U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-454/82-25(DPRP); 50-455/82-19(DPRP)

Docket Nos. 50-454; 50-455 Licenses No. CPPR-130, CPPR-131

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Byron Station

Inspection At: Byron Construction Site, Byron, IL

Inspection Conducted: December 2, 3, 7, 8, 27-29, 1982 and January 4-6 and 14, 1983

Inspector: D. W. Hayes DW Hayes 2/7/83

Approved By: R. C. Knop, Chief RC Knop 2-7-83
Projects Branch 1

Inspection Summary

Inspection on December 2, 3, 7, 8, 27-29, 1982 and January 4-6 and 14, 1983 (Reports No. 50-454/82-25(DPRP); 50-455/82-19(DPRP))

Areas Inspected: Receipt inspection records for tendons, tendon accessories and masonry block; storage inspection records for tendons, tendon accessories, masonry blocks and concrete aggregate and field inspection records for structural steel bolting. The inspection involved a total of 70 inspector-hours onsite by one NRC inspector.

Results: Of the areas inspected no new items of noncompliance were identified.

A. Purpose of Inspection

The purpose of this special inspection was to determine the involvement of Mr. Peter E. Stomfay-Stitz in certain safety related activities at the Byron Station. Mr. Stomfay-Stitz is one of three former workers at the Byron site who expressed concerns relative to the construction of Byron Station in affidavits filed in support of "DAARE/SAFE's Motion to Reconsider Summary Disposition of Contention 1 With Respect to Quality Assurance and Quality Control" (September 23, 1982). The results of this inspection also provided background information and identified the scope and areas where further inspection effort was needed to determine the validity of Mr. Stomfay-Stitz's concerns (allegations). These allegations as understood by the NRC are listed in Appendix A to this report.

Persons Contacted

Commonwealth Edison Company (CECo)

G. Sorensen, Project Superintendent
R. Tuetken, Assistant Project Superintendent
J. J. Mihovilovich, Structural Supervisor
M. A. Stanish, QA Superintendent
R. B. Klingler, QA Supervisor

Blount Brothers Corporation (BBC)

Dan Wilson, QA Manager (Corporate)
R. H. Bay, QA/QC Manager
R. Donica, Former QA/QC Manager (by telephone)
R. Barnhart, Project Engineer

The inspector also contacted and interviewed other licensee and contractor personnel during the inspection.

B. General Information

1. Work Activities

Mr. Stomfay-Stitz, following graduation from high school in June 1978, started work with the Blount Brothers Corporation, a general contractor at the Byron construction site. From June 13, 1978 to October 28, 1978, Mr. Stomfay-Stitz's job title was Time Checker. On October 28, 1978 he was certified as a QA/QC trainee for a material controller position. On January 9, 1979 he was certified as a Level I QA/QC inspector in that position. On April 4, 1979, he terminated his employment with Blount Brothers.

Since Mr. Stomfay-Stitz's job as a Time Checker did not involve safety related activities under the jurisdiction of the NRC, this report covers only his activities as a QA/QC inspector in those areas he expressed concern.

Mr. Stomfay-Stitz's activities as a QA/QC inspector involved material Receipt and Storage inspections and Field inspections relative to the concrete batch plant and structural steel in the containment buildings.

2. Requirements

a. Sargent and Lundy specification No. F2722 is applicable to the work performed by the Blount Brothers Corporation at the Byron Station. Sargent and Lundy (S&L) is the architect engineer.

b. Specification F2722 spells out the quality requirements that must be met by Blount Brothers and commits them to other S&L standard specifications including form BY/BR/MW which involves masonry work and Form 1705-R which involves erection of structural steel.

c. The Blount Brothers' procedures applicable to the activities performed by Mr. Stomfay-Stitz were:

. No.10 Revision 3,Titled, "Receiving, Storage and Handling"

. No. 31 Revision 0 and Revision 1, Titled, "Receiving, Storing and Inspection of Post Tensioning Tendons" (This procedure supplements No. 10)

. No. 21 Revision 2, Titled, Structural Steel Erection

d. The Blount Brothers' Quality Assurance Program required for the time period in question (October 1978 to April 1979) that the qualification of inspection examination and testing personnel be accomplished in accordance with ANSI N45.2.6.1973. Blount Brothers' procedure No. 33, Titled, "Personnel Qualification and Certification Procedure" implements this requirement.

