GULF STATES UTILITIES COMPANY

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September 10, 1980

RBG - 8539
File Nos. G9.5, G15.4.1

Mr. W. C. Seidle, Chief
Reactor Construction & Engineering
Support Branch
U. S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, TX 76011

Dear Mr. Seidle:

RIVER BEND STATION - UNIT 1
REFER TO: RIV
DOCKET NO. 50-458/RPT. 80-05

Your August 15, 1980, letter indicated our response letter of July 10, 1980, needed additional clarification or information. Attached to this letter are Gulf States Utilities' responses to items A, B, and C as requested.

We trust the enclosed response satisfactorily answers the concerns raised. We shall be glad to discuss any further points that you may have.

Sincerely,

E. L. Draper by JGB

E. L. Draper
Vice President - Technology

Attachment

8012190633

ATTACHMENT I

ADDITIONAL INFORMATION FOR I&E REPORT NO. 50-458/80-05

ITEM A

The word "qualified" as used in our response, means the personnel were trained for the specific task and had demostrated sufficient capability in performance of the task as documented in accordance with the Job Proficiency Guide.

ITEM B

Assistant Technicians, Technicians, and Trainees will perform tests in conjunction with a Level I or above. In this case both will sign the Test Report as performing the test. The reports will then be reviewed and signed by a Level II or above.

After a Technician, Assistant Technician, or Trainee is qualified under the JPG Program to perform a particular task, they may perform that task, initiate and sign the appropriate report while under the supervision of a Level I or greater. The supervising inspector will also sign the test report attesting to the reliability of the test. The report will be reviewed by a Level II or greater.

Note: Supervision is not to be construed as observing every step of every task performed.

The above policy will be reflected in a Quality Control Instruction.

"Inspection Report" refers to test reports and Inspection Reports.

ITEM C

The sample from Bayou Sara of #67 stone for initial qualification of the aggregate was hand fabricated by the material supplier because his production equipment was not operational. The test results indicated the sample did not meet the -200 criteria of ASTM C-33. N&D 9400 reported this situation and was dispostioned "accept-as-is", based on the fact that the properties of gradation and -200 are not constant values but may adjusted as required during processing. Therefore, it logically follows that the supplier would produce an acceptable product as required by the specification once his processing equipment became operational. However, this reasoning was not included in the justification.

The validity of this logic is proven by the acceptable test results for samples of #67 stone obtained 9/22/79 and 2/6/80, for sample numbers NMC-CA29 and NMC-CA106 respectively, and on the

past history of #57 stone from the same source. These were performed prior to the first use of #67 stone in safety related concrete, which was April 3, 1980 in placement number NS2-W82-E5-3902. N&D 9400 was superceded by N&D 9701 in part, to incorporate the results of these tests into the justification for the acceptance of the use of Bayou Sara #67 stone.

N&D's 9400 and 9421 also respectively reported the failure of Bayou Sara #67 and #8 stone to meet the specification requirement of 2.5 for specific gravity. The aggregates were dispositioned "accept-as-is" with the justification that their use would provide densities, as demonstrated in the trial mixes using those aggregates. Use of trial mix data was thought to adequately demonstrate the density requirement because the actual field use mixes contain more cement.

However, the PSAR requirement for densities of 140 pcf had not been changed to reflect the design requirement. Therefore, the justification of N&D's 9400 and 9421 should have, but did not, indicate a change to the PSAR was necessary. N&D's 9400 and 9421 were superceded by N&D's 9701 and 9702 in order to in part reflect the necessity for a PSAR change. The PSAR change was then initiated.

An infraction was then written by the NRC stating, "no data was available indicating that the minimum concrete density obtained with actual mixes used in Category I placements at the Site was at least 135 pcf".

S&W has responded to this infraction by performing air dry weight tests for all mixes used in safety related concrete. (Data attached) From the results of the data, the validity of the engineers "accept-as-is" disposition is substantiated.

Management has taken further action with respect to the aggregate qualification problems by issuing a memo to the Engineers. This memo highlights the problem and directs the Engineers to assure all specification, PSAR and other commitments are satisfied prior to approval for use of the aggregates in safety related concrete.

In response to your concern regarding the effectiveness of the management control program for control of the gradation noncompliance, we submit the following which should be substituted in lieu of the second paragraph in our original response letter dated July 29, 1980.

Gradation tests are run on a daily bias and satisfy either of the following criteria, as provided for in C-398. If the test sample is graded within the limits specified in Table 2 of ASTM C-33, its gradation is acceptable. If the test sample is not graded within the limits specified in Table 2 of ASTM C-33, the sample results may be averaged with the nine most recent test results of acceptable material. If these results are in turn within the limits in Table 2 of ASTM C-33, the sample's gradation is acceptable. In conjunction with acceptable results for other periodic tests, (other tests include: material finer than 200

sieve; clay lumps and friable particles; specific gravity; and absorption), the material represented by the accepted sample may be used in production concrete. Tests representative of material used in production concrete will be included in the running average. The average is monitored by FQC and trends identified for correction by construction. The purpose of the C-33 tests are, in fact, for monitoring and control of the process which produces the aggregate as well as the acceptability of the aggregate for use.

MIX	(AVERAGE of 3) FRESH UNIT WEIGHT	(AVERAGE of 3) (APPROX. METHOD) ρ=0.75 AIR DRY UNIT WEIGHT	FOR ρ=0.63*	SLUMP	AIR CONTENT	DIFFERENCE in UNIT WTS. ρ=.75	ρ=.63
A3	146.25 lb/cuft	144.24	143.26	2 1/2"	4.8%	2.01	2.98
B3	142.41	140.47	139.54	3"	4.8%	1.94	2.87
C1	145.83	143.75	142.72	2 1/2"	3.9%	2.08	3.11
G1	145.32	143.08	142.00	2 1/4"	3.1%	2.24	3.32
H2	146.97	144.90	143.91	2 1/2"	3.5%	2.07	3.06
H3	144.75	142.70	141.71	3 1/4"	4.9%	2.05	3.04
N	144.59	142.71	141.81	2 1/4"	4.8%	1.88	2.78
N1	147.34	145.35	144.40	2 1/4"	3.0%	1.99	2.94
R2	144.44	142.46	141.52	3"	4.8%	1.98	2.92
W1	142.50	140.36	139.34	2"	5.6%	2.14	3.16
Z	144.75	142.69	141.70	1 1/2"	4.7%	2.06	3.05

*Worst case determined from sample mixes using Plaquemine, Thompson Creek, and Amite River Aggregates.