Attachment 3

Calculation FC08499
Evaluation of FCS Concrete Compressive Strength Test Data

Design Analysis		**Last Page No.** [6] 133	
Analysis No.: [1]	FC08499	**Revision:** [2] 0 Major ☒	Minor ☐
Title: [3]	Evaluation of FCS Concrete Compressive Strength Test Data		
EC/ECR No.: [4]	58239	**Revision:** [5] 0	

Station(s): [7]	FCS	**Component(s):** [14]	
Unit No.: [8]	1	AE-AUX	AE-CON
Discipline: [9]	STRC	CONTAINMENT	
Descrip. Code/Keyword: [10]	STRC	AE-AUX-RCA	
Safety/QA Class: [11]	Safety Related		
System Code: [12]	AE		
Structure: [13]	Containment Auxiliary Building		

CONTROLLED DOCUMENT REFERENCES [15]

Document No.:	From/To	Document No.:	From/To
USAR-5.2	To		
FC08452	To		
Section 3.3 References [5] through [51]	From		

Is this Design Analysis Safeguards Information? [16] Yes ☐ No ☒ If yes, see SY-AA-101-106

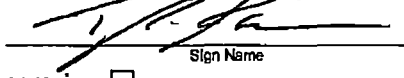
Does this Design Analysis contain Unverified Assumptions? [17] Yes ☐ No ☒ If yes, ATI/AR#:

This Design Analysis SUPERCEDES: [18] N/A **in its entirety.**

Description of Revision (list changed pages when all pages of original analysis were not changed): [19]

Original Issuance

- This calculation is tied to the affected documents list within EC 58239 and will not be issued until the relevant updates proposed in LIC-15-0142 are complete.

Preparer: [20]	Andrew Westrum Print Name	 Sign Name	6/1/2016 Date
Method of Review: [21]	**Detailed Review** ☒	**Alternate Calculations (attached)** ☐	**Testing** ☐
Reviewer: [22]	Tyler Knuth 12173 Print Name	 Sign Name	6/1/2016 Date
Review Notes: [23]	Independent review ☒	Peer review ☐	

(For External Analyses Only) **External Approver:** [24]	N/A Print Name	N/A Sign Name	N/A Date
Exelon Reviewer: [25]	N/A Print Name	N/A Sign Name	N/A Date
Independent 3rd Party Review Reqd? [26]	**Yes** ☐	**No** ☒	
Exelon Approver: [27]	Steve Queen Print Name	 Sign Name	6/3/16 Date

EAG Reviewed

AEJ for Mr Ali — 6/6/16

Initial — Date

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The concept behind a multiple pass review structure is to reduce the number of errors by increasing the probability of a more thorough, focused and complete review of the product. It provides a structure that ensures a methodical approach is taken for technical reviews. The targeted questions below are focused on design analyses (with reference section numbers indicated) and any associated configuration changes, but the overall process may also be applied to other technical products.

General Instructions: For any attributes answered no, provide comments to the preparer that will result in the attribute being appropriately addressed in the final product. Use this guidance with Attachments 4 and 5 guidance to complete a quality review.

Product Ref# (Calc#, EC#, etc.) FC08499 Rev. 0

1st Pass Attributes – General Overview

The goal of the overview pass is to do a first read of the product to get an understanding of what it is trying to solve or create and to develop a review plan without an in depth review of the details. When you complete this pass you should understand the scope of the analysis and have a focus for your review. (Numbers in parenthesis refer to steps in this T&RM)

Yes	No	Attribute
☒	☐	The purpose/scope is clear and well defined. You should be able to understand the purpose without resorting to consultation with the preparer. (4.3.2)
☒	☐	The reason or need for the product is clearly discussed. (4.3.2)
☒	☐	You possess the proper knowledge and skill sets needed for the review. **If** additional expertise is needed, **then** those reviews have been scheduled to ensure that appropriate knowledgeable "experts" are utilized for reviews.
☒	☐	The Methodology is appropriate for the purpose and scope of the document, and is clearly documented.

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2nd Pass Attributes – Technical Review

The goal of the second pass is to validate the technical details associated with the analysis to ensure that the technical content of the product is accurate, complete and achieves the intended purpose. This is the detailed review that verifies the inputs, critical parameters, and numerical results. You should not have to consult with the preparer to complete this review. Any clarification required from the preparer should result in changes to the final product. Also see attributes on Attachments 4 & 5.

Yes	No	Attribute
☒	☐	Input Parameters are clearly listed, defined with source documentation.
☒	☐	The Inputs are valid and are referenced to a quality documented reference.
☒	☐	Assumptions are reasonable and well documented.
☒	☐	The Methodology is appropriate and Equations Used have been verified- Ensure proper methodology & units
☐	☒	If an Alternate Calculation Tools or Methods was used as the review method, **then** that analysis has been attached to the final document
☒	☐	The Numerical calculations and computations have been verified correct- validate the numbers
☒	☐	The acceptance criteria is consistent with the Design Basis, Design Standards and applicable codes.
☒	☐	Does the analysis consider new potential failure modes and disposition them as appropriate? If none are indicated, is this appropriate?
☒	☐	Does the product consider the most limiting or bounding design basis conditions?
☒	☐	Are the results consistent with actual plant response and do they appear reasonable?
☒	☐	Does the conclusion clearly support the purpose as described?

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3rd Pass Attributes – Administrative

The goal of this final pass is to ensure that the product content is clear and contains the appropriate level of detail, the format is in accordance with established procedures and expectations and no format or content errors exist. Final document must meet Records Management criteria as given in RM-AA-108.

Yes	No	Attribute
☒	☐	Check references- are they the correct rev
☒	☐	Check procedures used- are they the correct rev
☒	☐	Check for Spelling Errors, Punctuation and Grammar
☒	☐	Check for simplicity and readability
☒	☐	Are the proper forms included in the document and filled out correctly
☒	☐	Check Page and Attachment Numbering
☒	☐	Right Boxes Checked on Forms
☒	☐	Proper process has been used, Major Rev, Minor Rev, EC/ECR etc.
☒	☐	Appropriate boxes are signed off or marked N/A
☒	☐	Appropriate definition and use of abbreviations and acronyms

Reviewer: Tyler Knuth _____ 6/1/2016
Print / Signature Date

TABLE OF CONTENTS

1.0 Purpose, Methodology, and Justification

1.1 Purpose

The FCS Containment Structure was originally designed using Class A concrete (specified as compressive strength 5000 psi [4]). Other Class I structures (i.e. the Auxiliary Building, Intake Structure, and non-shell portions of the Containment Building) were originally designed using Class B concrete (specified as compressive strength 4000 psi [4]) [5].

The results of this calculation supports the Licensing Amendment Request (LAR), LIC-15-0142 [1] request to allow reinforced concrete structures located in specified areas of the Auxiliary Building (AB) and Containment Internal Structure (CIS) to be evaluated using concrete compressive strength based on actual 28-day test data while meeting the strength testing requirements of the FCS licensing basis concrete building code ACI 318-63 Section 504 [60] in lieu of the original specified value (i.e. 4000 psi for Class B concrete). This is appropriate as original test data shows that the actual 28-day compressive strength of the concrete exceeds the original specified value.

The AB and CIS are defined in reference [1]. CIS includes the Reactor Cavity and Compartments.

1.2 Methodology

The concrete strength for the proposed licensing basis (PLB) will be determined through application of FCS licensing basis concrete Building Code ACI 318-63 Section 504(c) [60], which specifies the use of the 28-day laboratory-cured concrete strength test data. Specifically, one concrete strength will be established for the Auxiliary Building and one concrete strength will be established for Containment Internal Structures. The methodology to be used is as follows:

- Concrete compressive strength test data specific to the AB and CIS will be retrieved and logged.
- A rolling average will be calculated for five consecutive strength tests for WSD (ACI 318-63 Section 504(c)(1)).
- A rolling average will be calculated for three consecutive strength tests for USD (ACI 318-63 Section 504(c)(2)).
- The 20th percentile of the rolling average strengths will be calculated for WSD (ACI 318-63 Section 504(c)(1)).
- The 10th percentile of the rolling average strengths will be calculated for USD (ACI 318-63 Section 504(c)(2)).
- The minimum of the rolling average strengths for WSD and USD, not more than the 20th and 10th percentile for WSD and USD accordingly, will be used as the new design basis concrete strength.
- If more than the indicated permissive percentage is below the specified strength, the procedures of ACI 214-65 will be employed to determine if the average strength being calculated is adequately in excess of the specified strength (ACI 318-63 Section 504(c)(*)).
- This new design basis concrete strength will be limited to no greater than the 95% confidence level of all test data analyzed for each specific structure (additional conservatism beyond ACI 318-63 requirements).

1.3 Justification

The actual concrete strengths determined with the methodology prescribed in Section 1.2 satisfies the strength testing requirements of ACI 318-63 [60]. As defined in Section 301 of ACI 318-63, "Compressive strength shall be determined by test of standard 6-in. x 12-in. cylinders made and tested in accordance with ASTM specifications at 28 days or such earlier age as concrete is to receive its full service load or maximum stress." [60]

Per ACI 318-63 Section 504(a), "Specimens made to check... strength of concrete or as a basis for acceptance of concrete shall be made and laboratory-cured in accordance with... (ASTM C31).... Strength tests shall be made in accordance with... (ASTM C39)." [60] ACI 318-63 Section 504 also states, "Additional test specimens cured entirely under field conditions may be required by the Building Official to check adequacy of curing and protection of the concrete." [60] Test specimens cured entirely under field conditions are not specified for the determination of concrete compressive strength.

In regard to the use of rolling average calculations for data analysis, FCS licensing basis concrete Building Code ACI 318-63 Section 504(c) specifies, "To conform to the requirements of this code:

For Working Stress Design:

1. *For structures designed in accordance with Part IV-A of this code, the average of any five consecutive strength tests of the laboratory-cured specimens representing each class of concrete shall be equal to or greater than the specified strength, fc', and not more than 20 percent of the strength tests shall have values less than the specified strength.*

For Ultimate Strength Design:

2. *For structures designed in accordance with Part IV-B of this code, and for prestressed structures the average of any three consecutive strength tests of the laboratory-cured specimens representing each class of concrete shall be equal to or greater than the specified strength, fc', and not more than 10 percent of the strength tests shall have values less than the specified strength."*

Limiting the determined strength to the 95% confidence level is an additional means of establishing a high level of confidence in the new design basis strengths.

EPRI Guidance

To gain further insight in determining an appropriate confidence level to use for the statistical evaluation, EPRI NP-6041-SL, "A Methodology for Assessment of Nuclear Power Plant Seismic Margin," [61] is used for guidance in determining acceptable industry practice. Even though specifics and methodologies used for seismic margin calculations are not specific to this calculation, NP-6041-SL [61] does provide insight into the reasoning for the use of the 95% confidence level.

As indicated in section 6 of NP-6041-SL [61], under "Material Properties," the use of the 95% value corresponding to the exceedance probability of actual strength test data is considered a conservative value to use when sufficient data is available to derive meaningful statistical values.

Additionally, the use of the 95% confidence level has been widely used throughout the nuclear industry, and previously suggested and approved by the NRC for many specific topics, as an acceptable threshold level in defining variables with associated uncertainties.

Detailed investigations have been undertaken of the placement of concrete and the specific materials used and their location in the AB and CIS. Coupled with the methodology described in Section 1.2 which satisfies the testing requirements of ACI 318-63 [60], the use of concrete compressive strength based on actual 28-day test data is warranted and acceptable.

2.0 Scope

The statistical evaluation performed in this calculation will establish the concrete compressive strength based on actual 28-day test data used in the construction of the AB and CIS as discussed in section 1.0 of this calculation.

3.0 Inputs/References

Data retrieval for this calculation began with document title searches performed on the FCS server using the keywords "compressive" and "concrete" in separate searches. The search output files' titles were manually reviewed for potentially useful documents.

A total of 240 unique WIP files were identified as being potentially useful. Each of those 240 files were reviewed for Class B concrete compressive strength test data. A table listing the 240 WIP files reviewed is included as Attachment 8.1 of this calculation.

A quantity of 912 unique samples, or set numbers, were identified within the WIP files reviewed as being used in the construction of FCS Nuclear Plant. A comprehensive list of these 912 sets is included within Section 5.0 of this calculation. All data contained within the list of 912 sets can be found within References [54] - [59] and is shown in Attachment 8.2. The remaining WIP files that were reviewed include duplications of the set data but do not include any additional unique set data and are therefore not included in the Reference section of this calculation.

3.1 Commitments

Licensing Amendment Request (LAR), LIC-15-0142 [1], proposes the use of actual concrete strength based on 28-day test data to be used in the design basis analysis of the AB and CIS. This calculation supports that proposal.

3.2 Operating Experience

A search of operating Experience (OE) in the NRC OE database was conducted by using following search terms: "concrete strength" and "compressive strength."

The search identified Memorandum ML023290377, Reference [3], which discusses the use of 28-day concrete compressive strength test data for the design basis evaluation of the CIS for DC Cook Units 1 and 2 in Section 5.1 of the document. Upon review of Reference [3], it is apparent that a similar methodology as is described within Section 1.2 of this calculation has been implemented and accepted by the NRC for use in at least one other nuclear power generation plant.

The search also identified NRC Information Notice 2012-17, reference [2], detailing three instances of "*Inappropriate Use of Age-Hardened Concrete Compressive Strength.*" This calculation as well as Reference [1] are making no request for the use of increased concrete strength due to age-hardening.

3.3 References

Plant and Regulatory Documents

[1] LIC-15-0142, dated 12/23/2015, "Supplement of License Amendment Request 15-03; Revise Current Licensing Basis to Use ACI Ultimate Strength Requirements."
[2] NRC Information Notice 2012-17, dated 9/6/2012, "Inappropriate Use of Certified Material Test Report Yield Stress and Age-Hardened Concrete Compressive Strength in Design Calculations."
[3] NRC Memorandum ML023290377, "Donald C. Cook Nuclear Plant, Units 1 and 2 – Response to Task Interface Agreement (TIA 2001-15) Regarding Evaluation of Containment Structure Conformance to Design-Basis Requirements (TAC Nos. MB3603 and MB3604)."
[4] Omaha Public Power District Contract 759, "Concrete Structures, Containment, Structural Steel and Miscellaneous Facilities."

Plant Drawings

[5] 11405-S-47 Sheet 1, Rev 15, "AUXILIARY BUILDING FOUNDATION PLAN ELEV 989FT 0IN, OUTLINE, SHEET 1" (F/N 16432).
[6] 11405-S-48 Sheet 1, Rev 2, "AUXILIARY BUILDING FOUNDATION PLAN ELEV 989FT 0IN, OUTLINE, SHEET 2" (F/N 16433).
[7] 11405-S-49 Sheet 1, Rev 11, "AUXILIARY BUILDING FOUNDATION PLAN ELEV 971FT 0IN OUTLINE, SHEET 3" (F/N 16434).
[8] 9304-B Sheet 1, Rev 0, "REACTOR PLANT, POUR RP-5A, RP-5B AND RP-5C, ELEV 9 93 FT 10 IN TO 998 FT 0 IN" (F/N 7606).
[9] 9305-B Sheet 1, Rev 3, "REACTOR PLANT, RP-9, ELEV 1002 FT 3 IN TO 1012 FT 0 IN" (F/N 7607).
[10] 9306-B Sheet 1, Rev 1, "REACTOR PLANT, RP-10, RP-10A, RP-10A, ELEV 993 FT 10 IN TO 1005 FT 10 IN" (F/N 7608).
[11] 9312-B Sheet 1, Rev 1, "REACTOR PLANT, RP-14A, RP-14B, ELEV 1012FT 10IN TO 1028FT 5IN" (F/N 7612).
[12] 9315-B Sheet 1, Rev 2, "REACTOR PLANT, RP-16A, ELEV 1028FT 5IN TO 1038FT 4 IN" (F/N 7614).
[13] 9316-B Sheet 1, Rev 2, "REACTOR PLANT, RP-16B, ELEV 1028FT 5IN TO 1038FT 4 IN" (F/N 7615).
[14] 9317-B Sheet 1, Rev 0, "REACTOR PLANT, RP-16C, ELEV 1028FT 5IN AND 1029FT 0IN TO 1038FT 4IN" (F/N 7616).
[15] 9319-B Sheet 1, Rev 1, "REACTOR PLANT, RP-17B AND RP-17C, ELEV 1038FT 4IN TO 1044 FT 10IN" (F/N 7617).
[16] 7003-C Sheet 1, Rev 0, "AUXILIARY BUILDING, WALL POUR W-4 AT ELEV 970FT 10 IN" (F/N 7641).
[17] 7004-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR W-5 AT ELEV 970FT 10I N" (F/N 7642).

[18] 7005-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR W-8 AND W-8A, COLUMN C-1, C-2 AT ELEV 970FT 10IN" (F/N 7643).
[19] 7015-C Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-10, AX-12, AX-14 F ROM ELEV 988FT 10IN TO 1007FT 0IN" (F/N 7654).
[20] 7016-C Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-57, AX-58, AX-59, AX-60, AX-62 FROM 988FT 10IN TO 1009FT 0IN" (F/N 7655).
[21] 7017-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-65, AX-66 FROM 988 FT 10IN TO 1010FT 4IN" (F/N 7656).
[22] 7018-C Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-39, AX-41, AX-53, AX-54, AX-55, AX-56" (F/N 7657).
[23] 7020-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-69, AX-70, AX-71, AX-72, AX-73 ELEV 988FT 0IN" (F/N 7659).
[24] 7023-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL AND COLUMN POUR AX-49A, AX -49B, AX-50 FROM ELEV 988FT 10IN" (F/N 7662).
[25] 7027-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-33A, AX-33B ELEV 9 88FT 0IN" (F/N 7665).
[26] 7035 Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-6, AX-7" (F/N 7674).
[27] 7037-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-76A" (F/N 7676).
[28] 7045-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-74A" (F/N 7684).
[29] 7047 Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-8" (F/N 7687).
[30] 7050-C Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-36B,SLAB POUR AX-8 4 AT ELEV 1002FT 10IN" (F/N 7691).
[31] 7074-1-C Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-112A, SLAB POUR AX -112B, AX-112C, TOP ELEV 1006FT 10IN" (F/N 7718).
[32] 7081 Sheet 1, Rev 1, "AUXILIARY BUILDING WALL POUR AX-122A,AX-122B" (F/N 7728).
[33] 7084-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-77B" (F/N 7732).
[34] 7215-C Sheet 1, Rev 0, "AUXILIARY BUILDING WALL POUR AX-114A, AX-114B" (F/N 7873).
[35] 7235-C Sheet 1, Rev 0, "AUXILIARY BUILDING HYDROGEN GAS PLATFORM WALL POUR AX-86" (F/N 7895).
[36] 7412-C Sheet 1, Rev 0, "REACTOR PLANT SLAB POUR RP-3 ELEV 991FT 3IN" (F/N 7910).
[37] 7417-C Sheet 1, Rev 1, "REACTOR PLANT POUR RP-6, RP-6A, RP-6B ELEV 1005FT 2IN TO 1005FT 10IN" (F/N 7917).
[38] 7418-1-C Sheet 1, Rev 2, "REACTOR PLANT POUR RP-7 ELEV 1002FT 3IN AND 1002FT 4IN" (F/N 7918).
[39] 7431-C Sheet 1, Rev 2, "REACTOR PLANT RP-15B ELEV 1028FT 5IN" (F/N 7942).

[40] 7432-C Sheet 1, Rev 1, "REACTOR PLANT RP-15A ELEV 1019FT 10IN" (F/N 7943).
[41] 7433-C Sheet 1, Rev 4, "REACTOR PLANT POUR RP-15C ELEV 1029FT 0IN, 1028FT 5IN" (F/N 7944).
[42] 7460-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-18B ELEV 1044FT 10IN TO 1056 FT 8IN" (F/N 7970).
[43] 7461-C Sheet 1, Rev 1, "REACTOR PLANT POUR RP-18A ELEV 1044FT 10IN TO 1056 FT 8IN" (F/N 7971).
[44] 7462-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-18D ELEV 1044FT 10IN TO 1056 FT 8IN" (F/N 7972).
[45] 7463-C Sheet 1, Rev 1, "REACTOR PLANT POUR RP-19 ELEV 1056FT 8IN TO 1059FT 10IN" (F/N 7973).
[46] 7466-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-20A, RP-20B COMBINED 1013FT 0IN TO 1036FT 10IN, SECOND STAGE" (F/N 7976).
[47] 7469-C Sheet 1, Rev 0, "REACTOR PLANT RP-20D, RP-21D, ELEV 1038FT 4IN TO 1056FT 8IN" (F/N 7979).
[48] 7472-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-21A, RP-21B COMBINED ELEV 1013FT 0IN TO 1035FT 10IN" (F/N 7980).
[49] 7474-C Sheet 1, Rev 0, "REACTOR PLANT SECOND STAGE CONCRETE RP-22A, RP-22B RP-22C" (F/N 7982).
[50] 7478-1 Sheet 1, Rev 1, "REACTOR PLANT SECOND STAGE POUR RP-7-2 ELEV 1002FT 4IN TO 1012FT 5IN" (F/N 7984).
[51] 9309-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-13N EL 1009 FT 10 IN TO 1013 FT 0 IN" (F/N 8088).
[52] 9311-C Sheet 1, Rev 0, "REACTOR PLANT POUR RP-13S EL 1009 FT 10 IN TO 1012 FT 10 IN" (F/N 8089).
[53] 9318-C Sheet 1, Rev 1, "REACTOR PLANT POUR RP-17A SLAB EL 1038 FT 4 IN TO 1044 FT 10 IN" (F/N 8090).

FCS WIP Documents

[54] WIP3164, "Summary Of Concrete Cylinders Compressive Strengthtest Results On Properties Of Plastic Concrete & Strength Of Hardened Concrete From Various."
[55] WIP6770, "Summary Of Concrete Cylinders Compressive Strengthtest Reports On Compressive Strength Of Molded Concrete Cylinders; Class B Concrete."
[56] WIP6874, "Report Of Test Of Compressive Strength Of Molded Concrete Cylinderscontains Test Results For Various Pour Samples."
[57] WIP13497, "Summary Of Concrete Cylinders Compressive Strengthreports Properties Of Plastic Concrete & Strengths Of Hardened Concrete."
[58] WIP13605, "Summary Of Concrete Cylinders Compressive Strengthconcrete Test Results."
[59] WIP32516, "Summary Of Concrete Cylinders Compressive Strength."

Building Codes and Standards

[60] ACI 318-63, "Building Code Requirements for Reinforced Concrete."
[61] EPRI NP-6041-SL, "A Methodology for Assessment of Nuclear Power Plant Seismic Margin (Revision 1)."
[62] ACI 214-77, "Recommended Practice for Evaluation of Strength Test Results of Concrete."

4.0 Assumptions

There are no assumptions requiring verification in this calculation.

4.1 Engineering Judgement

Engineering judgement is used in Section 5.0 of this calculation to provide justification for any samples that were not located in the FCS plant records. Although there may have been additional original test data, locating 903 of the 912 unique sets identified is considered an appropriate sample representation of the entirety of the FCS original test data.

5.0 Analysis

Data Logging

Attachment 8.2 contains the balance of test data for the sets identified in Attachment 8.1. A summary of the set data pertaining to the AB and CIS is presented in the table on the following pages. Notes about each column of the table are included below.

Set # – Concrete Set #

Date Cylinders Cast – actual date the test cylinders were cast for each set

Location of Concrete Placement – pour location associated with each set

Building Code – AX is associated with AB, RP is associated with CIS

Specified Strength (psi) – 4000 psi corresponds with Class B concrete [4]

I - 7 Day Strength (psi) – recorded test strength

II - 28 Day Lab Strength (psi) – recorded test strength

III - 28 Day Lab Strength (psi) – recorded test strength

IV - 28 Day Lab Strength (psi) – recorded test strength

V - 28 Day Field Strength (psi) – recorded test strength

Reference – WIP file in which each set can be found

External Subgrade Wall? (F/N) – pour data associated with external walls below 1007 ft is identified here along with the FCS File Number corresponding to the pour drawing

Reactor Cavity Floor or Walls? (F/N) – pours associated with the reactor cavity floor or areas directly surrounding the reactor core are identified here along with the FCS File Number corresponding to the pour drawing

Notes – any pertinent notes recorded throughout the data discovery process are listed here

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
43	2/17/1969	Wall W-4 Part #1 Auxiliary Building	AX	4000	5482	7039	6862	7039	5412	WIP 8498, 13605	Y (7641)		7 Day Strength is 8 day, part of pour is external and part is internal
44	2/18/1969	Wall W-5 Part #2 Auxiliary Building	AX	4000	4368	5818	6048	5588	4633	WIP 8498, 13605	Y (7642)		part of pour is external and part is internal
45	2/19/1969	Wall W-3 Part #3 Auxiliary Building	AX	4000	5412	6544	6968	7163	5695	WIP 8498, 13605			
48	2/22/1969	Wall W-5 Part #5 Auxiliary Building	AX	4000	4545	5907	5907	5818	NOT @ AREA PLACED	WIP 8498, 13605	Y (7642)		part of pour is external and part is internal
51	2/28/1969	Auxiliary Building Wall W-1	AX	4000	5376	6827	6579	6295	5412	WIP 8498, 13605			
52	2/28/1969	Auxiliary Building Wall W-1	AX	4000	5058	7074	7127	7286	5765	WIP 8498, 13605			
72	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	4000	4863	6597	6650	6862	5836	WIP 8498, 13605	Y (7641)		W4 is external
73	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	4000	4757	6544	6544	6685	5748	WIP 8498, 13605	Y (7641)		W4 is external
74	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W2 P-2	AX	4000	4810	6686	6508	6791	6013	WIP 8498, 13605	Y (7641)		W4 is external
121	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5412	6650	6667	6950	6207	WIP 3164			Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
122	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5801	7021	7003	7074	6437	WIP 3164			Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
123	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5394	6827	6667	6720	6172	WIP 3164			Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
124	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5305	6261	6667	6367	5642	WIP 3164			Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
125	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5429	6827	6137	6667	5836	WIP 3164			Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
126	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	6243	7286	7251	6986	6933	WIP 3164			26 Day Field Requested, Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
127	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	4000	5376	6544	6650	6420	5889	WIP 3164			26 Day Field Requested, Based on the dates for sets 206 - 213, it is reasonable to conclude these sets took place in 1969
148	5/23/1969	Auxiliary Building AX-13-wall	AX	4000	5270	6809	6650	6650	unable to locate	WIP 13605	Y (7653)		
149	5/23/1969	Auxiliary Building AX-13-wall	AX	4000	5465	6579	6561	6720	unable to locate	WIP 13605	Y (7653)		
179	6/6/1969	Aux. M-7	AX	4000	4651	5801	5588	5606	5518	WIP 8498, 13605			
180	6/6/1969	Aux. M-7	AX	4000	6225	7499	7622	7304	7074	WIP 8498, 13605			
181	6/6/1969	Aux. M-7	AX	4000	6101	7127	7110	6968	7110	WIP 8498, 13605			
182	6/6/1969	Aux. M-7	AX	4000	5801	7092	6402	7056	6632	WIP 8498, 13605			
183	6/6/1969	Aux. M-7	AX	4000	5871	7339	6473	6809	6243	WIP 8498, 13605			
184	6/6/1969	Aux M-7	AX	4000	5058	6066	6367	6278	5871	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
185	6/6/1969	Aux M-7	AX	4000	5129	6544	6720	6650	6738	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
186	6/6/1969	Aux M-7	AX	4000	4899	6880	6880	6720	6179	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
187	6/6/1969	Aux M-7	AX	4000	5447	7110	7180	7003	6933	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
188	6/6/1969	Aux M-7	AX	4000	5535	7110	6915	7216	6862	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
189	6/9/1969	Aux 17 & 18	AX	4000	5801	7003	7428	7074	6791	WIP 8435, 8498, 13605			PDF page 34 of WIP 8498 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
206	6/13/1969	Aux Building M-6	AX	4000	5871	7463	7145	7835	7251	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
207	6/13/1969	Aux Building M-6	AX	4000	6331	7251	7163	7145	6632	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
208	6/13/1969	Aux Building M-6	AX	4000	6013	7251	7251	7145	6720	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
209	6/13/1969	Aux Building M-6	AX	4000	6544	7905	6933	7463	7534	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
210	6/13/1969	Aux Building M-6	AX	4000	6367	7782	7491	7835	7269	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
211	6/13/1969	Aux Building M-6	AX	4000	5995	6667	7446	7322	6296	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
212	6/13/1969	Aux Building M-6	AX	4000	6084	7640	7092	7082	6243	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
213	6/13/1969	Aux Building M-6	AX	4000	5553	7499	7640	7799	6544	WIP 8435, 13605			PDF page 4 of WIP 8435 is stamped received 7/21/69; therefore it is reasonable to conclude these sets took place in 1969
256	6/24/1969	AX 57	AX	4000	5129	6773	6614	6137	6225	WIP 8438, 13605	Y (7655)		The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
258	6/25/1969	M8 Aux Mat	AX	4000	4545	6296	6154	6154	5712	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
259	6/25/1969	M8 Aux Mat	AX	4000	4722	6119	6225	6084	6013	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
260	6/25/1969	M8 Aux Mat	AX	4000	5040	6437	6915	6597	6243	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
261	6/25/1969	M8 Aux Mat	AX	4000	4969	6827	6667	6720	6650	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
262	6/25/1969	M8 Aux Mat	AX	4000	4916	6420	6243	6402	6296	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
263	6/25/1969	M8 Aux Mat	AX	4000	4846	6048	6084	6632	5748	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
264	6/25/1969	M8 Aux Mat	AX	4000	4386	5500	5801	5659	5235	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
265	6/25/1969	M8 Aux Mat	AX	4000	4563	6331	6225	6597	5889	WIP 8438, 13605			The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
267	6/26/1969	AX 39	AX	4000	4828	7056	7180	7145	6773	WIP 8438, 13605	Y (7657)		The receipt stamp date is cutoff appears to be 196X, so it is reasonable to conclude these sets took place in 1969
284	7/2/1970	AX51 Wall	AX	4000	4421	6066	5889	6225	NOT @ AREA PLACED	WIP 8465, 13605			
286	7/9/1970	AX-65&66 Walls	AX	4000	4386	5854	5606	5305	NOT @ AREA PLACED	WIP 8465, 13605	Y (7656)		
287	7/9/1970	AX73 Wall	AX	4000	4686	6101	6225	6225	NOT @ AREA PLACED	WIP 8465, 13605	Y (7659)		

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
288	7/11/1970	AX56	AX	4000	5111	6455	6437	6420	6243	WIP 8465, 13605			
292	7/18/1970	AX40&41	AX	4000	4368	5854	5783	5889	6119	WIP 8465, 13605			
303	7/22/1969	AX-53	AX	4000	4598	6101	6296	6013	NOT @ AREA PLACED	WIP 8440, 13605			
306	7/23/1969	AX60 Wall	AX	4000	4775	5995	6897	6314	5748	WIP 8440, 13605			
308	7/24/1969	AX70	AX	4000	4510	6190	6349	6084	5341	WIP 8440, 13605	Y (7659)		
322	8/13/1969	AX - 44	AX	4000	4227	5535	5624	5712	NOT @ AREA PLACED	WIP 8440, 13605			
332	8/15/1969	AX 67 Wall	AX	4000	4085	5571	5447	5606	5465	WIP 13605	Y (7662)		
335	8/20/1969	AX 77A	AX	4000	4315	6101	6172	6031	NOT @ AREA PLACED	WIP 13605	Y (7676)		
336	8/21/1969	AX 54	AX	4000	4439	5979	5995	6048	5730	WIP 13605			
337	8/21/1969	AX 33	AX	4000	4439	5818	6101	5836	5783	WIP 13605	Y (7665)		Pours AX-33a and AX-33b are shown in F/N 7665
342	8/22/1969	AX 61A Wall	AX	4000	4403	5801	5871	5765	5659	WIP 13605			
343	8/26/1969	AX 47 Wall	AX	4000	4421	5801	5889	5871	5659	WIP 13605			
344	8/26/1969	AX68	AX	4000	4403	5960	5978	6013	5854	WIP 8441, 13605	Y (7662)		
345	8/28/1969	AX37 & 37a	AX	4000	4616	6119	5889	5925	NOT @ AREA PLACED	WIP 8441, 13605			
346	9/2/1969	AX45	AX	4000	4757	5871	6172	5801	NOT @ AREA PLACED	WIP 8441, 13605			
347	9/3/1969	AX76	AX	4000	4651	5748	6172	6190	NOT @ AREA PLACED	WIP 8441, 13605	Y (7676)		AX76a is shown in F/N 7676
348	9/5/1969	AX71	AX	4000	3997	6561	6384	6207	5659	WIP 8441, 13605			
349	9/9/1969	AX36 & 37b	AX	4000	4651	6349	6384	6420	5836	WIP 8441, 13605			
367	9/15/1969	AX62, 63, 64	AX	4000	4510	5412	5323	5518	5129	WIP 13605			
373	9/19/1969	AX3	AX	4000	4227	6278	5889	5801	5518	WIP 13605			
374	9/19/1969	AX78 Slab	AX	4000	4421	5871	5889	5889	5305	WIP 13605			
375	9/19/1969	AX24	AX	4000	4439	6119	5854	6172	5376	WIP 13605			
376	9/22/1969	AX58	AX	4000	4510	6207	6367	6084	NOT @ AREA PLACED	WIP 13605			
379	9/24/1969	AX-16	AX	4000	4333	6137	6013	6207	NOT @ AREA PLACED	WIP 13605			
396	9/30/1969	AX - 15	AX	4000	4474	5907	6031	5978	4952	WIP 8450, 13605			
397	10/1/1969	AX-31	AX	4000	4669	6154	6172	6367	4775	WIP 8450, 13605			
398	10/2/1969	AX-7	AX	4000	4651	6031	6154	5677	4704	WIP 8450, 13605	Y (7674)		
400	10/3/1969	AX27 Wall	AX	4000	4598	5960	5518	5482	NOT @ AREA PLACED	WIP 8450, 13605			
404	10/7/1969	AX74A Wall	AX	4000	4775	6579	6738	6278	5500	WIP 8450, 13605	Y (7684)		
405	10/8/1969	RP Mud Slab 3 B	RP	4000	4315	6367	6597	6367	5146	WIP 13605		N (7910)	Base mat
406	10/9/1969	AX10 Wall	AX	4000	4085	5482	5854	5482	NOT @ AREA PLACED	WIP 8450, 13605	Y (7654)		
409	10/10/1969	AX - 8	AX	4000	4138	5907	6066	5942	4651	WIP 8450, 13605	Y (7687)		
415	10/20/1969	AX-36-"B" Wall	AX	4000	3997	5252	5058	5040	NOT @ AREA PLACED	WIP 8450, 13605	Y (7691)		part external, part internal
416	10/21/1969	AX9B	AX	4000	4103	6331	5588	5960	5942	WIP 8450, 13605			
417	10/21/1969	AX22	AX	4000	4669	5978	6137	4934	5076	WIP 8450, 13605			
420	10/27/1969	AX - 25	AX	4000	4368	6013	6101	6084	4315	WIP 8450, 13605			
422	10/29/1969	AX 105 Slab	AX	4000	4457	6296	6261	6137	NOT @ AREA PLACED	WIP 8450, 13605			
424	11/3/1969	AX - 9A Wal	AX	4000	3961	5642	5482	5925	4014	WIP 8450, 13605			
428	11/7/1969	AX 107 Slab	AX	4000	4403	5748	5942	5871	NOT @ AREA PLACED	WIP 8450, 13605			
429	11/10/1969	AX 138, 143, 144, 146	AX	4000	4651	5871	6154	6101	5235	WIP 8450, 13605			
430	11/10/1969	AX 138, 143, 144, 146	AX	4000	3784	4775	4969	5735	4085	WIP 8450, 13605			
431	11/10/1969	AX 138, 143, 144, 146	AX	4000	4969	6367	6650	6720	5730	WIP 8450, 13605			
432	11/11/1969	AX - 21 Wall	AX	4000	5341	6968	7145	7145	5482	WIP 8450, 13605			
440	11/15/1969	AX -100 Slab	AX	4000	4686	6013	6225	6013	4987	WIP 8450, 13605			
441	11/15/1969	AX -100 Slab	AX	4000	5005	6597	6473	6437	5359	WIP 8450, 13605			
446	11/18/1969	AX - 19 Wall	AX	4000	4510	6526	6720	6632	5836	WIP 8450, 13605			
449	11/20/1969	AX - 20 Wall	AX	4000	4120	6031	6207	6048	5182	WIP 8450, 13605			
455	11/21/1969	AX - 5 Wall	AX	4000	5022	7254	6968	7127	5412	WIP 8450, 13605			Col V - 28 Day Field Strength verified with P/A
456	11/21/1969	AX-175 & 176 Wall	AX	4000	4421	6084	6473	6544	5465	WIP 8450, 13605			
458	11/24/1969	AX-104 B	AX	4000	4969	7003	6986	6632	5588	WIP 8450, 13605			
460	11/25/1969	AX-106 Slab	AX	4000	4810	6473	5978	6544	4740	WIP 8450, 13605			
461	11/25/1969	AX-106 Slab	AX	4000	4633	6154	6420	6190	4633	WIP 8450, 13605			
462	11/25/1969	AX-106 Slab	AX	4000	4474	6402	6561	6384	4704	WIP 8450, 13605			
464	11/29/1969	AX-101 Slab	AX	4000	4510	6154	6473	6154	4740	WIP 8450, 13605			
465	11/29/1969	AX-101 Slab	AX	4000	4704	6579	6508	6614	5164	WIP 8450, 13605			
467	12/2/1969	AX 177 A Wall	AX	4000	5022	6720	6561	6738	4616	WIP 8450, 13605			
468	12/5/1969	AX-246 Wall	AX	4000	4350	6296	6508	6597	4987	WIP 8450, 13605			
469	12/5/1969	AX-246 Wall	AX	4000	4209	6013	6084	6013	4775	WIP 8450, 13605			
474	12/11/1969	RP - 5A	RP	4000	5058	6508	6561	6897	4350	WIP 13605		N (7606)	Containment wall transfer canal interface
475	12/12/1969	AX - 1	AX	4000	4457	5942	6013	5482	4598	WIP 8450, 13605			
476	12/12/1969	AX - 1	AX	4000	4350	6172	6349	6172	4952	WIP 8450, 13605			
477	12/12/1969	AX - 1	AX	4000	4563	6225	6367	6473	5058	WIP 8450, 13605			
478	12/12/1969	AX - 1	AX	4000	4103	5836	5871	5500	4563	WIP 8450, 13605			
479	12/12/1969	AX - 1	AX	4000	4616	6473	5854	5854	4580	WIP 8450, 13605			
480	12/15/1969	AX - 174A	AX	4000	4757	6119	6384	6314	4297	WIP 8450, 13605			
481	12/16/1969	AX - 166 - 167 Wall	AX	4000	4775	6614	6756	6650	4704	WIP 8450, 13605			
483	12/19/1969	RP - 5 Slab & Wall	RP	4000	4598	5712	5942	5942	4757	WIP 13605		N (7606)	Containment wall transfer canal interface

Set#	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
484	12/19/1969	AX-1756 & 1768 Wall	AX	4000	4358	5801	5677	5341	4421	WIP 8450, 13605			
485	12/22/1969	AX - 161 Walls	AX	4000	4492	5871	5730	6031	3891	WIP 8450, 13605			Air tests on corrected loads 5.3, 5.5, 4.8
490	1/7/1970	AX-102 & 103	AX	4000	4669	6437	6367	6544	4846	WIP 8450, 13605			
491	1/7/1970	AX-102 & 103	AX	4000	2582	6084	6084	6013	4244	WIP 8450, 13605			
492	1/7/1970	AX-102 & 103	AX	4000	3555	5553	5518	5730	4067	WIP 8450, 13605			
493	1/7/1970	AX-102 & 103	AX	4000	4174	6137	6367	6084	4457	WIP 8450, 13605			
494	1/7/1970	AX-102 & 103	AX	4000	4156	5871	5765	6013	4350	WIP 8450, 13605			
495	1/8/1970	AX-102 & 103	AX	4000	4085	5871	5907	5889	4457	WIP 8450, 13605			
496	1/8/1970	AX-102 & 103	AX	4000	3926	5659	5553	5624	4457	WIP 8450, 13605			
498	1/13/1970	AX-154-165	AX	4000	4050	6261	6013	6526	4492	WIP 8450, 13605			
499	1/14/1970	AX 109	AX	4000	3873	5818	5588	5730	4333	WIP 8450, 13605			
500	1/15/1970	AX 163	AX	4000	4350	6526	6685	6614	4916	WIP 8450, 13605			
501	1/16/1970	AX 159	AX	4000	3944	6084	6119	5942	4633	WIP 8450, 13605			
502	1/23/1970	RP 6 & 8	RP	4000	3731	5783	5624	5748	4740	WIP 13605		N (7917)	SG Vault wall
503	1/23/1970	RP 6 & 8	RP	4000	3413	5252	5323	5217	3979	WIP 13605		N (7917)	28 Day Field Possibly damaged on job site
504	1/26/1970	AX 108 Slab	AX	4000	3678	5659	5695	5801	4209	WIP 8450, 13605			
507	1/28/1970	AX-153 Wall	AX	4000	3572	5518	5394	5642	3802	WIP 8450, 13605			28 Day Field Possibly damaged on job site
508	1/30/1970	AX-142 Wall	AX	4000	4174	6066	5677	5730	4227	WIP 8450, 13605			
509	2/6/1970	AX-137 Wall	AX	4000	3714	5925	5907	5642	3731	WIP 8450, 13605			28 Day Field Possibly damaged on job site
512	2/20/1970	RP-7 & 9	RP	4000	3926	5624	5836	5659	4421	WIP 13605		Y (7918, 7607)	Part of RP-7 and RP-9 surrounds reactor
513	2/20/1970	RP-7 & 9	RP	4000	3891	5730	5677	5518	4315	WIP 13605		Y (7918, 7607)	Part of RP-7 and RP-9 surrounds reactor
514	2/20/1970	RP-7 & 9	RP	4000	4209	6119	5942	5907	4598	WIP 13605		Y (7918, 7607)	Part of RP-7 and RP-9 surrounds reactor
515	2/20/1970	RP-7 & 9	RP	4000	3714	5518	5588	5305	4174	WIP 13605		Y (7918, 7607)	Part of RP-7 and RP-9 surrounds reactor
518	3/5/1970	RP-10 & 12B	RP	4000	4138	6048	5942	6048	4386	WIP 13605		N (7608)	SG Vault wall
519	3/5/1970	RP-10 & 12B	RP	4000	4227	6190	6048	5659	4563	WIP 13605		N (7608)	SG Vault wall
520	3/9/1970	RP-11	RP	4000	4244	6013	6048	6261	4386	WIP 13605		N (7609)	Basement wall opening near Col 9
521	3/18/1970	RP-13 C1 Cols. 7 & 8	RP	4000	4244	6031	5871	5818	4916	WIP 13605		N (8088, 8089)	1013' EL
522	3/19/1970	RP-13 N from Col. 9 - Col. 12	RP	4000	4014	5871	5889	5925	4580	WIP 13605		N (8088, 8089)	1013' EL
526	4/2/1970	RP-13	RP	4000	4669	6579	6650	6720	5553	WIP 13605		N (8088, 8089)	1013' EL
529	4/8/1970	AX 141 Wall	AX	4000	4386	6119	5907	6314	5199	WIP 13605			
530	4/9/1970	AX 122 A Wall	AX	4000	3696	5588	5364	5801	4510	WIP 13605	Y (7728)		partial above grade
532	4/14/1970	AX 140 Wall	AX	4000	4032	6225	6190	6101	5270	WIP 13605			
533	4/15/1970	AX-2	AX	4000	3961	6349	6278	6420	5005	WIP 13605			
534	4/15/1970	AX-2	AX	4000	4067	6437	6490	6437	5164	WIP 13605			
535	4/15/1970	AX-2	AX	4000	3802	6243	6402	6314	5093	WIP 13605			
537	4/22/1970	AX 149	AX	4000	4545	6579	6172	6773	5482	WIP 8465, 13605			
538	4/23/1970	AX 138	AX	4000	4846	6402	6650	6703	5624	WIP 8465, 13605			
539	4/27/1970	RP-13-S	RP	4000	4067	5907	5836	6084	5058	WIP 13605		N (8088, 8089)	1013' EL
540	4/28/1970	AX - 29d wall	AX	4000	3979	6013	6154	6225	5040	WIP 8465, 13605			
541	4/29/1970	AX 74 A	AX	4000	3767	5995	6066	5925	5058	WIP 8465, 13605	Y (7684)		
543	5/1/1970	AX 136 A	AX	4000	3997	6933	7003	6968	5571	WIP 8465, 13605			
544	5/4/1970	AX - 110	AX	4000	4492	6614	6791	6402	4669	WIP 8465, 13605			Field cylinder possibly damaged on site
545	5/4/1970	AX - 110	AX	4000	4403	6243	6367	6190	4492	WIP 8465, 13605			Field cylinder possibly damaged on site
546	5/4/1970	AX - 110	AX	4000	4757	6261	6561	6508	4740	WIP 8465, 13605			
547	5/4/1970	AX - 110	AX	4000	4669	6437	6296	6544	5022	WIP 8465, 13605			Field cylinder possibly damaged on site
548	5/5/1970	AX-170 & 172	AX	4000	4333	6261	6490	6473	5146	WIP 8465, 13605			
549	5/5/1970	RP-C-4-7, C-5-2, C-6-2	RP	4000	4174	5836	5995	6207	5335	WIP 13605		Unknown	
550	5/6/1970	AX-200	AX	4000	4403	6278	6190	6031	4156	WIP 8465, 13605			Field test 9 day breaks
551	5/6/1970	AX-200	AX	4000	4580	6579	6119	6437	4280	WIP 8465, 13605			
554	5/8/1970	AX 121A Slab	AX	4000	3961	5659	5978	5836	5076	WIP 6770, 13605			
555	5/12/1970	AX 147	AX	4000	4032	6048	5801	5783	5058	WIP 6770, 13605			
556	5/12/1970	RP 9	RP	4000	4085	6296	6190	6396	5659	WIP 13605		Y (7607)	Part of RP-9 surrounds reactor
557	5/12/1970	RP 9	RP	4000	4386	6367	6367	6137	5500	WIP 13605		Y (7607)	Part of RP-9 surrounds reactor
561	5/26/1970	AX - 127	AX	4000	4315	5942	5836	5871	4934	WIP 6770, 13605			
562	5/27/1970	RP 15a	RP	4000	4492	6137	5730	5942	5199	WIP 13605		N (7943)	
580	6/4/1970	AX 125 & 132	AX	4000	4209	6172	6154	6101	5535	WIP 6770, 8465, 13605			
581	6/4/1970	AX 125 & 132	AX	4000	4598	6225	6137	5854	5305	WIP 6770, 8465, 13605			
585	6/8/1970	RP - 13	RP	4000	4297	5765	5588	5907	4722	WIP 13605		N (8088, 8089)	1013' EL
586	6/9/1970	AX 112	AX	4000	4704	5642	6278	5960	5677	WIP 6770, 13605	Y (7718)		AX-112a is shown in F/N 7718
587	6/9/1970	AX 112	AX	4000	4580	6031	6066	5925	5518	WIP 6770, 13605	Y (7718)		AX-112a is shown in F/N 7718
588	6/9/1970	AX 112	AX	4000	4386	6172	5836	5871	5606	WIP 6770, 13605	Y (7718)		AX-112a is shown in F/N 7718
589	6/10/1970	AX - 123a & AX130-b	AX	4000	4527	6119	6261	6066	5129	WIP 6770, 13605			
593	6/15/1970	RP 13 N	RP	4000	4032	5624	5447	5500	4457	WIP 13605		N (8088, 8089)	1013' EL
594	6/16/1970	AX - 111	AX	4000	4439	5854	5980	5730	4527	WIP 6770, 13605			
595	6/16/1970	AX - 111	AX	4000	4350	6031	6119	5942	4810	WIP 6770, 13605			
596	6/18/1970	AX - 130	AX	4000	4510	6119	6314	6190	5305	WIP 6770, 13605			
600	6/22/1970	AX - 124 & 126	AX	4000	4439	6084	6331	6154	5553	WIP 6770, 13605			
601	6/23/1970	AX 170 & 172	AX	4000	4563	6119	6137	6119	5659	WIP 6770, 13605			
602	6/24/1970	AX 212 & 215	AX	4000	4899	6827	6437	6526	6031	WIP 6770, 13605			