Section 3 of ANSI N45.2.6 defines the qualification requirements and Paragraph 3.2 spells out the specific required capabilities, both physical and technical.

e. The Blount Brothers' QA Program Manual Revision 1, Issue 2 in Paragraph 2.6 defines the responsibilities of a Quality Control Material Inspector (also called a Material Controller) as follows:

(1) Supervise incoming inspection

(2) Review acceptability of vendor supplied documentation

(3) Arranges and monitors storage and handling of construction items and performs related functions as indicated in Quality Control Programs

3. Training and Certification

The CECo and BBC Quality Assurance programs and ANSI N45.2.6 requires that each person who verifies conformance of work activities to quality requirements shall be certified as being qualified to perform his assigned work. This certification must be supported by appropriate measures such as education or training, testing, evaluation and periodic review to assure the initial and continued proficiency. A review of Mr. Stomfay-Stitz's education, experience and training file indicates that he met the minimum requirements for the activities he was certified to perform

Mr. Stomfay-Stitz's file also indicates he received over 13 hours of training on structural steel bolting on the following dates: November 2, 9, 10, 13 and December 15, 1978. In addition a memo dated January 8, 1979, signed by Mr. Stomfay-Stitz stated he had studied BBC QA/QC work procedures including No. 21 which is the procedure for structural steel erection. However, a review of the inspector's file who provided the training indicated that he was certified only as a Level I inspector and his certification at that time did not include structural steel erection. Thus the adequacy of the training received by Mr. Stomfay-Stitz on structural steel erection is questionable.

His allegation in this area is substantiated. (Appendix A Item 13).

NRC Region III Inspection Reports No. 50-454/83-02; 50-455/83-02 provides additional information relative to structure steel bolting.

It should be noted that Mr. Stomfay-Stitz's certification as a Level I QC Material Inspector did not include structural steel erection. Further, as stated above, the BBC inspector performing the review and evaluation of the results of 6 of the 8 inspections conducted by Mr. Stomfay-Stitz in this area was also not certified for this activity. This is contrary to the requirements of 10 CFR 50, Appendix B, ANSI N45.2.6 and CECo and BBC quality assurance programs and is another example of an item of noncompliance concerning inadequate training and qualification/certification of QC inspectors as documented in the Appendix to the transmittal letter for Reports No. 50-454/82-05; 50-455/82-04. Resolution of this matter will be accomplished pursuant to that for Reports No. 50-454/82-05; 50-455/82-04.

Discussions with CECo and BBC personnel indicate the structural steel inspections performed by Mr. Stomfay-Stitz were surveillances only for general information and not acceptance inspections.

However, the records do not clearly reflect this fact.

It should be noted that due to subsequent design and other changes affecting bolting criteria the structural steel in containment is presently being reinspected. (See Section C.4 of this report and Reports No.50-454/83-02; 50-455/83-02 for additional information in this area.)

C. Inspection Activities

1. General

Based on discussions with cognizant CECo and BBC personnel and a review of logs and records it was determined that the specific activities performed by Mr. Stomfay-Stitz while he was a QA/QC inspector for Blount Brothers at the Byron Site were as follows:

Receiving Inspection

Items

Tendons and Accessories
Concrete Materials
Masonry Block and Accessories
Grout
Structural Steel and Bolting Materials
Fire Proofing Materials
Cadweld Materials
Reinforcing Steel
Concrete Expansion Anchors
Welding Materials (Via Hunter Corporation)

Storage Inspection

Items

Tendons and Accessories
Concrete Materials
Masonry Blocks
Embedments
Cadweld Materials
Reinforcing Steel
Structural Steel

Field Inspections

Items

Concrete Batch Plant
Structural Steel in Containment

Only those activities were reviewed where questions or concerns were expressed by Mr. Stomfay-Stitz in his affidavit. Specifically these were:

. Receipt and Storage of Tendons and accessories, including inspection of tendon buttonheads while in storage.

. Storage of concrete aggregate including segregation and quarantine of nonconforming aggregate.

. Receipt and Storage of Masonary blocks

. Field inspections relative to structural steel.

As previously stated this review involved discussions with cognizant personnel and examination of documents including log books, inspection reports, deviation and nonconformance reports and memorandums by Mr. Stomfay-Stitz concerning his inspection activities and findings.

2. Receiving Inspections

a. Tendons and Accessories

A review of the Receiving and Inspection log book (No. 1) which is maintained by the Material Controller, indicated that the following receiving and inspection (R&I) reports involved tendons and accessories received from INRYCO during the period October 18, 1978 through April 4, 1979.

Mr. Stomfay-Stitz's name or initials appear on all of these reports, however, he was the accepting inspector on only the last four (No's 2762, 2776, 2782 and 2827). Mr. R. Barnhart was the reviewer and accepting inspector for the majority of the others.

