LINER SYSTEM CERTIFICATION REPORT
For
ASH WATER TRANSPORT POND 1-B

Prepared for:

SAN MIGUEL ELECTRIC COOPERATIVE, INC.
SAN MIGUEL PLANT
CHRISTINE, ATASCOSA COUNTY, TEXAS

Prepared by:
ZEPHYR ENVIRONMENTAL CORPORATION
TEXAS REGISTERED ENGINEERING FIRM F-102
TEXAS GEOSCIENCE FIRM NO. 50037
2600 VIA FORTUNA, SUITE 450
AUSTIN, TEXAS 78746

NOVEMBER 28, 2017

zephyr

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INTRODUCTION

San Miguel Electric Cooperative, Inc. (SMEC) owns and operates a 440-MW mine-mouth, lignite-fired power generating plant and associated lignite mining facilities. The San Miguel Plant is located approximately 6 miles south of Christine, Texas. The Facility generates coal combustion residuals (CCR) that are regulated under Title 40, Code of Federal Regulations (CFR), Part 257 (the CCR Rule). San Miguel operates three CCR surface impoundments at SMEC.

(1) Ash Water Transport Pond 1-A,
(2) Ash Water Transport Pond 1-B, and
(3) Equalization Pond (EP).

Figure 1 provides an area map depicting the location of these units within the facility.

The CCR Rule requires that owners and operators of existing CCR Surface Impoundments document whether the unit was constructed with a liner that meets the requirements of the CCR Rule. As described in 40 CFR §257.71(a)(1), existing CCR Surface Impoundments are considered unlined unless they were constructed with one of either:

i. A liner consisting of a minimum of two feet of compacted soil with a permeability less than or equal to 1 x 10-7 centimeters per second (cm/sec);
ii. A composite liner consisting of a minimum 30-mil thick upper geomembrane component, and a lower component consisting of a minimum of two feet of compacted soil with a permeability less than or equal to 1 x 10-7 cm/sec; or
iii. An alternative composite liner consisting of a minimum 30-mil thick upper geomembrane component, and a lower component (that is not a geomembrane) with the liquid flow rate consistent with that of a minimum of two feet of compacted soil with a permeability less than or equal to 1 x 10-7 cm/sec.

This report was prepared to certify the construction of the liner for Ash Water Transport Pond 1-B (Ash Pond 1-B). Ash Pond 1-B was constructed in 1977. The liner was reconstructed in 1990-1991. Zephyr has reviewed information documenting the 1990 - 1991 Ash Pond 1-B surface impoundment liner reconstruction. The documents demonstrate that Ash Pond 1-B is an existing lined CCR surface impoundment with a liner consisting of 3 feet of compacted soil with a hydraulic conductivity of no more than 1 x 10 -7 cm/sec. Zephyr has prepared the certification of the Ash Pond 1-B liner per the requirements of 40 CFR 257.71(b),

1.0 SUMMARY OF AVAILABLE DOCUMENTATION

Ash Pond 1-B, along with the other surface impoundments (Ash Pond 1-A and the Equalization Pond) at the San Miguel plant, were originally constructed in 1977. In July, 1983, SMEC was notified by the Texas Department of Water Resources (TDWR) that, as a result of a routine industrial wastewater inspection made on May 26, 1983 by a TDWR representative, the west and east side outer banks of ash pond "A" were apparently leaking contents. TDWR requested that the reason for the pond leakage be identified and proposals made for correction of the problem. Subsequent inspections and tests made by San Miguel plant personnel revealed suspected leakage areas around the ash ponds 1-A and 1-B.

In 1987, San Miguel implemented reconstruction of the Ash Pond 1-A clay liner based on the recommendations and instructions provided by in the "*Liner Construction Unit #1 Ash Pond"* letter from PSI dated January 27, 1987 and the "*San Miguel Unit #1 General Notes for 1A Ash Pond Clay Liner Construction"* letter from San Miguel dated May 8, 1987. On July 10, 1987 San Miguel executed contracts with V. K. Knowlton Paving Contractor, Inc., for reconstruction of the Ash Pond 1-A liner, and with PSI for the associated construction quality assurance inspection and testing. Those contracts specified that the Ash Pond 1-A liner be reconstructed with three feet of compacted clay with a permeability less than 1 x 10-7 cm/sec. Details with regard to the re-construction of Pond 1-A are provided in the Professional Engineer's Certification of Pond 1-A by Environmental Resources Management dated October 17, 2016.

Beginning in December 1990, Atascosa Mining Co. was commissioned for the reconstruction of the Ash Pond 1-B liner and PSI was contracted again to perform construction quality assurance inspection and testing. Construction oversight was performed by the Morrison-Knudsen civil engineering firm. Before and during construction, PSI conducted Standard Proctor soil testing of native clay soil materials to define a minimum compacted dry density and range of moisture content that would meet the technical specifications. During construction, PSI conducted over 500 field compaction tests for moisture density testing of the reconstructed liner. A copy of these soil testing reports is provided in **Attachment A** of this certification report. By letter of July 12, 1991, PSI confirmed that the following soil properties were met for the Ash Pond 1-B liner:

1. Clay was placed at a compaction level of 95% or greater and moisture level of optimum to 4% above optimum.
2. Samples of the clay placed as liner material were tested and found to have the following characteristics:

Liquid Limit:	greater than 30
Plasticity index:	greater than 15
Permeability:	less than 1 X 10^{-7} cm/sec.