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
608	6/26/1970	AX 133	AX	4000	4492	6048	5978	6225	5925	WIP 6770, 13605			
610	6/30/1970	AX 211	AX	4000	4439	5978	6119	6225	5429	WIP 6770, 13605			
614	7/2/1970	AX - 151b & 157b	AX	4000	4315	6278	5765	5960	5412	WIP 6770, 13605			
615	7/6/1970	RP - 14b	RP	4000	4633	6154	5748	6278	6013	WIP 13605		N (7612)	SG vault wall
616	7/6/1970	RP146	RP	4000	4527	6455	6420	6101	5606	WIP 13605		N (7612)	considered as part of RP-14b based on test dates
617	7/6/1970	RP146	RP	4000	4722	6455	6561	6561	5818	WIP 13605		N (7612)	considered as part of RP-14b based on test dates
618	7/7/1970	AX 1516+1576	AX	4000	4457	6207	5907	5925	5058	WIP 6770, 8465, 13605			
619	7/10/1970	AX-134 WALL	AX	4000	3891	5871	5748	6119	5270	WIP 6770, 8465, 13605			
620	7/10/1970	AX-134 WALL	AX	4000	4598	6101	6048	6207	5606	WIP 6770, 8465, 13605			
621	7/10/1970	AX-134 WALL	AX	4000	4492	6154	6013	5854	5217	WIP 6770, 8465, 13605			
622	7/10/1970	AX-134 WALL	AX	4000	4810	6190	6137	6278	5836	WIP 6770, 8465, 13605			
623	7/10/1970	AX-134 WALL	AX	4000	4421	6437	5960	6225	5606	WIP 6770, 8465, 13605			
627	7/13/1970	AX-202 A	AX	4000	4775	6437	6738	6384	4969	WIP 6770, 8465, 13605			
628	7/13/1970	AX-202 A	AX	4000	4421	5889	5642	5836	4103	WIP 6770, 8465, 13605			
629	7/13/1970	AX-202 A	AX	4000	4386	6296	6119	5995	4315	WIP 6770, 8465, 13605			
630	7/13/1970	AX-202 A	AX	4000	5093	6738	6526	6614	5129	WIP 6770, 8465, 13605			
631	7/14/1970	AX210a	AX	4000	4669	6190	6190	5995	5730	WIP 6770, 8465, 13605			
632	7/14/1970	RP 15c	RP	4000	4686	6296	6490	6314	5942	WIP 13605		N (7944)	
633	7/14/1970	RP 15c	RP	4000	4297	6013	6013	5978	5129	WIP 13605		N (7944)	
637	7/16/1970	AX 171 + 179	AX	4000	4067	5871	5642	5836	5359	WIP 6770, 13605			
641	7/17/1970	AX-150	AX	4000	4333	5748	5907	5925	5270	WIP 6770, 13605			
642	7/21/1970	RP 15-B	RP	4000	4457	5960	6101	6225	5359	WIP 13605		N (7942)	
643	7/22/1970	AX 201	AX	4000	4457	6013	6190	6172	4421	WIP 6770, 13605			
644	7/22/1970	AX 201	AX	4000	4916	6402	6402	6437	4669	WIP 6770, 13605			
645	7/22/1970	AX 148	AX	4000	4439	6278	6278	6084	5305	WIP 6770, 13605			
646	7/24/1970	RP-14A	RP	4000	4598	5642	5836	5764	5199	WIP 13605		N (7612)	SG vault wall
647	7/24/1970	AX - 184 A	AX	4000	4156	5712	5164	5465	5040	WIP 6770, 13605			
648	7/27/1970	AX-113	AX	4000	4633	5942	6013	5571	5588	WIP 6770, 8465, 13605			
649	7/27/1970	AX-113	AX	4000	4633	5871	6048	5960	5412	WIP 6770, 8465, 13605			
654	7/30/1970	AX-214	AX	4000	4103	5783	5801	5394	5341	WIP 6770, 8465, 13605			
655	7/31/1970	AX-218, 220, 223	AX	4000	4333	5695	5764	5447	5288	WIP 6770, 8465, 13605			
658	8/3/1970	AX-204 A+205A	AX	4000	4421	5801	5642	6013	5500	WIP 6770, 8465, 13605			
659	8/6/1970	AX-216+217	AX	4000	4492	6066	5925	6013	5394	WIP 6770, 8465, 13605			
660	8/6/1970	AX 168a+169	AX	4000	4757	5818	6296	6207	5712	WIP 6770, 8465, 13605			
664	8/7/1970	AX 203, 205 b	AX	4000	4616	6261	6314	6119	6207	WIP 6770, 13605			CLASS A RECORDED, DO NOT USE
665	8/7/1970	AX 203, 205b	AX	4000	4510	6172	6261	6137	6314	WIP 6770, 13605			CLASS A RECORDED, DO NOT USE
669	8/11/1970	RP-16 "B"	RP	4000	4333	5960	5907	5871	4987	WIP 13605		N (7615)	SG vault wall
670	8/11/1970	AX-162	AX	4000	4510	5995	6243	6048	5571	WIP 6770, 13605			
671	8/13/1970	AX-182 a	AX	4000	3944	5942	5765	5907	5164	WIP 6770, 13605			
672	8/14/1970	RP16 C	RP	4000	4085	5801	5836	5907	5022	WIP 13605		N (7616)	SG vault wall
673	8/14/1970	RP16 C	RP	4000	4474	5748	5677	5730	5076	WIP 13605		N (7616)	SG vault wall
674	8/20/1970	AX 168 B	AX	4000	4174	5606	5606	5588	4846	WIP 6770, 13605			
678	8/27/1970	AX-221	AX	4000	4085	5535	5606	5341	4810	WIP 6770, 13605			
679	8/28/1970	AX 300a, 301a + 131a	AX	4000	4492	5748	5748	6031	5677	WIP 6770, 13605			Extra air test taken throughout this pour - 4.0, 4.4
680	8/28/1970	AX 300a, 301 a +181b1	AX	4000	3891	5500	5553	5411	5146	WIP 6770			Col IV - 28 Day Lab Strength is P / A
683	9/10/1970	AX 122b	AX	4000	3855	6048	5978	6402	5500	WIP 6770			
685	9/11/1970	RP16A	RP	4000	3572	5642	5642	5642	5040	WIP 6770		N (7614)	SG vault wall
686	9/11/1970	RP16A	RP	4000	3837	6066	6013	5659	5518	WIP 6770		N (7614)	SG vault wall
687	9/15/1970	AX 178 COLS	AX	4000	4952	6844	6579	6473	5606	WIP 6770			
689	9/21/1970	AX-225A + 226A	AX	4000	4174	5765	6261	6544	5606	WIP 6770			
690	9/21/1970	AX-225A + 226A	AX	4000	3891	6190	5942	6084	5111	WIP 6770			
691	9/22/1970	RP-17B	RP	4000	4014	5925	5960	5871	4757	WIP 6770		N (7617)	1045 EL
692	9/23/1970	AX 204B	AX	4000	4227	6331	6314	6597	5376	WIP 6770			
693	9/25/1970	AX-302	AX	4000	4333	6119	6314	5942	5553	WIP 6770			
694	9/25/1970	AX-302	AX	4000	4227	6278	6119	6261	4969	WIP 6770			
695	9/25/1970	AX-124B	AX	4000	4421	6597	6579	6579	5465	WIP 6770			
696	9/29/1970	Ax-231 & 235	AX	4000	4386	6296	6367	6278	4633	WIP 6770, 13605			
697	9/30/1970	AX 317 & 233	AX	4000	3749	5571	5871	6066	4297	WIP 6770, 13605			
698	10/1/1970	Ax 311 & 312	AX	4000	3678	5818	5659	5712	4669	WIP 6770, 13605			
699	10/2/1970	RP - 17C	RP	4000	4209	6084	5765	5535	4810	WIP 13605		N (7617)	1045 EL
700	10/7/1970	Ax 234a	AX	4000	4050	5765	5889	5801	4863	WIP 6770, 13605			
701	10/7/1970	Ax 234a	AX	4000	3802	5730	5659	5801	4757	WIP 6770, 13605			
702	10/7/1970	Ax 234a	AX	4000	3961	6084	5801	5907	4828	WIP 6770, 13605			
703	10/7/1970	Ax 234a	AX	4000	4050	5978	6207	6190	4828	WIP 6770, 13605			
704	10/13/1970	AX 315	AX	4000	4704	6437	6791	6597	5252	WIP 6770, 13605			
705	10/14/1970	AX 123b	AX	4000	4439	6367	6190	5836	4775	WIP 6770, 13605			

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
706	10/20/1970	Ax 303 & AX 316	AX	4000	4457	6367	6190	6437	4633	WIP 6770, 13605			
707	10/21/1970	AX 179 & 182 b	AX	4000	4457	6314	6367	5995	4845	WIP 6770, 13605			
708	10/22/1970	AX 401 a & 402 b	AX	4000	4421	5942	6048	6190	4704	WIP 6770, 13605			
709	10/22/1970	AX 401 a & 402 b	AX	4000	4138	5871	5696	5871	4474	WIP 6770, 13605			
710	10/28/1970	RP 17A	RP	4000	4474	6031	6278	6314	4510	WIP 13605		N (8090)	1045 EL
711	10/28/1970	RP 17A	RP	4000	4439	6508	6402	6384	4722	WIP 13605		N (8090)	1045 EL
712	10/28/1970	RP 17A	RP	4000	4810	6384	6632	6490	4987	WIP 13605		N (8090)	1045 EL
713	10/29/1970	Ax 318&319	AX	4000	5111	6720	6773	6756	5005	WIP 6770, 13605			
714	10/29/1970	Ax 409	AX	4000	4669	6420	6455	6761	4740	WIP 6770, 13605			
715	10/30/1970	Ax-400A	AX	4000	4545	6190	6225	6473	4740	WIP 6770, 13605			
716	10/30/1970	Ax-400A	AX	4000	4740	6455	6579	6331	5093	WIP 6770, 13605			
717	10/30/1970	Ax-400A	AX	4000	4174	6048	5730	6154	4527	WIP 6770, 13605			
718	10/30/1970	Ax-400A	AX	4000	4191	5995	5925	6048	4740	WIP 6770, 13605			
722	11/6/1970	AX 227, 228, 229	AX	4000	4174	6280	6225	6120	4400	WIP 6770, 13605			
723	11/9/1970	AZ 312 & 313B	AX	4000	3837	5854	6013	5925	3979	WIP 6770, 13605			
724	11/12/1970	AX 234 B	AX	4000	4067	6296	5960	6296	4386	WIP 6770, 13605			
725	11/13/1970	RP 18 D	RP	4000	4032	5783	5925	5783	lost on job	WIP 13605		N (7972)	
725A	11/13/1970	RP 18 D	RP	4000	4120	6119	6190	6225	lost on job	WIP 13605		N (7972)	
726	11/17/1970	AX 77b	AX	4000	4297	5978	5818	5765	4280	WIP 6770, 13605	Y (7732)		partial above grade
727	11/17/1970	AX 303 B	AX	4000	4686	6296	6261	6207	4368	WIP 6770, 13605			
728	11/17/1970	AX 303 B	AX	4000	4492	6119	6137	6119	4315	WIP 6770, 13605			
729	11/25/1970	RP - 18B	RP	4000	3643	5429	5447	5518	NOT @ AREA PLACED	WIP 13605		N (7970)	
730	11/30/1970	RP - 15A	RP	4000	3997	5730	5606	5677	4244	WIP 13605		N (7943)	
730A	11/30/1970	RP15A	RP	4000	sampled @ end of pump discharge hose	6154	6154	6384	-	WIP 3164, 6770		N (7943)	
731	12/1/1970	AX - 414	AX	4000	4333	5553	5553	5429	4262	WIP 6770, 13605			
732	12/1/1970	RP - 18A	RP	4000	4262	5765	5801	5588	4457	WIP 13605		N (7971)	
732A	12/1/1970	RP18A	RP	4000	sampled @ end of pump discharge hose	6225	6048	6402	-	WIP 3164, 6770		N (7971)	
733	12/4/1970	AX - 502	AX	4000	4580	5889	5836	5854	4350	WIP 6770, 13605			
734	12/4/1970	AX - 502	AX	4000	4014	5376	5500	5695	4191	WIP 6770, 13605			
734A	12/4/1970	AX 502 Slab	AX	4000	sampled @ end of pump discharge hose	5588	5765	5765	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
735	12/4/1970	AX - 502	AX	4000	3784	5571	5535	5695	3802	WIP 6770, 13605			
736	12/4/1970	AX - 502	AX	4000	3891	5394	5412	5447	3873	WIP 6770, 13605			
736A	12/4/1970	AX 502 Slab	AX	4000	sampled @ end of pump discharge hose	5712	5606	5677	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
737	12/4/1970	AX - 502	AX	4000	4244	5783	5748	5659	3661	WIP 6770, 13605			
738	12/10/1970	RP - 19 Slab	RP	4000	4297	5818	5925	5712	4510	WIP 13605		N (7973)	1060 EL
738A	12/10/1970	RP19 SLar	RP	4000	sampled @ end of pump discharge hose	6084	6278	6314	-	WIP 3164, 6770		N (7973)	1060 EL
743	3/4/1971	Cols Elev. 103C AX 310A, AX 321A	AX	4000	4846	6278	6314	6720	4545	WIP 6770, 13605			
744	3/11/1971	AX 402 "B" SLAB	AX	4000	4262	5818	5765	5783	3484	WIP 6770, 13605			12 Day Field Cure
745	3/18/1971	Parapet Walls AX 405, 406-1044'-0"	AX	4000	3678	5482	4669	5588	NOT @ AREA PLACED	WIP 6770, 13605			
747	3/26/1971	AX Pads RM 69 AC-33, VA-17, VA-18	AX	4000	3767	5465	5500	5748	4934	WIP 6770, 13605			
748	4/2/1971	AX 180 A 181A, 181B Walls	AX	4000	3572	5252	5412	5323	4474	WIP 6770, 39395, 13605			
749	4/5/1971	AX123C Wall, AX310C, 321C Cols.	AX	4000	3183	5606	5412	5270	4333	WIP 6770, 39395, 13605			
750	4/9/1971	AX 186 SLAB	AX	4000	3625	5040	4793	4722	4421	WIP 6770, 39395, 13605			
751	4/16/1971	AX 181-B Wall & Col. AX321D	AX	4000	3466	5129	5500	5500	5058	WIP 6770, 13605			
752	4/19/1971	AX 180C Wall	AX	4000	3130	4704	4757	4704	4120	WIP 6770, 13605			
766	4/26/1971	AX225b, 226b, 410a	AX	4000	4120	5677	6154	6013	5447	WIP 6770, 39393			
767	4/26/1971	AX225b, 226b, 410a	AX	4000	4527	6278	6561	6933	5695	WIP 6770, 39393			
768	4/27/1971	AX187a Slab AX188 stairs	AX	4000	4014	6048	6119	6137	4828	WIP 6770, 39393			
769	4/29/1971	AX 187b	AX	4000	4244	6384	5907	6243	5359	WIP 6770, 39393			
770	5/6/1971	AX 85 Pad	AX	4000	5076	7145	6738	7092	NOT @ AREA PLACED	WIP 6770, 39393			

Set#	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
775	5/17/1971	AX-411A, 123d, 122C walls	AX	4000	4457	6172	6137	6172	5978	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
776	5/17/1971	AX-411A, 123d, 122C walls	AX	4000	4474	6526	6402	6402	5199	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
780	5/24/1971	AX 502 AX 86 Wall	AX	4000	4457	6455	6119	6225	5518	WIP 3164, 6874	Y (7895)		set # cut off in scan in 3164, full scan in 6874 AX-86 partial above grade
781	5/26/1971	AX301b, 304C, 183b	AX	4000	4174	6013	6084	6314	5588	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
782	5/27/1971	AX410b	AX	4000	3537	5535	5465	5270	5182	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
783	6/3/1971	AX314, 322, AX313a Walls	AX	4000	4598	6190	6137	6261	5748	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
784	6/4/1971	Curb AX 400 B.C.D	AX	4000	4209	6031	6190	5942	5712	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
785	8/5/1971	AX104 C&D	AX	4000	4156	5465	5836	5907	5252	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
785A	8/5/1971	AX-104 C & D	AX	4000	sampled @ end of pump discharge hose	5907	6172	5765	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
786	8/5/1971	Columns 313 B	AX	4000	4669	5818	5412	6172	5449	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
787	8/9/1971	AX 225 C	AX	4000	4580	5553	5960	5836	NOT @ AREA PLACED	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
788	8/12/1971	AX323 Wall	AX	4000	4722	6314	6367	6561	5960	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
789	8/13/1971	AX500AX503 A	AX	4000	4050	5500	5022	5146	4881	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
790	8/13/1971	AX500AX503 A	AX	4000	4085	5712	5695	5182	5323	WIP 3164, 6874			set # cut off in scan in 3164, full scan in 6874
790A	8/13/1971	AX-500A & 503A	AX	4000	sampled @ end of pump discharge hose	5838	5889	5871	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
791	8/13/1971	AX500&503A	AX	4000	4866	6084	6172	5801	5836	WIP 3164, 6874			
792	8/17/1971	AX-226C	AX	4000	4828	6296	6473	6261	5588	WIP 3164, 6874			
800	8/20/1971	AX500B&503B	AX	4000	4439	5925	5942	5748	5978	WIP 3164, 6874			
801	8/24/1971	AX 411B	AX	4000	4421	5783	5836	5624	4987	WIP 3164, 6874			
801A	8/24/1971	AX-411 B	AX	4000	sampled @ end of pump discharge hose	5960	5995	-	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
802	8/25/1971	AX-410C&225d	AX	4000	4280	5995	5907	5801	5235	WIP 3164, 6874			
803	8/26/1971	1057 PARAPET WALL	AX	4000	3873	5305	5447	5341	4969	WIP 3164, 6874			This pour is likely part of the 1057 EL parapet wall for the Aux Building. Check to see if the test results correspond with any of the other parapet wall pours.
810	8/31/1971	AX502 Relief Panel	AX	4000	4757	6101	6243	6278	5465	WIP 3164, 13605			Set # is not completely legible. Logically based on dates and what numbers can be read on this page and the previous page of WIP 3164, this Set # is 810.
811	9/2/1971	AX123 E	AX	4000	4350	5748	5695	5359	4899	WIP 3164, 6770, 13605			see note for Set # 810
811A	9/2/1971	AX 123 E	AX	4000	sampled @ end of pump discharge hose	5712	5801	-	-	WIP 3164, 6770			set # and date cut off in WIP 3164 scan, remaining data matches 6770
813	9/9/1971	AX 501 & 503 (Part)	AX	4000	4633	6119	6048	6278	5182	WIP 3164, 6770, 13605			see note for Set # 810
814	9/9/1971	AX 501 & 503 (Part)	AX	4000	4527	6296	6190	6101	5553	WIP 3164, 6770, 13605			see note for Set # 810
815	9/10/1971	Pressure Panels Elev. 1036 (Ax Bldg.)	AX	4000	3820	5217	5465	5571	NOT @ AREA PLACED	WIP 3164, 6770, 13605			see note for Set # 810
816	9/15/1971	AX 226D (Wall)	AX	4000	4522	6278	6225	6225	5376	WIP 3164, 6770, 13605			see note for Set # 810
818	9/16/1971	AX 411C Wall	AX	4000	4598	5925	6508	6367	5447	WIP 3164, 6770, 13605			see note for Set # 810
819	9/17/1971	RP 21 a and b	RP	4000	3466	5801	5376	5518	5146	WIP 13605		N (7980)	
820	9/22/1971	1057 Parapets - AX 505, 514, 515, 516 & 507	AX	4000	3749	5518	5482	5500	4510	WIP 3164, 6770, 13605			see note for Set # 810
821	9/23/1971	AX 116	AX	4000	4421	6066	6314	6261	4863	WIP 3164, 6770, 13605			see note for Set # 810
824	9/28/1971	RP 20A and B	RP	4000	4280	5448	6048	6066	4899	WIP 13497		N (7976)	
825	9/29/1971	AX - 122D Wall	AX	4000	4439	6066	6101	5925	4846	WIP 6770, 13497, 39192			Set # is not completely legible. Logically based on dates and what numbers can be read on this page of WIP 6770, this Set # is 825. Confirmed in WIP 13497.
826	9/30/1971	AX 123 F Wall	AX	4000	4244	5818	5642	6013	4350	WIP 6770, 13497, 39192			see note for Set # 825
830	10/7/1971	AX 412B	AX	4000	3679	5305	5164	5359	4191	WIP 6770, 13497, 39192			see note for Set # 825
831	10/8/1971	RP 21D	RP	4000	4315	6048	6190	5995	5129	WIP 13497		N (7979)	
832	10/12/1971	AX 206 and Pads	AX	4000	4563	6296	6544	6314	5376	WIP 6770, 13497, 39192			see note for Set # 825
833	10/13/1971	RP 22A	RP	4000	4669	6544	6473	6190	4987	WIP 13497		N (7982)	
834	10/14/1971	AX 600A	AX	4000	4563	6508	6526	6650	5412	WIP 6770, 13497, 39192			see note for Set # 825
835	10/14/1971	AX 600A	AX	4000	4899	6685	6756	6508	5500	WIP 6770, 13497, 39192			see note for Set # 825
836	10/15/1971	VA-151 A, B, C and D RM. 82 Ax. Bldg. El. 1036	AX	4000	4050	5624	5978	5730	4492	WIP 6770, 13497, 39192			see note for Set # 825

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	Specified Strength (psi)	I - 7 Day Strength (psi)	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	V - 28 Day Field Strength (psi)	Reference	External Subgrade Wall? (F/N)	Reactor Cavity Floor or Walls? (F/N)	Notes
837	10/15/1971	AX 112C	AX	4000	4209	6048	6207	6261	5444	WIP 6770, 13497, 39192			see note for Set # 825
838	10/18/1971	RP 20D	RP	4000	4474	6544	6384	6119	5005	WIP 13497		N (7979)	
839	10/22/1971	AX 413b	AX	4000	5588	7481	7446	7375	6084	WIP 13497, 39192			
840	10/26/1971	1057 Roof B.O.S Pipe Sleve E. Aux. Bldg.	AX	4000	4669	6172	6402	6473	5093	WIP 13497, 39192			
841	10/26/1971	RP 22b	RP	4000	4315	6367	6013	6119	4863	WIP 13497		N (7982)	
842	10/27/1971	RP-7-2	RP	4000	3678	6172	5642	5765	4403	WIP 13497		Y (7984)	partially surrounds reactor
844	10/29/1971	AX 122C	AX	4000	4244	6207	6384	6172	5111	WIP 13497, 39192			
845	11/2/1971	AX-600B	AX	4000	4050	6437	6473	6314	4350	WIP 13497, 39192			
846	11/2/1971	AX-600B	AX	4000	3961	6720	6384	6738	4474	WIP 13497, 39192			
847	11/4/1971	AX-160B and AX-204	AX	4000	4041	6455	6314	6243	4527	WIP 13497, 39192			
848	11/4/1971	RP-22C	RP	4000	3395	5836	5960	5871	4297	WIP 13497		N (7982)	
849	11/5/1971	1044 Roof B.O.S. Ax. Bldg.	AX	4000	3749	5801	5889	6137	4368	WIP 13497, 39192			
851	11/10/1971	AX-605 Parapet Wall	AX	4000	4138	6137	6402	6331	4262	WIP 13497, 39192			
852	11/11/1971	AX-600C	AX	4000	3579	5217	5323	5535	4138	WIP 13497, 39192			
853	11/11/1971	AX-600C	AX	4000	3784	5359	6243	5942	4120	WIP 13497, 39192			
854	11/11/1971	AX-114b and c	AX	4000	3891	6137	5818	6225	4297	WIP 13497, 39192	Y (7873)		AX-114b and c partial above grade
855	11/17/1971	AX114 a & d wall	AX	4000	4545	5712	6685	6597	4598	WIP 13605	Y (7873)		AX-114a partial above grade
856	11/19/1971	AX 89 Slab	AX	4000	3784	5571	5695	5712	4457	WIP 13605			
857	11/24/1971	AX 90 Stairs	AX	4000	4810	6207	6243	6048	NOT @ AREA PLACED	WIP 13605			
858	12/2/1971	AX 7169 B/O in AX 316 Wall	AX	4000	4510	5164	5649	5288	NOT @ AREA PLACED	WIP 13605			
860	12/13/1971	AX 139 Wall	AX	4000	4987	5642	5571	5129	5164	WIP 13605			
861	12/14/1971	AX 114d	AX	4000	4368	5606	5642	5217	4510	WIP 13605			
862	12/23/1971	AX 114e Slab	AX	4000	4014	4651	4899	4863	4333	WIP 13605			
863	12/23/1971	AX 7080 B/O	AX	4000	4386	5394	5022	5058	4686	WIP 13605			
866	1/13/1972	AX-192 AX-1836b 304a, 191a	AX	4000	4616	6013	5960	5801	4969	WIP 13605			
869	1/19/1972	AX 7008 B/O's 1, 2, 3 AX7009 B/O's 1, 2, 3	AX	4000	4492	5748	5748	5730	4952	WIP 13605			
872	1/26/1972	AX304A	AX	4000	4686	6119	6455	6172	Damaged at Job Site	WIP 13497			
873	2/1/1972	AX191C	AX	4000	4580	5588	5942	5659	5022	WIP 13497			
875	2/4/1972	AX193	AX	4000	4863	5978	6420	5836	4934	WIP 13497			
876	2/9/1972	AX225C, VA-69, AX411b, AX234b	AX	4000	4457	5518	5164	5235	5005	WIP 13497			
878	2/11/1972	AX325a, 326a, 327a (Walls)	AX	4000	4297	4916	5093	5058	4987	WIP 13497			
879	3/1/1972	AX191 b and d	AX	4000	5288	6314	6349	6331	5305	WIP 13497			
880	3/1/1972	AX325b, 326b, 327b and c	AX	4000	5093	6190	6331	6225	4952	WIP 13497			
881	3/2/1972	AX7024-1 B/Os	AX	4000	4757	5252	5288	5199	5447	WIP 13497			
882	3/9/1972	AX B/Os 7019-3 Rm's 4-15	AX	4000	4439	4686	5076	5429	4333	WIP 13497			
883	3/15/1972	AX B/Os 7019-11	AX	4000	4421	5925	6031	5905	4846	WIP 13497			
884	3/20/1972	AX 191-E, 304 B and 324-A	AX	4000	4421	6614	6154	6402	Damaged at Job Site	WIP 13497			
885	3/22/1972	AX B/Os 7003-1	AX	4000	4669	5730	5624	5659	4849	WIP 13497			
886	3/29/1972	AX B/Os 7056-1, 2, 3, 4, 5	AX	4000	4457	6048	5394	5695	5465	WIP 13497			
887	3/30/1972	AX 324b, 504	AX	4000	4775	6367	6048	6526	5624	WIP 32516			
888	4/5/1972	AX 505, 514, 516 Parapets	AX	4000	4563	5712	5730	5925	4757	WIP 32516			
890	4/10/1972	AX B/OS 7028 1, 7, 8 410 & AX 38 a, b, c	AX	4000	4633	5836	5659	5925	4916	WIP 32516			
891	4/12/1972	AX B/OS 7028-3, 5, 6, 7, 15, 18, 19, 20, 22	AX	4000	4492	5500	5518	5588	5659	WIP 32516			
892	4/18/1972	AX B/OS 7153-5 7153-3, 5 7014-1, 2, 3, 4 7015-1, 2, 3, 5	AX	4000	4810	5500	5659	5780	5093	WIP 32516			
893	4/19/1972	B/OS 7463-1 to 12 RP15A Stair & Curb AX B/OS 7059-5, 7, 8	AX	4000	4421	5288	5359	5659	5465	WIP 32516			
894	4/26/1972	AX B/OS 7059-2, 3, 6 7066-10 7030-2, 3 7061-2	AX	4000	4863	5925	5995	6066	5341	WIP 32516			
895	4/27/1972	AX114 Slab	AX	4000	5305	7003	6544	6632	5394	WIP 32516			
897	5/3/1972	AX B/OS 7030-1, 6, 7, 14 7029-5, 7 7039-7 AX114 B Stairs	AX	4000	4527	5765	5810	5836	4793	WIP 32516			
898	5/4/1972	AX B/O 7060-1	AX	4000	3537	5359	5022	5042	4740	WIP 32516			
899	5/10/1972	AX B/OS 7028-1, 11, 12 7029-1, 2, 3, 4, 5, 7, 8, 9	AX	4000	4315	5288	5022	5341	4492	WIP 32516			
900	5/11/1972	AX B/OS 7023-7 7025-2, 3, 5, 6 7017-1	AX	4000	3643	4510	4686	4669	3944	WIP 32516			
901	5/16/1972	AX B/OS 7021-1 7018-8 7019-26 7025-3 7038-9	AX	4000	4156	4899	5146	5058	4686	WIP 32516			
902	5/18/1972	AX B/OS 7146-1 7174-1 7147-2 to 7	AX	4000	3676	4174	4757	4651	4067	WIP 32516			

It is possible that the test data that has been logged does not encompass all test data for the construction of the AB and CIS. Although there may have been additional original test data, locating 903 of the 912 unique sets identified is considered an appropriate sample representation of the entirety of the FCS original test data. See Attachment 8.2 for all 912 sets identified.

Four sets of data as described below will be evaluated separately.

Case 1: All Class B AB data.

Case 2: All Class B AB data except pours contributing to external subgrade walls.

Case 3: All Class B CIS data.

Case 4: All Class B CIS data except pours contributing to the floor beneath the reactor core and the concrete immediately surrounding the reactor core.

Calculate 95% Confidence Levels

The sample population standard deviation and mean are calculated considering the test strengths reported. The 95% confidence level is calculated from mean and standard deviation.

SAMPLE POPULATION STANDARD DEVIATION, σ
SAMPLE POPULATION MEAN, μ
SINGLE TAIL 95% CONFIDENCE, $\mu - 1.645\sigma$

A single tail test is appropriate as long as the impact of values falling outside the range of values on the opposite side of the curve has been considered. i.e. Is it a problem if the compressive strength is substantially higher than the mean? Since any compressive strength higher than the mean presents no negative impact, it is appropriate to use a single tail test.

As stated in ACI 214-77, "The strength of concrete test specimens on controlled projects can be assumed to fall into a pattern similar to the normal frequency distribution." [62] Therefore, the 95% confidence level corresponds with 1.645σ.

A summary of the mean, standard deviation, and 95% confidence level for cases 1 through 4 is included in Section 6.0 of this calculation.

Calculate Consecutive Test Rolling Averages

Rolling averages are calculated on the following pages by averaging sets of 3 and 5 chronologically consecutive test strength values.

Calculate Rolling Average Minimum for 3 Consecutive Tests and 10% Passing Limit – Case 1

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
43	2/17/1969	Wall W-4 Part #1 Auxiliary Building	AX	7039	6862	7039	Y (7641)			6980
44	2/18/1969	Wall W-5 Part #2 Auxiliary Building	AX	5818	6048	5588	Y (7642)	6573	6302	5818
45	2/19/1969	Wall W-3 Part #3 Auxiliary Building	AX	6544	6968	7163		6060	6367	6892
48	2/22/1969	Wall W-5 Part #5 Auxiliary Building	AX	5907	5907	5818	Y (7642)	6679	6326	5877
51	2/28/1969	Auxiliary Building Wall W-1	AX	6827	6579	6296		6184	6408	6567
52	2/28/1969	Auxiliary Building Wall W-1	AX	7074	7127	7286		6650	6832	7162
72	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	6597	6650	6862	Y (7641)	7003	6844	6703
73	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	6544	6544	6685	Y (7641)	6685	6650	6591
74	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W2 P-2	AX	6986	6508	6791	Y (7641)	6738	6726	6762
121	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6650	6667	6950		6650	6703	6756
122	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7021	7003	7074		6879	6991	7033
123	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6667	6720		6958	6856	6738
124	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6261	6667	6367		6549	6549	6432
125	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6137	6667		6620	6444	6544
126	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7286	7251	6986		6697	7068	7174
127	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6544	6650	6420		6927	6727	6538
148	5/23/1969	Auxiliary Building AX-13-wall	AX	6809	6650	6650	Y (7653)	6626	6626	6703
149	5/23/1969	Auxiliary Building AX-13-wall	AX	6579	6561	6720	Y (7653)	6626	6597	6620
179	6/6/1969	Aux. M-7	AX	5801	5588	5606		6361	6036	5665
180	6/6/1969	Aux. M-7	AX	7499	7622	7304		6231	6909	7475
181	6/6/1969	Aux. M-7	AX	7127	7110	6968		7351	7180	7068
182	6/6/1969	Aux. M-7	AX	7092	6402	7056		7057	6821	6850
183	6/6/1969	Aux. M-7	AX	7339	6473	6809		6932	6956	6874
184	6/6/1969	Aux M-7	AX	6066	6367	6278		6449	6414	6237
185	6/6/1969	Aux M-7	AX	6544	6720	6650		6396	6514	6638
186	6/6/1969	Aux M-7	AX	6880	6880	6720		6750	6803	6827
187	6/6/1969	Aux M-7	AX	7110	7180	7003		6903	7003	7098
188	6/6/1969	Aux M-7	AX	7110	6915	7216		7098	7009	7080
189	6/9/1969	Aux 17 & 18	AX	7003	7428	7074		7045	7216	7168
206	6/13/1969	Aux Building M-6	AX	7463	7145	7835		7322	7227	7481

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
207	6/13/1969	Aux Building M-6	AX	7251	7163	7145		7410	7416	7186
208	6/13/1969	Aux Building M-6	AX	7251	7251	7145		7186	7216	7216
209	6/13/1969	Aux Building M-6	AX	7905	6933	7463		7434	7328	7434
210	6/13/1969	Aux Building M-6	AX	7782	7491	7835		7393	7579	7703
211	6/13/1969	Aux Building M-6	AX	6667	7446	7322		7331	7316	7145
212	6/13/1969	Aux Building M-6	AX	7640	7092	7082		7469	7351	7271
213	6/13/1969	Aux Building M-6	AX	7499	7640	7799		7224	7407	7646
256	6/24/1969	AX 57	AX	6773	6614	6137	Y (7655)	7404	7062	6508
258	6/25/1969	M8 Aux Mat	AX	6296	6154	6154		6349	6196	6201
259	6/25/1969	M8 Aux Mat	AX	6119	6225	6084		6142	6166	6143
260	6/25/1969	M8 Aux Mat	AX	6437	6915	6597		6249	6479	6650
261	6/25/1969	M8 Aux Mat	AX	6827	6667	6720		6780	6697	6738
262	6/25/1969	M8 Aux Mat	AX	6420	6243	6402		6602	6461	6355
263	6/25/1969	M8 Aux Mat	AX	6048	6084	6632		6231	6178	6255
264	6/25/1969	M8 Aux Mat	AX	5500	5801	5659		6072	5978	5653
265	6/25/1969	M8 Aux Mat	AX	6331	6225	6597		5930	6072	6384
267	6/26/1969	AX 39	AX	7056	7180	7145	Y (7657)	6626	6944	7127
284	7/2/1970	AX51 Wall	AX	6066	5889	6225		6797	6367	6060
286	7/9/1970	AX-65&66 Walls	AX	5854	5606	5305	Y (7656)	5989	5895	5588
287	7/9/1970	AX73 Wall	AX	6101	6225	6225	Y (7659)	5671	5877	6184
288	7/11/1970	AX56	AX	6455	6437	6420		6302	6372	6437
292	7/18/1970	AX40&41	AX	5854	5783	5889		6237	6019	5842
303	7/22/1969	AX-53	AX	6101	6296	6013		5924	6095	6137
306	7/23/1969	AX60 Wall	AX	5995	6897	6314		6101	6302	6402
308	7/24/1969	AX70	AX	6190	6349	6084	Y (7659)	6467	6284	6208
322	8/13/1969	AX - 44	AX	5535	5624	5712		5989	5748	5624
332	8/15/1969	AX 67 Wall	AX	5571	5447	5606	Y (7662)	5636	5577	5541
335	8/20/1969	AX 77A	AX	6101	6172	6031	Y (7676)	5718	5960	6101
336	8/21/1969	AX 54	AX	5979	5995	6048		6061	6002	6007
337	8/21/1969	AX 33	AX	5818	6101	5836	Y (7665)	5954	5989	5918
342	8/22/1969	AX 61A Wall	AX	5801	5871	5765		5913	5836	5812
343	8/26/1969	AX 47 Wall	AX	5801	5889	5871		5812	5818	5854
344	8/26/1969	AX68	AX	5960	5978	6013	Y (7662)	5907	5936	5984
345	8/28/1969	AX37 & 37a	AX	6119	5889	5925		6037	6007	5978
346	9/2/1969	AX45	AX	5871	6172	5801		5895	5989	5948
347	9/3/1969	AX76	AX	5748	6172	6190	Y (7676)	5907	5907	6037
348	9/5/1969	AX71	AX	6561	6384	6207		6308	6378	6384
349	9/9/1969	AX36 & 37b	AX	6349	6384	6420		6313	6313	6384
367	9/15/1969	AX62, 63, 64	AX	5412	5323	5518		6072	5718	5418
373	9/19/1969	AX3	AX	6278	5889	5801		5706	5895	5989
374	9/19/1969	AX78 Slab	AX	5871	5889	5889		5854	5854	5883
375	9/19/1969	AX24	AX	6119	5854	6172		5966	5954	6048
376	9/22/1969	AX58	AX	6207	6367	6084		6078	6249	6219
379	9/24/1969	AX-16	AX	6137	6013	6207		6196	6078	6119
396	9/30/1969	AX - 15	AX	5907	6031	5978		6042	6048	5972

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
397	10/1/1969	AX-31	AX	6154	6172	6367		6054	6101	6231
398	10/2/1969	AX-7	AX	6031	6154	5677	Y (7674)	6190	6184	5954
400	10/3/1969	AX27 Wall	AX	5960	5518	5482		5930	5718	5653
404	10/7/1969	AX74A Wall	AX	6579	6738	6278	Y (7684)	5860	6266	6532
406	10/9/1969	AX10 Wall	AX	5482	5854	5482	Y (7654)	6166	5871	5606
409	10/10/1969	AX - 8	AX	5907	6066	5942	Y (7687)	5748	5818	5972
415	10/20/1969	AX-36-"B" Wall	AX	5252	5058	5040	Y (7691)	5753	5417	5117
416	10/21/1969	AX9B	AX	6331	5588	5960		5476	5653	5960
417	10/21/1969	AX22	AX	5978	6137	4934		5842	6025	5683
420	10/27/1969	AX - 25	AX	6013	6101	6084		5695	5683	6066
422	10/29/1969	AX 105 Slab	AX	6296	6261	6137		6160	6214	6231
424	11/3/1969	AX - 9A Wal	AX	5642	5482	5925		6013	5754	5683
428	11/7/1969	AX 107 Slab	AX	5748	5942	5871		5718	5872	5854
429	11/10/1969	AX 138, 143, 144, 146	AX	5871	6154	6101		5895	5965	6042
430	11/10/1969	AX 138, 143, 144, 146	AX	4775	4969	5235		5677	5282	4993
431	11/10/1969	AX 138, 143, 144, 146	AX	6367	6650	6720		5524	6084	6579
432	11/11/1969	AX - 21 Wall	AX	6968	7145	7145		6779	6944	7086
440	11/15/1969	AX -100 Slab	AX	6013	6225	6013		6768	6461	6084
441	11/15/1969	AX -100 Slab	AX	6597	6473	6437		6278	6361	6502
446	11/18/1969	AX - 19 Wall	AX	6526	6720	6632		6479	6561	6626
449	11/20/1969	AX - 20 Wall	AX	6031	6207	6048		6461	6290	6095
455	11/21/1969	AX - 5 Wall	AX	7254	6968	7127		6503	6757	7116
456	11/21/1969	AX-175 & 176 Wall	AX	6084	6473	6544		6726	6561	6367
458	11/24/1969	AX-104 B	AX	7003	6986	6632		6673	6844	6874
460	11/25/1969	AX-106 Slab	AX	6473	5978	6544		6697	6361	6332
461	11/25/1969	AX-106 Slab	AX	6154	6420	6190		6225	6373	6255
462	11/25/1969	AX-106 Slab	AX	6402	6561	6384		6337	6384	6449
464	11/29/1969	AX-101 Slab	AX	6154	6473	6154		6366	6337	6260
465	11/29/1969	AX-101 Slab	AX	6579	6508	6614		6402	6414	6567
467	12/2/1969	AX 177 A Wall	AX	6720	6561	6738		6614	6632	6673
468	12/5/1969	AX-246 Wall	AX	6296	6508	6597		6532	6514	6467
469	12/5/1969	AX-246 Wall	AX	6013	6084	6013		6373	6231	6037
475	12/12/1969	AX - 1	AX	5942	6013	5482		6013	5989	5812
476	12/12/1969	AX - 1	AX	6172	6349	6172		5889	6001	6231
477	12/12/1969	AX - 1	AX	6225	6367	6473		6249	6255	6355
478	12/12/1969	AX - 1	AX	5836	5871	5500		6225	6060	5736
479	12/12/1969	AX - 1	AX	6473	5854	5854		5948	5942	6060
480	12/15/1969	AX - 174A	AX	6119	6384	6314		5942	6119	6272
481	12/16/1969	AX - 166 - 167 Wall	AX	6614	6756	6650		6437	6561	6673
484	12/19/1969	AX-1756 & 1768 Wall	AX	5801	5677	5341		6402	6043	5606
485	12/22/1969	AX - 161 Walls	AX	5871	5730	6031		5630	5647	5877
490	1/7/1970	AX-102 & 103	AX	6437	6367	6544		6066	6278	6449
491	1/7/1970	AX-102 & 103	AX	6084	6084	6013		6332	6237	6060
492	1/7/1970	AX-102 & 103	AX	5553	5518	5730		5883	5695	5600
493	1/7/1970	AX-102 & 103	AX	6137	6367	6084		5795	6078	6196

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494	1/7/1970	AX-102 & 103	AX	5871	5765	6013		6107	5907	5883
495	1/8/1970	AX-102 & 103	AX	5871	5907	5889		5883	5930	5889
496	1/8/1970	AX-102 & 103	AX	5659	5553	5624		5818	5700	5612
498	1/13/1970	AX-154-165	AX	6261	6013	6526		5813	5966	6267
499	1/14/1970	AX 109	AX	5818	5588	5730		6119	5977	5712
500	1/15/1970	AX 163	AX	6526	6685	6614		5948	6314	6608
501	1/16/1970	AX 159	AX	6084	6119	5942		6461	6272	6048
504	1/26/1970	AX 108 Slab	AX	5659	5695	5801		5907	5765	5718
507	1/28/1970	AX-153 Wall	AX	5518	5394	5642		5671	5571	5518
508	1/30/1970	AX-142 Wall	AX	6066	5677	5730		5701	5795	5824
509	2/6/1970	AX-137 Wall	AX	5925	5907	5642		5777	5854	5825
529	4/8/1970	AX 141 Wall	AX	6119	5907	6314		5889	5889	6113
530	4/9/1970	AX 122 A Wall	AX	5588	5364	5801	Y (7728)	5936	5755	5584
532	4/14/1970	AX 140 Wall	AX	6225	6190	6101		5797	6072	6172
533	4/15/1970	AX-2	AX	6349	6278	6420		6213	6243	6349
534	4/15/1970	AX-2	AX	6437	6490	6437		6378	6449	6455
535	4/15/1970	AX-2	AX	6243	6402	6314		6390	6361	6320
537	4/22/1970	AX 149	AX	6579	6172	6773		6432	6355	6508
538	4/23/1970	AX 138	AX	6402	6650	6703		6449	6608	6585
540	4/28/1970	AX - 29d wall	AX	6013	6154	6225		6455	6290	6131
541	4/29/1970	AX 74 A	AX	5995	6066	5925	Y (7684)	6125	6095	5995
543	5/1/1970	AX 136 A	AX	6933	7003	6968		6308	6620	6968
544	5/4/1970	AX - 110	AX	6614	6791	6402		6862	6791	6602
545	5/4/1970	AX - 110	AX	6243	6367	6190		6479	6337	6267
546	5/4/1970	AX - 110	AX	6261	6561	6508		6273	6337	6443
547	5/4/1970	AX - 110	AX	6437	6296	6544		6502	6414	6426
548	5/5/1970	AX-170 & 172	AX	6261	6490	6473		6367	6432	6408
550	5/6/1970	AX-200	AX	6278	6190	6031		6414	6314	6166
551	5/6/1970	AX-200	AX	6579	6119	6437		6267	6243	6378
554	5/8/1970	AX 121A Slab	AX	5659	5978	5836		6072	6025	5824
555	5/12/1970	AX 147	AX	6048	5801	5783		5954	5895	5877
561	5/26/1970	AX - 127	AX	5942	5836	5871		5842	5854	5883
580	6/4/1970	AX 125 & 132	AX	6172	6154	6101		5960	6066	6142
581	6/4/1970	AX 125 & 132	AX	6225	6137	5854		6160	6154	6072
586	6/9/1970	AX 112	AX	5642	6278	5960	Y (7718)	5878	5925	5960
587	6/9/1970	AX 112	AX	6031	6066	5925	Y (7718)	6090	6019	6007
588	6/9/1970	AX 112	AX	6172	5836	5871	Y (7718)	6054	5978	5960
589	6/10/1970	AX - 123a & AX130-b	AX	6119	6261	6066		5942	6084	6149
594	6/16/1970	AX - 111	AX	5854	5960	5730		6060	5960	5848
595	6/16/1970	AX - 111	AX	6031	6119	5942		5907	5960	6031
596	6/18/1970	AX - 130	AX	6119	6314	6190		6060	6125	6208
600	6/22/1970	AX - 124 & 126	AX	6084	6331	6154		6196	6202	6190
601	6/23/1970	AX 170 & 172	AX	6119	6137	6119		6201	6137	6125
602	6/24/1970	AX 212 & 215	AX	6827	6437	6526		6361	6461	6597
608	6/26/1970	AX 133	AX	6048	5978	6225		6337	6184	6084

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610	6/30/1970	AX 211	AX	5978	6119	6225		6060	6107	6107
614	7/2/1970	AX - 151b & 157b	AX	6278	5765	5960		6207	6089	6001
618	7/7/1970	AX 1516 + 1576	AX	6207	5907	5925		5977	6025	6013
619	7/10/1970	AX-134 WALL	AX	5871	5748	6119		5901	5848	5913
620	7/10/1970	AX-134 WALL	AX	6101	6048	6207		5989	6089	6119
621	7/10/1970	AX-134 WALL	AX	6154	6013	5854		6136	6125	6007
622	7/10/1970	AX-134 WALL	AX	6190	6137	6278		6019	6060	6202
623	7/10/1970	AX-134 WALL	AX	6437	5960	6225		6284	6225	6207
627	7/13/1970	AX-202 A	AX	6437	6738	6384		6207	6467	6520
628	7/13/1970	AX-202 A	AX	5889	5642	5836		6337	5972	5789
629	7/13/1970	AX-202 A	AX	6296	6119	5995		5925	6084	6137
630	7/13/1970	AX-202 A	AX	6738	6526	6614		6284	6420	6626
631	7/14/1970	AX210a	AX	6190	6190	5995		6443	6331	6125
637	7/16/1970	AX 171 + 179	AX	5871	5642	5836		6019	5836	5783
641	7/17/1970	AX-150	AX	5748	5907	5925		5742	5830	5860
643	7/22/1970	AX 201	AX	6013	6190	6172		5948	6043	6125
644	7/22/1970	AX 201	AX	6402	6402	6437		6255	6325	6414
645	7/22/1970	AX 148	AX	6278	6278	6084		6372	6331	6213
647	7/24/1970	AX - 184 A	AX	5712	5164	5465		6025	5653	5447
648	7/27/1970	AX-113	AX	5942	6013	5571		5524	5807	5842
649	7/27/1970	AX-113	AX	5871	6048	5960		5818	5830	5960
654	7/30/1970	AX-214	AX	5783	5801	5394		5930	5848	5659
655	7/31/1970	AX-218, 220, 223	AX	5695	5764	5447		5630	5618	5635
658	8/3/1970	AX-204 A+205A	AX	5801	5642	6013		5671	5630	5819
659	8/6/1970	AX-216 +217	AX	6066	5925	6013		5907	6001	6001
660	8/6/1970	AX 168a+169	AX	5818	6296	6207		5919	6042	6107
664	8/7/1970	AX 203, 205 b	AX	6261	6314	6119		6255	6261	6231
665	8/7/1970	AX 203, 205b	AX	6172	6261	6137		6202	6184	6190
670	8/11/1970	AX-162	AX	5995	6243	6048		6131	6125	6095
671	8/13/1970	AX-182 a	AX	5942	5765	5907		6078	5918	5871
674	8/20/1970	AX 168 B	AX	5606	5606	5588		5759	5706	5600
678	8/27/1970	AX-221	AX	5535	5606	5341		5576	5576	5494
679	8/28/1970	AX 300a, 301a + 131a	AX	5748	5748	6031		5565	5612	5842
680	8/28/1970	AX 300a, 301 a +181b1	AX	5500	5553	5411		5760	5695	5488
683	9/10/1970	AX 122b	AX	6048	5978	6402		5671	5812	6143
687	9/15/1970	AX 178 COLS	AX	6844	6579	6473		6408	6608	6632
689	9/21/1970	AX-225A + 226A	AX	5765	6261	6544		6272	6166	6190
690	9/21/1970	AX-225A + 226A	AX	6190	5942	6084		6332	6225	6072
692	9/23/1970	AX 204B	AX	6331	6314	6597		6119	6243	6414
693	9/25/1970	AX-302	AX	6119	6314	5942		6343	6343	6125
694	9/25/1970	AX-302	AX	6278	6119	6261		6178	6113	6219
695	9/25/1970	AX-124B	AX	6597	6579	6579		6326	6479	6585
696	9/29/1970	Ax-231 & 235	AX	6296	6367	6278		6485	6414	6314
697	9/30/1970	AX 317 & 233	AX	5571	5871	6066		6072	5907	5836
698	10/1/1970	Ax 311 & 312	AX	5818	5659	5712		5918	5848	5730

