LOUISIANA POWER & LIGHT / 317 BARONNE STREET • P.O. BOX 60340
NEW ORLEANS, LOUISIANA 70160 • (504) 595-2200
MIDDLE SOUTH UTILITIES SYSTEM

September 14, 1984

J.M. CAIN
President and
Chief Executive Officer

W3B84-0481

Director of Nuclear Reactor Regulation
ATTN: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Waterford 3 SES
Partial Response to Items
from Waterford Review Team

REFERENCES: 1) Letter, D.G. Eisenhut to J.M. Cain,
"Waterford 3 Review," dated June 13, 1984

2) Letter W3B84-0473, R.S. Leddick to D.G. Eisenhut,
"Program Plan for Resolution of Pre-Licensing
Issues" dated August 20, 1984

Dear Mr. Eisenhut:

The purpose of this letter is to submit Louisiana Power & Light's responses to issues 15 and 22 as set forth in your June 13, 1984 letter (Reference 1). The response to issue 15 follows the approach set forth in Attachment 1 to the Program Plan sent to you by LP&L on August 20, 1984 (Reference 2). Limited revision has been made in the Program Plan for Issue 22 (enclosed) and the response to Issue 22 follows this revised approach. Current assessment of each of the issues is as set forth in the responses.

The responses have been reviewed and verified by LP&L QA in accordance with procedure QASP 19-13. The designated subcommittee of the Waterford Safety Review Committee also has reviewed the adequacy of the responses for resolving the issues raised. The subcommittee scope of responsibility does not include independent validation of the facts.

The Task Force has indicated by separate correspondence (enclosed) that it is satisfied with the logic of the responses, however, they have not yet completed their independent validation of the facts. The Task Force has committed to notifying me and the NRC immediately should they find significant deviations in the course of their validation. In the event of such notification, LP&L will amend individual responses as may be necessary.

Limited Distribution

We request that you commence actions you deem necessary to lead to the resolution of these individual issues.

Sincerely,

J.M. Cain

JMC:DA:pbs

Attachments

cc: Mr. R.S. Leddick

Mr. D.E. Dobson

Mr. R.F. Burski

Mr. K.W. Cook

Mr. T.F. Gerrets

Mr. A.S. Lockhart

Mr. R.P. Barkhurst

Mr. L. Constable
USNRC - Waterford 3

Mr. J.T. Collins
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Suite 1000
Arlington, TX 76011

Mr. D. Crutchfield
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. Knighton, Chief
Licensing Branch No. 3
Division of Licensing
Washington, D.C. 20555

Mr. M. Peranich
Waterford 3 Investigation and
Evaluation Inquiry Report Team
Leader
4340 E.W. Hwy. MS-EWS-358
Bethesda, MD 20114

Mr. D. Thatcher
Waterford 3 Instrumentation & Control
Leader
7920 Norfolk Ave. MS-216
Bethesda, MD 20114

Mr. L. Shao
Waterford 3 Civil/Structure Team
Leader
5650 Nicholson Ln.
Rockville, MD

Mr. J. Harrison
Waterford 3 QA Team Leader
Region III
700 Roosevelt Rd.
Glen Ellyn, IL 60137

Mr. J.E. Gagliardo
Director Of Waterford 3 Task
Force
Region IV
611 Ryan Plaza Suite 1000
Arlington, TX 76011

Mr. S. Levine
NUS Corporation
910 Clopper Road
Gaithersburg, MD 20878

Mr. R.L. Ferguson
UNC Nuclear Industries
P.O. Box 490
Richland, WA 99352

Mr. L.L. Humphreys
UNC Nuclear Industries
1200 Jadwin, Suite 425
Richland, WA 99352

Mr. G. Charnoff
Shaw, Pittman, Potts &
Trowbridge
1800 M. St. N.W.
Washington, D.C. 20555

Dr. J. Hendrie
50 Bellport Lane
Bellport, NY 11713

Mr. R. Douglass
Baltimore Gas & Electric
8013 Ft. Smallwood Road
Baltimore, MD 21226

Mr. M.K. Yates, Project Manager
Ebasco Services, Inc.
Two World Trade Center, 80th
New York, NY 10048

Mr. R. Christesen, President
Ebasco Services, Inc.
Two World Trade Center
New York, NY 10048

PROGRAM PLAN

ISSUE & TITLE	DESCRIPTION OF ISSUE	LP&L APPROACH TO RESOLUTION	CURRENT ASSESSMENT
22. Welder Qualification (Mercury) and Filler Material Control (Site Wide)	Verify welder qualifications or assure the quality of all welds. Provide engineering justification for the allowance of "rebake" temperatures and holding times that differ from the requirements of the ASME and AWS Codes.	The welder documentation is available which demonstrates that the welders were properly qualified. The response demonstrates that 1) the weld material control program at Waterford meets the intent of both ASME and AWS Code requirements. 2) that isolated instances where deviations from site procedures occurred, the corrective action was adequate to maintain the moisture content limitations specified by the codes for low hydrogen electrodes. 4) the adequacy of the weld material control program is substantiated by the acceptable results of the NDE examination, when performed, of welds where low hydrogen electrodes were used.	All welders were found to be properly qualified. NCR-W3-7724 addressed and resolved qualification sheet errors for 3 welders (clerical errors which were committed after the welders left site). The moisture conter limitations specified by the Codes for low hydrogen electrodes were met. The only deviation from explicit code requirements was a documented reduction in specified holding oven temperatures.

NUS CORPORATION
910 CLOPPER ROAD
GAITHERSBURG, MARYLAND 20878
(301) 258-6000

NUS-W3-A723
September 14, 1984

Mr. J. M. Cain
President and Chief Executive Officer
Louisiana Power and Light Company
317 Barrone Street
New Orleans, Louisiana 70160

Dear Mr. Cain:

I have been authorized by the Prelicensing Issues Task Force to forward to you the attached letter relating to the submittal of Louisiana Power and Light Company responses to Issues 15 and 22 of Mr. Eisenhut's letter to LP&L dated June 13, 1984.

Sincerely,

Peter V. Judd

Peter V. Judd
Project Manager
Prelicensing Issues
Task Force Support Group

PVJ/cn
Attachment

NUS CORPORATION
910 CLOPPER ROAD
GAITHERSBURG MARYLAND 20878
(301) 258-8000

CG-SL-23-84

September 14, 1984

Mr. P. V. Judd
Pre-Licensing Task Force Support Group
Louisiana Power & Light Company
Waterford # 3 SES
Highway 18
Taft, Louisiana 70066

Reference: Letter from D. G. Eisenhut, Director, Division of Licensing, U. S. Nuclear Regulatory Commission to J. M. Cain, President and Chief Executive Officer, Louisiana Power & Light Company, Waterford # 3 Review, June 13, 1984

Dear Mr. Judd:

We understand that Louisiana Power & Light plans to submit responses to the Nuclear Regulatory Commission covering Issues 15 and 22 of the referenced letter.

The Task Force has no objections to this course of action. We have studied these issues and find the logic stated in the LP&L responses to be adequate. Mr. Cain should note that the Task Force has not yet completed its independent validation of facts presented in the responses. We will notify Mr. Cain and the NRC immediately if we find significant deviations in the course of our continuing validation efforts. Of course, as Mr. Cain knows, our work on all 23 issues and their collective significance is continuing and will culminate in a formal report to him.

I have discussed this matter with Messrs. Robert Ferguson and Larry Humphreys and we have agreed to this together. Please forward this to Mr. J. M. Cain.

Sincerely,

Saul Levine
Vice President and
Group Executive
Consulting Group

/m

RESPONSE

ITEM NO.: 15

TITLE: Welding of "D" Level Material Inside Containment

NRC DESCRIPTION OF CONCERN:

The staff reviewed the welding of "D" level material for containment attachments. The containment spray system structural component welds were chosen for specific detailed review. The welds on the containment spray piping supports were checked for weld rod traceability and welder identification and certification. The applicant was unable to produce the documentation sought for the staff review.

The applicant shall (1) locate the documentation and verify the adequacy of the information, or (2) perform a material analysis and NDE work, or (3) rework the welds. The staff shall be promptly informed of the applicant's approach and the documentation shall be made available for staff review.

DISCUSSION:

LP&L has reviewed the welding of "D" level material inside containment with the contractor, has determined that a deficiency exists and has undertaken a corrective action program including a sampling inspection.

The Containment Spray system structural component welding records were not shown to the staff reviewers. These supports were installed by Tompkins-Beckwith and are fully documented. Instead, the staff reviewers were incorrectly shown Chicago Bridge & Iron Company (CB&I) drawings. The specific item reviewed by the staff was later determined to consist of temporary supports which, for the most part, have now been abandoned. There were two cases, however, where Containment Spray piping support struts were attached to a CB&I "D" material item. An analysis was performed (Ref. 9) which demonstrated that the containment spray piping is adequately supported without assuming any contribution by the two struts under the design loads, including seismic loads, as committed to in FSAR Sections 3.7.3.1.1.1 and 3.9.3.1.1.4. Therefore, with respect to spray header piping no action is required. Other "D" material applications, however, were found to be Seismic Category I structures and these have been addressed in the response.

CB&I, the installing contractor, defines Class D material as all that material which falls outside the ASME Boiler & Pressure Vessel Code jurisdictional boundary. The documentation requirements of CB&I's Quality Assurance Program Manual applied to material within ASME Code jurisdiction only, thus the D material was not originally provided with material certifications or documented evidence of inspection.

The findings of the review and descriptions of the program are as follows:

Unique weld rod traceability cannot be obtained for Class D material welding since CB&I's program did not provide process control records for D material to the same level as Class A, B or C material. However, records are available for all welding material used by CB&I, and all such material is certified for safety-related applications.

Welder identification cannot be obtained for individual Class D material welds since CB&I's program did not provide detailed process control records for such welding. However, all CB&I welders on this project were qualified in accordance with ASME Section IX Code.

The CB&I QA Manual required, as a minimum, that the site Welding/QA Supervisor inspect fit-up, welding in progress and finished welds on all classes of work. The CB&I Site Welding/QA Supervisor had the responsibility for the completion of a report (See Attachment 1, CB&I Form WL222) that requires the visual inspection of finished welds and includes the inspection of fit-up and in- process welding. Note that the inspection checklist items on Form WL222 references "all welds". Although the requirements for documentation do not apply to "D" material welding, there is therefore reason to believe that this function was performed on Class "D" material field welds. The work was performed by the same welders and inspected by the same welding supervisors to the same standard as the rest of the CB&I work for which documentation is provided. This provides a high degree of confidence in the quality of the finished work since CB&I welders and inspectors were well qualified and very experienced as reflected in their certifications which indicated an average of 7 years for welders and more than 20 years for inspectors, working to ASME Code requirements for CB&I alone. The quality of CB&I welding on this project is very high as has been repeatedly proven by low NDE rates of rejection and by the results of QA surveillances and audits. Attachment 2 is a letter from CB&I to Ebasco providing additional information on their approach to documentation of "D" material welding.

An Ebasco Engineering review of Chicago Bridge & Iron Company drawings was undertaken to list all shop and field welds identified by CB&I as Class "D" material. Class "D" material is defined as all material and welding located 4 inches or more from the face of the containment vessel. After deletion of obvious non-safety related items such as handrails, there are 2652 shop and 810 field welds so that the total number of welds of Class "D" material is 3462.

A sample of welds was chosen for visual inspection based on review of all the welds. The Containment Spray piping seismic clips were not further considered once it was determined that they either had been abandoned or were determined by analysis not to have been required. The Class "D" items in the Personnel Access Hatch and the Escape Hatch were judged to be minor structures or non-structural applications and were excluded from the sample.

The Polar Crane Girder assembly and the Maintenance Hatch supports were identified as the significant structural applications and from these the entire sample of 405 welds (11.7% of the total 3462) was selected to be inspected, of which 188 were inspected with the paint removed and 217 were inspected with the paint on. The paint was removed to inspect for defects that could not be readily seen through the paint. None were identified which would require enlarging the sample. The 217 painted welds were inspected for major defects and size of weld.

No NDE was involved since none was required by the original criteria for Class "D" welds.

The inspection was performed by two qualified welding inspectors in accordance with LP&L procedure "QA Inspection of Structural Steel Weldments" No. QASP-19.10. The welds that had only acceptable indications and were of required size were approved as is and the reports were retained by LP&L. If there were unacceptable indications in any of them, they were forwarded to Ebasco engineering for evaluation under NCR-W3-7792.

Ebasco evaluated 32 connections which were not accepted on QC inspection under NCR W3-7792 This evaluation found that although some of welds were slightly undersize or exhibited relatively short regions of surface defects, engineering calculations based on the original design requirements demonstrate that the connections in which they are found are nevertheless not overstressed when subject to the design loads. The welding of these connections is therefore acceptable.

Therefore, it has been concluded that the design requirements are satisfied for the entire sample of 405 welds inspected and that, on the basis of the satisfactory results of the sample inspection all CB&I "D" material welds are considered satisfactory and may be accepted as is.

On the basis that all weld materials used were provided with proper certifications, all welders and inspectors were qualified and performed work to the procedures of the vendor's program and that the sampling inspection of the welds has identified no unacceptable conditions, the quality of the all D material welding is evaluated to be satisfactory and no further action is required.

During the weld inspection, six arc strikes were found on the Polar Crane Girder Stiffeners and one on a crane rail shim plate. Because of the type of steel involved (SA.516 Grade 70), and the position and function of the crane, a reinspection of all crane girder stiffeners for arc strikes was undertaken. All arc strikes found were removed and upon reinspection and evaluation, were found to not be structurally significant.

CAUSE:

The cause of the documentation deficiencies in CB&I Class "D" material welding is that the approved vendor quality program did not require such documentation. CB&I did not adequately interpret the distinction between Seismic Class I designation and ASME code jurisdictional boundaries; and on the part of Ebasco and LP&L, they did not identify the omission in the CB&I QA Manual either during the program review process or in reviews of in-process documentation. Other contractors which performed work in accordance with both the ASME Code and outside the code jurisdictional boundary (Seismic Category I) satisfied the criteria of 10CFR50, Appendix B.

GENERIC IMPLICATIONS:

The generic implications regarding CB&I have been addressed in the program just completed since all Class D material welding was considered. With respect to other contractors, the ASME Code boundary/Seismic Category I boundary issue does not arise.

SAFETY SIGNIFICANCE:

The CB&I's quality program was applied to the Class D material installation as all other classes in every respect except detail documentation. The above evaluation just completed verifies the work is of satisfactory quality. These welds are not considered to pose a constraint to fuel load, power ascension or commercial operation.

CORRECTIVE ACTION:

The review and sampling programs described above are complete. All arc strikes identified during the inspection of the Polar Crane girder were removed by grinding.

ATTACHMENTS:

(1) CB&I Form WL222

(2) CB&I letter to Ebasco Services Inc. dated 6/29/84

REFERENCES:

(1) Ebasco Specification No. LOU-1564.717

(2) Ebasco Drawings Nos. 1564-G-816 through 819

(3) CB&I QA Program Manual

(4) CB&I Dwgs. 71-2426 Series

(5) NCR W3-7792 dated 7/24/84

(6) LP&L Procedure No. QASP-19.10, "QA Inspection of Structural Steel Weldments"

(7) Inspection Reports, Form LPL Q-58 (7-84)

(8) CB&I Letter dated 6/29/84

(9) S/A Calculation No. 1071, Part 1 and No. 1077

Attachment 1

CBI FIELD WELDING SUPERVISORS REPORT

Contract No. _____ Construction Office _____ Date _____

Description _____

Material Specifications _____

Customer _____ Location _____

Erection Supt. _____ Weld Foreman _____ Code _____

Weather Conditions and Temperature _____ Hours Spent on Job _____

No.	Yes	No	Fit-Up and Welding	No.	Yes	No	Testing
1			Breakdowns per Manual 13	18			Bottom welds cleaned & pickups made before vacuum test
2			Bottom laid per Manual 13	19			Bottom vacuum tested per Std. 751-5-2
3			Bottom fit per Manual 13	20			Bottom testing up to date
4			Roof fit per Manual 13	21			Magnetic particle testing up to date
5			Verts fit-up & aligned per Manual 13 and/or Code	22			Dye penetrant testing up to date
6			Girths fit-up and aligned per Manual 13 and/or Code	23			X-ray or plugs up to date
7			Tab plates used as required	24			Fittings tested up to date
8			Joints properly cleaned for AGW	25			Customer witness of NDE up to date
9			Fittings properly installed per Manual 13 and/or Code				**Inspection and Cleanup**
10			Joints backgouged properly	26			Slag cleaned from all welds daily
11			Contract welding procedure being used	27			Pickups made properly daily
12			3 – Plate laps per Manual 13	28			Any unacceptable undercut
13			All splices properly welded 100%	29			All fillet and other welds proper size
14			Wide gaps built up before welding	30			Burrs properly removed
15			Construction manuals used as required	31			Columns, stairways, top angle etc. plumb
16			Welding electrodes stored properly	32			Any unacceptable buckles or peaked verts
17			Proper preheat used as required	33			Any fabrication errors—report on backside
				34			Any engineering errors—report in remarks below

Fabrication—CBI Shop Location _____ Or Subcontractor _____

Type and brand of Electrode and Flux _____

Type X-Ray film, screens and penetrameters _____

No. of X-Rays or Plugs taken this week _____ Good _____ Bad _____

Total no. of X-Rays or Plugs to date _____ Good _____ Bad _____

Welding defects found by NDE _____

Steps taken to prevent/correct defects _____

Types of automatic equipment used _____

Form G.E. 155 Level Readings	Tank # _____	Tank # _____	Tank # _____
Before Laying Bottom	High _____ Low _____	High _____ Low _____	High _____ Low _____
After 1st Ring is Fit	High _____ Low _____	High _____ Low _____	High _____ Low _____
After 2nd Ring is Fit	High _____ Low _____	High _____ Low _____	High _____ Low _____
After 3rd Ring is Fit	High _____ Low _____	High _____ Low _____	High _____ Low _____

REMARKS (State briefly your opinion of job considering workmanship, safety, fabrication, erection and testing)

Original: CONSTRUCTION OFFICE
Copy: ERECTION SUPT.
Copy: HOUSTON WELDING SERVICES
Copy: WELD SUPERVISOR

_____
WELDING SUPERVISOR'S SIGNATURE

Printed in USA

WL 222 (FRONT) APR 76

ATTACHMENT # 2

ORIGINAL BECHT

cc MKY S. COCKRELL
L. STINSON G BOULBEDIS

Attachment Z
NRC Concern 15

Chicago Bridge & Iron Company

8900 Fairbanks North Houston Road
P O Box 40066
Houston, Texas 77040
713 466 7581

June 29, 1984

EBASCO Services Incorporated
P. O. Box 70
Killona, LA. 70060-0070

ATT: Mr. Michael K. Yates
Project Manager

RE: Waterford SES No. 3
TAft, La.
CBI Contract 71-2426

SUBJ: NRC Concern No. 15
EBASCO Letter ES-9423-84 Dated 6/25/84

Dear Mr. Yates:

Attached please find CBI's responses to your letter ES-9423-84 requesting information necessary to answer the NRC's concern No. 15. This concern deals with documentation of class D material welds. The number of each response corresponds to the number of each action request in your letter:

1. No process control records documenting visual inspection of field welds of type D materials exist. Permanent records for these welds were not required by the ASME Code, customer's specifications, or the CBI Quality Assurance Program.

2. Applicable records for materials and welding consumables are on file in the EBASCO/LPL records' vault on site.

3. Shop records on file at the site detail inspections for the crane girder sub-assemblies and some of the spray systems' structural components.

   Although not required by the QA Manual, some D material welds were documented on the shop records as a matter of convenience to shop personnel. No class D material welds were documented in the field.

4. All CBI welders (including tackers) on this project were fully tested and qualified in accordance with ASME Section IX Code.

CBI Welding/QA Supervisors are long-term employees who have risen through the ranks to their position because they are outstanding craftsmen who display an exemplary attitude toward quality and they have the full backing of management to do whatever is required on site to assure that quality is satisfactory. The Welding/QA Supervisor never works for the site foreman, but instead works for the District Welding/QA Manager. Therefore, he has full independence to perform his QA duties. It was this way by choice within the CBI organization long before the nuclear power industry came into existence.

Each week, no matter what class of structure to which he is assigned, the Welding/QA Supervisor is required to complete a report (see attached form WL222) whereby the district office can be kept up-to-date on the job from a QA standpoint. Note that items 26 through 29 deal with the timely visual inspection of welds. Also, attached are CBI forms WL232, WL233 and WL234 which deal with the final inspection of various types of CBI products. Again, note that there are references to inspection of all welds. Two conclusions can be drawn from this discussion:

a. CBI Welding/QA personnel are taught and expected to inspect all welds.

b. Although documented inspections of class D material welds were not required by this contract, inspections were most certainly performed as a matter of routine.

5. A review of CBI's photograph collection for this project did not produce any appropriate photographs showing work in progress on class D materials.

6. Individuals contacted who were on site at Taft during the construction phase of the contract indicate that all of the welds in question received a visual examination both after fit-up and after completion of the welds. However, with the passage of time, none of these individuals felt comfortable with providing any further documentation beyond that which was signed at the time of construction.

   Discussions with our site personnel indicated that the EBASCO/LPL inspectors and the Hartford ANI were very diligent in their duties, and it is most unlikely that any welding on this contract - either documented or undocumented - would have escaped their scrutiny.

Attachment 2
NRC Concern 15

7. The list of certified field welders on this job may be found in CBI files numbered 8.10 in the EBASCO/LPL records' vault at the jobsite.

8. It is CBI's interpretation of AISC requirements that all welds governed by this specification be given a visual inspection of the completed weld.

9. It is Chicago Bridge & Iron's corporate policy to depend upon its internally enforced quality assurance programs and to demand that this system work. Doing so yields the following benefits:

   a. Rework with its attendant lost profits is minimized by effectively using site quality assurance personnel. Their presence on the jobsite is considered to be a positive influence as it is QA's job to ensure that quality is built in on an on-going basis - not "inspected in" as an afterthought.

   b. Our image with our customers is enhanced because it is well known within the industry that our QA systems are effective and would be so even without outside inspection. This is reinforced by the fact that Chicago Bridge & Iron has built thousands of trouble-free structures which received no customer or third-party inspections.

The centerpiece of CBI QA programs is the site Welding/QA Supervisor. Whether or not examinations are documented, these individuals are expected at the very least to inspect fit-up, welding-in-progress and finished welds on all classes of work. This is so stated in paragraph 3.4.3.1.C.6, Division 4 of the QA Manual. There is no reason to believe that this function was not performed on the class D material field welds.

Please feel free to contact either Mr. Nixon or me if we can be of further assistance on this matter.

Yours very truly,

Thomas D. Warner

Thomas D. Warner
Welding/QA Manager
Houston Construction District

TDW:mjr

Attachments - WL222
WL232
WL233
WL234

RESPONSE

ITEM NO.: 22

TITLE: Welder Qualifications (Mercury) and Filler Material Control (Site Wide)

NRC DESCRIPTION OF CONCERN:

The staff reviewed in process weld records for the installation of instrumentation systems by Mercury Company. Systems reviewed included Reactor Coolant, Safety Injection, Component Cooling Water, Main Steam, Main Feed, and Charging Water. The staff selected welders from these records and reviewed their qualifications to the welding process used during the time frame of actual welding.

Based on the staff's review it appears that some Mercury welders were not qualified. Problems included: welders not qualified to the correct welding procedure; welders qualified for a specific process, even though they were not tested for that process; actual dates on qualification records appeared questionable, the welder may have welded prior to being tested. The staff concludes that there are questions relative to the Mercury welder qualification status.

Also during this review the staff evaluated the controls being used to control filler material. The staff found that the requirements for "rebaking" of low hydrogen electrodes did not meet the raquirement of the ASME and AWS Codes. The Codes require low hydrogen electrodes to be rebaked at temperatures of 450° to 800°F for two hours. The site practice for all site contractors was to rebake at 200°F for eight hours. Justification for this Code deviation has not been provided by LP&L.

LP&L shall (1) Attempt to locate the missing documentation and determine if the welders were properly qualified, or (2) If the documentation to support proper qualification cannot be located, LP&L shall propose a program to assure the quality of all welds performed by questionably qualified welders.

LP&L shall also provide engineering justification for the allowance of "rebake" temperatures and holding times that differ from the requirements of the ASME and AWS Codes.

DISCUSSION:

Welder Qualifications

LP&L has performed a review of all Mercury welders for proper qualification. This review was initiated in October 1983 as a disposition to NCR-W3-7218. It concluded that, with a single exception, all Mercury welders making safety and seismic weldments were properly qualified, and had welded only in processes for which they were so qualified. The single exception was identified, corrected, and dispositioned via NCR-W3-7219. A separate concern not covered in this response, involving the adequacy of the tube track welding process, is addressed in SCD 84 (NCR-W3-6159). Since the NRC's special review, NCR-W3-7218 has been supplemented with an attachment which provides clearer and more auditable documentation of the review.

