KANSAS GAS AND ELECTRIC COMPANY
THE ELECTRIC COMPANY

GLENN L. KOESTER
VICE PRESIDENT-OPERATIONS

August 9, 1979

Mr. Domenic B. Vassallo
Acting Director
Division of Project Management
Office of Nuclear Reactor Regulation
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Re: Docket No. STN 50-482
Subj: Investigations of 28-Day Base Mat Cylinders
a) GLKoester letter 5/3/79 to RBoyd

Dear Mr. Vassallo:

The PCA Report dated April 27, 1979, which was transmitted to Mr. Roger Boyd with my letter of May 3, 1979, contained some minor errors. The attached letter from Mr. J.J. Shideler explains the errors and transmits two (2) corrected pages.

Please insert the two corrected pages into your copy of the April 27, 1979 Report.

Sincerely yours,

Glenn L Koester

GLK:bb
Attach

cc: Mr. Karl Seyfrit, Region IV
Attach

B001
SE 1/1

7908140524

827191

construction technology laboratories
A DIVISION OF THE PORTLAND CEMENT ASSOCIATION
5420 Old Orchard Road, Skokie, Illinois 60077 • Area Code 312 966-6200

July 5, 1979

Mr. Glenn L. Koester
Vice President - Operations
Kansas Gas & Electric Company
Wichita, Kansas 67201

Re: Wolf Creek Generating Station
Reactor Basemat Concrete
Our report of April 27, 1979

Mr. Koester:

As discussed with you, the tabulation in the Chemical Services report of April 27 had errors in transcribing the "Combined Water Content" for samples 6483 and 6586. This affected the computed values for Total Water, Approximate W/C and Total Dry Aggregate. Corrections have been made on the attached tabulation.

Also, there was a typographical error in paragraph 2 of the Conclusions of the same report. The number 0.44 should be 0.43. The correction has been made in the attached report. This does not affect the average or the conclusion.

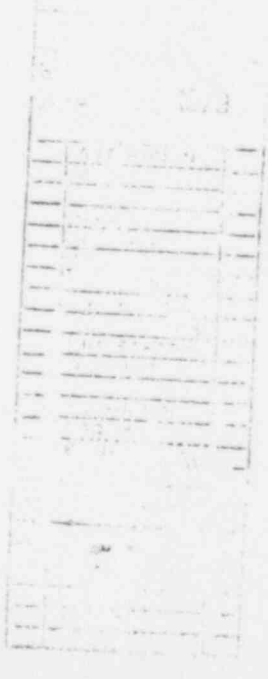
Sincerely yours,

J. J. Shideler

J. J. Shideler, Director
Administrative and Technical Services

JJS/lg
CT-0407

Copy to -
W. E. Kunze
E. Hognestad
A. A. Alonzo
Earl Creel (KG&E)
Attachments



Chemical Services Report

Project No.: CT-0407

Date: April 27, 1979
Corrected: July 5, 1979

Re: Wolf Creek Generating Station
Daniel International Corporation

The attached data sheet details the results of tests conducted to determine the cement contents and approximate water-cement ratios of 16 samples of hardened concrete delivered to PCA/CTL on February 27, 1979. The samples were identified by K. G. & E/Daniel International as remnants of 6"x12" concrete cylinders tested at the age of 28 days and representing the subject construction (reactor basemat). The test methods employed are identical to those described in our previous reports (see PCA reports dated 4/19/78 and 2/27/79).

Conclusions

1. The cement contents of the 16 samples analyzed range from 545 to 595 lbs/yd^3. The average of these values was 566 lbs/yd^3, which is very close to the cement content specified in the concrete mix design (564 lbs/yd^3). The anticipated accuracy of the test is ±30 lbs/yd^3.

2. The approximate water-cement ratio values range from 0.43 to 0.49 with an average value of 0.46. These values are considered to be in good agreement with the value of 0.49 calculated from the concrete mix design.

3. The determined cement content and approximate water-cement ratio values are in very good agreement with those previously reported. Both sets of data suggest concrete batching procedures were uniform.

L. Michael Meyer (lg)
L. M. Meyer
Supervisor, Chemical Services
Technical Services Section

A. A. Alonzo
A. A. Alonzo
Associate Research Chemist
Technical Services Section

LMM/AAA/md
CT-0407

Copy to-
J. J. Shideler

027133

TABLE OF DETERMINED
CEMENT CONTENTS AND APPROXIMATE WATER-CEMENT RATIOS

CORRECTED VERSION

Project No.: CT-0407

Completion Date: 4-13-79

Test Method: Sulfur Trioxide (SO_3) Method

Concrete Cylinder No:	6424	6483	6490	6531	6543	6561	6586	6640	6651	6700	6717	6718	6735	6752	6771	6794
Cement Content, lbs/yd^3:	585	570	570	565	565	555	545	590	545	595	550	555	575	570	575	550
% SO_3 (oven dry weight basis):	0.33	0.32	0.32	0.32	0.32	0.31	0.31	0.33	0.31	0.34	0.31	0.31	0.32	0.32	0.32	0.31
Unit Weight, lbs/ft^3:																
S.S.D.	145.5	145.1	145.8	144.2	144.6	146.3	143.4	145.8	143.3	143.1	144.7	146.0	146.8	145.6	147.0	145.3
Oven Dry (@ 105°C)	137.8	137.4	138.1	136.6	136.9	138.5	135.8	138.1	135.7	135.5	137.0	138.3	139.0	137.9	139.2	137.6
Free Water Content, %: (SSD weight basis)	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Combined H_2O Content, %: (Oven dry wt. basis)	2.5	2.2	2.3	2.6	2.6	2.7	2.3	2.6	2.4	2.4	2.4	2.3	2.2	2.2	2.5	2.4
Total Water, lbs/yd^3: (Free water + combined water)	300	290	295	300	305	310	290	305	295	295	295	295	295	290	305	295
Approximate w/c: (Corrected for aggregate absorption)	0.45	0.44	0.45	0.46	0.47	0.49	0.46	0.45	0.47	0.43	0.47	0.46	0.45	0.44	0.46	0.47
Total dry aggregate, lbs/yd^3:	3045	3060	3070	3030	3035	3085	3035	3040	3030	2975	3060	3090	3095	3070	3090	3080

(1) Concrete and aggregate SO_3 contents determined gravimetrically in duplicate (modification of ASTM C114). Aggregate SO_3 content was negligible.
(2) Cement SO_3 content 2.09% (average of Type II Portland cement samples C-UT-16 and 17).
(3) Overall aggregate absorption 1.25% (average absorption of a 50/50 C.A. to F.A. mix with respective absorption values of 1.8% and 0.7%).
(4) Free H_2O content of 5.3% represents average value (range 5.2-5.4%) as determined on three randomly chosen cylinders (Nos. 6490, 6718 and 6735).