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700	10/7/1970	Ax 234a	AX	5765	5889	5801		5712	5789	5818
701	10/7/1970	Ax 234a	AX	5730	5659	5801		5807	5730	5730
702	10/7/1970	Ax 234a	AX	6084	5801	5907		5848	5895	5931
703	10/7/1970	Ax 234a	AX	5978	6207	6190		5895	6031	6125
704	10/13/1970	AX 315	AX	6437	6791	6597		6278	6473	6608
705	10/14/1970	AX 123b	AX	6367	6190	5836		6585	6385	6131
706	10/20/1970	Ax 303 & AX 316	AX	6367	6190	6437		6131	6131	6331
707	10/21/1970	AX 179 & 182 b	AX	6314	6367	5995		6314	6373	6225
708	10/22/1970	AX 401 a & 402 b	AX	5942	6048	6190		6101	5995	6060
709	10/22/1970	AX 401 a & 402 b	AX	5871	5696	5871		6036	5919	5813
713	10/29/1970	Ax 318&319	AX	6720	6773	6756		6096	6455	6750
714	10/29/1970	Ax 409	AX	6420	6455	6261		6650	6544	6379
715	10/30/1970	Ax-400A	AX	6190	6225	6473		6302	6225	6296
716	10/30/1970	Ax-400A	AX	6455	6579	6331		6384	6502	6455
717	10/30/1970	Ax-400A	AX	6048	5730	6154		6319	6036	5977
718	10/30/1970	Ax-400A	AX	5995	5925	6048		5960	6025	5989
722	11/6/1970	AX 227, 228, 229	AX	6280	6225	6120		6084	6184	6208
723	11/9/1970	AZ 312 & 313B	AX	5854	6013	5925		6066	5996	5931
724	11/12/1970	AX 234 B	AX	6296	5960	6296		6078	6060	6184
726	11/17/1970	AX 77 b	AX	5978	5818	5765	Y (7732)	6078	6031	5854
727	11/17/1970	AX 303 B	AX	6296	6261	6207		5960	6107	6255
728	11/17/1970	AX 303 B	AX	6119	6137	6119		6196	6154	6125
731	12/1/1970	AX - 414	AX	5553	5553	5429		5936	5742	5512
733	12/4/1970	AX - 502	AX	5889	5836	5854		5624	5718	5860
734	12/4/1970	AX - 502	AX	5376	5500	5695		5689	5577	5524
734A	12/4/1970	AX 502 Slab	AX	5588	5765	5765		5594	5683	5706
735	12/4/1970	AX - 502	AX	5571	5535	5695		5700	5624	5600
736	12/4/1970	AX - 502	AX	5394	5412	5447		5541	5500	5418
736A	12/4/1970	AX 502 Slab	AX	5712	5606	5677		5524	5588	5665
737	12/4/1970	AX - 502	AX	5783	5748	5659		5689	5736	5730
743	3/4/1971	Cols Elev. 103C AX 310A, AX 321A	AX	6278	6314	6720		5895	6084	6437
744	3/11/1971	AX 402 "B" SLAB	AX	5818	5765	5783		6284	6101	5789
745	3/18/1971	Parapet Walls AX 405, 406-1044'-0"	AX	5482	4669	5588		5677	5311	5246
747	3/26/1971	AX Pads RM 69 AC-33, VA-17, VA-18	AX	5465	5500	5748		5241	5518	5571
748	4/2/1971	AX 180 A 181A, 181B Walls	AX	5252	5412	5323		5500	5471	5329
749	4/5/1971	AX123C Wall, AX310C, 321C Cols.	AX	5606	5412	5270		5447	5447	5429
750	4/9/1971	AX 186 SLAB	AX	5040	4793	4722		5241	5034	4852
751	4/16/1971	AX 181-B Wall & Col. AX321D	AX	5129	5500	5500		4881	5117	5376
752	4/19/1971	AX 180C Wall	AX	4704	4757	4704		5235	4987	4722
766	4/26/1971	AX225b, 226b, 410a	AX	5677	6154	6013		5046	5512	5948
767	4/26/1971	AX225b, 226b, 410a	AX	6278	6561	6933		6148	6284	6591
768	4/27/1971	AX187a Slab AX188 stairs	AX	6048	6119	6137		6514	6367	6101
769	4/29/1971	AX 187b	AX	6384	5907	6243		6213	6143	6178
770	5/6/1971	AX 85 Pad	AX	7145	6738	7092		6432	6709	6992
775	5/17/1971	AX-411A, 123d, 122C walls	AX	6172	6137	6172		6667	6467	6160

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776	5/17/1971	AX-411A, 123d, 122C walls	AX	6526	6402	6402		6278	6367	6443
780	5/24/1971	AX 502 AX 86 Wall	AX	6455	6119	6225	Y (7895)	6420	6325	6266
781	5/26/1971	AX301b, 304C, 183b	AX	6013	6084	6314		6119	6107	6137
782	5/27/1971	AX410b	AX	5535	5465	5270		5978	5771	5423
783	6/3/1971	AX314, 322, AX313a Walls	AX	6190	6137	6261		5642	5866	6196
784	6/4/1971	Curb AX 400 B.C.D	AX	6031	6190	5942		6143	6161	6054
785	8/5/1971	AX104 C&D	AX	5465	5836	5907		5866	5748	5736
785A	8/5/1971	AX-104 C & D	AX	5907	6172	5765		5883	5995	5948
786	8/5/1971	Columns 313 B	AX	5818	5412	6172		5918	5665	5801
787	8/9/1971	AX 225 C	AX	5553	5960	5836		5712	5895	5783
788	8/12/1971	AX323 Wall	AX	6314	6367	6561		6037	6172	6414
789	8/13/1971	AX500AX503 A	AX	5500	5022	5146		6143	5694	5223
790	8/13/1971	AX500AX503 A	AX	5712	5695	5182		5293	5518	5530
790A	8/13/1971	AX-500A & 503A	AX	5838	5889	5871		5572	5636	5866
791	8/13/1971	AX500&503A	AX	6084	6172	5801		5948	6042	6019
792	8/17/1971	AX-226C	AX	6296	6473	6261		6090	6190	6343
800	8/20/1971	AX500B&503B	AX	5925	5942	5748		6220	6043	5872
801	8/24/1971	AX 411B	AX	5783	5836	5624		5824	5789	5748
801A	8/24/1971	AX-411 B	AX	5960	5995	-		5807	5860	5978
802	8/25/1971	AX-410C&225d	AX	5995	5907	5801		5995	5951	5901
803	8/26/1971	1057 PARAPET WALL	AX	5305	5447	5341		5671	5518	5364
810	8/31/1971	AX502 Relief Panel	AX	6101	6243	6278		5630	5895	6207
811	9/2/1971	AX123 E	AX	5748	5695	5359		6090	5907	5601
811A	9/2/1971	AX 123 E	AX	5712	5801	-		5589	5624	5757
813	9/9/1971	AX 501 & 503 (Part)	AX	6119	6048	6278		5960	6084	6148
814	9/9/1971	AX 501 & 503 (Part)	AX	6296	6190	6101		6207	6255	6196
815	9/10/1971	Pressure Panels Elev. 1036 (Ax Bldg.)	AX	5217	5465	5571		5836	5594	5418
816	9/15/1971	AX 2260 (Wall)	AX	6278	6225	6225		5771	6025	6243
818	9/16/1971	AX 411C Wall	AX	5925	6508	6367		6125	6219	6267
820	9/22/1971	1057' Parapets - AX 505, 514, 515, 516 & 507	AX	5518	5482	5500		6131	5789	5500
821	9/23/1971	AX 116	AX	6066	6314	6261		5683	5960	6214
825	9/29/1971	AX - 122D Wall	AX	6066	6101	5925		6214	6143	6031
826	9/30/1971	AX 123 F Wall	AX	5818	5642	6013		5948	5795	5824
830	10/7/1971	AX 412B	AX	5305	5164	5359		5653	5494	5276
832	10/12/1971	AX 206 and Pads	AX	6296	6544	6314		5606	6066	6385
834	10/14/1971	AX 600A	AX	6508	6526	6650		6455	6449	6561
835	10/14/1971	AX 600A	AX	6685	6756	6508		6620	6697	6650
836	10/15/1971	VA-151 A, B, C and D RM. 82 Ax. Bldg. El. 1036	AX	5624	5978	5730		6296	6037	5777
837	10/15/1971	AX 112C	AX	6048	6207	6261		5919	5995	6172
839	10/22/1971	AX 413b	AX	7481	7446	7375		6650	7063	7434
840	10/26/1971	1057 Roof B.O.S Pipe Sleve E. Aux. Bldg.	AX	6172	6402	6473		6998	6650	6349
844	10/29/1971	AX 122C	AX	6207	6384	6172		6361	6355	6254
845	11/2/1971	AX-600B	AX	6437	6473	6314		6331	6361	6408
846	11/2/1971	AX-600B	AX	6720	6384	6738		6502	6473	6614
847	11/4/1971	AX-160B and AX-204	AX	6455	6314	6243		6526	6502	6337

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
849	11/5/1971	1044 Roof B.O.S. Ax. Bldg.	AX	5801	5889	6137		6119	5978	5942
851	11/10/1971	AX-605 Parapet Wall	AX	6137	6402	6331		6054	6225	6290
852	11/11/1971	AX-600C	AX	5217	5323	5535		5983	5624	5358
853	11/11/1971	AX-600C	AX	5359	6243	5942		5406	5712	5848
854	11/11/1971	AX-114b and c	AX	6137	5818	6225	Y (7873)	6107	5966	6060
855	11/17/1971	AX114 a & d wall	AX	5712	6685	6597	Y (7873)	5918	6207	6331
856	11/19/1971	AX 89 Slab	AX	5571	5695	5712		6284	5954	5659
857	11/24/1971	AX 90 Stairs	AX	6207	6243	6048		5871	6054	6166
858	12/2/1971	AX 7169 B/O in AX 316 Wall	AX	5164	5649	5288		5818	5620	5367
860	12/13/1971	AX 139 Wall	AX	5642	5571	5129		5526	5500	5447
861	12/14/1971	AX 114d	AX	5606	5642	5217		5435	5459	5488
862	12/23/1971	AX 114e Slab	AX	4651	4899	4863		5170	4922	4804
863	12/23/1971	AX 7080 B/O	AX	5394	5022	5058		5052	5093	5158
866	1/13/1972	AX-192 AX-1836b 304a, 191a	AX	6013	5960	5801		5364	5677	5925
869	1/19/1972	AX 7008 B/O's 1, 2, 3 AX7009 B/O's 1, 2, 3	AX	5748	5748	5730		5836	5766	5742
872	1/26/1972	AX304A	AX	6119	6455	6172		5866	6101	6249
873	2/1/1972	AX191C	AX	5588	5942	5659		6072	5901	5730
875	2/4/1972	AX193	AX	5978	6420	5836		5860	6019	6078
876	2/9/1972	AX225C, VA-69, AX411b, AX234b	AX	5518	5164	5235		5925	5506	5306
878	2/11/1972	AX325a, 326a, 327a (Walls)	AX	4916	5093	5058		5105	5081	5022
879	3/1/1972	AX191 b and d	AX	6314	6349	6331		5488	5907	6331
880	3/1/1972	AX325b, 326b, 327b and c	AX	6190	6331	6225		6290	6284	6249
881	3/2/1972	AX7024-1 B/Os	AX	5252	5288	5199		5936	5588	5246
882	3/9/1972	AX B/Os 7019-3 Rm's 4-15	AX	4686	5076	5429		5058	4987	5064
883	3/15/1972	AX B/Os 7019-11	AX	5925	6031	5905		5477	5795	5954
884	3/20/1972	AX 191-E, 304 B and 324-A	AX	6614	6154	6402		6183	6224	6390
885	3/22/1972	AX B/Os 7003-1	AX	5730	5624	5659		6095	5919	5671
886	3/29/1972	AX B/Os 7056-1, 2, 3, 4, 5	AX	6048	5394	5695		5777	5700	5712
887	3/30/1972	AX 324b, 504	AX	6367	6048	6526		5819	6037	6314
888	4/5/1972	AX 505, 514, 516 Parapets	AX	5712	5730	5925		6095	5989	5789
890	4/10/1972	AX B/OS 7028 1, 7, 8 410 & AX 38 a, b, c	AX	5836	5659	5925		5830	5807	5807
891	4/12/1972	AX B/OS 7028-3, 5, 6, 7, 15, 18, 19, 20, 22	AX	5500	5518	5588		5695	5648	5535
892	4/18/1972	AX B/OS 7153-5 7153-3, 5 7014-1, 2, 3, 4 7015-1, 2, 3, 5	AX	5500	5659	5780		5535	5582	5646
893	4/19/1972	B/OS 7463-1 to 12 RP15A Stair & Curb AX B/OS 7059-5, 7, 8	AX	5288	5359	5659		5576	5476	5435
894	4/26/1972	AX B/OS 7059-2, 3, 6 7066-10 7030-2, 3 7061-2	AX	5925	5995	6066		5648	5860	5995
895	4/27/1972	AX114 Slab	AX	7003	6544	6632		6355	6538	6726
897	5/3/1972	AX B/OS 7030-1, 6, 7, 14 7029-5, 7 7039-7 AX114 B Stairs	AX	5765	5810	5836		6314	6069	5804

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
898	5/4/1972	AX B/O 7060-1	AX	5359	5022	5042		5668	5406	5141
899	5/10/1972	AX B/OS 7028-1, 11, 12 7029-1, 2, 3, 4, 5, 7, 8, 9	AX	5288	5022	5341		5117	5117	5217
900	5/11/1972	AX B/OS 7023-7 7025-2, 3, 5, 6 7017-1	AX	4510	4686	4669		4958	4846	4622
901	5/16/1972	AX B/OS 7021-1 7018-8 7019-26 7025-3 7038-9	AX	4899	5146	5058		4751	4905	5034
902	5/18/1972	AX B/OS 7146-1 7174-1 7147-2 to 7	AX	4174	4757	4651		4793	4663	4527

The rolling average minimum and 10% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 5 Consecutive Tests and 20% Passing Limit – Case 1

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
43	2/17/1969	Wall W-4 Part #1 Auxiliary Building	AX	7039	6862	7039	Y (7641)			
44	2/18/1969	Wall W-5 Part #2 Auxiliary Building	AX	5818	6048	5588	Y (7642)		6561	6271
45	2/19/1969	Wall W-3 Part #3 Auxiliary Building	AX	6544	6968	7163		6207	6193	6462
48	2/22/1969	Wall W-5 Part #5 Auxiliary Building	AX	5907	5907	5818	Y (7642)	6434	6498	6353
51	2/28/1969	Auxiliary Building Wall W-1	AX	6827	6579	6296		6324	6208	6285
52	2/28/1969	Auxiliary Building Wall W-1	AX	7074	7127	7286		6519	6781	6872
72	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	6597	6650	6862	Y (7641)	6876	6947	6904
73	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W-2 P-2	AX	6544	6544	6685	Y (7641)	6788	6639	6657
74	3/8/1969	971-Auxiliary Bldg. W-8A, W4 P-4, W2 P-2	AX	6986	6508	6791	Y (7641)	6724	6653	6703
121	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6650	6667	6950		6724	6720	6713
122	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7021	7003	7074		6816	6858	6943
123	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6667	6720		6975	6918	6858
124	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6261	6667	6367		6710	6628	6536
125	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6137	6667		6568	6452	6533
126	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7286	7251	6986		6657	6834	6865
127	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6544	6650	6420		6947	6943	6770
148	5/23/1969	Auxiliary Building AX-13-wall	AX	6809	6650	6650	Y (7653)	6682	6615	6636
149	5/23/1969	Auxiliary Building AX-13-wall	AX	6579	6561	6720	Y (7653)	6622	6650	6632
179	6/6/1969	Aux. M-7	AX	5801	5588	5606		6462	6250	6055
180	6/6/1969	Aux. M-7	AX	7499	7622	7304		6243	6423	6724
181	6/6/1969	Aux. M-7	AX	7127	7110	6968		7032	7332	7226
182	6/6/1969	Aux. M-7	AX	7092	6402	7056		7120	6940	6926
183	6/6/1969	Aux. M-7	AX	7339	6473	6809		6971	6872	6816
184	6/6/1969	Aux M-7	AX	6066	6367	6278		6749	6611	6399
185	6/6/1969	Aux M-7	AX	6544	6720	6650		6413	6395	6512
186	6/6/1969	Aux M-7	AX	6880	6880	6720		6614	6735	6770
187	6/6/1969	Aux M-7	AX	7110	7180	7003		6848	6954	6979
188	6/6/1969	Aux M-7	AX	7110	6915	7216		7025	7064	7085
189	6/9/1969	Aux 17 & 18	AX	7003	7428	7074		7049	7134	7127
206	6/13/1969	Aux Building M-6	AX	7463	7145	7835		7237	7223	7389

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
207	6/13/1969	Aux Building M-6	AX	7251	7163	7145		7354	7371	7308
208	6/13/1969	Aux Building M-6	AX	7251	7251	7145		7329	7212	7191
209	6/13/1969	Aux Building M-6	AX	7905	6933	7463		7339	7297	7339
210	6/13/1969	Aux Building M-6	AX	7782	7491	7835		7446	7515	7501
211	6/13/1969	Aux Building M-6	AX	6667	7446	7322		7448	7444	7352
212	6/13/1969	Aux Building M-6	AX	7640	7092	7082		7382	7233	7316
213	6/13/1969	Aux Building M-6	AX	7499	7640	7799		7327	7391	7422
256	6/24/1969	AX 57	AX	6773	6614	6137	Y (7655)	7359	7265	6993
258	6/25/1969	M8 Aux Mat	AX	6296	6154	6154		6724	6395	6271
259	6/25/1969	M8 Aux Mat	AX	6119	6225	6084		6172	6190	6147
260	6/25/1969	M8 Aux Mat	AX	6437	6915	6597		6204	6356	6452
261	6/25/1969	M8 Aux Mat	AX	6827	6667	6720		6572	6689	6745
262	6/25/1969	M8 Aux Mat	AX	6420	6243	6402		6646	6575	6490
263	6/25/1969	M8 Aux Mat	AX	6048	6084	6632		6367	6239	6282
264	6/25/1969	M8 Aux Mat	AX	5500	5801	5659		6133	6013	5935
265	6/25/1969	M8 Aux Mat	AX	6331	6225	6597		5985	5903	6123
267	6/26/1969	AX 39	AX	7056	7180	7145	Y (7657)	6374	6678	6841
284	7/2/1970	AX51 Wall	AX	6066	5889	6225		6809	6667	6501
286	7/9/1970	AX-65&66 Walls	AX	5854	5606	5305	Y (7656)	6236	5928	5776
287	7/9/1970	AX73 Wall	AX	6101	6225	6225	Y (7659)	5818	5818	5892
288	7/11/1970	AX56	AX	6455	6437	6420		6062	6289	6352
292	7/18/1970	AX40&41	AX	5854	5783	5889		6278	6190	6077
303	7/22/1969	AX-53	AX	6101	6296	6013		6009	5985	6016
306	7/23/1969	AX60 Wall	AX	5995	6897	6314		6059	6260	6303
308	7/24/1969	AX70	AX	6190	6349	6084	Y (7659)	6282	6349	6367
322	8/13/1969	AX - 44	AX	5535	5624	5712		6094	5956	5861
332	8/15/1969	AX 67 Wall	AX	5571	5447	5606	Y (7662)	5705	5578	5592
335	8/20/1969	AX 77A	AX	6101	6172	6031	Y (7676)	5687	5779	5871
336	8/21/1969	AX 54	AX	5979	5995	6048		5978	6056	6045
337	8/21/1969	AX 33	AX	5818	6101	5836	Y (7665)	5974	5988	5960
342	8/22/1969	AX 61A Wall	AX	5801	5871	5765		5921	5885	5875
343	8/26/1969	AX 47 Wall	AX	5801	5889	5871		5815	5825	5839
344	8/26/1969	AX68	AX	5960	5978	6013	Y (7662)	5857	5900	5942
345	8/28/1969	AX37 & 37a	AX	6119	5889	5925		5988	5992	5985
346	9/2/1969	AX45	AX	5871	6172	5801		5963	5995	5932
347	9/3/1969	AX76	AX	5748	6172	6190	Y (7676)	5903	5953	6017
348	9/5/1969	AX71	AX	6561	6384	6207		6094	6211	6303
349	9/9/1969	AX36 & 37b	AX	6349	6384	6420		6338	6377	6349
367	9/15/1969	AX62, 63, 64	AX	5412	5323	5518		6154	5978	5811
373	9/19/1969	AX3	AX	6278	5889	5801		5790	5684	5762
374	9/19/1969	AX78 Slab	AX	5871	5889	5889		5871	5946	5868
375	9/19/1969	AX24	AX	6119	5854	6172		5914	5924	5985
376	9/22/1969	AX58	AX	6207	6367	6084		6048	6144	6137
379	9/24/1969	AX-16	AX	6137	6013	6207		6193	6162	6162
396	9/30/1969	AX - 15	AX	5907	6031	5978		6070	6059	6027

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
397	10/1/1969	AX-31	AX	6154	6172	6367		6055	6048	6140
398	10/2/1969	AX-7	AX	6031	6154	5677	Y (7674)	6140	6176	6080
400	10/3/1969	AX27 Wall	AX	5960	5518	5482		6038	5868	5758
404	10/7/1969	AX74A Wall	AX	6579	6738	6278	Y (7684)	5843	6055	6119
406	10/9/1969	AX10 Wall	AX	5482	5854	5482	Y (7654)	6112	6186	5967
409	10/10/1969	AX - 8	AX	5907	6066	5942	Y (7687)	5801	5758	5850
415	10/20/1969	AX-36-"B" Wall	AX	5252	5058	5040	Y (7691)	5730	5645	5472
416	10/21/1969	AX9B	AX	6331	5588	5960		5525	5454	5595
417	10/21/1969	AX22	AX	5978	6137	4934		5779	5999	5719
420	10/27/1969	AX - 25	AX	6013	6101	6084		5804	5833	5854
422	10/29/1969	AX 105 Slab	AX	6296	6261	6137		5886	6151	6176
424	11/3/1969	AX - 9A Wal	AX	5642	5482	5925		6084	5964	5889
428	11/7/1969	AX 107 Slab	AX	5748	5942	5871		5787	5748	5794
429	11/10/1969	AX 138, 143, 144, 146	AX	5871	6154	6101		5871	5917	5988
430	11/10/1969	AX 138, 143, 144, 146	AX	4775	4969	5235		5754	5574	5447
431	11/10/1969	AX 138, 143, 144, 146	AX	6367	6650	6720		5489	5599	5988
432	11/11/1969	AX - 21 Wall	AX	6968	7145	7145		6388	6770	6926
440	11/15/1969	AX -100 Slab	AX	6013	6225	6013		6798	6699	6508
441	11/15/1969	AX -100 Slab	AX	6597	6473	6437		6399	6264	6349
446	11/18/1969	AX - 19 Wall	AX	6526	6720	6632		6409	6551	6558
449	11/20/1969	AX - 20 Wall	AX	6031	6207	6048		6469	6423	6328
455	11/21/1969	AX - 5 Wall	AX	7254	6968	7127		6434	6502	6721
456	11/21/1969	AX-175 & 176 Wall	AX	6084	6473	6544		6696	6781	6639
458	11/24/1969	AX-104 B	AX	7003	6986	6632		6646	6618	6728
460	11/25/1969	AX-106 Slab	AX	6473	5978	6544		6728	6614	6523
461	11/25/1969	AX-106 Slab	AX	6154	6420	6190		6356	6314	6257
462	11/25/1969	AX-106 Slab	AX	6402	6561	6384		6342	6345	6391
464	11/29/1969	AX-101 Slab	AX	6154	6473	6154		6338	6395	6345
465	11/29/1969	AX-101 Slab	AX	6579	6508	6614		6349	6374	6466
467	12/2/1969	AX 177 A Wall	AX	6720	6561	6738		6515	6596	6628
468	12/5/1969	AX-246 Wall	AX	6296	6508	6597		6586	6565	6540
469	12/5/1969	AX-246 Wall	AX	6013	6084	6013		6430	6300	6243
475	12/12/1969	AX - 1	AX	5942	6013	5482		6130	6013	5907
476	12/12/1969	AX - 1	AX	6172	6349	6172		5924	5992	6038
477	12/12/1969	AX - 1	AX	6225	6367	6473		6080	6257	6317
478	12/12/1969	AX - 1	AX	5836	5871	5500		6215	6154	6009
479	12/12/1969	AX - 1	AX	6473	5854	5854		6031	5907	5910
480	12/15/1969	AX - 174A	AX	6119	6384	6314		5960	6137	6105
481	12/16/1969	AX - 166 - 167 Wall	AX	6614	6756	6650		6257	6437	6544
484	12/19/1969	AX-1756 & 1768 Wall	AX	5801	5677	5341		6427	6300	6045
485	12/22/1969	AX - 161 Walls	AX	5871	5730	6031		5868	5684	5730
490	1/7/1970	AX-102 & 103	AX	6437	6367	6544		5882	6087	6222
491	1/7/1970	AX-102 & 103	AX	6084	6084	6013		6293	6303	6218
492	1/7/1970	AX-102 & 103	AX	5553	5518	5730		6056	5850	5780
493	1/7/1970	AX-102 & 103	AX	6137	6367	6084		5790	5861	5967

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
494	1/7/1970	AX-102 & 103	AX	5871	5765	6013		6038	6045	6020
495	1/8/1970	AX-102 & 103	AX	5871	5907	5889		5921	5885	5889
496	1/8/1970	AX-102 & 103	AX	5659	5553	5624		5868	5776	5726
498	1/13/1970	AX-154-165	AX	6261	6013	6526		5797	5822	5995
499	1/14/1970	AX 109	AX	5818	5588	5730		6048	6041	5935
500	1/15/1970	AX 163	AX	6526	6685	6614		6038	6069	6229
501	1/16/1970	AX 159	AX	6084	6119	5942		6328	6406	6289
504	1/26/1970	AX 108 Slab	AX	5659	5695	5801		6084	5900	5843
507	1/28/1970	AX-153 Wall	AX	5518	5394	5642		5723	5613	5610
508	1/30/1970	AX-142 Wall	AX	6066	5677	5730		5684	5659	5702
509	2/6/1970	AX-137 Wall	AX	5925	5907	5642		5808	5861	5776
529	4/8/1970	AX 141 Wall	AX	6119	5907	6314		5865	5900	5978
530	4/9/1970	AX 122 A Wall	AX	5588	5364	5801	Y (7728)	5914	5858	5795
532	4/14/1970	AX 140 Wall	AX	6225	6190	6101		5858	5834	5936
533	4/15/1970	AX-2	AX	6349	6278	6420		6133	6229	6268
534	4/15/1970	AX-2	AX	6437	6490	6437		6317	6395	6412
535	4/15/1970	AX-2	AX	6243	6402	6314		6405	6402	6377
537	4/22/1970	AX 149	AX	6579	6172	6773		6395	6342	6448
538	4/23/1970	AX 138	AX	6402	6650	6703		6448	6515	6540
540	4/28/1970	AX - 29d wall	AX	6013	6154	6225		6508	6384	6349
541	4/29/1970	AX 74 A	AX	5995	6066	5925	Y (7684)	6218	6091	6073
543	5/1/1970	AX 136 A	AX	6933	7003	6968		6229	6384	6579
544	5/4/1970	AX - 110	AX	6614	6791	6402		6689	6862	6756
545	5/4/1970	AX - 110	AX	6243	6367	6190		6604	6483	6399
546	5/4/1970	AX - 110	AX	6261	6561	6508		6293	6324	6377
547	5/4/1970	AX - 110	AX	6437	6296	6544		6391	6413	6469
548	5/5/1970	AX-170 & 172	AX	6261	6490	6473		6409	6406	6413
550	5/6/1970	AX-200	AX	6278	6190	6031		6409	6338	6292
551	5/6/1970	AX-200	AX	6579	6119	6437		6310	6239	6271
554	5/8/1970	AX 121A Slab	AX	5659	5978	5836		6165	6154	6006
555	5/12/1970	AX 147	AX	6048	5801	5783		5992	5864	5889
561	5/26/1970	AX - 127	AX	5942	5836	5871		5882	5882	5847
580	6/4/1970	AX 125 & 132	AX	6172	6154	6101		5921	5995	6027
581	6/4/1970	AX 125 & 132	AX	6225	6137	5854		6105	6158	6094
586	6/9/1970	AX 112	AX	5642	6278	5960	Y (7718)	5992	6027	5974
587	6/9/1970	AX 112	AX	6031	6066	5925	Y (7718)	5953	5995	6052
588	6/9/1970	AX 112	AX	6172	5836	5871	Y (7718)	6031	6006	5974
589	6/10/1970	AX - 123a & AX130-b	AX	6119	6261	6066		5985	6052	6031
594	6/16/1970	AX - 111	AX	5854	5960	5730		6034	6052	5974
595	6/16/1970	AX - 111	AX	6031	6119	5942		5928	5939	5956
596	6/18/1970	AX - 130	AX	6119	6314	6190		5988	6105	6137
600	6/22/1970	AX - 124 & 126	AX	6084	6331	6154		6130	6208	6215
601	6/23/1970	AX 170 & 172	AX	6119	6137	6119		6176	6165	6172
602	6/24/1970	AX 212 & 215	AX	6827	6437	6526		6271	6328	6409
608	6/26/1970	AX 133	AX	6048	5978	6225		6391	6363	6243

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
610	6/30/1970	AX 211	AX	5978	6119	6225		6151	6070	6105
614	7/2/1970	AX - 151b & 157b	AX	6278	5765	5960		6165	6073	6069
618	7/7/1970	AX 1516 + 1576	AX	6207	5907	5925		6087	6023	5953
619	7/10/1970	AX-134 WALL	AX	5871	5748	6119		5974	5932	5914
620	7/10/1970	AX-134 WALL	AX	6101	6048	6207		5953	5977	6045
621	7/10/1970	AX-134 WALL	AX	6154	6013	5854		6126	6105	6055
622	7/10/1970	AX-134 WALL	AX	6190	6137	6278		6084	6070	6094
623	7/10/1970	AX-134 WALL	AX	6437	5960	6225		6179	6200	6207
627	7/13/1970	AX-202 A	AX	6437	6738	6384		6267	6359	6349
628	7/13/1970	AX-202 A	AX	5889	5642	5836		6335	6218	6098
629	7/13/1970	AX-202 A	AX	6296	6119	5995		6009	5956	5978
630	7/13/1970	AX-202 A	AX	6738	6526	6614		6197	6335	6398
631	7/14/1970	AX210a	AX	6190	6190	5995		6413	6452	6303
637	7/16/1970	AX 171 + 179	AX	5871	5642	5836		6172	5978	5907
641	7/17/1970	AX-150	AX	5748	5907	5925		5818	5801	5812
643	7/22/1970	AX 201	AX	6013	6190	6172		5886	5957	6041
644	7/22/1970	AX 201	AX	6402	6402	6437		6140	6236	6321
645	7/22/1970	AX 148	AX	6278	6278	6084		6338	6359	6296
647	7/24/1970	AX - 184 A	AX	5712	5164	5465		6158	5903	5741
648	7/27/1970	AX-113	AX	5942	6013	5571		5673	5659	5631
649	7/27/1970	AX-113	AX	5871	6048	5960		5772	5889	5893
654	7/30/1970	AX-214	AX	5783	5801	5394		5847	5893	5797
655	7/31/1970	AX-218, 220, 223	AX	5695	5764	5447		5727	5687	5620
658	8/3/1970	AX-204 A+205A	AX	5801	5642	6013		5620	5670	5733
659	8/6/1970	AX-216 +217	AX	6066	5925	6013		5794	5889	5932
660	8/6/1970	AX 168a+169	AX	5818	6296	6207		5967	6024	6052
664	8/7/1970	AX 203, 205 b	AX	6261	6314	6119		6119	6179	6239
665	8/7/1970	AX 203, 205b	AX	6172	6261	6137		6215	6225	6201
670	8/11/1970	AX-162	AX	5995	6243	6048		6137	6162	6137
671	8/13/1970	AX-182 a	AX	5942	5765	5907		6073	5999	5981
674	8/20/1970	AX 168 B	AX	5606	5606	5588		5854	5765	5694
678	8/27/1970	AX-221	AX	5535	5606	5341		5648	5588	5535
679	8/28/1970	AX 300a, 301a + 131a	AX	5748	5748	6031		5564	5596	5695
680	8/28/1970	AX 300a, 301 a +181b1	AX	5500	5553	5411		5674	5716	5649
683	9/10/1970	AX 122b	AX	6048	5978	6402		5709	5698	5878
687	9/15/1970	AX 178 COLS	AX	6844	6579	6473		6137	6370	6455
689	9/21/1970	AX-225A + 226A	AX	5765	6261	6544		6413	6384	6324
690	9/21/1970	AX-225A + 226A	AX	6190	5942	6084		6247	6140	6204
692	9/23/1970	AX 204B	AX	6331	6314	6597		6218	6172	6254
693	9/25/1970	AX-302	AX	6119	6314	5942		6289	6335	6257
694	9/25/1970	AX-302	AX	6278	6119	6261		6250	6154	6183
695	9/25/1970	AX-124B	AX	6597	6579	6579		6239	6367	6427
696	9/29/1970	Ax-231 & 235	AX	6296	6367	6278		6462	6484	6420
697	9/30/1970	AX 317 & 233	AX	5571	5871	6066		6218	6077	6031
698	10/1/1970	Ax 311 & 312	AX	5818	5659	5712		5921	5797	5825

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
700	10/7/1970	Ax 234a	AX	5765	5889	5801		5804	5769	5765
701	10/7/1970	Ax 234a	AX	5730	5659	5801		5779	5769	5776
702	10/7/1970	Ax 234a	AX	6084	5801	5907		5815	5815	5850
703	10/7/1970	Ax 234a	AX	5978	6207	6190		5914	5995	6017
704	10/13/1970	AX 315	AX	6437	6791	6597		6144	6321	6444
705	10/14/1970	AX 123b	AX	6367	6190	5836		6476	6476	6356
706	10/20/1970	Ax 303 & AX 316	AX	6367	6190	6437		6271	6190	6204
707	10/21/1970	AX 179 & 182 b	AX	6314	6367	5995		6229	6335	6261
708	10/22/1970	AX 401 a & 402 b	AX	5942	6048	6190		6211	6133	6108
709	10/22/1970	AX 401 a & 402 b	AX	5871	5696	5871		6009	5949	5935
713	10/29/1970	Ax 318&319	AX	6720	6773	6756		6070	6186	6363
714	10/29/1970	Ax 409	AX	6420	6455	6261		6508	6625	6533
715	10/30/1970	Ax-400A	AX	6190	6225	6473		6416	6310	6321
716	10/30/1970	Ax-400A	AX	6455	6579	6331		6321	6384	6413
717	10/30/1970	Ax-400A	AX	6048	5730	6154		6377	6229	6168
718	10/30/1970	Ax-400A	AX	5995	5925	6048		6052	5970	5970
722	11/6/1970	AX 227, 228, 229	AX	6280	6225	6120		6080	6095	6120
723	11/9/1970	AZ 312 & 313B	AX	5854	6013	5925		6105	6098	6027
724	11/12/1970	AX 234 B	AX	6296	5960	6296		6042	6010	6098
726	11/17/1970	AX 77 b	AX	5978	5818	5765	Y (7732)	6091	6070	5963
727	11/17/1970	AX 303 B	AX	6296	6261	6207		6031	6024	6069
728	11/17/1970	AX 303 B	AX	6119	6137	6119		6130	6204	6169
731	12/1/1970	AX - 414	AX	5553	5553	5429		6027	5896	5758
733	12/4/1970	AX - 502	AX	5889	5836	5854		5709	5652	5712
734	12/4/1970	AX - 502	AX	5376	5500	5695		5677	5691	5652
734A	12/4/1970	AX 502 Slab	AX	5588	5765	5765		5603	5585	5663
735	12/4/1970	AX - 502	AX	5571	5535	5695		5677	5645	5666
736	12/4/1970	AX - 502	AX	5394	5412	5447		5592	5521	5497
736A	12/4/1970	AX 502 Slab	AX	5712	5606	5677		5532	5514	5571
737	12/4/1970	AX - 502	AX	5783	5748	5659		5645	5705	5695
743	3/4/1971	Cols Elev. 103C AX 310A, AX 321A	AX	6278	6314	6720		5829	5956	6144
744	3/11/1971	AX 402 "B" SLAB	AX	5818	5765	5783		6158	6179	6080
745	3/18/1971	Parapet Walls AX 405, 406- 1044'-0"	AX	5482	4669	5588		5914	5503	5457
747	3/26/1971	AX Pads RM 69 AC-33, VA-17, VA-18	AX	5465	5500	5748		5397	5341	5394
748	4/2/1971	AX 180 A 181A, 181B Walls	AX	5252	5412	5323		5511	5475	5447
749	4/5/1971	AX123C Wall, AX310C, 321C Cols.	AX	5606	5412	5270		5468	5401	5405
750	4/9/1971	AX 186 SLAB	AX	5040	4793	4722		5330	5224	5047
751	4/16/1971	AX 181-B Wall & Col. AX321D	AX	5129	5500	5500		4991	5037	5129
752	4/19/1971	AX 180C Wall	AX	4704	4757	4704		5111	5118	5033
766	4/26/1971	AX225b, 226b, 410a	AX	5677	6154	6013		5068	5199	5461
767	4/26/1971	AX225b, 226b, 410a	AX	6278	6561	6933		5765	6137	6388
768	4/27/1971	AX187a Slab AX188 stairs	AX	6048	6119	6137		6367	6388	6360
769	4/29/1971	AX 187b	AX	6384	5907	6243		6324	6119	6158
770	5/6/1971	AX 8S Pad	AX	7145	6738	7092		6363	6483	6625
775	5/17/1971	AX-411A, 123d, 122C walls	AX	6172	6137	6172		6678	6657	6462

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776	5/17/1971	AX-411A, 123d, 122C walls	AX	6526	6402	6402		6420	6282	6328
780	5/24/1971	AX 502 AX 86 Wall	AX	6455	6119	6225	Y (7895)	6391	6381	6321
781	5/26/1971	AX301b, 304C, 183b	AX	6013	6084	6314		6243	6179	6151
782	5/27/1971	AX410b	AX	5535	5465	5270		6034	5882	5734
783	6/3/1971	AX314, 322, AX313a Walls	AX	6190	6137	6261		5755	5719	5865
784	6/4/1971	Curb AX 400 B.C.D	AX	6031	6190	5942		5978	6162	6112
785	8/5/1971	AX104 C&D	AX	5465	5836	5907		5978	5893	5868
785A	8/5/1971	AX-104 C & D	AX	5907	6172	5765		5811	5857	5917
786	8/5/1971	Columns 313 B	AX	5818	5412	6172		5914	5815	5868
787	8/9/1971	AX 225 C	AX	5553	5960	5836		5744	5783	5787
788	8/12/1971	AX323 Wall	AX	6314	6367	6561		5967	6006	6208
789	8/13/1971	AX500AX503 A	AX	5500	5022	5146		6116	5953	5719
790	8/13/1971	AX500AX503 A	AX	5712	5695	5182		5588	5415	5351
790A	8/13/1971	AX-500A & 503A	AX	5838	5889	5871		5515	5663	5695
791	8/13/1971	AX500&503A	AX	6084	6172	5801		5773	5971	5963
792	8/17/1971	AX-226C	AX	6296	6473	6261		6045	6165	6201
800	8/20/1971	AX500B&503B	AX	5925	5942	5748		6151	6179	6070
801	8/24/1971	AX 411B	AX	5783	5836	5624		5932	5847	5787
801A	8/24/1971	AX-411 B	AX	5960	5995	-		5790	5840	5854
802	8/25/1971	AX-410C&225d	AX	5995	5907	5801		5894	5964	5925
803	8/26/1971	1057 PARAPET WALL	AX	5305	5447	5341		5752	5691	5560
810	8/31/1971	AX502 Relief Panel	AX	6101	6243	6278		5599	5687	5882
811	9/2/1971	AX123 E	AX	5748	5695	5359		5942	6013	5865
811A	9/2/1971	AX 123 E	AX	5712	5801	-		5758	5663	5642
813	9/9/1971	AX 501 & 503 (Part)	AX	6119	6048	6278		5748	5920	6062
814	9/9/1971	AX 501 & 503 (Part)	AX	6296	6190	6101		6185	6186	6183
815	9/10/1971	Pressure Panels Elev. 1036 (Ax Bldg.)	AX	5217	5465	5571		6016	5854	5709
816	9/15/1971	AX 2260 (Wall)	AX	6278	6225	6225		5726	5751	5953
818	9/16/1971	AX 411C Wall	AX	5925	6508	6367		6045	6232	6250
820	9/22/1971	1057' Parapets - AX 505, 514, 515, 516 & 507	AX	5518	5482	5500		6109	5960	5875
821	9/23/1971	AX 116	AX	6066	6314	6261		5787	5776	5925
825	9/29/1971	AX - 122D Wall	AX	6066	6101	5925		6041	6162	6133
826	9/30/1971	AX 123 F Wall	AX	5818	5642	6013		6034	5910	5900
830	10/7/1971	AX 412B	AX	5305	5164	5359		5741	5588	5497
832	10/12/1971	AX 206 and Pads	AX	6296	6544	6314		5627	5734	5935
834	10/14/1971	AX 600A	AX	6508	6526	6650		6204	6438	6508
835	10/14/1971	AX 600A	AX	6685	6756	6508		6537	6625	6625
836	10/15/1971	VA-151 A, B, C and D RM. 82 Ax. Bldg. El. 1036	AX	5624	5978	5730		6445	6310	6119
837	10/15/1971	AX 112C	AX	6048	6207	6261		5978	5917	6045
839	10/22/1971	AX 413b	AX	7481	7446	7375		6345	6689	6954
840	10/26/1971	1057 Roof B.O.S Pipe Sleve E. Aux. Bldg.	AX	6172	6402	6473		6947	6975	6774
844	10/29/1971	AX 122C	AX	6207	6384	6172		6526	6328	6328
845	11/2/1971	AX-600B	AX	6437	6473	6314		6335	6335	6356
846	11/2/1971	AX-600B	AX	6720	6384	6738		6423	6466	6526
847	11/4/1971	AX-160B and AX-204	AX	6455	6314	6243		6522	6522	6427

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
849	11/5/1971	1044 Roof B.O.S. Ax. Bldg.	AX	5801	5889	6137		6310	6140	6077
851	11/10/1971	AX-605 Parapet Wall	AX	6137	6402	6331		6041	6073	6179
852	11/11/1971	AX-600C	AX	5217	5323	5535		6045	5882	5762
853	11/11/1971	AX-600C	AX	5359	6243	5942		5553	5535	5680
854	11/11/1971	AX-114b and c	AX	6137	5818	6225	Y (7873)	5843	5900	6073
855	11/17/1971	AX114 a & d wall	AX	5712	6685	6597	Y (7873)	5967	6115	6207
856	11/19/1971	AX 89 Slab	AX	5571	5695	5712		6158	6052	6052
857	11/24/1971	AX 90 Stairs	AX	6207	6243	6048		5956	5886	5981
858	12/2/1971	AX 7169 B/O in AX 316 Wall	AX	5164	5649	5288		5875	5862	5678
860	12/13/1971	AX 139 Wall	AX	5642	5571	5129		5558	5463	5456
861	12/14/1971	AX 114d	AX	5606	5642	5217		5447	5518	5433
862	12/23/1971	AX 114e Slab	AX	4651	4899	4863		5249	5203	5054
863	12/23/1971	AX 7080 B/O	AX	5394	5022	5058		5005	4966	5047
866	1/13/1972	AX-192 AX-1836b 304a, 191a	AX	6013	5960	5801		5270	5489	5571
869	1/19/1972	AX 7008 B/O's 1, 2, 3 AX7009 B/O's 1, 2, 3	AX	5748	5748	5730		5716	5854	5797
872	1/26/1972	AX304A	AX	6119	6455	6172		5829	5960	6045
873	2/1/1972	AX191C	AX	5588	5942	5659		6013	6055	5963
875	2/4/1972	AX193	AX	5978	6420	5836		5868	5917	5967
876	2/9/1972	AX225C, VA-69, AX411b, AX234b	AX	5518	5164	5235		5882	5783	5635
878	2/11/1972	AX325a, 326a, 327a (Walls)	AX	4916	5093	5058		5334	5185	5093
879	3/1/1972	AX191 b and d	AX	6314	6349	6331		5323	5546	5829
880	3/1/1972	AX325b, 326b, 327b and c	AX	6190	6331	6225		6048	6303	6285
881	3/2/1972	AX7024-1 B/Os	AX	5252	5288	5199		6066	5857	5659
882	3/9/1972	AX B/Os 7019-3 Rm's 4-15	AX	4686	5076	5429		5330	5100	5136
883	3/15/1972	AX B/Os 7019-11	AX	5925	6031	5905		5263	5429	5673
884	3/20/1972	AX 191-E, 304 B and 324-A	AX	6614	6154	6402		5981	6126	6221
885	3/22/1972	AX B/Os 7003-1	AX	5730	5624	5659		6161	6105	5914
886	3/29/1972	AX B/Os 7056-1, 2, 3, 4, 5	AX	6048	5394	5695		5893	5691	5684
887	3/30/1972	AX 324b, 504	AX	6367	6048	6526		5833	5910	6006
888	4/5/1972	AX 505, 514, 516 Parapets	AX	5712	5730	5925		6070	6077	5988
890	4/10/1972	AX B/OS 7028 1, 7, 8 410 & AX 38 a, b, c	AX	5836	5659	5925		5946	5772	5815
891	4/12/1972	AX B/OS 7028-3, 5, 6, 7, 15, 18, 19, 20, 22	AX	5500	5518	5588		5769	5688	5638
892	4/18/1972	AX B/OS 7153-5 7153-3, 5 7014-1, 2, 3, 4 7015-1, 2, 3, 5	AX	5500	5659	5780		5606	5553	5609
893	4/19/1972	B/OS 7463-1 to 12 RP15A Stair & Curb AX B/OS 7059-5, 7, 8	AX	5288	5359	5659		5563	5517	5549
894	4/26/1972	AX B/OS 7059-2, 3, 6 7066-10 7030-2, 3 7061-2	AX	5925	5995	6066		5602	5645	5801
895	4/27/1972	AX114 Slab	AX	7003	6544	6632		6130	6307	6448
897	5/3/1972	AX B/OS 7030-1, 6, 7, 14 7029-5, 7 7039-7 AX114 B Stairs	AX	5765	5810	5836		6402	6351	6117

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898	5/4/1972	AX B/O 7060-1	AX	5359	5022	5042		5880	5558	5414
899	5/10/1972	AX B/OS 7028-1, 11, 12 7029-1, 2, 3, 4, 5, 7, 8, 9	AX	5288	5022	5341		5309	5147	5143
900	5/11/1972	AX B/OS 7023-7 7025-2, 3, 5, 6 7017-1	AX	4510	4686	4669		5041	4969	4846
901	5/16/1972	AX B/OS 7021-1 7018-8 7019-26 7025-3 7038-9	AX	4899	5146	5058		4821	4782	4892
902	5/18/1972	AX B/OS 7146-1 7174-1 7147-2 to 7	AX	4174	4757	4651		4789	4807	4757

The rolling average minimum and 20% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 3 Consecutive Tests and 10% Passing Limit – Case 2

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
45	2/19/1969	Wall W-3 Part #3 Auxiliary Building	AX	6544	6968	7163				6892
51	2/28/1969	Auxiliary Building Wall W-1	AX	6827	6579	6296		6986	6856	6567
52	2/28/1969	Auxiliary Building Wall W-1	AX	7074	7127	7286		6650	6832	7162
121	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6650	6667	6950		7021	6868	6756
122	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7021	7003	7074		6879	6991	7033
123	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6667	6720		6968	6856	6738
124	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6261	6667	6367		6549	6549	6432
125	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6137	6667		6620	6444	6544
126	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7286	7251	6986		6697	7068	7174
127	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6544	6650	6420		6927	6727	6538
179	6/6/1969	Aux. M-7	AX	5801	5588	5606		6290	5936	5665
180	6/6/1969	Aux. M-7	AX	7499	7622	7304		6231	6909	7475
181	6/6/1969	Aux. M-7	AX	7127	7110	6968		7351	7180	7068
182	6/6/1969	Aux. M-7	AX	7092	6402	7056		7057	6821	6850
183	6/6/1969	Aux. M-7	AX	7339	6473	6809		6932	6956	6874
184	6/6/1969	Aux M-7	AX	6066	6367	6278		6449	6414	6237
185	6/6/1969	Aux M-7	AX	6544	6720	6650		6396	6514	6638
186	6/6/1969	Aux M-7	AX	6880	6880	6720		6750	6803	6827
187	6/6/1969	Aux M-7	AX	7110	7180	7003		6903	7003	7098
188	6/6/1969	Aux M-7	AX	7110	6915	7216		7098	7009	7080
189	6/9/1969	Aux 17 & 18	AX	7003	7428	7074		7045	7216	7168
206	6/13/1969	Aux Building M-6	AX	7463	7145	7835		7322	7227	7481
207	6/13/1969	Aux Building M-6	AX	7251	7163	7145		7410	7416	7186
208	6/13/1969	Aux Building M-6	AX	7251	7251	7145		7186	7216	7216
209	6/13/1969	Aux Building M-6	AX	7905	6933	7463		7434	7328	7434
210	6/13/1969	Aux Building M-6	AX	7782	7491	7835		7393	7579	7703
211	6/13/1969	Aux Building M-6	AX	6667	7446	7322		7331	7316	7145
212	6/13/1969	Aux Building M-6	AX	7640	7092	7082		7469	7351	7271
213	6/13/1969	Aux Building M-6	AX	7499	7640	7799		7224	7407	7646
258	6/25/1969	M8 Aux Mat	AX	6296	6154	6154		7245	6750	6201
259	6/25/1969	M8 Aux Mat	AX	6119	6225	6084		6142	6166	6143
260	6/25/1969	M8 Aux Mat	AX	6437	6915	6597		6249	6479	6650
261	6/25/1969	M8 Aux Mat	AX	6827	6667	6720		6780	6697	6738
262	6/25/1969	M8 Aux Mat	AX	6420	6243	6402		6602	6461	6355
263	6/25/1969	M8 Aux Mat	AX	6048	6084	6632		6231	6178	6255
264	6/25/1969	M8 Aux Mat	AX	5500	5801	5659		6072	5978	5653
265	6/25/1969	M8 Aux Mat	AX	6331	6225	6597		5930	6072	6384
284	7/2/1970	AX51 Wall	AX	6066	5889	6225		6296	6184	6060
288	7/11/1970	AX56	AX	6455	6437	6420		6190	6372	6437
292	7/18/1970	AX40&41	AX	5854	5783	5889		6237	6019	5842