As a result of concerns regarding discrepancies in Mercury welder qualification records noted by the NRC during the special review, and brought to LP&L's attention during a meeting on May 18, 1984, NCR-W3-7724 was opened. As a disposition to this NCR, a review was conducted that confirmed that the documentation to support the proper welding procedure qualification of all Mercury welders was in order with the exception of three minor discrepancies which have been corrected.

Although the review conducted by LP&L via NCR-W3-7724 covered all Mercury welders, a specific response to questions regarding the qualifications of the 13 welders identified by the NRC during the special review, is contained in Attachment 1. Included in this attachment are the three documentation discrepancies noted and corrected.

In the case of the 13 welders cited by the NRC, documentation supports the fact that all welded in processes for which they were qualified, except for M315 (See Attachment #1, item 1H); this welder did perform a weld out of his qualification. The weld, however, was rejected in process by the Mercury QC inspector, and the weld was redone by a qualified welder.

Filler Material Control

The Waterford 3 site procedures for filler material control were designed to preclude the need for drying ("rebaking") as used or defined by the ASME and AWS Codes and did not include provisions for "rebaking". The site procedures and corrective action taken in the isolated cases of deviation from site procedures were adequate to maintain the moisture content limitations specified by the codes for low hydrogen electrodes.

The AWS D1.1, Structural Welding Code (paragraph 4.9), states that low hydrogen, type E-7018, electrodes should be dried ("rebaked") when either of the following conditions exists:

1. If electrodes are not purchased in hermetically sealed containers

2. or if the hermetically sealed container shows evidence of damage

3. or if electrodes are not used within four (4) hours of removal from a drying or storage/holding oven.

   Condition 3 is also addressed in ASME Section III, NX-2440, Storage and Handling of Welding Materials which states "Suitable storage and handling of electrodes, flux, and other welding materials shall be taken to minimize absorption of moisture by fluxes and cored, fabricated, and coated electrodes."

Low hydrogen electrodes used at Waterford were specified to be purchased in hermetically sealed containers. This practice eliminated the need to dry the electrodes for condition 1) above.

Ebasco Discrepancy Notices were reviewed to find conditions of damage to hermetically sealed containers. Attachment 6 includes all DNs found which noted seal damage to low hydrogen electrode containers. The disposition and corrective action in all cases attached was to scrap or return the electrodes to the manufacturer for replacement. This practice eliminated the need to dry the electrodes for condition 2) above.

Site procedure ASP-IV-18, "Receiving, Storage, Issuing, and Control of Welding Electrodes and Filler Metals", Attachment 3, and individual contractor procedures (such as Tompkins-Beckwith's TBP-3, "Weld Material Control Procedure", Attachment 4), were written with the intent to control the welding materials in a manner that would minimize absorption of moisture or exposure to ambient conditions.

ASP-IV-18 and TBP-3 required that low hydrogen electrodes, upon removal from sealed containers, be placed in holding ovens for eight (8) hours at 200°F minimum prior to issue and that when these electrodes were issued that they were to be held in "point-of-use" ovens (rod caddies) prior to use. The site procedures for holding oven temperature (200°F minimum) comply with ASME's recommendation of 50°F to 250°F above ambient (ASME Section II, Part C, SFA 5.1, Table A.1, 1977 Edition) but do not comply with the AWS D1.1 250°F minimum (AWS D1.1-75, Paragraph 4.9). Although the wording of other site contractor procedures may have varied from the attached two procedures (i.e. leather pouches versus rod caddies), the moisture absorption of filler material was addressed and controlled in a similar fashion.

We believe, under the conditions above and through compliance with the site procedures, even with the holding temperature variation from AWS, that the electrodes would not have absorbed excessive amounts of moisture and that adequate filler material control, to meet condition 3) above, was present.

To identify and evaluate representative cases where deviations from weld rod control procedures occurred, all Ebasco Nonconformance Reports and Tompkins-Beckwith Discrepancy Notices were reviewed. Isolated cases were found which pertain to rod ovens and associated problems and are shown in Attachment 5. The corrective action for these cases consisted of either returning the electrodes to the holding ovens for the eight (8) hours or scrapping.

To justify the adequacy of corrective action, the two conditions, of those in Attachment 5, where low hydrogen electrodes could have potentially absorbed the greatest amount of moisture (T-B Discrepancy Notices W-339 and W-742) were evaluated. Both of these DN's noted conditions where holding ovens lost power over the weekend with the electrodes possibly exposed to ambient conditions for approximately forty-eight (48) hours. Ambient conditions for these two (2) DN's would be similar to that shown in Attachment 7. To determine the effects of this exposure, the following tests were performed:

1. The manufacturer, Alloy Rods Division of Chemetron Corporation, of the majority of the low hydrogen electrodes used at the site was contacted and submitted product literature on moisture absorption of E-7018 electrodes (see Attachment 8). The curves shown on page three (3) of the attachment indicate that the electrodes noted in the two (2) T-B Discrepancy Notices (if they were the "new" moisture resistant style electrode) would not have exceeded the ASME allowable moisture content of 0.60% (ASME Section II, Part C, SFA 5.5, Table 7, 1977 Edition).

2. In consideration that Attachment 8 applied to Alloy Rods Division's new moisture resistant coating (in use in mid 1981) and that the T-B DN's were prior to this date, the manufacturer was requested to test moisture absorption of the "old" style electrodes. Alloy Rods performed two separate tests of the old style electrodes to confirm our position that the effects of the conditions and subsequent corrective action taken in the case of the DN's was adequate and that drying or "reoaking" was not required.

The first test directly exposed the electrodes to a humidity cabinet for forty-eight (48) hours at 60°F and 80% relative humidity. The moisture content at the start was 0.10% and at the end of forty-eight (48) hours had increased to values between 0.56% to 1.26%, depending on electrode position in the bundle. The bundle was then placed in a dry rod oven for eight (8) hours at 250°F. The moisture content at the end of this time varied between 0.19% and 0.26%, which was well below the allowable 0.60%.

The second test simulated the conditions that occurred at site. A holding oven, Phoenix Type 300, was unplugged for forty-eight (48) hours. The moisture content at the start was 0.08% and at the end of the 48 hours had increased to 0.23%, which was still below the allowable 0.60% without subsequent reconditioning at 250°F for eight (8) hours.

The test results of the both tests are shown in Attachment 9.

The literature and testing performed by the manufacturer, confirm that the control of low hydrogen welding electrodes, even considering the isolated deviations from site procedures, was adequate.

The adequacy of the Waterford 3 Welding program was further confirmed by the satisfactory results of project and NRC NDE efforts.

In summary, LP&L's position is that 1) the weld material control program at Waterford meets the intent of both ASME and AWS Code requirements. 2) that the site procedures were designed to avoid the need for rebaking. 3) in the isolated instances where deviations from site procedures occurred, the corrective action was adequate to maintain the moisture content limitations specified by the codes for low hydrogen electrodes. 4) the adequacy of the weld material control program is substantiated by the acceptable results of the NDE examination, when performed, of welds where low hydrogen electrodes were used.

CAUSE:
The apparent cause for this concern is the complexity in understanding welder qualification hierarchy; improper placement of a "rebake" sign on an Ebasco rod oven; and lack of specific justification on corrective actions in some instances in which specified holding temperatures were not maintained.

The Mercury welders and their qualifications are in order and the site filler metal control procedures were adequate to limit the moisture content of the low hydrogen electrodes. Minor deviations from literal code interpretations are justifiable.

GENERIC IMPLICATIONS:

As discussed above, the review of Mercury's record confirmed that the documentation to support the proper qualification of Mercury welders is in order. The concern related to the control of moisture content in low hydrogen electrodes was treated generically in that procedures for all site contractors were reviewed and found to be acceptable. To ensure that welding being performed under the Plant Maintenance Program was and will be properly accomplished, an audit of that program was initiated and is in progress.

Adequate controls for receiving, storage, and issuing of welding electrodes were present.

SAFETY SIGNIFICANCE:

Documentation exists to support the qualification of all specific welders called into question. All other Mercury welders also had documentation to support their qualification. There were three minor discrepancies which have been corrected.

Deviations from Code requirements for control of moisture content of low hydrogen electrodes were justifiable.

There is, therefore, no affect on plant safety and this issue should not pose a constraint to fuel load or power operation.

CORRECTIVE ACTION PLAN/SCHEDULE:

NCR-W3-7724 addressed and resolved welding procedure qualification errors for welders M101, M109 and M85. NCR W3-7218 attachments 4 and 5 showed that Mercury welders making safety related and seismic weldments were certified within the time frame they performed welding at Waterford 3.

ATTACHMENTS:

Attachment 1 Specific Responses to NRC Mercury Welder Qualification Concerns

Attachment 2 Mercury Procedure Cross-Qualification Chart

Attachment 3 Procedure ASP-IV-18, Receiving, Storage, Issuing and Control of Welding Electrodes and Filler Metals

Attachment 4 Tompkins-Beckwith Procedure TBP-3, "Welding Material Control Procedure".

Attachment 5 Ebasco Non-Conformance Reports and T-B Discrepancy Notices on Weld Material Control.

Attachment 6 Ebasco Discrepancy Notices on Damaged Electrode Containers.

Attachment 7 Weather Conditions for February, 1979.

Attachment 8 Alloy Rod's Division, "It's A Fact", dated September 30, 1981.

Attachment 9 Letter dated 9/4/84, Alloy Rod Incorporated to Ebasco Services.

REFERENCES:

ASME Boiler and Pressure Vessel Code, Section III, Paragraph NX2440, 1977 Edition.

AWS Structural Welding Code, D1.1-75 Paragraph 4.9.

ATTACHMENT 1

SPECIFIC RESPONSES TO NRC MERCURY
WELDER QUALIFICATION CONCERNS

1. NRC Concern - Individual not qualified to the correct procedure.

Welders involved:

A. M44 Concern - Qualified to WPSB. Form retyped showed welder qualified to WPSY.

Response - Welder left the site on 12/7/79. Clerical error, showing qualification to WPSY, was made on 11/26/82. Qualification to WPSB is in welder M44 qualification folder not WPSY. A review of the Filler Metal Withdrawal Authorizations (FMWAs) confirms that M44 welded in the WPSB process only.

B. M177 Concern - No qualification test for WPSY. Welded to WPSB and WPSE.

Response - Qualification test for WPSY is in M177 qualification folder. Qualification to WPSY allows welder to perform welding to WPSB and WPSE. See Attachment 2.

C. M34, 85, 130, 211, 212 Concern - Qualified to WPSD but welded in WPSY.

Response - Qualification tests for WPSD and WPSY are in welder qualification file.

D. M142 Concern - No qualification tests for WPSY or WPSD.

Response - Qualifications for WPSY and WPSD are in welder qualification file.

E. M109 Concern - Qualification to WPSY in file. Voided qualification on 10/22/83.

Response - Welder left the site on 2/8/80. Clerical error, showing qualification to WPSY, was made on 11/26/82. Welder qualified to WPSB and WPSD. WPSY was used for qualification testing only. It was not specified for production welding. NCR-W3-7724 documented error and provided corrective action. NCR is closed.

F. M101 Concern - Welder qualified to WPSB. Added sheet shows welder qualified to WPSY.

Response - Welder left the site on 3/21/80. Clerical error, showing qualification to WPSY, was made on 11/26/82. Welder qualified to WPSB. WPSY was used for qualification testing only. It was not specified for production welding. NCR-W3-7724 documented error and provided corrective action. NCR is closed.

SPECIFIC RESPONSES TO NRC MERCURY
WELDER QUALIFICATION CONCERNS

G. M129 Concern - No qualifications to WPSD.

Response - Qualification test for WPSD dated 3/14/80 was not signed by QC inspector. However, valid qualification test for WPSG is in welder qualification file which qualifies welder to weld in the WPSD process. See Attachment 2.

H. M315 Concern - Not qualified to WPSD. Welder used process.

Response - M315 made tack welds for FW 13 on instruments PT-RC-161 and PT-RC-0162. The Mercury Q.C. Inspector rejected the tack welds because the welder was not qualified and the tacks were cracked. The weld FW-13R was redone by M-41 who was qualified to WPSD. A review of FMWAs confirms that M315 did not perform any other welds in WPSD.

I. M343 Concern - No documentation that welder qualified to WPSD. Welder used process. (Ref: Mercury NCR 3149).

Response - Qualifiaction to WPSD dated 8/3/82 is in file. Mercury NCR 3149 was written when welder qualification was misplaced. Subsequently file was put back in place.

2. NRC Concern - Individual qualified to a specific WPS process but could not find documentation that he actually took test.

Welders involved:

M129 Concern - No completed qualification test reviewed for WPSD (test not signed).

Response - See Item 1G. Qualified to WPSG on 3/14/80 which qualifies the welder to WPSD. All WPSD welding performed by this individual, was done after this date. See Attachment 2.

M44 Concern - No qualification test reviewed for WPSY.

Response - See Item 1A. Welder M44 did welding only to WPSB not WPSY (See 1A). WPSB qualifications in welder file.

M101 Concern - No qualification test reviewed for WPSY.

Response - See Item 1F. Welder was qualified to WPSB only. Welder did not qualify and did not weld to WPSY (See 1F). NCR-W3-7724 documented error and provided corrective action.

M142 Concern - No qualification test reviewed for WPSY or WPSD.

Response - See Item 1D. Qualification for WPSY and WPSD are in file.

SPECIFIC RESPONSES TO NRC MERCURY
WELDER QUALIFICATION CONCERNS

M177 Concern - No qualification test reviewed for WPSY.

Response - See Item 1B. Qualification for WPSY are in file.

M109 Concern - No qualification test reviewed for WPSY.

Response - See Item 1E. Welder was qualified to WPSB and WPSD. Welder did not qualify and did not weld to WPSY (See 1F). NCR-W3-7724 documented error and provided corrective action.

M34, 85, 130, 211, 212 Concern - No qualification test reviewed for WPSY.

Response - See Item 1C. Qualification tests for WPSY on these welders are in their qualification folders.

M85 Concern - No valid qualification to WPSD on file.

Response - Valid qualification record for WPSD was voided in error on 11/8/83 by Mercury's Welding Engineer. NCR-W3-7724 documents this error and reinstates the record as valid.

3. NRC Concern - NRC asked for certification documentation on an individual, initially none found. Record that was later presented appeared to be someone else's with name typed over. Welder involved: M177

   Response - A review of welder qualification records on welder M177 determined validity of document. While it is evident that the qualification record had a name error and correction, the welder number block and all other information had not been changed.

4. NRC Concern - Individual failed a qualification test, he was declared qualified at a later date. Could find no record of a test or means by which he was qualified. Welder involved - M197.

   Response - The welder qualified to WPSD for 3/8" O.D. and greater on 1/23/81. This qualified the welder to use the GTAW process for welds on 3/8" O.D. and larger material. On 6/18/81 the welder took an additional test for WPSD to weld ¼" O.D. and failed. The welder continued to weld 3/8" O.D. and larger material per his qualifications. A review of the FMWAs and the weld data packages confirm M197 did not weld on 1/4" OD.

ATTACHMENT 2

MERCURY COMPANY WELDING PROCEDURE
CROSS QUALIFICATION CHART

Procedure	Process	Qualifies to Weld*
WPSY	Dual P1-P1 SMAW and P1-P1 GTAW	WPS-B and WPS-E
WPS B	P1-P1 SMAW	WPS B
WPS E	P1-P1 GTAW	WPS E
WPS D	P8-P8 GTAW	WPS D and WPS G
WPS G	P8-P1 GTAW	WPS G and WPS D

* The above qualification chart shows those procedures and processes the welder was normally qualified to weld to in Mercury's program. ASME Code allowances are more liberal in the area of welder qualification.

ATTACHMENT 3

EBASCO SERVICES INCORPORATED

WATERFORD STEAM ELECTRIC STATION - UNIT NO 3

PROCEDURE FOR: RECEIVING, STORAGE, ISSUING, AND CONTROL OF WELDING ELECTRODES AND FILLER METALS	PROCEDURE NUMBER: ASP-IV-18

ISSUE SUMMARY

ISSUE/DATE	PREPARED	APPROVED	REMARKS
"G" Draft 2/20/79	J. L. Bezfamilny		Revised 6.2.2
G Issue 4-20-79	J. L. Bezfamilny	J. Crnich	- - - -
"H" Draft 4-6-79	J. A. Chapman		Revisions as indicated
H Issue 4-25-79	J. A. Chapman	J. Crnich	
"I" Draft 7-26-79	J. A. Chapman		Added 6.3.2
I Issue 9-6-79	J. A. Chapman	J. Crnich	
J Draft "J" Issue 10-19-79	J. A. Chapman	J. Crnich	Revised 6.4.5.2 -
"K" Draft 11-19-80	W. R. Pieren		Revised 6.2.2, 6.3.1 Revised 6.2.5, Rewrote 6.4, 6.4.1, 6,4,2, 6,4,3, 6.4.4, 6.4.5, 6,4,6, 6.4.7, and 6.4.8
K ISSUE 1-19-81	W. R. Pieren	R. J. Milhiser	Added a new 6.5, Renumbered 6.4.6 and 6.4.7 to 6.6 and 6.7, Revised "Approval" on Form ASP-IV-18-2. Changed title of Form ASP-IV-18-1.

NOTATIONS IN THIS COLUMN INDICATE WHICH CHANGES HAVE BEEN MADE

For information only

FORM NO. ASP-III-1-3 (10-13-75)

EBASCO SERVICES INCORPORATED

WATERFORD STEAM ELECTRIC STATION - UNIT NO 3

PROCEDURE FOR: RECEIVING, STORAGE, ISSUING, AND CONTROL OF WELDING ELECTRODES AND FILLER METALS(m)	PROCEDURE NUMBER: ASP-IV-18

ISSUE SUMMARY

ISSUE/DATE	PREPARED	APPROVED	REMARKS
"A" Draft 5/[illegible]/76	D. H. Lack		
A 6/1/76	D. H. Lack	J. O. Booth	
"B" Draft 01-19-77	D. H. Lack		
"B"/ 01-31-77	D. H. Lack	J. O. Booth	Revisions as indicated
C/7-20-77	D. H. Lack	for J. O. Booth	Revisions as indicated
"D" Draft 3-7-78	H. Bourque		Revisions as indicated
"D" Issue 5/3/78	H. Bourque	J. Crnich	
"E" Draft 7-13-78	H. Bourque		Revised paragraph 3.2, 6.1.2, 6.2.2 through 6.2.7.
"E" Issue 7-15-78	H. Bourque	J. Crnich	
"F" Draft 1-19-79	J. Chapman		Revised 6.2.1, 6.4.7.
F/1-19-79	J. Chapman	J. Crnich	

NOTATIONS IN THIS COLUMN INDICATE WHICH CHANGES HAVE BEEN MADE

For information only

FORM NO. ASP-III-1-3 (10-13-75)

NOTATIONS IN THIS COLUMN IND TE WHICH CHANGES HAVE BEEN MADE

1.0 PURPOSE

The purpose of this procedure is to establish the responsibilities and set forth the methods to be followed in receiving, storage, distribution and control of welding electrodes and filler metals to assure compliance to the site Quality Program.

2.0 STORAGE

This procedure shall apply to all welding electrodes and filler metal used at the construction site and contains the requirements that are to be fulfilled by the construction organization that receives, stores, and issues these items for this project.

3.0 REFERENCES

3.1 ASP-IV-10, Material Receiving, Warehousing and Control

3.2 ANSI N45.2.2

3.3 Ebasco Quality Assurance Manual ASME Section III

4.0 DEFINITIONS

4.1 Area Rod Room - A centrally located room or building for storing welding materials received in bulk quantity from the construction warehouse and where those materials may be issued to individual welders employed by Ebasco.

5.0 RESPONSIBILITIES

The Weld Rod Room Attendant reports to the Warehouse Materials Supervisor, and is responsible for receipt, storage and issuance of all welding material.

6.0 PROCEDURE

6.1 Receipt of Covered Electrode, Bare Filler Metal and Consumable Inserts

6.1.1 Covered Electrode containers shall be inspected to verify that they are properly sealed and no damage has occurred in shipment. Verify mill test certification papers are correct and cans are identified with the heat and lot number.

6.1.2 Bare filler metal and consumable inserts will be inspected to verify that containers have not been damaged and are properly identified for traceability. Verify mill test certification papers are correct and containers are identified with the heat number. Bare rod will be examined to insure proper flagging.

6.2 Storage of Covered Electrode, Bare Filler Metal and Consumable Inserts

6.2.1 Covered electrodes, bare filler metal and consumable inserts shall be stored in a central location on site. The storage room shall be weather proof, clean and dry. All containers shall be stored off the floor. Storage areas shall be in accordance with Level C storage requirements of ANSI N45.2.2.

6.2.2 All low hydrogen electrodes shall be stored in ovens at a minimum temperature of 200°F for approximately 8 hours following removal from container and prior to use. All covered electrodes are not to be exposed to ambient temperature for more than 4 hours. Covered electrodes which are not used within the r hour period are to be returned to ovens for 8 hours drying at a minimum temperature of 200°F. The maximum holding oven temperature shall not exceed 350°F. Bare filler metal shall be stored in dry, clean areas and shall not be used in an oxidized or dirty condition.

6.2.3 Stainless steel covered electrodes shall be stored in ovens at 155° to 205° for a minimum of 8 hours after removal from containers and immediately prior to issue or re-issue. If these covered electrodes are exposed to ambient temperatures for more than four hours, they are to be returned to the ovens for 8 hours of drying at 155°F to 205°F.

6.2.4 Cellulose type (E60xx) covered electrodes shall be stored in ovens at 50°F to 105°F after sealed shipping container is open for a minimum of one-hour prior to issue or re-issue.

6.2.5 There will be no more than one type of grouping of welding electrodes in the same oven. The ovens will have identification as to heat and/or lot number of electrodes which are stored in the ovens and the time the electrodes were placed in the oven in order to determine the required 8 hour period.

6.2.6 Electrodes coming in direct contact with water or other contaminating elements should be discarded. Furthermore, electrodes with chipped, cracked, or otherwise damaged flux should be also scrapped.

6.2.7 When weld rod containers have been damaged the electrodes shall be extraordinarily examined to insure the integrity of the flux as per Paragraph 6.2.6.

For information only

NOTATIONS IN THIS COLUMN IN. ATE WHICH CHANGES HAVE BEEN MADE

6.3 Issue of Bulk Welding Material to Contractors and Area Rod Rooms

6.3.1 Contractors that have an approved Quality Control Program and require welding materials for this Project, and Ebasco Area Supervisors requiring welding materials, shall submit a Requisition on the Warehouse or the Filler Metal-Electrodes or Consumable Inserts Requisition (Form ASP-IV-18-2) to the Special Processes Group for review and approval. Following approval, the warehouse shall issue the welding materials in bulk quantity - (meaning large). The materials to remain in original packages). Each contractor shall be responsible for the subsequent control, storage, and issuance of the welding materials.

6.3.2 The requisition shall be filled out with the following applicable items completed in accordance with ASP-IV-10, Form No. ASP-IV-18-2. Items marked N/A (not applicable) are those for which specific information cannot be supplied due to the varied application available to the recipients of bulk issued material.

A) System N/A
B) Isometric of Drawing Number N/A
C) Weld Number N/A
D) Weld Procedure Number N/A
E) Welder's Name N/A
F) Welder's Symbol N/A
G) Signature
H) Quantity
I) Type
J) Size

Q 6.4 Issuance of Welding and Brazing Materials from the Warehouse to Individual Welders Employed by Ebasco. (See form ASP-IV-18-2 and Attachment 7.3, Instruction to Form ASP-IV-18-2.)

Q 6.4.1 In order to receive welding or brazing materials from the warehouse, a welding materials requisition, Form No. ASP-IV-18-2, shall be initiated and authorized by the craft supervisor or his designee. Each item of the form must be completed, except for the lot or heat number, and then the requisition shall be submitted to the Q.C. Supervisor or his designee for review and approval prior to the issuance of any material. A list of authorized signatures for welding material requisitions shall be furnished to the warehouse clerk by lead craft supervisor and will be maintained by the Rod Issue Clerk.

Q 6.4.2 The review of the requisition by the Q.C. Supervisor or designee shall include verification that the welder who is to use the material is currently qualified for the welding procedure specified on the requisition by referring to the Welder's Qualification and Status Record of CP-684 and that the welding material specified is in accordance with the requirements of the welding procedure. Approval shall be indicated by signature on the requisition by the Q.C. Supervisor or his designee. He will also verify that the weld number, or part identification is properly indicated.

6.4.3 When welding material is to be issued by the warehouse, the welder receiving the material shall identify himself by presenting his welder identification card (refer to CP-684) and he shall have an approved welding material requisition. At the time the welding material is issued, the warehouse clerk shall enter the lot or heat number on the material requisition. A copy of the requisition shall be furnished to the welder and shall be available for examination at the work station or location.

6.4.4 Each welder shall weld only with those materials issued specifically to him. The welder shall neither share or borrow welding materials with/from other welders. Additionally, only one type of covered electrode or one type of bare filler wire, not including a consumable insert, shall be issued to a welder at any one time. One type of bare filler wire and one typed of covered electrode may be issued simultaneously if these materials are specified by the applicable welding procedure.