R&I Report No.	Date	R&I Report No.	Date	R&I Report No.	Date
2546	10/18/78	2613	11/09/78	2679	12/05/78
2564	10/20/78	2636	11/06/78	2688	12/14/78
2563	10/25/78	2625	11/04/78	2684	12/11/78
2568	10/27/78	2637	11/17/78	2693	12/18/78
2575	10/23/78	2643	11/16/78	2697	12/19/78
2576	10/31/78	2644	11/21/78	2710	12/28/78
2579	11/01/78	2654	11/27/78	2714	12/21/78
2603	11/07/78	2655	11/28/78	2715	12/22/78
2606	11/08/78	2669	11/30/78	2762	02/06/79
2612	11/09/78	2674	12/04/78	2776	02/09/79
				2782	02/12/79
				2827	03/07/79

The above listed Receiving and Inspection Reports were reviewed.

All applicable inspection items on the check list for each report were marked acceptable except for the following:

R&I Report No.	Problem
2603	Item 9, which concerns coatings and preservatives, was marked N/A (Not Applicable) by Mr. Stomfay-Stitz. This was marked out and initialed by Mr. R. Barnhart and the acceptable column checked.

2613	Item 4, which concerns shifting of material, etc., indicated tendons 17DE and 14DE were rejected per M. Pendelton (a CECo employee). A note signed by Mr. Stomfay-Stitz stated tendons had shifted during shipping and fell off blocking separating the tendons causing them to lie on top of each other. Followup on the resolution of rejected tendons 17 DE and 14DE established that they were returned to INRYCO. At the INRYCO plant they were reconditioned, reinspected and reshipped to the Byron site (Report No. 2625) and all applicable inspection items were then found to be acceptable.
2625	Note on report stated, for documentation for tendons 17DE and 14DE see R&I Report No. 2613. For tendons 39DF and 42DF see R&I Report No. 2443.
2654	Item 3, which concerns possible environmental damage, was marked see note attached. The attached note, addressed to M. Pendleton, CECo, dated November 27, 1978, 1:45 p.m., stated: "Upon arrival at the Byron Station the Rack containing tendons 62DF and 65DF (Part No. 572) was found to have excessive moisture in bottom of shipping bag and on dunnage. Mark (Mr. Pendleton) said to accept them and place a large slit in bottom of shipping bag. Inspection of the tendons showed no nicks or rust." The note was signed by both Messrs. Stomfay-Stitz and Barnhard. A review of the original note revealed two discrepancies: (1) the last sentence was in different colored ink, and (2) on the original note Mr. Barnhard's signature is below Mr. Stomfay-Stitz and on the copy it is above his signature. The significance of these discrepancies is not known. The storage and staging inspection reports (BB File No. 35.02.02) were

	reviewed for tendons 62DF and 65DF. This inspection, which is conducted just prior to tendon installation, indicated that all applicable inspection criteria was acceptable for these tendons. The date of the inspection was October 27, 1981. Further the pull cards for these tendons was reviewed and they also indicated the wire condition to be "A" (highest level of acceptability).
2693	Items 7 and 14, which concern documentation were marked as deficiencies - Proper documentation was not received with shipment for tendons 15DE and 18DE Quarantine tag No. Q11-271A & B applied.
2693A	Dated January 8, 1979, stated documentation received for tendons 15DE and 18DE Quarantine tags removed.
2715	Items 7 and 14 marked defective documentation not received for tendon 19FE.
2715A	Dated February 1, 1979, stated documentation received for tendon 19FE Quarantine tag No. Q11-272 removed.
2827	R&I report marked Nonsafety Related - Items received were wire samples.

A review of the Deviation Report log for the period January 1, 1978 through April 4, 1979, indicated that five Deviation Reports were issued relative to receipt inspection of tendons and tendon accessories. They were:

- DR No. 274 dated March 29, 1978. Tendons 63BA and 64BA were dirty and were rejected and returned to INRYCO.

- DR No. 275 dated April 12, 1978. Tendons 65BA and 66BA were dirty and were rejected and returned to INRYCO.

- DR No. 295 dated May 15, 1978. Tendons V147 and V148 were dirty and were rejected and returned to INRYCO.

As a result of the above DRs INRYCO issued Nonconformance Report No. 781-4 to resolve the problem. Subsequently the problem was resolved and the tendons were reconditioned and reinspected and

reshipped to the Byron site. R&I Reports 2164 dated June 14, 1978 for tendons 63BA, 64BA, 65BA and 66BA and 2223 dated June 29, 1978 for tendons V147 and V148 indicated that the tendons met all applicable inspection criteria.

. DR No. 309 dated June 21, 1978. Tendons D1-24, 25, 26, 27, 28 and 29 and tendons D2-24, 25 and 26 had evidence of water damage. Tendons were rejected and returned to INRYCO.

These tendons were reconditioned and reinspected by INRYCO and reshipped to the Byron site on August 28, 1978. Receipt inspection on August 28, 1978 and documented on R&I Report No. 2417 indicated tendons met all applicable inspection criteria.