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
303	7/22/1969	AX-53	AX	6101	6296	6013		5924	6095	6137
306	7/23/1969	AX60 Wall	AX	5995	6897	6314		6101	6302	6402
322	8/13/1969	AX - 44	AX	5535	5624	5712		6249	5824	5624
336	8/21/1969	AX 54	AX	5979	5995	6048		5772	5895	6007
342	8/22/1969	AX 61A Wall	AX	5801	5871	5765		5948	5907	5812
343	8/26/1969	AX 47 Wall	AX	5801	5889	5871		5812	5818	5854
345	8/28/1969	AX37 & 37a	AX	6119	5889	5925		5960	5960	5978
346	9/2/1969	AX45	AX	5871	6172	5801		5895	5989	5948
348	9/5/1969	AX71	AX	6561	6384	6207		6178	6249	6384
349	9/9/1969	AX36 & 37b	AX	6349	6384	6420		6313	6313	6384
367	9/15/1969	AX62, 63, 64	AX	5412	5323	5518		6072	5718	5418
373	9/19/1969	AX3	AX	6278	5889	5801		5706	5895	5989
374	9/19/1969	AX78 Slab	AX	5871	5889	5889		5854	5854	5883
375	9/19/1969	AX24	AX	6119	5854	6172		5966	5954	6048
376	9/22/1969	AX58	AX	6207	6367	6084		6078	6249	6219
379	9/24/1969	AX-16	AX	6137	6013	6207		6196	6078	6119
396	9/30/1969	AX - 15	AX	5907	6031	5978		6042	6048	5972
397	10/1/1969	AX-31	AX	6154	6172	6367		6054	6101	6231
400	10/3/1969	AX27 Wall	AX	5960	5518	5482		6166	5948	5653
416	10/21/1969	AX9B	AX	6331	5588	5960		5777	5800	5960
417	10/21/1969	AX22	AX	5978	6137	4934		5842	6025	5683
420	10/27/1969	AX - 25	AX	6013	6101	6084		5695	5683	6066
422	10/29/1969	AX 105 Slab	AX	6296	6261	6137		6160	6214	6231
424	11/3/1969	AX - 9A Wal	AX	5642	5482	5925		6013	5754	5683
428	11/7/1969	AX 107 Slab	AX	5748	5942	5871		5718	5872	5854
429	11/10/1969	AX 138, 143, 144, 146	AX	5871	6154	6101		5895	5965	6042
430	11/10/1969	AX 138, 143, 144, 146	AX	4775	4969	5235		5677	5282	4993
431	11/10/1969	AX 138, 143, 144, 146	AX	6367	6650	6720		5524	6084	6579
432	11/11/1969	AX - 21 Wall	AX	6968	7145	7145		6779	6944	7086
440	11/15/1969	AX -100 Slab	AX	6013	6225	6013		6768	6461	6084
441	11/15/1969	AX -100 Slab	AX	6597	6473	6437		6278	6361	6502
446	11/18/1969	AX - 19 Wall	AX	6526	6720	6632		6479	6561	6626
449	11/20/1969	AX - 20 Wall	AX	6031	6207	6048		6461	6290	6095
455	11/21/1969	AX - 5 Wall	AX	7254	6968	7127		6503	6757	7116
456	11/21/1969	AX-175 & 176 Wall	AX	6084	6473	6544		6726	6561	6367
458	11/24/1969	AX-104 B	AX	7003	6986	6632		6673	6844	6874
460	11/25/1969	AX-106 Slab	AX	6473	5978	6544		6697	6361	6332
461	11/25/1969	AX-106 Slab	AX	6154	6420	6190		6225	6373	6255
462	11/25/1969	AX-106 Slab	AX	6402	6561	6384		6337	6384	6449
464	11/29/1969	AX-101 Slab	AX	6154	6473	6154		6366	6337	6260
465	11/29/1969	AX-101 Slab	AX	6579	6508	6614		6402	6414	6567
467	12/2/1969	AX 177 A Wall	AX	6720	6561	6738		6614	6632	6673
468	12/5/1969	AX-246 Wall	AX	6296	6508	6597		6532	6514	6467
469	12/5/1969	AX-246 Wall	AX	6013	6084	6013		6373	6231	6037
475	12/12/1969	AX - 1	AX	5942	6013	5482		6013	5989	5812

Evaluation of FCS Concrete Compressive Strength Test Data

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
476	12/12/1969	AX - 1	AX	6172	6349	6172		5889	6001	6231
477	12/12/1969	AX - 1	AX	6225	6367	6473		6249	6255	6355
478	12/12/1969	AX - 1	AX	5836	5871	5500		6225	6060	5736
479	12/12/1969	AX - 1	AX	6473	5854	5854		5948	5942	6060
480	12/15/1969	AX - 174A	AX	6119	6384	6314		5942	6119	6272
481	12/16/1969	AX - 166 - 167 Wall	AX	6614	6756	6650		6437	6561	6673
484	12/19/1969	AX-1756 & 1768 Wall	AX	5801	5677	5341		6402	6043	5606
485	12/22/1969	AX - 161 Walls	AX	5871	5730	6031		5630	5647	5877
490	1/7/1970	AX-102 & 103	AX	6437	6367	6544		6066	6278	6449
491	1/7/1970	AX-102 & 103	AX	6084	6084	6013		6332	6237	6060
492	1/7/1970	AX-102 & 103	AX	5553	5518	5730		5883	5695	5600
493	1/7/1970	AX-102 & 103	AX	6137	6367	6084		5795	6078	6196
494	1/7/1970	AX-102 & 103	AX	5871	5765	6013		6107	5907	5883
495	1/8/1970	AX-102 & 103	AX	5871	5907	5889		5883	5930	5889
496	1/8/1970	AX-102 & 103	AX	5659	5553	5624		5818	5700	5612
498	1/13/1970	AX-154-165	AX	6261	6013	6526		5813	5966	6267
499	1/14/1970	AX 109	AX	5818	5588	5730		6119	5977	5712
500	1/15/1970	AX 163	AX	6526	6685	6614		5948	6314	6608
501	1/16/1970	AX 159	AX	6084	6119	5942		6461	6272	6048
504	1/26/1970	AX 108 Slab	AX	5659	5695	5801		5907	5765	5718
507	1/28/1970	AX-153 Wall	AX	5518	5394	5642		5671	5571	5518
508	1/30/1970	AX-142 Wall	AX	6066	5677	5730		5701	5795	5824
509	2/6/1970	AX-137 Wall	AX	5925	5907	5642		5777	5854	5825
529	4/8/1970	AX 141 Wall	AX	6119	5907	6314		5889	5889	6113
532	4/14/1970	AX 140 Wall	AX	6225	6190	6101		6149	6243	6172
533	4/15/1970	AX-2	AX	6349	6278	6420		6213	6243	6349
534	4/15/1970	AX-2	AX	6437	6490	6437		6378	6449	6455
535	4/15/1970	AX-2	AX	6243	6402	6314		6390	6361	6320
537	4/22/1970	AX 149	AX	6579	6172	6773		6432	6355	6508
538	4/23/1970	AX 138	AX	6402	6650	6703		6449	6608	6585
540	4/28/1970	AX - 29d wall	AX	6013	6154	6225		6455	6290	6131
543	5/1/1970	AX 136 A	AX	6933	7003	6968		6437	6720	6968
544	5/4/1970	AX - 110	AX	6614	6791	6402		6862	6791	6602
545	5/4/1970	AX - 110	AX	6243	6367	6190		6479	6337	6267
546	5/4/1970	AX - 110	AX	6261	6561	6508		6273	6337	6443
547	5/4/1970	AX - 110	AX	6437	6296	6544		6502	6414	6426
548	5/5/1970	AX-170 & 172	AX	6261	6490	6473		6367	6432	6408
550	5/6/1970	AX-200	AX	6278	6190	6031		6414	6314	6166
551	5/6/1970	AX-200	AX	6579	6119	6437		6267	6243	6378
554	5/8/1970	AX 121A Slab	AX	5659	5978	5836		6072	6025	5824
555	5/12/1970	AX 147	AX	6048	5801	5783		5954	5895	5877
561	5/26/1970	AX - 127	AX	5942	5836	5871		5842	5854	5883
580	6/4/1970	AX 125 & 132	AX	6172	6154	6101		5960	6066	6142
581	6/4/1970	AX 125 & 132	AX	6225	6137	5854		6160	6154	6072
589	6/10/1970	AX - 123a & AX130-b	AX	6119	6261	6066		6037	6078	6149

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
594	6/16/1970	AX - 111	AX	5854	5960	5730		6060	5960	5848
595	6/16/1970	AX - 111	AX	6031	6119	5942		5907	5960	6031
596	6/18/1970	AX - 130	AX	6119	6314	6190		6060	6125	6208
600	6/22/1970	AX - 124 & 126	AX	6084	6331	6154		6196	6202	6190
601	6/23/1970	AX 170 & 172	AX	6119	6137	6119		6201	6137	6125
602	6/24/1970	AX 212 & 215	AX	6827	6437	6526		6361	6461	6597
608	6/26/1970	AX 133	AX	6048	5978	6225		6337	6184	6084
610	6/30/1970	AX 211	AX	5978	6119	6225		6060	6107	6107
614	7/2/1970	AX - 151b & 157b	AX	6278	5765	5960		6207	6089	6001
618	7/7/1970	AX 1516 + 1576	AX	6207	5907	5925		5977	6025	6013
619	7/10/1970	AX-134 WALL	AX	5871	5748	6119		5901	5848	5913
620	7/10/1970	AX-134 WALL	AX	6101	6048	6207		5989	6089	6119
621	7/10/1970	AX-134 WALL	AX	6154	6013	5854		6136	6125	6007
622	7/10/1970	AX-134 WALL	AX	6190	6137	6278		6019	6060	6202
623	7/10/1970	AX-134 WALL	AX	6437	5960	6225		6284	6225	6207
627	7/13/1970	AX-202 A	AX	6437	6738	6384		6207	6467	6520
628	7/13/1970	AX-202 A	AX	5889	5642	5836		6337	5972	5789
629	7/13/1970	AX-202 A	AX	6296	6119	5995		5925	6084	6137
630	7/13/1970	AX-202 A	AX	6738	6526	6614		6284	6420	6626
631	7/14/1970	AX210a	AX	6190	6190	5995		6443	6331	6125
637	7/16/1970	AX 171 + 179	AX	5871	5642	5836		6019	5836	5783
641	7/17/1970	AX-150	AX	5748	5907	5925		5742	5830	5860
643	7/22/1970	AX 201	AX	6013	6190	6172		5948	6043	6125
644	7/22/1970	AX 201	AX	6402	6402	6437		6255	6325	6414
645	7/22/1970	AX 148	AX	6278	6278	6084		6372	6331	6213
647	7/24/1970	AX - 184 A	AX	5712	5164	5465		6025	5653	5447
648	7/27/1970	AX-113	AX	5942	6013	5571		5524	5807	5842
649	7/27/1970	AX-113	AX	5871	6048	5960		5818	5830	5960
654	7/30/1970	AX-214	AX	5783	5801	5394		5930	5848	5659
655	7/31/1970	AX-218, 220, 223	AX	5695	5764	5447		5630	5618	5635
658	8/3/1970	AX-204 A+205A	AX	5801	5642	6013		5671	5630	5819
659	8/6/1970	AX-216 +217	AX	6066	5925	6013		5907	6001	6001
660	8/6/1970	AX 168a+169	AX	5818	6296	6207		5919	6042	6107
664	8/7/1970	AX 203, 205 b	AX	6261	6314	6119		6255	6261	6231
665	8/7/1970	AX 203, 205b	AX	6172	6261	6137		6202	6184	6190
670	8/11/1970	AX-162	AX	5995	6243	6048		6131	6125	6095
671	8/13/1970	AX-182 a	AX	5942	5765	5907		6078	5918	5871
674	8/20/1970	AX 168 B	AX	5606	5606	5588		5759	5706	5600
678	8/27/1970	AX-221	AX	5535	5606	5341		5576	5576	5494
679	8/28/1970	AX 300a, 301a + 131a	AX	5748	5748	6031		5565	5612	5842
680	8/28/1970	AX 300a, 301 a +181b1	AX	5500	5553	5411		5760	5695	5488
683	9/10/1970	AX 122b	AX	6048	5978	6402		5671	5812	6143
687	9/15/1970	AX 178 COLS	AX	6844	6579	6473		6408	6608	6632
689	9/21/1970	AX-225A + 226A	AX	5765	6261	6544		6272	6166	6190
690	9/21/1970	AX-225A + 226A	AX	6190	5942	6084		6332	6225	6072

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
692	9/23/1970	AX 204B	AX	6331	6314	6597		6119	6243	6414
693	9/25/1970	AX-302	AX	6119	6314	5942		6343	6343	6125
694	9/25/1970	AX-302	AX	6278	6119	6261		6178	6113	6219
695	9/25/1970	AX-124B	AX	6597	6579	6579		6326	6479	6585
696	9/29/1970	Ax-231 & 235	AX	6296	6367	6278		6485	6414	6314
697	9/30/1970	AX 317 & 233	AX	5571	5871	6066		6072	5907	5836
698	10/1/1970	Ax 311 & 312	AX	5818	5659	5712		5918	5848	5730
700	10/7/1970	Ax 234a	AX	5765	5889	5801		5712	5789	5818
701	10/7/1970	Ax 234a	AX	5730	5659	5801		5807	5730	5730
702	10/7/1970	Ax 234a	AX	6084	5801	5907		5848	5895	5931
703	10/7/1970	Ax 234a	AX	5978	6207	6190		5895	6031	6125
704	10/13/1970	AX 315	AX	6437	6791	6597		6278	6473	6608
705	10/14/1970	AX 123b	AX	6367	6190	5836		6585	6385	6131
706	10/20/1970	Ax 303 & AX 316	AX	6367	6190	6437		6131	6131	6331
707	10/21/1970	AX 179 & 182 b	AX	6314	6367	5995		6314	6373	6225
708	10/22/1970	AX 401 a & 402 b	AX	5942	6048	6190		6101	5995	6060
709	10/22/1970	AX 401 a & 402 b	AX	5871	5696	5871		6036	5919	5813
713	10/29/1970	Ax 318&319	AX	6720	6773	6756		6096	6455	6750
714	10/29/1970	Ax 409	AX	6420	6455	6261		6650	6544	6379
715	10/30/1970	Ax-400A	AX	6190	6225	6473		6302	6225	6296
716	10/30/1970	Ax-400A	AX	6455	6579	6331		6384	6502	6455
717	10/30/1970	Ax-400A	AX	6048	5730	6154		6319	6036	5977
718	10/30/1970	Ax-400A	AX	5995	5925	6048		5960	6025	5989
722	11/6/1970	AX 227, 228, 229	AX	6280	6225	6120		6084	6184	6208
723	11/9/1970	AZ 312 & 313B	AX	5854	6013	5925		6066	5996	5931
724	11/12/1970	AX 234 B	AX	6296	5960	6296		6078	6060	6184
727	11/17/1970	AX 303 B	AX	6296	6261	6207		6184	6284	6255
728	11/17/1970	AX 303 B	AX	6119	6137	6119		6196	6154	6125
731	12/1/1970	AX - 414	AX	5553	5553	5429		5936	5742	5512
733	12/4/1970	AX - 502	AX	5889	5836	5854		5624	5718	5860
734	12/4/1970	AX - 502	AX	5376	5500	5695		5689	5577	5524
734A	12/4/1970	AX 502 Slab	AX	5588	5765	5765		5594	5683	5706
735	12/4/1970	AX - 502	AX	5571	5535	5695		5700	5624	5600
736	12/4/1970	AX - 502	AX	5394	5412	5447		5541	5500	5418
736A	12/4/1970	AX 502 Slab	AX	5712	5606	5677		5524	5588	5665
737	12/4/1970	AX - 502	AX	5783	5748	5659		5689	5736	5730
743	3/4/1971	Cols Elev. 103C AX 310A, AX 321A	AX	6278	6314	6720		5895	6084	6437
744	3/11/1971	AX 402 "B" SLAB	AX	5818	5765	5783		6284	6101	5789
745	3/18/1971	Parapet Walls AX 405, 406- 1044'-0"	AX	5482	4669	5588		5677	5311	5246
747	3/26/1971	AX Pads RM 69 AC-33, VA-17, VA-18	AX	5465	5500	5748		5241	5518	5571
748	4/2/1971	AX 180 A 181A, 181B Walls	AX	5252	5412	5323		5500	5471	5329
749	4/5/1971	AX123C Wall, AX310C, 321C Cols.	AX	5606	5412	5270		5447	5447	5429
750	4/9/1971	AX 186 SLAB	AX	5040	4793	4722		5241	5034	4852
751	4/16/1971	AX 181-B Wall & Col. AX321D	AX	5129	5500	5500		4881	5117	5376
752	4/19/1971	AX 180C Wall	AX	4704	4757	4704		5235	4987	4722

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
766	4/26/1971	AX225b, 226b, 410a	AX	5677	6154	6013		5046	5512	5948
767	4/26/1971	AX225b, 226b, 410a	AX	6278	6561	6933		6148	6284	6591
768	4/27/1971	AX187a Slab AX188 stairs	AX	6048	6119	6137		6514	6367	6101
769	4/29/1971	AX 187b	AX	6384	5907	6243		6213	6143	6178
770	5/6/1971	AX 85 Pad	AX	7145	6738	7092		6432	6709	6992
775	5/17/1971	AX-411A, 123d, 122C walls	AX	6172	6137	6172		6667	6467	6160
776	5/17/1971	AX-411A, 123d, 122C walls	AX	6526	6402	6402		6278	6367	6443
781	5/26/1971	AX301b, 304C, 183b	AX	6013	6084	6314		6272	6166	6137
782	5/27/1971	AX410b	AX	5535	5465	5270		5978	5771	5423
783	6/3/1971	AX314, 322, AX313a Walls	AX	6190	6137	6261		5642	5866	6196
784	6/4/1971	Curb AX 400 B.C.D	AX	6031	6190	5942		6143	6161	6054
785	8/5/1971	AX104 C&D	AX	5465	5836	5907		5866	5748	5736
785A	8/5/1971	AX-104 C & D	AX	5907	6172	5765		5883	5995	5948
786	8/5/1971	Columns 313 B	AX	5818	5412	6172		5918	5665	5801
787	8/9/1971	AX 225 C	AX	5553	5960	5836		5712	5895	5783
788	8/12/1971	AX323 Wall	AX	6314	6367	6561		6037	6172	6414
789	8/13/1971	AX500AX503 A	AX	5500	5022	5146		6143	5694	5223
790	8/13/1971	AX500AX503 A	AX	5712	5695	5182		5293	5518	5530
790A	8/13/1971	AX-500A & 503A	AX	5838	5889	5871		5572	5636	5866
791	8/13/1971	AX500&503A	AX	6084	6172	5801		5948	6042	6019
792	8/17/1971	AX-226C	AX	6296	6473	6261		6090	6190	6343
800	8/20/1971	AX500B&503B	AX	5925	5942	5748		6220	6043	5872
801	8/24/1971	AX 411B	AX	5783	5836	5624		5824	5789	5748
801A	8/24/1971	AX-411 B	AX	5960	5995	-		5807	5860	5978
802	8/25/1971	AX-410C&225d	AX	5995	5907	5801		5995	5951	5901
803	8/26/1971	1057 PARAPET WALL	AX	5305	5447	5341		5671	5518	5364
810	8/31/1971	AX502 Relief Panel	AX	6101	6243	6278		5630	5895	6207
811	9/2/1971	AX123 E	AX	5748	5695	5359		6090	5907	5601
811A	9/2/1971	AX 123 E	AX	5712	5801	-		5589	5624	5757
813	9/9/1971	AX 501 & 503 (Part)	AX	6119	6048	6278		5960	6084	6148
814	9/9/1971	AX 501 & 503 (Part)	AX	6296	6190	6101		6207	6255	6196
815	9/10/1971	Pressure Panels Elev. 1036 (Ax Bldg.)	AX	5217	5465	5571		5836	5594	5418
816	9/15/1971	AX 2260 (Wall)	AX	6278	6225	6225		5771	6025	6243
818	9/16/1971	AX 411C Wall	AX	5925	6508	6367		6125	6219	6267
820	9/22/1971	1057' Parapets - AX 505, 514, 515, 516 & 507	AX	5518	5482	5500		6131	5789	5500
821	9/23/1971	AX 116	AX	6066	6314	6261		5683	5960	6214
825	9/29/1971	AX - 122D Wall	AX	6066	6101	5925		6214	6143	6031
826	9/30/1971	AX 123 F Wall	AX	5818	5642	6013		5948	5795	5824
830	10/7/1971	AX 412B	AX	5305	5164	5359		5653	5494	5276
832	10/12/1971	AX 206 and Pads	AX	6296	6544	6314		5606	6066	6385
834	10/14/1971	AX 600A	AX	6508	6526	6650		6455	6449	6561
835	10/14/1971	AX 600A	AX	6685	6756	6508		6620	6697	6650
836	10/15/1971	VA-151 A, B, C and D RM. 82 Ax. Bldg. El. 1036	AX	5624	5978	5730		6296	6037	5777
837	10/15/1971	AX 112C	AX	6048	6207	6261		5919	5995	6172
839	10/22/1971	AX 413b	AX	7481	7446	7375		6650	7063	7434

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
840	10/26/1971	1057 Roof B.O.S Pipe Sleve E. Aux. Bldg.	AX	6172	6402	6473		6998	6650	6349
844	10/29/1971	AX 122C	AX	6207	6384	6172		6361	6355	6254
845	11/2/1971	AX-600B	AX	6437	6473	6314		6331	6361	6408
846	11/2/1971	AX-600B	AX	6720	6384	6738		6502	6473	6614
847	11/4/1971	AX-160B and AX-204	AX	6455	6314	6243		6526	6502	6337
849	11/5/1971	1044 Roof B.O.S. Ax. Bldg.	AX	5801	5889	6137		6119	5978	5942
851	11/10/1971	AX-605 Parapet Wall	AX	6137	6402	6331		6054	6225	6290
852	11/11/1971	AX-600C	AX	5217	5323	5535		5983	5624	5358
853	11/11/1971	AX-600C	AX	5359	6243	5942		5406	5712	5848
856	11/19/1971	AX 89 Slab	AX	5571	5695	5712		5919	5736	5659
857	11/24/1971	AX 90 Stairs	AX	6207	6243	6048		5871	6054	6166
858	12/2/1971	AX 7169 B/O in AX 316 Wall	AX	5164	5649	5288		5818	5620	5367
860	12/13/1971	AX 139 Wall	AX	5642	5571	5129		5526	5500	5447
861	12/14/1971	AX 114d	AX	5606	5642	5217		5435	5459	5488
862	12/23/1971	AX 114e Slab	AX	4651	4899	4863		5170	4922	4804
863	12/23/1971	AX 7080 B/O	AX	5394	5022	5058		5052	5093	5158
866	1/13/1972	AX-192 AX-1836b 304a, 191a	AX	6013	5960	5801		5364	5677	5925
869	1/19/1972	AX 7008 B/O's 1, 2, 3 AX7009 B/O's 1, 2, 3	AX	5748	5748	5730		5836	5766	5742
872	1/26/1972	AX304A	AX	6119	6455	6172		5866	6101	6249
873	2/1/1972	AX191C	AX	5588	5942	5659		6072	5901	5730
875	2/4/1972	AX193	AX	5978	6420	5836		5860	6019	6078
876	2/9/1972	AX225C, VA-69, AX411b, AX234b	AX	5518	5164	5235		5925	5506	5306
878	2/11/1972	AX325a, 326a, 327a (Walls)	AX	4916	5093	5058		5105	5081	5022
879	3/1/1972	AX191 b and d	AX	6314	6349	6331		5488	5907	6331
880	3/1/1972	AX325b, 326b, 327b and c	AX	6190	6331	6225		6290	6284	6249
881	3/2/1972	AX7024-1 B/Os	AX	5252	5288	5199		5936	5588	5246
882	3/9/1972	AX B/Os 7019-3 Rm's 4-15	AX	4686	5076	5429		5058	4987	5064
883	3/15/1972	AX B/Os 7019-11	AX	5925	6031	5905		5477	5795	5954
884	3/20/1972	AX 191-E, 304 B and 324-A	AX	6614	6154	6402		6183	6224	6390
885	3/22/1972	AX B/Os 7003-1	AX	5730	5624	5659		6095	5919	5671
886	3/29/1972	AX B/Os 7056-1, 2, 3, 4, 5	AX	6048	5394	5695		5777	5700	5712
887	3/30/1972	AX 324b, 504	AX	6367	6048	6526		5819	6037	6314
888	4/5/1972	AX 505, 514, 516 Parapets	AX	5712	5730	5925		6095	5989	5789
890	4/10/1972	AX B/OS 7028 1, 7, 8 410 & AX 38 a, b, c	AX	5836	5659	5925		5830	5807	5807
891	4/12/1972	AX B/OS 7028-3, 5, 6, 7, 15, 18, 19, 20, 22	AX	5500	5518	5588		5695	5648	5535
892	4/18/1972	AX B/OS 7153-5 7153-3, 5 7014-1, 2, 3, 4 7015-1, 2, 3, 5	AX	5500	5659	5780		5535	5582	5646
893	4/19/1972	B/OS 7463-1 to 12 RP15A Stair & Curb AX B/OS 7059-5, 7, 8	AX	5288	5359	5659		5576	5476	5435
894	4/26/1972	AX B/OS 7059-2, 3, 6 7066-10 7030-2, 3 7061-2	AX	5925	5995	6066		5648	5860	5995

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
895	4/27/1972	AX114 Slab	AX	7003	6544	6632		6355	6538	6726
897	5/3/1972	AX B/OS 7030-1, 6, 7, 14 7029-5, 7 7039-7 AX114 B Stairs	AX	5765	5810	5836		6314	6069	5804
898	5/4/1972	AX B/O 7060-1	AX	5359	5022	5042		5668	5406	5141
899	5/10/1972	AX B/OS 7028-1, 11, 12 7029-1, 2, 3, 4, 5, 7, 8, 9	AX	5288	5022	5341		5117	5117	5217
900	5/11/1972	AX B/OS 7023-7 7025-2, 3, 5, 6 7017-1	AX	4510	4686	4669		4958	4846	4622
901	5/16/1972	AX B/OS 7021-1 7018-8 7019-26 7025-3 7038-9	AX	4899	5146	5058		4751	4905	5034
902	5/18/1972	AX B/OS 7146-1 7174-1 7147-2 to 7	AX	4174	4757	4651		4793	4663	4527

The rolling average minimum and 10% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 5 Consecutive Tests and 20% Passing Limit – Case 2

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
45	2/19/1969	Wall W-3 Part #3 Auxiliary Building	AX	6544	6968	7163				
51	2/28/1969	Auxiliary Building Wall W-1	AX	6827	6579	6296			6816	6767
52	2/28/1969	Auxiliary Building Wall W-1	AX	7074	7127	7286		6788	6781	6872
121	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6650	6667	6950		6887	6961	6936
122	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7021	7003	7074		6915	6858	6943
123	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6667	6720		6975	6918	6858
124	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6261	6667	6367		6710	6628	6536
125	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6827	6137	6667		6568	6452	6533
126	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	7286	7251	6986		6657	6834	6865
127	5/8/1969	Slab 55-1 Auxiliary Bldg.	AX	6544	6650	6420		6947	6943	6770
179	6/6/1969	Aux. M-7	AX	5801	5588	5606		6480	6201	6013
180	6/6/1969	Aux. M-7	AX	7499	7622	7304		6183	6423	6724
181	6/6/1969	Aux. M-7	AX	7127	7110	6968		7032	7332	7226
182	6/6/1969	Aux. M-7	AX	7092	6402	7056		7120	6940	6926
183	6/6/1969	Aux. M-7	AX	7339	6473	6809		6971	6872	6816
184	6/6/1969	Aux M-7	AX	6066	6367	6278		6749	6611	6399
185	6/6/1969	Aux M-7	AX	6544	6720	6650		6413	6395	6512
186	6/6/1969	Aux M-7	AX	6880	6880	6720		6614	6735	6770
187	6/6/1969	Aux M-7	AX	7110	7180	7003		6848	6954	6979
188	6/6/1969	Aux M-7	AX	7110	6915	7216		7025	7064	7085
189	6/9/1969	Aux 17 & 18	AX	7003	7428	7074		7049	7134	7127
206	6/13/1969	Aux Building M-6	AX	7463	7145	7835		7237	7223	7389
207	6/13/1969	Aux Building M-6	AX	7251	7163	7145		7354	7371	7308
208	6/13/1969	Aux Building M-6	AX	7251	7251	7145		7329	7212	7191
209	6/13/1969	Aux Building M-6	AX	7905	6933	7463		7339	7297	7339
210	6/13/1969	Aux Building M-6	AX	7782	7491	7835		7446	7515	7501
211	6/13/1969	Aux Building M-6	AX	6667	7446	7322		7448	7444	7352
212	6/13/1969	Aux Building M-6	AX	7640	7092	7082		7382	7233	7316
213	6/13/1969	Aux Building M-6	AX	7499	7640	7799		7327	7391	7422
258	6/25/1969	M8 Aux Mat	AX	6296	6154	6154		7263	7078	6809
259	6/25/1969	M8 Aux Mat	AX	6119	6225	6084		6504	6190	6147
260	6/25/1969	M8 Aux Mat	AX	6437	6915	6597		6204	6356	6452
261	6/25/1969	M8 Aux Mat	AX	6827	6667	6720		6572	6689	6745
262	6/25/1969	M8 Aux Mat	AX	6420	6243	6402		6646	6575	6490
263	6/25/1969	M8 Aux Mat	AX	6048	6084	6632		6367	6239	6282
264	6/25/1969	M8 Aux Mat	AX	5500	5801	5659		6133	6013	5935
265	6/25/1969	M8 Aux Mat	AX	6331	6225	6597		5985	5903	6123
284	7/2/1970	AX51 Wall	AX	6066	5889	6225		6176	6222	6200
288	7/11/1970	AX56	AX	6455	6437	6420		6246	6214	6285
292	7/18/1970	AX40&41	AX	5854	5783	5889		6278	6190	6077

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303	7/22/1969	AX-53	AX	6101	6296	6013		6009	5985	6016
306	7/23/1969	AX60 Wall	AX	5995	6897	6314		6059	6260	6303
322	8/13/1969	AX - 44	AX	5535	5624	5712		6151	6073	6016
336	8/21/1969	AX 54	AX	5979	5995	6048		5833	5769	5872
342	8/22/1969	AX 61A Wall	AX	5801	5871	5765		5907	5939	5896
343	8/26/1969	AX 47 Wall	AX	5801	5889	5871		5857	5825	5839
345	8/28/1969	AX37 & 37a	AX	6119	5889	5925		5889	5914	5939
346	9/2/1969	AX45	AX	5871	6172	5801		5935	5995	5932
348	9/5/1969	AX71	AX	6561	6384	6207		6066	6158	6225
349	9/9/1969	AX36 & 37b	AX	6349	6384	6420		6260	6377	6349
367	9/15/1969	AX62, 63, 64	AX	5412	5323	5518		6154	5978	5811
373	9/19/1969	AX3	AX	6278	5889	5801		5790	5684	5762
374	9/19/1969	AX78 Slab	AX	5871	5889	5889		5871	5946	5868
375	9/19/1969	AX24	AX	6119	5854	6172		5914	5924	5985
376	9/22/1969	AX58	AX	6207	6367	6084		6048	6144	6137
379	9/24/1969	AX-16	AX	6137	6013	6207		6193	6162	6162
396	9/30/1969	AX - 15	AX	5907	6031	5978		6070	6059	6027
397	10/1/1969	AX-31	AX	6154	6172	6367		6055	6048	6140
400	10/3/1969	AX27 Wall	AX	5960	5518	5482		6126	6034	5900
416	10/21/1969	AX9B	AX	6331	5588	5960		5932	5776	5776
417	10/21/1969	AX22	AX	5978	6137	4934		5868	5999	5719
420	10/27/1969	AX - 25	AX	6013	6101	6084		5804	5833	5854
422	10/29/1969	AX 105 Slab	AX	6296	6261	6137		5886	6151	6176
424	11/3/1969	AX - 9A Wal	AX	5642	5482	5925		6084	5964	5889
428	11/7/1969	AX 107 Slab	AX	5748	5942	5871		5787	5748	5794
429	11/10/1969	AX 138, 143, 144, 146	AX	5871	6154	6101		5871	5917	5988
430	11/10/1969	AX 138, 143, 144, 146	AX	4775	4969	5235		5754	5574	5447
431	11/10/1969	AX 138, 143, 144, 146	AX	6367	6650	6720		5489	5599	5988
432	11/11/1969	AX - 21 Wall	AX	6968	7145	7145		6388	6770	6926
440	11/15/1969	AX -100 Slab	AX	6013	6225	6013		6798	6699	6508
441	11/15/1969	AX -100 Slab	AX	6597	6473	6437		6399	6264	6349
446	11/18/1969	AX - 19 Wall	AX	6526	6720	6632		6409	6551	6558
449	11/20/1969	AX - 20 Wall	AX	6031	6207	6048		6469	6423	6328
455	11/21/1969	AX - 5 Wall	AX	7254	6968	7127		6434	6502	6721
456	11/21/1969	AX-175 & 176 Wall	AX	6084	6473	6544		6696	6781	6639
458	11/24/1969	AX-104 B	AX	7003	6986	6632		6646	6618	6728
460	11/25/1969	AX-106 Slab	AX	6473	5978	6544		6728	6614	6523
461	11/25/1969	AX-106 Slab	AX	6154	6420	6190		6356	6314	6257
462	11/25/1969	AX-106 Slab	AX	6402	6561	6384		6342	6345	6391
464	11/29/1969	AX-101 Slab	AX	6154	6473	6154		6338	6395	6345
465	11/29/1969	AX-101 Slab	AX	6579	6508	6614		6349	6374	6466
467	12/2/1969	AX 177 A Wall	AX	6720	6561	6738		6515	6596	6628
468	12/5/1969	AX-246 Wall	AX	6296	6508	6597		6586	6565	6540
469	12/5/1969	AX-246 Wall	AX	6013	6084	6013		6430	6300	6243
475	12/12/1969	AX - 1	AX	5942	6013	5482		6130	6013	5907

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxillary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
476	12/12/1969	AX - 1	AX	6172	6349	6172		5924	5992	6038
477	12/12/1969	AX - 1	AX	6225	6367	6473		6080	6257	6317
478	12/12/1969	AX - 1	AX	5836	5871	5500		6215	6154	6009
479	12/12/1969	AX - 1	AX	6473	5854	5854		6031	5907	5910
480	12/15/1969	AX - 174A	AX	6119	6384	6314		5960	6137	6105
481	12/16/1969	AX - 166 - 167 Wall	AX	6614	6756	6650		6257	6437	6544
484	12/19/1969	AX-1756 & 1768 Wall	AX	5801	5677	5341		6427	6300	6045
485	12/22/1969	AX - 161 Walls	AX	5871	5730	6031		5868	5684	5730
490	1/7/1970	AX-102 & 103	AX	6437	6367	6544		5882	6087	6222
491	1/7/1970	AX-102 & 103	AX	6084	6084	6013		6293	6303	6218
492	1/7/1970	AX-102 & 103	AX	5553	5518	5730		6056	5850	5780
493	1/7/1970	AX-102 & 103	AX	6137	6367	6084		5790	5861	5967
494	1/7/1970	AX-102 & 103	AX	5871	5765	6013		6038	6045	6020
495	1/8/1970	AX-102 & 103	AX	5871	5907	5889		5921	5885	5889
496	1/8/1970	AX-102 & 103	AX	5659	5553	5624		5868	5776	5726
498	1/13/1970	AX-154-165	AX	6261	6013	6526		5797	5822	5995
499	1/14/1970	AX 109	AX	5818	5588	5730		6048	6041	5935
500	1/15/1970	AX 163	AX	6526	6685	6614		6038	6069	6229
501	1/16/1970	AX 159	AX	6084	6119	5942		6328	6406	6289
504	1/26/1970	AX 108 Slab	AX	5659	5695	5801		6084	5900	5843
507	1/28/1970	AX-153 Wall	AX	5518	5394	5642		5723	5613	5610
508	1/30/1970	AX-142 Wall	AX	6066	5677	5730		5684	5659	5702
509	2/6/1970	AX-137 Wall	AX	5925	5907	5642		5808	5861	5776
529	4/8/1970	AX 141 Wall	AX	6119	5907	6314		5865	5900	5978
532	4/14/1970	AX 140 Wall	AX	6225	6190	6101		6041	6151	6147
533	4/15/1970	AX-2	AX	6349	6278	6420		6236	6229	6268
534	4/15/1970	AX-2	AX	6437	6490	6437		6317	6395	6412
535	4/15/1970	AX-2	AX	6243	6402	6314		6405	6402	6377
537	4/22/1970	AX 149	AX	6579	6172	6773		6395	6342	6448
538	4/23/1970	AX 138	AX	6402	6650	6703		6448	6515	6540
540	4/28/1970	AX - 29d wall	AX	6013	6154	6225		6508	6384	6349
543	5/1/1970	AX 136 A	AX	6933	7003	6958		6406	6466	6657
544	5/4/1970	AX - 110	AX	6614	6791	6402		6749	6862	6756
545	5/4/1970	AX - 110	AX	6243	6367	6190		6604	6483	6399
546	5/4/1970	AX - 110	AX	6261	6561	6508		6293	6324	6377
547	5/4/1970	AX - 110	AX	6437	6296	6544		6391	6413	6469
548	5/5/1970	AX-170 & 172	AX	6261	6490	6473		6409	6406	6413
550	5/6/1970	AX-200	AX	6278	6190	6031		6409	6338	6292
551	5/6/1970	AX-200	AX	6579	6119	6437		6310	6239	6271
554	5/8/1970	AX 121A Slab	AX	5659	5978	5836		6165	6154	6006
555	5/12/1970	AX 147	AX	6048	5801	5783		5992	5864	5889
561	5/26/1970	AX - 127	AX	5942	5836	5871		5882	5882	5847
580	6/4/1970	AX 125 & 132	AX	6172	6154	6101		5921	5995	6027
581	6/4/1970	AX 125 & 132	AX	6225	6137	5854		6105	6158	6094
589	6/10/1970	AX - 123a & AX130-b	AX	6119	6261	6066		6087	6119	6087

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594	6/16/1970	AX - 111	AX	5854	5960	5730		6031	6052	5974
595	6/16/1970	AX - 111	AX	6031	6119	5942		5928	5939	5956
596	6/18/1970	AX - 130	AX	6119	6314	6190		5988	6105	6137
600	6/22/1970	AX - 124 & 126	AX	6084	6331	6154		6130	6208	6215
601	6/23/1970	AX 170 & 172	AX	6119	6137	6119		6176	6165	6172
602	6/24/1970	AX 212 & 215	AX	6827	6437	6526		6271	6328	6409
608	6/26/1970	AX 133	AX	6048	5978	6225		6391	6363	6243
610	6/30/1970	AX 211	AX	5978	6119	6225		6151	6070	6105
614	7/2/1970	AX - 151b & 157b	AX	6278	5765	5960		6165	6073	6069
618	7/7/1970	AX 1516 + 1576	AX	6207	5907	5925		6087	6023	5953
619	7/10/1970	AX-134 WALL	AX	5871	5748	6119		5974	5932	5914
620	7/10/1970	AX-134 WALL	AX	6101	6048	6207		5953	5977	6045
621	7/10/1970	AX-134 WALL	AX	6154	6013	5854		6126	6105	6055
622	7/10/1970	AX-134 WALL	AX	6190	6137	6278		6084	6070	6094
623	7/10/1970	AX-134 WALL	AX	6437	5960	6225		6179	6200	6207
627	7/13/1970	AX-202 A	AX	6437	6738	6384		6267	6359	6349
628	7/13/1970	AX-202 A	AX	5889	5642	5836		6335	6218	6098
629	7/13/1970	AX-202 A	AX	6296	6119	5995		6009	5956	5978
630	7/13/1970	AX-202 A	AX	6738	6526	6614		6197	6335	6398
631	7/14/1970	AX210a	AX	6190	6190	5995		6413	6452	6303
637	7/16/1970	AX 171 + 179	AX	5871	5642	5836		6172	5978	5907
641	7/17/1970	AX-150	AX	5748	5907	5925		5818	5801	5812
643	7/22/1970	AX 201	AX	6013	6190	6172		5886	5957	6041
644	7/22/1970	AX 201	AX	6402	6402	6437		6140	6236	6321
645	7/22/1970	AX 148	AX	6278	6278	6084		6338	6359	6296
647	7/24/1970	AX - 184 A	AX	5712	5164	5465		6158	5903	5741
648	7/27/1970	AX-113	AX	5942	6013	5571		5673	5659	5631
649	7/27/1970	AX-113	AX	5871	6048	5960		5772	5889	5893
654	7/30/1970	AX-214	AX	5783	5801	5394		5847	5893	5797
655	7/31/1970	AX-218, 220, 223	AX	5695	5764	5447		5727	5687	5620
658	8/3/1970	AX-204 A+205A	AX	5801	5642	6013		5620	5670	5733
659	8/6/1970	AX-216 +217	AX	6066	5925	6013		5794	5889	5932
660	8/6/1970	AX 168a+169	AX	5818	6296	6207		5967	6024	6052
664	8/7/1970	AX 203, 205 b	AX	6261	6314	6119		6119	6179	6239
665	8/7/1970	AX 203, 205b	AX	6172	6261	6137		6215	6225	6201
670	8/11/1970	AX-162	AX	5995	6243	6048		6137	6162	6137
671	8/13/1970	AX-182 a	AX	5942	5765	5907		6073	5999	5981
674	8/20/1970	AX 168 B	AX	5606	5606	5588		5854	5765	5694
678	8/27/1970	AX-221	AX	5535	5606	5341		5648	5588	5535
679	8/28/1970	AX 300a, 301a + 131a	AX	5748	5748	6081		5564	5596	5695
680	8/28/1970	AX 300a, 301 a +181b1	AX	5500	5553	5411		5674	5716	5649
683	9/10/1970	AX 122b	AX	6048	5978	6402		5709	5698	5878
687	9/15/1970	AX 178 COLS	AX	6844	6579	6473		6137	6370	6455
689	9/21/1970	AX-225A + 226A	AX	5765	6261	6544		6413	6384	6324
690	9/21/1970	AX-225A + 226A	AX	6190	5942	6084		6247	6140	6204

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692	9/23/1970	AX 204B	AX	6331	6314	6597		6218	6172	6254
693	9/25/1970	AX-302	AX	6119	6314	5942		6289	6335	6257
694	9/25/1970	AX-302	AX	6278	6119	6261		6250	6154	6183
695	9/25/1970	AX-124B	AX	6597	6579	6579		6239	6367	6427
696	9/29/1970	Ax-231 & 235	AX	6296	6367	6278		6462	6484	6420
697	9/30/1970	AX 317 & 233	AX	5571	5871	6066		6218	6077	6031
698	10/1/1970	Ax 311 & 312	AX	5818	5659	5712		5921	5797	5825
700	10/7/1970	Ax 234a	AX	5765	5889	5801		5804	5769	5765
701	10/7/1970	Ax 234a	AX	5730	5659	5801		5779	5769	5776
702	10/7/1970	Ax 234a	AX	6084	5801	5907		5815	5815	5850
703	10/7/1970	Ax 234a	AX	5978	6207	6190		5914	5995	6017
704	10/13/1970	AX 315	AX	6437	6791	6597		6144	6321	6444
705	10/14/1970	AX 123b	AX	6367	6190	5836		6476	6476	6356
706	10/20/1970	Ax 303 & AX 316	AX	6367	6190	6437		6271	6190	6204
707	10/21/1970	AX 179 & 182 b	AX	6314	6367	5995		6229	6335	6261
708	10/22/1970	AX 401 a & 402 b	AX	5942	6048	6190		6211	6133	6108
709	10/22/1970	AX 401 a & 402 b	AX	5871	5696	5871		6009	5949	5935
713	10/29/1970	Ax 318&319	AX	6720	6773	6756		6070	6186	6363
714	10/29/1970	Ax 409	AX	6420	6455	6261		6508	6625	6533
715	10/30/1970	Ax-400A	AX	6190	6225	6473		6416	6310	6321
716	10/30/1970	Ax-400A	AX	6455	6579	6331		6321	6384	6413
717	10/30/1970	Ax-400A	AX	6048	5730	6154		6377	6229	6168
718	10/30/1970	Ax-400A	AX	5995	5925	6048		6052	5970	5970
722	11/6/1970	AX 227, 228, 229	AX	6280	6225	6120		6080	6095	6120
723	11/9/1970	AZ 312 & 313B	AX	5854	6013	5925		6105	6098	6027
724	11/12/1970	AX 234 B	AX	6296	5960	6296		6042	6010	6098
727	11/17/1970	AX 303 B	AX	6296	6261	6207		6155	6222	6204
728	11/17/1970	AX 303 B	AX	6119	6137	6119		6236	6204	6169
731	12/1/1970	AX - 414	AX	5553	5553	5429		6027	5896	5758
733	12/4/1970	AX - 502	AX	5889	5836	5854		5709	5652	5712
734	12/4/1970	AX - 502	AX	5376	5500	5695		5677	5691	5652
734A	12/4/1970	AX 502 Slab	AX	5588	5765	5765		5603	5585	5663
735	12/4/1970	AX - 502	AX	5571	5535	5695		5677	5645	5666
736	12/4/1970	AX - 502	AX	5394	5412	5447		5592	5521	5497
736A	12/4/1970	AX 502 Slab	AX	5712	5606	5677		5532	5514	5571
737	12/4/1970	AX - 502	AX	5783	5748	5659		5645	5705	5695
743	3/4/1971	Cols Elev. 103C AX 310A, AX 321A	AX	6278	6314	6720		5829	5956	6144
744	3/11/1971	AX 402 "B" SLAB	AX	5818	5765	5783		6158	6179	6080
745	3/18/1971	Parapet Walls AX 405, 406-1044'-0"	AX	5482	4669	5588		5914	5503	5457
747	3/26/1971	AX Pads RM 69 AC-33, VA-17, VA-18	AX	5465	5500	5748		5397	5341	5394
748	4/2/1971	AX 180 A 181A, 181B Walls	AX	5252	5412	5323		5511	5475	5447
749	4/5/1971	AX123C Wall, AX310C, 321C Cols.	AX	5606	5412	5270		5468	5401	5405
750	4/9/1971	AX 186 SLAB	AX	5040	4793	4722		5330	5224	5047
751	4/16/1971	AX 181-B Wall & Col. AX321D	AX	5129	5500	5500		4991	5037	5129
752	4/19/1971	AX 180C Wall	AX	4704	4757	4704		5111	5118	5033

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766	4/26/1971	AX225b, 226b, 410a	AX	5677	6154	6013		5068	5199	5461
767	4/26/1971	AX225b, 226b, 410a	AX	6278	6561	6933		5765	6137	6388
768	4/27/1971	AX187a Slab AX188 stairs	AX	6048	6119	6137		6367	6388	6360
769	4/29/1971	AX 187b	AX	6384	5907	6243		6324	6119	6158
770	5/6/1971	AX 85 Pad	AX	7145	6738	7092		6363	6483	6625
775	5/17/1971	AX-411A, 123d, 122C walls	AX	6172	6137	6172		6678	6657	6462
776	5/17/1971	AX-411A, 123d, 122C walls	AX	6526	6402	6402		6420	6282	6328
781	5/26/1971	AX301b, 304C, 183b	AX	6013	6084	6314		6303	6285	6243
782	5/27/1971	AX410b	AX	5535	5465	5270		6070	5882	5734
783	6/3/1971	AX314, 322, AX313a Walls	AX	6190	6137	6261		5755	5719	5865
784	6/4/1971	Curb AX 400 B.C.D	AX	6031	6190	5942		5978	6162	6112
785	8/5/1971	AX104 C&D	AX	5465	5836	5907		5978	5893	5868
785A	8/5/1971	AX-104 C & D	AX	5907	6172	5765		5811	5857	5917
786	8/5/1971	Columns 313 B	AX	5818	5412	6172		5914	5815	5868
787	8/9/1971	AX 225 C	AX	5553	5960	5836		5744	5783	5787
788	8/12/1971	AX323 Wall	AX	6314	6367	6561		5967	6006	6208
789	8/13/1971	AX500AX503 A	AX	5500	5022	5146		6116	5953	5719
790	8/13/1971	AX500AX503 A	AX	5712	5695	5182		5588	5415	5351
790A	8/13/1971	AX-500A & 503A	AX	5838	5889	5871		5515	5663	5695
791	8/13/1971	AX500&503A	AX	6084	6172	5801		5773	5971	5963
792	8/17/1971	AX-226C	AX	6296	6473	6261		6045	6165	6201
800	8/20/1971	AX500B&503B	AX	5925	5942	5748		6151	6179	6070
801	8/24/1971	AX 411B	AX	5783	5836	5624		5932	5847	5787
801A	8/24/1971	AX-411 B	AX	5960	5995	-		5790	5840	5854
802	8/25/1971	AX-410C&225d	AX	5995	5907	5801		5894	5964	5925
803	8/26/1971	1057 PARAPET WALL	AX	5305	5447	5341		5752	5691	5560
810	8/31/1971	AX502 Relief Panel	AX	6101	6243	6278		5599	5687	5882
811	9/2/1971	AX123 E	AX	5748	5695	5359		5942	6013	5865
811A	9/2/1971	AX 123 E	AX	5712	5801	-		5758	5663	5642
813	9/9/1971	AX 501 & 503 (Part)	AX	6119	6048	6278		5748	5920	6062
814	9/9/1971	AX 501 & 503 (Part)	AX	6296	6190	6101		6185	6186	6183
815	9/10/1971	Pressure Panels Elev. 1036 (Ax Bldg.)	AX	5217	5465	5571		6016	5854	5709
816	9/15/1971	AX 2260 (Wall)	AX	6278	6225	6225		5726	5751	5953
818	9/16/1971	AX 411C Wall	AX	5925	6508	6367		6045	6232	6250
820	9/22/1971	1057' Parapets - AX 505, 514, 515, 516 & 507	AX	5518	5482	5500		6109	5960	5875
821	9/23/1971	AX 116	AX	6066	6314	6261		5787	5776	5925
825	9/29/1971	AX - 122D Wall	AX	6066	6101	5925		6041	6162	6133
826	9/30/1971	AX 123 F Wall	AX	5818	5642	6013		6034	5910	5900
830	10/7/1971	AX 412B	AX	5305	5164	5359		5741	5588	5497
832	10/12/1971	AX 206 and Pads	AX	6296	6544	6314		5627	5734	5935
834	10/14/1971	AX 600A	AX	6508	6526	6650		6204	6438	6508
835	10/14/1971	AX 600A	AX	6685	6756	6508		6537	6625	6625
836	10/15/1971	VA-151 A, B, C and D RM. 82 Ax. Bldg. El. 1036	AX	5624	5978	5730		6445	6310	6119
837	10/15/1971	AX 112C	AX	6048	6207	6261		5978	5917	6045
839	10/22/1971	AX 413b	AX	7481	7446	7375		6345	6689	6954