6.4.5 Covered electrodes (with the exception of E-6011 electrodes) shall be issued in a portable electrode oven (rod caddy). Each welder shall be assigned a specific, numbered portable electrode oven. While in the field, the portable electrode oven shall be connected to a 110 volt power supply. If this is not possible or if the portable oven in inoperative or if the electrodes are otherwise exposed to ambient conditions, the portable over and all of the remaining electrodes shall be returned to the warehouse within four hours. (If the portable oven is inoperative, this condition shall be reported to the warehouse clerk so that the unit can be removed from service and repaired).

6.4.6 If the covered electrodes are maintained at the required temperatures as specified in Paragraphs 6.2.2, 6.2.3, and 6.2.4, the electrodes can remain in the field for periods longer than four hours. The portable electrode oven and any remaining undamaged electrodes shall be returned to the warehouse at the end of each shift. Electrode or rod stubs and damaged electrodes shall be deposited only in designated, controlled containers that are stationed at various locations in the field.

6.4.7 Straight lengths of bare filler wire, normally thirty-six inches long, shall have a material identification flag attached to both ends. Lengths less than approximately eighteen inches need be flagged on one end only. A welder shall not weld using a bare filler wire without identification on one end.

6.4.8 Consumable insert material normally has the alloy type imprinted in the wire approximately every three feet. However, to be assured that the identity of the material cut for an insert is not lost, one end of the consumable insert shall be flagged when a length of the material is removed from the coil by the warehouseman. Only enough insert material, with a reasonable overage to allow for trimming, shall be issued for one pipe joint per material requisition.

6.5 Issuance of Welding and Brazing Materials to Individual Welders Employed by Contractors that do not have a Quality Control Program.

6.5.1 Each contractor who does not have a Quality Control Program shall be required to work to the Ebasco Quality Control program.

6.5.2 A list of those authorized to prepare requisitions for welding and brazing materials and a list of the currently qualified welders and brazers shall be furnished to the warehouse clerk and to the Special Processed Group by each Contractor.

6.5.3 The contractor's requisitioner shall complete all of the items on the requisition form, ASP-IV-18-2, except for lot or heat number. This latter information shall be entered by the warehouseman at the time the welding or brazing materials are issued.

6.5.4 The requisition for welding or brazing materials shall be reviewed and approved by the Special Processed Group before welding or brazing materials are to be issued to the welder. The approval shall signify that the welder is currently qualified for the specified procedure and that the welding or brazing materials requested are in compliance with the requirements of the procedure.

6.5.5 The requirements of the following paragraphs shall apply, also, to the contractor and his welders: 6.4.3, 6.4.4, 6.4.5, 6.4.6, 6.4.7, 6.4.8, and 6.4.9.

NOTE: In paragraph 6.4.4 there is reference to a welder identification card. Each contractor shall be responsible for assigning identification to his welders and for furnishing the required documentation.

6.6 The Weld Room Attendant shall verify proper electrode storage oven temperature once per shift and maintain a log as evidence of verification (Form ASP-IV-18-1). At this time, he should verify that only calibrated thermometers are in use.

6.7 All electrode stubs, and rejectable electrodes shall be deposited in a controlled container until removed from the site in a predetermined manner. They shall not be discarded in trash containers in the general work areas.

7.0 ATTACHMENTS

7.1 Form No. ASP-IV-18-1

7.2 Form No. ASP-IV-18-2

7.3 Instruction to Form No. ASP-IV-18-2

For information only

NOTATIONS IN THIS COLUMN IN DATE WHICH CHANGES HAVE BEEN MADE

ELECTRODE STORAGE OVEN TEMPERATURE LOG

TEMP/OVEN #	DATE:	TIME:	THERMOMETER #	WAREHOUSEMAN

ORM NO. ASP-IV-18-1 5/12/76

ATTACHMENT 7.2
FORM # ASP-IV-18-2

CONSTRUCTION WAREHOUSE

CONTRACTOR NAME (1)

Subcontractor (2) Date (3)

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION 5536

System (4), Iso or Dwg. No. (5)

Weld No. (6), Weld Procedure no. (7)

Welder's Name (8) Symbol (9)

Authorized Signature (10)

Approved by QC Supervisor/Inspector (11) Date (12)

1. Bare Rod:
   (A) Quantity: (13) Type (14) Size (15) Lot or Heat (16)

   Quantity Returned (17)

2. Covered Electrodes
   (A) Quantity (18) Type (19) Size (20) Lot or Heat (21)

   Quantity Returned (22)

3. Consumable Inserts
   (A) Quantity (23) Type (24) Size (25) Lot or Heat (26)

   Quantity Returned (27)

Issued by (28) Date (29)

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

For information only

Attachment 7.3
ASP-IV-18

INSTRUCTION TO FORM NO. ASP-IV-18-2

Item No.	Description	Individual Responsible for Entry
1	Ebasco Services Ind.	Craft Supvr. or designee
2	Name of Contractor as specified in para. 6.5.	Supervisor or designee
3	Date as required	Craft Supvr. or designee
4	Start-up designation or process (Ex: Temporary)	Craft Supvr. or designee
5	Design document number detailing the work to be performed (where applicable)	Craft Supvr. or designee
6	Unique weld numbers for all Class 1, 2, 3, ASME III NF component and only Seismic Class 1 full penetration weld. For all other Seismic Class I applications record the unique drawing no. that specifies the welding requirements. For all other welding applications enter the words "all welds".	Craft Supvr. or designee
7	As Applicable	Craft Supvr. or designee
8	As Applicable	Craft Supvr. or designee
9	As Applicable	Craft Supvr. or designee
10	Applicable Authorized Signature	Craft Supvr. or designee
11	Special Process Group Designee	As Required
12	Date of Approval	As Required
13 - 29	To be completed by Weld Rod Room Attendant	As Applicable

NOTE: Items not applicable shall be denoted N/A.

ATTACHMENT 4

QA VAULT

TOMPKINS-BECKWITH, INC.
Waterford S.E.S. Unit 3
Louisiana Power & Light Co.
Killona, Louisiana

Proc. No. TBP-3 Rev. "J"

Page No. 0-6

Title: WELD MATERIAL CONTROL PROCEDURE

TOMPKINS - BECKWITH INC.
CONTROLLED DOCUMENT
NOV 13 1980
Document Accountable & Return
Control Number D-3-1
(TB Doc. Control Stamp)

PROCEDURE COVER SHEET

DATE	COMMENTS	Changes Concurred By:
5-12-80	Procedure Revised due to QAM Revision	

EBASCO SERVICES INCORPORATED
QUALITY ASSURANCE ENGINEERING
This Document is:
☑ Reviewed Without Comments
☐ Reviewed With Comments as Noted; Incorporate Comments, and Resubmit; Proceed With Order.
☐ Rejected: Revise and Resubmit
NOTE: Review of this document with or without comments is for general conformance with the applicable specification only and does not relieve the manufacturer or contractor from full responsibility for delivery of all materials, equipment, services and documentation in strict accordance with the Purchase Order.
By: [signature]
Date: 5-12-80

FOR INFORMATION ONLY

PREPARED BY:

SIGNATURE	DATE	TITLE
[signature]	5/12/80	QA SUPERVISOR

APPROVED BY:

SIGNATURE	DATE	TITLE
[signature]	5/12/80	PROJECT ENGINEER
J. B. [signature]	5-12-80	QA SITE MANAGER

TOMPKINS-BECKWITH, INC.
Jacksonville, Florida

Proc. No.	TBP-3
Rev.	~~I~~ J
Page	1 of 6

TITLE: WELD MATERIAL CONTROL PROCEDURE

1.0 PURPOSE

1.1 The purpose of this procedure is to delineate the measures that have been established for meeting the requirements for Nuclear Power Plant Weld Material Control for Waterford #3.

2.0 SCOPE

2.1 The measures herein established are to assure that the requisite quality of all weld material received and accepted by, the Company at the jobsite is preserved from the time the weld materials are removed from Ebasco control until incorporated into the completed systems.

3.0 REFERENCE

3.1 Quality Assurance Criteria for Nuclear Power Plants, 10 CFR 50, Appendix B.

3.2 Quality Assurance Requirements for Control of Procurement of Items, ANSI N45.2.13.

3.3 Packaging, Shipping, Receiving, Storage and Handling of Items for Nuclear Power Plants (during the construction phase), ANSI N45.2.2.

3.4 Tompkins-Beckwith, Inc. Quality Assurance Manual.

3.5 Tompkins-Beckwith Procedure TBP-8 Audit Procedure.

4.0 DEFINITIONS

4.1 Classification - the organization of items according to their type, grade or code.

4.2 Documentation - any written or pictorial information describing, defining, specifying, reporting or certifying activities, requirements, procedures or results.

4.3 Item - any level of unit assembly, including structure, system, sub-system component, part or material.

4.4 Handling - an act of physically moving items by hand or mechanical means, but not including transport modes.

4.5 Storage - the disposition of material from the time the item(s) is/are received on the construction jobsite until the item(s) is/are released from storage facilities for fabrication or installation.

4.7 Weld Material - electrodes, consumable inserts, filler wire, etc.

4.8 Authorized Withdrawal Individual (AWI) - the Welding Supervisor or a person designated by him.

4.9 Rod Room - specific area designated for storage and issuance of weld material.

5.0 RESPONSIBILITY

5.1 The Quality Assurance Supervisor, or his designee, is responsible for the inspection and reporting of quality activities defined in this procedure.

5.2 The Welding Supervisor is responsible for:

A. Assuring that only welding materials which have been tested and certified as appropriate for the intended heat treating, are used on welds requiring post weld heat treatment and impact testing.

B. Requisitioning weld materials from Ebasco.

C. The issuance of weld materials to the Construction forces.

5.3 The QC Engineer is responsible for reviewing the documentation for welding materials used to verify that they are in compliance with the Code.

5.4 The Quality Control Inspectors are responsible for performing receipt inspection and verification of the welding materials at the weld joint.

6.0 INSTRUCTIONS

6.1 Weld materials are purchased, received, inspected and warehoused by Ebasco Services, Inc.

6.2 Withdrawal of welding materials from the Ebasco Warehouse shall be accomplished in the following manner:

A. The Welding Supervisor, or his designee, shall prepare Ebasco Form # ASP-IV-18-2 (Exhibit #1). All pertinent information will be included.

B. Upon presentation of Ebasco Form # ASP-IV-18-2, the Ebasco Warehouseman will issue the material requested and sign the form in the space provided.

C. Quality Control will verify that the weld material requisitioned from Ebasco's Warehouse is correct and tagged with an Ebasco QC Accept Tag. QC acceptance will be denoted by the inspector initialing Ebasco's Form ASP-IV-18-2.

D. One copy of Ebasco Form ASP-IV-18-2, will be forwarded to the QA Document Controller for filing in the QA Master File. Three copies will be retained by Ebasco.

E. Weld materials withdrawn from Ebasco's control for bulk storage are warehoused in a lock and key controlled area.

6.3 Control of Bulk Storage Weld Material

6.3.1 Weld material is requested from the bulk storage by the Welding Supervisor, or his designee, on Filler Metal Electrodes or Consumable Inserts Requisition, Form 8009, which is approved by the Materials Controller, or designee, for transfer to the Rod Room.

6.3.2 The Welding Supervisor, or his designee, shall determine the need for additional weld material by visual inspection of bulk storage stock and/or maintaining a running account of the quantity of weld material issued for field use and shall re-requisition additional weld materials from Ebasco as necessary.

6.4 Control of Rod Room Weld Material

6.4.1 The Rod Room Clerk retains a key to the Rod Room and issues weld material only upon receipt of a Filler Metal Electrodes or Consumable Inserts Requisition, Form 8009, prepared by the Welding Supervisor, or his designee. The individual preparing the Requisition for filler material to be used in pipe welds will indicate at "System" (Item #1 on Forms Guide) the System Name and the System Class. For Example: SYSTEM CS, Class 2

6.4.1.1 The Rod Room Clerk will utilize the Welder Qualification Summary to ascertain that the Welder requisitioning weld materials is qualified to weld to the Procedure listed on Form 8009.

6.4.1.2 For Class 1, 2, 3, 4, 5 and all chrome moly piping welds, the Form 11009 is presented to the Rod Room Clerks so that he may verify that the Weld Procedure Number and filler metal on the Controlled Weld Joint Record (Form #11009) and the Filler Metal Electrodes or Consumable Inserts Requisition (Form 8009) match.

NOTE: Rod will not be issued until this determination has been made.

6.4.1.3 The Welding Supervisor or his designee, collects the 8009 Forms daily from each rod room for welding material issued and returned. The Welding Supervisor distributes the original to the QA Document Controller with a copy being sent to QC ~~Welding~~. LWR 5/12/80

6.4.2 Materials requiring heating after opening shall be placed in ovens capable of maintaining proper temperatures for classifications involved.

6.4.3 Weld rod of the same size, but with different heat numbers shall not be eated in the same oven.

6.5 Control of Weld Material in the Field

6.5.1 At the point of usage the QC Inspector shall verify the classification of rod utilized.

6.5.2 The quantity of coated electrodes issued to a welder is only sufficient for his use during that shift. Excess electrodes are to be returned to the issuing point at the end of a welder's shift. Returned rods are weighed to the nearest 1/4 pound by the Rod Room Clerk.

6.5.3 Bare rod will be issued to the welder in tube type containers. Excess bare rod not utilized will be returned to the issuing point.

6.5.4 The Foreman and welder shall maintain the control and proper use of weld materials and are subject to monitoring by the Welding Supervisor and verification by Quality Control at the weld joint.

6.5.5 Damaged, damp or unidentifiable materials shall be placed in a locked container until they are removed from the jobsite or deposited in a controlled scrap or dumping area at the project site.

6.5.6 All weld rod stubs are placed in small containers. These containers are returned to the rod room and dumped into 55 gallon drums, which are secured by lock and key, until the weld rod stubs are removed from the jobsite.

6.6 Ovens

6.6.1 Each oven used for bulk storage shall be assigned an identification number. They shall be of (or equal to) the following manufacture:

A. Phoenix Type 300

B. Phoenix Type 900

6.6.1.1 For bulk storage all low hydrogen electrodes and submerged arc fluxes shall be stored in ovens at 250° F (plus or minus 50° F) for approximately 8 hours following removal from containers and prior to use. All coated electrodes and fluxes issued to the field are not to be out of rod caddies for more than 4 hours. Coated electrodes and fluxes taken out of rod caddies that are not used within 4 hours, are to be returned to ovens for 8 hours drying at 250° F, plus or minus 50° F. All stainless steel covered electrodes after removing from sealed container will be stored in ovens at 180° F ± 25° F. When these electrodes are exposed to the ambient temperature for more than four (4) hours, the electrodes shall be returned to the ovens for eight (8) hours at 180° F ± 25° F.

6.6.1.2 The temperature of each bulk storage oven shall be monitored daily by the Rod Room Clerk and recorded on the Electrode Oven Temperature Log (Exhibit #2). ⚠1

6.6.2 Each oven used for "point of use" storage shall be assigned an identification number and be of (or equal to) the following manufacture.

A. Phoenix Type 10 Series

B. Phoenix Type 50A

6.6.2.1 Point of use ovens shall be checked by Quality Control daily on a random basis to ascertain that the temperature of subject ovens is sufficient to maintain the rods in a moisture free environment. Daily inspection results will be documented on Surveillance Report Form GP-723-12.

6.6.3 Each individual entering data on the Electrode Oven Temperature shall initial where indicated. Logs are sent to QA Document Controller for filing in the QA Master File.

6.7 Gases

6.7.1 Welding and cutting gases are furnished by Ebasco.

6.7.2 Should Tompkins-Beckwith, Inc. purchese the above items, the Vendors will be required to furnish verification of quality and purity.

7.0 AUDITING

7.1 The implementation of this procedure will be audited by Quality Assurance in accordance with Tompkins-Beckwith Inc. Procedure TBP-8.

8.0 EXHIBITS

8.1 Ebasco Form ASP-IV-18-2, Exhibit #1 (Forms Guide attached)

8.2 Exhibit #2 - Electrode Oven Temperature Log (Forms Guide attached)

8.3 Form 8009 Rev. 1 - Filler Metal Electrodes or Consumable Inserts Requisition. (Forms Guide attached).

8.4 Form GP-723-12 - Surveillance Report (Forms Guide attached) Rev. 1

CONSTRUCTION WAREHOUSE EXHIBIT #1

CONTRACTOR NAME (1)

Subcontractor (2) Date (3)

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION 10005

SAMPLE

System (4) Iso or Dwg. No (5)

Weld No. (6) Weld Procedure no. (7)

Welder's Name (8) Symbol (9)

Authorized Signature (10)

Approved by QC Supervisor/Inspector (11) (12) Date (13)

1. Bare Rod:
(A) Quantity: (14) Type (15) Size (16) Lot or Heat (17)
Quantity Returned (18)

2. Covered Electrodes
(A) Quantity (19) Type (20) Size (21) Lot or Heat (22)
Quantity Returned (23)

3. Consumable Inserts:
(A) Quantity (24) Type (25) Size (26) Lot or Heat (27)
Quantity Returned (28)

Issued by (29) Date (30)

FORM NO. ASP—IV—18-2(6-1-76)

Q C COPY

FORMS GUIDE FOR
FORM ASP-IV-18-2

FILLER METAL ELECTRODES OR CONSUMABLE INSERTS REQUISITION

Items (1) through (10) are completed as applicable by the Welding Supervisor or his designee.

Items (11) and (13) are completed by Ebasco.

Item (12) is completed by Tompkins-Beckwith Quality Control.

Items (14) through (28) are filled in by the Welding Supervisor, as applicable, except for items (17) (22) (27) (29) and (30), which are completed by Ebasco

TOMPKINS-BECKWITH, Inc.
[illegible] Blvd.
• P. O. Box [illegible] •
Jacksonville, Florida [illegible]

Phone [illegible]

EXHIBIT #2

ELECTRODE OVEN TEMPERATURE LOG

		TEMPERATURE						QC/QA
DATE	TIME	No.	No.	No.	No.	No.	No.	Initials

FORMS GUIDE FOR ELECTRODE OVEN TEMPERATURE LOG

This form is completed and initialed by the Rod Room Clerk when monitoring the temperature of the ovens used for bulk storage.

This form is completed and initialed by Quality Control when verifying proper oven temperature on "Point of Use" ovens.

Form 8009, Rev. 1
Part A

TOMPKINS-BECKWITH, INC.
P.O. Box 390
HAHNVILLE, LOUISIANA 70057

Serial No. _____

FILLER METAL ELECTRODES OR CONSUMABLE INSERTS REQUISITION

SYSTEM (1) _____ ISO or Dwg. No. (2) _____

Weld/Hanger No. (3) _____ Weld Proc. No. (4) _____

Welder's Name (5) _____ Symbol (6) _____

Authorized Signature (7) _____

1. Filler Materials:

Quantity (8) _____ Type (9) _____ Size (10) _____ Lot & Heat No. (11) _____

Quantity (8) _____ Type (9) _____ Size (10) _____ Lot & Heat No. (11) _____

Quantity (8) _____ Type (9) _____ Size (10) _____ Lot & Heat No. (11) _____

2. Consumable Inserts:

Quantity (8) _____ Type (8) _____ Size (8) _____ Lot & Heat No. (11) _____

ISSUED BY (12) _____ Date (13) _____

Form 8009 Rev. 1
Part B

Serial No. _____

FILLER METAL RETURNED:

1. Filler Materials:

Quantity _____ Type _____ Size _____ Lot & Heat No. _____

Quantity _____ Type _____ Size _____ Lot & Heat No. _____

Quantity _____ Type _____ Size _____ Lot & Heat No. _____

2. Consumable Inserts:

Quantity _____ Type _____ Size _____ Lot & Heat No. _____

Checked By _____ Date _____

FORMS GUIDE FOR

FILLER METAL ELECTRODES OR CONSUMABLE INSERTS
REQUISITION

FORM 8009 REV. 1

Part "A"

Lines 1-10 are completed by the Welding Supervisor, or his designee, as applicable. Lines 11, 12 and 13 are completed by the Rod Room Clerk, upon issuance of the material. One copy is placed in the Traveler and one goes with the rod caddy (coated electrodes only) or welder

Part "B"

Upon return of the form from the field, Part "B" is completed by the Rod Room Clerk and forwarded to the Welding Supervisor for filing, per Ebasco contract requirements:

Contract No. : W3-NY-11 Section: 884-75TA

Remaining copies of the form are distributed to the Welding Supervisor, QC Engineer and QA Document Controller.

NOTE: The Form will have sequential serial numbers preprinted.

TOMPKINS-BECKWITH, INC.
Waterford SES - Unit 3

SURVEILLANCE REPORT

W3-NY-11
Contract

Category:
- [ ] Final
- [ ] In-process

Area & Elev

QC Welding-Inspector

Shift

Date

Dwg./Iso Number	Weld No.	Welder ID	Weld Proc.	Acc.	Rej.	Rod Cad, Ck. No.	Rod Cad, Ck. Result	Preheat	Interpass	Remarks

Form CP-723-12 Rev. 1

INSTRUCTIONS FOR COMPLETING THE SURVEILLANCE REPORT (FORM GP-723-12 REV. 1)

Category	Piping category being inspected.
Final	For use on non-safety related piping category which requires a 10% inspection of final welds.
In-Process	For use on items being inspected during welding: Amp check, Rod caddie check, In-process checks of Preheat & Interpass temp. etc.
Area and Elevation	Building or area the inspection is being performed and the elevation.
QC ~~Welding~~ Inspector	The person responsible for initiating and completing all data pertinent to this form.
Shift	1st, 2nd, etc.
Date	The date the report is initiated.
Drawing/ ISO No.	Record the ISO No. as the primary designation wherever possible.
Weld No.	The unique number given to each field or shop weld on each isometric drawing. (When Applicable)
Welder Identification	The welder (s) stamp as marked near the actual weld.
Welding Procedure	The T-B welding procedure being used during the surveillance inspection (If Applicable)
Accept/Reject	The QC ~~Welding~~ Inspector initials either the accept or reject block.
Rod Caddy Check	Record the rod caddy number, and result.
Preheat	The QC ~~Welding~~ Inspector will check the preheat and record same. Inspection of preheat is during in-process of welding.
Interpass	The QC ~~Welding~~ Inspector will check the interpass temperature and record same. Inspection of interpass is during in-process of welding.
Remarks	Any additional information which may be of use may be listed here.

ATTACHMENT 5

ATTACHMENT #5
TOMPKINS-BECKWITH DISCREPANCY NOTICES

DOCUMENT #	DATE	PROBLEM DESCRIPTION
DN-W-642	11-2-79	Rod room clerk failed to log oven temperature one day
DN-W-339	2-5-79	Loss of power to rod oven for indeterminate time, no minimum temperature indicated
DN-W-186	6-16-78	Rod ovens out of calibration for eight days
DN-W-411	4-4-79	Rod oven out of control storage
DN-W-468	4-10-79	Rod caddy not plugged in
DN-W-546	6-27-79	Power loss to rod oven, minimum temperature 175°F
DN-W-545	6-27-79	Power loss to rod oven, minimum temperature 185°F
DN-W-742	2-18-80	Power off for unknown length of time, no minimum temperature indicated
DN-W-547	6-27-79	Power loss to rod oven, minimum temperature 150°F
DN-W-654	11-13-79	Rods and caddy not returned to rod room at end of shift
DN-W-752	2-28-80	Rods and caddy not returned to rod room at end of shift
DN-W-810	4-24-80	Rods and caddy not returned to rod room at end of shift
	EBASCO NONCONFORMANCE REPORTS	
NCR-2459	1-15-81	Power loss to rod oven, minimum temperature 105°F
NCR-2810	7-8-81	Portable oven temperatures out of 225°F ± 25°F allowable range on the high side
NCR-4571	9-20-82	Oven temperature out of acceptable range, minimum temperature 140°F
NCR-5245	1-3-83	Portable oven out of acceptable range on the high side, 375°F
NCR-6915	8-31-83	Filler metal not being properly disposed of
NCR-7791	7-20-84	Failure to perform weekly surveillance of portable rod ovens

DISCREPANCY NOTICE

D. N. Number W-642
Date of Report 11-2-79

Tompkins-Beckwith, Inc.
Project: Waterford SES Unit 3
Contract: W3-NY-11 Job 723

Item Description ELECTRODE HOLDING OVENS

Location TGB 13 System NA

P.O./Contract No. W3-NY-11 Dwg./Spec. No. TBP-3 6.6.1.2

1. Discrepancy Description: ABOVE ITEMS HAVE NOT HAD TEMPERATURE MONITERED DAILY BY THE ROD ROOM CLERK ON THE ELECTRODE OVEN TEMPERATURE LOG ~~SINCE~~ ON 10-31-79

QC Inspector R. Q. Rogers

2. Recommended Disposition: GIVE TRAINING CLASS ON DUTIES OF ROD ROOM PERSONNEL

Provided By [signature] QC Review By: [signature] Date 11-2-79

3. NCN No. N/A QA Supervisor [signature] Date 11/2/79

4. Disposition Required: NONE - THIS IS A VERY ISOLATED CASE OF A 1 DAY ~~OMITTS~~ OMISSION. THE HISTORY OF THE LOG BEARS THIS OUT HM 11-14-79

RECEIVED
NOV 14 1979
T-B QA RECORDS

For Project Engineer H. Miller Date 11-14-79

Referred To: H. MILLER

5. Corrective Action Taken: ROD CLERK HAS BEEN ADVISED OF THIS ISOLATED OMISSION

Supervisory Position Wldg SUPER. Signature H. Miller Date 11-14-79

6. Reinspection remarks: No reinspection required

QC Inspector [signature] Date 11-14-79 HM 11-14-79

7. Accept ✓ Reject N/A New DN No. N/A Issued

QC Engineer [signature] Date 11-14-79

DISCREPANCY NOTICE

D. N. Number W-339

Date of Report 2-5-79

Tompkins-Beckwith, Inc.