. DR No. 327 dated September 8, 1978. Tendons 25CB, 26CB, 39DF and 42DF loaded incorrectly. Tendons were rejected and returned to INRYCO.

Tendons were reconditioned and reinspected by INRYCO and reshipped to the Byron site on October 5, 1978. R&I Report No. 2498 indicates tendons met all applicable inspection criteria.

The tendons represented by these Diviation Reports were received prior to Mr. Stomfay-Stitz's employment as a QA/QC inspector with Blount Brothers.

Mr. Stomfay-Stitz's allegation that many times he found nonconforming tendons during receipt inspection (Appendix A Item 1) is not substantiated. His allegation that nonconformances resulted from the mistreatment during transfer (Appendix A Item 3) is substantiated in part, however, these nonconformances occurred before or after his employment as a QA/QC inspector for Blount Brothers. Further the nonconforming tendons were properly identified and the problems resolved in accordance with requirements.

b. Masonry Blocks

A review of the Receiving and Inspection Log book No. 1 which is maintained by the Material Controller, indicated that the following receiving and inspection reports involved masonry blocks received from the Eller and Willey Block Company during the period October 19, 1978 through April 4, 1979.

Mr. Stomfay-Stitz's name or initials appear on all of these reports, however, he was the accepting inspector on only those dated January 9, 1979 and later.

R&I Report No.	Date	R&I Report No.	Date	R&I Report No.	Date
2552	10/19/78	2676	12/06/78	2789	02/14/79
2560	10/23/78	2681	12/08/78	2790	02/15/79
2561	10/24/78	2685	12/12/78	2794	02/16/79
2562	10/25/78	2687	12/13/78	2796	02/19/79
2570	10/30/78	2692	12/15/78	2797	02/20/79
2580	10/20/78	2694	12/18/78	2803	02/22/79
2581	11/01/78	2698	12/19/78	2805	02/23/79
2593	11/02/78	2702	12/21/78	2812	02/26/79
2594	11/03/78	2703*	12/26/78	2818	03/01/79
2600	11/06/78	2709	12/29/78	2819	03/02/79
2602	11/07/78	2721	01/08/79	2823	03/05/79
2609	11/08/78	2722	01/09/79	2825	03/06/79
2614	11/09/78	2726	01/10/79	2826	03/07/79
2618	11/10/78	2731	01/11/79	2833	03/08/79
2628	11/14/78	2732	01/17/79	2837	03/09/79
2631	11/15/78	2736	01/18/79	2839	03/12/79
2635	11/16/78	2742	01/23/79	2847	03/14/79
2640	11/20/78	2749	01/30/79	2849	03/15/79
2646	11/21/78	2757	02/02/79	2853	03/16/79
2650	11/22/78	2760	02/05/79	2857	03/19/79
2659	11/27/78	2766	02/06/79	2859	03/20/79
2660	11/28/78	2767	02/07/79	2862	03/22/79
2663	11/29/78	2722	02/08/79	2866	03/23/79
2664	11/30/78	2774	02/09/79	2870	03/26/79
2670	12/04/78	2779	02/13/79	2871	03/28/79

*Mr. Stomfay-Stitz was not involved in this inspection.

A detailed review was performed on the above listed Receiving and Inspection reports. This documentation indicated that all of the masonry blocks were found to be acceptable and met requirements of all applicable inspection criteria. There were no entries on these reports relative to wet or dirty blocks, in fact notations were on over 50 percent of the reports that the blocks were tarped on the truck for weather protection.

A review of the Deviation Report log for the period January 1, 1978 through September 1, 1980, indicated three Deviation Reports were issued relative to receipt inspection of masonry blocks. They were:

- DR No. 250 dated January 13, 1978. The deviation description was that 96 8x8x16 inch hollow masonry blocks were damaged on arrival at the job site.

  The damaged blocks were scrapped and the vendor notified to use more care in loading.

- DR No. 330 dated September 18, 1978. The deviation description was that the masonry units (blocks) delivered September 11, 1978 (R&I No. 2458) were not protected against moisture and became drenched during rainy weather.

  The blocks were rejected and returned to the supplier.

- DR No. 484 dated July 2, 1980. The deviation description was that two pallets of block were broken during unloading.

  The blocks were rejected and returned to the vendor.

  The masonry blocks represented by those Deviation Reports were received either before or after Mr. Stomfay-Stitz's employment as a QA/QC inspector with Blount Brothers.

  Mr. Stomfay-Stitz's allegation that many times concrete blocks (masonry) would arrive wet or dirty (Appendix A, Item 10) is not substantiated.

3. Storage Inspections

   a. Tendons and Accessories

   A review of the storage control log book, which is maintained by the Material Controller, indicated that the following storage inspection reports involved tendons and accessories during the period October 27, 1978 through April 4, 1979.