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840	10/26/1971	1057 Roof B.O.S Pipe Sleve E. Aux. Bldg.	AX	6172	6402	6473		6947	6975	6774
844	10/29/1971	AX 122C	AX	6207	6384	6172		6526	6328	6328
845	11/2/1971	AX-600B	AX	6437	6473	6314		6335	6335	6356
846	11/2/1971	AX-600B	AX	6720	6384	6738		6423	6466	6526
847	11/4/1971	AX-160B and AX-204	AX	6455	6314	6243		6522	6522	6427
849	11/5/1971	1044 Roof B.O.S. Ax. Bldg.	AX	5801	5889	6137		6310	6140	6077
851	11/10/1971	AX-605 Parapet Wall	AX	6137	6402	6331		6041	6073	6179
852	11/11/1971	AX-600C	AX	5217	5323	5535		6045	5882	5762
853	11/11/1971	AX-600C	AX	5359	6243	5942		5553	5535	5680
856	11/19/1971	AX 89 Slab	AX	5571	5695	5712		5730	5762	5833
857	11/24/1971	AX 90 Stairs	AX	6207	6243	6048		5825	5886	5981
858	12/2/1971	AX 7169 B/O in AX 316 Wall	AX	5164	5649	5288		5875	5862	5678
860	12/13/1971	AX 139 Wall	AX	5642	5571	5129		5558	5463	5456
861	12/14/1971	AX 114d	AX	5606	5642	5217		5447	5518	5433
862	12/23/1971	AX 114e Slab	AX	4651	4899	4863		5249	5203	5054
863	12/23/1971	AX 7080 B/O	AX	5394	5022	5058		5005	4966	5047
866	1/13/1972	AX-192 AX-1836b 304a, 191a	AX	6013	5960	5801		5270	5489	5571
869	1/19/1972	AX 7008 B/O's 1, 2, 3 AX7009 B/O's 1, 2, 3	AX	5748	5748	5730		5716	5854	5797
872	1/26/1972	AX304A	AX	6119	6455	6172		5829	5960	6045
873	2/1/1972	AX191C	AX	5588	5942	5659		6013	6055	5963
875	2/4/1972	AX193	AX	5978	6420	5836		5868	5917	5967
876	2/9/1972	AX225C, VA-69, AX411b, AX234b	AX	5518	5164	5235		5882	5783	5635
878	2/11/1972	AX325a, 326a, 327a (Walls)	AX	4916	5093	5058		5334	5185	5093
879	3/1/1972	AX191 b and d	AX	6314	6349	6331		5323	5546	5829
880	3/1/1972	AX325b, 326b, 327b and c	AX	6190	6331	6225		6048	6303	6285
881	3/2/1972	AX7024-1 B/Os	AX	5252	5288	5199		6066	5857	5659
882	3/9/1972	AX B/Os 7019-3 Rm's 4-15	AX	4686	5076	5429		5330	5100	5136
883	3/15/1972	AX B/Os 7019-11	AX	5925	6031	5905		5263	5429	5673
884	3/20/1972	AX 191-E, 304 B and 324-A	AX	6614	6154	6402		5981	6126	6221
885	3/22/1972	AX B/Os 7003-1	AX	5730	5624	5659		6161	6105	5914
886	3/29/1972	AX B/Os 7056-1, 2, 3, 4, 5	AX	6048	5394	5695		5893	5691	5684
887	3/30/1972	AX 324b, 504	AX	6367	6048	6526		5833	5910	6006
888	4/5/1972	AX 505, 514, 516 Parapets	AX	5712	5730	5925		6070	6077	5988
890	4/10/1972	AX B/OS 7028 1, 7, 8 410 & AX 38 a, b, c	AX	5836	5659	5925		5946	5772	5815
891	4/12/1972	AX B/OS 7028-3, 5, 6, 7, 15, 18, 19, 20, 22	AX	5500	5518	5588		5769	5688	5638
892	4/18/1972	AX B/OS 7153-5 7153-3, 5 7014-1, 2, 3, 4 7015-1, 2, 3, 5	AX	5500	5659	5780		5606	5553	5609
893	4/19/1972	B/OS 7463-1 to 12 RP15A Stair & Curb AX B/OS 7059-5, 7, 8	AX	5288	5359	5659		5563	5517	5549
894	4/26/1972	AX B/OS 7059-2, 3, 6 7066-10 7030-2, 3 7061-2	AX	5925	5995	6066		5602	5645	5801

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	External Subgrade Wall? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
895	4/27/1972	AX114 Slab	AX	7003	6544	6632		6130	6307	6448
897	5/3/1972	AX B/OS 7030-1, 6, 7, 14 7029-5, 7 7039-7 AX114 B Stairs	AX	5765	5810	5836		6402	6351	6117
898	5/4/1972	AX B/O 7060-1	AX	5359	5022	5042		5880	5558	5414
899	5/10/1972	AX B/OS 7028-1, 11, 12 7029-1, 2, 3, 4, 5, 7, 8, 9	AX	5288	5022	5341		5309	5147	5143
900	5/11/1972	AX B/OS 7023-7 7025-2, 3, 5, 6 7017-1	AX	4510	4686	4669		5041	4969	4846
901	5/16/1972	AX B/OS 7021-1 7018-8 7019-26 7025-3 7038-9	AX	4899	5146	5058		4821	4782	4892
902	5/18/1972	AX B/OS 7146-1 7174-1 7147-2 to 7	AX	4174	4757	4651		4789	4807	4757

The rolling average minimum and 20% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 3 Consecutive Tests and 10% Passing Limit – Case 3

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
405	10/8/1969	RP Mud Slab 3 B	RP	6367	6597	6367	N (7910)			6444
474	12/11/1969	RP - 5A	RP	6508	6561	6897	N (7606)	6491	6479	6655
483	12/19/1969	RP - 5 Slab & Wall	RP	5712	5942	5942	N (7606)	6390	6184	5865
502	1/23/1970	RP 6 & 8	RP	5783	5624	5748	N (7917)	5889	5783	5718
503	1/23/1970	RP 6 & 8	RP	5252	5323	5217	N (7917)	5541	5441	5264
512	2/20/1970	RP-7 & 9	RP	5624	5836	5659	Y (7918, 7607)	5388	5559	5706
513	2/20/1970	RP-7 & 9	RP	5730	5677	5518	Y (7918, 7607)	5742	5689	5642
514	2/20/1970	RP-7 & 9	RP	6119	5942	5907	Y (7918, 7607)	5771	5860	5989
515	2/20/1970	RP-7 & 9	RP	5518	5588	5305	Y (7918, 7607)	5789	5671	5470
518	3/5/1970	RP-10 & 12B	RP	6048	5942	6048	N (7608)	5647	5765	6013
519	3/5/1970	RP-10 & 12B	RP	6190	6048	5659	N (7608)	6060	6095	5966
520	3/9/1970	RP-11	RP	6013	6048	6261	N (7609)	5907	5907	6107
521	3/18/1970	RP-13 C1 Cols. 7 & 8	RP	6031	5871	5818	N (8088, 8089)	6113	6054	5907
522	3/19/1970	RP-13 N from Col. 9 - Col. 12	RP	5871	5889	5925	N (8088, 8089)	5853	5859	5895
526	4/2/1970	RP-13	RP	6579	6650	6720	N (8088, 8089)	6131	6385	6650
539	4/27/1970	RP-13-S	RP	5907	5836	6084	N (8088, 8089)	6426	6154	5942
549	5/5/1970	RP-C-4-2, C-5-2, C-6-2	RP	5836	5995	6207	Unknown	5919	5972	6013
556	5/12/1970	RP 9	RP	6296	6190	6396	Y (7607)	6166	6231	6294
557	5/12/1970	RP 9	RP	6367	6367	6137	Y (7607)	6318	6377	6290
562	5/27/1970	RP 15a	RP	6137	5730	5942	N (7943)	6214	6001	5936
585	6/8/1970	RP - 13	RP	5765	5588	5907	N (8088, 8089)	5812	5765	5753
593	6/15/1970	RP 13 N	RP	5624	5447	5500	N (8088, 8089)	5706	5659	5524
615	7/6/1970	RP - 14b	RP	6154	5748	6278	N (7612)	5700	5801	6060
616	7/6/1970	RP146	RP	6455	6420	6101	N (7612)	6160	6384	6325
617	7/6/1970	RP146	RP	6455	6561	6561	N (7612)	6325	6372	6526
632	7/14/1970	RP 15c	RP	6296	6490	6314	N (7944)	6473	6449	6367
633	7/14/1970	RP 15c	RP	6013	6013	5978	N (7944)	6272	6113	6001
642	7/21/1970	RP 15-B	RP	5960	6101	6225	N (7942)	5984	6013	6095
646	7/24/1970	RP-14A	RP	5642	5836	5764	N (7612)	5989	5901	5747
669	8/11/1970	RP-16 "B"	RP	5960	5907	5871	N (7615)	5853	5877	5913
672	8/14/1970	RP16 C	RP	5801	5836	5907	N (7616)	5860	5836	5848
673	8/14/1970	RP16 C	RP	5748	5677	5730	N (7616)	5830	5777	5718
685	9/11/1970	RP16A	RP	5642	5642	5642	N (7614)	5683	5671	5642
686	9/11/1970	RP16A	RP	6066	6013	5659	N (7614)	5783	5907	5913
691	9/22/1970	RP-17B	RP	5925	5960	5871	N (7617)	5866	5848	5919
699	10/2/1970	RP - 17C	RP	6084	5765	5535	N (7617)	5972	5907	5795
710	10/28/1970	RP 17A	RP	6031	6278	6314	N (8090)	5777	5948	6208
711	10/28/1970	RP 17A	RP	6508	6402	6384	N (8090)	6367	6408	6431
712	10/28/1970	RP 17A	RP	6384	6632	6490	N (8090)	6390	6467	6502
725	11/13/1970	RP 18 D	RP	5783	5925	5783	N (7972)	6302	6066	5830

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
725A	11/13/1970	RP 18 D	RP	6119	6190	6225	N (7972)	5942	6031	6178
729	11/25/1970	RP - 18B	RP	5429	5447	5518	N (7970)	5948	5700	5465
730	11/30/1970	RP - 15A	RP	5730	5606	5677	N (7943)	5565	5618	5671
730A	11/30/1970	RP15A	RP	6154	6154	6384	N (7943)	5812	5995	6231
732	12/1/1970	RP - 18A	RP	5765	5801	5588	N (7971)	6101	5983	5718
732A	12/1/1970	RP18A	RP	6225	6048	6402	N (7971)	5871	5954	6225
738	12/10/1970	RP - 19 Slab	RP	5818	5925	5712	N (7973)	6089	6048	5818
738A	12/10/1970	RP19 SL ar	RP	6084	6278	6314	N (7973)	5907	6025	6225
819	9/17/1971	RP 21 a and b	RP	5801	5376	5518	N (7980)	6131	5830	5565
824	9/28/1971	RP 20 A and B	RP	5448	6048	6066	N (7976)	5447	5671	5854
831	10/8/1971	RP 21D	RP	6048	6190	5995	N (7979)	6054	6101	6078
833	10/13/1971	RP 22A	RP	6544	6473	6190	N (7982)	6243	6337	6402
838	10/18/1971	RP 20D	RP	6544	6384	6119	N (7979)	6402	6373	6349
841	10/26/1971	RP 22b	RP	6367	6013	6119	N (7982)	6290	6166	6166
842	10/27/1971	RP-7-2	RP	6172	5642	5765	Y (7984)	6101	5978	5860
848	11/4/1971	RP-22C	RP	5836	5960	5871	N (7982)	5748	5854	5889

The rolling average minimum and 10% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 5 Consecutive Tests and 20% Passing Limit – Case 3

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
405	10/8/1969	RP Mud Slab 3 B	RP	6367	6597	6367	N (7910)			
474	12/11/1969	RP - 5A	RP	6508	6561	6897	N (7606)		6480	6586
483	12/19/1969	RP - 5 Slab & Wall	RP	5712	5942	5942	N (7606)	6409	6324	6211
502	1/23/1970	RP 6 & 8	RP	5783	5624	5748	N (7917)	6055	5801	5808
503	1/23/1970	RP 6 & 8	RP	5252	5323	5217	N (7917)	5670	5546	5433
512	2/20/1970	RP-7 & 9	RP	5624	5836	5659	Y (7918, 7607)	5433	5450	5532
513	2/20/1970	RP-7 & 9	RP	5730	5677	5518	Y (7918, 7607)	5613	5705	5684
514	2/20/1970	RP-7 & 9	RP	6119	5942	5907	Y (7918, 7607)	5741	5797	5833
515	2/20/1970	RP-7 & 9	RP	5518	5588	5305	Y (7918, 7607)	5801	5815	5652
518	3/5/1970	RP-10 & 12B	RP	6048	5942	6048	N (7608)	5673	5680	5786
519	3/5/1970	RP-10 & 12B	RP	6190	6048	5659	N (7608)	5907	6055	5977
520	3/9/1970	RP-11	RP	6013	6048	6261	N (7609)	5992	5992	6006
521	3/18/1970	RP-13 C1 Cols. 7 & 8	RP	6031	5871	5818	N (8088, 8089)	6002	6045	6006
522	3/19/1970	RP-13 N from Col. 9 - Col. 12	RP	5871	5889	5925	N (8088, 8089)	5970	5896	5875
526	4/2/1970	RP-13	RP	6579	6650	6720	N (8088, 8089)	6016	6183	6353
539	4/27/1970	RP-13-S	RP	5907	5836	6084	N (8088, 8089)	6356	6338	6239
549	5/5/1970	RP-C-4-2, C-5-2, C-6-2	RP	5836	5995	6207	Unknown	6077	5932	5992
556	5/12/1970	RP 9	RP	6296	6190	6396	Y (7607)	6084	6105	6217
557	5/12/1970	RP 9	RP	6367	6367	6137	Y (7607)	6291	6323	6291
562	5/27/1970	RP 15a	RP	6137	5730	5942	N (7943)	6281	6148	6063
585	6/8/1970	RP - 13	RP	5765	5588	5907	N (8088, 8089)	5942	5832	5786
593	6/15/1970	RP 13 N	RP	5624	5447	5500	N (8088, 8089)	5765	5666	5613
615	7/6/1970	RP - 14b	RP	6154	5748	6278	N (7612)	5726	5695	5825
616	7/6/1970	RP146	RP	6455	6420	6101	N (7612)	6027	6211	6200
617	7/6/1970	RP146	RP	6455	6561	6561	N (7612)	6342	6398	6420
632	7/14/1970	RP 15c	RP	6296	6490	6314	N (7944)	6395	6473	6444
633	7/14/1970	RP 15c	RP	6013	6013	5978	N (7944)	6335	6225	6162
642	7/21/1970	RP 15-B	RP	5960	6101	6225	N (7942)	6056	6013	6055
646	7/24/1970	RP-14A	RP	5642	5836	5764	N (7612)	5981	5953	5914
669	8/11/1970	RP-16 "B"	RP	5960	5907	5871	N (7615)	5885	5822	5868
672	8/14/1970	RP16 C	RP	5801	5836	5907	N (7616)	5861	5875	5864
673	8/14/1970	RP16 C	RP	5748	5677	5730	N (7616)	5833	5794	5780
685	9/11/1970	RP16A	RP	5642	5642	5642	N (7614)	5741	5688	5667
686	9/11/1970	RP16A	RP	6066	6013	5659	N (7614)	5744	5801	5804
691	9/22/1970	RP-17B	RP	5925	5960	5871	N (7617)	5861	5925	5886
699	10/2/1970	RP - 17C	RP	6084	5765	5535	N (7617)	5900	5921	5843
710	10/28/1970	RP 17A	RP	6031	6278	6314	N (8090)	5857	5939	5985
711	10/28/1970	RP 17A	RP	6508	6402	6384	N (8090)	6133	6307	6377
712	10/28/1970	RP 17A	RP	6384	6632	6490	N (8090)	6398	6462	6458
725	11/13/1970	RP 18 D	RP	5783	5925	5783	N (7972)	6335	6243	6123

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
725A	11/13/1970	RP 18 D	RP	6119	6190	6225	N (7972)	6020	5960	6048
729	11/25/1970	RP - 18B	RP	5429	5447	5518	N (7970)	5949	5882	5762
730	11/30/1970	RP - 15A	RP	5730	5606	5677	N (7943)	5670	5546	5596
730A	11/30/1970	RP15A	RP	6154	6154	6384	N (7943)	5737	5864	5995
732	12/1/1970	RP - 18A	RP	5765	5801	5588	N (7971)	6027	6052	5938
732A	12/1/1970	RP18A	RP	6225	6048	6402	N (7971)	5953	5885	6013
738	12/10/1970	RP - 19 Slab	RP	5818	5925	5712	N (7973)	6016	6084	5981
738A	12/10/1970	RP19 SL ar	RP	6084	6278	6314	N (7973)	5988	5963	6063
819	9/17/1971	RP 21 a and b	RP	5801	5376	5518	N (7980)	6038	5971	5857
824	9/28/1971	RP 20 A and B	RP	5448	6048	6066	N (7976)	5691	5638	5691
831	10/8/1971	RP 21D	RP	6048	6190	5995	N (7979)	5826	5960	6069
833	10/13/1971	RP 22A	RP	6544	6473	6190	N (7982)	6169	6250	6278
838	10/18/1971	RP 20D	RP	6544	6384	6119	N (7979)	6349	6427	6342
841	10/26/1971	RP 22b	RP	6367	6013	6119	N (7982)	6321	6285	6200
842	10/27/1971	RP-7-2	RP	6172	5642	5765	Y (7984)	6158	6063	5942
848	11/4/1971	RP-22C	RP	5836	5960	5871	N (7982)	5907	5875	5815

The rolling average minimum and 20% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 3 Consecutive Tests and 10% Passing Limit – Case 4

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
405	10/8/1969	RP Mud Slab 3 B	RP	6367	6597	6367	N (7910)			6444
474	12/11/1969	RP - 5A	RP	6508	6561	6897	N (7606)	6491	6479	6655
483	12/19/1969	RP - 5 Slab & Wall	RP	5712	5942	5942	N (7606)	6390	6184	5865
502	1/23/1970	RP 6 & 8	RP	5783	5624	5748	N (7917)	5889	5783	5718
503	1/23/1970	RP 6 & 8	RP	5252	5323	5217	N (7917)	5541	5441	5264
518	3/5/1970	RP-10 & 12B	RP	6048	5942	6048	N (7608)	5529	5736	6013
519	3/5/1970	RP-10 & 12B	RP	6190	6048	5659	N (7608)	6060	6095	5966
520	3/9/1970	RP-11	RP	6013	6048	6261	N (7609)	5907	5907	6107
521	3/18/1970	RP-13 C1 Cols. 7 & 8	RP	6031	5871	5818	N (8088, 8089)	6113	6054	5907
522	3/19/1970	RP-13 N from Col. 9 - Col. 12	RP	5871	5889	5925	N (8088, 8089)	5853	5859	5895
526	4/2/1970	RP-13	RP	6579	6650	6720	N (8088, 8089)	6131	6385	6650
539	4/27/1970	RP-13-S	RP	5907	5836	6084	N (8088, 8089)	6426	6154	5942
549	5/5/1970	RP-C-4-2, C-5-2, C-6-2	RP	5836	5995	6207	Unknown	5919	5972	6013
562	5/27/1970	RP 15a	RP	6137	5730	5942	N (7943)	6113	6025	5936
585	6/8/1970	RP - 13	RP	5765	5588	5907	N (8088, 8089)	5812	5765	5753
593	6/15/1970	RP 13 N	RP	5624	5447	5500	N (8088, 8089)	5706	5659	5524
615	7/6/1970	RP - 14b	RP	6154	5748	6278	N (7612)	5700	5801	6060
616	7/6/1970	RP146	RP	6455	6420	6101	N (7612)	6160	6384	6325
617	7/6/1970	RP146	RP	6455	6561	6561	N (7612)	6325	6372	6526
632	7/14/1970	RP 15c	RP	6296	6490	6314	N (7944)	6473	6449	6367
633	7/14/1970	RP 15c	RP	6013	6013	5978	N (7944)	6272	6113	6001
642	7/21/1970	RP 15-B	RP	5960	6101	6225	N (7942)	5984	6013	6095
646	7/24/1970	RP-14A	RP	5642	5836	5764	N (7612)	5989	5901	5747
669	8/11/1970	RP-16 "B"	RP	5960	5907	5871	N (7615)	5853	5877	5913
672	8/14/1970	RP16 C	RP	5801	5836	5907	N (7616)	5860	5836	5848
673	8/14/1970	RP16 C	RP	5748	5677	5730	N (7616)	5830	5777	5718
685	9/11/1970	RP16A	RP	5642	5642	5642	N (7614)	5683	5671	5642
686	9/11/1970	RP16A	RP	6066	6013	5659	N (7614)	5783	5907	5913
691	9/22/1970	RP-17B	RP	5925	5960	5871	N (7617)	5866	5848	5919
699	10/2/1970	RP - 17C	RP	6084	5765	5535	N (7617)	5972	5907	5795
710	10/28/1970	RP 17A	RP	6031	6278	6314	N (8090)	5777	5948	6208
711	10/28/1970	RP 17A	RP	6508	6402	6384	N (8090)	6367	6408	6431
712	10/28/1970	RP 17A	RP	6384	6632	6490	N (8090)	6390	6467	6502
725	11/13/1970	RP 18 D	RP	5783	5925	5783	N (7972)	6302	6066	5830
725A	11/13/1970	RP 18 D	RP	6119	6190	6225	N (7972)	5942	6031	6178
729	11/25/1970	RP - 18B	RP	5429	5447	5518	N (7970)	5948	5700	5465
730	11/30/1970	RP - 15A	RP	5730	5606	5677	N (7943)	5565	5618	5671
730A	11/30/1970	RP15A	RP	6154	6154	6384	N (7943)	5812	5995	6231
732	12/1/1970	RP - 18A	RP	5765	5801	5588	N (7971)	6101	5983	5718
732A	12/1/1970	RP18A	RP	6225	6048	6402	N (7971)	5871	5954	6225

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	3 Consecutive Rolling Average I (psi)	3 Consecutive Rolling Average II (psi)	3 Consecutive Rolling Average III (psi)
738	12/10/1970	RP - 19 Slab	RP	5818	5925	5712	N (7973)	6089	6048	5818
738A	12/10/1970	RP19 SLar	RP	6084	6278	6314	N (7973)	5907	6025	6225
819	9/17/1971	RP 21 a and b	RP	5801	5376	5518	N (7980)	6131	5830	5565
824	9/28/1971	RP 20 A and B	RP	5448	6048	6065	N (7976)	5447	5671	5854
831	10/8/1971	RP 21D	RP	6048	6190	5995	N (7979)	6054	6101	6078
833	10/13/1971	RP 22A	RP	6544	6473	6190	N (7982)	6243	6337	6402
838	10/18/1971	RP 20D	RP	6544	6384	6119	N (7979)	6402	6373	6349
841	10/26/1971	RP 22b	RP	6367	6013	6119	N (7982)	6290	6166	6166
848	11/4/1971	RP-22C	RP	5836	5960	5871	N (7982)	5989	5972	5889

The rolling average minimum and 10% passing limit are included in Section 6.0 of this calculation.

Calculate Rolling Average Minimum for 5 Consecutive Tests and 20% Passing Limit – Case 4

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
405	10/8/1969	RP Mud Slab 3 B	RP	6367	6597	6367	N (7910)			
474	12/11/1969	RP - 5A	RP	6508	6561	6897	N (7606)		6480	6586
483	12/19/1969	RP - 5 Slab & Wall	RP	5712	5942	5942	N (7606)	6409	6324	6211
502	1/23/1970	RP 6 & 8	RP	5783	5624	5748	N (7917)	6055	5801	5808
503	1/23/1970	RP 6 & 8	RP	5252	5323	5217	N (7917)	5670	5546	5433
518	3/5/1970	RP-10 & 12B	RP	6048	5942	6048	N (7608)	5518	5556	5716
519	3/5/1970	RP-10 & 12B	RP	6190	6048	5659	N (7608)	5889	6055	5977
520	3/9/1970	RP-11	RP	6013	6048	6261	N (7609)	5992	5992	6006
521	3/18/1970	RP-13 C1 Cols. 7 & 8	RP	6031	5871	5818	N (8088, 8089)	6002	6045	6006
522	3/19/1970	RP-13 N from Col. 9 - Col. 12	RP	5871	5889	5925	N (8088, 8089)	5970	5896	5875
526	4/2/1970	RP-13	RP	6579	6650	6720	N (8088, 8089)	6016	6183	6353
539	4/27/1970	RP-13-S	RP	5907	5836	6084	N (8088, 8089)	6356	6338	6239
549	5/5/1970	RP-C-4-2, C-5-2, C-6-2	RP	5836	5995	6207	Unknown	6077	5932	5992
562	5/27/1970	RP 15a	RP	6137	5730	5942	N (7943)	6052	5981	6002
585	6/8/1970	RP - 13	RP	5765	5588	5907	N (8088, 8089)	5956	5832	5786
593	6/15/1970	RP 13 N	RP	5624	5447	5500	N (8088, 8089)	5765	5666	5613
615	7/6/1970	RP - 14b	RP	6154	5748	6278	N (7612)	5726	5695	5825
616	7/6/1970	RP146	RP	6455	6420	6101	N (7612)	6027	6211	6200
617	7/6/1970	RP146	RP	6455	6561	6561	N (7612)	6342	6398	6420
632	7/14/1970	RP 15c	RP	6296	6490	6314	N (7944)	6395	6473	6444
633	7/14/1970	RP 15c	RP	6013	6013	5978	N (7944)	6335	6225	6162
642	7/21/1970	RP 15-B	RP	5960	6101	6225	N (7942)	6056	6013	6055
646	7/24/1970	RP-14A	RP	5642	5836	5764	N (7612)	5981	5953	5914
669	8/11/1970	RP-16 "B"	RP	5960	5907	5871	N (7615)	5885	5822	5868
672	8/14/1970	RP16 C	RP	5801	5836	5907	N (7616)	5861	5875	5864
673	8/14/1970	RP16 C	RP	5748	5677	5730	N (7616)	5833	5794	5780
685	9/11/1970	RP16A	RP	5642	5642	5642	N (7614)	5741	5688	5667
686	9/11/1970	RP16A	RP	6066	6013	5659	N (7614)	5744	5801	5804
691	9/22/1970	RP-17B	RP	5925	5960	5871	N (7617)	5861	5925	5886
699	10/2/1970	RP - 17C	RP	6084	5765	5535	N (7617)	5900	5921	5843
710	10/28/1970	RP 17A	RP	6031	6278	6314	N (8090)	5857	5939	5985
711	10/28/1970	RP 17A	RP	6508	6402	6384	N (8090)	6133	6307	6377
712	10/28/1970	RP 17A	RP	6384	6632	6490	N (8090)	6398	6462	6458
725	11/13/1970	RP 18 D	RP	5783	5925	5783	N (7972)	6335	6243	6123
725A	11/13/1970	RP 18 D	RP	6119	6190	6225	N (7972)	6020	5960	6048
729	11/25/1970	RP - 18B	RP	5429	5447	5518	N (7970)	5949	5882	5762
730	11/30/1970	RP - 15A	RP	5730	5606	5677	N (7943)	5670	5546	5596
730A	11/30/1970	RP15A	RP	6154	6154	6384	N (7943)	5737	5864	5995
732	12/1/1970	RP - 18A	RP	5765	5801	5588	N (7971)	6027	6052	5938
732A	12/1/1970	RP18A	RP	6225	6048	6402	N (7971)	5953	5885	6013

Set #	Date Cylinders Cast	Location of Concrete Placement	Building Code AX = Auxiliary Building, RP = Reactor Plant	II - 28 Day Lab Strength (psi)	III - 28 Day Lab Strength (psi)	IV - 28 Day Lab Strength (psi)	Reactor Cavity Floor or Walls? (F/N)	5 Consecutive Rolling Average I (psi)	5 Consecutive Rolling Average II (psi)	5 Consecutive Rolling Average III (psi)
738	12/10/1970	RP - 19 Slab	RP	5818	5925	5712	N (7973)	6016	6084	5981
738A	12/10/1970	RP19 SL ar	RP	6084	6278	6314	N (7973)	5988	5963	6063
819	9/17/1971	RP 21 a and b	RP	5801	5376	5518	N (7980)	6038	5971	5857
824	9/28/1971	RP 20 A and B	RP	5448	6048	6066	N (7976)	5691	5638	5691
831	10/8/1971	RP 21D	RP	6048	6190	5995	N (7979)	5826	5960	6069
833	10/13/1971	RP 22A	RP	6544	6473	6190	N (7982)	6169	6250	6278
838	10/18/1971	RP 20D	RP	6544	6384	6119	N (7979)	6349	6427	6342
841	10/26/1971	RP 22b	RP	6367	6013	6119	N (7982)	6321	6285	6200
848	11/4/1971	RP-22C	RP	5836	5960	5871	N (7982)	6091	6059	5960

The rolling average minimum and 20% passing limit are included in Section 6.0 of this calculation.

6.0 Results & Conclusions

Case	Mean (psi)	Standard Deviation (psi)	95% Confidence Level (psi)
1	6103	529	5232
2	6099	535	5220
3	5992	331	5447
4	6007	331	5463

Case	3 Consecutive Rolling Average 10% Passing Limit (psi)	3 Consecutive Rolling Average Minimum (psi)	5 Consecutive Rolling Average 20% Passing Limit (psi)	5 Consecutive Rolling Average Minimum (psi)
1	5482	4527	5712	4757
2	5482	4527	5702	4757
3	5588	5264	5712	5433
4	5617	5264	5734	5433

In accordance with Section 1.2, the minimum of the rolling average strengths for WSD and USD (5 and 3 consecutive test rolling averages respectively), not more than the 20th and 10th percentile for WSD and USD accordingly, will be used as the new design basis concrete strength. The new design basis strength will also be limited to no greater than the 95% confidence level.

Cases 1 and 2 apply to the AB. Both the 5 and 3 consecutive test rolling average minimums are below, or not more than, the 20th and 10th percentile acceptance criteria respectively. The minimum rolling average strength for cases 1 and 2 is 4527 psi, which is also below the 95% confidence levels for both cases. Therefore, a concrete compressive strength of 4527 psi meets all testing and acceptance criteria for the AB. Conservatively, the new Class B concrete compressive strength will be considered to be 4500 psi. This is conservative and provides an additional level of confidence.

Cases 3 and 4 apply to the CIS. Both the 5 and 3 consecutive test rolling average minimums are below, or not more than, the 20th and 10th percentile acceptance criteria respectively. The minimum rolling average strength for cases 3 and 4 is 5264 psi, which is also below the 95% confidence levels for both cases. Therefore, a concrete compressive strength of 5264 psi meets all testing and acceptance criteria for the CIS. Conservatively, the new Class B concrete compressive strength will be considered to be 5200 psi. This is conservative and provides an additional level of confidence.

7.0 Design Basis, Licensing Basis and/or Operating Document Changes

This calculation does not directly affect any Design Basis, Licensing Basis and/or Operating Documents. This calculation supports Licensing Amendment Request (LAR), LIC-15-0142 [1] request to allow reinforced concrete structures located in specified areas of the AB and CIS to be evaluated using concrete compressive strength based on actual 28-day test data.

8.0 List of Attachments

8.1 List of WIP Files Reviewed
8.2 Compilation of Pertinent WIP File Data [54] - [59]

Attachment 8.1

List of WIP Files Reviewed

WIP	Useful?	Notes	Engineer
2180	N		
2197	N		
2689	N		
3164	Y	lists (all?) aux bldg pour numbers	AW
3166	N		
5932	N		
6770	Y		AW
6872	N		
6874	Y		AW
6875	N	lists one year compressive strength	
6891	N		
7105	N		
7469	N		
8435	Y		AW
8438	Y		AW
8440	Y		AW
8441	Y		AW
8450	Y		AW
8465	Y		AW
8498	Y		AW
9643	N		
13383	N		
13448	N		
13449	N		
13497	Y		AW
13502	N		
13518	N		
13519	N		
13531	N		
13537	N		
13539	N		
13540	N		
13541	N		
13542	N		
13545	N		
13546	N		
13576	N	lists some 90 day test strengths	
13605	Y		AW
13683	N		
13870	N		
15866	N		
15950	N		
18187	N		
18971	N		
19052	N		
19086	N		
19374	N	W-7 location results on page 3 is class B	AW
20156	N		
20211	N		
20347	Y		AW
20379	N		
20532	Y		AW
20540	N		
20701	Y		AW
20860	Y		AW
20861	N		
20864	N		
20886	Y		AW
20916	N		

WIP	Useful?	Notes	Engineer
20929	N		
20965	N		
21107	N		
21195	N		
21196	Y		AW
21341	N		
21392	Y		AW
21393	N		
21498	Y		AW
21499	N		
21531	Y		AW
21548	Y		AW
21549	Y		AW
21559	Y		AW
21560	Y		AW
21614	N		
21646	N		
21660	Y		AW
21661	Y		AW
21671	Y		AW
21676	N		
21697	Y		AW
21710	N		
21732	Y		AW
21866	Y		AW
21888	Y		AW
21901	Y		AW
22036	Y		AW
22057	Y		AW
22081	N		
22087	Y		AW
22123	Y		AW
22280	Y		AW
23500	Y		AW
23543	N		
23565	N		
25625	N		
25991	Y		AW
26022	Y		AW
26401	Y		AW
29744	Y		AW
29745	Y		AW
31246	N		
31861	N		
31862	N		
31863	N		
31864	N		
31865	N		
31867	N		
31868	N		
31869	N		
31888	N		
31939	N		
32170	N		
32250	N		
32389	N		
32398	N		
32412	N		
32430	N		
32447	N		

WIP	Useful?	Notes	Engineer
32456	N		
32516	Y		AW
32529	Y		AW
33142	Y		AW
38071	Y		AW
38072	N		
38075	Y		AW
38076	N		
38086	N		
38133	N		
38134	N		
38135	N		
38139	Y		AW
38202	Y	Original evaluation of sets 1 through 6 showing strength in excess of min design strength	AW
38207	N	bldg 971	
38235	N		
38239	N		
38350	N		
38382	N		
38603	Y		AW
38617	Y		AW
38619	Y		AW
38629	Y		AW
38631	N		
38697	N		
38759	N		
39026	N		
39027	Y		KC
39031	N		
39033	N		
39034	N		
39035	N		
39036	N		
39179	N		
39192	Y		KC
39203	N		
39390	N		
39392	N		
39393	Y		KC
39395	Y		KC
39397	Y		KC
39400	Y		KC
39402	Y		KC
39407	Y		KC
39413	Y		KC
39417	Y		KC
39441	N	has some 1 year test results	
39990	Y		KC
40923	Y		KC
53943	N		
53953	N		
53962	N		
53972	N		
53978	N		
53982	N		
53984	N		
53989	N		
53990	N		
57486	N		
57487	Y		KC

WIP	Useful?	Notes	Engineer
57488	Y		KC
57490	Y		KC
57491	Y		KC
57492	Y		KC
57493	Y		KC
57494	Y		KC
57495	Y		KC
57496	Y		KC
57497	Y		KC
57498	Y		KC
57499	Y		KC
57500	Y		KC
57501	Y		KC
57502	Y		KC
57503	Y		KC
57504	Y		KC
57505	Y		KC
57506	Y		KC
57507	Y		KC
57508	N		
57509	N		
57510	Y		KC
57511	Y		KC
57512	Y		KC
57513	Y		KC
57515	Y		KC
57516	N		
57517	N		
57518	N		
57519	Y		KC
57520	Y		KC
57521	Y		KC
57522	Y		KC
57523	Y		KC
57524	N		
57525	N		
57526	Y		KC
57527	N		
57528	Y		KC
57529	Y		KC
57530	Y		KC
57535	Y		KC
57536	Y		KC
57537	Y		KC
57543	Y		KC
57544	Y		KC
57545	Y		KC
57546	Y		KC
57548	Y		KC
57549	Y		KC
57550	Y		KC
59721	N		
59722	N		
62050	N		
64134	N		
64135	N		
64136	N		
64137	N		
64138	N		
64139	N		
64140	N		

Attachment 8.2

Compilation of Pertinent WIP File Data [54] - [59]

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 (Contract #759) — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 10/10/68 to 1/21/69

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY CAR)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
10	10/10/68	Floor Slab Field Office Building		3	2			116,000	4100	165,500	5890	162,000	5730	170,500	6035	140,000	4950	Conc. Temp. 60°
11	11/1/68	Decon Crane Pad #1 2nd Lift, Floor 1, West		2-3/4	2		4000	123,000	4350	178,000	6300	179,000	6330	174,000	6160	150,000	5305	Conc. Temp. 60°
--	11/1/68	SAME AS SET 11		3	---	---	------	------	------	------	------	------	------	------	------	Truck #410 Slump On	Ty Tru	Ticket 709372 k #410
12	11/8/68	Sewage Treatment Plant Base		3-1/2	3	--		107,500	3805	125,500	4450	134,500	4755	134,000	5740	Field Cy Buried in	Under Backf	Conc. Temp. 11 40°
13	12/11/68	Water Tunnel Base Column Pads P A 3		2-1/2	2			133,500	5014	166,000	5871	164,000	5801	168,000	5942	102,000	3608	Conc. Temp. 53°
--	12/11/68	SAME AS SET 13		2	---	---	------	------	------	------	------	------	------	------	------	------	------	Slump Only 3:00 P.M.
14	12/16/68	Mat #3 Floor Slab Stress Gallery	B	3	4.5		4000	95,000	3400	116,000	4103	120,000	4244	113,500	4014	110,000	3891	69° Temp. Ch 12:29 Load 1:12
15	12/16/68	Mat #4 Floor Slab Stress Gallery	B	3-1/2	5		4000	132,000	4670	142,000	5022	146,000	5164	152,500	5394	133,000	4709	69° Temp. Ch 1:17 Load 1:50
16	12/18/68	Mat #1 Floor Slab Stress Gallery	B	3	5		4000	126,500	4475	159,000	5624	162,000	5730	158,000	5588	147,500	5217	50° Temp. Ch 12:42 Load 1:30
17	12/28/68	Mat #2 Stress Gallery	B	4-1/4	5.5		4000	142,000	5022	162,000	5730	169,000	5978	176,000	6225	155,000	5482	68° Temp.
18	1/6/69	Stress Gallery Wall Section #4	B	3	5.5		4000	107,000	3784	132,500	4686	136,000	4810	129,000	4563	113,500	4014	Pour #7 51° Temp.
19	1/10/69	Stress Gallery Floor Slab Section #3	B	3	4.75		4000	152,000	5375	196,000	6933	176,000	6225	202,000	7145	172,000	6080	Pour #8 63° Temp.
20	1/11/69	Wall Section #W-1 Stress Gallery	B	3	5.5	147-3/4	4000	95,000	3360	131,000	4633	140,000	4952	145,000	5129	130,000	4598	Pour #9 60° Temp.
21	1/15/69	Saw Tooth Model	A	2-3/4	3.25		5000	155,000	5482	207,500	7338	196,500	6950	205,000	7251	Lab Cure 197,500	6986N	3/4 ABC Pour # 59
22	1/15/69	Adobe Ring Section #11	A	2-1/2	4	147-3/4	5000	122,500	4333	185,000	6544	182,500	6455	187,000	6612	153,500	5429	No Pour # 51° Temp.
23	1/21/69	Stress Gallery Wall Section #2	B	2-1/2	4	146.0	4000	124,500	4403	164,000	5801	167,500	5925	163,000	5765	151,500	5359	Pour #10 60° Temp.

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 1/30/69 thru 2/7/69

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders poured to 6" diam., 12" high)											
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
24	1/30/69	Stress Gallery Wall Sec-H-3	B	2-3/4	4.75	147.8	4000	115,500	4227	170,500	6031	172,500	6101	166,500	5995	154,000	5447	Four #11 36°
25	2/5/69	Water Circle Tunnel Slab	B	1-1/2	5	146.2	4000	154,000	5447	192,000	6958	197,000	6968	198,000	7003	162,000	5659	Four #12 Load 14 62
26	"	" "	B	2-1/2	4.5		4000	148,000	5235	192,500	6806	194,500	6883	192,500	6809	161,500	5712	Load 21 56°
27	"	" "	B	2-1/2	5.75	146.2	4000	135,500	4928	187,000	6614	188,000	6650	194,500	6880	156,500	5535	Load 26 60°
28	2/6/69	Basement Floor Slab (Old, 67), Mat 3	B	1/2	4.75		4000	165,500	5500	180,000	6650	204,500	7233	198,000	7003	154,500	5466	Four 13 Load 12, 56°
29	"	" " "	B	2	5.0	147.2	4000	142,500	5040	199,000	7039	198,500	7021	196,000	6933	162,000	5730	Load 25 56°
30	"	" " "	B	2-3/4			4000	143,000	5058	193,500	6844	191,000	6756	193,000	6827	161,500	5712	Load 39 56°
31	"	" " "	B	2-1/2	5.0	146.2	4000	130,000	4352	181,500	6420	195,500	6915	191,500	6915	154,000	5447	Load 45 56°
32	"	" " "	B	2-1/2			4000	128,000	4527	183,500	6490	176,500	6243	175,500	6207	150,000	5305	Load 71 53°
33	"	" " "	B	1-3/4	5.0	146.0	4000	147,000	5159	201,000	7110	200,000	7074	205,500	7269	158,000	5588	Load 82 62°
34	"	" " "	B	2-1/2			4000	125,500	4439	180,000	6367	128,000	5331	172,000	6331	136,500	4828	Load 94 58°
35	"	" " "	B	2-1/4			4000	141,000	4987	194,000	6862	169,000	6695	190,500	6738	141,500	5026	Load 99 56°
36	"	" " "	B	3			4000	121,000	4280	173,000	6119	171,000	6048	167,500	5920	134,000	4740	Load 108 58°
37	"	" " "	B	1-3/4	5.0	145.7	4000	127,000 (10 Day)	4492	181,000	6402	181,500	6526	183,000	6473	138,500	4899	Load 132 52°
38	2/7/69	" " "	B	2-3/4			4000	142,000 (10 Day)	5022	183,500	6490	182,000	6432	185,500	6597	131,000	4633	Load 145 58°
39	"	" " "	B	2-3/4			4000	142,000 (10 Day)	5022	173,000	6119	171,000	6048	153,500	5429	128,000	4527	Load 151 52°

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: February 2 thru March 1

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in % per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
40	Febr. 7	Hagemann Floor Slab Building #97)	B	3			4000	(10 day) 28,000	6487	157,000	5554	162,000	5939	162,500	5750	126,000	4457	69° Load 178
41	"	" "	B	3			4000	(09 day) 29,000	6563	158,000	5588	156,000	5518	147,000	5199	120,000	4244	69° Load 177
42	"	" "	B	13	4	142.2	4000	(06 day) 26,000	5447	182,500	6455	185,500	6561	191,500	6771	131,500	4651	67 Load 186
43	Febr. 12	Wall W-4 Part #1 Auxiliary Building	B	2	4.25	146.5	4000	(8 day) 25,000	5402	109,000	7039	194,000	6002	152,000	7039	152,500	4912	57° Load 6
44	Febr. 18	Wall W-5 Part #2 Auxiliary Building	B	3	"	146.0	4000	23,500	4368	164,500	5818	171,000	6048	158,000	5588	131,000	4633	53° Load 10
45	Febr. 19	Wall W-3 Part #3 Auxiliary Building	B	2	5.5	146.3	4000	23,000	5412	185,000	6544	192,000	6263	202,500	7163	101,000	5585	53° Load 5
46	Febr. 20	Water Circ. Tunnel Mat M-2	B	24	6	146.75	4000	142,000	5027	194,000	6862	190,000	6725	182,000	6791	157,000	5553	45° Load 6 Hot
47	Febr. 20	Water Circ. Tunnel Mat M-2	B	24	6		4000	142,000	5027	180,000	3974	182,500	6815	202,500	7339	157,500	5573	49° Load 14
48	Febr. 22	Wall W-5 Part #3 Auxiliary Building	B	23	6	146.4	4000	23,500	4345	167,000	5907	167,000	5907	164,500	5818	(unable to locate field cyl		50° Load 8
49	Febr. 26	Water Circ. Tunnel W-1 & W-2	B	2	3.25	144.5	4000	143,500	5026	191,000	6958	191,000	6756	184,000	6508	155,000	5482	54° Load 7
50	Febr. 26	Water Circ. Tunnel W-1 & W-2	B	24			4000	147,000	5199	195,000	6897	190,000	6720	155,000	6507	156,000	5518	60° Load 14
51	Febr. 26	Auxiliary Building Wall W-1	B	14	4.75		4000	152,000	5376	193,000	6827	185,000	6529	178,000	6296	153,000	5412	58° Load 7
52	Febr. 28	" "	B	3	5.25	147.7	4000	143,000	5050	200,000	7074	201,500	7127	205,000	7266	161,000	5695	56° Load 14
53	March 1	Reactor Pit	A	2	5.0	143.2	4000	168,000	5942	214,000	7569	210,000	7428	220,000	7782	182,500	6455	52° Load 12
54	March 1	" "	B	24	4.75		4000	131,000	4633	174,000	6154	187,500	6632	186,500	6597	145,000	5129	50° Load 30
55	March 1	" "	A	14			5000	165,000	5842	220,000	7782	201,000	7110	207,000	7322	175,500	6207	52° Load 42

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: March 1 thru March 6

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" High)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cubic ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
56	March 1	Reactor Bld.	A	2¾	4.75		5000	159,500	5642	204,500	7233	200,000	7074	209,500	7410	162,500	5396	Load 48° #50
57	"	"	A	2¾		150.6	5000	178,000	6296	211,000	7463	219,000	7746	220,000	7782	200,000	7074	Load 51° #70
58	"	"	A	3	5.0		5000	170,000	6013	202,500	7161	213,000	7534	206,000	7216	170,500	6031	Load 48° #70
59	"	"	A	3			5000	144,000	5036	195,500	7039	198,000	7038	206,000	7257	167,500	5925	Load 54° #90
60	March 2	"	A	¾	4.25		5000	166,000	5199	175,500	6207	168,000	5942	166,000	5839	160,000	6952	Load 58° #97
61	March 6	Outer Intake Structure Bld.	B	2¾	4.75	147.25	4000	112,500	4686	167,000	5836	196,500	6969	180,000	6367	154,500	5447	Load 58° #11
62	"	"	B	1¾			4000	142,500	5212	203,500	7163	200,000	7074	195,500	6911	176,000	6225	Load 52° #22
63	"	"	B	1¾			4000	147,000	5199	187,500	6632	195,000	6892	203,000	7180	164,000	5815	Load 52° #31
64	"	"	B	1¾			4000	129,000	4563	177,500	6278	175,000	6190	185,000	6545	161,000	5695	Load 48° #49
65	"	"	B	3	5	148.5	4000	124,000	4386	177,000	6261	160,000	5671	172,000	6261	162,000	5730	Load 54° #69
66	"	"	B	1¾			4000	147,000	5199	187,500	6632	188,000	6650	183,000	6473	160,500	5960	Load 52° #82
67	"	"	B	2"			4000	142,500	5326	205,000	7251	196,000	6933	199,000	7039	174,000	6154	Load 50° #91
68	"	"	B	2¾			4000	142,500	5040	151,000	5756	185,000	6857	195,000	6933	170,000	6013	Load 52° #101
69	"	"	B	1¾			4000	135,000	4775	198,000	7003	186,000	6579	195,000	6897	166,000	5482	Load 50° #113
70	"	"	B	2¾	4.75	146.5	4000	135,000	4775	185,000	6544	187,500	6632	185,000	6544	157,000	5553	Load 52° #118
71	"	"	B	1¾			4000	104,500	3695	189,000	6685	196,000	6933	199,000	7039	168,000	5942	Load 52° #132