Project Waterford SES Unit 3

Contract W3-NY-11 Job 723

T.B.O.A. Records REVIEWED 2 WATERFORD 3

Form 9002-Rev. 0 (6/27/77)

MONDAY

Item Description ROD OVENS

Location +21 ROD Q System NA

P.O./Contract No. W3-NY-11 Dwg./Spec. No. NA

1. Discrepancy Description: LOSS OF POWER TO ROD OVEN IN +21 ROD ROOM

QC Inspector [signature]

2. Recommended Disposition: LOCK OVENS + DO NOT ISSUE RODS UNTIL RODS HAVE BEEN BAKED. C/S RODS FOR 8 HOURS AT 250°F ± 50 S/S RODS FOR 4 HOURS AT 180° ± 25°

Provided By [signature] QC Review By: [signature] Date 1-5-79

3. NCN No. N/A QA Supervisor R. Hollenbeck Date 1-5-79

4. Disposition Required: Per above ~~Station QC to~~ Notify QC when ovens are turned back on

Project Engineer [signature] Date 2/5/79

Referred To: C Carson

5. Corrective Action Taken: As Per above recommended disposition

Supervisory Position Supt. Signature [signature] Date 2-7-79

6. Reinspection remarks: Per Recommended Disposition, Acceptable SEE ATTACHED REPORT

QC Inspector WE Mitchell Date 2-7-79

7. Accept ✓ Reject ___

New DN No. NA Issued QC Engineer [signature] Date 2-9-79

TOMPKINS-BECKWITH, INC.
Waterford SES - Unit 3

SURVEILLANCE REPORT

WJ-NY-11
Contract

Category: N/A
N/A Final
N/A In-process

RAB +21'
Area & Elev

S. ROY
QC Welding Inspector

1st
Shift

2-5-79
Date

DN# 339 WELDING ROD OVENS

Dwg./Iso Number	Weld No.	Welder ID	Weld Proc.	Acc.	Rej.	Rod Cad. Ck. No:	Rod Cad. Ck. Reslt	Preheat	Interpass	Remarks
CARBON 300-21										240° F
CARBON 300-24					N					270° F
CARBON 300-25				N		A				290° F
STAINLESS 300-8					A					190° F
STAINLESS 300-28										200° F
						N				
				N				A		
						A				

Form QC-721-12 Rev.

DISCREPANCY NOTICE

D. N. Number W-186

Tompkins-Beckwith, Inc.

Date of Report 6-16-78

T.B.O.A. Records REVIEWED 2

Project Waterford SES Unit #3

Form 9002-Rev. 0 (6/27/77)

Contract W3-NY-11 Job 723

Item Description Rod Ovens # 300-21, 22, 23, 24 & 25

Location -35 & +21 System N/A

P. O. / Contract No. _____ Dwg./Spec. No. N/A

1. Discrepancy Description: Rod Ovens are out of Calibration since 6-8-78 Rods have been issued out of these Ovens for 8 days without the ovens being calibrated.

Q. C. Inspector J E Hayes

2. Recommended Disposition: Welding Rods are not to be issued from these Rod Ovens until these check out as recalibrated

Provided By J E Hayes Approved By J E Hayes Date 6-16-78

3. NCN No. N/A Q. A. Supervisor W. M. Rindos Date 6/20/78

4. Disposition Required: ~~Verify calibration of mercurial thermometers using instructions CAL-2. Do not issue rods until thermometers are verified.~~ ARC Replace out of calibration thermometers with calibrated thermometers. Verify calibration of out of calibration thermometers.

Project Engineer P Cole Date 6/16/78

Referred To: C Cason

5. Corrective Action Taken: C.B 6-16-78 Done per above disposition

Supervisory Position Supt. Signature S. Bento Date 6-16-78

6. Reinspection remarks: Thermometers check for temperatures

Q. C. Inspector S A Tilly Date 6-17-78

7. Accept ✓ Reject _____

New DN No. _____ Issued Q.C. Engineer J E Hayes Date 6-A-78

DISCREPANCY NOTICE

D. N. Number W411

Date of Report 4/4/79

Tompkins-Beckwith, Inc.

Form 9002-Rev. 0 (6/27/77)

Project Waterford SES Unit 3

Contract W3-NY-11 Job 723

T.B.QA Records REVIEWED 2 WATERFORD 3

Item Description Rod oven #300-41

Location RCB Superintendent Trailer System N/A

P.O./Contract No. Dwg./Spec. No. N/A

1. Discrepancy Description: Rod oven out of control storage Day & Night shift Superintendent issuing control filler material 309-16 1/8" HT# 8K4R

QC Inspector [signature]

2. Recommended Disposition: RCB SUPERINTENDENT MUST HAVE & MAINTAIN OVEN TEMPERATURE LOG, ALSO MUST HAVE A LOCKED RECEPTACLE FOR RETURNED STUBS

Provided By [signature] QC Review By: [signature] Date 4-5-79

3. NCR No. N/A QA Supervisor [signature] Date 4/5/79

4. Disposition Required: Initiate Electrode oven Temperature Log. Place returned stubs in locked receptacle

Project Engineer J Cole Date 4/5/79

Referred To: H. Miller

5. Corrective Action Taken: OVEN TEMPERATURE LOG HAS BEEN INIATED. LOCKED RECEPTICLE FOR ROD STUBS HAS BEEN PROVIDED. ROD OVEN IS & HAS BEEN LOCKED

Supervisory Position Night Super H. Miller Signature H. Miller Date 4-11-79

6. Reinspection remarks:

ACCEPTABLE PER ABOVE DISPOSITION

QC Inspector W E Mitchell Date 4/11/79

7. Accept ✓ Reject NA

New DN No. NA Issued QC Engineer [signature] Date 4-11-79

DISCREPANCY NOTICE

RECEIVED

APR 24 1979

D. N. Number W-468

Date of Report 4-10-79

Tompkins-Beckwith, Inc.

Form 9002-Rev. 0
(6/27/77)

Project Waterford SES Unit 3 I-B QA RECORDS

Contract W3-NY-11 Job 723

Item Description ROD CADDY 10-96

Location 36A +69 RAB System Maintaince

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

TO QA Records RECEIVED WATERFORD 3

1. Discrepancy Description: ROD CADDY'S UNPLUGED - #10-96
RODS ARE BEING USED TO WELD Temporary SUPPORTS FOR Main STEAM
(Rod Slip # 91907 WP1.4) WELDER INFORMED TO PLUG CADDY IN. WELDER STATED HE DID NOT HAVE TO PLUG IT IN SINCE IT WAS USED FOR TEMPORY SUPPORTS.

QC Inspector [signature]

2. Recommended Disposition: AS ROD MAY BE EXPOSED TO AMBIENT TEMPERTURE FOR 4 HOURS BEFORE THEY MUST BE REBAKED
THIS DOES NOT MEAN THAT THE ROD CADDY MAY BE UNPLUGED FOR 4 HOURS. INFORM CRAFT THAT ROD CADDY'S MUST BE PLUGGED IN AT ALL TIMES REGARDLESS OF THE PURPOSE THEY ARE IN USE FOR

Provided By [signature] QC Review By: [signature] Date 4-11-79

3. NCI No. N/A QA Supervisor [signature] Date 4/11/79

4. Disposition Required: per above

Project Engineer [signature] Date 4/11/79

Referred To: C Cason

5. Corrective Action Taken: Superintendent instructed that Caddie must be plugged in at all times

Supervisory Position Asst P.M. Signature [signature] Date 4/24/79

6. Reinspection remarks: CRAFT HAS BEEN INFORMED

QC Inspector W E Mitchell Date 4/24/79

7. Accept ✓ Reject N/A

New NI No. N/A Issued QC Engineer W E Mitchell Date 4/24/79

TOMPKINS-BECKWITH, Inc.
P. O. Box 390
Hahnville, Louisiana 70057

Phone 721-2306
721-2307

April 24, 1979

INTEROFFICE MEMORANDUM

TO : Craft Supervision

FROM: C. R. Beatty, Jr., Project Superintendent

Rod caddys must be plugged in at all times. This is for all work, either temporary or permanent.

C. Beatty

C. R. Beatty, Jr.

CB/dg

DISCREPANCY NOTICE

D. N. Number W-546

Date of Report 6-27-79

Tompkins-Beckwith, Inc.

Project Waterford SES Unit 1

Contract W3-NY-11 Job 723

RECEIVED

JUL [illegible]

THE QA RECORDS

Form 3002-Rev. 0 (5/27/77)

T-B QA Records REVIEWED WATERFORD 3

Item Description: Rod OVEN # 300

Location: RAB EL.-35 AREA 31C System: N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

1. Discrepancy Description: Violation of TEMPERATURE RANGE ACCORDING to procedure. More than 50° below 250° RANGE REQUIREMENT 175°F [initials] 6-27-79

QC Inspector: [signature]

2. Recommended Disposition: ~~Rebake for 8 hours according to SRS~~ 6-27-79 ~~PROCEDURE.~~ HAVE ENGINEERING GIVE DISPOSITION

Provided By [signature] 6-27-79 QC Review By: [signature] Date 6-27-79

3. NCR No. N/A QA Supervisor [signature] Date 6/27/79

4. Disposition Required: PROBLEM WAS DUE TO AN ELECTRICAL OUTAGE OF SEVERAL HOURS DURATION. RODS IN OVEN WERE NOT EXPOSED TO ANY ABNORMAL MOISTURE CONDITION. THESE RODS HAD PREVIOUSLY BEEN HEATED WITHIN THE PERMISSIBLE RANGE FOR 8 HRS PLUS. UNDER THESE CONDITIONS RODS COULD BE WITHDRAWN FOR USE.

Project Engineer [signature] Date [illegible]

Referred To: T. Stucky

5. Corrective Action Taken: NO rods was used from oven for 48 ± hr. from when D.N. was put on.

Supervisory Position Pipefitter Gen. Foreman Signature [signature] Date 6-29-79

6. Reinspection Remarks: Rods were under Heat range requirements R.T. ~~from when D.N. was~~ for more than the hours required for rebake by procedure.

QC Inspector [signature] Date 6-29-79

7. Accept ✓ Reject N/A

Item II No. N/A Listed QC Engineer [signature] Date 7-2-79

X

DISCREPANCY NOTICE

D. N. Number W-545

RECEIVED

Date of Report 6-27-79

Tompkins-Beckwith, Inc.

Form 9002-Rev. 0 (6/27/77)

Project Waterford SES Unit 3

JUL 2 1979

Contract W3-NY-11 Job 723

T-B QA RECORDS

Item Description Rod OVEN # 30B 27

Location RAB- El. -35 AREA 31 C System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

REVIEWED T-B QA Records WATERFORD 3

1. Discrepancy Description: Violation of temperature range accordding to procedure. More than 50° below 250° requirement. 185°F J 6-27-79

QC Inspector Percy J. Wimberly

2. Recommended Disposition: ~~Rebake accordding to procedure for 8 hours.~~ SH 6-27-79 HAVE ENGINEERING GIVE DISPOSITION

Provided By ~~Percy J. Wimberly~~ SH 6-27-79 QC Review By: [signature] Date 6-27-79

3. NCR No. N/A QA Supervisor [signature] Date 6/27/79

4. Disposition Required: PROBLEM WAS DUE TO AN ELECTRICAL OUTAGE OF SEVERAL HOURS DURATION. RODS IN OVEN WERE NOT EXPOSED TO ANY ABNORMAL MOISTURE CONDITION. THESE RODS HAD PREVIOUSLY BEEN HEATED WITHIN THE PERMISSIBLE RANGE FOR 8 HRS. PLUS. UNDER THESE CONDITIONS RODS COULD BE WITHDRAWN FOR USE.

Project Engineer [signature] Date 6/27/79

Referred To: T. Sullivan

5. Corrective Action Taken: No rods was used for 45± hr from when D.N. was put on

Supervisory Position Rigletter Gen. Foreman Signature Elias Thibodeaux, Jr. Date 6-29-79

6. Reinspection Remarks: Rods were under Heat range requirements for more than the hours required for rebake by procedure.

QC Inspector Percy J. Wimberly Date 6-29-79

7. Accept ✓ Reject NA

New DN No. NA Issued QC Engineer [signature] Date 7-2-79

DISCREPANCY NOTICE

D. N. Number

Tompkins-Beckwith, Inc.
Project: Waterford SES Unit 3
Contract: W3-NY-11 Job 723

Date of Report 2/18/80

MONDAY

TBQA Records REVIEWED 7 WATERFORD 3

Item Description -35 Rod Room

Location RAB -35 System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

1. Discrepancy Description: ELECTRICAL POWER OFF FOR AN UNKNOWN LENGTH OF TIME.

QC Inspector G Reynolds

2. Recommended Disposition: TO ENGINEERING

Provided By G Reynolds QC Review By: G Reynolds Date 2/18/80

3. NCN No. N/A QA Supervisor K Dan for Date 2-18-80

4. Disposition Required: AFTER OVENS HAVE BEEN BROUGHT BACK TO TEM HM 2-18-80 PROPER TEMPERATURE HOLD IN OVENS FOR A MINIMUM OF 8 HOURS PRIOR TO ISSUENCE OF ROD.

FOR Project Engineer H. Miller Date 2-18-80

Referred To: AL MEHNIER

5. Corrective Action Taken: POWER ON OVER 8 HRS AT PROPER TEMPERATURE. AS PER PROCEDURE

Supervisory Position Supt Signature A V. Mayer Date 2-20-80

6. Reinspection remarks: Above disposition followed and accepted

QC Inspector J J Winslett Date 2-20-80

7. Accept ✓ Reject N/A New DN No. N/A Issued

QC Engineer A Mayer Date 2-20-80

Form 9002-Rev. 0 (6/27/77)

DISCREPANCY N

D. N. Number W-547

Date of Report 6-27-79

Tompkins-Beckwith, Inc.

RECEIVED

JUL 2 1979

Form 9002-Rev. 0 (5/27/77)

Project Waterford SES Unit 3

Contract W3-NY-11 Job 723

LP&L QA RECORDS REVIEWED WATERFORD 3

Item Description Rod Oven # 300

Location RAB - EL. -35 AREA 31C System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

1. Discrepancy Description: Violation of temperature range according to procedure. ~~Less~~ more than 25° below 180° temperature requirement: 150°F 6-27-79

QC Inspector [signature]

2. Recommended Disposition: ~~Rebake rod for 2 hours according to procedure.~~ 6-27-79 HAVE ENGINEERING GIVE DISPOSITION

Provided By [signature] 6-27-79 QC Review By: [signature] Date 6-27-79

3. NCR No. N/A QA Supervisor [signature] Date 6/27/79

4. Disposition Required: PROBLEM WAS DUE TO AN ELECTRICAL OUTAGE OF SEVERAL HOURS DURATION. RODS IN OVEN WERE NOT EXPOSED TO ANY ABNORMAL MOISTURE CONDITION. THESE RODS HAD PREVIOUSLY BEEN HEATED WITHIN THE PERMISSIBLE RANGE FOR 8 HRS. PLUS. UNDER THESE CONDITIONS RODS COULD BE WITHDRAWN FOR USE

Project Engineer [signature] Date 6/28/79

Referred To: T. Stucky

5. Corrective Action Taken: No rods was used for 46½ hr. from when D.N. was put on

Supervisory Position Asst. Mgr. ... Signature [signature] Date 6-29-79

6. Reinspection Results: Rods were under heat range requirements for more than the hours required for rebake by procedure

QC Inspector [signature] Date 6-29-79

7. Accept ✓ Reject NA

New DN No. NA Issued QC Engineer [signature] Date 7-2-79

DISCREPANCY NOTICE

D. N. Number W-654
Date of Report 11-13-79

Tompkins-Beckwith, Inc.
Project: Waterford SES Unit 3
Contract: W3-NY-11 Job 723

~~919-362-2733~~
~~362-2273~~ X

ORIGINAL COPY

Item Description Rod Caddy SS-16 AND Rods

Location RAB-EL.+21 Rod Room System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

1. Discrepancy Description: Rods and Caddy not returned to Rod Room at end of shift. Welder's symbol P-6 according to Rod slip.

QC Inspector L. J. Winiarski

2. Recommended Disposition: DESTROY OR REGRATE RODS INSTRUCT WELDER P-6 THAT ROD & CADDY MUST BE RETURNED AT END OF SHIFT

Provided By [signature] QC Review By: [signature] Date 11-13-79

3. NCN No. N/A QA Supervisor [signature] Date 11/13/79

4. Disposition Required: RODS TO BE RETURNED TO ~~DRYING~~ HOLDING OVENS (FM 11-13-79) FOR MINIMUM OF 8 HOURS. WELDER P-6 (R. NASH) TO BE CAUTIONED THAT UNUSED ROD & ROD CADDIES MUST BE RETURNED TO ROD ROOM AT END OF SHIFT.

RECEIVED
NOV 21 1979

For Project Engineer H. Miller Date 11-13-79
RAYMOND CARROLL

Referred To: E.J. SEVIN

I-B QA/QC Action Taken: Rods returned to rebake oven for minimum of 8 hours. Welder P-6 (R. Nash) cautioned that unused rods & rod caddies must be returned to rod room at end of shift.

Supervisory Position Welding Engineer Signature C.J. Sevin Date 11-21-79

6. Reinspection remarks: RODS NOT REMOVED FROM ROD CADDY (SS16). RODS REMOVED AT 1:20 P.M. 11-21-79 TO REBAKE OVEN FOR MIN. OF 8 HRS. REBAKE.

QC Inspector J. Minta Date 11-21-79

7. Accept ✓ Reject N/A New DN No. N/A Issued

QC Engineer [signature] Date 11-21-79

Form 9002-Rev. 0 (8/27/77)

DISCREPANCY NOTICE

D. N. Number W 752
Date of Report 2/28/80

Tompkins-Beckwith, Inc.
Project: Waterford SES Unit 3
Contract: W3-NY-11 Job 723

Item Description Rod Caddy #10-116

Location -4 RCB System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. TBP-3

1. Discrepancy Description: Rod Caddy Left out From Second Shift By Welder. (Sym FK) Bernard, Rod Slip # 84053, This is Avidation of TBP-3 Para. 6.5.2

QC Inspector D Reynolds

2. Recommended Disposition: To Engineering

T-B QA Records REVIEWED 22 WATERFORD 3

RECEIVED
JUL 29 1981
T-B QA RECORDS

Provided By D Reynolds QC Review By: [signature] Date 2-28-80

3. NCN No. 218 QA Supervisor [signature] Date 3/25/80

4. Disposition Required: None - Rod Caddy Was Not Returned At End Of Shift Due To Overtime Work. Caddy Was Placed In Locked Area & Finally Returned To Rod Room. Returned Rods Were ~~Placed In Holding Area~~ HMB 3-17-80 Disposed Of.

For Project Engineer H. Mills Date 3-17-80

Referred To: C. Beaty, Jr.

5. Corrective Action Taken: Arrange To Cover Rod Room Attendance For Possible Future Occurances.

Supervisory Position Proj. Supt Signature C Beaty Date 3-19-80

6. Reinspection remarks: Per the above action in step 4 & 5

QC Inspector [signature] Date 7/29/81

7. Accept ✓ Reject N/A New DN No. N/A Issued

QC Engineer [signature] Date 7/29/81

Form 9002-Rev. 0 (8/27/77)

DISCREPANCY NOTICE

D. N. Number W 810

Date of Report 4-24-80

Tompkins-Beckwith, Inc.
Project: Waterford SES Unit 3
Contract: W3-NY-11 Job 723

Item Description Rod Caddy 1925

Location RAB +21 33B System N/A

P.O./Contract No. W3-NY-11 Dwg./Spec. No. N/A

1. Discrepancy Description: Rod caddy was not turned in at end of 1st shift. Was found unplugged at 7:20 Caddy 425 Foreman W.F. Smith JR Rod slip 91786

QC Inspector [signature]

2. Recommended Disposition: TO ENGINEERING

EBASCO WATERFORD 7

Provided By [signature] QC Review By: [signature] Date 4-25-80

3. NCN No. N/A QA Supervisor [signature] for Date 4-25-80

4. Disposition Required: A Small Quanity Of Rods Were Returned With Caddy. These Rods Were Sorted For Damaged Or Contaminated Electrode, Which Were Discarded. Acceptable Electrode Was Placed In Reheat Oven For 8 HRS Minimum (Confirmed By H. Shavers). Welder To Be Cautioned On Proper Rod Return

For Project Engineer H. Miller Date 7-2-80

Referred To: C. BEATTY, JR.

5. Corrective Action Taken: Welder has been instructed in requirements of TBP-3. Foreman has been replaced

Supervisory Position PROJ. SUPT. Signature C. Beatty Date 7-1-80

6. Reinspection remarks: N/A

QC Inspector Date

7. Accept ✓ Reject N/A New DN No. N/A Issued

QC Engineer [signature] Date 7-2-80

6009-1/5:7

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

REPORT, NO.(1) W3-2459

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) SUS # 99C,E,H,I,M,P Trend Code: 9000.12

CLIENT OR PROJECT (2)		DRAWING NO./SPEC NO. (3)
Waterford SES - Unit No. 3		
SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4)	P.O. NO. (5)	AsP-IV-18 para 6.2.2
Ebasco Services, Inc.	N/A	
DESCRIPTION OF COMPONENT, PART OR SYSTEM (6)		
Low Hydrogen Weld Rod		

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

ASP-IV-18 para 6.2.2 requires low hydrogen weld rod be stored in rod ovens at 200° to 350° for a minimum of 8 hours . . . immediately prior to issue or re-issue. at 4:23 a.m., 1/15/81, site power was lost and rod oven temperatures dropped to 105° min. by 8:30 a.m. when power was restored.

REPORTABLE	YES	NO
10CFR50.55(e)	☐	☑
10CFR21	☐	☑

Reviewed By: [illegible] Date: 1/15/81

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8)	TITLE/COMPANY	DATE (9)
L A Stinson	Manager, Site Quality Program	1/15/81

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

Accept as is. Rod had been reconditioned at proper temperature for over 12 hours when power was lost. Rods were not exposed to ambient temperature/humidity and hence the opportunity for gathering humidity did not exist.

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11)	TITLE/COMPANY	DATE (12)
L A Stinson	Manager, Site Quality Program	1/15/81

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

Concur; rod is acceptable for issue.

IV. CORRECTIVE ACTION (14) ☐ Required ☒ Not Required 1/16/81

V. (15)	☒ ENGINEERING	☐ QUALITY ASSURANCE	☐ CONSTRUCTION	☒ OTHER / ANI
NAME (SIGNATURE)				
DATE	1/15/81			1/16/81
	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☐ REQUIRED ☒ NOT REQUIRED (16) 1/16/81

(17) BY _____ (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE _____ TITLE _____ DATE _____

6069-11/5.77

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

NCR NO. (1) W3--2810

9000.00.65

Distribution: White - PQA Site Supv. QA Supervisor; Yellow - Organization recommending disposition; Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) SUS #99 TREND CODE: 9000.01.41

CLIENT OR PROJECT (2): Waterford SES - Unit No. 3

DRAWING NO./SPEC NO. (3): Ebasco Proc. ASP-IV-18; " " WQC-76 FCR MP-155, " " WQC-103 R/1; CP-676 ES-56; TBP-3 MCP-2100

SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4): Ebasco Services, Inc.

P.O. NO. (5): N/A

DESCRIPTION OF COMPONENT, PART OR SYSTEM (6): Weld Rod Storage Ovens

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

The temperature of portable weld rod oven numbers EB-29, EB-28, EB-26, EB-25 and EB-32 are are not being maintained in accordance with the requirements of Procedure ASP-IV-18. ASP-IV-18 provides a temperature range of 225° ± 25°. See Attached DN C-0050 (Attachment #1). There is also a conflict between FCR-MP-155 Rev. 1 and ASP-IV-18. Ebasco Procedures WQC-76, WQC-103, CP-676; TB Procedure TBP-3; Mercury Procedure MCP-2100; and NISCO Procedure ES-56 are in compliance with FCR MP-155 Rev. 1 but not with ASP-IV-18.

ITEM #-0005

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8): A Hartnett/C E Bishop | TITLE/COMPANY: Ebasco Quality Assurance | DATE (9): 7/8/81

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

Recomend That Procedure ASP-IV-18 be revised To be Compatable with ECR-MP-155 Rev. 1

REPORTABLE	YES	NO
10CFR50.55(e)	☐	☑
10CFR21	☐	☑

Reviewed by [illegible] Date 7/16/81

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11): [illegible] | TITLE/COMPANY: Site QA Engr./Ebasco | DATE (12): 7-16-81

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

Concur with Recommended Disposition

IV. CORRECTIVE ACTION (14) ☒ Required ☐ Not Required

ASP-IV-18 has been revised (Rev. L) as recommended. B. Yaeger, SRE-Field 7/30/81.