A copy of PSI letter is provided in **Attachment B**.

By letter of August 19, 1991, Atascosa Mining Co. provided an engineering certification attesting that the Ash Pond 1-B liner was constructed with a minimum thickness of 3.0 feet at all locations of the interior up to the design elevation of 315.0 feet, mean sea level. A copy of this certification is provided as **Attachment C**.

2.0 PROFESSIONAL ENGINEER'S CERTIFICATION

2.1 RELIANCE

This Certification relies upon the genuineness of the documents provided in Attachments B and C of this report and upon the certifying engineer's review of soils testing data provided in Appendix A. An independent verification of the Ash Pond 1-B liner soil properties was not performed as part of this certification.

2.2 CERTIFICATION STATEMENT

I hereby certify that I have reviewed the aforementioned documentation for Ash Pond 1-B regulated under the Coal Combustion Residual regulations found in 40 CFR 257 for surface impoundments that is located at the San Miguel Electric Cooperative, Inc. plant in Atascosa County, Texas, and being familiar with the provisions of 40 CFR Part 257.71(a)(1)(i), attest that this documentation is accurate to the best of my knowledge and that it supports a conclusion that that the Ash Pond 1-B reconstructed liner meets the design requirements contained in 40 CFR Part 257.71(a)(1)(i) *of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments".*

(Seal)

Date 11/28/2017

David H. Sorrells
Printed Name of Licensed Professional Engineer

David H. Sorrells, P.E.
Signature of Licensed Professional Engineer

License No. 42153 State Texas

FIGURE 1

AREA MAP

Datum: GCS NAD 1983 Map Sources: ESRI Bing Hybrid & Streets Basemaps

Property Boundary

zephyr

FIGURE 1 - AREA MAP

San Miguel Electric Cooperative, Inc.
Atascosa County, Texas

H:\San Miguel Electric\017789 Pond Liner Evaluation\Drawings\1_AreaMap.mxd

Drafted By:	Reviewed By:	Project No.:	Date:
J. Knowles	D. Sorrells	017789	11/28/2017

ATTACHMENT A

PSI SOIL TESTING DATA
ASH POND 1-B

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 6, 1990

OUR REPORT NO.: 311-00155-3 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 6, 1990

OUR REPORT NO.: 311-00155-3

TEST DATA: Optimum moisture: (*, 29.3%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-06-90	2nd lift	*	86.5	29.4	84.2	97.3	1-A
2	12-06-90	2nd lift	*	86.5	30.0	89.2	103.1	1-A
3	12-06-90	2nd lift	*	86.5	29.9	86.2	99.6	1-A
4	12-06-90	2nd lift	*	86.5	29.4	88.5	102.3	1-A
5	12-06-90	3rd lift	*	86.5	31.5	85.5	98.8	1-A
6	12-06-90	3rd lift	*	86.5	31.4	83.7	96.8	1-A

TEST LOCATION:

1	North side slope - north station 2 + 80 and east station 15 + 20
2	North side slope - north station 2 + 85 and east station 20 + 25
3	North side slope - north station 2 + 85 and east station 23 + 85
4	North side slope - north station 2 + 90 and east station 34 + 60
5	North side slope - north station 2 + 85 and east station 17 + 20
6	North side slope - north station 2 + 85 and east station 22 + 15

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

* Laboratory test data provided by Morrison-Knudsen

REMARKS:

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 6, 1990

OUR REPORT NO.: 311-00155-3 Page 3 of 3

TEST DATA: Optimum moisture: (*, 29.3%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	12-06-90	3rd lift	*	86.5	31.1	84.7	98.0	1-A
8	12-06-90	3rd lift	*	86.5	31.6	86.2	99.8	1-A

TEST LOCATION:

7	North side slope - at north station 2 + 90 and east station 27 + 40
8	North side slope - at north station 3 + 00 and east station 34 + 00
	* Laboratory test data provided by Morrison-Knudsen

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Dr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 7, 1990

OUR REPORT NO.: 311-00155-4 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 7, 1990

OUR REPORT NO.: 311-00155-4

TEST DATA: Optimum moisture: (*, 29.3%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-07-90	4th LIFT UP SLOPE	*	86.5	30.1	85.7	99.1	1-A
2	12-07-90	4th LIFT UP SLOPE	*	86.5	29.3	86.2	99.6	1-A
3	12-07-90	4th LIFT UP SLOPE	*	86.5	29.3	84.7	97.9	1-A
4	12-07-90	4th LIFT UP SLOPE	*	86.5	29.5	85.7	99.0	1-A
5	12-07-90	5th LIFT UP SLOPE	*	86.5	29.6	84.5	97.7	1-A
6	12-07-90	5th LIFT UP SLOPE	*	86.5	33.0	82.7	95.6	1-A

TEST LOCATION: Clay liner

1	North slope at E 16 + 30 and N 3 + 01
2	North slope at E 19 + 20 and N 3 + 01
3	North slope at E 22 + 00 and N 3 + 05
4	North slope at E 30 + 00 and N 3 + 00
5	North slope at E 15 + 00 and N 3 + 02
6	North slope at E 19 + 90 and N 3 + 05

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

*Laboratory data provided by Morrison-Knudsen

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 7, 1990

OUR REPORT NO.: 311-00155-4 Page 3 of 3

TEST DATA: Optimum moisture: (*, 29.3%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	12-07-90	5th LIFT UP SLOPE	*	86.5	32.0	85.2	98.5	1-A
8	12-07-90	5th LIFT UP SLOPE	*	86.5	30.4	85.0	98.3	1-A
9	12-07-90	3rd LIFT UP SLOPE	*	86.5	31.1	85.0	98.3	1-A