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Ryan

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 3/8/69 thru 5/15/69

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (21-DAY LAB)		III (28-DAY LAB)		IV (90-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
72	3-8-69	971-Auxiliary Bldg. W-8A, W-4 P-4, W-2 P-2	B	2	4.75	146.9	4000	132,500	4963	186,500	6897	188,000	6550	181,000	6962	165,000	5636	Pour #24 58° Load #1
73	"	971-Auxiliary Bldg. W-8A, W-4 P-4, W-2 P-2	B	2			4000	134,500	4757	185,000	6544	185,000	5544	180,000	6665	162,500	5748	51° Load #2
74	"	971-Auxiliary Bldg. W-8A, W-4 P-4, W2 P-2	B	1-1/4			4000	136,000	4819	192,500	6996	184,000	6508	178,000	6791	170,000	6013	52° Load #3
75	3-18-69	Water Circulating Tunnel W-3	B	2-1/4	4.75	148.3	4000	138,000	4861	189,000	6685	184,000	6508	190,000	6720	Unable to Locate Cylinder		Pour 25 57° Load 4
76	3-19-69	Water Circulating Tunnel W-4	B	3	4		4000	164,000	5801	214,000	7587	201,500	7127	213,000	7534	Unable to Locate Cylinder		Pour 26 53°
77	3-19-69	Column #1 Auxiliary Bldg.	A	1-1/4	4	149.2	5000	167,000	5907	221,000	7800	221,500	7835	224,500	7941	190,000	6720	Pour 27 54° Load 1
78	3-22-69	Water Circulating Tunnel W-3 and 4	B	2-3/4	4.5		4000	130,000	4598	172,000	6084	175,000	6190	176,000	6154	Unable to Locate Cylinder		62°
79	"	Column #2 Auxiliary Bldg.	A	2-3/4	4		5000	136,000	4810	193,000	6827	185,000	6544	191,500	6827	157,000	5553	3/4 Add 62°
80	4-2-69	Circulating Water Tunnel W-5, and W-6	B	2-3/4	5		4000	138,500	4981	191,000	6756	189,000	6650	142,500	5040	163,000	5765	Load 11 52°
81	"	"	B	2-3/4	4.5		4000	135,500	5146	178,000	6084	187,500	6632	178,000	6296	138,000	4881	Load 23 54°
82	4-12-69	Circulating Water Tunnel W-7	B	3	6		4000	142,000	5072	168,000	5942	158,000	5589	177,000	6261	138,000	4881	Load 9 62°
83	4-15-69	Water Intake Structure 1,5-2	B	1-3/4	5	148.1	4000	148,000	5235	198,000	7003	186,000	6933	191,500	6773	177,500	6278	Load 5 59°
84	"	"	A	1-3/4			4000	155,000	5482	194,500	6880	195,500	6915	183,500	6490	163,500	5783	Load 17 57°
85	"	"	B	2			4000	138,000	4881	182,000	6437	172,000	6084	179,000	6331	163,500	5783	Load 31 52°
86	"	"	B	2-1/2			4000	127,500	4510	164,500	5818	156,000	5518	166,500	5889	146,500	5839	Load 43 50°
87	"	"	B	3	5.5	146.2	4000	117,000	4139	160,000	5639	155,500	5500	140,000	5235	138,000	4981	Load 57 60°

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: April 15-30

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam. x 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
88	April 15	Water Intake Structure	B	2 3/4			4000	124,000	4366	163,000	5765	165,500	5783	159,000	5524	141,000	4937	50°Load#73
89	"	"	B	2 1/4			4000	131,500	4651	167,000	5907	170,000	6013	174,000	6154	157,500	5571	50°Load#84
90	"	"	B	2 1/2			4000	146,500	5146	188,500	6667	187,000	6614	181,000	6402	168,000	5942	50°Load#99
91	"	"	B	2 1/2			4000	129,000	4563	165,500	5854	160,000	5659	164,500	5801	159,000	5624	55°Load#110
92	"	"	B	1 1/2	4	148.0	4000	137,000	4846	181,500	6420	187,000	6614	181,000	6402	164,000	5465	52°Load#122
93	April 21	Reactor Pit RP-1	A	2	4.25	149.5	5000	164,000	5801	207,000	7322	216,000	7640	218,000	7711	195,000	6897	63°Load#9
94	April 30	Turbine Generator Mat	B	1 3/4	4.0	149.0	4000	152,000	5376	198,000	7021	186,500	6597	186,000	6579	183,500	6490	61°Load#7
95	"	"	B	2 1/2			4000	131,500	4651	185,500	6561	192,000	6791	189,500	6703	178,000	6296	61°Load#20
96	"	"	B	2 1/4			4000	144,500	5111	177,500	6278	195,500	6915	188,000	6650	181,000	6402	62°Load#31
97	"	"	B	1 1/2			4000	144,000	5093	184,500	6680	187,000	6614	185,500	6561	185,000	6544	53°Load#39
98	"	"	B	2 1/2	4.75	147.2	4000	132,500	4686	171,500	6065	168,000	5942	175,500	6207	160,500	5995	65°Load#47
99	"	"	B	1 3/4			4000	134,500	4757	175,000	6190	185,500	6561	183,500	6490	171,000	6048	64°Load#60
100	"	"	B	2 1/4			4000	147,000	5199	183,000	6473	185,500	6490	187,500	6632	177,000	6261	55°Load#72
101	"	"	B	2 1/4			4000	152,500	5394	182,000	6437	191,000	6756	188,000	6650	165,000	5835	53°Load#80
102	"	"	B	1/2			4000	158,000	5588	209,000	7392	207,000	7322	201,000	7110	192,000	6791	55°Load#91
103	"	"	B	1 3/4	4.25	147.5	4000	148,000	5235	193,500	6844	189,500	6703	187,500	6632	177,000	6261	65°Load#105

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: April 30-May 1

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
104	April 30	Turbine Generator Mat	B	2 1/4			4000	149,500	5288	192,000	6791	187,000	6614	178,000	6296	172,000	6084	64°Load#11
105	"	"	B	2 1/2			4000	151,000	5341	172,500	6101	187,000	6614	187,000	6614	184,000	6508	64°Load #129
106	"	"	B	3			4000	140,000	4952	171,000	6048	176,000	6225	179,000	6331	157,000	5553	64°Load #142
107	"	"	B	2 1/4			4000	149,000	5270	164,500	5818	176,000	6225	175,000	6190	164,000	5801	63°Load #153
108	"	"	B	2 3/4	4.5	147.1	4000	148,000	5235	185,000	6544	181,000	6331	182,000	6437	178,000	6296	63°Load# 164
109	"	"	B	1 3/4			4000	149,000	5270	171,000	6048	168,500	5960	182,000	6437	154,000	5447	60°Load# 176
110	May 1	"	B	1			4000	166,000	5871	192,500	6809	198,500	7021	189,000	6685	178,500	6314	60°Load# 194
111	"	"	B	1			4000	146,500	5182	185,500	6561	183,000	6473	168,000	5871	162,500	5794	63°Load# 207
112	"	"	B	3			4000	147,000	5199	174,000	6154	180,000	6367	179,500	6349	176,500	6243	61°Load# 221
113	"	"	B	1 3/4	4.0	148.6	4000	155,000	5482	196,000	6933	197,000	5968	196,500	5950	189,000	6685	62°Load# 243
114	"	"	B	1 3/4			4000	128,000	4527	164,500	5818	155,500	5500	174,000	6154	145,500	5146	60°Load# 255
115	"	"	B	1 3/4			4000	142,000	5022	187,500	6632	187,500	6632	183,500	6490	152,000	5376	64°Load# 273
116	"	"	B	2			4000	147,000	5199	197,000	6791	179,500	6349	191,500	6773	171,000	6048	64°Load# 284
117	"	"	B	2			4000	143,500	5076	183,000	6473	191,000	6756	187,500	6632	157,500	5571	64°Load# 299
118	"	"	B	2 1/4	4.6	146.2	4000	127,000	4492	164,500	5818	171,500	6066	172,000	6084	156,500	5535	68°Load# 311
119	"	"	B	2 1/2			4000	144,000	5093	186,000	6579	184,000	6508	179,500	6331	174,000	6154	68°Load#331

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

PASTE-UP DOCUMENT

SUMMARY OF CONCRETE CYLINDE..S COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I   NEBRASKA TESTING LABORATORIES, INC.   INCLUSIVE DATES OF REPORT: May 1 -- May 15

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											REMARKS
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
[illegible]	May 1	Turbine Generator Mat	B	2"			4000	144,000	5093	[illegible],000	6402	190,000	6720	138,000	6650	170,[illegible]	6031	55°Load #[illegible]4
121	May 8	Auxiliary Slab 35-1 Bldg.	B	3"	5	147.7	4000	153,000	5412	[illegible],000	6650	188,500	6667	136,500	6052	175,500	6207	59°Load #[illegible]2
122	May 8	"	B	3"			4000	156,000	5601	[illegible],500	7021	198,000	7003	200,000	7074	182,000	6437	63°Load #25
[illegible]	May 8	"	B	2½"			4000	152,500	5394	[illegible],000	5827	188,500	6667	190,000	6720	174,500	6172	62°Load #32
[illegible]	May 8	"	B	2½"			4000	150,000	5305	[illegible],000	5261	188,500	6667	180,000	6367	155,500	5642	61°Load #[illegible]8
[illegible]	May 8	"	B	1"	5		4000	153,500	5429	[illegible],000	6027	173,500	6137	140,500	6657	165,000	5836	63°Load #58
[illegible]	May 8	"	B	1"			4000	176,500	6243	[illegible],000	7206	205,000	7251	157,500	5586	196,000	6933	63°Load #[illegible]1
[illegible]	May 8	"	B	2"			4000	152,000	5376	[illegible],000	5544	184,000	5659	201,500	5420	166,500	*5505	59°Load #[illegible]3
[illegible]	May 9	Water Circ. Tunnel Wall #8	B	2½"	5.25	145.4	4000	117,500	4156	[illegible],500	5146	152,000	5323	147,500	5217	(4 day 97,000	field) 3431	63°Load #[illegible]C
129	May 9	"	B	2½"	5.3		4000	82,500	2918	[illegible],500	[illegible]333	108,500	[illegible]	110,000	[illegible]	Lost on site	job	61°Load #[illegible]7
130	May 12	Reactor Pit RP-2	B	1½"	4.0	147.5	4000	154,500	5465	[illegible],000	5579	185,500	6561	170,000	6296	171,500	6066	61°Load #[illegible]
131	May 12	"	B	1½"			4000	152,500	5248	182,500	[illegible]455	185,500	6561	189,500	6003	177,000	6261	65°Load #[illegible]3
[illegible]	May 12	"	B	2½"			4000	127,000	4492	[illegible],500	[illegible]	149,000	5270	158,000	5588	138,500	4899	64°Load #[illegible]2
133	May 14	Sump Pipes, Drain Pump Pit Drains [illegible]	B	[illegible]"			4000	128,500	4545	[illegible],000	[illegible]417	167,000	5907	167,000	5907	152,000	5376	64°Load #[illegible]
134	May 15	Lower ½ B-11A Containment Structure	A	3½"	4.25	146.0	5000	127,000	4492	163,500	5170	161,500	5783	161,500	5712	150,500	5016	60°Load #[illegible]
135	May 15	"	A	2"			5000	160,000	5659	200,500	7092	201,000	7110	193,500	6844	185,000	6544	70°Load #[illegible]7

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse (1) of original copies of this form.   *Note 28 day Field Reverse

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I   NEBRASKA TESTING LABORATORIES, INC.   INCLUSIVE DATES OF REPORT: May 15, 19[illegible] - May 29, 19[illegible]

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
136	May 15	Lower R M-11A Containment Structure	A	3"	4.0	149.2	5000	155,500	5553	188,500	6667	207,500	7339	192,500	6809	206,500	7304	68°Load #5(*)
137	May 15	"	A	3"			5000	146,000	5164	185,500	6561	175,500	6207	185,500	6561	192,500	6532	63° [illegible] #13
138	May 15	"	A	2½			5000	156,000	5518	188,500	6667	191,000	6756	191,000	[illegible]	191,000	[illegible]	63°Load #57
139	May 15	"	A	1"	4.75	145.0	5000	156,000	5518	189,500	6703	195,500	6915	192,000	6959	192,500	6809	63°Load #53
140	May 15	"	A	1½			5000	140,000	5215	152,500	5803	197,000	6968	188,500	6667	199,500	7056	64°[illegible] #50
141	May 15	"	A	1"			5000	160,000	5659	209,000	7392	213,000	7534	205,000	7251	197,000	6968	63°Load #51
142	May 15	"	A	2"			5000	157,000	5553	205,000	7251	204,000	7216	211,000	7463	Lost on Site	Job	63°Load #102
143	May 15	"	A	1½"			5000	132,000	5176	202,500	7163	207,000	7322	204,500	7322	199,500	7056	67°Load #112
144	May 20	Water Intake Mat #3	B	2½	5.5	146.0	4000	142,000	5022	190,000	6720	194,000	6862	187,500	6632	180,000	6367	61°Load #.
145	May 20	"	B	2½			4000	151,000	5341	195,000	6897	195,000	6557	192,000	6791	156,000	5518	65°Load #19
146	May 20	"	B	1½			4000	165,000	5872	205,000	7251	203,000	7180	201,500	7127	162,000	5730	64°Load #11
147	May 22	TGF-1 TGF-6 Sump wall	B	3	4.75	150.2	4000	153,000	5412	197,000	6950	200,000	7074	193,000	6844	Field cure taken from job		60°Load #10
148	May 23	Auxiliary Building AB-13-wall	B	2½	5.0	147.7	4000	149,000	5270	192,500	6809	188,000	6650	188,000	6650	Unable to Locate		63°Load #10
149	May 23	"	B	1½			4000	154,500	5465	186,000	6579	185,500	6561	190,000	6720	Unable to Locate		63°Load #16
150	May 26		A	1½	4.2	147.7	5000	140,000	4952	175,000	6190	177,000	6261	180,000	6367	162,500	5748	67°Load #
151	May 29	Containment Str. M-1-8	A	2½	4.5	146.[illegible]	5000	176,500	6225	181,500	6490	198,000	7003	173,500	6137	207,500	7339	61°Load #10

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUBMITTED BY [signature]

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: May 29-June 4

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
152	May 29	Containment Str. "-11-B	A	1"			5,000	268,500	5985	706,500	7304	213,000	7535	312,000	7675	212,500	7516	60°Load 1023
153	"	"	A	2"			5,000	258,000	5555	700,000	7357	190,500	7021	168,000	5809	195,500	5397	59°Load 934
154	"	"	A	3"			5,000	241,500	5005	628,500	6314	146,000	5164	201,500	7127	Cast on Site	job	61°Load 850
155	"	"	A	3"	5.3	149.0	5,000	55,000	5826	692,500	7056	201,500	7127	192,500	6816	191,500	6773	62°Load 865
156	"	"	A	1¾"			5,000	274,500	6192	705,500	7209	202,500	7163	203,500	7150	191,500	6773	67°Load 877
157	"	"	A	2¾"			5,000	255,000	5482	194,500	6800	195,000	6897	196,000	2003	Cast on Site	job	62°Load 842
158	"	"	A	2¾"			5,000	270,000	6013	702,000	7145	205,500	7268	158,000	7001	"		62°Load 803
159	"	"	A	2¾"	4.9	149.2	5,000	256,000	5538	102,000	6614	200,500	2052	192,000	6791	"		63°Load 806
160	"	"	A	2¾			5,000	265,500	5854	196,500	6850	199,000	7019	195,500	5819	"		62°Load 892
161	June 2	C.B.I. W-9-BC-12-11	A	3"	5.2	148.2	5,000	57,000	2807	697,500	6786	150,500	5238	195,000	6892	183,000	6403	66°Load 913
162	"	"	A	1¾			5,000	255,000	5500	640,500	6934	216,500	7229	210,000	7428	197,000	6906	63°Load 878
163	"	Turb. Gen. Pe Cole, Turbine Gen. Pe	A	2¾			5,000	264,000	6506	702,000	7145	212,000	7499	202,500	7074	Cast on Site	job	65°Load 904
164	"	"	A	2¾			5,000	268,000	5578	701,500	7410	204,000	7216	198,500	7021	197,500	6937	60°Load 830
165	June 4	Containment Str. M-12-A	A	1¾	4.85	149.2	5,000	260,500	6384	724,000	7923	220,500	7802	200,500	7092	180,500	6384	54°Load 85
166	"	"	A	2			5,000	265,000	5536	80,500	6334	200,000	7074	221,000	7855	190,500	6739	54°Load 8??
167	"	"	A	2¾			5,000	276,000	6225	721,500	7903	220,500	7092	220,000	7782	178,000	6190	62°Load 8??

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Ryan

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 4-June 5

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders reload to 6" diam. 12" high)												
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
160	June 4	Containment M-12-A	A	2¾			5,000	165,000	5871	220,000	7782	202,000	7004	165,500	5854	165,500	5854	65°Load #10
169	"	"	A	2¾	5.2	148.7	5,000	169,000	5936	176,000	6296	170,000	6736	175,500	6254	168,000	6720	63°Load #15
170	"	"	A	1¾			5,000	175,000	6190	173,000	6296	178,500	6314	172,500	6278	168,500	2021	64°Load #19
171	"	"	A	2"			5,000	190,000	6367	196,000	7003	190,200	2021	190,000	7001	185,500	6561	64°Load #24
172	"	"	A	1			5,000	187,500	6656	200,500	7092	200,500	7095	199,500	7056	200,000	7072	64°Load #108
173	"	"	A	2"	4.6	148.8	5,000	187,000	6307	200,000	7074	205,500	7088	200,500	7092	193,000	6827	66°Load #113
174	"	"	A	1¾			5,000	184,500	6509	225,000	7350	222,000	7852	200,500	7092	200,000	7074	66°Load #121
175	"	"	A	1¾			5,000	186,000	6916	210,000	7428	210,000	7428	210,500	7446	200,500	7092	68°Load #134
176	"	"	A	2"			5,000	169,000	5979	201,000	7224	191,500	6774	200,500	7092	180,000	6367	66°Load #149
177	"	"	A	2¾	4.25	148.7	5,000	171,000	6048	186,500	6738	181,500	6534	190,500	6735	109,500	5384	60°Load #162
178	June 5	Intake Str. I-G-3	B	2¾	4.7	148.8	4,000	157,000	5571	195,000	6897	195,500	6915	206,000	7285			65°Load #7
179	June 6	Aux. M-7	B	2¾	5.1	144.9	4,000	131,500	4651	164,000	5801	159,000	5598	158,500	5605	156,000	5516	57°Load #8
180	"	"	B	2¾			4,000	176,000	6225	212,000	7499	219,500	7622	226,500	7304	200,000	7074	68°Load #21
181	"	"	B	2¾			4,000	172,000	6191	201,500	7127	201,000	7110	197,000	6968	201,000	7110	66°Load #33
182	"	"	B	2¾			4,000	164,000	5801	200,500	7092	161,000	6402	199,500	7056	187,500	6632	63°Load #36
183	"	"	B	2¾	4.25	148.3	4,000	164,000	5871	207,500	7339	183,000	6473	192,500	6809	176,500	6243	66°Load #71

NOTES: (1) Specifications for Class A, B and E concretes are similar as on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 6-June 10

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)			III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
184	June 6	Aux M-7	B	2¾			4000	143,000	5090	171,500	6066	180,000	6367	177,500	6278	166,000	5871	66°Load 82
185	"	"	B	2¾			4000	145,000	5129	185,000	6544	190,000	6720	186,000	6550	183,500	6730	64°Load 99
186	"	"	B	2¾			4000	139,500	4969	184,500	6480	184,500	6480	180,000	6320	173,000	6179	60°Load 110
187	"	"	B	1¾	4.0	149.2	4000	154,000	5462	201,000	7130	203,000	7200	198,000	7003	186,000	5933	65°Load 135
188	"	"	B	2¾			4000	136,500	4839	201,000	7130	195,500	6919	204,000	7216	194,000	6862	64°Load 133
189	June 9	Aux 17 & 18	D	2¾	4.25	150.2	4000	160,000	5801	198,000	7003	218,000	7420	200,000	7074	192,000	6791	57°Load 4
190	"	IFG G3	B	3"			4000	171,000	6040	228,000	8065	205,500	7269	183,000	6473	207,500	6697	52°Load 17
191	June 10	M-12-D	A	2"	5.1	149.9	5000	157,000	5553	195,000	6897	204,000	7216	206,000	7286	190,500	6738	57°Load 9
192	"	"	A	2¾			5000	156,000	5518	212,000	7675	200,500	7092	204,000	7216	196,000	6933	59°Load 25
193	"	"	A	3"			5000	142,000	5199	195,000	6897	195,500	6919	183,000	6527	191,500	6773	53°Load 43
194	"	"	A	1¾			5000	163,000	5765	204,000	7216	212,000	7499	216,000	7640	205,500	7269	56°Load 56
195	"	"	A	2"	5.25	145.8	5000	155,000	5482	204,500	7233	181,000	6529	211,000	7534	180,000	6367	53°Load 57
196	"	"	A	1¾			5000	164,000	5801	210,500	7446	213,500	7552	216,000	7640	209,500	7410	56°Load 86
197	"	"	A	1"			5000	165,000	5836	217,000	7675	222,500	7870	204,500	7233	215,500	7622	56°Load 99
198	"	"	A	2¾			5000	155,000	5482	204,000	7216	202,500	7161	200,000	7074	195,000	6897	55°Load 114
199	"	"	A	2¾	5.25	148.6	5000	155,000	5482	202,500	7163	206,500	7304	206,500	7304	189,500	6703	52°Load 130

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

NTL By: [signature]

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 10 thru [illegible]

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		VIEW-DAY FIELD		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
200	June 10	M-12-6	A	2¾			5000	155000	5624	200,000	7076	187,500	6632	203,500	7198	190,000	6720	60°Load 142
201	"	"	A	3"			5000	154000	5442	185,500	6561	196,000	7003	198,000	7001	193,000	6827	62°Load 145
202	"	"	A	3¾			5000	152500	5395	190,000	6720	202,500	7167	194,000	6862	183,000	6473	62°Load 147
203	June 11	J 5 5 6	B	2¾	4.75	148.6	4000	146000	5229	187,000	6614	191,000	6756	201,500	7127			62°Load 10
204	"	B C 12 A 14	B	2¾			4000	157500	5571	211,500	7481	216,000	7569	196,500	6950			69°Load 28
205	"	"	B	2¾			4000	172500	6101	192,000	7039	209,500	7410	194,500	6880	196,500	6880	66°Load 4
206	June 13	Aux Building M-6	B	1¾	6.59	148.4	4000	166000	5871	211,000	7463	202,000	7145	221,500	7835	205,000	7251	66°Load 3
207	"	"	B	1¾			4000	178000	6331	204,000	7251	202,500	7162	202,000	7145	167,500	6632	65°Load 20
208	"	"	B	2¾			4000	170000	6013	209,000	7251	209,000	7251	202,000	7145	190,000	6720	66°Load 36
209	"	"	B	2¾			4000	185000	6546	221,500	7805	196,000	6933	221,000	7461	213,000	7534	65°Load 5
210	"	"	B	1"	5.6	149.4	4000	180000	6367	220,000	7782	213,500	7491	221,500	7835	202,500	7269	62°Load 6
211	"	"	B	2"			4000	169500	5975	188,500	6667	210,500	7446	207,000	7322	178,000	6296	56°Load 6
212	"	"	B	1¾			4000	177000	6084	216,000	7640	200,500	7089	218,500	7052	176,500	6243	63°Load 9
213	"	"	B	2¾			4000	157000	5553	212,000	7499	216,000	7640	220,500	7799	185,000	6546	65°Load 112
214	June 16	Containment Str.	A	¾	5.1	149.6	5000	186000	6597	190,500	6384	201,000	7110	213,500	7552	222,000	7852	66°Load 9
215	"	"	A	1¾	4.4	148.4	5000	193500	6844	216,000	7640	226,500	8012	227,000	8029	201,000	7110	68°Load 5

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

NTL By: [signature]

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 16-June 20

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as: Temperature of Concrete
216	June 16	H-10-A Containment Str.	A	2"			5000	173,500	6131	203,000	7180	178,000	6296	200,000	7074	200,500	7092	62° Load 30
217	"	"	A	1½"			5000	187,500	6633	193,500	6137	217,500	7693	204,000	7216	196,500	6950	60° Load 47
218	"	"	A	3/4			5000	195,000	6897	201,000	7145	210,500	7446	210,000	7428	218,500	7729	66° Load 56
219	"	"	A	1½	4.3	148.0	5000	190,500	6164	215,000	7605	215,000	7605	205,500	7269	211,000	7463	65° Load 66
220	"	"	A	2"			5000	173,500	6131	205,000	7251	196,000	6933	200,500	7092	191,500	6773	63° Load 81
221	"	"	A	2½			5000	164,500	5818	218,000	7711	204,500	7233	206,500	7375	191,000	6402	63° Load 95
222	"	"	A	1 3/4			5000	173,500	6131	214,000	7569	214,500	7587	211,500	7481	185,000	6544	65° Load 104
223	"	"	A	2"	4.75	147.1	5000	166,000	5871	218,500	7729	202,500	7163	200,000	7145	170,000	6296	54° Load 121
224	"	"	A	3/4			5000	175,500	6011	218,000	7711	221,000	7818	199,000	7039	217,500	7693	65° Load 141
225	"	"	A	2½			5000	164,000	5801	210,000	7428	207,500	7339	209,000	7357	195,000	6897	64° Load 157
226	June 17	N-6 - C.W.T.	B	2	5.75	147.2	4000	142,500	5040	188,000	6650	193,500	6738	188,500	6667			45° Load 11
227	"	"	B	2½			4000	158,000	5800	193,500	6844	200,000	7074	204,000	7216			57° Load 24
228	"	"	B	1½			4000	155,000	5482	201,000	7110	198,000	7003	193,500	7096			61° Load 37
229	"	"	B	2½			4000	147,500	5217	187,000	6614	193,000	6827	195,000	6897			56° Load 50
230	June 18	I-5-B	B	3"	2.1	147.0	4000	150,000	5305	190,500	6738	176,000	6225	186,500	6597			65° Load 8
231	June 20	Water Intake I-5-A	B	2 3/4	5.3		4000	159,500	5642	201,500	7127	201,500	7127	204,500	7233			65° Load 11

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - (OR) CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 21-June 25

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
232	June 21	Containment Mat M-10-5	A	2¼	5.1	148.6	5000	149,000	5270	170,000	6020	165,000	5830	172,000	6090			65° Load 1
233	"	"	A	2¼			5000	157,000	5553	184,000	6510	185,000	6550	178,000	6030			64° Load 2
234	"	"	A	2¼			5000	160,000	5659	188,000	6650	188,500	6670	182,000	6440			61° Load 3
235	"	"	A	2			5000	158,000	5588	184,000	5800	184,500	5810	175,000	6190			62° Load 5
236	"	"	A	1¼			5000	146,500	5102	188,000	6650	175,500	6190	169,000	5950			63° Load 6
237	"	"	A	2¼	5.4	147.9	5000	145,500	5146	173,000	6120	164,500	5820	167,000	5910	10		62° Load 7
238	"	"	A	2			5000	154,000	5447	151,500	5360	179,500	6350	149,500	5288	P		63° Load 8
239	"	"	A	2¼			5000	146,500	5182	168,500	5965	160,000	5770	161,000	5700	2	5-1	62° Load 9
240	"	"	A	13/4			5000	148,000	5235	150,500	5323	169,000	6270	164,000	5800	9		60° Load 11
241	"	"	A	3/4			5000	151,500	5359	188,500	6670	178,000	6300	161,500	5820			60° Load 12
242	"	DS-2 West	Load A	1¼	6.0	147.3	5000	146,500	5182	166,000	5870	155,000	5410	170,000	6020	15		57° Load 11
243	June 23	M-9-4	A	3	5.2	149.1	5000	150,000	5310	184,500	6530	190,000	6720	185,500	6585	10		56° Load 19
244	"	"	A	2¼	500		5000	147,000	5200	173,500	6140	180,000	6370	165,000	5850			57° Load 22
245	"	"	A	2 3/4			5000	128,000	4530	183,500	6495	185,500	6565	176,500	6245			45° Load 30
246	"	"	A	1 3/4			5000	154,500	5465	196,000	6940	186,000	6590	183,500	6550			57° Load 45
247	"	"	A	2			5000	155,500	5505	180,000	6370	186,500	6705	179,500	6350			60° Load 58

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 21-June 25

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)			III (28-DAY FAS)		IV (28-DAY FAS)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
248	June 23	M-9-A	A	2"	5.2	148.3	5000	148,000	5240	199,500	7060	188,500	6670	189,000	6690			64 Load 71
249	"	"	A	2"			5000	133,500	4620	183,000	6480	180,000	6370	184,000	6510			64 Load 85
250	"	"	A	1 3/4			5000	148,500	5255	173,500	6140	175,500	6210	175,500	6190			68 Load 98
251	"	"	A	2"			5000	155,500	5505	188,500	6665	192,500	6810	185,000	6550			64 Load 110
252	"	"	A	2"			5000	155,500	5505	170,500	6035	152,500	5395	173,000	6120			64 Load 122
253	"	"	A	1 3/4			5000	142,500	5045	166,500	5855	183,500	6495	160,000	5660			67 Load 5
254	June 24	TG S-2	A	3"	5.1	146.7	5000	152,500	5394	195,500	6915	193,500	6844	191,000	6756	193,500	6839	68 Load 7
255	"	"	A	1 3/4			5000	155,000	5482	185,500	6544	196,000	6933	193,500	6844	170,000	6013	64 Load 13
256	"	AX 57	B	3"	6.6	148.3	4500	145,000	5129	191,500	6773	187,000	6614	173,500	6137	176,000	6225	68 Load 6
257	"	TG F-4	A	3"			5000	148,500	5252	187,000	6614	179,000	6331	181,500	6420	180,500	6381	68 Load 18
258	June 25	MB Aux Mat	B	2 3/4	6.1	148.6	4000	128,500	4545	178,000	6296	174,000	6154	174,000	6154	161,500	5712	68 Load 8
259	"	"	B	3 1/4			4000	133,500	4722	173,000	6119	176,000	6225	172,000	6084	170,000	6013	68 Load 21
260	"	"	B	1 1/4			4000	142,500	5040	182,000	6437	195,500	6916	186,500	6597	176,500	6243	67 Load 33
261	"	"	B	2"			4000	140,500	4960	193,000	6827	188,500	6667	190,000	6720	169,000	6650	67 Load 47
262	"	"	B	1 3/4			4000	139,000	4916	181,500	6420	176,500	6243	181,000	6402	178,000	6296	66 Load 60
263	"	"	B	1 1/4	6.3	148.1	4000	137,000	4845	171,000	6048	172,000	6084	167,500	6632	162,500	5748	67 Load 74

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Robert M. Mundt

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 25-June 28

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded in 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY) FIELD		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
264	June 25	NS Aux Mat	B	2 3/4			4000	124,000	4386	165,500	5500	164,000	5801	160,000	5659	148,000	5235	66 Load 66
265	"	"	B	2 3/4			4000	129,000	4563	179,000	6330	176,000	6225	185,500	6597	166,500	5889	67 Load 98
266	June 25	DS-5 & 7	B	2 1/2			4000	137,500	4863	185,500	6561	186,500	6597	183,000	6650			64 Load 6*
267	"	AX 39	B	1 3/4			4000	136,500	4828	199,500	7055	203,000	7180	202,000	7145	191,500	6773	65 Load 8*
268	June 27	TGF 9	A	1 1/2	3.7	149.0	5000	172,500	6101	223,000	7905	209,000	7398	217,500	7693	215,500	7622	67 Load 11
269	"	"	A	2 3/4			5000	176,000	6225	224,000	7923	224,500	7941	220,000	8065	221,500	7835	67 Load 26
270	"	"	A	1"			5000	162,000	5730	206,500	7269	226,000	7994	216,500	7650	204,000	7216	67 Load 37
271	"	"	A	1 3/4			5000	168,000	5942	201,500	7127	206,000	7286	194,500	6880	185,000	6544	68 Load 49
272	June 28	M-R-B	A	2 1/4	4.6	149.4	5000	165,000	5836	173,000	6120	173,500	6140	178,500	6315	188,000	6650	67 Load 12
273	"	"	A	2 3/4			5000	133,000	4704	198,000	7010	188,000	6650	202,500	7163	197,000	6968	65 Load 20
274	"	"	A	2"			5000	159,500	5642	175,000	6190	190,000	6720	187,500	6635	184,000	6509	66 Load 32
275	"	"	A	2 1/4			5000	159,500	5642	186,500	6599	185,500	6560	170,000	6020	185,000	6544	68 Load 43
276	"	"	A	2"			5000	149,500	5288	186,000	6580	170,000	6020	185,000	6550	177,000	6261	66 Load 61
277	"	"	A	2 3/4	4.3	149.1	5000	178,500	6314	203,500	7198	194,000	6870	193,500	6850	184,000	6509	67 Load 74
278	"	"	A	2 1/4			5000	170,500	6031	200,000	7088	190,500	6740	196,000	6940	209,000	7392	68 Load 86
279	"	"	A	2 1/2			5000	166,000	5871	179,000	6333	187,500	6635	188,500	6670	199,000	7039	66 Load 101

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. *Separate Data

SUBMITTED BY: Walter M. Stewart

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: June 28-July 21

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
280	June 28	M-98 Intake Str. 25-43 Wall	A	23/4			4,000	137,000	4846	173,500	6140	194,500	6885	175,000	6190	167,500	5931	62°Load	104
281	July 1		B	2¾	4.75	140.2	4,000	130,000	4596	170,500	6031	179,000	6331	186,000	6579			68°Load	4
282	July 1	DS-39 Wall & Mat. Water Circ. Tunn.	B	2¾			4,000	146,000	5166	193,000	6827	192,500	6809	199,000	7039			65°Load	7
283	July 2		B	3¼	4.75		4,000	130,500	4616	171,000	6048	173,000	6119	171,000	6048			68°Load	10
284	July 2	DS-31 Wall Pedestal	B	2¾			4,000	125,000	4421	171,500	6066	166,500	5889	176,000	6225			66°Load	6
285	July 9	EC-15	B	2¾	5.3	148.6	4,000	151,500	5359	197,000	6968	201,500	7126	200,500	7092			65°Load	6
286	July 9	EX-64166 Walls	B	3¾			4,000	121,000	4306	165,500	5856	150,500	5326	140,000	5305			66°Load	16
287	July 9	DS23 Wall	B	2¾			4,000	127,500	4686	172,500	6101	176,000	6225	174,000	6225			62°Load	4
288	July 11	DS56	B	2¾	4.2	148.0	4,000	144,500	5111	182,500	6455	182,000	6437	181,500	6420	176,500	6243	79°Load	4
289	July 11	CW16-12	B	3¼			4,000	131,000	5093	177,500	6278	176,000	6225	177,000	6261	170,500	6031	63°Load	17
290	July 11	CW16-12	B	2¾			4,000	124,000	4240	175,000	6190	173,500	6138	181,500	6420	165,500	5854	84°Load	25
291	July 17	16F 64646	B	3¼	6.1	145.8	4,000	130,000	4598	175,000	6190	171,500	6066	184,500	5283	153,500	5429	68°Load	9
292	July 18	64646	B	3¼	6.2 / 5.1	144.0	4,000	123,500	5368	166,500	5894	163,500	5783	66,500	5885	173,000	6119	69°Load	3
293	July 21	DS25 Wall	B	3¼	5.1	148.2	4,000	124,000	4240	175,000	6190	173,500	6137	175,000	6119	174,500	6172	68°Load	11
294	July 21	DS45	B	2¾			4,000	142,000	5022	181,500	6420	178,000	6296	183,000	6473	177,000	6261	65°Load	20
295	July 21	DS45	B	3¼			4,000	126,500	4474	160,000	5659	160,000	5659	162,500	5748	157,000	5551	62°Load	34

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

PLACE ON SITE — NOT AT AREA

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: July 21-July 25

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon 6"x12" cylinders molded to 6" diam., 12" high)												
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY CAS)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT % per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete	
296	July 21	W-435	B	23/4			4,000	132,500	4684	184,000	6597	173,000	6119	182,000	6614	182,000	6437	66°Load	48
297	July 21	W-435	B	2"			4,000	140,000	4952	181,000	6402	164,500	5820	172,500	6101	165,000	5836	67°Load	61
298	July 21	W-435	B	2¾	5.6	148.6	4,000	145,000	5129	177,500	6278	180,000	6367	177,500	6278	177,500	6278	67°Load	73
299	July 21	W-435	B	3¼			4,000	129,500	4580	180,000	6367	180,000	6367	173,500	6139	182,000	6437	66°Load	96
300	July 21	W-435	B	2¾			4,000	133,000	4704	185,500	6561	183,500	6490	179,500	6365	175,000	6190	66°Load	99
301	July 21	W-435	B	2"			4,000	139,000	4916	183,500	6490	190,000	6720	182,000	6432	186,000	6506	67°Load	111
302	July 22	18E-13	B	23/4	6.0	146.3	4,000	129,500	4580	172,000	6213	176,000	6359	161,000	5585	145,500	5146	67°Load	6
303	July 22	8X-53	B	1"			4,000	130,000	4598	172,000	6161	170,000	6296	170,000	6013	Not to be Placed		64°Load	3
304	July 22	18E-13	B	23/4			4,000	117,000	4138	160,500	5677	160,000	5677	156,000	5516	163,000	5068	66°Load	18
305	July 23	DS-2245	B	13/4	5.8		4,000	146,000	5164	168,000	5944	162,500	5749	161,000	5692	160,000	5642	63°Load	10
306	July 23	8X60 Wall	B	2"			4,000	135,000	4775	169,500	5995	195,000	6897	175,500	6211	162,500	5748	66°Load	5
307	July 24	18E 14	B	2¾	6.0	147.7	4,000	128,500	4545	177,000	6261	171,500	6066	170,500	6349	162,500	5925	66°Load	16
308	July 24	8X70	B	2¾	-	-	4,000	122,500	4410	175,000	6190	174,500	6349	172,000	6784	151,000	5341	68°Load	3
309	July 25	55-2	B	2"	4.3	146.1	4,000	130,000	4951	162,000	5230	156,500	5535	125,000	4190	*161,000	5058	66°Load	10
310	July 25	55-2	C	2¾	-	-	4,000	128,000	4527	161,000	5695	162,500	5730	166,500	5858	*159,000	5571	66°Load	23
311	July 25	55-2	B	2¾			4,000	117,000	3984	172,000	6256	170,000	6031	174,500	6172	*156,000	5465	67°Load	35

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. *14 Day Field Cure Requested by GHDAR.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: DEPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: July 29 - August 14, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	STRENGTH per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
312	7-25-69	SS - 2	B	3"			4,000	138,000	4978	169,500	5995	177,500	6278	178,500	6314	168,500	5960	68°Load	47
313	"	"	B	3"			4,000	126,000	4457	175,500	6207	170,000	6013	169,500	5995	167,500	5925	65°Load	60
314	"	"	B	3 1/2"	5.8	148.0	4,000	117,000	4138	147,000	5199	163,000	5765	164,500	5801	143,000	5058	66°Load	73
315	"	"	B	2"			4,000	148,500	5252	199,500	7056	200,000	7074	191,000	6756	164,000	5801	70°Load	84
316	"	"	B	2 3/4"			4,000	128,000	4527	182,500	6455	178,000	6296	180,500	6384	153,000	5412	68°Load	55
317	8-8-69	15 - 15	B	2 3/4"	5.2	147.5	4,000	131,000	4633	163,000	5765	163,000	5765	173,000	6119	169,000	5978	66°Load	6
318	8-11-69	JOF - 8	B	2"	4.6	148.5	4,000	138,500	4899	163,000	5765	178,000	6296	168,000	5942	154,500	5465	70°Load	7
319	"	"	B	2 1/2"			4,000	132,500	4686	167,000	5907	169,500	5995	168,000	5942	156,000	5518	69°Load	17
320	"	"	B	2 1/4"			4,000	130,000	4298	174,000	6154	172,500	6101	168,500	5960	152,500	5394	66°Load	28
321	8-12-69	30 - 5 (Wall)	B	2"	4.9	147.8	4,000	125,500	4439	160,000	5662	157,500	5571	168,000	5942	Not Ac Area P	cced.	69°Load	3
322	8-13-69	6X - 48	B	2"	4.1	148.0	4,000	119,500	4227	156,500	5535	159,000	5624	161,500	5712	Not Ac Area P	cced.	76°Load	6
323	8-14-69	TB - 11 & TB - 5	B	2 1/4"	5.2	149.1	4,000	129,500	4580	178,500	6314	172,500	6101	180,000	6367	162,000	5730	64°Load	1
324	"	"	B	2 3/4"			4,000	120,500	4262	170,000	6013	174,000	6154	175,000	6190	171,000	6048	63°Load	21
325	"	"	B	2 1/2"			4,000	121,000	4280	177,000	6261	170,000	6013	168,000	5942	159,500	5642	64°Load	36
326	"	"	B	"			4,000	121,000	4280	170,500	6031	167,500	5925	161,000	5695	162,500	5748	64°Load	51
327	"	"	B	3 3/2			4,000	121,000	4280	152,000	5376	155,900	5520	159,500	5642	150,500	5323	62°Load	63

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. *14 day field cure broken @ request of GH&BR.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 8/14/69 to 8/26/69

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)														
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
328	8/14/69	TB-11 & TB-5	B	2-3/4	4.5	148.2	4,000	127,500	4,510	174,000	6,154	165,500	5,854	164,500	5,818	157,500	5,571	65° Load 72
329	8/14/69	TB-11 & TB-5	B	3-1/2			4,000	131,000	4,633	168,500	5,960	166,000	5,871	168,500	5,950	157,500	5,571	66° Load 83
330	8/14/69	TB-11 & TB-5	B	3-1/4			4,000	117,000	4,138	157,000	5,307	156,000	5,518	159,000	5,624	157,000	5,553	68° Load 98
331	8/14/69	TB-11 & TB-5	B	3			4,000	132,500	4,686	177,500	6,278	177,000	6,261	173,000	6,119	154,000	5,447	66° Load 107
332	8/15/69	AX 67 Wall	B	3	5.0	150.3	4,000	115,000	4,065	157,500	5,571	154,000	5,447	158,500	5,606	154,500	5,465	74° Load 5
333	8/15/69	DS-1 Wall	B	3			4,000	120,500	4,262	160,000	5,659	162,500	5,783	158,000	5,588	150,500	5,323	76° Load 2
334	8/15/69	TGF 11	B	3-3/4	4.0	149.5	4,000	135,500	4,793	168,000	5,942	179,000	6,331	177,500	6,278	175,500	6,207	65° Load 2
335	8/20/69	AX 77A	B	2-3/4	4.1	150.2	4,000	122,500	4,335	172,500	6,101	170,500	6,172	170,500	6,031	Not at Area Placed		80° Load 5
336	8/21/69	AX 54	B	3	4.4	148.4	4,000	125,500	4,439	169,000	5,979	168,500	5,995	171,000	6,048	162,000	5,730	76° Load 2
337	8/21/69	AX 33	B	2-1/4			4,000	126,500	4,439	164,500	5,816	172,500	6,101	165,000	5,836	153,500	5,783	77° Load 4
338	8/22/69	DS-10	B	3-1/2	6.0	147.1	4,000	112,500	4,156	155,500	5,503	158,000	5,335	153,500	5,429	144,500	5,111	64° Load 10
339	8/22/69	TGF 10	B	3			4,000	120,500	4,403	158,000	5,588	164,000	5,801	173,000	6,119	164,500	5,819	66° Load 4
340	8/22/69	DS-10	B	2			4,000	124,500	4,757	158,000	5,588	172,000	6,084	161,000	5,695	167,500	5,925	68° Load 20
341	8/22/69	DS-10	B	2-1/4			4,000	131,000	4,722	176,500	6,243	173,500	6,137	181,500	6,420	169,000	5,978	68° Load 32
342	8/22/69	AX 69 Wall	B	2-1/2			4,000	128,500	4,403	164,000	5,801	166,000	5,871	163,000	5,765	160,000	5,659	79° Load 3
343	8/25/69	AX 87 Wall	B	2	4.7		4,000	125,500	4,421	164,000	5,801	166,500	5,889	166,000	5,871	160,000	5,659	78° Load 4

NOTE(S): (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: DPPD - FORT CALHOUN STATION - UNIT 1 — HENSEN TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Aug. 26-Sept. 12, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
344	Aug. 26	AX68	B	2 1/4			4,000	124,500	4403	168,500	5960	169,000	5975	170,000	6013	165,500	5854	78°Load	#6
345	Aug. 28	AX37 & 37a	B	3"	4.8	147.7	4,000	130,500	4615	173,000	6119	166,500	5889	157,500	5925	Not		77°Load	#2
346	Sept. 2	AX45	B	2"	4.7		4,000	134,500	4757	166,000	5871	174,500	6172	154,000	5803	At	Area	75°Load	#2
347	Sept. 3	AX76	B	2 1/2	4.2		4,000	131,500	4651	162,800	5758	174,500	6172	175,000	6190	Placed.		74°Load	#1
348	Sept. 5	AX71	B	3"	5.6	147.4	4,000	113,000	3997	185,500	6561	180,500	6384	175,500	6207	160,000	5659	77°Load	#6
349	Sept. 5	AX35 & 37b	B	1 3/4	5.4		4,000	131,500	4651	179,500	6349	180,500	6384	181,500	6420	165,000	5836	56°Load	#2
350	Sept. 10	SB-2 Walls	B	2 1/4	5.5		4,000	120,000	4244	167,500	5926	172,000	6084	169,000	5978	Not At Area Placed.		74°Load	#6
351	Sept. 11	TB 22,23,24,25 Walls	B	2 1/2	5.1	137.5	4,000	19,000	6209	169,500	5995	176,000	6225	172,000	6084	153,000	5412	70°Load	#6
352	Sept. 11	"	B	3"			4,000	106,000	3749	168,000	5942	150,500	5323	152,000	5376	141,500	5005	75°Load	#18
353	"	"	B	3"			4,000	128,500	4545	162,000	5730	164,000	5801	167,500	5925	148,500	5252	79°Load	#33
354	"	"	B	2 1/2			4,000	124,500	4403	157,500	5571	173,500	6349	173,500	6137	149,000	5295	77°Load	#45
355	Sept. 12	TB 9&10 Slab	B	3"	5.3	140.2	4,000	16,500	5090	157,500	5571	163,000	5765	157,500	5571	161,000	5765	50°Load	#11
356	"	"	B	2 1/4			4,000	144,000	5093	173,000	6119	185,500	6561	166,000	5871	169,000	5842	68°Load	#23
357	"	"	B	1 3/4			4,000	131,000	4633	150,000	5305	160,000	5659	155,500	5500	169,000	5978	63°Load	#35
358	"	"	B	2 1/2			4,000	122,000	4315	175,000	6243	166,000	5871	176,000	6225	155,000	5482	65°Load	#43
359	"	"	B	2"			4,000	124,000	4386	169,500	5942	170,500	6031	157,000	5553	170,500	6031	69°Load	#51

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George A. Hulsey
Engineer

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Sept. 12-Sept. 19, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
360	Sept. 12	IB8 & 10 Slab	B	2	5.4	147.6	4,000	115,500	4085	165,000	5836	150,000	5305	162,500	5748	154,500	5465	57°Load 74
361	"	"	B	1 3/4			4,000	130,500	4616	171,500	6066	175,000	6190	172,000	6084	177,500	6278	58°Load 94
362	"	"	B	1 1/2			4,000	134,000	4740	170,500	6031	180,000	6367	179,000	6331	168,500	5955	58°Load 98
363	"	"	B	2"			4,000	136,500	4828	167,500	5926	180,500	6384	181,500	6420	173,000	6119	58°Load109
364	"	"	B	2 1/2			4,000	123,500	4368	161,000	5695	167,500	5925	156,000	5518	155,500	5500	60°Load121
365	"	"	B	1 3/4	5.1	148.6	4,000	133,500	4722	171,000	6048	183,000	6473	166,500	5889	160,000	5659	57°Load134
366	"	"	B	1 3/4			4,000	137,500	4863	171,500	6066	176,000	6225	173,500	6137	182,000	6437	57°Load146
367	Sept. 15	AX62, 63, 64,	B	2 3/4	4.5	-	4,000	127,500	4510	153,000	5412	150,500	5323	156,000	5518	145,000	5129	73°Load 4
368	Sept. 16	North Section of AX63.	"C"	2"	X	2364	3,000	120,000	4244	175,000	6190	176,000	6190	171,500	6066	145,000	5129	80°Load 6
369	Sept. 17	Cap @ North End of IB 9	B	2 1/4	4.5	149.9	4,000	138,500	4828	180,000	6367	185,500	6561	175,000	6190	141,500	5005	67°Load 3
370	Sept. 18	OS-9	B	2 1/2	4.7	148.8	4,000	138,500	4809	150,500	5877	170,000	6013	165,000	5836	130,500	4616	64°Load 10
371	"	"	B	2 1/2			4,000	127,500	4510	150,500	5323	170,000	6013	168,500	5960	140,500	4969	66°Load 22
372	"	"	B	3			4,000	115,500	4085	155,000	5482	155,500	5500	155,500	5500	141,500	5005	67°Load 32
373	Sept. 19	AX3	B	2 3/4	5.2		4,000	119,500	4227	172,500	6278	166,500	5889	164,000	5801	156,000	5518	69°Load 3
374	"	AX28 Slab	B	3"			4,000	125,000	4421	166,000	5871	166,500	5889	166,500	5889	150,000	5305	70°Load 6
375	"	AX24	B	2 1/2	6.0	148.2	4,000	125,500	4439	173,000	6119	165,500	5854	174,500	6172	152,000	5376	67°Load 6