   Mr. Stomfay-Stitz's name or initials appear on all of these reports, however, he was the accepting inspector on only those reports dated December 29, 1978 and later. Mr. R. Barnhart was the reviewer and accepting inspector for the majority of the other reports.

R&I Report No.	Date	R&I Report No.	Date	R&I Report No.	Date
825	10/27/78	886	12/15/78	947	02/09/79
830	10/27/78	888	12/22/78	952	02/09/79
833	11/03/78	893	12/22/78	955	02/16/79
838	11/02/78	897	12/29/78	960	02/16/79
841	11/10/78	902	12/29/78	964	02/23/79
846	11/10/78	906	01/05/79	969	02/23/79
849	11/17/78	911	01/05/79	974	03/02/79
854	11/17/78	914	01/12/79	979	03/02/79
857	11/24/78	919	01/12/79	983	03/09/79
862	11/24/78	922	01/19/79	988	03/09/79
865	12/01/78	927	01/19/79	992	03/16/79
870	12/01/78	930	01/26/79	997	03/16/79
873	12/08/78	935	01/26/79	1001	03/23/79
878	12/08/78	939	02/02/79	1006	03/23/79
881	12/15/78	944	02/02/79	1010	03/30/79
				1015	03/30/79

A detailed review was performed on the above listed storage inspection reports. (Although the log book did not indicate his involvement two other storage inspection reports for tendons and tendon accessories had Mr. Stomfay-Stitz's signature on them. They were reports No. 817 and 822 both dated October 20, 1978.) This documentation (all the above listed reports) indicated that the tendon storage conditions met all applicable inspection criteria. There were no adverse tendon storage condition noted on any of these reports.

Subsequent to Mr. Stomfay-Stitz's employment with Blount Brothers as a QA/QC inspector, rust was discovered on many of the tendons and was contributed to storage conditions. This was documented on BB Deviation Report No. 415 and resulted in an inspection of all Unit 1 vertical and horizontal tendons. The results of this inspection are documented in DR No. 415 dated August 20, 1979. Six horizontal tendons were rejected, one of which was cut up for testing. The results of this testing and an engineering evaluation later resulted in accepting two of the remaining five tendons. The rest were replaced by INRYCO.

Because Mr. Stomfay-Stitz had no direct knowledge that tendon damage occurred during storage (or if he did have knowledge he failed to note it on his inspection reports) his allegation concerning improper tendon storage conditions is not considered substantiated. (Appendix A Item 5)

Appendix A Items 2 and 6 concern allegations by Mr. Stomfay-Stitz whether all nonconforming tendons were completely repaired by the manufacturer and if all defective tendon button heads were identified.

No record of the two day inspection participated in by Mr. Stomfay-Stitz during the winter of 1978, could be located (Appendix A Item 6). However, discussions with cognizant contractor and CECo personnel confirmed such an inspection took place. As explained by BB and CECo personnel, the purpose of this inspection was not to determine acceptability or unacceptability of each tendon buttonhead but to estimate the extent of the problem to assist in planning corrective action.

Personnel from INRYCO, the tendon manufacturer, conducted a field inspection on November 16 and 17, 1978, on the accessible buttonheads of 46 tendons. The results of this inspection indicated that buttonheads on 13 of the 46 tendons did not meet the then existing buttonhead crack criteria in INRYCO Specification No. 1610 and should have been rejected in the INRYCO shop. Subsequent to this inspection finding, the following took place:

- On November 28, 1978, CECo reported the matter to the NRC Region III office purusant to the requirements of 10 CFR 50.55(e).

- On November 30, 1978, INRYCO initiated Nonconformance Report No. 781-9.

- On December 1, 1978, CECo notified BB that all tendons were on hold.

- On December 1, 1978, Memo issued by R. Donica, BB QA Manager, to Mr. Stomfay-Stitz advising him of the tendon hold status and directed him to verify that all three tendon storage locations are signed accordingly.

- On December 5, 1978, CECo issued Nonconformance Report No. F-306.

- On January 9-11, 1979, an inspection conducted by NRC Region III inspectors included a preliminary review of the buttonhead deficiencies reported by CECo (see I&E Inspection Reports No. 50-454/79-01; 50-455/79-01).

- On January 19, 1979, NRC Region III inspectors initiated a followup inspection relative to the tendon buttonhead deficiencies. (see I&E Inspection Reports No. 50-454/79-04; 50-455/79-04).

- On February 7-9, 1979, NRC Region III inspectors conduct a second followup inspection relative to the status of the resolution of the tendon buttonhead problem (see I&E Inspection Reports No. 50-454/79-03; 50-455/79-03).