TEST LOCATION: Clay liner

7	North slope - at E 23 + 80 and N 3 + 05
8	North slope - at 24 + 10 and N 3 + 06
9	North slope - at E 32 + 60 and N 3 + 10
	* Laboratory data provided by Morrison-Knudsen

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 10, 1990

OUR REPORT NO.: 311-00155-2

TEST DATA

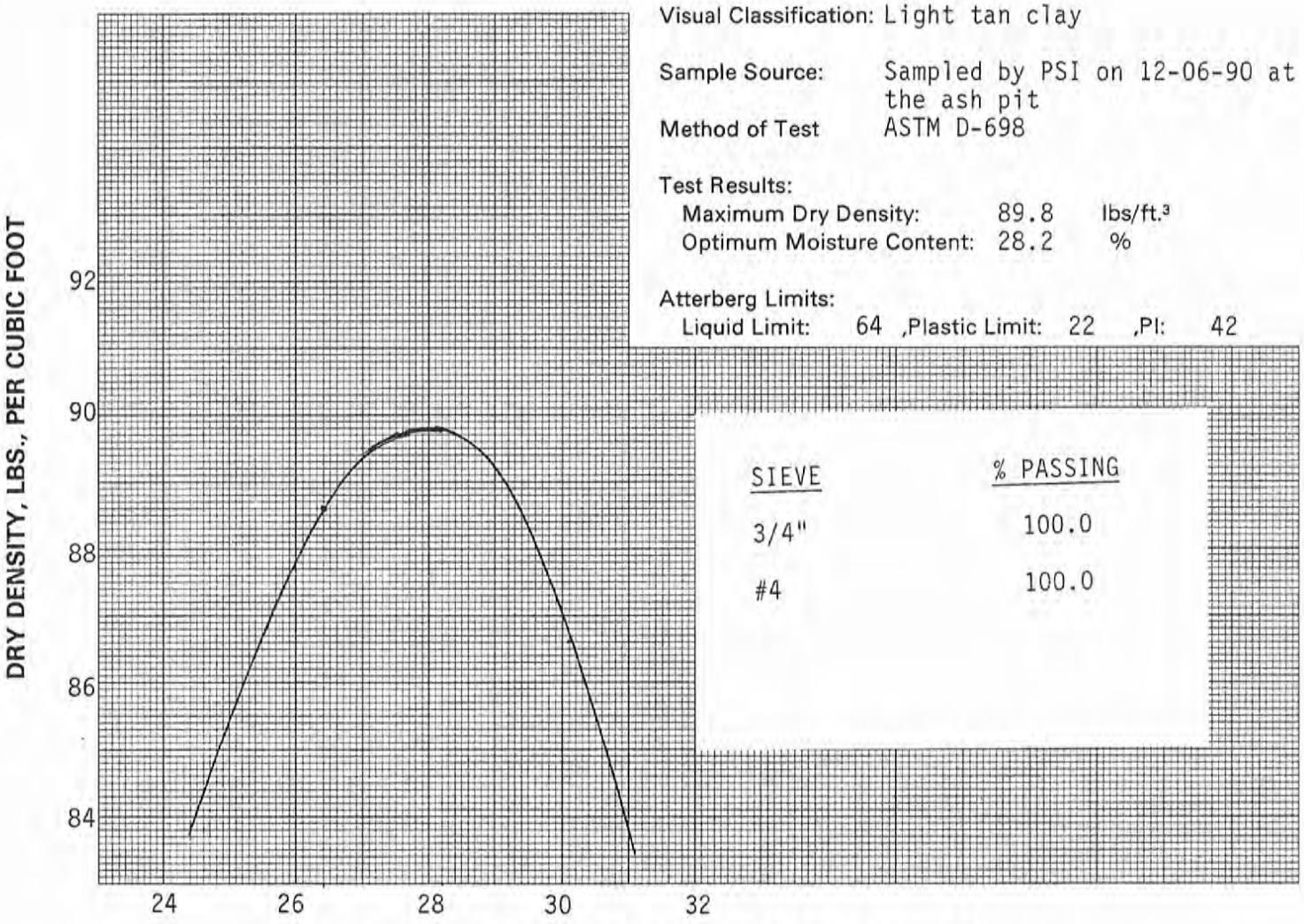
Visual Classification: Light tan clay

Sample Source: Sampled by PSI on 12-06-90 at the ash pit

Method of Test: ASTM D-698

Test Results:
Maximum Dry Density: 89.8 lbs/ft.³
Optimum Moisture Content: 28.2 %

Atterberg Limits:
Liquid Limit: 64 ,Plastic Limit: 22 ,PI: 42



SIEVE	% PASSING
3/4"	100.0
#4	100.0

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 10, 1990

OUR REPORT NO.: 311-00155-5 Page 1 of 2

REMARKS: Technician: Jimmy Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

Most work conducted on this date involved removing soil that became excessively wet over the weekend.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of Optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 10, 1990

OUR REPORT NO.: 311-00155-5

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-10-90	3rd Lift	2	89.8	28.5	80.7	98.8	1-A
2	12-10-90	3rd Lift	2	89.8	30.1	85.2	95.0	1-A

TEST LOCATION:

1	Clay liner - north slope at E34 and 70 and N3 and 10
2	Clay liner - north slope at E33 and 90 and N3 and 10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 11, 1990