V. (15)

☒ ENGINEERING	☐ QUALITY ASSURANCE	☐ CONSTRUCTION	☒ OTHER ANI
NAME (SIGNATURE) [illegible]	NAME (SIGNATURE)	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE 7/30/81	DATE	DATE	DATE
☑ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☒ REQUIRED ☐ NOT REQUIRED (16)

(17) BY Ebasco (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE Charles Bishop TITLE QAS DATE 7/6/81

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

REPORT NO. W-2810

9000-00-65

INSTRUCTIONS: (See back of form) SUS #99 TREND CODE 9000-01-41

Distribution: White — PQAE or Site QA Supervisor; Yellow — Organization recommending disposition; Pink — Initiator of NCR

CLIENT OR PROJECT (2): Waterford Steam Electric Station Unit 3

DRAWING NO./SPEC. NO. (3): Ebasco Proc. ASP-IV-18; WQC-76; FCR MP-155; WQC-103; R/1; CP-676; ES-56; TBP-3; MCP-2100

SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4): Ebasco Services, Inc.

P.O. NO. (5): N/A

DESCRIPTION OF COMPONENT, PART OR SYSTEM (6): Weld Rod Storage Ovens

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

The temperature of portable weld rod oven numbers EB-29, EB-28, EB-26, EB-25 and EB-32 are are not being maintained in accordance with the requirements of Procedure ASP-IV-18. ASP-IV-18 provides a temperature range of 225° ± 25°. See attached DN C-0050 (Attachment #1). There is also a conflict between FCR-MP-155 Rev. 1 and ASP-IV-18. Ebasco Procedures WQC-76, WQC-103, CP-676; TB Procedure TBP-3; Mercury Procedure MCP-2100; and NISCO Procedure ES-56 are in compliance with FCR MP-155 Rev. 1 but not with ASP-IV-18.

ITEM # C005

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8): A. Fornett/C. T. Bishop

TITLE/COMPANY: Ebasco Quality Assurance

DATE (9): 7/8/81

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

Recommend that Procedure ASP-IV-18 be revised to be compatible with FCR-MP-155 Rev. 1.

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11):

TITLE/COMPANY: Ebasco

DATE (12): 7-16-81

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

Concur with recommended disposition.

IV. CORRECTIVE ACTION (14) [X] Required [ ] Not Required

ASP-IV-18 has been revised (Rev. 1) as recommended. R. Yaeger, SPE-Field 7/31/81.

V. (15) [X] ENGINEERING	[ ] QUALITY ASSURANCE	[ ] CONSTRUCTION	[X] OTHER
NAME (SIGNATURE)	NAME (SIGNATURE)	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE 7/30/81	DATE	DATE	DATE
[ ] ACCEPTED [ ] REJECTED [ ] ACCEPTED WITH COMMENTS	[ ] ACCEPTED [ ] REJECTED [ ] ACCEPTED WITH COMMENTS	[ ] ACCEPTED [ ] REJECTED [ ] ACCEPTED WITH COMMENTS	[ ] ACCEPTED [ ] REJECTED [ ] ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION [X] REQUIRED [ ] NOT REQUIRED (16)

(17) BY ________ (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE ________ TITLE ________ DATE ________

6009-13/5x77

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

REPORT NO.(1) _____

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

INSTRUCTIONS: (See back of form)

CLIENT OR PROJECT (2)

DRAWING NO./SPEC NO. (3)

SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4) | P.O. NO. (5)

DESCRIPTION OF COMPONENT, PART OR SYSTEM (6)

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8) | TITLE/COMPANY | DATE (9)

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11) | TITLE/COMPANY | DATE (12)

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

IV. CORRECTIVE ACTION (14) ☐ Required ☐ Not Required

ASP-IV-18 has been revised (Rev. L) as recommended.
7/30/81 [signature] SRE-FIELD

V. (15) ☐ ENGINEERING | ☐ QUALITY ASSURANCE | ☐ CONSTRUCTION | ☐ OTHER _____

NAME (SIGNATURE)	NAME (SIGNATURE)	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE	DATE	DATE	DATE
☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☐ REQUIRED ☐ NOT REQUIRED (16)

(17) BY _____ SIGNATURE _____ TITLE _____ DATE _____
EBASCO VENDOR QA OR QA ENGINEERING

D. N. Number C-0050
D of Report 6-24-81
MRR# N/A
MRIR# N/A
REQ# N/A

WATERFORD STEAM ELECTRIC STATION
1980 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

tem Description Portable Weld Rod Ovens EB-29, 28, 26, 25 and 32
cation Iron workers Store Room System N/A
O. / Contract No. N/A Dwg./Spec. No. WQC-103

1. Discrepancy Description: The required temperature for these ovens is 250°F + 50°. All th
ven temperatures exceed the allowable required temperatures. (See the attached sheet for oven temperatures).
NOTE: All ovens contained E-7018 electrodes.

Q. C. Inspector Ronald K. Beams *Ronald K Beams*

Q. C. Supervisor *[signature]* *6/25/81*

2. Recommended Disposition: Engineering to evaluate.

Provided By *Ronald K. Beams* Date *6-24-81*

3. NCR No. *W3-2810* Q.A. Site Supervisor *[signature]* Date *7/7/81*

4. Disposition: *Electrodes acceptable "as is". E-7018 electrodes can be re-baked (drying out process) @ temperatures up to 650°F and higher w/o damage to the coating. In this instance, the max. temperature of the ovens was only ±420°F.*

Sr. Resident Engineer *[signature]* Date *6/30/81*

Referred To: *NA*

5. Corrective Action Taken: *NA*

Organization: *NA* Signature Date

6. Reinspection remarks: *Item (4) is rejected, referring to QA for upgrading to NCR due to the conflict between site procedure, E.R. MP-155 and administrative procedure ASP IV-18*

ccept ____ Reject ✓ Q.C. Inspector *R A Roffe* Date *7-7-8*

rm No. WQC-1-4 (2-24-78)

C-CCSC

RECORD OF PORTABLE ROD OVEN USE

ROD OVEN NUMBER	DATE	TIME OF DAY	OVEN ON	OVEN TEMPERATURE	ACCEPTED/ NOT ACCEPTED	INSPECTOR INITIALS
[illegible] 29	6-19-81	11:00	✓	340°	Not Accepted	R.K.B.
[illegible] 28	6-19-81	11:05	✓	390°	Not Accepted	R.K.B.
[illegible] 20	6-19-81	11:10	✓	420°	Not Accepted	R.K.B.
[illegible] 25	6-19-81	11:15	✓	380°	Not Accepted	R.K.B.
[illegible]	6-19-81	11:20	✓	350°	Not Accepted	R.K.B.

INSPECTOR(S) [illegible] R.K. [illegible]

THERMOMETER #-QCID NO. QC-[illegible]

CALIBRATION DUE 9-16-81

*Copy to Craft Supervisor if in Nonconformance

Form No. W3-102-1 (7/1/80)

6009-11/5.27

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

REPORT NO. (1) W3-4571

INSTRUCTIONS: (See back of form) TREND CODE: 1100.11.63 SUS#99H

CLIENT AND PROJECT (2)
Waterford SES Unit 3

DRAWING NO./SPEC NO. (3)
WQC-76 & 82

SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4)
HVAC

P.O. NO. (5)
W3-NY-17A

DESCRIPTION OF COMPONENT, PART OR SYSTEM (6)
Weld Electrode Oven Temp. Log

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

See DN H-1997 for description of nonconformance.

REPORTABLE	YES	NO
10CFR50.55(e)	☐	☑
10CFR21	☐	☑

Reviewed by: [signature] Date: 10/30/82

ITEM NO: 0001

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8)	TITLE/COMPANY	DATE (9)
Joe Gutierrez/Wayne Fields	QAE/Ebasco	9/20/82

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

See Attachment #2

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11)	TITLE/COMPANY	DATE (12)
M. QUINN	HVAC QC SUPERVISOR	9/24/82

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

① Concur with Disposition.

IV. CORRECTIVE ACTION (14) ☒ Required ☐ Not Required

Training session was held on 10/21/82. See attachment #3. J. Price on 10/21/82

V. (15) ☒ ENGINEERING	☒ QUALITY ASSURANCE	☐ CONSTRUCTION	☐ OTHER
NAME (SIGNATURE) ① Stanley Lakner	NAME (SIGNATURE) Wayne Fields	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE 9/27/82	DATE 10/11/82	DATE	DATE
☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☐ REQUIRED ☐ NOT REQUIRED (16)

(17) BY QA (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE [signature] TITLE Mgr. Site Qual. Prgm. DATE 10/30/82

EBASCO

Attachment #1 NCR W3-4571

D. N. Number H-1997

Date of Report 9/20/82

MRR# N/A

MRIR# N/A

REQ# N/A

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description Weld Electrode Oven Temperature Log

Location HVAC QC Office System 99H

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. WQC-76 and 82

1. Discrepancy Description: See attachment.

Q. C. Inspector N/A

Q. C. Supervisor E. Falcon E Falcon

2. Recommended Disposition: Route to QA for review. NCR recommended.

Provided By M. Quinn Quinn Date 9/20/82

3. NCR No. W3-4571 Q. A. Site Supervisor (for J. Gutierrez) Date 9/22/82

4. Disposition:

Sr. Resident Engineer Date

Referred To:

5. Corrective Action Taken:

Organization: Signature Date

6. Reinspection remarks:

Accept ____ Reject ____ Q.C. Inspector Date

RECEIVED SEP 20 1982 EBASCO QA

ATTACHMENT # 1

DN H-1997

Discrepancy Description: A review of electrode holding oven temperatures as recorded by HVAC QC in accordance with WQC-76, reveals that stainless steel electrodes (type E-308), have been stored in holding ovens with temperatures ranging from 140° F to 300° F. The acceptable range for these electrodes is from 155° F to 205° F. The violations of the temperature range were not documented by QC on the days that they occurred. Further review reveals that the ID numbers listed in the log do not correspond with the thermometers that are actually in use at this time.

This condition is a violation of WQC-76 and WQC-82.

E. Falcon

E. Falcon
9/20/82

ATTACHMENT # 2

NCR - W3-4571

Recommended Disposition: As per conversation with ESSE Materials Application Engineer, S. Cockrell, E-308 electrodes stored in holding ovens in the temperature range of 140° F to 300° F is acceptable and causes no problem with the function of that type electrode.

However, HVAC QC personnel are to be trained in the requirements of WQC-76 and WQC-82. This training will be accomplished by the HVAC QC Supervisor. Documented evidence of training (signature list of attendees), to be attached to this NCR for closure purposes.

M. QUINN
HVAC QC SUPERVISOR
9/24/82

ATTACHMENT # 3

NCR W3-4571

The following personnel attended the training session on WQC-76 and WQC-82 as called for by NCR W3-4571.

Ernest Falcon
Emmett Wilson
Anthony Cooke
Mitch Mills
Wayne Deroche

G. Bourgeois

G. BOURGEOIS
HVAC QC SUPERVISOR
10/21/82

6009-11/5-77

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

LOGGED JAN 8 1983 ENTRY — LOGGED JAN 17 1983 ENTRY

REPORT NO. (1) W3-5245

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) TREND CODE: 1300.01.24 SUS# 99M

CLIENT OR PROJECT (2)		DRAWING NO./SPEC NO. (3)
Waterford SES Unit 3		WQC-1
SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4)	P.O. NO. (5)	
EBFA	N/A	
DESCRIPTION OF COMPONENT, PART OR SYSTEM (6)		
Portable Rod Oven #1 and #30		

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

See DN-H-2073 for description of nonconformance (Attachment #1).

	YES	NO
50.55	☐	☑
10CFR21	☐	☑

Reviewed By: ... Date: 1-19-83

ITEM NO: ccc2

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8)	TITLE/COMPANY	DATE (9)
J. Gutierrez/W. Fields	QAE/Ebasco	11/22/82

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

Reinstruct all rod room room personnel and their supervisors as to disposition and removal of QC hold tags.

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11)	TITLE/COMPANY	DATE (12)
A Quinby	SRE/EBASCO	1/3/83

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

① Provide documentation as to training of personnel.

② Concur with Disposition

IV. CORRECTIVE ACTION (14) ☒ Required ☐ Not Required

① ~~...~~ Per attachment # 2

D. W. Overheu

V. (15) ☐ ENGINEERING	☒ QUALITY ASSURANCE	~~☒~~ CONSTRUCTION	☐ OTHER
NAME (SIGNATURE) ② [signature]	NAME (SIGNATURE) ① [signature]	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE 1-15-83	DATE 1-5-83	DATE	DATE
☑ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☒ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ~~☒ REQUIRED~~ 3/8/83 ☒ NOT REQUIRED (16) 3/8/83

(17) BY ______ (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE ______ TITLE ______ DATE ______

Attachment #1 NCR W3-5245

D. N. Number H-2073

Date of Report 11/17/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# N/A

MRIR# N/A

REQ# N/A

Item Description Violation Of Hold Tag

Location Rod Room System 99H

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. n/A

1. Discrepancy Description: See attachments

Q. C. Inspector E. Falcon E. Falcon

Q. C. Supervisor G. Bourgeois G. Bourgeois

2. Recommended Disposition: Route to QA for review. NCR recommended.

Provided By E. Falcon E. Falcon Date 11/17/82

3. NCR No. W3-5245 Q. A. Site Supervisor L. Wayne Fields (for J. Gutierrez) Date 11/29/82

4. Disposition:

Sr. Resident Engineer _____ Date _____

Referred To: _____

5. Corrective Action Taken:

Organization: _____ Signature _____ Date _____

6. Reinspection remarks:

Accept ____ Reject ____ Q.C. Inspector _____ Date _____

NOV 29 1982 ENTERGY

ATTACHMENT # 1

DN H-2061

Discrepancy Description: During portable rod oven surveillance on 10/19/82 it was detected that portable rod oven #1 was not within the specified range as stated in WQC-76. Portable rod oven #1 temperature registered was 375° F which exceed the specified low hydrogen covered electrodes range of 200-350°F. Thermometer O.C.I.D 5.3.44 Cal. due date 2/6/83 (covered electrodes from oven #1 were used in the fabrication of F-530, SMH-416-A-7). See attached copy of FMR 007725. This violates WQC-76.

E. WILSON
QC INSPECTOR

ATTACHMENT #1

DN H-2073

Discrepancy Description: Portable rod oven #1 has DN H-2061 written against it on 10/30/82. As of this date 11/17/82 2:00 P.M. QC has not received a copy of this DN with an engineering disposition. This oven had a hold tag put on it on 10/30/82. It was detected by QC that this oven had been sent out for repairs and returned to the rod room and has been in use (see attached FMR). The hold tag was removed by someone other than a HVAC QC Inspector.

Portable rod oven #30

Above mentioned rod oven has DN H-2062 written against it on 10/31/82, engineering received it on 11/2/82. As of this date 11/17/82 2:00 P.M. QC has not received a copy of this DN with engineering disposition. This oven had a hold tag put on it on 10/31/82. It was notice that the oven was not in the rod room, upon investigation it was found that the oven was sent out for repairs.

This is a violation of WQC-1 Para. 6.4.1.1.4-C.

NOTE: Disposition copies of DN H-2061 and 2062 was received by QC from Construction on 11/17/82 at 2:20 P.M.

Esper Falcon

E. Falcon
Lead QC Inspector
11/17/82

EBASCO SERVICES INCORPORATED

Sid Bottoms Jr.

№ 008025

FILLER METAL REQUISITION

WELDER NAME: L. Williams Larry Williams

WELDER IDENTIFICATION: E46

DATE: 11-16-82 WELD PROCEDURE NO. 111

FILLER TYPE: E7018 SIZE: 3/32

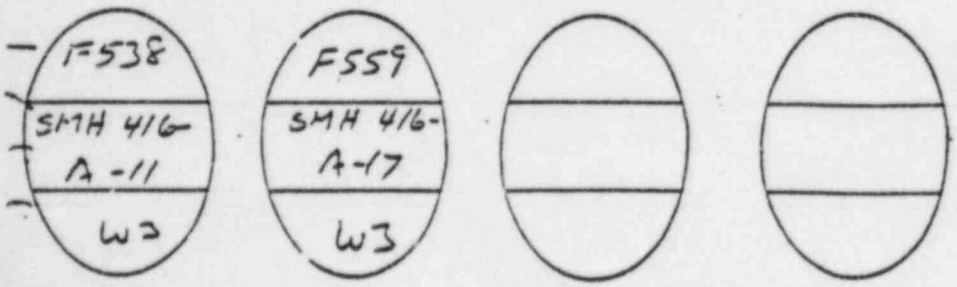
HEAT NO./LOT NO. 431P2321

QUANTITY OF FILLER ISSUED: 3 LBS. RETURNED: 3 LBS.

TIME FILLER ISSUED: 7:00 RETURNED: 5:20

Approved by: [signature] 11-16-82
Q.C. Inspector Date

OVEN NUMBER: #1



FORM CP-676 1/5-79

EBASCO SERVICES INCORPORATED

No 007953

FILLER METAL REQUISITION

WELDER NAME: C. FINO

WELDER IDENTIFICATION: E77

DATE: 11-10-82 WELD PROCEDURE NO. 111

FILLER TYPE: E7018 SIZE: 3/32

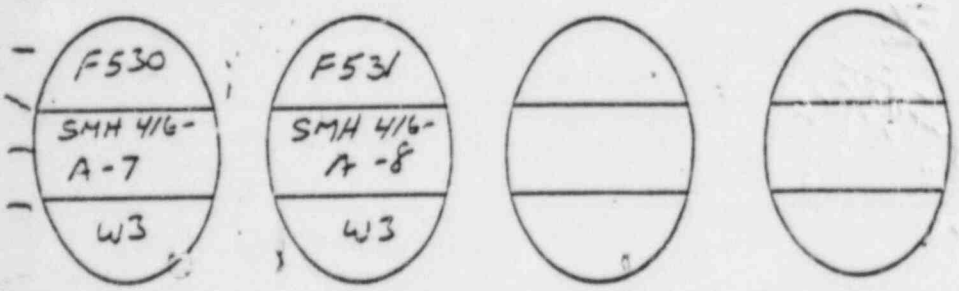
HEAT NO./LOT NO. 422P0461

QUANTITY OF FILLER ISSUED: 3 LBS. RETURNED: 2½ LBS.

TIME FILLER ISSUED: 7:00 RETURNED: 5:20

Approved by: [signature] 11.10.82
Q.C. Inspector Date

OVEN NUMBER: #1



FORM CP-676 1/5-79

EBASCO SERVICES INCORPORATED

№ 007990

FILLER METAL REQUISITION

WELDER NAME: C. Fino [illegible]

WELDER IDENTIFICATION: E77

DATE: 11-11-82 WELD PROCEDURE NO. 111

FILLER TYPE: E7018 SIZE: 3/32

HEAT NO./LOT NO. 422P0461

QUANTITY OF FILLER ISSUED: 3 LBS. RETURNED: 0 LBS.

TIME FILLER ISSUED: 7:00 RETURNED: 7:20 PM

Approved by: C. Cook (Q.C. Inspector) 11.11.82 (Date)

OVEN NUMBER: #1

E530
[illegible] 416-
A 7
L3

FORM CP-676 1/5-79

EBASCO SERVICES INCORPORATED

Sid Bottomsup jr

Nº 007995

FILLER METAL REQUISITION

WELDER NAME: S GUYDROZ

WELDER IDENTIFICATION: E57

DATE: 11-12-82 WELD PROCEDURE NO. 111

FILLER TYPE: 7018 SIZE: 3/32

HEAT NO./LOT NO. 431-P2321

QUANTITY OF FILLER ISSUED: 3 LBS. RETURNED: 3 LBS.

TIME FILLER ISSUED: 7:00 RETURNED: 7:20

Approved by: C. Crabe (Q.C. Inspector) 11.12.82 (Date)

OVEN NUMBER: #1

F1677

SMA-14

W3

FOR AS 2678

FORM CP-676 1/5-79

005001

FILLER METAL REQUISITION

WELDER NAME: S. Gutierrez S GUTIERREZ

WELDER IDENTIFICATION: E57

DATE: 11-13-82 WELD PROCEDURE NO. 111

FILLER TYPE: 7018 SIZE: 3/32

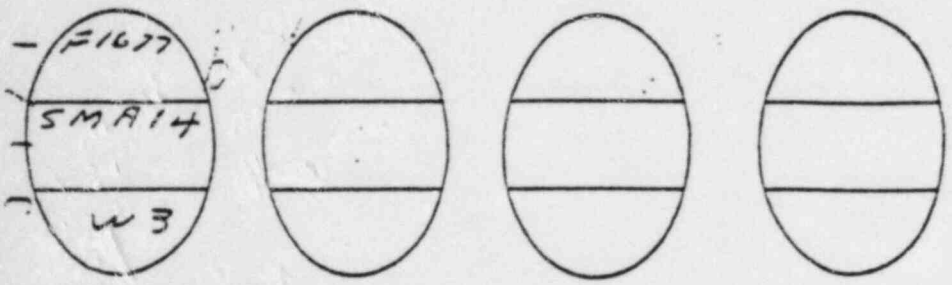
HEAT NO./LOT NO. 431-P2321

QUANTITY OF FILLER ISSUED: 6 LBS. RETURNED: 2 LBS.

TIME FILLER ISSUED: 7:00 RETURNED: 1:40

Approved by: C. Cooke (Q.C. Inspector) 11-13-82 (Date)

OVEN NUMBER: #1



FCR #52673

FORM CP-676 1/5-79

EBASCO SERVICES INCORPORATED

Neil Batstone

NO 00S010

FILLER METAL REQUISITION

WELDER NAME: L. Williams

WELDER IDENTIFICATION: E46

DATE: 11-15-82 WELD PROCEDURE NO. 111

FILLER TYPE: E7018 SIZE: 3/32

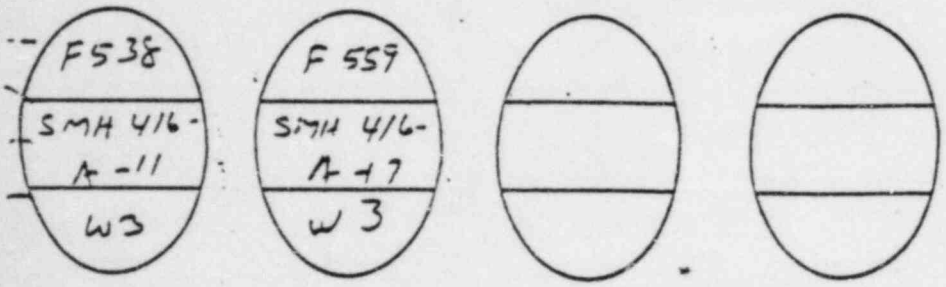
HEAT NO./LOT NO. 431P2321

QUANTITY OF FILLER ISSUED: 3 LBS. RETURNED: 3 LBS.

TIME FILLER ISSUED: 7:10 RETURNED: 5:20

Approved by: C. Crocker (Q.C. Inspector) 11.15.82 (Date)

OVEN NUMBER: #1



FORM CP-676 1/5-79

D. N. [illegible] -2061

Date of Report 10/30/82

MRR# N/A

MRIR# N/A

REQ# N/A

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description Portable Rod Oven #1 SUS 46C

Location Fabrication Shop System 46C

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. SMH-416-A7

1. Discrepancy Description: See attached sheet.

Q. C. Inspector E. Wilson

Q. C. Supervisor G. Bourgeois

2. Recommended Disposition: (1) Portable rod oven #1 to be repaired so that it will maintain required temperature range. (2) Welds made with this filler metal to be evaluated by a welding engineering to determine if welds are acceptable.

Provided By E. Falcon FoC EF Date 11/2/82

3. NCR No. N/A Q. A. Site Supervisor N/A Date N/A

4. Disposition: ITEM (1) ENG CONCURS WITH RECOMENDED DISPOSITION.

ITEM (2) Welds made at this temperature are acceptable

Sr. Resident Engineer [signature] Date 11/3/82

Referred To: S. OVERHEE/G BOURGEOIS Case Welding

5. Corrective Action Taken:

Organization: Signature Date

6. Reinspection remarks:

Accept ____ Reject ____ Q.C. Inspector Date

ATTACHMENT # 1

DN H-2061

Discrepancy Description: During portable rod oven surveillance on 10/19/82 it was detected that portable rod oven #1 was not within the specified range as stated in WQC-76. Portable rod oven #1 temperature registered was 375° F which exceed the specified low hydrogen covered electrodes range of 200-350°F. Thermometer O.C.I.D 5.3.44 Cal. due date 2/6/83 (covered electrodes from oven #1 were used in the fabrication of F-530, SMH-416-A-7). See attached copy of FMR 007725. This violates WQC-76.