- On March 26, 1979, INRYCO issued a report on resolution of INRYCO NCR 781-9.

- On October 16, 1979, CECo closed out NCR F-306 based on resolution of INRYCO NCR 781-9.

For additional details on the resolution of the buttonhead deficiencies and other actions taken by CECo and BB to assure that the post tensioning tendons installed at Byron meet design requirements (see NRC Region III Inspection Reports No. 50-454/82-28; 50-455/82-22).

The allegations that INRYCO did not completely repair nonconforming tendons and that tendon buttonheads with excessive cracks may have gone undetected is not substantiated.

b. Masonry Blocks

The storage inspection reports for masonry blocks was reviewed for the period August 4, 1978 through April 4, 1979 (BB File No. 10.02.01). The report numbers and dates of the inspections are listed below. The inspections documented on Report Nos. 734 through 810 were conducted prior to Mr. Stomfay-Stitz's involvement as a QA/QC inspector for Blount Brothers. The remaining reports listed were signed by Mr. Stomfay-Stitz.

R&I Report No.	Date	R&I Report No.	Date	R&I Report No.	Date
734	08/04/78	818	10/20/78	907	01/05/79
740	08/11/78	826	10/27/78	915	01/12/79
746	08/18/78	834	11/02/78	923	01/19/79
754	08/25/78	842	11/10/78	931	01/16/79
762	09/01/78	850	11/17/78	940	02/02/79
770	09/08/78	858	11/24/78	956	02/16/79
778	09/15/78	866	12/01/78	965	02/23/79
786	09/22/78	874	12/08/78	975	03/02/79
792	09/29/78	882	12/15/78	984	03/09/79
802	10/06/78	889	12/22/78	993	03/16/79
810	10/13/78	898	12/29/78	1002	03/23/79
				1011	

Report No. 1011 did not have an inspection date entered. It was stamped received on April 4, 1979, by BB QA department.

No adverse storage conditions were noted on any of these reports with the exception of Report No. 778. Report 778 references DR No. 330. (See Report Section C.2.b above for a description of DR 330)

No entries were made relative to wet or dirty blocks.

c. Concrete Aggregate

This section of the report addresses, in part, the allegation that some, if not all, condemned concrete aggregate was used in producing concrete for safety related structures. (Appendix A Item 8) NRC Region III Inspection Report No. 50-454/82-28; 50-455/82-22 provides complete information on this and other related allegations in the Civil Engineering field including post tensioning tendons and masonry blocks.

A review of inter-office memos relative to batch plant inspections identified the following listed memos which concern concrete aggregate. All the memos are signed by Mr. Stomfay-Stitz and were addressed to Mr. R. Donica unless otherwise noted. Mr. Donica was the BB QA manager during Mr. Stomfay-Stitz's employment by Blount Brothers.

Memo dated February 27, 1979

"Periodic check of the coarse agg. stock pile verified hold status of "ENTIRE" stock pile in effect per failing gradation of the formerly acceptable south face of stock pile. No Category I concrete was made today."

Memo dated March 22, 1979

"Per failing gradation test done by Pittsburg Testing Lab, the entire eastern face of the coarse aggregate pile has been placed on hold, marked with sign and yellow safety tape. However, the south face of the stock pile was found to be acceptable. The Batch plant end-loader operator has been instructed to only use coarse aggregate from the south end of the stockpile. I will periodically check to see that aggregate is only being taken from the south side of stock pile. The failing aggregate is being moved to a separate area away from stock pile and is being marked and used for backfill only."

Memo dated March 23, 1979

"Periodic checks of the stock pile of coarse agg. verified that hold signs and yellow safety tape are still in place along eastern face of stock pile. Batch plant end-loader operator was observed removing coarse aggregate from acceptable southside of stock pile."

Memo dated 3/26/79

"Periodic checks of coarse aggregate stock pile verified that hold status of the eastern face of pile is still in effect. It is signed and roped off accordingly. No concrete was made today."

Memo dated March 28, 1979

To Roger Weber "Due to failing gradation tests done by PTL at the coarse aggregate stock pile, the entire pile has been placed on hold."

"Please notify me of any future Cat. I pours on placement."

Memo dated March 29, 1979

To Pete Stomfay-Stitz from Roger Weber. "Please be advised that there will be Category I concrete poured at the following locations on March 29, 1979.

(1) 401 el. Lift out slabs 10 and L-Q
(2) 401 el. Block out in slab
(3) 439 Lift out slab

Memo dated March 29, 1979

"Due to failing gradation tests done by PTL at the coarse Agg. stockpile, hold status is still in effect for entire stockpile. Acceptable coarse Agg. has been delivered on site and was used today to batch Category I concrete. I observed the batch plant end-loader operator removing aggregate from acceptable stockpile."