OUR REPORT NO.: 311-00155-6 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 11, 1990

OUR REPORT NO.: 311-00155-6

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-11-90	6th Lift Up Slope	2	89.8	28.6	89.0	99.1	1-A
2	12-11-90	4th Lift Up Slope	2	89.8	29.1	86.0	96.1	1-A
3	12-11-90	5th Lift Up Slope	2	89.8	31.3	85.7	95.4	1-A
4	12-11-90	6th Lift Up Slope	2	89.8	29.5	88.0	98.0	1-A
5	12-11-90	5th Lift Up Slope	2	89.8	28.7	87.0	96.9	1-A
6	12-11-90	6th Lift Up Slope	2	89.8	29.9	87.0	96.9	1-A

TEST LOCATION:

1	Ash pit north slope at E28 and 35 and N3 and 05
2	Ash pit north slope at E32 and 90 and N3 and 05
3	Ash pit north slope at E33 and 80 and N3 and 10
4	Ash pit north slope at E35 and 00 and N3 and 10
5	Ash pit east slope at E36 and 15 and N2 and 45
6	Ash pit north slope at E26 and 90 and N3 and 10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 11, 1990

OUR REPORT NO.: 311-00155-6

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	12-11-90	6th lift Up slope	2	89.8	31.0	85.5	95.2	1-A
8	12-11-90	6th lift Up slope	2	89.8	29.9	86.2	96.0	1-A
9	12-11-90	6th lift Up slope	2	89.8	29.0	87.2	97.1	1-A
10	12-11-90	6th lift Up slope	2	89.8	28.2	88.5	98.6	1-A
11	12-11-90	6th lift Up slope	2	89.8	30.6	86.5	96.3	1-A

TEST LOCATION:

7	Ash pit north slope at E16 and 20 and N3 and 05
8	Ash pit north slope at E34 and 00 and N3 and 15
9	Ash pit north slope at E14 and 15 and N3 and 05
10	Ash pit north slope at E19 and 45 and N3 and 10
11	Ash pit north slope at E27 and 50 and N3 and 10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 13, 1990

OUR REPORT NO.: 311-00155-7 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 13, 1990

OUR REPORT NO.: 311-00155-7 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-13-90	7th Lift Up Slope	2	89.8	29.9	88.6	98.6	1-A
2	12-13-90	8th Lift Up Slope	2	89.8	28.0	90.2	100.4	1-A
3	12-13-90	9th Lift Up Slope	2	89.8	32.6	86.7	96.5	1-A

TEST LOCATION:

1	Ash pit east wall - at Weir, E36 and 25, and N2 and 95
2	Ash pit east wall - at Weir, E36 and 25, and N3 and 00
3	Ash pit east wall - at Weir, E36 and 20, and N3 and 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 12, 1990

OUR REPORT NO.: 311-00155-8 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 12, 1990

OUR REPORT NO.: 311-00155-8 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-12-90	6th Lift Up Slope	2	89.8	31.4	85.2	95.0	1-A
2	12-12-90	6th Lift Up Slope	2	89.8	29.7	85.2	95.0	1-A
3	12-12-90	6th Lift Up Slope	2	89.8	28.3	91.2	101.3	1-A

TEST LOCATION:

1	Ash pit north slope - E27 and 50, N3 and 15
2	Ash pit north slope - E2 and 30, N3 and 15
3	Ash pit north slope - E15 and 90, N3 and 15

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 14, 1990

OUR REPORT NO.: 311-00155-9 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 14, 1990

OUR REPORT NO.: 311-00155-9

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-14-90	19th lift upslope	2	89.8	28.7	86.2	96.0	1-A
2	12-14-90	7th lift upslope	2	89.8	29.2	89.0	99.1	1-A
3	12-14-90	7th lift upslope	2	89.8	29.9	86.2	96.0	1-A

TEST LOCATION:

1	Ash pit east end at Weir - at E 36 + 00 and N 3 + 05
2	Ash pit north slope - at E 16 + 60 and N 3 + 00
3	Ash pit north slope - at E 19 + 45 and N 3 + 10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc; (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 18, 1990

OUR REPORT NO.: 311-00155-10 Page 1 of 3

REMARKS: Technician: J. Schlomach
P/Cloudy 60°-75°

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of:

(1)-Disc
(2)-Maintainers
(3)-Water Trucks
(4)-Scrapers

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78206

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 18, 1990

OUR REPORT NO.: 311-00155-10

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-18-90	LIFT 1	2	89.8	28.4	89.5	99.7	1-A
2	12-18-90	LIFT 1	2	89.8	29.3	85.5	95.2	1-A
3	12-18-90	LIFT 1	2	89.8	29.0	87.2	97.1	1-A
4	12-18-90	LIFT 1	2	89.8	28.4	88.0	98.0	1-A
5	12-18-90	LIFT 1	2	89.8	28.6	89.0	99.1	1-A
6	12-18-90	LIFT 1	2	89.8	28.4	87.2	97.1	1-A

TEST LOCATION:

1	Ash pit floor-at north 2 + 20 and east 22 + 00
2	Ash pit floor-at north 2 + 25 and east 29 + 00
3	Ash pit floor-at north 2 + 10 and east 27 + 15
4	Ash pit floor-at north 2 + 20 and east 25 + 30
5	Ash pit floor-at north 2 + 20 and east 20 + 75
6	Ash pit floor-at north 2 + 90 and east 15 + 30