E. WILSON
QC INSPECTOR

Attachment #1 NCR W3-5245

Page 11 of 11

D. N. Miller

Date of Report 10/31/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# N/A

MRIR# N/A

REQ# N/A

Item Description Portable Rod Oven Temperature SUS 46C

Location RAB +69 System 46C

P. O. / Contract No. W3-NY-17A Dwg./Spec. Nr. SMG-863-S02-1

1. Discrepancy Description: During daily rod oven surveillance it was found that rod oven #30 containing stainless steel covered electrodes did not maintain correct temperature as specified in WQC-76.6.1.1. This condition violates WQC-76. Note: Oven temperature was 140°. Filler metal was used on S.S. screens for the S-6 unit.

Q. C. Inspector M. Mire

Q. C. Supervisor G. Bourgeois

2. Recommended Disposition: (1) Construction to have portable rod oven #30 repaired so that it will maintain required temperature range. (2) welds made with this filler metal to be evaluated by a welding engineering to determine if welds are acceptable.

Provided By E. Falcon Date

3. NCR No. Q. A. Site Supervisor Date

4. Disposition: ITEM (1) ENG. CONCURS WITH RECOMENDED DISPOSITION. ITEM (2) WELDS made at this temperature are ACCEPTABLE

Sr. Resident Engineer Date

Referred To: S. OVERHEU / G BOURGEOIS ESSE welding Eng

5. Corrective Action Taken:

Organization: Signature Date

6. Reinspection remarks:

Accept Reject Q.C. Inspector Date

Attachment #1 NCR W3-5245

Page 11 of 11

D. N. Number W-2062

Date of Report 10/31/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MDR# N/A

MRR# N/A

RDO# N/A

Item Description Portable Rod Oven Temperature SUS 46C

Location RAB +69 System 46C

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. SMG-863-S02-1

1. Discrepancy Description: During daily rod oven surveillance it was found that rod oven #30 containing stainless steel covered electrodes did not maintain correct temperature as specified in WOC-76.6.1.1. This condition violates WOC-76. Note: Oven temperature was 140°. Filler metal was used on S.S. screens for the S-6 unit.

Q. C. Inspector M. Mire

Q. C. Supervisor G. Bourgeois

2. Recommended Disposition: (1) Construction to have portable rod oven #30 repaired so that it will maintain required temperature range. (2) welds made with this filler metal to be evaluated by a welding engineering to determine if welds are acceptable.

Provided By E. Falcon for NCR EF II-2-82 Date 11-2-82

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: ITEM (1) ENG. CONCURS WITH RECOMENDED DISPOSITION
ITEM (2) WELDS made of this temperature are ACCEPTABLE

Sr. Resident Engineer _____ Date 11-2-82

Referred To: S. OVERHOLT/G BOURGEOIS ESSE welding Eng

5. Corrective Action Taken: _____

Organization: _____ Signature _____ Date _____

6. Reinspection remarks: _____

Accept ____ Reject ____ Q.C. Inspector _____ Date _____

NCR W3-5245

ATTACHMENT #2 Sh. 1 of 3

As of 1/20/83, all weld rods issued to HVAC welders are issued out of the Central Rod Room. HVAC no longer maintains it's own Rod Room.

The Rod ovens mentioned in DN-H-2073 have been repaired as evidenced by closed copies of DN-H-2061 & 2062.

This NCR should be closed based on the fact that there is no one to instruct as to the disposition and removal of QC Hold Tags.

D. W. Overheu

D. W. Overheu - HVAC. Gen. Craft. Supv.

NCR W3-5245 ATT. #2
SH. 2 OF 3

D. N. Number H-2061

Date of Report 10/30/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# N/A
MRIR# N/A
REQ# N/A

Item Description Portable Rod Oven #1 SUS 46C

Location Fabrication Shop System 46C

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. SMH-416-A7

1. Discrepancy Description: See attached sheet.

Q. C. Inspector E. Wilson

Q. C. Supervisor G. Bourgeois

2. Recommended Disposition: (1) Portable rod oven #1 to be repaired so that it will maintain required temperature range. (2) Welds made with this filler metal to be evaluated by a welding engineering to determine if welds are acceptable.

Provided By E. Falcon for CF Date 11/2/82

3. NCR No. N/A Q. A. Site Supervisor N/A Date N/A

4. Disposition: ITEM (1) ENG CONCURS WITH RECOMENDED DISPOSITION.
ITEM (2) Welds made at this temperature are acceptable

Sr. Resident Engineer [signature] Date 11/3/82

Referred To: S. OVERHEE/G BOURGEOIS CCSG Welding Eng

5. Corrective Action Taken: AS PER ITEM #4

Organization: HVAC Signature [signature] Date 11/3/82

6. Reinspection remarks: ACCEPT PER ENGINEER DISPOSITION

Accept ✓ Reject ___ Q.C. Inspector [signature] Date 11-3-82

REVISED NCR W3-5245 ATT. #2
SH. 3 OF 3

D. N. Number H-2062

Date of Report 10/31/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# N/A

MRIR# N/A

REQ# N/A

Item Description Portable Rod Oven Temperature SUS 46C

Location RAB +69 System 46C

P. O. / Contract No. W3-NY-17A Dwg./Spec. No. SMG-863-S02-1

1. Discrepancy Description: During daily rod oven surveillance it was found that rod oven #30 containing stainless steel covered electrodes did not maintain correct temperature as specified in WQC-76, 6.1.1. This condition violates WQC-76. Note: Oven temperature was 140°. Filler metal was used on S.S. screens for the S-6 unit.

Q. C. Inspector M. Mire [signature] FOR M.Mire

Q. C. Supervisor G. Bourgeois [signature]

2. Recommended Disposition: (1) Construction to have portable rod oven #30 repaired so that it will maintain required temperature range. (2) welds made with this filler metal to be evaluated by a welding engineering to determine if welds are acceptable.

Provided By E. Falcon [signature] FOR EF 11-2-82 Date 11/2/82

3. NCR No. ______ Q. A. Site Supervisor ______ Date ______

4. Disposition: ITEM (1) ENG. CONCURS WITH RECOMENDED DISPOSITION. ITEM (2) Welds made at this temperature are ACCEPTable

Sr. Resident Engineer [signature] ESSE Welding Eng Date 11-..

Referred To: S. OVERHEU / G BOURGEOIS

5. Corrective Action Taken: AS PER ITEM #4

Organization: HVAC Signature [signature] Date 11/..

6. Reinspection remarks: ACCEPT PER ENGINEER disposition

Accept ✓ Reject ____ Q.C. Inspector [signature] Date 11-..

Form No. ... (2-24-78)

6009-11/5-77

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

REPORT NO.(1) W3-6915

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) TREND CODE: 9000.00.66 SUS# 99 H

CLIENT OR PROJECT (2): WATERFORD III SES	DRAWING NO./SPEC NO. (3): ASP-IV-18
SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4): EBFA / P.O. NO. (5): N/A	
DESCRIPTION OF COMPONENT, PART OR SYSTEM (6): CONTROL OF DISPOSABLE FILLER METAL	

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

Warehouse rod room & sheet metal tool room areas ~~XXXX~~ are not controlling filler metals as required.

EC! QA ENGINEERING

SEP 8 1983

REF: DN SQ 0670 & 0671 attached to NCR

REPORTABLE 10CFR50.55(e) YES ☐ NO ☒
10CFR21 YES ☐ NO ☒
Reviewed by: Date: 9-7-83

ITEM # 0002

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8)	TITLE/COMPANY	DATE (9)
K. Wolverton/N. Ruiz 9/9/83	LQAE/QAE/~~EX~~ EBFA	8-31-83

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

Establish control, retrain personnel to the requirements of ASP-IV-18 and other applicable procedures. Any training shall be scheduled through J. Sullivan

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11)	TITLE/COMPANY	DATE (12)
N. Ruiz 9/9/83	QAE/EBFA	8-31-83

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

Concur with disposition.

① Training Records to be attached to NCR.

IV. CORRECTIVE ACTION (14) ☒ Required ☐ Not Required

Personnel authorized to authorize FMR's have been retrained to ASP IV 18 R/O. Record on file w/Site Trng. Group J.L.S 10-12-83

V.(15) ☐ ENGINEERING	☒ QUALITY ASSURANCE	☒ CONSTRUCTION	☐ OTHER
NAME (SIGNATURE)	NAME (SIGNATURE) James Coe	NAME (SIGNATURE)	NAME (SIGNATURE)
DATE	DATE 9-22-83	DATE 9/20/83	DATE
☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	ACCEPTED REJECTED ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☒ REQUIRED 9-22-83 ☐ NOT REQUIRED (16)

(17) BY QAE (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE JAMES COE TITLE QAE DATE 11-7-83

ECI QA ENGINEERING

AUG 24 1983

This is Attachment 1
to NCR W3-6915 page 1
of 1 QR 19-783

D. N. Number SQ-0671

Date of Report 8/22/83

WATERFORD STEAM ELECTRIC STATION SUS# 99H
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description Disposable Filler Metal

Location Side of Sheet Metal Tool Room Ref. Doc N/A

1. Discrepancy Description: During a surveillance it was found that the barrel containing disposable filler metal is over flowing with thrown away rods and is piled about one foot high on top of barrel. Also rod stubs are all over the ground. This is in violation of ASP-IV-18.

Q. C. Inspector Errol Falcon Errol Falcon

Q. C. Supervisor R.K.Beams R K Beams 8/23/83

2. Recommended Disposition: Route to QA for review. NCR Recommended.

Provided By M. Quinn Date 8-23-83

3. NCR No. W3-6915 Q. A. Site Supervisor for H. J. Kunis, Jr. Date 9-7-83

4. Disposition:

Referred To: Sr. Resident Engineer Date

Concur with Disp. Date

5. Corrective Action Taken:

Organization: Signature Date

6. Reinspection remarks:

Accept Reject Q.C. Inspector Date

Form No. WOC-150-1 (5-12-83)

RECEIVED SEP 1983 7 LHASCO QA

ECI QA ENGINEERING

AUG 24 1983

This is Attachment 2
to NCR W3-6915 page 1
of 8 QR 9-7-83

D. N. Number SO-0670

Date of Report 8/22/83

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

SUS# See Attached Sheet

Item Description Rods Not Returned to Warehouse

Location Warehouse Rod Room Ref. Doc ASP-IV-18

1. Discrepancy Description: During routine inspection it was found that both covered electrodes and bare rod had not been turned in at the end of each shift 8-22-83. (See attached filler metal request) This violates ASP-IV-18.

Q. C. Inspector E. Wilson

Q. C. Supervisor R.K.Beams

2. Recommended Disposition: Route to Q.A. for review. NCR Recommended.

Provided By M. Quinn Date 8-23-83

3. NCR No. W3-6915 Q. A. Site Supervisor for H. J. Kunis, Jr. Date 9-7-83

4. Disposition:

Referred To: Sr. Resident Engineer Date

Concur with Disp. Date

5. Corrective Action Taken:

Organization: Signature Date

6. Reinspection remarks:

Accept Reject Q.C. Inspector Date

Form No. WOC-150-1 (5-12-82)

This is Attachment 2
to NCR W3-6945 page
of 8 GR 9-7-83

D.N. SQ-0670

F. ENSCO

Subcontractor EBI-A PIPE FITTERS Date 8-17-83

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

47041

System 29 Iso or Dwg. No.

Weld No. ALL (OPEN) NO WELD NOT (FOR HANGERS) Weld Procedure no. W.P. 2 Pw O

Welder's Name C. LANDRY Symbol EB 147

Authorized Signature J. [illegible]

Approved by QC Supervisor/Inspector [signature] Date 8-19-83

1. Bare Rod:
   (A) Quantity: N.A Type — Size — Lot or Heat —
   Quantity Returned

2. Covered Electrodes
   (A) Quantity 4 lbs Type E7018 Size 3/32 Lot or Heat
   Quantity Returned

3. Consumable Inserts
   (A) Quantity N.A Type — Size — Lot or Heat —
   Quantity Returned

Issued by Date

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

This is Attachment ___

to NCR W3-6915 page 3

of 8 QR 9-783

Subcontractor PIPEFITTER Date 8/19/83

47135

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

System 257 Iso or Dwg. No OCN-MP-575, Q/WA 820373

Weld No. FW 5 & FW 11 Weld Procedure no. WP 43 REV

Welder's Name T NGUYEN Symbol EB 266

Authorized Signature J. Cusimano

Approved by QC Supervisor/Inspector [signature] Date 8-19-83

1. Bare Rod:
   (A) Quantity: 1½ LB Type ER 316 Size 3/32 Lot or Heat ___

   Quantity Returned ___

2. Covered Electrodes
   (A) Quantity N/A Type ~ Size ~ Lot or Heat ~

   Quantity Returned ___

3. Consumable Inserts
   (A) Quantity N/A Type ~ Size ~ Lot or Heat ~

   Quantity Returned ___

Issued by ___ Date ___

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

RODS NOT RETURNED

FRIDAY - 2nd SHIFT

This is Attachment 2
to NCR W3-695 page 4
of 8 9R 9-7-83

D.N. SQ-0670

Subcontractor ________ F. E. R. FITTERS ________ Date 8/19/83

47033

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

System 29 Iso or Dwg. No. DCU-MP-848-CWA 830918

Weld No. FW6 FW8 Weld Procedure no. WP 43 Rev 18

Welder's Name C. LANDRY Symbol ES 147

Authorized Signature J. Cimmiano

Approved by QC Supervisor/Inspector [signature] Date 8-19-83

1. Bare Rod:
   (A) Quantity: 1 lbs Type ER316 Size 3/32 Lot or Heat ________

   Quantity Returned ________

2. Covered Electrodes
   (A) Quantity N/A Type ~ Size ~ Lot or Heat ~

   Quantity Returned ________

3. Consumable Inserts
   (A) Quantity N/A Type ~ Size ~ Lot or Heat ~

   Quantity Returned ________

Issued by ________ Date ________

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

This is Attachment 2
to NCR W3-6915 page 5
of 8 ... 9-7-83

D.N. SQ-0670

Subcontractor ________ Date ________

47026

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

System 23 Iso or Dwg. No. ________

Weld No. ALL weld Weld Procedure no. BP-5 R-1

Welder's Name ________ Symbol EB-170

Authorized Signature J. ________

Approved by QC Supervisor/Inspector ________ Date 8-19-83

1. Bare Rod:
   (A) Quantity: 1 lb. Type Eutectic 1800 Size 3/32" Lot or Heat ________

   Quantity Returned ________

2. Covered Electrodes
   (A) Quantity N.A. Type — Size — Lot or Heat —

   Quantity Returned ________

3. Consumable Inserts
   (A) Quantity N.A. Type — Size — Lot or Heat —

   Quantity Returned ________

Issued by ________ Date ________

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

This is Attachment 2
to NCR W3-6915, page 6
of 8 ... 9-7-83

D.N. SQ-0670

Subcontractor ESEA-HVAC Date 8-30-83

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

47422

System 43 D Iso or Dwg. No. SMC-856 505
ALL WELDS PER DCN HV 800
Weld No S.S. FLANGE ... Weld Procedure no. WP 43 ...

Welder's Name L. RANCATORE Symbol E-25

Authorized Signature Doug ...

Approved by QC Supervisor/Inspector P.D. ... Date 8-30-83

1. Bare Rod:
(A) Quantity: 1 LB. Type ER-308 Size 1/8 Lot or Heat

Quantity Returned

2. Covered Electrodes
(A) Quantity N/A Type Size Lot or Heat

Quantity Returned

3. Consumable Inserts
(A) Quantity N/A Type Size Lot or Heat

Quantity Returned

Issued by Date

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

This is Attachment 3 to NCR W3-[illegible] page 1 of 8 QR 9-7-83

D.N. SQ-0670

CONTRACTOR NAME FRASCO

Subcontractor E.S.I.-A-HVAC Date F-20-83

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION 47423

System 435 Iso or Dwg. No. SMS-PSL 505 HCW-MV-11/E-W FT. SAMPLE

Weld No. ALL WELDS PER DESIGNATED SS-ELBOW-TO-SS-PIPE-SELF SELECTED (FLUSH-R) Weld Procedure no. WPQ 43 R12

Welder's Name S. GUTIERREZ Symbol E-57

Authorized Signature Doug Gafe

Approved by QC Supervisor/Inspector P.D. Healy Date 8-30-83

1. Bare Rod:
(A) Quantity: 1LB Type ER-308 Size 1/8 Lot or Heat

Quantity Returned

2. Covered Electrodes
(A) Quantity N/A Type Size Lot or Heat

Quantity Returned

3. Consumable Inserts
(A) Quantity N/A Type Size Lot or Heat

Quantity Returned

Issued by Date

FORM NO. ASP-IV-18.2(6-1-76)

Q C COPY

This is Attachment 2 to NCR W3-6915 CONTRACTOR NAME EBASCO page 5 of 5 CR 9-7-83

D.N. SQ-0670

Subcontractor EB-EA-HVAC Date 8-20-83

47421

FILLER METAL-ELECTRODES OR CONSUMABLE INSERTS REQUISITION

SMG 256505

System 43J Iso or Dwg. No DCN NY HVAC ...

Weld No ALL WELDS PER DCN HV ... S.S. FLANGE TO ... Weld Procedure no. WP 43 ...

Welder's Name E. WENDT Symbol E-40

Authorized Signature Doug ...

Approved by QC Supervisor/Inspector P.D. ... Date 8-20-83

1. Bare Rod:
   (A) Quantity: 1LB Type ER-308 Size 1/8 Lot or Heat

   Quantity Returned

2. Covered Electrodes
   (A) Quantity N/A Type Size Lot or Heat

   Quantity Returned

3. Consumable Inserts
   (A) Quantity N/A Type Size Lot or Heat

   Quantity Returned

Issued by Date

FORM NO. ASP-IV-18-2(6-1-76)

Q C COPY

RECEIVED SEP 7 1983 EBASCO QA

This is Attachment ___ to NCR W3-1915 page 1 of 1 JRE 11-7-83

EBASCO SERVICES INCORPORATED

10352 1317

PROGRAM PARTICIPANT ROSTER

PROGRAM TITLE: Receiving, Storage, Issuing and Control of Welding Electrodes and Filler Metals, QCP-134 ... N/A

LOCATION: Conference Room 3 — TIME: 1:00 PM - 3:00 PM — INSTRUCTOR: [illegible] — DATE: 9/14/83

EMPLOYEE NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
[illegible], Carl W.	955-323	EDFA-Electrical	Craft supervisor	Carl W. [illegible]
[illegible], John E.	950-262	EBFA I&C	Gen. Craft Supv.	[illegible]
[illegible]	950-360	EBFA I&C	Craft Supv.	[illegible]
[illegible]	665-023	Eng. Elect.	Elect. Designer	[illegible]
[illegible], Wardell	7/75	"ECI"	I.W. Gen Foreman	Wardell [illegible]
[illegible], [illegible]	955-118	EBFA Civil	Craft Supervisor	[illegible]
[illegible]	7/31	"ECI"	I.W. Gen Foreman	[illegible]
[illegible]	950-565	ECI (Civil)	Res. Engr. A.C.S.	Samuel A. Kalat
[illegible], Robert L.	950-657	EBFA-Electrical	Gen. Craft Supv.	Robert [illegible]

[illegible] do not issue weld rods [illegible] participated.

This Is Attachment 3
to NCR W3-6915 page 3
of 6 [illegible] 11-7-83

0 0 3 6 2 1 3 1 1

EBASCO SERVICES INCORPORATED

PROGRAM PARTICIPANT ROSTER

[illegible]	PROGRAM TITLE		
N/A	[illegible] Rev. [illegible] : Ref NCR W3-6915		
[illegible]		TRAINED BY [illegible]	DATE 9/28/83

PARTICIPANT NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
[illegible] Wardell	7/75	ECI	I.W. G.F.	Wardell [illegible]
[illegible] Fred William	955-430	ECI Mechanical	General Craft Supervisor - Mech.	[illegible] 9/29/83
[illegible] R. Flaming	950 268	ECI Hangers	General Craft Supervisor	[illegible] 9/28/83
[illegible] Robert L	950-637	EBFA-E	Gen. Craft Supv	[illegible] Wells
[illegible] John E	950-262	ECI - I&C	Gen. Craft Supv	John [illegible]
[illegible] Ed	950-585	Civil	Gen Craft Supv	Ed [illegible]
[illegible] Johnson	950-567	Civil	Asst. Const. Supt.	[illegible]
[illegible] Samuel A	950-565	Civil Const	Res Eng.	Samuel A [illegible]
[illegible] [illegible]	955-233	EBFA-E	Elect Supv.	[illegible]
[illegible] James E	13/97	EBFA I&C	G.F	James [illegible]
[illegible] Carl E	955-234	EBFA-E	Elec. Supv.	Carl E [illegible]
[illegible] [illegible] D	955-017	EBFA-E	Elect Superv	[illegible]
[illegible] John	15-11	HVAC	Supt.	John [illegible]
[illegible] Joe	15-5	HVAC	G.F	Joseph [illegible]
[illegible] [illegible]	950-262	ECI - Mech	Gen Craft Supv	[illegible]
[illegible] R.S.	955-413	EBFA-E	Elect. Supv.	R.S. Mc[illegible]

This Is Attachment 3
to NCR W3-6915 page 3
of 6 — JRE 11-7-83

J 0 3 5 2 1 3 3 9

EBASCO SERVICES INCORPORATED

PROGRAM PARTICIPANT ROSTER

[illegible]: [illegible] | PROGRAM TITLE: ASP-IV-19 Rev. Q Ref: NCR W3-6915

[illegible]: [illegible] | TRAINED BY: [illegible] | DATE: 9/28/83

PARTICIPANT NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
[illegible] W. E.	955-095	[illegible]	CRAFT SUPV.	[illegible]
[illegible] GEORGE K.	955-205	Const.	CRAFT SUPV.	George [illegible]
[illegible] JAMES	950-805	CONST	CRAFT SUPV	James Watkins
[illegible], R. DOUGLAS	950-012	CONST	CRAFT SUPV	Doug Cole
[illegible]HARDT, JOHN	971-288	CONST	CRAFT SUPV.	John Ehrhardt
[illegible] Cecil	7-31	Const	Ironworker Gen Foreman	Cecil Walker
[illegible], Carl W.	5675	ECI-E	Craft. Supv.	Carl W. [illegible]
[illegible], KENNETH A.	950-151	ECI-I&C	CRAFT. SUPV.	K. [illegible]
[illegible]SON, HERVIS J.	970-250	WAREHOUSE	MATERIAL HANDLER	Hervis J. [illegible]

This Is Attachment 3
to NCR W3-6915 page 4
of 6 [illegible] 11-7-83

8310152 1311

EBASCO SERVICES INCORPORATED

PROGRAM PARTICIPANT ROSTER

PROGRAM CODE: [illegible]

PROGRAM TITLE: ESP-IV 18 Rev. 0 [illegible] NCR W3-6915

[illegible] Attachment 3

TRAINED BY: [illegible]

DATE: 9/28/83

PARTICIPANT NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
[illegible] Jacob F.	13/3	Pipefitter	G. F.	[illegible]
[illegible] James R.	389	1st Shift Supv.	Ast Craft Supv.	[illegible]
[illegible] Shaline A.	15/152	HVAC	Foreman	[illegible]
[illegible]	976231	ECI Hvac		[illegible]
[illegible] Holloway	13/120	Pipefitter	Foreman	[illegible]
[illegible] Freeman	950/887	Supv. EBFA	Supv. EBFA	[illegible]
[illegible] Barone	13/4	EBFA Pipefitter	Foreman	[illegible] Barone
[illegible]rrison Peter	955-420	EBFA Supv.	Supervisor	Peter [illegible]
[illegible]kwith, Jim	950-643	EBASCO Supt.	2nd Shift Supt.	[illegible]

This is Attachment 3 to NCR W3-6915 page 5 of 6 JRC 11-7-83

1 0 3 5 2 1 3 9 1

EBASCO SERVICES INCORPORATED

PROGRAM PARTICIPANT ROSTER

PROGRAM CODE: N/A

PROGRAM TITLE: ASP IV-18 Rev. 0 + CP 684 Rev H. Ref: NCR-W3-6915

LOCATION: Waterford 3

TRAINED BY: John T. Sullivan

DATE: 10/10/83

PARTICIPANT NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
FRILOUX, CARROLL J	13/103	PIPING	FOREMAN	C. J. Friloux
GREENWELL, RICHARD W	955-056	I+C	I+C SUPT	R. Greenwell

This Is Attachment 3 to NCR W3-6915 page 6 of 6 [illegible] 11-2-83

8311070392

EBASCO SERVICES INCORPORATED

PROGRAM PARTICIPANT ROSTER

PROGRAM CODE	PROGRAM TITLE		
N/A	NCR - W3-6915 Ref Procedure ASP-IV-18 Rev. Q		
LOCATION: Waterford 3		TRAINED BY: JL SULLIVAN	DATE: 10/11/83

PARTICIPANT NAME (LAST, FIRST, MIDDLE)	PAYROLL NUMBER	DEPARTMENT	JOB TITLE	SIGNATURE
Anderson Gary G.	955-118	Special Processes (ECI-Metals)	Craft Supervisor	Gary G. Anderson
[illegible], Edmond G.	950-459	Gen Craft Serv.	Gen Craft Serv.	[illegible]
Phillips, Fred D	.	ECI	GCS	F. Phillips
Burnett Wilbur E.	950-314	ECI	Supervisor	Wilbur Burnett

800 -13/5-77

EBASCO SERVICES INCORPORATED
QUALITY ASSURANCE
NONCONFORMANCE REPORT

REPORT NO. (1) W3-779

Distribution:
White - PQAE or Site QA Supervisor
Yellow - Organization recommending disposition
Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) TFY 1700.0971 SUS 99M

CLIENT OR PROJECT (2): Waterford SES Unit 3

DRAWING NO./SPEC. NO. (3): DN-SQ-3131; WQC-170 R/1

SUPPLIER, CONSTRUCTION QC OR CONTRACTOR: EBASCO (Q.C)

P.O. NO. (5): N/A

DESCRIPTION OF COMPONENT, PART OR SYSTEM (6): Portable Rod Ovens

(Stamps: LOGGED JUL 23 1984; LOGGED JUL 23 1984 ENTRY; AUG 9 1984 ENTRY; LOGGED AUG 10 1984 ENTRY)

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply. Submit Sketch if Applicable)

Paragraph 6.2.1 states that a weekly surveillance shall be made on portable rod ovens. This requirement is not being complied with. The following dates indicate frequency since Jan. 1, 1984 - 1-12-84, 4-17-84, 4-23-84, 5-1-84.
Violation of WQC 170 R/1. (DN-SQ-3131 attached)
item 001

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8): James Coe — James Coe
TITLE/COMPANY: QAE
DATE: 7-17-84

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

SEE ATTACHMENT NO. 1 TO DN-SQ-3131

SEE ATTACHMENT NO. 5 FOR REVISED RECOMMENDED DISPOSITION
[signature] 8/9/84 James Coe

REPORTABLE	YES	NO
10CFR50.55(e)	☐	☒
10CFR21	☐	☒

Reviewed by: [signature] Date: 7/26/84

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11): James Coe
TITLE/COMPANY: QAE
DATE (12): 7-20-84

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13) ③ SEE att # 4 & 5 [initials] 8-8-84

① Concur with Attachment #1.
2 Q.C. to comply with att #1 and attach documentation to att #2. Corrective action report and properly fill out.