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Sept. 22-Sept. 26, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
376	Sept. 22	AX58	B	2 1/2	4.6		4,000	127,800	4610	175,000	6207	180,000	6362	172,000	6084	NOT AT PLACED	AREA	71°Load 4
377	Sept. 24	TGF-12	B	2 1/4	5.5		"	130,500	4616	165,000	5830	175,000	6190	170,000	6013	130,000	4598	67°Load 8
378	"	"	B	2 3/4			"	126,000	4457	175,000	6190	165,500	5854	165,500	5854	140,000	4932	68°Load 20
379	"	AX-16	B	3			"	122,500	4335	173,500	6137	170,000	6013	175,500	6207	NOT AT PLACED	AREA	68°Load 31
380	Sept. 25	TG 16,19,20,21	B	2 1/4	4.6	149.0	"	122,000	4315	163,500	6490	180,500	6381	174,500	6172	152,500	5394	69°Load 10
381	"	"	B	3 1/2			"	121,000	4280	162,500	5748	168,500	5960	169,000	5942	150,500	5323	71°Load 23
382	"	"	B	2 3/4			"	128,500	4545	174,500	6172	175,000	6190	177,500	6278	156,500	5535	71°Load 37
383	"	"	B	2 3/4			"	132,000	4669	180,000	6367	176,500	6243	177,500	6278	146,000	5164	71°Load 43
384	Sept. 26	IB & J 10 Slabs	B	2 1/4	5.5	147.9	"	120,500	4262	162,000	5730	172,000	6084	164,500	5818	152,000	5376	66°Load 10
385	"	"	B	2 3/4			"	124,000	4386	170,000	6013	173,000	6119	169,000	5978	131,000	4633	69°Load 22
386	"	"	B	3 1/2			"	125,500	4439	160,000	5659	160,000	5659	154,000	5447	138,000	4881	70°Load 35
387	"	"	B	1 3/4			"	125,000	4421	172,000	6084	166,000	5871	169,000	5288	151,500	5359	70°Load 47
388	"	"	B	2 1/4			"	130,000	4598	174,500	6172	185,500	6561	185,500	6561	155,000	5482	69°Load 60
389	"	"	B	2 3/4	5.6	148.6	"	125,500	4439	172,000	6084	170,500	6031	172,000	6084	152,000	5376	68°Load 72
390	"	"	B	1 3/4			"	125,500	4439	187,000	6614	184,000	6508	189,000	6685	164,500	5818	67°Load 81
391	"	"	B	2 3/4			"	130,500	4616	184,000	6508	182,000	6437	180,000	6367	146,500	5182	69°Load 93

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Dan E. McCarthy, President

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Sept. 27-Oct. 9, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
392	Sept. 28	CV Wall	A	3	4.2	148.3	5,000	152,000	5376	197,000	6968	205,500	7223	196,500	6950	145,000	5129	60°Load 1
393	Sept. 29	" Containment	A	3			5,000	144,000	5093	179,500	6349	198,000	7003	190,000	6720	158,500	5606	78°Load 20
394	"	"	A	2 3/4			"	150,000	5305	206,500	7300	198,500	7021	202,500	7163	151,000	5341	68°Load 27
395	Sept. 30	Containment & Mud Slab	B	3			4,000	129,500	4580	161,500	5712	176,500	6243	178,000	6296	157,500	5571	70°Load 4
396	"	AX - 16	B	3 1/4		147.4	4,000	126,500	4474	167,000	5907	170,500	6031	169,000	5976	140,000	4952	58°Load 9
397	Oct. 1	AX-31	B	2 1/4	4.3		4,000	132,000	4669	174,000	6156	174,500	6172	180,000	6367	135,000	4775	66°Load 3
398	Oct. 2	AX-7	B	3	4.8	148.4	4,000	131,500	4651	170,500	6031	174,000	6184	160,500	5677	133,000	4706	74°Load 7
399	"	6X836 Slab	C	2		243	5,000	121,000	1280	147,000	6614	175,000	6190	180,000	6367	135,000	4775	90°Load 3
400	Oct. 3	AX27 Wall	B	2 1/4	5.2	148.4	4,000	130,000	4598	160,500	5960	156,000	5516	155,000	5482	NOT AT AREA PLACED		71°Load 5
401	"	T6-25 14&15	B	2			4,000	130,000	4598	165,000	5836	175,000	6190	164,500	5818	155,000	5482	72°Load 11
402	"	"	B	2 1/2			4,000	105,000	3714	148,000	5235	135,000	4775	148,500	5257	125,000	4421	76°Load 22
403	"	"	B	3			4,000	115,000	4067	155,000	5482	162,500	5748	155,500	5500	121,000	4280	78°Load 30
404	Oct. 7	AX36 Wall	B	2 1/2	5.0	148.7	4,000	125,000	4275	166,000	5979	169,500	5238	177,500	6278	155,500	5500	66°Load 2
405	Oct. 8	SP Mud Slab 3 B	B	2 3/4	5.2	147.6	4,000	122,000	4315	169,000	6367	166,500	5592	168,000	6367	145,500	5146	62°Load 4
406	Oct. 9	AX10 Wall	B	2 3/4	5.3	148.0	4,000	116,500	4005	155,000	5482	165,500	5856	155,000	5482	NOT AT AREA PLACED		69°Load 9
407	"	T8 16&17 Walls	B	3 1/2			4,000	110,500	3909	155,000	5482	145,000	5129	148,500	5252	130,500	4616	70°Load 22

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Oct. 5 - Oct. 29, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
							I (7-DAY)			II (28-DAY LAB)		III(28-DAY LAB)		IV (28-DAY LAB)		V(28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT % per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
408	Oct. 9	TB-16, 17 & 18	B	3"			4,000	115,500	4085	151,500	5590	160,000	5659	155,000	5482	130,000	4598	71°Load38
409	Oct. 10	AX - 8	B	2 3/4	6.0	46.26	4,000	117,000	4138	167,000	5937	171,500	6066	168,000	5942	131,500	4651	68°Load14
410	Oct. 14	Conduit Protection S Face TB-25	B	2"			4,000	137,000	4846	182,500	6455	175,500	6207	160,000	6367	151,000	5341	52°Load 1
411	Oct. 17	Containment Cn 2 Wall	A	3"	4.7	148.2	5,000	143,000	5058	189,500	6703	189,500	6667	189,000	6685	152,000	5376	58°Load 11
412	Oct. 17	"	A	3"			5,000	118,000	4174	170,000	6013	174,500	6172	172,000	6084	154,000	5447	58°Load23
413	"	"	A	3"			5,000	132,000	4669	188,000	6685	170,000	6013	171,500	6066	150,000	5305	57°Load33
414	"	"	A	3"			5,000	123,000	4350	165,000	5836	180,500	6384	173,500	6137	162,000	5730	66°Load45
415	Oct. 20	AX-3E-"E" Wall	B	3"	6.0	145.1	4,000	113,000	3997	148,500	5252	143,000	5058	142,500	5040	NOT AT AREA PLACED		60°Load 2
416	Oct. 21	AX33	B	2 3/4	6.0		4,000	116,000	4103	170,000	6331	168,000	5586	168,500	5960	168,000	5942	65°Load12
417	"	AX22	B	2 1/2			4,000	132,000	4669	169,000	5978	173,500	6137	139,500	4934	143,500	5076	67°Load16
418	Oct.23	IS - 56	B	2 1/4	6.0	145.1	4,000	115,000	4067	174,000	6154	165,000	5836	165,000	5836	149,000	5270	56°Load 8
419	"	"	B	2 1/2			4,000	114,500	4049	162,000	5937	160,000	5659	165,000	5836	133,500	4722	63°Load22
420	Oct. 27	AX - 25	B	2 1/4	5.5	-	4,000	123,500	4368	170,000	6013	172,500	6101	172,000	6084	122,000	4315	58°Load 4
421	Oct. 27	IS - 11 Wall	B	2 1/4			4,000	118,000	4174	167,000	5937	170,500	6031	166,500	5889	141,000	4987	55°Load15
422	Oct. 29	AX 105 Slab	B	2"	4.5		4,000	126,000	4457	178,000	6296	177,000	6261	173,500	6137	NOT AT AREA PLACED		59°Load 8
423	Oct. 29	IS - 9 Wall	B	3"		146.1	4,000	115,000	4067	158,000	5590	161,000	5695	154,000	5447	131,500	4651	58°Load20

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Nov. 3 - Nov. 14-60

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
424	Nov. 3	AX - 35 Wall	B	3"	-	-	4,000	116,000	3291	159,500	5642	155,000	5482	162,500	5225	113,500	4014	69°Load 4
425	Nov. 5	Equip. Pads East Room 971 Area	B	1 3/4	4.0	148.2	4,000	127,500	4510	178,000	6296	171,500	6066	180,000	6367	130,500	4934	61°Load 4
426	Nov. 6	1565 & C 5.25 Wall	B	2 1/2	4.0	-	4,000	114,000	4032	166,000	5871	168,000	5559	166,000	5871	127,000	4432	63°Load 7
427	Nov. 7	IS 150 Wall	B	3"	4.5	-	4,000	118,500	4085	168,000	5942	171,500	5056	161,500	5712	154,000	5497	57°Load 7
428	"	AX 107 Slab	B	3"		146.0	4,000	124,500	4403	162,500	5748	166,000	5942	166,000	5871	HOT AREA PLACED	AT	65°Load 16
429	Nov. 10	AX 138,143,144,146	B	2 3/4	6.5/*		4,000	131,500	4651	165,000	5871	174,000	5154	172,500	6101	140,000	5235	57°Load 10
430	"	"	B	3"			4,000	101,500	3704	135,000	4775	140,500	1969	140,000	5235	115,500	4085	61°Load 21
431	"	"	B	2 1/2	4.7		4,000	140,500	4968	180,000	6367	184,000	6550	190,000	6720	162,000	5730	61°Load 32
432	Nov. 11	AX - 21 Wall	B	1 3/4	5.2	148.0	4,000	151,000	5341	192,000	6968	202,000	7145	202,000	7145	155,000	5482	68°Load 5
433	Nov. 12	IB - 26 A&B Sock	B	3"	4.7		4,000	133,000	4709	173,500	6349	181,000	6402	182,000	6437	147,500	5217	54°Load 8
434	"	"	B	3 1/2		149.9	4,000	117,500	4156	159,500	5995	167,500	5925	175,000	6190	125,000	4421	54°Load 21
435	Nov. 13	Containment B-D/6 Floor	A	3 1/2	4.3	149.3	3,000	156,000	5518	169,000	6685	189,000	6685	203,000	7180	161,000	5765	52°Load 11
436	"	"	A	2 1/4			3,000	167,500	5925	211,000	7463	183,000	6085	186,000	6582	152,000	5378	56°Load 23
437	"	"	A	3"			3,000	164,000	5802	155,000	6544	183,000	6473	183,000	6473	144,000	5093	65°Load 35
438	"	"	A	2 3/4			3,000	139,000	4916	174,000	6154	172,000	6084	171,000	6048	141,000	4987	56°Load 45
439	Nov. 14	IS - 90 Wall	B	1 3/4	4.4	149.5	4,000	153,000	5429	202,000	7216	191,000	6862	196,000	6933	146,000	5164	55°Load 2

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

* EXTRA AIR TESTS TO CORRECT AIR CONTENT 6.25, 4.4, 5.5%

George K. Hasselberg

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Nov. 15 - Nov. 21-1959

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
440	Nov. 15	AX -100 Wall	B	3 1/4	4.7		4,000	132,500	4686	170,000	6013	176,000	6225	170,000	6013	141,000	4987	60° Load 11
441	Nov. 15	"	B	2"			4,000	142,500	5005	186,500	6597	193,000	6473	182,000	6437	151,500	5359	63° Load 21
442	"	FE - 26 & 7 Wall	B	2 1/4			4,000	125,000	4421	172,000	6084	180,000	6650	174,000	6154	122,000	4333	61° Load 32
443	Nov. 17	CH - 3	A	2 3/4	4.3	149.4	5,000	146,000	5164	209,000	7392	210,000	7420	200,000	7074	190,000	5624	60° Load 8
444	Nov. 17	"	A	3"			5,000	148,500	5252	202,000	7145	197,000	6969	203,000	7109	155,000	5482	60° Load 20
445	Nov. 17	"	A	3"			5,000	131,000	4633	197,000	6968	197,000	6968	204,000	7216	150,000	5305	62° Load 33
446	Nov. 18	AX - 19 Wall	B	2"	4.0	148.7	4,000	127,500	4510	184,500	6526	190,000	6720	187,500	6632	165,000	5836	58° Load 1
447	Nov. 19	FE - 12	B	2 3/4	5.6		4,000	136,500	4828	190,000	6720	187,000	6614	186,000	6579	131,000	4633	59° Load 6
448	Nov. 19	FE - 25 & 17 Wall & Slab	B	2 3/4		147.3	4,000	126,500	4474	177,000	6261	173,000	6119	187,000	6614	130,500	4616	59° Load 15
449	Nov. 20	AX - 20 Wall	B	3"	3.5	148.5	4,000	116,500	4120	170,500	6031	175,500	6207	171,000	6048	146,500	5182	56° Load 3
450	Nov. 20	EW48	A	3 1/2	5.4	148.0	5,000	135,000	4816	187,500	6692	193,000	6731	191,000	6870	165,000	5836	58° Load 12
451	Nov. 20	"	A	3 1/4			5,000	136,500	4838	200,500	7092	201,000	7110	196,500	7056	155,000	5482	59° Load 23
452	Nov. 20	"	A	2 1/2			5,000	144,500	5111	203,500	7199	199,500	7055	212,000	7499	170,500	6031	57° Load 35
453	Nov. 20	"	A	3 1/2			5,000	136,500	4828	196,000	6931	193,500	6719	191,000	6756	162,500	5748	57° Load 42
454	Nov. 20	"	A	2 3/4			5,000	145,500	5146	204,000	7216	196,000	6931	202,000	7145	170,000	6013	58° Load 56
455	Nov. 21	AX - 5 Wall	B	2 1/2	3.2	147.2	4,000	142,000	5022	205,000	7254	197,000	6969	201,500	7127	153,000	5412	59° Load 5

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Nov. 21 - Dec. 9, 1969

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
455	Nov. 21	AX-135 A 170 Wall	B	2 1/2			4,000	125,000	4421	172,000	6084	183,000	6473	185,000	6544	154,500	5465	58°Load *
457	Nov. 22	15-56 A D 15-130 Wall	B	3"	4.4	148.2	4,000	132,500	4686	174,500	6172	175,000	6190	179,500	6349	134,500	4757	61°Load 7
458	Nov. 24	AX-104 B	B	2 3/4	6.0		4,000	140,500	4969	198,000	7003	197,500	6986	187,500	6632	159,000	5588	59°Load 11
459	Nov. 25	D6-11&12&12 Slope	B	3"	4.6	148.3	4,000	119,500	4227	175,000	6190	167,500	5925	170,500	6031	121,000	4280	60°Load 8
460	"	AX-106 Slab	B	1 1/2			4,000	136,000	4810	183,000	6473	169,000	5978	185,000	6544	134,000	4740	65°Load 20
461	"	"	B	2 3/4			4,000	131,000	4633	174,000	6154	181,500	6420	176,000	6190	131,000	4633	62°Load 33
462	"	"	B	2 3/4			4,000	126,500	4474	181,000	6402	185,500	6561	180,500	6384	133,000	4704	60°Load 44
463	Nov. 26	15-42C	B	3"	4.7		5,000	120,000	4244	172,000	6084	177,000	6261	177,000	6261	132,500	4686	56°Load 3
464	Nov. 29	AX-101 Slab	B	2 3/4	5.7	145.8	4,000	127,500	4510	174,000	6154	183,000	6473	171,000	6154	134,000	4740	55°Load 10
465	"	AX-101 Slab	B	3"			4,000	133,000	4704	186,000	6579	184,000	6508	187,000	6614	146,000	5164	55°Load 24
466	Dec. 1	15 3C & 16B Wall	B	2 3/4	4.6		4,000	131,000	4633	177,500	6278	175,000	6190	185,000	6544	141,000	4987	59°Load 8
467	Dec. 2	AX 177 A Wall	B	2 3/4			4,000	142,000	5022	190,000	6720	185,500	6561	190,500	6738	130,500	4616	63°Load 2
468	Dec. 5	AX-246 Wall	B	3 1/4	5.1	148.9	4,000	123,000	4350	178,000	6296	184,000	6508	186,500	6597	141,000	4987	54°Load 10
469	"	"	B	3 1/4			4,000	119,000	4209	170,000	6013	172,000	6084	170,000	6013	135,000	4775	53°Load 2
470	Dec. 9	CM - 4	A	3 1/2	5.2	148.4	5,000	139,500	4934	194,500	6880	198,500	7021	198,000	7003	145,000	5129	54°Load 10
471	"	"	A	3 1/2			5,000	143,000	5058	200,000	7074	194,000	6862	204,000	7233	152,500	5394	55°Load 22

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
*95 yds. from Last Set.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Dec. 9-69 - Jan 3-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (based upon cylinders molded to 6" diam., 12" high)													
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	Slump in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.		Such as Temperature of Concrete
472	Dec. 9	CH - 4	A	2 3/4			5,000	145,000	5129	177,000	6261	185,500	6561	187,000	6614	140,500	4969		60°Load 23
473	Dec. 10	IS - 18	B	3"	4.2	146.1	4,000	138,000	4881	198,000	7003	196,000	6933	199,000	7039	132,000	4669		60°Load 3
474	Dec. 11	BP - 54	B	2 3/4	5.1		4,000	143,000	5058	184,000	6508	185,500	6561	195,000	6897	123,000	4350		56°Load 2
475	Dec. 12	AX - 1	B	3 1/2	6.2	148.3	4,000	126,000	4457	168,000	5942	170,000	6013	155,000	5482	130,000	4598		54°Load 10
476	Dec. 12	AX - 1	B	2 3/4			4,000	123,000	4350	174,500	6172	179,500	6349	174,500	6172	140,000	4952		56°Load 21
477	Dec. 12	AX - 1	B	2"			4,000	123,000	4563	176,000	6225	180,000	6367	183,000	6473	143,000	5058		56°Load 33
478	Dec. 12	AX - 1	B	3 1/2			4,000	116,000	4103	165,000	5836	166,000	5871	155,500	5500	129,000	4563		58°Load 46
479	Dec. 12	AX - 1	B	2"			4,000	130,500	4615	183,000	6473	165,500	5854	165,500	5854	129,500	4580		56°Load 53
480	Dec. 15	AX - 1748	B	2 3/4	4.2	148.3	4,000	134,500	4757	173,000	6119	180,500	6384	178,500	6314	121,500	4297		57°Load 4
481	Dec. 16	AX - 165 - 167 Wall	B	2 1/2	5.3		4,000	135,000	4775	187,000	6614	191,000	6756	188,000	6650	133,000	4704		58°Load 9
482	Dec. 16	IS - 148, 124, & L 132 & L Wall, IS-B-1 Beam	B	2 3/4			4,000	132,500	4686	181,000	6573	185,000	6545	186,000	6579	126,000	4457		52°Load 17
483	Dec. 19	BP - S Slab & Wall	B	3"	4.0	147.3	4,000	130,000	4598	161,500	5712	168,000	5942	168,000	5942	134,500	4757		54°Load 9
484	Dec. 19	AX-1756 & 1768 Wall	B	3 1/2			4,000	123,500	4368	154,000	5801	160,500	5677	151,000	5341	125,000	4421		54°Load 20
485	Dec. 22	AX - 161 Walls	B	3"	4.6	149.0	4,000	127,000	4492	166,000	5871	162,000	5729	170,500	6031	110,000*	3891		56°Load 2
486	Dec. 29	IS - 18	B	3"	4.2		4,000	105,500	3731	143,000	5270	143,000	5270	152,500	5394	92,000**	3501		52°Load 9
487	Jan. 3	CH - 5	A	3"	7.0*		5,000	119,000	4209	143,500	5076	149,000	5235	152,000	5376	118,500*	4191		51°Load 11

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

*AIR TESTS ON CORRECTED LOADS 5.3, 5.5, 4.8

**POSSIBLY DAMAGED @ JOB SITE.

Leonard C. Charles

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Jan. 3 - Jan. 23-1971

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												REMARKS
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in % per cent	UNIT WEIGHT in lbs. per cu. ft.	REQUIRED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
489	Jan. 3	CV - 5	A	3"			5,000	129,000	4563	187,500	6632	183,000	6473	184,000	6509	146,500	5182	55°Load 21
490	Jan. 3	CH - 5	A	3"		149.6	5,000	123,000	4350	171,500	6065	167,500	5925	171,000	6048	127,000*	4492	63°Load 25
491	Jan. 7	AX-102 & 103	B	2 3/4	4.9	150.8	4,000	130,000	4969	182,000	6437	139,000	6367	185,000	6544	137,000	4845	55°Load 17
491	Jan. 7	"	B	2 1/2			4,000	73,800	2582	172,000	6084	172,000	6084	170,000	6013	120,000	4244	59°Load 25
492	Jan. 7	"	B	3 1/2			4,000	100,500	3555	157,000	5553	155,000	5518	152,000	5739	115,000	4067	55°Load 33
493	Jan. 7	"	B	3"			4,000	118,000	4174	173,500	6137	169,500	5997	172,000	6084	126,000	4457	52°Load 45
494	Jan. 7	"	B	2 1/4			4,000	117,500	4156	166,000	5871	163,000	5765	170,000	6013	123,000	4353	58°Load 55
495	Jan. 8	"	B	3 1/2	4.3	149.5	4,000	115,500	4085	166,000	5871	167,000	5907	166,500	5889	126,000	4457	52°Load 53
496	Jan. 8	"	B	3 1/2			4,000	111,000	3926	160,000	5662	162,000	5553	159,000	5625	126,000	4457	58°Load 60
497	Jan. 9	IS 11C R & L to 13 C R & L & B-2	B	2 1/2	4.6	147.5	4,000	112,500	3979	154,000	5447	157,500	5571	165,500	5854	147,500	5217	60°Load 5
498	Jan. 13	AX-154-165	B	3"	5.5	-	4,000	114,500	4050	177,000	6261	170,000	6013	181,500	6826	122,000	4492	55°Load 9
499	Jan. 14	AX 108	B	3"	5.0	149.5	4,000	109,500	3873	164,500	5818	158,000	5588	167,000	5731	122,500	4333	57°Load 8
500	Jan. 15	AX 163	B	2 3/4	-	-	4,000	123,000	4350	184,500	6526	189,000	6685	187,000	6614	139,000	4916	56°Load 2
501	Jan. 16	AX 159	B	2 1/4	5.7	147.3	4,000	111,500	3944	172,000	6084	173,000	6119	168,000	5942	131,000	4633	55°Load 8
502	Jan. 23	BF 6 & 8	B	2	5.1	148.9	4,000	105,500	3731	163,500	5783	159,000	5624	162,500	5748	121,000	4280	57°Load 7
503	Jan. 23	"	B	3"			4,000	96,000	3413	146,000	5252	150,000	5323	147,500	5217	112,500*	3979	60°Load 17

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
*POSSIBLY DAMAGED @ JOB SITE.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Jan. 26-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded 6" diam., 12" high)													
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	ESTIMATED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.		Such as Temperature of Concrete
504	1-26-70	AX 106 Slab	B	2 3/4	4.7		4,000	104,000	3678	166,000	5659	161,000	5695	164,000	5801	119,000	4209	62	62°Load 6
505	1-27-70	15-22, 7C, 6C & 3C Walls	D	3	6.0		3,000	111,000	3926	164,000	5801	175,000	6190	162,500	5748	119,500	4227	60	60°Load 8
506	"	"	D	2 3/4			4,000	122,500	4333	173,500	6137	177,000	6261	168,000	5942	125,000	4421	64	64°Load 15
507	1-28-70	AX-153 Wall	B	3"		146.7	4,000	101,000	3572	156,000	5518	152,500	5395	159,500	5642	107,500*	3802	62	62°Load 4
508	1-30-70	AX-142 Wall	B	2"	5.2	148.9	4,000	118,000	4174	171,500	6066	160,500	5677	162,000	5730	119,500	4227	55	55°Load 7
509	2-6-70	AX-137 Wall	B	3"	5.5	-	4,000	105,000	3714	167,500	5925	167,000	5907	160,500	5642	105,500	3231	55	55°Load 8
510	2-11-70	CV-6	A	2 3/4	5.2	147.2	5,000	149,500	5292	187,000	6614	201,000	7110	196,000	6933	157,000	5553	54	54°Load 9
511	"	"	A	3"			5,000	133,500	4722	187,000	6614	189,000	6650	185,000	6544	165,000	5836	56	56°Load 24
512	2-10-70	RB-7 & 9	B	3"	5.5	146.7	4,000	111,000	3926	159,000	5624	165,000	5836	160,000	5659	125,000	4421	57	57°Load 11
513	"	"	B	3"			4,000	110,000	3891	162,000	5732	160,500	5677	155,000	5518	122,000	4315	56	56°Load 23
514	"	"	B	2 3/4			4,000	119,000	4209	173,000	6119	168,000	5942	167,000	5907	133,000	4525	58	58°Load 34
515	"	"	B	3"			4,000	105,000	3714	166,000	5516	158,000	5588	160,000	5305	118,000	4174	55	55°Load 45
516	2-26-70	CV-7	A	3"	5.5	148.1	5,000	146,000	5164	198,000	7003	187,000	6614	188,000	6650	147,500	5217	62	62°Load 10
517	"	"	A	3"			5,000	137,000	4846	186,000	6544	183,000	6473	183,500	6490	138,500*	4899	62	62°Load 24
518	3-5-70	AX-10 & 122	B	3"	6.0	147.5	4,000	117,000	4138	171,000	6048	167,000	5942	171,000	6048	124,000	4386	59	59°Load 9
519	"	"	B	3"			4,000	119,500	4227	175,000	6190	171,000	6048	169,000	5659	129,000	4563	60	60°Load 22

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
*POSSIBLY DAMAGED ON JOB SITE.

Lance P. Keller, Res. Engr.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: March 9-70 - April 15-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.)	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.)	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.)	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.)	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH (in lbs. per sq. in.)	Such as Temperature of Concrete
521	3-9-70	RP-11	B	3"	5.5	-	4,000	120,000	4244	170,000	6013	171,000	6048	177,000	6261	124,000	4386	58°Load 3
521	3-19-70	RP-13 Cl Cols. 7 &9	B	3"		-	4,000	120,000	4244	170,500	6031	166,000	5871	164,500	5819	139,000	4916	58°Load 1
522	3-19-70	RP-13 ¼ from Col. 9 - Col. 12	B	3"	6.1	145.3	4,000	113,500	4014	166,000	5871	166,500	5835	167,500	5925	129,500	4580	58°Load 4
523	3-26-70	Reactor Anchor Blks. in Reactor	A 3/4"	2 3/4	4.1	148.6	4,000	138,500	4897	190,500	6735	204,000	7215	197,000	6968	155,500	5500	62°Load 1
524	3-25-70	CHR	A	2 3/4	4.5	140.9	4,000	153,500	5429	195,500	6915	197,500	6986	210,000	7428	156,000	5518	55°Load 11
525	3-25-70	"	A	2			4,000	141,000	4987	197,000	6968	187,000	6614	195,000	6897	152,500	5394	58°Load 23
526	4-3-70	RP-13	B	2	4.3	149.0	4,000	132,000	4669	186,000	6579	186,000	6650	190,000	6720	155,000	5553	59°Load 4
527	4-3-70	CHR	A	3"	4.5	149.6	4,000	138,500	4897	202,500	7163	200,500	7092	200,500	7092	166,000	5871	62°Load 11
528	"	"	A	3"			4,000	133,500	4722	185,000	6561	190,000	6720	186,500	6597	167,000	5907	60°Load 21
529	4-8-70	AX 141 Wall	B	2"	4.0	149.3	4,000	124,000	4386	173,000	6112	182,000	6907	178,500	6314	147,000	5199	62°Load 2
530	4-9-70	AX 122 A Wall	B	3"	4.3		4,000	104,500	3696	168,000	5568	161,500	5354	164,000	5801	127,500	4510	64°Load 7
531	4-7-70	16 B5	B	3"	4.1		4,000	103,000	3643	156,500	5889	150,500	5677	169,000	5659	145,500	5146	70°Load 2
532	4-14-70	AX 140 Wall	B	3"	5.3	148.5	4,000	114,000	4032	176,000	6225	175,000	6190	172,500	6101	149,000	5270	56°Load 6
533	4-15-70	AX-2	B	3"	5.1	147.6	4,000	112,000	3961	179,500	6348	177,500	6278	181,500	6420	141,500	5005	64°Load 13
534	4-15-70	AX-2	B	3"			4,000	115,000	4067	182,000	6437	183,500	6490	182,000	6437	145,000	5154	63°Load 21
535	4-15-70	"	B	3"			4,000	107,500	3802	176,500	6243	181,000	6402	178,500	6314	144,000	5093	59°Load 30

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George L. Fowler

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: APRIL 16 -70 MAY 6-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
							I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	ESTIMATED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as temperature of Concrete
536	4-16-70	TB-9b	A	2 1/2			5,000	94,000	3325	172,000	6084	167,000	5907	172,500	6101	132,500	4686	69° Load 7
537	4-22-70	AX 149	B	2 3/4	4.3		4,000	128,500	4545	186,000	6578	174,500	6172	191,500	6773	155,000	5482	62° Load 5
538	4-23-70	AX 138	B	3"		148.3	4,000	137,000	4846	181,000	6402	188,000	6650	183,500	6703	159,000	5624	56° Load 6
539	4-27-70	RP-13-5	B	3"	5.6		4,000	115,000	4067	167,000	5907	165,000	5836	172,000	6084	143,000	5058	71° Load 8
540	4-28-70	AX - 29d wall	B	3"		148.7	4,000	112,500	3978	170,000	6013	174,000	6154	176,000	6225	142,500	5040	68° Load 2
541	4-29-70	AX 74 A	B	3"			4,000	106,500	3767	169,500	5995	171,500	6066	167,500	5925	143,000	5058	74° Load 1
542	4-30-70	IS-4 C	B	3"	5.6	147.1	4,000	120,500	4264	187,000	6614	177,500	6278	183,000	6473	158,000	5588	59° Load 8
543	5-1-70	AX 138 A	B	3"	5.0	143.2	4,000	11,000	3997	196,000	6933	198,000	7003	207,000	7320	167,000	5571	54° Load 4
544	5-4-70	AX - 110	B	3 3/4	4.6	145.6	4,000	127,000	4492	187,000	6614	192,000	6791	181,000	6402	32,000*	4669	62° Load 1
545	5-4-70	AX - 110	B	3 1/2			4,000	124,500	4403	179,500	6348	180,000	6367	175,000	6190	127,000*	4492	64° Load 2
546	5-4-70	AX - 110	B	2 3/4			4,000	134,500	4757	177,000	6261	185,500	6561	185,000	6543	31,000	4740	60° Load 3
547	5-4-70	AX - 110	B	3"			4,000	132,000	4669	182,000	6437	178,000	6296	185,000	6543	43,000*	6022	58° Load 4
548	5-5-70	AX-170 & 172	B	2 3/4	4.5		4,000	122,500	4333	177,000	6261	183,500	6493	183,000	6473	45,500	6346	66° Load 8
549	5-5-70	RP-C-4-2, C-5-2, C-6-2	B	3"			4,000	18,000	4174	165,000	5836	169,500	5995	75,500	7207	36,500	5335	70° Load 15
550	5-6-70	AX-200	B	3"	5.4		4,000	24,500	4403	77,500	6278	175,000	6190	35,600	4031	17,500**	4156	60° Load 1
551	5-6-70	AX-200	B	2 1/2		148.2	4,000	25,600	4580	86,000	6579	173,000	6119	182,000	6437	21,000	4280	65° Load 21

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. * Possibly damaged on job site
* Air corrected next load 4.0, 4.7% *(11 day break) **(9 day breaks requested by Mr. Crawford

Jerome F. Donlan

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — PENNSYLVANIA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: [illegible]

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded 6" diam., 12" high)												REMARKS	
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	Laboratory CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH at 28 days in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete		
552	5-7-70	CU - 10	A	2 3/4	4.6	148.8	5,000	135,000	4775	174,500	6172	168,000	5942	173,000	6331	154,500	5466	68° Load		33
553	"	"	A	3			5,000	131,500	4651	178,500	6314	182,000	6437	185,000	6579	141,500	5005	66° Load		25
554	5-8-70	BX 121A 5100	B	3			4,000	112,000	3961	160,000	5660	159,000	5979	165,000	5836	143,500	5076	69° Load		3
555	5-12-70	BX 142	B	3	5.8	148.9	4,000	114,000	4032	171,000	6048	164,000	5801	163,500	5783	143,000	5058	69° Load		6
556	5-12-70	BX 9	B	2 1/4			4,000	115,500	4085	178,000	6296	175,000	6190	178,000	6296	168,000	5659	63° Load		18
557	"	"	B	3			4,000	124,000	4386	184,000	6507	140,000	6367	173,500	6137	155,500	5500	66° Load		28
558	5-13-70	CU - 11	A	3	4.0	148.0	5,000	132,500	4721	184,000	6862	166,000	5889	167,500	6032	176,000	6225	68° Load		10
559	"	"	A	3			5,000	133,500	4722	181,000	6402	181,500	6420	180,500	6384	150,500	5323	64° Load		26
560	5-15-70	BX - 12	B	3	4.8		4,000	101,500	3595	161,500	5959	151,000	5341	158,000	5588	131,000	4633	62° Load		3
561	5-26-70	AX - 127	B	3	3.0	148.3	4,000	122,000	4319	168,000	5942	165,000	5836	166,000	5871	130,500	4911	66° Load		5
562	5-27-70	BX 150	B	3	4.0		4,000	127,000	4492	173,500	6137	162,000	5730	168,000	5942	147,000	5199	68° Load		4
563	5-28-70	CU - 17	A	3	4.0	148.3	5,000	142,500	5041	183,500	6489	192,000	6789	183,000	6473	156,500	5535	66° Load		9
564	"	"	A	3			5,000	140,500	4982	178,500	6314	170,000	6013	182,000	6437	170,000	6013	68° Load		25
565	6-3-70	TOP - 16	B	2	4.0	149.3	4,000	136,500	4828	172,500	6101	170,000	6013	175,500	6207	146,500	5182	64° Load		10
566	"	"	B	3			4,000	126,000	4457	164,500	5818	167,000	5907	168,000	5942	140,000	4952	64° Load		24
567	"	"	B	2 3/4			4,000	142,000	5022	176,000	6225	174,500	6172	179,500	6349	168,000	5942	66° Load		35

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 6-3-70 to 6-5-72

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)													
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS	
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete		
568	6-3-70	IDF - 16	B	3 1/2			4,000	118,000	4178	156,500	5535	165,000	5482	150,500	5323	145,000	5552	67 °Load	49	
569	"	"	B	3			4,000	115,000	4057	153,000	5412	150,000	5285	152,000	5376	131,500	4654	56 °Load	61	
570	"	"	B	3	4.4	148.1	4,000	117,500	4156	155,000	5482	159,000	5624	163,000	5765	146,500	5182	68 °Load	73	
571	"	"	B	3			4,000	126,000	4452	165,000	5836	168,000	5889	169,000	5765	158,500	5642	66 °Load	86	
572	"	"	B	3 3/4			4,000	126,000	4527	162,500	5825	159,000	5500	166,500	5887	151,500	5359	67 °Load	100	
573	"	"	B	3			4,000	126,000	4346	162,000	5731	169,500	6030	170,500	6031	157,000	5626	66 °Load	111	
574	"	"	B	3			4,000	130,000	4566	162,500	5748	162,000	5733	159,000	5624	153,000	5412	66 °Load	125	
575	"	"	B	3 1/2	4.5	148.2	4,000	118,500	4191	175,500	6207	171,000	6048	168,500	5960	153,500	5429	64 °Load	135	
576	"	"	B	3			4,000	132,000	4666	176,500	6207	175,000	6190	177,000	6261	156,000	5518	67 °Load	149	
577	"	"	B	2 3/4			4,000	131,500	4651	165,500	5854	170,500	6243	171,000	6048	156,000	5518	68 °Load	161	
578	"	"	B	2 3/4			4,000	126,000	4457	151,000	5341	158,500	5606	170,000	6013	143,500	5079	66 °Load	172	
579	"	"	B	3 1/4			4,000	118,000	4174	153,000	5412	172,500	6101	166,500	5889	155,500	5500	64 °Load	187	
580	6-4-70	AC 125 & 132	B	3	4.3		4,000	119,000	4208	176,500	6173	174,000	6154	172,500	6101	146,500	5518	67 °Load	10	
581	"	"	B	3			4,000	130,000	4598	176,000	6225	173,500	6137	155,500	5854	155,000	5565	66 °Load	19	
582	6-5-70	CIL 13	A	3	4.6	148.1	5,000	146,000	5164	183,500	6614	187,500	6632	183,500	6846	169,500	5995	68 °Load	32	
583	"	"	A	3			5,000	144,000	5093	169,000	6650	183,500	6490	184,500	6526	162,000	5730	66 °Load	75	

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I   NEBRASKA TESTING LABORATORIES, INC.   INCLUSIVE DATES OF REPORT: June 5, 1970 to

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											REMARKS	
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
584	6-5-70	[illegible]	B	2 3/4	4.5	147.4	4,000	121,500	4297	153,000	5409	165,000	5811	165,000	5836	155,000	5417	77° Load	11
585	6-9-70	[illegible] 15	B	3	4.5		4,000	121,500	4297	163,000	5765	158,000	5583	157,000	5552	133,500	4722	73° Load	9
586	"	AX-117	B	3			4,000	153,000	5411	161,500	5642	177,500	6278	168,500	5960	160,500	5677	76° Load	22
587	"	"	B	3		147.9	4,000	130,500	4580	170,500	6031	171,500	6066	161,500	5025	156,000	5518	65° Load	35
588	"	"	B	3			4,000	134,000	4395	171,500	6172	165,000	5836	165,000	5871	158,500	5606	63° Load	46
589	6-10-70	AX - 121-A & AX120-E	B	3	4.1	148.2	4,000	138,000	4927	173,000	6119	177,000	6261	171,500	6066	145,000	5129	70° Load	7
590	6-12-70	CN-44	A	3	4.5		5,000	139,500	4934	161,500	5526	194,000	6509	188,000	6650	164,000	5801	66° Load	10
591	"	"	A	3		149.1	5,000	139,000	4916	186,500	6597	184,000	6508	185,000	6544	159,500	5642	67° Load	24
592	"	"	A	3			5,000	156,500	5535	198,000	7003	193,000	6827	196,000	6933	166,000	5871	56° Load	31
593	6-15-70	AP 10 8	B	2 1/4			4,000	114,000	4032	159,000	5624	154,000	5447	156,500	5501	126,000	4457	55° Load	3
594	6-16-70	AX - 111	B	3	5.4		4,000	125,500	4439	165,500	5854	160,500	5950	162,000	5730	*128,000	4527	56° Load	9
595	"	"	B	3		148.0	4,000	121,000	4396	170,500	6031	172,000	5165	159,000	5042	*130,000	4010	56° Load	23
596	6-18-70	AX - 130	B	3	4.8		4,000	127,500	4510	173,000	6119	178,500	6314	175,000	6130	150,000	5305	56° Load	5
597	6-12-70	CN 15	A	3	4.6		5,000	121,500	4350	177,500	6278	182,000	5437	151,500	5420	157,000	5552	51° Load	11
598	"	"	A	2 3/4		147.5	5,000	140,500	5046	185,000	6544	181,000	5958	182,500	6455	154,000	5442	54° Load	23
599	"	"	A	3			5,000	131,500	4597	158,500	5561	183,000	5479	152,000	5437	159,000	5521	54° Load	30

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. *14 Day Field Cylinders requested by OPPD.

[signature]

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 6-22-70 - 7-6-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 5" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
600	6-22-70	AX - 124 & 125	A	2 3/4	4.7	147.4	4,000	125,500	4439	172,000	6084	178,000	6331	174,000	6154	167,000	5693	77°Load 1
601	6-23-70	AX 120 & 122	B	3"	5.5	147.7	4,000	128,000	4563	173,000	6119	173,500	6137	173,000	6119	161,000	5692	77°Load 8
602	6-24-70	AX 212 & 215	B	3"	4.2		4,000	138,500	4899	193,000	6827	182,000	6437	184,500	6526	170,500	6031	80°Load 9
603	6-25-70	IS 21	B	2 1/2	4.2		4,000	135,500	4793	173,000	6119	181,000	6402	177,000	6261	142,000	5022	73°Load 12
604	6-25-70	IS 23	B	3 1/4		147.5	4,000	120,500	4616	171,000	6119	171,000	6048	170,000	6013	156,000	5518	78°Load 19
605	6-26-70	CN - 10	A	3"	4.1	149.5	5,000	140,000	4952	186,000	6544	186,000	6579	182,500	6809	178,500	6314	66°Load 11
606	6-26-70	CN - 10	A	3"			5,000	142,000	5199	186,500	6597	188,000	6650	183,000	6473	171,000	6048	67°Load 24
607	6-26-70	CN - 10	A	3"			5,000	151,500	5359	185,500	6915	185,500	6915	190,500	6738	180,000	6367	64°Load 31
608	6-26-70	AX 123	B	2 3/4			4,000	122,000	4492	171,000	6048	159,000	5978	176,000	6225	167,500	5925	65°Load 4
609	6-29-70	AX 128 & 185	C	2 1/2	—		4,000	93,000	3288	159,000	5624	157,500	5571	160,800	5650	141,400	4987	89°Load 3
610	6-30-70	AX 211	B	3"	4.6	149.0	4,000	125,500	4439	169,000	5978	173,000	6119	175,000	6225	153,600	5429	85°Load 3
611	7-2-70	CN - 17	A	2 1/2	4.7	152.7	5,000	138,000	4881	201,500	7127	200,000	7074	196,500	6950	185,500	6561	66°Load 15
612	7-2-70	CN - 17	A	3"			5,000	128,000	4527	185,000	6579	185,000	6544	189,000	6650	182,000	6455	66°Load 23
613	7-2-70	CN - 17	A	3"			5,000	135,500	4899	173,500	6349	159,000	5978	175,000	6190	159,500	5395	67°Load 30
614	7-2-70	AX - 151b & 157b	B	3"	4.2		4,000	122,000	4315	177,500	6272	163,000	5765	168,500	5960	153,000	5412	80°Load 3
615	7-6-70	AX - 146	B	3"	4.7	148.4	4,000	131,000	4633	174,000	6154	162,500	5748	172,500	6278	170,000	6013	65°Load 31

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 7-6-70 To 7-14-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
							I (7-DAY)			II (28-DAY LAB)			III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
615	7-6	RPE66	B	3"			4,000	128,000	4527	182,500	6455	181,500	6420	172,500	6101	158,500	5605	69° LOAD 2
617	"	"	B	3"			4,000	133,500	4722	187,500	6455	185,500	6561	165,500	6561	164,500	5818	67° LOAD 3
618	7-7	A X 1616 + 1576	B	2 1/2"	4.8		4,000	126,000	4457	175,500	6207	167,000	5907	167,500	5925	143,000	5058	72° LOAD 4
619	7-10	AX-134 WALL	B	3"	4.7	148.9	4,000	110,000	3891	166,000	5871	162,500	5748	173,000	6119	149,000	5270	55° LOAD 1
620	"	"	B	3"			4,000	130,00	4598	172,500	6101	171,000	6048	175,500	6207	158,500	5606	66° LOAD 23
621	"	"	B	3"			4,000	127,000	4492	174,000	6154	170,000	6013	165,500	5854	147,500	5217	66° LOAD 3
622	"	"	B	2 3/4"			4,000	136,000	4810	175,000	6190	173,500	6137	177,500	6278	165,000	5836	67° LOAD 4
623	"	"	B	2 3/4"			4,000	126,000	4421	182,000	6437	168,500	5960	176,000	6225	158,500	5606	66° LOAD 6
624	7-13	CN-18	A	3"	4.2	150.1	5,000	157,000	5553	201,000	7110	201,500	7127	201,500	7127	190,000	6720	66° LOAD 1
625	"	"	A	3"			5,000	148,000	5235	195,000	6915	192,500	6809	193,500	6844	185,500	6561	67° LOAD 2
626	"	"	A	3"			5,000	149,000	5270	202,000	7145	196,000	6933	200,500	7092	180,500	6384	66° LOAD 3
627	"	AX-200 A	E	3"	4.0	142.2	4,000	134,500	4775	182,000	6437	190,500	6733	180,500	6384	163,500	4959	49° LOAD 1
628	"	"	E	3 1/2"			4,000	125,00	4421	166,500	5889	159,500	5642	165,000	5836	116,000	4103	64° LOAD 2
629	"	"	E	3 1/2"			4,000	124,000	4386	176,000	6225	173,000	6119	169,500	5995	122,000	4315	53° LOAD 3
630	"	"	E	2 1/4"			4,000	144,000	5092	190,500	6735	184,500	6526	187,000	6614	145,000	5129	59° LOAD 4
631	7-14	AX210s	B	2 1/2"	5.0	147.9	4,000	132,000	4668	175,000	6190	175,000	6190	169,500	5995	162,000	5730	51° LOAD 5

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
* 8 DAY BREAK PER GHD & R

George C. Theios

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 7-14-70 to 7-24-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
632	7-14	RP 15 C	B	2 3/4	4.7		4,000	132,500	4665	178,000	6266	183,500	6490	176,500	6214	168,000	5942	67° Load	30
633	7-14	RP 15C	B	3			4,000	121,000	4207	170,000	6013	170,000	6013	169,000	5978	145,000	5129	67° Load	25
634	7-15	IS-24	B	3 1/4	5.2	148.1	4,000	117,000	4138	170,000	6013	173,000	6119	165,000	5836	141,000	4987	77° Load	13
635	7-15	IS-24	B	3			4,000	132,000	4669	171,000	6048	167,000	5907	175,500	6207	148,000	5235	78° Load	24
636	7-15	IS-24	B	3 1/2			4,000	130,500	4616	173,000	6120	170,000	6296	172,000	6084	138,000	4881	80° Load	37
637	7-16	AR 171 +179	B	3	5.3	147.2	4,000	115,000	4067	166,000	5871	150,500	5942	165,000	5836	151,500	5359	79° Load	9
638	7-17	CR-19	A	2 1/2	4.4	149.5	5,000	142,000	5022	175,000	6190	166,000	6570	178,500	6314	166,000	6570	65° Load	31
639	7-17	CR-19	A	3			5,000	129,500	4580	170,000	6296	170,500	6031	170,000	6013	162,000	5730	66° Load	33
640	7-17	CR-19	A	2 3/4			5,000	135,000	4775	172,500	6101	176,500	6207	170,000	6331	165,500	5854	68° Load	31
641	7-17	AR-180	B	3	5.1		4,000	122,500	4333	162,500	5748	167,000	5907	167,500	5925	140,000	5270	79° Load	8
642	7-21	RP 15-B	B	2 3/4	5.0	148.2	4,000	126,000	4457	168,500	5960	172,500	6101	170,000	6225	151,000	5350	67° Load	10
643	7-22	AR 201	B	3	5.1		4,000	126,000	4457	170,000	6013	175,000	6190	174,500	6172	165,000	4121	71° Load	7
644	7-22	AR 201	B	3			4,000	139,000	4916	181,000	6402	181,000	6402	182,000	6437	132,000	4669	72° Load	17
645	7-22	AR 148	B	2 1/2			4,000	125,500	4439	177,500	6278	177,500	6278	172,000	6084	150,000	5305	62° Load	2
646	7-24	RP-14A	B	2 1/2	5.5	146.9	4,000	130,000	4598	159,500	5642	165,000	5836	163,000	5764	147,000	5199	67° Load	12
647	7-24	AR -181 A	B	3			4,000	117,500	4156	161,500	5712	146,000	5164	154,500	5465	142,500	5040	82° Load	1

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
@ 12 Day Break Per OHDOR * 8 Day Break Per OHDOR

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 7-22-70 to 8-7-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)			III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS
648	7-27	AX-113	B	3	5.1	150.7	4,000	131,000	4633	168,000	5942	170,000	6013	157,500	5571	158,000	5588	67° Load 9
649	7-27	AX-113	B	3			4,000	131,000	4633	166,000	5871	171,000	6048	168,500	5960	153,000	5412	78° Load 19
650	7-28	IS-26abcd	B	2 3/4	4.5		4,000	127,000	4492	158,000	5588	170,500	6031	164,000	5801	147,000	5199	80° Load 5
651	7-29	CH-20	A	2 3/4	4.0	149.5	3,000	138,500	4898	195,000	6897	191,500	6882	192,500	6809	183,000	6473	69° Load 10
652	7-29	CH-20	A	2 3/4			3,000	152,500	5394	179,000	6331	177,000	6261	177,500	6278	171,500	6066	67° Load 24
653	7-29	CH-20	A	2 3/4			3,000	122,000	4315	164,000	5801	165,500	5854	165,500	5854	150,000	5305	66° Load 31
654	7-30	AX-214	B	3		147.0	4,000	116,000	4103	163,500	5783	164,000	5801	152,500	5394	151,000	5341	85° Load 12
655	7-31	AX-218, 220, 223	B	2 3/4	5.0		4,000	122,500	4333	161,000	5695	163,000	5764	154,000	5447	149,500	5288	66° Load 12
656	7-31	WELLS	B	2 3/4			4,000	129,500	4580	173,000	6119	182,500	6455	181,000	6402	169,000	5978	66° Load 32
657	7-31	WELLS	B	3			4,000	120,000	4244	171,000	6048	177,500	6278	181,000	6402	163,500	5783	67° Load 31
658	B-3	AX-204 A+205A	B	2 3/4	5.6	145.6	4,000	125,000	4421	164,000	5801	159,500	5642	170,000	6013	155,500	5500	82° Load 10
659	B-6	AX-215 +217	B	2 3/4	5.4	147.4	4,000	127,000	4492	171,500	6066	167,500	5925	170,000	6013	152,500	5394	80° Load 2
660	B-9	AX 168a+169	B	2 3/4			4,000	134,500	4757	164,500	5818	176,000	6296	175,500	6207	161,500	5712	68° Load 17
661	B-7	AX 203+205b	A	2 3/4	5.2	148.2	4,000	144,500	5111	181,000	6402	181,500	6420	182,500	6455	178,500	6314	68° Load 11
662	B-7	AX 203+205b	A	3			3,000	136,000	4810	185,000	6544	175,000	6190	178,500	6314	189,500	6703	68° Load 23
663	B-7	AX 203+205b	A	3			3,000	130,500	4616	176,500	6243	170,500	6031	170,000	6013	179,000	6331	68° Load 36