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78206

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 18, 1990

OUR REPORT NO.: 311-00155-10

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	12-18-90	LIFT 1	2	89.8	30.1	85	95.0	1-A
8	12-18-90	LIFT 1	2	89.8	30.3	86.7	96.5	1-A
9	12-18-90	LIFT 1	2	89.8	28.8	87.7	97.7	1-A
10	12-18-90	LIFT 1	2	89.8	28.4	88	98.0	1-A
11	12-18-90	LIFT 1	2	89.8	28.3	87.8	97.8	1-A
12	12-18-90	LIFT 1	2	89.8	28.7	86.2	96.0	1-A

TEST LOCATION:

7	Ash pit floor-at north 2 + 90 and east 16 + 50
8	Ash pit floor-at north 2 + 80 and east 19 + 00
9	Ash pit floor-at north 2 + 80 and east 21 + 00
10	Ash pit floor-at north 2 + 80 and east 24 + 00
11	Ash pit floor-at north 2 + 75 and east 26 + 00
12	Ash pit floor-at north 2 + 75 and east 28 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 28, 1990

OUR REPORT NO.: 311-00155-11 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 28, 1990

OUR REPORT NO.: 311-00155-11

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	12-28-90	2nd Lift	2	89.8	30.4	85.5	95.2	1-A
2	12-28-90	2nd Lift	2	89.8	31.3	85.7	95.4	1-A
3	12-28-90	2nd Lift	2	89.8	30.7	85.7	95.4	1-A
4	12-28-90	2nd Lift	2	89.8	28.2	87.0	96.7	1-A
5	12-28-90	2nd Lift	2	89.8	29.6	85.0	95.0	1-A
6	12-28-90	2nd Lift	2	89.8	28.4	87.2	96.6	1-A

TEST LOCATION:

1	Ash pit liner at N2+50 and E34+80
2	Ash pit liner at N2+10 and E34+75
3	Ash pit liner at N2+60 and E31+25
4	Ash pit liner at N2+05 and E31+25
5	Ash pit liner at N2+70 and E27+50
6	Ash pit liner at N2+10 and E27+50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: December 28, 1990

OUR REPORT NO.: 311-00155-11 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	12-28-90	2nd Lift	2	89.8	29.9	87.0	96.8	1-A
8	12-28-90	2nd Lift	2	89.8	29.5	88.0	98.0	1-A
9	12-28-90	2nd Lift	2	89.8	29.1	87.5	97.4	1-A
10	12-28-90	2nd Lift	2	89.8	28.2	87.0	96.9	1-A
11	12-28-90	2nd Lift	2	89.8	28.0	88.7	98.8	1-A
12	12-28-90	2nd Lift	2	89.8	29.0	87.2	97.1	1-A

TEST LOCATION:

7	Ash pit liner at N2+75 and E23+10
8	Ash pit liner at N2+10 and E23+10
9	Ash pit liner at N2+50 and E19+00
10	Ash pit liner at N2+15 and E19+10
11	Ash pit liner at N2+75 and E16+00
12	Ash pit liner at N2+15 and E16+00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 12, 1991

OUR REPORT NO.: 311-00155-12

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 12, 1991

OUR REPORT NO.: 311-00155-12

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-12-91	LIFT 7 up slope	2	89.8	32.0	86.0	95.8	1-A
2	02-12-91	LIFT 7 up slope	2	89.8	30.0	87.7	97.7	1-A
3	02-12-91	LIFT 7 up slope	2	89.8	30.9	86.7	96.5	1-A
4	02-12-91	LIFT 7 up slope	2	89.8	29.7	87.5	97.4	1-A

TEST LOCATION:

1	Ash pit liner (station) N 3 + 05 and E 16 + 00
2	Ash pit liner (station) N 3 + 05 and E 19 + 00
3	Ash pit liner (station) N 3 + 10 and E 22 + 00
4	Ash pit liner (station) N 3 + 10 and E 24 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 13, 1991

OUR REPORT NO.: 311-00155-13 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 13, 1991

OUR REPORT NO.: 311-00155-13 Page 2 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-13-91	LIFT 8 up slope	2	89.8	30.8	86.0	95.8	1-A
2	02-13-91	LIFT 8 up slope	2	89.8	28.0	87.5	97.4	1-A
3	02-13-91	LIFT 8 up slope	2	89.8	31.7	86.2	96.0	1-A
4	02-13-91	LIFT 8 up slope	2	89.8	29.1	87.5	97.4	1-A
5	02-13-91	LIFT 8 up slope	2	89.8	31.6	85.5	95.2	1-A
6	02-13-91	LIFT 8 up slope	2	89.8	30.7	85.7	95.4	1-A

TEST LOCATION:

1	Ash pond B N 3 + 00 and E 13 + 40
2	Ash pond B N 3 + 00 and E 16 + 50
3	Ash pond B N 3 + 10 and E 20 + 20
4	Ash pond B N 3 + 05 and E 14 + 00
5	Ash pond B N 3 + 10 and E 16 + 00
6	Ash pond B N 3 + 15 and E 20 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 13, 1991

OUR REPORT NO.: 311-00155-13

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-13-91	LIFT 9 up slope	2	89.8	28.4	89.2	99.3	1-A
8	02-13-91	LIFT 9 up slope	2	89.8	29.4	87.7	97.7	1-A

TEST LOCATION:

7	Ash pond B N 3 + 15 and E 22 + 50
8	Ash pond B N 3 + 15 and E 25 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 14, 1991