Memo dated March 30, 1979

To Pete Stomfay-Stitz from Roger Weber. "Please be advised that a Category I pour is scheduled for March 30, 1979. The location of the pour is: Safety valve room walls N.W. side of Cont. No. 2."

Memo dated March 30, 1979

"Due to failing gradation tests at the coarse Agg. stockpile, hold status is still in effect for ENTIRE stockpile. Acceptable coarse Agg. has been delivered onsite and was used today to batch Category I concrete. Signs stating "Acceptable Coarse Aggregate" have been posted. I have observed the batch plant end-loader operator removing aggregate from acceptable stockpile."

It would appear from these memos, which were the only ones found concerning concrete aggregate, that not only was condemned aggregate not used for safety related concrete but that Mr. Stomfay-Stitz took added and appropriate steps to observe and verify that it was not improperly used. Further it was determined during an interview with Mr. Stomfay-Stitz on January 29, 1983, that he had no first hand knowledge nor had anyone ever informed him that nonconforming aggregate was used to produce Category I concrete. His allegation concerning improper use of nonconforming aggregate is not substantiated (Appendix A Item 8).

4. Field Inspections

Structure Steel Bolting

The Blount Brothers' QA/QC surveillance reports for structural steel erection (File No. 11.01.01) were reviewed for the period October 1978 to March 1980.

No deficiencies were noted on any of the estimated 400 surveillance reports for this period. Eight of these reports were initialled or signed by Mr. Stomfay-Stitz. They were dated:

2/14/79	2/20/79	3/2/79	3/8/79	3/20/79
3/22/79	3/30/79	4/2/79		

As stated previously Mr. Stomfay-Stitz was never certified to inspect structural steel bolting. Further, the BB inspector reviewing six of the eight inspection reports by Mr. Stomfay-Stitz was also not certified. The BB inspectors reviewing the other two inspection reports by Mr. Stomfay-Stitz were certified.

See NRC Region III Inspection Reports No. 50-454/83-02; 50-455/83-02 for complete information on structural steel bolting activities by Blount Brothers.

5. Miscellaneous

a. In regard to Appendix A Item 12, which concerns allegation of repeated incidents of change in design, a determination cannot be made as to validity without more specific information (i.e., was the design change properly reviewed and approved and was the work inspected to the revised design.)

Changes in design are not unusual and frequently occur on a large project such as Byron. These changes are necessary for a number of reasons including advance technology, errors, interferences, changes in equipment or component designs by the suppliers and additional NRC requirements. The design changes referenced by Mr. Stomfay-Stitz very likely were initially documented on Nonconformance Reports, Field Change Notices (i.e., occurred after design drawings issued), then later were incorporated into the drawings. From Mr. Stomfay-Stitz's statement it appears this latter step, where drawings are brought up-to-date (i.e., As-built) is the source of his concerns. This bringing the drawings up-to-date, frequently occurs after the work is completed which could be misinterpreted as improper by someone not familiar with the process.

This allegation (Appendix A Item 12) is not substantiated. However during the interview with Mr. Stomfay-Stitz on January 29, 1983, he alleged that on several occasions he personally called someone in the Sargent and Lundy (S&L) Chicago office and obtained commitments to issue design changes when an installation did not meet the initial design requirements. Mr. Stomfay-Stitz could not recall the name of the S&L Engineer nor could he provide any specified information on what the changes were other than they primarily involved missing items of structural steel. Further review of this item is planned (454/82-25-01; 455/82-19-01).

b. Appendix A Item 14 involves an allegation that Blount Brothers QA/QC staff at Byron was not separate and independent from Blount's production staff.

10 CFR 50 Appendix B, Criterion I requires: The authority and duties of persons and organizations performing activities affecting the safety related functions of structures, systems and componenets shall be clearly established and delineated in writing. These activities include both the performing functions of attaining quality objectives and the quality assurance functions. The quality assurance functions are those of (a) assuring that an appropriate quality assurance program is established and effectively executed and (b) verifying, such as by checking, auditing, and inspection, that activities affecting the safety related functions have been correctly performed.

The persons and organizations performing quality assurance functions shall have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend, or provide solutions; and to verify implementation of solutions.

Such persons and organizations performing quality assurance functions shall report to a management level such that this required authority and organizational freedom, including sufficient independence from cost and schedule when opposed to safety considerations, are provided.

The Blount Brothers organization charts for the quality assurance functions were reviewed for the period during Mr. Stomfay-Stitz's assignment as a QA/QC inspector. At that time, as today, the onsite QA manager reports to an offsite corporate QA manager who in turn reports to a company corporate executive. No evidence could be found to indicate that persons or organizations performing quality assurance functions for Blount Brothers at Byron station did not have sufficient authority and organizational freedom to identify quality problems; to initiate, recommend or provide solution and to verify implementation of solutions.