IV. CORRECTIVE ACTION (14) ☒ Required [initials] 7-25-84 ☐ Not Required

* ATTACHMENTS #4, 5, + 6 ARE ACCEPTED.

V. (15) ☐ ENGINEERING	☒ QUALITY ASSURANCE	☐ CONSTRUCTION	☒ OTHER Q.A.
NAME/SIGNATURE: [signature] [initials] 8/9/84	NAME/SIGNATURE: James Coe ②	NAME/SIGNATURE:	NAME/SIGNATURE: James Coe ③
DATE: 7/23/84	DATE: 7-25-84	DATE:	DATE: 8-8-84
☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☒ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☒ REQUIRED [initials] 7-25-84 ☐ NOT REQUIRED

(17) BY: QA Engr. (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE: [signature] TITLE: CSQAE DATE: 8/16/84

4009-13/3-77

EBASCO SERVICES INCORPORATED

QUALITY ASSURANCE

NONCONFORMANCE REPORT

REPORT NO.(1) W3-7791

Distribution:
- White - PQAE or Site QA Supervisor
- Yellow - Organization recommending disposition
- Pink - Initiator of NCR

INSTRUCTIONS: (See back of form) T.O. 1700.0971 sus 99M

CLIENT OR PROJECT (2) Waterford SES Unit 3	DRAWING NO./SPEC NO. (3) DN-SQ-3131 WQC-170 R/1
SUPPLIER, CONSTRUCTION QC OR CONTRACTOR (4) EBASCO (Q.C.) — P.O. NO. (5) N/A	
DESCRIPTION OF COMPONENT, PART OR SYSTEM (6) Portable Rod ovens	

I. DESCRIPTION OF NONCONFORMANCE (7) (Items Involved, Specification, Code or Standard to Which Items Do Not Comply, Submit Sketch if Applicable)

Paragraph 6.2.1 states that a weekly surveillance shall be made on Portable Rod ovens. This Requirement is not being Complied with. The following dates indicate the missing since Jan. 1, 1984 - 1-12-84, 4-17-84, 4-23-84, 5-1-84.
Violation of WQC 170 R/1. (DN-SQ-3131 attached) item no. 1

NAME AND SIGNATURE OF PERSON REPORTING NONCONFORMANCE (8)	TITLE/COMPANY	DATE (9)
James Cole James Coe	QAE	7-17-84

II. RECOMMENDED DISPOSITION (10) (Submit Sketch if Applicable)

SEE ATTACHMENT NO. 1 TO DN-SQ-3131

See ATTACHMENT No. 5 FOR REVISED RECOMMENDED DISPOSITION ×

James Coe 8/9/84 — [signature] 8/8/84

NAME AND SIGNATURE OF PERSON RECOMMENDING DISPOSITION (11)	TITLE/COMPANY	DATE (12)
James Coe	QAE	7-20-84

III. EVALUATION OF DISPOSITION BY EBASCO, REASON FOR DISPOSITION (13)

(1) Concur with ATTACHMENT #1 (3) SEE att # 4&5 [initials] 8-8-84
2. Q.C. To Comply with att #1 and attach documentation to att #2. Corrective action Request and generate Nell out

IV. CORRECTIVE ACTION (14) ☒ Required ☐ Not Required

WB? JRE 7-25-84

~~* ATTACHMENTS #4, 5, + 6 ARE ACCEPTED.~~

V.(15) ☐ ENGINEERING	☒ QUALITY ASSURANCE	☐ CONSTRUCTION	☒ OTHER Q.A.
NAME (SIGNATURE) [signature]	NAME (SIGNATURE) James Coe	NAME (SIGNATURE)	NAME (SIGNATURE) James Coe
DATE 7/23/84	DATE 7-25-84	DATE	DATE 8-8-84
☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☒ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☐ ACCEPTED WITH COMMENTS	☐ ACCEPTED ☐ REJECTED ☒ ACCEPTED WITH COMMENTS

VI. VERIFICATION OF DISPOSITION ☒ REQUIRED JRE 7-25-84 ☐ NOT REQUIRED (16)

(17) BY QA Engr (EBASCO VENDOR QA OR QA ENGINEERING) SIGNATURE [signature] TITLE QAE DATE [illegible]/84

This is Attachment 1 to NCR W3- 7791 page 1 of 2 · [illegible] 9/20/84

WATERFORD STEAM ELECTRIC STATION
1982-1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

[X] Safety Related

[ ] Non-Safety Related

D.N. Number SQ-3131

Date of Report 6/26/84

Tags Hung 0 Tags Removed ______ SCS# N/A

Ref. Doc. WQC-170 Rev. 1 System Area N/A

Location N/A Package No. N/A

Hanger Yes [ ] No [X]

Item Description Portable Rod Oven Surveillance

1. Discrepancy Description: Paragrath 6.2.1 states that a weekly surveillance shall be made on portable rod ovens. This requirement is not being complied with. The following dates indicate the frequency since Jan. 1 1984. 1-12-84, 4-23-84, 4-17-84, 5-1-84.

Q.C. Inspector T. Stuckey/ [signature] Q.C. Supervisor M. Quinn/ [signature]

2. Recommended Disposition: Route to QA for review. NCR recommended.

Note: Recommend that WQC-170 be revised to relax the frequency of inspection to reflect actual construction activity. (ie. inspection should only be required on a quarterly basis)

Provided By M. Quinn/ [signature] Date 6-26 84

3. NCR No. ~~N/A~~ W3-7791 Q.A. Site Supervisor James Coe for Sam Horton Date 7-5-84

4. Disposition: SEE att #1 to DN.

Sr. Resident Engineer ______ Date ______

Referred To: ______

5. Corrective Action Taken: ______

Organization: ______ Signature ______ Date ______

6. Reinspection remarks: ______

JUL 20 1984 EBASCO QA

Accept ______ Reject ______ Q.C. Inspector ______ Date ______

Form No. WQC-150-1 (2/21/84)

Attachment I

attachment #1 to DN-SQ 3131 1

This is Attachment 1
to NCR W3-1791 page 2
of 2 appr-1 7/20/84

Q.A. EVALUATION

1. Q.C. shall research and identify if any additional rod ovens need to be added to this list. 7-5-84

2. WQC-170 will not be relaxed. Q.C. shall continue to perform weekly surveillances as directed in paragraph 6.2.1.

3. Q.C. shall provide positive measures taken to preclude recurrence for this activity.

FINAL

Q.C. shall submit documented results to Q.A. for final review and resolution.

J. Coe James Coe QAE 7-5-84
Name/Signature Title Date

CORRECTIVE ACTION REPORT

NONCONFORMANCE REPORT NO- 7791

ATTACHMENT # 2

In certification of and pursuant to the mandates of 10CFR50 Appendix B Criteria XV "Nonconforming Materials, Parts or Components" in connection with XVI "Corrective Action" and in accordance with the provisions of the Quality Assurance Program constituting a part of the Contract governing performance of the subject activity or installed item(s), the following is submitted:

Corrective Action Taken and the Results Achieved: _____

_____

_____

_____

_____

Corrective Action Taken to Preclude Recurrence: _____

_____

_____

_____

_____

Date When Full Corrective Action Was Achieved: _____

_____

Copies of the following documents are being returned with this Corrective Action Report to Ebasco Quality Assurance to verify corrective action taken:

_____

_____

_____

_____

The above corrective action has been completed, recorded and verified by:

Signature	Signature	Signature
Company (Const. Rep.)	Company (QA/QC Rep.)	Company
Title	Title	Authorized Nuclear Insp.
Date	Date	Date

In certification of ... to the ... of ... Criteria ... Materials, Parts or ... in accordance with ... Quality Assurance Program constituting a part of the Contract governing performance of the subject activity or installed item(s), the following is submitted:

Corrective Action Taken and the Results Achieved:

N/A

Corrective Action Taken to Preclude Recurrence:

N/A

Date When Full Corrective Action Was Achieved: N/A

Copies of the following documents are being returned with this Corrective Action Report to Ebasco Quality Assurance to verify corrective action taken:

See Attachment #3. - [signature] 8-1-84

The above corrective action has been completed, recorded and verified by:

Signature	Signature	Signature
Company (Const. Rep.)	Company (QA/QC Rep.)	Company
Title	Title	Authorized ...
Date	Date	

Attachment 3 of NCR W3-7791

QC Response to Attachment 1 of DN SQ-3131 by item:

1. There is no list of portable rod ovens as these are not calibrated pieces of equipment.

2. There is no specific code or site specification that requires QC verification/surveillance on portable rod ovens. The responsibility for maintaining E-7018 electrode in a specific temperature range falls upon construction per ASP-IV-18.

   The only requirements for inspection of portable rod ovens appear in WQC-170 and based upon the limited number of rejections of the portable rod oven surveillance activities, QC feels that the inspection frequency should be relaxed if not deleted in it's entirety.

3. QC will revise WQC-170 to delete the inspection of portable rod ovens on any specific frequency.

4. Additionally, Engineering should perform an evaluation of the welds done in the time frame in question to determine any detrimental effects due to a lack of monitoring of portable rod ovens by QC.

8-1-84

ATTACHMENT #4
NCR-W3-7791

1) The failure to comply, completely, with the requirements of WQC-170, para 6.2.1 has not resulted in any instances of weld metal or base metal cracking from hydrogen embrittlement. The welds performed have met NDE and visual inspection requirements. No further action is required in this regard.

2) Ebasco ASP-IV-18, para 6.4.5 specifies that electrodes with low-hydrogen type coatings shall be issued in portable ovens that are to be connected to a 110 volt power source while in the field. While the procedure does not specify that QC document the above requirement, it is expected that such an important item shall be, at least, monitored by QC.

3) Since all welds require a visual inspection prior to welding, the following suggestion is offered. Revise WQC-202 so that verification that the portable oven is connected to a 110 volt supply, and is operative, becomes a part of the "check-off items" the inspector performs during tha fit-up inspection. In this manner separate documentation is not required.

W.L. Perrin

B. Perrin 8-7-84

ATTACHMENT #5

NCR W3-7791

Q.C.; (per attachment #4) to provide documentation of revised WQC-202, "Welding Inspection Requirements" to add verification of portable rod ovens as part of "check-off items".

James Coe 5/8/84

J. Coe Date

QA Engineer

Attachment #6 pg 1 of 2

ASP-III-1 Attachment 7.7

NCR W3-7771

EBASCO SERVICES INCORPORATED

WATERFORD STEAM ELECTRIC STATION - UNIT NO. 3

AMENDMENT NO. 2

PROCEDURE FOR:	PROCEDURE NUMBER	ISSUE
Welding Inspection Requirements Ebasco Force Accout	WQC-202	3

LEAD CONSTRUCTION ENGINEER — DATE: 8/8/84	Sam Hoston for A.M. CUTRONA — Q.A. PROGRAM MANAGER — DATE: 8/8/84

AMENDMENT EFFECTIVE DATE: 8/8/84

DESCRIPTION OF ADDITIONS/DELETIONS/CHANGES:

Under paragraph 6.1.4, add inspection attributes:

1) Portable rod oven (when used for covered electrode) is warm and energized.
m) Bare rod (when used) is flagged to identify rod type.

Under paragraph 6.2.1, add inspection attributes:

1) Portable rod oven (when used for covered electrode) is warm and energized.
m) Bare rod (when used) is flagged to identify rod type.

8/8/84 LAB

INITIATED BY — DATE: 8-8-84

FORM NO. ASP III-1-7 (1/6/83)

Attachment #6 pg. 2 of 2
NCR W3-7701

ASP-III-1
Attachment 7.7

EBASCO SERVICES INCORPORATED

WATERFORD STEAM ELECTRIC STATION - UNIT NO. 3

AMENDMENT NO. 1

PROCEDURE FOR:	PROCEDURE NUMBER	ISSUE
Control of Weld Filler Metals	WQC-170	1

LEAD CONSTRUCTION ENGINEER / DATE: 8/8/84	Q.A. PROGRAM MANAGER / DATE: 8/8/84

AMENDMENT EFFECTIVE DATE: 8/8/84

DESCRIPTION OF ADDITIONS/DELETIONS/CHANGES:

Delete paragraphs 6.2, 6.2.1 and 6.3 in their entirety. These requirements are included in Amendment #2 of WQC-202, Issue Rev. 3

8/8/84
(LLB)

INITIATED BY / DATE: 8.8.84

FORM NO. ASP III-1-7 (1/6/83)

ATTACHMENT 6

D. N. Number MC-1891

Date of Report 12/27/78

WATERFORD STEAM ELECTRIC STATION
1980 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# 808467

MRIR# 78-05623

REQ# N/A

Item Description 1 Can 50 Lbs. of 1/8 E7018 Covered Electrodes

Location 2B Whse. Hold Cage System N/A

P. O. / Contract No. WP3-1873 Dwg./Spec. No. SFA 5.1

1. Discrepancy Description: This can has been punctured during shipment, which may have caused the rod to be contaminated.

Q. C. Inspector Ronald K. Beams

Q. C. Supervisor M. Simon

2. Recommended Disposition: Scrap material.

Provided By Ronald K. Beams Date 12-27-78

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: Comply with recommended disposition.

Sr. Resident Engineer [signature] Date 1/5/78

Referred To: Warehouse

5. Corrective Action Taken: Rods - Scrapped 1-5-78, RMA # 2229.

Organization: Warehouse Signature J Hedley Date 1-5-79

6. Reinspection remarks: None

Accept ✓ REVIEWED & ACCEPTED QUALITY CONTROL Inspector Ronald K Beams Date 1-11-79

JAN 13 1979

Form No. WQ[illegible] LB Berry

HNT

D. N. Number MC-1953

Date of Report 2/2/79

WATERFORD STEAM ELECTRIC STATION
1980 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# SEE ATTACHED SHEET

MRIR# SEE ATTACHED SHEET

REQ# 8708

Item Description See Attached Sheet

Location Whse. 2B Hold Cage System N/A

P. O. / Contract No. WP3-1385 Dwg./Spec. No. ASME Section III Subsection NB

1. Discrepancy Description: The cans of E7018 covered electrodes were received damaged. (The cans have holes in the bottom, 1 can was not sealed properly before it was shipped.)

Q. C. Inspector Ronald K. Beams

Q. C. Supervisor R B Berry

2. Recommended Disposition: Warehouse dispose of cans per ASP-IV-18 Issue F.

Provided By Ronald K. Beams Date 2-2-79

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: Comply with recommended disposition. (Donate to Welding School)

Sr. Resident Engineer [signature] Date 2-12-79
For W. G. Guldemond

Referred To: Warehouse/ J. Chapman

5. Corrective Action Taken: Material removed from site RMR# 2373.

Organization: Warehouse Signature V. St. Amant Date 2/16/79

6. Reinspection remarks: None

REVIEWED & ACCEPTED
QUALITY CONTROL

Accept ✓ Reject ____ Q.C. Inspector Ronald K. Beams Date 3-20-79

MAR 21 1979

Form No. WQC-1-4 (R B Berry

ANI

D. N. Number MC-1983

Date of Report 2/20/79

WATERFORD STEAM ELECTRIC STATION
1980 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# 808801

MRIR# 79-00700

REQ# 8708

Item Description 1 Can 3/32" E 7018 Covered Electrodes

Location Whse. 2B Hold Cage System N/A

P. O. / Contract No. WP3-1385 Dwg./Spec. No. ASME Section III Subsection NB

1. Discrepancy Description: The cans of E7018 covered electrodes were received damaged. (The can has a hole in the bottom).

Q. C. Inspector Ronald K. Reams

Q. C. Supervisor [signature]

2. Recommended Disposition: Warehouse dispose of can per ASP-IV-18 Issue F.

Provided By Ronald K. Reams Date 2-20-79

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: Comply with recommended disposition.

Sr. Resident Engineer [signature] for W. C. Gilray Date 3-5-79

Referred To: Warehouse/ J. Chapman

5. Corrective Action Taken: Material for item scraped 4-25-79 RMR# 2548.

Organization: Whse. Signature J. Hadley Date 4-26-79

6. Reinspection remarks: Material scraped

REVIEWED & ACCEPTED
QUALITY CONTROL
APR 30 1979

Accept ✓ Reject _____ Q.C. Inspector Ronald K. Reams Date 4-30-79

[signature]

Form No. WQC-1-4 (2-24-78)

D. N. Number MC-2225

Date of Report 7/16/79

WATERFORD STEAM ELECTRIC STATION
1980 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# N/A

MRIR# N/A

REQ# N/A

Item Description 3 Barrels and (11) cans Welding Electrodes

Location 2B Whse. Hold Cage System Weld Rod

P. O. / Contract No. N/A Dwg./Spec. No. ASP-IV-18 Rev. H

1. Discrepancy Description: This material was removed from Waldingers ovens and put in barrels and cans. These cans and barrels were never covered or sealed. Therefore, the rods have become contaminated. (These rods were returned to warehouse.)

Q. C. Inspector Ronald K. Beams

Q. C. Supervisor L B Berry

2. Recommended Disposition: Have the material removed from the site.

REVIEWED & ACCEPTED
QUALITY CONTROL

Provided By Ronald K Beams Date 7-16-79

3. NCR No. JUL 31 1979 Q. A. Site Supervisor _____ Date _____

4. Disposition: Scrap.

L B Berry

FOR Sr. Resident Engineer [signature] Date 7-25-79

Referred To: Warehouse

5. Corrective Action Taken: Material scrapped via RMR 2829.

Organization: Whse Signature K M Battle Date 7-30-79

6. Reinspection remarks: None

Accept / Reject ____ Q.C. Inspector Ronald K Beams Date 7-31-79

Form No. WQC-1-4 (2-24-78)

EBASCO Rita

D. N. Number MC-3620

Date of Report 8/19/81

MRR# 105326

MRIR# 81-02360

REQ# 25401

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description Item (1) 2,100# E7018 3/32" Welding Electrodes

Location 2B Row E Isle System 99M

P. O. / Contract No. WP3-5709 Dwg./Spec. No. QA Manual-ASME Sec.III, Sec. III-5, R.2, para. 4.8.1

1. Discrepancy Description: The cans of weld rod are dented, punctured and/or cracked, breaking the seal.

Q. C. Inspector Laura E. Lounsbury

Q. C. Supervisor [signature]

REVIEWED & ACCEPTED QUALITY CONTROL JAN 24 1983 [signature]

2. Recommended Disposition: Return to the vendor for replacement.

Provided By L.E. Lounsbury Date 8/19/81

3. NCR No. ________ Q. A. Site Supervisor ________ Date ________

4. Disposition: ~~Comply with recommended disposition. RMR attached.~~ all 8-4-82

REVISED DISPOSITION: Return to Carrier ~~RMR attached~~ RR HLTS per attached OS&D report & RMR

Sr. Resident Engineer [signature] Date 8-26-81 8-4-82

Referred To: Purch/Whse

5. Corrective Action Taken: ~~Mat'l sent to Spector Red Ball Salvage Dept See copy of documented RMR attached.~~ RS 1-11-82
Material returned to Vendor per attached OS&D report & RMR

Organization: Mech Signature Anna Brad Date 7-2-82

6. Reinspection remarks: Attached RMR is incomplete. It does not include a routing slip. Only 400#'s of the 2500#'s should be referencing OS&D report which

Accept ____ Reject ✓ Q.C. Inspector L.E. Lounsbury Date 8/30/82

was on whse. hold. Requires a routing slip & completed RMR.

Rita Spicer 1-25-83

Form No. WQC-1-4 (2-24-78)

Accept ✓ 1.23.83 - See attached reinspection remarks
L.E. Lounsbury

EBASCO

D. N. Number MC-3884

Date of Report 11-30-81

MRR# 111232

MRIR# 81-03864

REQ# 28143

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description Welding Electrodes (SEE ATTACHED SHEET)

Location 7B Warehouse System 99-M

P. O. / Contract No. WP3-7235 Dwg./Spec. No. N/A

1. Discrepancy Description: Cans are preforated and badly dented.

REVIEWED & ACCEPTED
QUALITY CONTROL

Q. C. Inspector John S Martin

Q. C. Supervisor L B Berry

2. Recommended Disposition: Return to vendor for replacement.

FEB 11 1982

L B Berry

Provided By John S Martin Date 12-12-81

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: ~~Comply with recommended disposition.~~ Will scrap RMR attached.

REVISED DISPOSITION: SCRAP

Sr. Resident Engineer [signature] Date 1-13-82
2-3-82

Referred To: Purch/Whse

5. Corrective Action Taken: Documented copy of RMR attached.

Organization: Mech Signature Anna Brady Date 2-10-82

6. Reinspection remarks:

None

Accept ✓ Reject ____ Q.C. Inspector John S Martin Date 2/11/82

Form No. WQC-1-4 (2-24-78)

EBASCO

D. N. Number MC-4199

Date of Report 3/16/82

MRR# 201149

MRIR# 82-01177

REQ# 29808

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

Item Description 1) 1,200 lbs E7018-3/32" Welding Electrodes Ht #422P0461

Location 2B Whse. System 99M

P. O. / Contract No. WP3-7824 Dwg./Spec. No. FPS-1 Rev.1

1. Discrepancy Description: Cans are preforated (24 cans). Note: cans that are damaged were found on bottom layer of pallet.

Q. C. Inspector JoAnn S Martin

Q. C. Supervisor R C Berry

2. Recommended Disposition: Return material to vendor for replacement.

REVIEWED & ACCEPTED
QUALITY CONTROL
JUL 6 1982

Provided By JoAnn S Martin Date 3/16/82

3. NCR No. 82-A Site Supervisor _____ Date _____

4. Disposition: SCRAP RMR attached
R. J. Diambattista

Sr. Resident Engineer _____ Date 4-1-82

Referred-To: Purch/Whse

5. Corrective Action Taken: Copy of RMR attached.

Organization: Mech Signature Anna Brady Date 3-28-82

6. Reinspection remarks: _____

Accept ✓ Reject ____ Q.C. Inspector JoAnn S Martin Date 7/6/82

Form No. WQC-1-4 (2-24-78)

EBASCO

D. N. Number MC-4443

Date of Report 6/4/82

WATERFORD STEAM ELECTRIC STATION
1982 - 1165 MW INSTALLATION UNIT NO. 3
DISCREPANCY NOTICE

MRR# 205047

MRIR# 82-02528

REQ# 31979

Item Description 1) 100 #E-7018 3/32" Welding Electrodes Heat #431P2321 Lot #2B217Z01

Location 2B Whse. open storage System 99M

P. O. / Contract No. WP3-8567 Dwg./Spec. No. FPS-1 Rev.1/SFA5.1

1. Discrepancy Description: Cans are perforated.

Q. C. Inspector John S Martin

Q. C. Supervisor Billy Joe Dickson

2. Recommended Disposition: Return material to vendor for replacement and/or scrap.

QUALITY CONTROL
OCT 21 1982

Billy Joe Dickson Provided By John S Martin Date 6/4/82

3. NCR No. _____ Q. A. Site Supervisor _____ Date _____

4. Disposition: SCRAP RMR attached.

Sr. Resident Engineer [signature] Date 6-28-82

Referred To: Purch/Whse

5. Corrective Action Taken: See Attached Completed Copy of RMR

Organization: Mech. Signature Keith A Brietz Date 10-19-82

6. Reinspection remarks: None

Accept ✓ Reject ____ Q.C. Inspector John S Martin Date 10-20-82

Form No. WQC-1-4 (2-24-78)

EBASCO

☐ SAFETY
☒ SAFETY (ASME III)
☐ NON-SAFETY
☐ NON-SAFETY (FIRE PROTECTION)
☐ PROGRAMATIC

D. N. Number MC-5633
Date of Report 8-18-83
MRR # 305679
RTW # N/A
MRIR # 83-02474
RTWIR # N/A

WATERFORD STEAM ELECTRIC STATION
1983 - 1165 MW INSTALLATION - UNIT NO. 3
DISCREPANCY NOTICE

Item Description 7 pcs. (50 lb. containers) 3/32" E7018 Weld Rods - Lot 3B104016 - Ht.20771

Location 2B Weld Rod Room System N/A

P. O./Contract No. WP3-11815 Dwg./Spec. No. FPS-1 Rev.1, para. 3.1

1. Discrepancy Description All covered electrodes as per purchase specifications for mild steel covered welding electrodes shall have the electrode classification legibly marked on each rod. Upon opening above weld rod containers, no markings were found on electrodes.