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 8-7-70 to 8-26-70

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)													
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.		Such as Temperature of Concrete
664	8-7	AX 201, 205 b	A	2 3/4			4,000	130,500	4616	177,000	6261	170,500	6314	173,000	6119	175,500	6207	67 Load 4	
665	8-7	AX 203, 209b	A	2 3/4			4,000	137,500	4910	174,500	6172	177,000	6251	173,500	6137	158,500	5314	69 Load 5	
666	8-10	CW-21	A	3	5.8	146.1	5,000	137,000	4846	192,000	6791	182,000	6437	184,000	6508	173,000	6119	60 Load 1	
667	8-10	CW-21	A	2 3/4			5,000	131,500	4651	191,000	6720	192,500	6809	190,000	6720	176,500	6243	66 Load 2	
668	8-10	CW-21	A	2 3/4			5,000	130,500	4809	193,500	6844	190,000	6720	187,000	6614	180,000	6367	70 Load 3	
669	8-11	AX-16" B"	B	2 3/4	5.0	148.8	4,000	132,500	4333	168,500	5960	167,000	5907	166,000	5871	141,000	4987	66 Load 1	
670	8-11	AX-162	B	3"			4,000	127,500	4510	169,500	5995	176,500	6243	171,000	6048	157,500	5571	69 Load 3	
671	8-13	AX-162 a	B	3"	5.6	146.6	4,000	111,000	3944	168,000	5942	163,000	5765	167,000	5907	146,000	5164	84 Load 4	
672	8-14	EF16 C	B	2 3/4	5.3	146.8	4,000	115,500	4085	164,000	5801	165,000	5836	167,000	5907	141,000	5022	67 Load 1	
673	8-14	EF16 C	B	3"			4,000	126,500	4474	162,500	5748	160,500	5677	162,000	5730	141,500	5076	67 Load 1	
674	8-20	AX 156 B	B	2 3/4		145.5	4,000	118,000	4174	158,500	5605	158,500	5606	138,000	5388	137,000	4846	78 Load 1	
675	8-26	Urbeco Concrete Repair Beam Ave. D1	C - Special Mix				3,000	108,500	1837	3 DAY LAB CYLINDER)		(7 DAY LAB CYL. 134,000		4770 P.S.I.)				1	
676	8-25	CW-22	A	3 1/2	5.7	146.3	5,000	147,500	5217	186,000	6579	195,000	6852	185,000	6544	177,000	6261	65 Load 1	
677	8-27	CW-22	A	3			5,000	128,000	4457	190,500	6738	187,500	6632	185,000	6544	166,000	5871	65 Load 2	
678	8-27	AX-221	B	2 3/4	4.8	149.3	4,000	118,500	4895	156,500	5535	159,500	5606	151,000	5341	136,000	4810	67 Load 5	
679	8-28	AX 300a, 301a + 131	B	3"	4.0	149.4	4,000	127,000	4492	162,500	5748	162,500	5748	170,500	6031	160,500	5677	82 Load 1	

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

* EXTRA AIR VENT TAKEN THROUGHOUT THIS POUR - 4.0, 4.4

George C. Thelin

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 8-28-78 to 9-25-78

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (based upon cylinders molded to 6" diam., 12" high)												REMARKS	
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)				
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete		
680	8-28	AX 300a, 301 a + 181	B	2 3/4			4,000	110,000	3891	155,500	5,500	157,000	5553	153,600	5	149,500	5146	85° Load	23	
681	9-10	CW-23	A	3 1/2	4.8	147.1	5,000	130,500	4616	179,000	6331	177,500	6278	181,000	6402	163,000	5765	62° Load	11	
682	9-10	CW-23	A	3 1/2			5,000	120,500	4262	197,500	6986	186,300	6597	189,000	6685	161,500	5713	67° Load	22	
683	9-10	AX 122B	B	2 1/2			4,000	109,000	3855	171,000	6048	169,000	5978	181,000	6402	135,300	5300	75° Load	4	
684	9-11	Block out CW-22	A	3 1/2	4.4		5,000	114,000	4032	184,000	6526	180,000	6367	183,000	6473	164,500	5818	64° Load	4	
685	9-11	RP16A	B	3	5.1	146.0	4,000	101,000	3572	159,500	5642	159,500	5642	159,500	5642	142,500	5040	67° Load	2	
686	9-11	RP16A	B	2 3/4			4,000	108,500	3837	171,500	6066	170,000	6013	160,000	5659	156,000	5518	64° Load	10	
687	9-15	AX 17B COLS	B	2 1/2	4.0		4,000	140,000	4952	193,500	6844	186,000	6579	183,000	6473	150,500	5606	57° Load	1	
688	9-18	CW-23 Blockout	A	3 1/4	5.4	147.8	5,000	130,500	4616	183,000	6473	186,500	6597	187,500	6	166,500	5889	62° Load	1	
689	9-21	AX-223A + 226A	B	3	4.5	148.2	4,000	118,000	4174	163,000	5765	177,000	6261	185,000	6844	138,500	5606	69° Load	8	
690	9-21	AX-223A + 226A	B	3			4,000	110,000	3891	175,000	6190	168,000	5942	172,000	6086	144,300	5111	67° Load	15	
691	9-22	RP-17B	B	3	4.1	147.9	4,000	113,500	4014	167,500	5925	168,500	5960	166,000	5871	134,300	4757	63° Load	2	
692	9-23	AX 204B	B	2 1/2	4.4		4,000	119,500	4227	179,000	6331	178,500	6314	186,500	6597	152,000	5376	62° Load	2	
693	9-25	AX-302	B	2 1/2	4.8		4,000	122,500	4333	173,000	6119	178,500	6314	168,000	5942	157,000	5553	60° Load	10	
694	9-25	AX-302	B	3			4,000	119,500	4227	177,500	6278	173,000	6119	177,000	6261	140,500	4969	69° Load	22	
695	9-25	AX-124B	B	2 1/2			4,000	125,000	4421	186,500	6597	185,000	6579	186,000	6579	165,500	5465	64° Load	3	

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: Sept. 29-70 to Oct. 28

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT % per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete
693	Sept. 29	AM-291 & 315	B	2"	5.9	149.2	3,000	134,500	4756	178,000	6296	180,000	6367	177,300	6270	131,000	4633	71° Load 3
697	Sept. 30	AM 317 & 293	B	3"	5.3		"	105,00	3749	157,500	5573	166,000	5871	134,200	4696	121,500	4297	74° Load3
698	Oct. 1	AM 311 & 312	B	2 1/2	5.3	146.4	"	104,000	3678	164,500	5818	160,000	5659	161,500	5733	132,000	4669	71° Load3
699	Oct. 2	AM - 370	B	2 3/4	5.8		"	119,500	4200	172,000	6084	163,000	5765	136,500	5519	136,000	4810	69° Load6
703	Oct. 2	AM 296a	B	2 3/4	5.6	145.3	"	114,500	4050	161,000	5693	166,500	5889	164,000	5801	137,500	4863	68° Load9
701	"	"	B	3			"	107,500	3802	162,000	5730	160,000	5659	164,000	5801	134,500	4757	69° Load21
702	"	"	B	3			"	113,000	3951	172,000	6084	164,000	5801	167,000	5907	136,500	4828	65° Load11
703	"	"	B	3			"	114,500	4050	169,000	5978	175,500	6207	175,000	6190	136,500	4828	69° Load48
704	Oct. 13	AM 315	B	3	4.4	146.6	"	131,000	4704	182,000	6437	192,000	6791	186,500	6597	140,500	5252	62° Load5
705	Oct. 14	AM 1210	B	2 1/2	4.7		"	125,000	4419	180,000	6367	175,000	6190	165,000	5836	135,000	4775	59° Load3
706	Oct. 20	AM 301 & AM 316	B	2 1/2	4.3	149.0	"	130,000	4597	180,000	6367	175,000	6190	182,000	6437	131,000	4633	64° Load10
707	Oct. 21	AM 179 & 182 b	B	2 3/4	5.2		"	126,000	4457	176,500	6314	180,000	6367	169,500	5995	117,000	4846	64° Load4
708	Oct. 22	AM 401 a & AM 402 b	B	3"	4.2	148.8	"	130,000	4531	168,000	5942	171,500	6019	173,000	6120	131,000	4704	63° Load3
709	Oct. 23	"	B	3"			"	117,000	4136	166,000	5871	162,000	5996	160,000	5871	126,500	4474	67° Load21
710	Oct. 28	AM 32a	B	3"	5.1	145.2	"	126,500	4474	170,500	6031	177,500	6279	178,500	6314	127,500	4510	53° Load11
711	"	"	B	2 3/4			"	125,000	4419	184,000	6508	181,000	6402	180,500	6384	130,500	4722	52° Load22

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Orville C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: 7010 - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 10-25-90 to 11-17-90

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF FIELD CONCRETE (Based upon cylinders tested at 5" slump, 12" mixes)													
							I (7-DAY)			II (28-DAY LAB)			III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS (Such as Temperature of Concrete	
717	Oct 28	RP-17A	B	3			4,000	136,000	4810	190,500	6384	187,500	6632	183,500	6490	141,000	4992	36° Load	11
719	Oct 29	Ax 318& 319	B	2½			"	144,500	5111	190,000	6722	191,500	6773	191,000	6756	141,500	5005	50° Load	4
723	"	Ax 409	B	2 3/4			"	132,000	4669	181,500	6422	182,500	6458	178,000	6262	134,000	4740	60° Load	12
724	Oct 30	Ax 402W	B	2½	5.1	142.0	"	129,500	4581	183,000	6501	176,500	6429	183,000	6473	134,000	4740	70° Load	4
726	"	" "	B	2½			"	134,000	4740	184,500	6466	186,000	6579	178,500	6311	144,000	5093	40° Load	23
727	"	" "	B	2 3/4			"	118,000	4174	171,000	6048	158,000	5590	174,000	6154	138,000	4527	60° Load	136
728	"	" "	B	3"			"	118,500	4191	169,500	5995	167,500	5926	171,000	6048	134,000	4740	50° Load	18
719	Nov 1	CW-24	A	2 3/4	4.2	148.5	5,000	134,000	4740	197,500	6986	192,000	6791	192,000	6791	153,000	5412	30° Load	3
720	"	" "	A	2½			"	132,000	4669	180,500	6738	196,500	6950	193,500	6844	143,000	5076	60° Load	20
12	Nov 5	CT4, 4 3/4 Col F1, G2, G13	A	3	4.8		4,000	133,500	4368	182,000	6437	190,500	6738	187,500	6632	141,500	5111	30° Load	3
73	Nov 6	AX 327, 328, 329	B	3			"	118,000	4171	177,500	6280	176,000	6225	173,000	6120	124,500	4403	40° Load	12
74	Nov 9	AX 312 & 313B	B	3	5.0	145.	"	105,500	3731	165,500	5854	170,000	6013	165,500	5854	112,000	3961	50° Load	9
75	Nov 12	AX 331 B	B	3	5.4		"	113,000	3997	175,000	6296	165,500	5854	175,000	6296	121,000	4280	50° Load	4
729	Nov 15	RP 13 B	B	3	4.5		"	114,000	4032	165,500	5783	167,500	5926	163,500	5783	Lost in [illegible]		50° Load	7
730	"	" "	"	"	"		"	116,000	4130	173,000	6113	179,500	6198	176,000	6225	--	--	Same load	
731	Nov 17	AX 77 b	B	2 3/4		146.6	"	121,500	4297	169,000	5978	164,500	5818	168,000	5765	121,000	4280	50° Load	3

Notes: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 11-17 to 2-16, 71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												REMARKS
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
727	Nov. 17	AX 303 B	B	3"	4.4		4,000	132,500	4690	178,500	6256	177,000	6261	175,500	6207	123,500	4368	58°Load12
728	"	"	B	3"			"	127,000	4492	173,000	6119	173,500	6137	173,000	6119	122,000	4315	52°Load17
729	Nov. 25	RP - 18B	B	3"	4.0	147.7	"	103,000	3643	163,500	5429	154,000	5447	156,000	5518	NOT AT AREA PLACED		50°Load2
730	Nov. 30	RP - 18A	B	3"	*3.7		"	113,000	3997	162,000	5730	158,500	5606	160,500	5677	120,000	4244	60°Load2
731	Dec. 1	AX - 414	B	2 3/4"	6.0		"	122,500	4333	157,000	5553	157,000	5553	153,500	5429	120,500	4262	60°Load1
732	"	RP - 18A	B	2 3/4"	4.6		"	120,500	4262	163,000	5765	164,000	5801	158,000	5588	126,000	4457	65°Load6
733	Dec. 4	AX - 502	B	2 1/2"	4.2	148.3	"	129,500	4580	166,500	5889	165,000	5836	165,500	5854	123,000	4350	64°Load8
734	"	"	B	2 3/4"			"	113,500	4014	162,000	5376	155,500	5500	161,000	5695	118,500	4191	66°Load20
735	"	"	B	3"			"	107,000	3784	157,500	5571	155,500	5535	161,000	5695	107,500	3802	58°Load34
736	"	"	B	3"			"	110,000	3891	152,500	5394	153,000	5412	154,000	5447	109,500	3873	59°Load46
737	"	"	B	3"			"	120,000	4244	163,500	5783	162,500	5748	160,000	5659	103,500	3661	58°Load69
738	Dec. 10	RP - 19 Slab	B	2 3/4"	4.6	147.7	"	121,500	4297	164,500	5818	167,500	5925	161,500	5712	127,500	4510	50°Load8
739	Dec. 14	Floor Topping on RP-19 Slab	1/4 Down Slab	3 1/4"		136.7	"	99,000	3501	164,000	5801	163,000	5765	167,000	5907	152,000	5376	54°Load2
740	Jan. 15-71	AX Stairs Bm. 52 Elev. 1007 to 1011	3/4 1-50	2 3/4"			"	92,000	3254	150,500	5323	153,500	5429	157,000	5553	131,000	4704	58°Load1
741	Jan. 26	Equipment Pads Aux. Bldg. Bm. 62	3/4 1-50	2 1/4"			"	122,500	4333	152,500	5394	150,000	5659	151,000	5341	113,500	4014	52°Load1
742	Feb. 10	Curb - Rope 77 Aux. Bldg.	7 Bag Sand	4"	6.0		"	105,000	3714	91,000	3218	102,000	3608	120,000	4244	78,000	2662	60°Load2

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.
*Air Corrected to Within Spec, 4.0%

George C. Phelps

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I

NEBRASKA TESTING LABORATORIES, INC.

INCLUSIVE DATES OF REPORT: 3-4-71 to 4-23-71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											REMARKS	
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)			
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
743	March 4-71	Cols Elev. 1000 AX 312A, AX 321A	B	3"	4.6		4,000	137,000	4846	177,500	6278	178,500	6314	190,000	6720	128,500	4546	68°Load	2
744	March 11-71	AX 402 "0" SLAB	B	3"	4.2		4,000	120,500	4262	164,500	5818	163,000	5765	153,500	5783	98,500**	3484	62°Load	2
745	March 16	Parapet Walls AX 435 ...	B	3"		146.1	4,000	104,000	3678	155,000	5482	132,500	4689	158,000	5588	Not P Area Placed		60°Load	1
746	March 25	(11) Blockouts & 4 Thrustblock (Intake)	B	3"	4.6		4,000	111,500	3944	161,000	5695	165,500	5854	166,000	5871	129,500	4580	52°Load	3
747	March 26	AX Pads A159 AC-33, 9A-17, 9A-18	B	3"	4.6		4,000	106,500	3767	154,500	5465	155,500	5500	162,500	5748	139,500	4934	56°Load	2
748	April 2	AX 180 & 181A, 181B Walls	B	3"	5.0	147.6	4,000	101,000	3572	148,500	5252	153,000	5412	150,500	5323	126,500	4474	60°Load	10
749	April 5	AX1730 Wall AX310C, 321C Cols.	B	2 3/4	5.1		4,000	90,000	3183	158,500	5606	153,000	5412	149,000	5270	122,500	4333	58°Load	3
750	April 9	AX 185 SLAB	B	2"	4.8		4,000	102,500	3625	142,500	5040	135,500	4793	133,500	4722	125,000	4421	68°Load	1
751	April 16	AX 101-B Wall & Col. AX321F	B	2 3/4	5.2	145.3	4,000	98,000	3466	145,000	5129	155,500	5500	155,000	5500	143,000	5058	64°Load	0
752	April 19	AX 180C Wall	B	3"	5.0*		4,000	88,500	3130	133,000	4704	134,500	4757	133,000	4704	116,500	4120	66°Load	5
753	April 21	CW 25	A	2 3/4	6.0	149.0	5,000	137,500	4863	181,500	6420	157,000	5554	182,000	6437	156,500	5535	65°Load	9
754	April 21	CW 25	A	3"			5,000	140,000	4952	211,000	7463	182,000	6437	209,500	7410	176,000	6225	65°Load	22
755	April 21	CW 25	A	3"			5,000	141,000	4987	223,500	7892	202,000	7145	198,500	7021	181,000	6402	54°Load	35
756	April 21	CW 25	A	2 3/4			5,000	156,000	5518	210,500	7446	212,000	7499	220,500	7799	176,500	6243	66°Load	48
757	April 21	K1, K2	A	2 3/4	6.5	149.0	5,000	136,000	4810	168,000	5952	196,000	6933	202,500	7163	168,000	5942	54°Load	6
758	April 21	K1, K2	A	2 1/2			5,000	137,500	4863	184,000	6508	180,500	6384	187,000	6614	179,000	6331	57°Load	16

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form. ** 12 Day Field Cure For GWDGR.

*Air Corrected to 5.3%

George C. Fuchs

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 NEBRASKA TESTING LABORATORIES, INC. INCLUSIVE DATES OF REPORT: 4-23-71 to 5-13-71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III(28-DAY LAB)		IV (28-DAY LAB)		V(28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
759	April 23	K1,K2	A	3"			5,000	128,000	4563	185,000	6544	170,000	6013	164,000	6508	158,000	5588	60°Load
760	April 23	K1,K2	A	3"			5,000	129,500	4580	178,000	6296	183,000	6473	176,500	6243	159,000	5624	63°Load
761	April 23	K1,K2	A	3"	5.5	148.0	5,000	137,500	4863	189,000	6685	194,500	6880	196,000	6933	154,000	5447	62°Load
762	April 23	K1,K2	A	3"			5,000	128,500	4545	181,000	6402	180,500	6367	184,500	6632	161,500	5712	64°Load
763	April 23	K1,K2	A	2 3/4			5,000	145,000	5129	196,500	6950	190,000	6720	183,000	6473	176,000	6225	63°Load
764	April 23	K1,K2	A	2¾			5,000	138,500	4899	190,000	6720	192,500	6809	189,500	6703	172,500	6101	62°Load
765	April 23	K1,K2	A	2 3/4	4.7	147.9	5,000	138,000	4881	189,000	6685	184,000	6862	197,500	6966	176,500	6243	64°Load
766	April 26	AX226b, 226b, 410a	B	3"	*7.5		4,000	116,500	4120	165,000	5677	174,000	6154	170,000	6013	164,000	5447	56°Load
767	April 26	AX226b, 226b, 410a	B	2 3/4	4.0		4,000	128,000	4527	177,500	6278	185,500	6561	196,000	6933	161,000	5695	59°Load
768	April 27	AX187a Slab AX188 stairs	B	3"	** 3.5		4,000	113,500	4014	171,000	6048	173,000	6119	173,500	6137	136,500	4828	59°Load
769	April 29	AX 187b	B	3"	4.8		4,000	120,000	4244	180,500	6386	167,000	5907	176,300	6243	151,500	5359	56°Load
770	May 6	AX 85 Pad	B	2 3/4	4.5	149.5	4,000	143,500	5076	202,000	7145	190,500	6738	200,500	7092	Not 0 Ages Placed		71°Load
771	May 13	K3	A	3"	3.6	149.2	5,000	136,000	4810	180,500	6384	182,000	6437	187,000	6614	172,500	6101	67°Load
772	May 13	K3	A	3"			5,000	139,500	4934	194,500	6880	186,000	6579	195,000	6897	153,000	5412	69°Load
773	May 13	K3	A	3"	5.0		5,000	148,500	5252	206,000	7285	193,500	6844	201,500	7127	183,500	6490	64°Load
774	May 13	K3	A	3"			5,000	126,500	4474	195,500	6916	198,000	7003	195,000	6897	164,000	5801	62°Load

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

*Air Corrected 6.0%, 5.3%, 5.7%, 5.7%, 6.0% **Air Corrected 4.5% Air Corrected 4.0,5.0,5.0%

Wayne K. Cole

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — RECEIVED SEPT 1971 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 5-17-71 to 8-13-71

CONCRETE CYLINDER DATA				PLACED CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)													
									I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
	May 17	Walls AX-411A,123C, 122C	B	2 1/2	4.3		4,000	126,000	4457	174,500	6172	173,500	6137	174,500	6172	169,000	5978	64° Load
776	" "	" "	B	3"			4,000	126,500	4474	184,500	6526	181,000	6402	181,000	6402	147,000	5199	63° Load
777	May 20	D1-A	A	2 1/2	4.0	148.9	5,000	143,500	5076	189,500	6703	191,000	6756	185,500	5561	168,500	5960	56° Load
778	" "	" "	A	3"			5,000	141,500	5005	190,500	6738	196,000	6933	190,500	6738	178,000	6296	55° Load
779	May 24	D1-B	A	3"	4.0		5,000	147,000	5199	209,500	7410	201,500	7127	211,500	7481	190,000	6720	64° Load
780	" "	AX 502 AX B5 Wall	B	3"	4.3		4,000	126,000	4457	182,500	6455	173,000	6119	176,000	6225	156,000	5518	64° Load
781	May 26	AX301b,304C,1835	B	3"	4.4		4,000	118,000	4174	170,000	6013	172,000	6084	178,500	6314	158,000	5588	63° Load
782	May 27	AX410b	B	3"		147.3	4,000	100,000	3537	156,500	5535	158,500	5605	149,000	5270	146,500	5182	66° Load
	June 3	AX314,322 AX313a Walls	B	2 1/4	4.2		4,000	130,000	4598	175,000	6190	173,500	6139	177,000	6261	162,500	5748	70° Load
784	June 4	Curb AX 400 B.C.D	B	2 3/4	4.3		4,000	119,000	4209	170,500	6031	175,000	6190	168,000	5942	161,500	5712	78° Load
785	Aug. 5	AX104 CAD	B	3"	4.4		4,000	117,500	4156	164,500	5865	165,000	5836	167,000	5907	148,500	5252	74° Load
786	Aug. 5	Columns 313 B	B	3"			4,000	132,000	4669	164,500	5818	153,000	5412	174,500	6172	154,000	5449	80° Load
787	Aug. 9	AX 225 C	B	3"		147.4	4,000	129,500	4580	157,000	5553	168,500	5960	165,000	5836	Not 0 Area Placed		77° Load
788	Aug. 12	AX323 Wall	B	2 1/2	5.0		4,000	133,500	4722	178,500	6314	180,000	6367	185,500	6561	168,500	5960	76° Load
789	Aug. 13	AX500AX503 A	B	3"	5.0		4,000	114,500	4050	155,500	5500	142,000	5022	145,500	5146	138,000	4881	75° Load
790	Aug. 13	" "	B	3"			4,000	115,000	4065	161,500	5712	161,000	5695	146,500	5182	150,500	5323	77° Load

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Don J. Majewski

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

- FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 8-13-71 to 8-27-71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS	
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
791	Aug. 13	AX5CC&5D3A	B	2 1/2			4,000	132,500	4855	172,000	6084	174,500	6172	164,000	5801	165,000	5836	81° Load	2
792	Aug. 17	AX-226C	B	3	4.5		4,000	135,500	4828	178,000	6296	183,000	6473	177,000	6261	158,000	5589	76° Load	4
793	Aug. 18	K-4	A	3	4.5		5,000	155,000	5518	182,500	6455	177,000	6261	179,000	6331	175,000	6190	67° Load	1
794	Aug. 18	K-4	A	3		147.8	5,000	144,500	5111	186,000	6579	184,500	6880	183,500	6490	166,500	5889	67° Load	2
795	Aug. 18	K-4	A	3			5,000	154,500	5465	188,000	6650	190,000	6720	185,500	6561	185,000	6544	66° Load	3
796	Aug. 18	K-4	A	3			5,000	143,500	5075	183,000	6473	184,000	6509	183,000	6473	176,500	6243	67° Load	4
797	Aug. 18	K-4	A	3	4.3		5,000	145,000	5129	174,000	6154	175,500	6207	180,000	6367	No Field		69° Load*	5
798	Aug. 18	K-4	A	3			5,000	137,000	4846	183,000	6473	179,500	6349	175,500	6207	165,000	5836	67° Load	6
799	Aug. 18	K-4	A	3			5,000	136,000	4810	164,500	5818	173,000	6119	178,500	6314	148,000	5235	69° Load	8
800	Aug. 20	AX5CC&5D3B	B	3	5.2		4,000	125,500	4439	167,500	5925	168,000	5942	162,500	5748	169,000	5978	83° Load	6
801	Aug. 24	AX 411B	B	2 3/4		147.8	4,000	125,000	4421	163,500	5783	165,000	5836	159,000	5624	141,000	4987	83° Load	3
802	Aug. 25	AX-410C&225d	B	3	4.8		4,000	121,000	4280	169,500	5995	167,000	5907	164,000	5801	148,000	5235	81° Load	6
803	Aug. 26	1057 PARAPET WALL	B	3		147.3	4,000	109,500	3873	150,000	5305	154,000	5447	151,000	5341	140,500	4969	80° Load	1
804	Aug. 27	D-2	A	2 3/4	5.0	148.6	5,000	130,500	4616	186,000	6579	172,000	6084	180,500	6384	175,500	6207	72° Load	3
805	Aug. 27	D-2	A	2 1/4			5,000	143,500	5076	185,000	6544	185,500	6561	167,500	5907	165,000	5836	72° Load	2
806	Aug. 27	D-2	A	2 1/2			5,000	144,000	5093	181,000	6402	188,500	6667	164,500	6880	183,500	6490	72° Load	3

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Don G. Defenbaugh

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 8-27 to 9-24-71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (tests upon cylinders molded to 6" diam., 12" high)											
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in Inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
307	8-27-71	D-2	A	2 3/4			5,000	136,500	4828	180,500	6384	177,500	6278	173,500	6349	180,000	6367	65°Load 46
308	"	"	A	3"			"	135,500	4793	177,000	6261	180,000	6367	177,000	6261	165,500	5859	69°Load 58
309	"	"	A	2 1/4	5.4	148.7	"	136,500	4816	171,500	6056	166,500	5889	170,500	6031	171,000	6048	66°Load 71
310	8-31-71	AX502 Relief Panel	B	2 1/2			4,000	134,500	4757	172,500	6101	176,500	6243	172,500	6278	154,500	5465	70°Load 1
311	9-2-71	AX123 E	B	3"	5.5		"	123,000	4350	162,600	5748	161,000	5695	151,500	5359	138,500	4899	64°Load 4
312	9-3-71	CV 4 & 5 Repair	A	3"	4.7		5,000	118,500	4191	157,000	5553	152,500	5394	150,000	5305	147,000	5199	62°Load 2
313	9-5-71	AX 501 & 503 (Part)	B	3"	5.7		4,000	131,000	4633	173,000	6119	171,000	6048	177,500	6278	146,500	5182	72°Load 9
314	"	" "	B	2 3/4			"	128,000	4527	170,000	6236	175,000	6190	172,500	6101	157,000	5553	76°Load 16
315	9-10-71	Pressure Panels Bldg. 1036 (Ax Bldg.	B	2 3/4			"	108,000	3820	147,500	5217	164,500	5165	157,500	5571	NOT C AREA PLACED		70°Load 1
316	9-15-71	AX 5200 (Wall)	B	2 1/2	4.2		"	128,000	4527	177,500	6278	176,000	6226	176,000	6226	152,000	5376	71°Load 3
317	9-16-71	CV 6 Repair	A	2 3/4	4.5		5,000	148,000	5235	192,500	6809	191,500	6832	201,000	7110	173,500	6137	67°Load 2
318	9-16-71	AX 411C Wall	B	2 3/4		147.8	4,000	130,000	4598	167,500	5925	184,000	6508	180,000	6367	154,000	5447	70°Load 4
319	9-17-71	AX 2 1 3 and 6	B	3"	5.7		"	96,000	3396	164,000	5801	153,000	5376	156,000	5518	155,500	5146	67°Load 8
320	9-22-71	1057 Parapets - AX 503, 514, 515, 516 &507	B	3"			"	106,000	3749	156,000	5518	155,000	5482	156,500	5533	127,500	4510	65°Load 1
321	9-23-71	AX 116	B	3"	5.0		"	126,000	4421	171,500	6065	178,500	6314	177,000	6261	137,500	4863	63°Load 1
322	9-24-71	CV 7 Repair	A	3"	4.7		5,000	132,000	4669	166,000	5871	175,500	6207	173,000	6115	151,500	5357	64°Load 1

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Don Wisinski

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT I — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: 9-24-71 to 10-18-71

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												REMARKS
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Cured at Temperature of Concrete
823	9-24-71	Shuttle pads on 1037 slab VA 46 A and B Pad	B	3"			4,000	128,500	4585	186,000	6579	178,000	6331	178,000	6314	173,500	6101	69 Load 1
824	9-28-71	VA 20 A and B	B	3 3/4			"	121,000	4280	162,000	5448	171,000	6048	171,500	6066	130,500	4899	68 Load 8
825	9-29-71	AX - 122D Wall	B	3		147.0	"	125,500	4439	171,500	6066	172,000	6101	167,500	5925	137,00	4846	70 Load 2
826	9-30-71	AX 122 F Wall	B	3"	5.6		"	120,000	4244	164,500	5810	159,500	5642	170,000	6013	123,000	4350	80 Load 1
827	10-1-71	Fire Hydrant Pads	B	3"			"	121,500	4297	163,500	5060	161,500	5712	173,500	6084	129,000	4563	78 Load 3
828	"	Spent Fuel Gate	B	2 3/4	5.8		"	122,500	4686	170,000	6013	159,000	5624	174,000	6154	149,500	5288	67 Load 5
829	10-5-71	CW-B Repair	A	3"	5.0		5,000	133,000	4705	191,000	6776	200,000	7074	190,500	6738	150,500	5508	68 Load 2
830*	10-7-71	AX 412B	B	"			4,000	104,800	3670	150,000	5305	146,000	5164	151,800	5339	116,500	4191	69 Load 1
831	10-8-71	RP 23D	B	3"		148.1	"	122,000	4315	171,000	6048	175,000	6193	160,500	5095	148,500	5129	65 Load 2
832	10-12-71	AX 206 and Pads	B	2 3/4	5.0		"	120,000	4243	178,000	6296	165,000	6544	178,500	6315	152,000	5376	66 Load 7
833	10-13-71	RP 22A	B	3"	4.4		"	132,000	4662	183,000	6544	180,000	6473	175,000	6190	141,000	4987	64 Load 2
834	10-14-71	AX 600A	B	3"	5.2		"	122,000	4341	184,000	6509	181,500	6525	186,000	6550	153,000	5412	66 Load 9
835	10-14-71	"	B	2 3/4			"	130,000	4608	191,000	6665	191,000	6759	184,000	6508	155,500	5500	67 Load 2
836	10-15-71	VA-151 A,B,C And D Bld. 02 Ax.Bldg. El.103	B	3"			"	114,500	4050	159,000	5624	169,000	5978	162,500	5730	127,000	4492	65 Load 3
837	10-15-71	AX 112C	B	3"	6.0		"	119,000	4209	171,000	6048	175,500	6207	177,000	6261	150,000	5446	65 Load 6
838	10-16-71	RP 20D	B	2 1/2			"	120,500	4834	185,000	6544	180,500	6385	173,000	6119	141,500	5005	65 Load 2

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: October 22, 1970 to November 11, 1971

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as temperature of Concrete
939	10-22-71	AX 413b	B	2 1/2			4,000	158,500	5598	211,500	2481	210,500	7446	208,500	7375	172,000	6084	62°Load 2
940	10-25-71	1057 Roof O.C.S. Pipe Sleeve E. Aux. Bldg.	B	3"	4.6		"	132,000	4669	174,500	6172	181,000	6402	183,000	6473	144,000	5093	68°Load 1
941	10-26-71	RP 22b	B	3"		147.0	"	122,000	4315	180,000	6367	170,000	6013	173,000	6119	132,500	4863	64°Load 3
942	10-27-71	RP-7-2	B	3"	5.5		"	104,600	3678	174,500	6172	159,500	5642	163,000	5765	129,500	4803	62°Load 4
943	10-28-71	CH-9 Repair	A	3"	-	-	5,000	144,000	5093	180,000	6367	183,500	6490	177,000	6261	157,500	5571	66°Load 2
944	10-29-71	AX 122C	B	3"	-	-	4,000	120,000	4244	175,500	6207	180,500	6384	174,500	6172	144,500	5111	67°Load 5
945	11-2-71	AX-6008	A	3"	4.6		"	114,500	4050	182,000	6437	183,000	6473	178,500	6314	123,000	4350	60°Load 6
946	11-2-71	AX-6006	B	2 1/2			"	112,000	3961	190,000	6720	180,500	6384	190,500	6738	126,500	4474	58°Load10
947	11-4-71	AX-1608 and AX-204	B	2 3/4		147.4	"	113,500	4041	182,500	6455	178,500	6314	176,500	6243	128,000	4527	58°Load 9
948	11-4-71	RP-22C	B	3"			"	96,500	3395	165,000	5836	168,500	5960	166,000	5871	121,500	4297	64°Load 1
949	11-5-71	1049 Roof O.C.S. Ax. Bldg.	B	3"			"	106,500	3749	164,000	5801	165,500	5853	173,500	6137	123,500	4368	58°Load 1
950	11-5-71	RF 7-3 Reactor Wall Do.	1/4 Sand	4"			"	55,000	1980	130,000	4598	123,500	4368	124,000	4386	106,000	3749	60°Load 1
951	11-10-71	AX-505 Parapet Wall	B	2 3/4	4.5	142.3	"	117,000	4138	173,500	6137	181,000	6402	179,000	6331	128,500	4262	63°Load 1
952	11-11-71	AX-6030	D	3"	5.0		"	99,500	3579	147,500	5217	150,500	5323	156,500	5536	117,000	4138	58°Load10
953	11-11-71	AX-5006	D	3"			"	107,600	3784	151,500	5359	176,500	6243	168,000	5942	116,500	4120	59°Load16
954	11-11-71	AX-1145 and c	B	3"			"	111,000	3927	173,500	6137	164,500	5818	176,000	6225	131,500	4297	61°Load 3

NOTES: (1) Specifications for Class A, B and E concretes are summarized on reverse side of original copies of this form.

Don J. Gajewski
Don Gajewski

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1

NEBRASKA TESTING LABORATORIES, INC.

INCLUSIVE DATES OF REPORT: Nov. 17-71 to Jan. 20-72

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											REMARKS
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete
855	11-17-71	[illegible] wall	B	2 1/2	5.0	-	4,000	130,500	4595	162,000	5713	189,000	6685	185,500	6597	130,000	4598	56° Load 1
856	11-19-71	AX [illegible] Slab	B	2 3/4	5.0	-	"	107,000	3784	157,500	5571	161,000	5695	161,500	5712	126,000	4457	56° Load 1
857	11-24-71	AX [illegible]	B	3"		149.9	"	135,000	4010	175,500	6207	176,500	6243	171,000	5048	NOT AT AREA FOUND		60° Load 1
858	12-2-71	AX [illegible] in AX 216 Wall	B	2 1/2	5.0		"	127,500	4510	146,000	5164	160,000	5659	149,500	5288	" "	" "	60° Load 5
859	12-10-71	[illegible] Fall	Grout				"	92,500	[illegible]	7 Day (Unknown Grout) (Field)	- Hand Mixed -	- - -	- - -	- - - -	28 Day Field	91,000	3210	65° Load
860	12-13-71	AX 139 Wall	B	3"			"	141,000	4987	159,500	5642	157,500	5571	145,000	5129	146,000	5164	54° Load 1
861	12-14-71	AX 1200	B	2 3/4	6.0		"	123,500	4368	150,500	5606	151,500	5642	147,500	5217	127,500	4510	55° Load 2
862	12-21-71	AX 1100 Slab	B	3"			"	113,500	4014	131,500	4651	128,500	4535	137,300	4863	122,500	4333	61° Load 2
863	12-23-71	AX 7000 B/D	B	2 3/4		148.2	"	123,000	[illegible]	152,500	5394	142,000	5022	143,000	5058	113,500	4006	60° Load 6
864	12-28-71	7006-11 B/D	B	3"	5.4	-	"	100,000	3537	143,500	5076	140,500	4969	137,500	4846	139,000	4916	57° Load 3
865	1-11-72	Containment Openings #1	A	3"	5.5	147.6	5,000	98,000	3466	154,000	5447	158,500	5606	162,000	5659	111,000	3926	60° Load 3
866	1-13-72	AX-192 AX-1036b 104a, 191a	B	3"	6.0		4,000	130,500	4616	170,000	6013	155,500	5500	164,000	5801	140,500	4969	64° Load 5
867	1-14-72	Containment Opening #2	A	3"	5.5		5,000	105,500	3731	166,500	5889	162,500	5748	160,000	5659	127,000	4492	56° Load 4
868	1-19-72	AX 7000 B/D's 4,5 AX 7009 B/D's 12,13,	SS 7 BAG	3"			4,000	87,000	3095	126,000	4457	126,500	4474	126,500	4474	112,500	3979	65° Load 1
869	1-19-72	AX 7009 " 1, 14, 15 1,3 AX7009 B/D's 1,2,3	B	2 1/2			4,000	127,000	4492	162,500	5748	162,500	5748	162,000	5730	140,000	4952	56° Load 2
870	1-20-72	5,6,7,8,10 Containment Opening #3	A	3"	3.2	140.3	5,000	110,000	3891	171,000	6048	172,000	6084	155,500	5500	125,00	4421	56° Load 3

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: January 26-72 to March 29-72

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
							I (7-DAY)			II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	REQUIRED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	REMARKS Such as Temperature of Concrete	
871	1-26-72	Containment Opening #4	A	2 3/4	4.3		5,000	131,500	4651	191,500	6773	198,000	7003	186,500	6557	Damaged at Job Site		52° Load	6
872	1-26-72	AX304A	B	2 3/4			4,000	132,500	4686	173,000	6119	182,500	6455	174,500	6172	Damaged at Job Site		62° Load	1
873	2-1-72	AX191C	D	3		147.6	4,000	129,500	4581	158,000	5588	168,500	5842	160,500	5659	142,000	5022	58° Load	2
874	2-2-72	Containment Opening #5	A	2 3/4	4.8		5,000	107,000	3788	210,500	7428	205,500	7251	189,500	7056	Damaged at Job Site		54° Load	1
875	2-4-72	AX193	B	2 1/2			4,000	137,500	4863	169,000	5978	181,500	6420	165,000	5836	139,500	4934	62° Load	2
876	2-9-72	AX325C, VA-69 AX411b, AX235b	B	3		147.1	4,000	126,000	4457	156,000	5518	146,000	5164	140,000	5235	141,500	5305	50° Load	1
877	2-10-72	Containment Opening #6	A	2 3/4	4.7		5,000	127,500	4510	177,000	6261	171,000	6048	173,000	6119	Damaged at Job Site		60° Load	5
878	2-11-72	AX325a, 326b 327a (Walls)	B	3	6.0		4,000	121,500	4257	139,000	4916	144,000	5093	143,000	5058	141,000	4987	60° Load	3
879	3-1-72	AX191 b and d	D	2 3/4	5.7		4,000	150,000	5283	178,500	6314	179,500	6349	179,000	6331	150,500	5305	58° Load	1
880	3-1-72	AX325b, 326b, 327b and c	B	3		148.4	4,000	144,000	5093	175,000	6190	179,000	6331	176,000	6225	140,000	4952	59° Load	2
881	3-2-72	AX7024-1 B/D[5]	B	2 1/2			4,000	134,500	4757	148,500	5252	149,500	5285	147,000	5199	154,000	5447	52° Load	1
882	3-9-72	AX B/D[5] 7019-3 Rn's 4-15	B	3	6.0		4,000	125,500	4439	132,500	4686	140,500	5076	152,500	5429	122,500	4333	62° Load	4
883	3-15-72	AX B/D[5] 7019-11	D	3		147.5	4,000	125,000	4421	167,500	5925	171,000	6048	167,000	5905	137,000	4845	60° Load	1
884	3-20-72	AX 191-E, 304 B and 324-A	B	3	*3.7		4,000	125,000	4421	187,000	6614	174,000	6154	181,000	6402	Damaged at Job Site		64° Load	3
885	3-22-72	AX B/D[5] 7003-1	B	3	6.0		4,000	132,000	4669	162,500	5730	159,000	5624	160,000	5659	137,000	4849	51° Load	2
886	3-29-72	AX B/D[5] 7056-1,2,3,4,5	B	3	5.4		4,000	126,000	4457	171,000	6048	152,500	5394	161,000	5695	154,500	5465	56° Load	1

NOTES: (1) Specifications for Class A, B and D Concretes are summarized on reverse side of original copies of this form.

*AIR CORRECTED 6.0, 5.9, 5.8, 5.3%

Donald L. Ojard

QA CONST. REC.
QA REC.
N/A

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

FORT CALHOUN STATION - UNIT

NEBRASKA TESTING LABORATORIES, INC.

INCLUSIVE DATES OF REPORT: 3-30-72 to 5-18-72

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE					STRENGTH OF HARDENED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)												REMARKS
								I (7-DAY)		II (28-DAY LAB)		III(28-DAY LAB)		IV (28-DAY LAB)		VI(28-DAY FIELD)				
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.			Such as Temperature of Concrete
587	3-30-72	AX 32&b, 50&	B	3"	5.3		4,000	135,000	4775	180,000	6367	171,000	6048	184,500	6526	169,000	5835			56°Load 3
588	4-6-72	AX 505, 50&, 516 Pasonnts	B	3"	4.0	148.4	"	129,500	4563	161,500	5712	162,000	5730	162,500	5925	134,500	4757			62°Load 1
589	"	Spent Fuel Gate	A	3"			5,000	112,500	3870	137,000	4846	149,000	5270	143,000	5056	124,500	4403			74°Load 1
590	4-10-72	AX B/05 7020 1,7,8, 410 & AX 30 a,b,c	B	3"	4.5	147.8	4,000	131,000	4633	165,000	5836	160,000	5659	167,500	5925	139,500	4916			70°Load 2
591	4-12-72	AX B/05 7020-3, 5, 6,7,15,18,19,20,22	B	3"	6.0		"	127,000	4492	155,500	5500	156,500	5518	158,000	5588	160,000	5660			71°Load 2
592	4-18-72	AX B/05 7153-1 7153-2 & 7014-1,2,3,4 7015-1 & 3,5	B	3"	4.0		"	136,000	4810	155,500	5500	161,000	5659	163,500	5790	144,000	5093			60°Load 4
593	4-19-72	B/05 7063-1 to 12 7015-2 Lair 2 Cure AX B/05 7050-5,6,8	B	3"	6.0		"	125,000	4421	149,500	5288	151,500	5359	160,000	5658	154,500	5465			56°Load 1
594	4-26-72	AX B/05 7038-1,2,3 7068-1& 7038-4,5,6 7068-2	B	3"	6.0		"	137,500	4861	167,500	5925	169,500	5996	171,500	6066	151,000	5341			68°Load 2
595	4-27-72	AX114 Slab	D	2 1/2"			"	150,000	5305	189,000	7003	185,000	6544	187,500	6632	152,000	5394			56°Load 1
596	"	MS. 7001-5	B	3"	5.4	147.6	"	143,000	5056	181,000	6402	182,000	6437	182,000	6437	152,000	5324			56°Load 2
597	5-3-72	AX B/05 7014-1,6,7,14 7028-5,7 7043-7 AX115 F Stairs	B	3"	5.6		"	128,000	4527	163,000	5765	164,500	5818	165,000	5836	135,500	4793			66°Load 2
598	5-4-72	AX B/O 7060-1	B	3"	5.7		"	100,000	3537	151,500	5359	142,000	5022	142,500	5040	134,000	4740			58°Load 3
599	5-10-72	AX B/05 7028-1,11,12 7029-1,2,3,4,5,7,8,9	B	3"	6.0		"	122,000	4315	149,500	5288	142,000	5022	151,000	5341	127,000	4492			60°Load 3
600	5-11-72	AX B/05 7023-7 7025-2,3,5,6 7017-1	B	3"		147.9	"	103,000	3643	127,500	4510	132,500	4686	132,000	4669	111,500	3944			62°Load 2
601	5-16-72	AX B/05 7021-1 7016-8 7019-26 7025-3 7038-5	B	3"	5.4		"	117,500	4156	130,500	4899	145,500	5146	143,000	5058	132,500	4686			63°Load 1
602	5-18-72	AX B/05 7146-1 7174-1, 7167-2 to 7	B	3"	6.0		"	104,000	3678	118,000	4174	134,500	4757	131,500	4651	15,000	4667			70°Load 2

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

Donald J. Gniewski

9T5230

SUMMARY OF CONCRETE CYLINDERS COMPRESSIVE STRENGTH

PROJECT: OPPD - FORT CALHOUN STATION - UNIT 1 — NEBRASKA TESTING LABORATORIES, INC. — INCLUSIVE DATES OF REPORT: NOV13, 1970 to 12-10-7

CONCRETE CYLINDER DATA			PROPERTIES OF PLASTIC CONCRETE				STRENGTH OF IDENTIFIED CONCRETE (Based upon cylinders molded to 6" diam., 12" high)											
								I (7-DAY)		II (28-DAY LAB)		III (28-DAY LAB)		IV (28-DAY LAB)		V (28-DAY FIELD)		REMARKS
SET NO.	DATE CYLINDERS CAST	LOCATION OF CONCRETE PLACEMENT	CONCRETE CLASS (NOTE 1)	SLUMP in inches	AIR CONTENT in per cent	UNIT WEIGHT in lbs. per cu. ft.	SPECIFIED STRENGTH in lbs per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	FAILURE LOAD in lbs.	COMPRESSIVE STRENGTH in lbs. per sq. in.	Such as Temperature of Concrete	
725A	Nov. 13	RP18D	B	3"	4.5		4,000	Sampled @ end of pump discharge		173,000	6119	175,000	6190	176,000	6225			68° Load	
730A	Nov. 30	RP15A	B	3"	3.7*		4,000	Hose "	"	174,000	6154	174,000	6154	180,500	6384			65° Load	
732A	Dec. 1	RP18A	B	2 3/4	4.6		4,000	"	"	176,000	6225	176,000	6048	181,000	6402			65° Load	
734A	Dec. 4	AX 502 SLAB	B	2 3/4			4,000	"	"	159,000	5589	163,000	5765	163,000	5765			55° Load	2
736A	Dec. 4	AX 502 SLAB	B	3"			4,000	"	"	161,500	5712	158,500	5605	160,500	5677			59° Load	4
738A	Dec. 10	RP19 SL ar	B	2 3/4	4.6	147.7	4,000	"	"	172,000	6084	177,500	6278	178,500	6314			60° Load*	1
755A	IA 5-19	CW 25	A	3"			5,000	Sample @ end of pump discharge		208,000	7357							64° Load	3
759A	IA 5-21	K1, K2	A	3"			5,000	Hose "	"	178,000	6296							60° Load	3
762A	IA 5-21	K1, K2	A	3"			5,000	"	"	181,000	6402							64° Load	6
785A	A* 8-5-71	AX-104 C & D	B	3"			4,000	"	"	162,000	5907	174,500	6172	163,000	5765			74° Load.	3
790A	A* 8-13-7	AX-500A & 503A	B	3"			4,000	"	"	165,000	5838	166,500	5889	166,000	5871			77° Load	1
794A	A* 8-18-7	K-4	A	3"			5,000	"	"	182,500	6456	180,000	6367					67° Load	2
798A	A* 8-18-7	K-4	A	3"			5,000	"	"	100,500	6384	178,000	6296					67° Load	6
801A	A* 8-24-7	AX-411 B	B	2 3/4			4,000	"	"	160,500	5960	169,500	5995					83° Load	3
811A	A* 9-2-71	AX 123 E	B	3"	5.5		4,000	"	"	161,500	5712	164,000	5801					84° Load	4
812A	A* 9-3-71	CW4 & 5 REPAIR	A	3"	4.7		5,000	"	"	167,500	6925	162,500	5748					69° Load	2

NOTES: (1) Specifications for Class A, B and C concretes are summarized on reverse side of original copies of this form.

* AIR CORRECTED TO WITHIN SPEC. 4.0%, 4.2, 5.5, 6%