OUR REPORT NO.: 311-00155-14 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 14, 1991

OUR REPORT NO.: 311-00155-14 Page 2 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-14-91	LIFT 10 up slope	2	89.8	31.6	85.5	95.2	1-A
2	02-14-91	LIFT 10 up slope	2	89.8	30.0	86.7	96.5	1-A
3	02-14-91	LIFT 10 up slope	2	89.8	30.2	87.2	97.1	1-A
4	02-14-91	LIFT 10 up slope	2	89.8	29.6	86.0	95.7	1-A
5	02-14-91	LIFT 10 up slope	2	89.8	29.1	87.5	97.4	1-A
6	02-14-91	LIFT 9 up slope	2	89.8	29.6	88.7	98.8	1-A

TEST LOCATION:

1	Ash pit north slope-at N 3 + 05 and E 14 + 75
2	Ash pit north slope-at N 3 + 15 and E 17 + 25
3	Ash pit north slope-at N 3 + 20 and E 20 + 10
4	Ash pit north slope-at N 3 + 15 and E 23 + 50
5	Ash pit north slope-at N 3 + 15 and E 26 + 40
6	Ash pit north slope-at N 3 + 15 and E 29 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 14, 1991

OUR REPORT NO.: 311-00155-14

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-14-91	LIFT 9 up slope	2	89.8	29.4	86.5	96.3	1-A
8	02-14-91	LIFT 10 up slope	2	89.8	31.0	85.5	95.2	1-A
9	02-14-91	LIFT 10 up slope	2	89.8	28.7	87.0	96.9	1-A

TEST LOCATION:

7	Ash pit north slope-at N 3 + 15 and E 31 + 30
8	Ash pit north slope (restructure)-at N 3 + 15 and E 21 + 00
9	Ash pit north slope (restructure)-at N 3 + 15 and E 23 + 80

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 15, 1991

OUR REPORT NO.: 311-00155-15 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 15, 1991

OUR REPORT NO.: 311-00155-15

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-15-91	LIFT 11 up slope	2	89.8	29.0	88.0	98.0	1-A
2	02-15-91	LIFT 11 up slope	2	89.8	31.4	86.0	95.8	1-A
3	02-15-91	LIFT 11 up slope	2	89.8	28.2	88.5	98.6	1-A
4	02-15-91	LIFT 11 up slope	2	89.8	28.2	87.7	97.7	1-A
5	02-15-91	LIFT 11 up slope	2	89.8	28.7	88.2	98.2	1-A
6	02-15-91	LIFT 11 up slope	2	89.8	28.6	87.5	97.4	1-A

TEST LOCATION:

1	Ash pit north slope-at N 3 + 15 and E 15 + 25
2	Ash pit north slope-at N 3 + 15 and E 18 + 50
3	Ash pit north slope-at N 3 + 15 and E 21 + 00
4	Ash pit north slope-at N 3 + 20 and E 24 + 00
5	Ash pit north slope-at N 3 + 20 and E 27 + 50
6	Ash pit north slope-at N 3 + 20 and E 31 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 15, 1991

OUR REPORT NO: 311-00155-15 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-15-91	LIFT 12 up slope	2	89.8	28.3	87.7	97.7	1-A
8	02-15-91	LIFT 12 up slope	2	89.8	28.1	88.2	98.2	1-A
9	02-15-91	LIFT 12 up slope	2	89.8	28.6	88.2	98.2	1-A
10	02-15-91	LIFT 12 up slope	2	89.8	31.4	85.2	95.0	1-A
11	02-15-91	LIFT 12 up slope	2	89.8	31.0	85.5	95.5	1-A
12	02-15-91	LIFT 12 up slope	2	89.8	31.6	85.5	95.5	1-A

TEST LOCATION:

7	Ash pit north slope-at N 3 + 10 and E 14 + 20
8	Ash pit north slope-at N 3 + 10 and E 17 + 00
9	Ash pit north slope-at N 3 + 10 and E 20 + 00
10	Ash pit north slope-at N 3 + 10 and E 23 + 00
11	Ash pit north slope-at N 3 + 15 and E 27 + 50
12	Ash pit north slope-at N 3 + 15 and E 31 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 18, 1991

OUR REPORT NO.: 311-00155-16 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compation to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 18, 1991

OUR REPORT NO.: 311-00155-16

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-18-91	LIFT 12 up slope	2	89.8	30.7	85.7	95.4	1-A
2	02-18-91	LIFT 12 up slope	2	89.8	30.7	85.7	95.4	1-A
3	02-18-91	LIFT 12 up slope	2	89.8	30.7	85.7	95.4	1-A
4	02-18-91	LIFT 12 up slope	2	89.8	28.8	87.7	97.7	1-A
5	02-18-91	LIFT 12 up slope	2	89.8	29.0	87.2	97.1	1-A
6	02-18-91	LIFT 13 up slope	2	89.8	30.5	86.2	96.0	1-A

TEST LOCATION:

1	Ash pit north slope-at N 3 + 05 and E 14 + 50
2	Ash pit north slope-at N 3 + 10 and E 18 + 50
3	Ash pit north slope-at N 3 + 10 and E 21 + 00
4	Ash pit north slope-at N 3 + 10 and E 25 + 50
5	Ash pit north slope-at N 3 + 15 and E 28 + 00
6	Ash pit north slope-at N 3 + 05 and E 15 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 18, 1991