The fact that the site QA manager may consult with production management personnel on pay scales or time off for QC inspectors does not establish that insufficient authority or organizational freedom exists to identify quality problems. For example the QA manager would need to know production schedules to determine need for QC inspector coverage.

This Allegation (Appendix A Item 14) is not substantiated.

6. Management Meeting

A routine exit meeting was conducted with licensee and licensee contractor personnel on January 14, 1983, at the NRC Region III offices in Glen Ellyn, Illinois. Those in attendance are listed below. The purpose of the meeting was to discuss the inspection findings to date documented in this report and in Reports No. 50-454/82-26; 50-455/82-20; 50-454/82-28; 50-455/82-22; 50-454/83-02 and 50-455/83-02.

The licensee was told that we had not fully completed our inspection in regard to Mr. Smith's affidavit nor had we conducted the planned interview with Mr. Stomfay-Stitz, but that if significant changes in our findings resulted from these actions they would be informed.

The licensee was cautioned that "white outs" and 'black outs" were observed on several documents reviewed during the course of the inspection and that, although we were able to establish the initial entries on these specific documents, the practice of whiting or blacking out entries on quality records was not acceptable. The licensee representative stated that this had occurred in the past but effective corrective action had been taken and that this problem no longer existed.

Attendance (Management Meeting)

Commonwealth Edison Company (CECo)

M. J. Wallace, Assistant Manager of Projects - Byron Station
L. DelGeorge, Staff Assistant

R. Tuetken, Assistant Superintendent - Byron Station
J. Mihovilovich, Lead Structural Engineer
G. Marcus, Director of Quality Assurance
M. A. Stanish, QA Supervisor - Byron Station
T. R. Tramm, Nuclear Licensing Administrator
W. M. Kiefer, Supervisor of Offsite Review

Isham Lincoln and Beale

M. Miller, Attorney
B. Becker, Attorney

Blount Brothers Corporation

H. V. Williams, Project Manager - Byron
R. Bay, QA/QC Manager - Byron

Hunter Corporation

M. Somsag, QA Supervisor

Nuclear Regulatory Commission

R. C. Knop, Chief, Projects Branch 1
D. W. Hayes, Chief, Projects Section 1B
D. H. Danielson, Chief, Materials and Processes Section
W. L. Forney, Senior Resident Inspector, Byron
L. McGregor, Senior Resident Inspector, Braidwood
J. M. Hinds, Jr., Project Inspector
D. E. Keating, Engineering Inspector
J. F. Norton, Engineering Inspector
I. T. Yin, Engineering Specialist

Appendix A

The below listed items are allegations/concerns expressed by Mr. Stomfay-Stitz (as understood by the NRC) in his Affidavit date September 20, 1982.

1. I was told to examine the tendons visually to determine whether any nicks, wetness or other damage had occurred during shipping. Many times I found such nonconformances and authorized the return of the noncomplying tendons to the manufacturer. Even though following instructions I was told by both Blount and CE supervisory personnel that returning the noncomplying tendons to the manufacturer presented an inconvenience to Blount and CE.

2. INRYCO personnel came on site later in 1978 or in 1979, but I believe it is unlikely that the tendon manufacturer (INRYCO) was able to completely repair the noncomplying tendons.

3. Many other nonconformances resulted from the mistreatment of the safety related tendons during transfer and storage of the tendons at the Byron site.

4. Many of the plastic bags needed to keep the tendons clean and dry, were torn open as the tendons were loaded and unloaded for transportation to and from storage areas.

5. Tendons were stored in tendon barns which did not adequately protect the tendons from dirt and dampness.

6. In the winter of 1978, I participated in a two day inspection of tendon buttonheads for excessive cracking. Because the inspection was rushed and under terrible weather conditions buttonhead cracks may have existed in the tendons but went unnoticed.

7. After a sample of concrete aggregate failed to comply with specifications, repeated additional samples were taken until one was found that would pass requirements.

8. Some if not all of condemned aggregate was used in fabricating safety related concrete.

9. Good deal of bad aggregate was used to fabricate concrete used in the containment buildings.

10. Many times masonry blocks would arrive wet or dirty.

11. Many masonry blocks that were suppossed to be used only on Category II were used in Category I construction.

12. Repeated incidents of change in design. Design plans altered so that the structure which actually was constructed would appear to have met design specifications.

13. Support beams left out and rather than correcting the problem the design plan was altered.

14. Never received proper training for inspecting bolting. Bumbled my way through bolting inspections. Often did not inspect several bolts which required inspections.

15. Blount Brothers QA/QC staff at Byron was not separate and independent from Blount's production staff.