Q. C. Inspector [signature]

Q. C. Supervisor [signature] 08/19/83

2. Recommended Disposition ~~Engineering to evaluate & disposition 4.3 "QA to upgrade to an NCR as required by ASME Manual, Section III 3, Supplement 8, para. 7".~~ 8-19-83 Warehouse shall recall all weld rod of this lot, for return to vendor. Revised Disposition: Engineering to Evaluate.

Provided By [signature] Date 8-18-83

3. NCR No. N/A Q. A. Site Supervisor [signature] (for H. J. Kunis, Jr.) Date 8/22/83

4. Disposition RETURN MAT'L TO VENDOR FOR REPLACEMENT.

Referred To: ~~QA~~ Mech. Sr. Resident Engineer [signature] Date 9-1-83

5. Corrective Action Taken: SEE ATTACHED COPY OF RMR # 3741

Organization: Mech Signature [signature] Date 9/30/83

6. Reinspection Remarks: MAT'L RETURNED PER RMR # 3741

~~REVIEWED & ACCEPTED~~
~~QUALITY CONTROL~~

Accept ✓ Reject ____ Q. C. Inspector [signature] ~~REVIEWED & ACCEPTED~~ 9-3-83
~~QUALITY CONTROL~~

OCT 03 1983
LES 10/02/83
[signature]

OCT 03 1983
LES/10/02/83
[signature]

Form No. WQC-1-4 (4/14/83)

ATTACHMENT 7

FEBRUARY 1979
NEW ORLEANS, LOUISIANA
NAT WEATHER SERVICE MET OBST
NEW ORLEANS INT'L AIRPORT

Local Climatological Data

MONTHLY SUMMARY

FEBRUARY 1979 NEW ORLEANS, LOUISIANA

LATITUDE 29° 59' N LONGITUDE 90° 15' W ELEVATION (GROUND) 4 FT. STANDARD TIME USED: CENTRAL WBAN #12916

Date	Temperature °F Maximum	Minimum	Average	Departure from normal	Average dew point	Degree days base 65° Heating	Cooling	Weather types on dates of occurrence	Snow, ice pellets or ice on ground at 06AM In.	Precipitation Water equivalent In.	Snow, ice pellets In.	Avg. station pressure In. Elev. 30 feet m.s.l.	Wind Resultant dir.	Resultant speed m.p.h.	Average speed m.p.h.	Fastest mile Speed m.p.h.	Direction	Sunshine Total minutes	Percent of possible	Sky cover tenths Sunrise to sunset	Midnight to midnight	Date
1	2	3	4	5	6	7A	7B	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	43	31	37	-17	18	28	0		0	0	0	30.32	02	8.0	8.8	14	06	558	86	6	7	1
2	57	38	48	-6	34	17	0	8	0	0	0	30.21	12	7.5	8.3	15	13	82	14	10	10	2
3	68	55	62	8	55	3	0	8	0	.48	0	30.04	18	4.2	8.5	13	17	3	0	10	10	3
4	57	46	52	-2	51	13	0	2 8	0	.64	0	30.11	03	5.2	5.8	14	04	0	0	10	10	4
5	48	43	45	-8	38	20	0	2 8	0	2.11	0	30.10	06	14.3	14.4	20	07	0	0	10	10	5
6	53	43	48	-6	42	17	0	1 8	0	4.15	0	29.76	07	9.0	12.2	18	28	0	0	10	10	6
7	47	42	45	-10	35	20	0	1 8	0	0	0	29.85	31	12.3	13.4	20	28	46	7	10	10	7
8	55	40	48	-7	36	17	0	1	0	0	0	30.17	24	4.2	7.3	14	25	428	65	1	5	8
9	50	33	42	-13	26	23	0	1 8	0	0	0	30.36	35	12.5	14.0	23	35	609	92	1	1	9
10	48	24*	37*	-18	24	28	0	8	0	0	0	30.38	06	4.8	6.3	8	05	646	98	0	0	10
11	63	27	45	-10	30	20	0	8	0	0	0	30.33	18	3.4	3.7	8	18	642	97	1	1	11
12	71	35	53	-2	42	12	0	1 8	0	0	0	30.23	20	1.4	3.7	8	28	541	81	4	2	12
13	70	46	58	4	52	6	0	1 8	0	.01	0	30.18	17	3.8	4.8	8	17	70	11	10	9	13
14	77	59	68	12	57	0	3	1 8	0	T	0	30.08	21	9.3	9.9	16	23	413	62	3	4	14
15	79*	58	69	13	58	0	4	2 8	0	0	0	29.87	20	8.8	9.5	16	23	480	72	6	8	15
16	73	48	61	5	54	4	0	2 8	0	T	0	30.07	35	5.4	9.2	18	35	61	9	10	10	16
17	48	43	46	-10	38	19	0	1 8	0	T	0	30.18	04	10.4	10.8	14	04	0	0	10	10	17
18	53	38	46	-10	37	19	0	1 8	0	.47	0	30.22	36	12.1	12.5	18	36	280	43	10	10	18
19	53	39	46	-10	34	19	0	1 8	0	T	0	30.35	05	5.2	8.1	13	08	251	37	10	10	19
20	58	48	53	-3	48	12	0	8	0	1.85	0	30.17	09	5.4	5.8	15	12	0	0	10	8	20
21	72	53	63	7	56	2	0	1 8	0	0	0	30.08	09	3.8	5.5	12	17	158	23	10	10	21
22	76	62	69*	12	61	0	4	2 3 8	0	.57	0	30.04	15	7.7	8.3	18	16	82	12	10	10	22
23	76	60	68	11	62	0	3	2 3 8	0	1.95	0	29.95	13	2.7	8.4	20	34	17	2	10	10	23
24	72	53	63	6	58	2	0	1 3 8	0	.88	0	29.85	18	3.1	9.6	22	27	158	23	10	8	24
25	58	44	51	-4	37	14	0		0	0	0	29.87	31	10.1	10.8	23	31	823	81	5	3	25
26	58	40	50	-7	30	15	0		0	0	0	30.13	32	9.1	9.4	17	34	667	100	0	0	26
27	65	35	50	-7	37	15	0	8	0	0	0	30.08	14	3.5	5.2	12	18	596	91	7	5	27
28	75	50	63	5	54	2	0	1 8	0	0	0	29.84	18	7.9	9.6	19	18	375	54	7	6	28

Sum	Sum				Total	Total		Total	Total	For the month:						Total		Sum	Sum
1725	1229				347	14	Number of days	12.49	0	30.11	04	1.5	9.0	23	31	7795	For	208	189
Avg.	Avg.	Avg.	Dep.	Avg.	Dep.	Dep.	Precipitation	Dep.						Date:	25+	Possible for month		Avg.	Avg.
61.6	44.1	52.9	-2.7	43	48	-21	≥ .01 inch 10	7.87								18701	42	7.4	7.1

Number of days				Season to date			Greatest in 24 hours and dates			Greatest depth on ground of snow, ice pellets or ice and date
Maximum temp.		Minimum temp.		Total	Total	Snow, ice pellets ≥ 1.0 inch 0	Precipitation		Snow, ice pellets	
≥ 90°	≤ 32°	≤ 32°	≤ 0°	1312	14	Thunderstorms 3				
				Dep.	Dep.	Heavy fog 6	5.29	5-6	0	0
0	0	3	0	64	-49	Clear 5 Partly cloudy 6 Cloudy 17				

* EXTREME FOR THE MONTH - LAST OCCURRENCE IF MORE THAN ONE.
T TRACE AMOUNT
+ ALSO ON AN EARLIER DATE, OR DATES.
HEAVY FOG - VISIBILITY 1/4 MILE OR LESS.
FIGURES FOR WIND DIRECTIONS ARE TENS OF DEGREES CLOCKWISE FROM TRUE NORTH. 00 - CALM
DATA IN COLS. 6 AND 12-15 ARE BASED ON 7 OR MORE OBSERVATIONS PER DAY AT 3-HOUR INTERVALS.
FASTEST MILE WIND SPEEDS ARE FASTEST OBSERVED ONE-MINUTE VALUES WHEN DIRECTIONS ARE IN TENS OF DEGREES. THE / WITH THE DIRECTION INDICATES PEAK GUST SPEED.
ANY ERRORS DETECTED WILL BE CORRECTED AND CHANGES IN SUMMARY DATA WILL BE ANNOTATED IN THE ANNUAL SUMMARY.

SUMMARY BY HOURS

Hour (local time)	Averages: Sky cover tenths	Station pressure In.	Temperature Air °F	Wet bulb °F	Dew pt. °F	Relative humidity %	Wind speed m.p.h.	Resultant wind Direction	Speed m.p.h.
00	6	30.12	50	46	42	75	8.6	03	1.3
03	7	30.10	48	45	41	77	8.3	01	2.8
06	8	30.12	47	44	40	77	8.3	03	2.5
09	7	30.15	51	47	43	76	8.6	04	3.0
12	8	30.14	56	51	45	67	10.8	02	1.5
15	7	30.08	56	52	45	63	10.1	02	.7
18	7	30.08	56	50	44	67	9.0	08	1.0
21	6	30.11	52	48	44	73	8.4	09	.7

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

Date	A.M. hour ending at 1	2	3	4	5	6	7	8	9	10	11	12	P.M. hour ending at 1	2	3	4	5	6	7	8	9	10	11	12	Date
1																									1
2																									2
3					T	T	T	T		T	.06	.01		.08	.05	.01	.04	.01	.06	.08	.05	T	T		3
4												T	T	T	.01	.02	.04	.11	.07	.05	.04	.06	.08	.09	4
5	.08	.18	.08	.05	.03	.14	.05	.03	.02	.01	.04	.05	.04	.03	.03	T	T	.02	.14	.29	.25	.21	.21	.29	5
6	.35	.53	.52	.45	.28	.38	.35	.22	.20	.20	.10	.08	.02	.01	.06	.04	.07	.07	.13	.10	T				6
7														T											7
8																									8
9																									9
10																									10
11																									11
12																									12
13	T											T	T	T	T				T	.01					13
14																									14
15																									15
16																									16
17										T															17
18																						T	T	T	18
19	.05	.04	.04	.02	T		.17	.02	.08	.04	.01	T													19
20																			T		T		T	T	20
21							.01	.18	.12	.20	.12	.02	.25	.16	.18	.24	.22	.14	.01	T					21
22																									22
23	T	T		T	T	T			T	T									T	.05	.08	.27	.17		23
24	.02	T	.37	.51 T	.22	T							T	T	.03	.07	.02	.04		.14	.02	.05	.05	.03	24
25																T	T		.06	T					25
26																									26
27																									27
28																									28

SUBSCRIPTION PRICE: $2.55 PER YEAR INCLUDING ANNUAL SUMMARY. FOREIGN MAIL [illegible] EXTRA. SINGLE COPY: 20 CENTS FOR MONTHLY OR ANNUAL ISSUE. [illegible] MINIMUM CHARGE OF $[illegible] FOR EACH ORDER OF SHELF STOCKED ISSUES OF PUBLICATIONS. MAKE CHECKS PAYABLE TO DEPARTMENT OF COMMERCE, NOAA. SEND PAYMENTS, ORDERS, AND INQUIRIES TO NATIONAL CLIMATIC CENTER, FEDERAL BUILDING, ASHEVILLE, NORTH CAROLINA 28801.

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH CAROLINA 28801.

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA AND INFORMATION SERVICE

Daniel B. Mitchell
DIRECTOR, NATIONAL CLIMATIC CENTER

ATTACHMENT 8

CHEMETRON CORPORATION
September 30, 1981
No. 33

IT'S A FACT

ATOM ARC 7018
MOISTURE RESISTANT LOW HYDROGEN ELECTRODES

A NEW MOISTURE RESISTANT COATING

One major concern in the welding of steel is hydrogen embrittlement. Excessive atomic hydrogen trapped in hardenable steel can exert enough pressure to cause critical defects such as underbead cracking and delayed brittle fracture.

One source of hydrogen in the arc atmosphere is moisture in the electrode coating, and for this reason Alloy Rods exercises extreme control in the production of low hydrogen elecrodes. All Atom Arc Low Hydrogen electrodes are manufactured to contain moisture levels below .2% before they are packed in hermetically sealed containers. In addition, Atom Arc 7018 electrodes are now manufactured with a flux coating that effectively **resists** moisture pickup for many hours **after** the container is opened. This improved coating provides an extra degree of reliability, especially for electrodes exposed to high temperature — high humidity working conditions.

This new moisture resistant coating is now standard for all sizes of Atom Arc 7018 electrodes. The improved coating was carefully formulated not only to resist moisture pick-up but also to retain the fine operating characteristics and consistent dependability for which the entire Atom Arc line is so well recognized. In the future, the moisture resistant coating will become the standard for the entire Atom Arc line.

MOISTURE TESTING AND RESULTS

The AWS D1.1 Structural Code and the Military MIL-E-22200/1E specifications allow a maximum of .4% moisture content for E70XX low hydrogen electrodes. Testing by Alloy Rods under specific combinations of relative humidity and temperature has demonstrated that the improved Atom Arc 7018 electrode satisfies this low moisture requirement for exposure times beyond those normally allowed in field use. In fact, under certain conditions, the moisture resistant Atom Arc 7018 electrode remained below the .4% max. level even after 72 hours of exposure.

TEST METHOD

The method of moisture testing chosen by Alloy Rods is that described in **AWS A5.5, Section 25.** The reasons for choosing this method are two-fold. First, it is the method required to satisfy AWS A5.5 and D1.1 specifications. Secondly, this test is sensitive **only** to water, and it is the most accurate and reliable method of moisture determination currently in use.

It should be noted that even though Atom Arc 7018 electrodes resist moisture pickup longer than ever before, **no** moisture resistant electrode will eliminate the need for storage and rebake ovens and the necessity to follow code requirements for allowable exposure times.

TYPICAL MECHANICAL PROPERTIES

	As Welded	Stress Relieved 2 hrs. @ 1150°F.
Yield Point (psi)	68,500	62,000
Tensile Strength (psi)	75,000	72,000
% Elongation (2")	31	32
% Reduction of Area	75.5	77

TYPICAL CHARPY V-NOTCH IMPACT VALUES

Temperature	As Welded	Stress Relieved 2 hrs. @1150°F.
72°F.	125 ft.-lbs.	130 ft.-lbs.
−20°F.	70 ft.-lbs.	75 ft.-lbs.

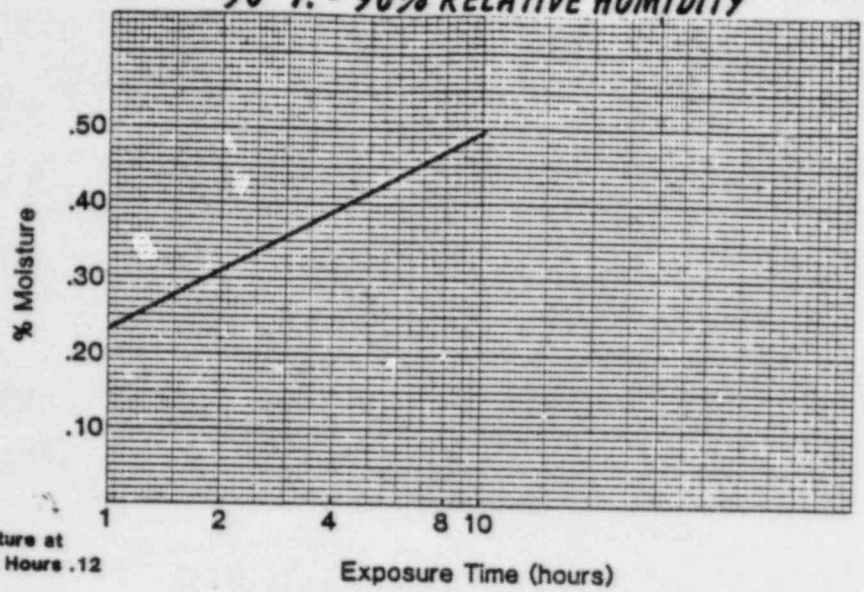
TYPICAL CHEMICAL ANALYSIS OF WELD METAL

C	Mn	Si
0.06%	1.10%	0.50%

CODE AND SPECIFICATION DATA

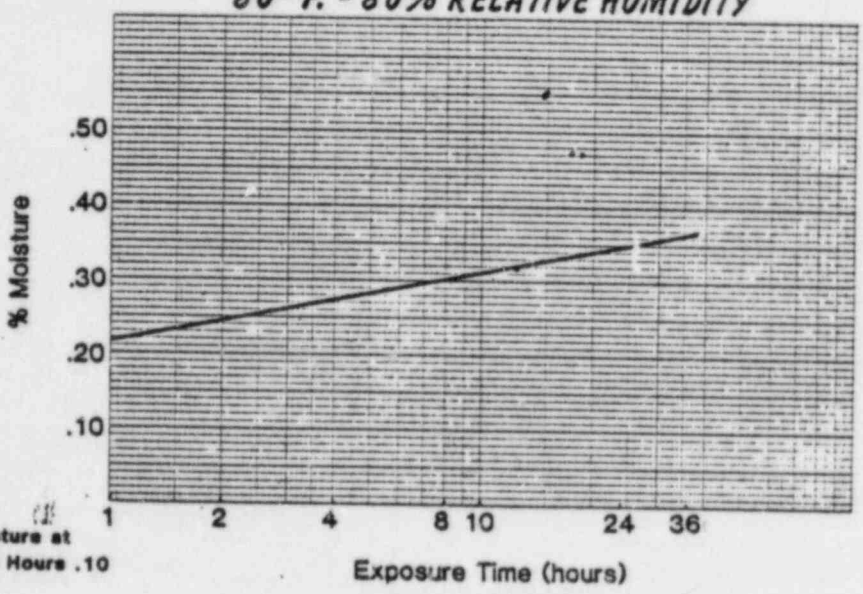
AWS: A5.1, Class E7018
ASME: SFA 5.1
Military Specification: MIL-E-22200/1E, MIL 7018
American Bureau of Shipping: 2Y
Det Norske Veritas: 3YHH
Lloyds Register of Shipping: 3H

90° F. - 90% RELATIVE HUMIDITY



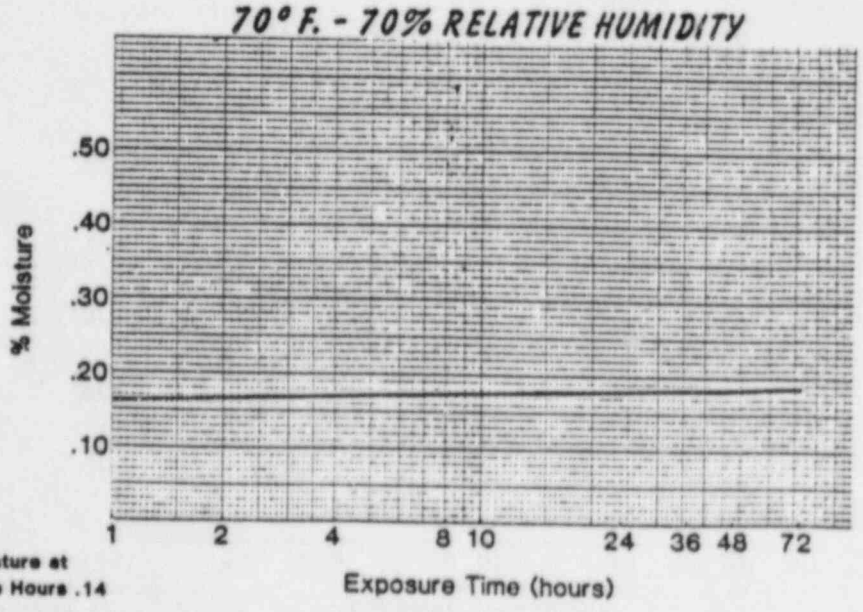
Moisture at Zero Hours .12

80° F. - 80% RELATIVE HUMIDITY



Moisture at Zero Hours .10

70° F. - 70% RELATIVE HUMIDITY



Moisture at Zero Hours .14

The data presented on the preceding pages is *TYPICAL* and is not to be construed as guaranteed values. Tests were performed in strict accordance with AWS procedures, but individual results may differ depending on test variables.

Alloy Rods Division
CHEMETRON CORPORATION
HANOVER, PA 17331 U.S.A.

THE SPECIALIST IN WELDING METALLURGY
An Allegheny International Company

ATTACHMENT 9

ALLOY RODS, INC.

ALLEGHENY INTERNATIONAL

Wilson Avenue
P.O. Box 517
Hanover, PA 17331 USA
717/637-8911
TWX 510-657-4171

September 4, 1984

EBASCO CORPORATION
P. O. Box 70
Killona, LA 70066

ATTENTION: Mr. U. Quimby

Dear Mr. Quimby:

The ATOM ARC electrodes which were used by your company for fabrication work in 1979 and 1980 were of a vintage prior to our moisture resistant formula. This pre-moisture formula is no longer being produced and was replaced with the M.R. formula over a period of time starting in 1981.

We have a small inventory of some of the pre-moisture resistant electrodes on hand; primarily for reference work when one of our people will check weldability to our present product.

The electrodes used for the tests are 1/8" diameter, produced in April of 1981. The electrodes were in a fifty (50) pound can which had been opened in June of 1981 and have been laying on our warehouse shelf since that time. For information only, we ran a moisture content of this coating, prior to conditioning, and it was 1.20%.

All of the electrodes used in the following tests were reconditioned at 800°F for 1/2 hour. The electrodes were then tied into two separate bundles with the depth of the electrodes varying from 10 to 12 deep. These electrodes were then submitted to the following tests.

TEST NO. 1

(A) One bundle was exposed in our humidity cabinet for 48 hours @ 60°F and 80 percent relative humidity.

Coating moisture prior to exposure 0.10%

	COATING MOISTURES AFTER EXPOSURE				
Location in Bundle -	Top	1/4	Middle	3/4	Bottom
	1.26	0.92	0.56	0.86	1.14

TEST NO. 1 (Continued)

(B) This same test bundle of electrode was then placed in a dry rod oven which was set at 250°F, and remained in the oven for 8 hrs. and samples taken at the end of this period.

COATING MOISTURE AFTER 8 HRS. IN OVEN

Location in Bundle -	Top	1/4	Middle	3/4	Bottom
	0.19	0.25	0.26	0.18	0.20

Test No. 1 Terminated.

TEST NO. 2

(A) This bundle of electrodes was placed in a holding oven set at 250°F and then the electric power plug was pulled with electrodes remaining in this oven for 48 hours.

The coating moisture prior to test was 0.08.

COATING MOISTURES AFTER 48 Hrs. IN OVEN

Location in Bundle	Top	1/4	Middle	3/4	Bottom
	0.23	0.17	0.23	0.20	0.21

(B) The bundle of electrodes was left in the oven and the electric power was restored to the oven and samples taken after 14 hours.

COATING MOISTURES AFTER 14 Hr. OVEN BACK ON

Location in Bundle	Top	Middle	Bottom
	0.12	0.16	0.16

Test No. 2 Terminated.

We hope that this information will be of value to you and if, for any reason, you need clarification of the results contained herein, please do not hesitate to call.

Very truly yours,

Paul M. Krieger

Paul M. Krieger
Senior Research Engineer
RESEARCH AND DEVELOPMENT

PMK/cer
ATTACHMENT
CC: S. E. Ferree, C. B. Marshall
C. R. Zimmerman

EQUIPMENT USED

"DRY ROD"

ELECTRIC STABILIZING OVEN
TYPE 300 MODEL PP3 TEMP. RANGE 175-550
MFG. PHILIP RODEN CO., MILWAUKEE, WISCONSIN

PHOENIX - DRY ROD
TYPE 300 MODEL 16A - St. Temp Range 100-550
MFG. PHOENIX PROD. CO., MILWAUKEE, WISCONSIN

HUMIDITY CABINET

BLUE M
MODEL CFR-7-520 SER. NO. 62-207
TEMP RANGE 38°F to 200°F R.H. RANGE- 40 to 98