OUR REPORT NO.: 312-00155-16 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-18-91	LIFT 13 up slope	2	89.8	30.0	84.5	94.1	1-B
8	02-18-91	LIFT 13 up slope	2	89.8	30.2	87.2	97.0	1-A-C
9	02-18-91	LIFT 13 up slope	2	89.8	29.8	86.7	96.5	1-A
10	02-18-91	LIFT 13 up slope	2	89.8	30.1	85.7	95.4	1-A
11	02-18-91	LIFT 13 up slope	2	89.8	30.4	85.3	95.2	1-A

TEST LOCATION:

7	Ash pit north slope-at N 3 + 05 and E 19 + 00
8	Retest of test #7 above
9	Ash pit north slope-at N 3 + 15 and E 22 + 50
10	Ash pit north slope-at N 3 + 15 and E 27 + 00
11	Ash pit north slope-at N 3 + 15 and E 31 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 20, 1991

OUR REPORT NO.: 311-00155-17 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 20, 1991

OUR REPORT NO.: 311-00155-17 Page 2 of 3

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-20-91	LIFT 15 up slope	2	89.8	29.4	86.5	96.3	1-A
2	02-20-91	LIFT 15 up slope	2	89.8	28.2	88.5	98.6	1-A
3	02-20-91	LIFT 15 up slope	2	89.8	29.1	87.5	97.4	1-A
4	02-20-91	LIFT 15 up slope	2	89.8	30.0	86.5	96.3	1-A
5	02-20-91	LIFT 16 up slope	2	89.8	29.1	87.5	97.4	1-A
6	02-20-91	LIFT 16 up slope	2	89.8	29.0	88.0	98.0	1-A

TEST LOCATION:

1	Ash pond north slope N 3 + 15 and E 15 + 50
2	Ash pond north slope N 3 + 10 and E 20 + 00
3	Ash pond north slope N 3 + 15 and E 25 + 00
4	Ash pond north slope N 3 + 20 and E 30 + 50
5	Ash pond north slope N 3 + 15 and E 13 + 50
6	Ash pond north slope N 3 + 15 and E 17 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 20, 1991

OUR REPORT NO.: 311-00155-17 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-20-91	LIFT 16 up slope	2	89.8	28.9	88.0	98.0	1-A
8	02-20-91	LIFT 16 up slope	2	89.8	29.6	87.2	97.4	1-A
9	02-20-91	LIFT 16 up slope	2	89.8	30.6	86.5	96.3	1-A

TEST LOCATION:

7	Ash pond north slope N 3 + 20 and E 22 + 20
8	Ash pond north slope N 3 + 20 and E 26 + 20
9	Ash pond north slope N 3 + 20 and E 30 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 19, 1991

OUR REPORT NO.: 311-00155-18 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc; (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 19, 1991

OUR REPORT NO.: 311-00155-18

TEST DATA: Optimum moisture: (1, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-19-91	LIFT 13 up slope	1	89.8	30.9	85.2	95.0	1-A
2	02-19-91	LIFT 13 up slope	1	89.8	28.2	89.7	99.8	1-A
3	02-19-91	LIFT 13 up slope	1	89.8	30.7	85.7	95.4	1-A
4	02-19-91	LIFT 13 up slope	1	89.8	29.1	87.5	97.4	1-A

TEST LOCATION:

1	Ash pond north slope N 3 + 10 and E 17 + 00
2	Ash pond north slope N 3 + 15 and E 21 + 50
3	Ash pond north slope N 3 + 20 and E 26 + 00
4	Ash pond north slope N 3 + 20 and E 30 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 21, 1991

OUR REPORT NO.: 311-00155-19 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 21, 1991

OUR REPORT NO.: 311-00155-19 Page 2 of 3

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-21-91	LIFT 17 up slope	2	89.8	28.2	87.5	97.4	1-A
2	02-21-91	LIFT 17 up slope	2	89.8	30.4	85.5	95.2	1-A
3	02-21-91	LIFT 17 up slope	2	89.8	31.0	85.5	95.2	1-A
4	02-21-91	LIFT 17 up slope	2	89.8	28.6	87.5	97.4	1-A
5	02-21-91	LIFT 17 up slope	2	89.8	29.9	87.0	96.9	1-A
6	02-21-91	LIFT 18 up slope	2	89.8	29.1	87.5	97.4	1-A

TEST LOCATION:

1	Ash pond north slope N 3 + 20 and E 15 + 50
2	Ash pond north slope N 3 + 15 and E 20 + 20
3	Ash pond north slope N 3 + 15 and E 23 + 00
4	Ash pond north slope N 3 + 15 and E 26 + 50
5	Ash pond north slope N 3 + 20 and E 31 + 00
6	Ash pond north slope N 3 + 20 and E 13 + 75

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 21, 1991

OUR REPORT NO.: 311-00155-19

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-21-91	LIFT 18 up slope	2	89.8	28.3	89.2	99.3	1-A
8	02-21-91	LIFT 18 up slope	2	89.8	31.0	85.5	95.2	1-A
9	02-21-91	LIFT 18 up slope	2	89.8	28.0	87.5	97.3	1-A
10	02-21-91	LIFT 18 up slope	2	89.8	30.4	86.5	96.3	1-A
11	02-21-91	LIFT 19 up slope	2	89.8	29.2	86.7	96.5	1-A
12	02-21-91	LIFT 19 up slope	2	89.8	28.2	87.0	96.9	1-A

TEST LOCATION:

7	Ash pond north slope N 3 + 15 and E 17 + 50
8	Ash pond north slope N 3 + 20 and E 22 + 00
9	Ash pond north slope N 3 + 15 and E 26 + 00
10	Ash pond north slope N 3 + 15 and E 30 + 50
11	Ash pond north slope N 3 + 20 and E 15 + 00
12	Ash pond north slope N 3 + 20 and E 18 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 22, 1991

OUR REPORT NO.: 311-00155-20 Page 1 of 4

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 22, 1991

OUR REPORT NO.: 311-00155-20

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-22-91	LIFT 9 up slope	2	89.8	30.9	86.7	96.5	1-A
2	02-22-91	LIFT 20 up slope	2	89.8	30.4	85.5	95.2	1-A
3	02-22-91	LIFT 19 up slope	2	89.8	31.8	85.0	94.7	1-A
4	02-22-91	LIFT 19 up slope	2	89.8	30.5	86.2	96.0	1-A
5	02-22-91	LIFT 19 up slope	2	89.8	30.3	86.7	96.5	1-A
6	02-22-91	LIFT 21 up slope	2	89.8	30.5	86.2	96.0	1-A

TEST LOCATION:

1	Ash pond B west end slope N 3 + 15 and E 12 + 75
2	Ash pond B north slope N 3 + 20 and E 15 + 50
3	Ash pond B north slope N 3 + 20 and E 18 + 50
4	Ash pond B north slope N 3 + 25 and E 22 + 50
5	Ash pond B north slope N 3 + 25 and E 29 + 20
6	Ash pond B north slope N 3 + 20 and E 17 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

c: (2) Above
nr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 22, 1991

OUR REPORT NO.: 311-00155-20 Page 3 of 4

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-22-91	LIFT 20 up slope	2	89.8	30.4	87.0	96.9	1-A
8	02-22-91	LIFT 20 up slope	2	89.8	31.1	85.0	95.0	1-A
9	02-22-91	LIFT 20 up slope	2	89.8	31.0	85.5	95.2	1-A
10	02-22-91	LIFT 22 up slope	2	89.8	28.6	87.5	97.4	1-A
11	02-22-91	LIFT 22 up slope	2	89.8	28.4	88.0	98.0	1-A
12	02-22-91	LIFT 21 up slope	2	89.8	31.3	85.7	95.4	1-A

TEST LOCATION:

7	Ash pond B north slope N 3 + 20 and E 22 + 50
8	Ash pond B north slope N 3 + 20 and E 27 + 50
9	Ash pond B north slope N 3 + 25 and E 31 + 00
10	Ash pond B north slope N 3 + 15 and E 13 + 25
11	Ash pond B north slope N 3 + 30 and E 18 + 50
12	Ash pond B north slope N 3 + 25 and E 24 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 22, 1991

OUR REPORT NO.: 311-00155-20 Page 4 of 4

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
13	02-22-91	LIFT 21 up slope	2	89.8	29.2	86.7	96.5	1-A
14	02-22-91	LIFT 23 up slope	2	89.8	29.2	86.7	96.5	1-A
15	02-22-91	LIFT 23 up slope	2	89.8	31.0	85.5	95.2	1-A
16	02-22-91	LIFT 22 up slope	2	89.8	29.3	87.0	96.9	1-A
17	02-22-91	LIFT 22 up slope	2	89.8	30.2	86.0	95.8	1-A

TEST LOCATION:

13	Ash pond B north slope N 3 + 20 and E 29 + 75
14	Ash pond B north slope N 3 + 10 and E 13 + 50
15	Ash pond B north slope N 3 + 20 and E 18 + 00
16	Ash pond B north slope N 3 + 20 and E 23 + 00
17	Ash pond B north slope N 3 + 20 and E 27 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 25, 1991

OUR REPORT NO.: 311-00155-21 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 25, 1991

OUR REPORT NO.: 311-00155-21

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-25-91	LIFT 24 up slope	2	89.8	31.8	85.0	95.0	1-A
2	02-25-91	LIFT 24 up slope	2	89.8	28.5	88.7	98.8	1-A
3	02-25-91	LIFT 23 up slope	2	89.8	30.0	87.7	97.7	1-A
4	02-25-91	LIFT 23 up slope	2	89.8	28.2	88.5	98.6	1-A
5	02-25-91	LIFT 25 up slope	2	89.8	29.6	87.2	97.1	1-A
6	02-25-91	LIFT 12 up slope	2	89.8	28.4	89.2	99.3	1-A

TEST LOCATION:

1	Ash pond B north slope N 3 + 20 and E 15 + 50
2	Ash pond B north slope N 3 + 25 and E 19 + 20
3	Ash pond B north slope N 3 + 25 and E 24 + 00
4	Ash pond B north slope N 3 + 20 and E 30 + 00
5	Ash pond B north slope N 3 + 25 and E 16 + 75
6	Ash pond B north slope N 3 + 15 and E 12 + 75

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 25, 1991

OUR REPORT NO.: 311-00155-21 Page 3 of 3

TEST DATA: Optimum moisture: (2 , 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-25-91	LIFT 24 up slope	2	89.8	29.4	88.5	98.6	1-A
8	02-25-91	LIFT 24 up slope	2	89.8	31.3	85.7	95.4	1-A

TEST LOCATION:

7	Ash pond B north slope N 3 + 30 and E 22 + 20
8	Ash pond B north slope N 3 + 30 and E 29 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
nr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-22

TEST DATA

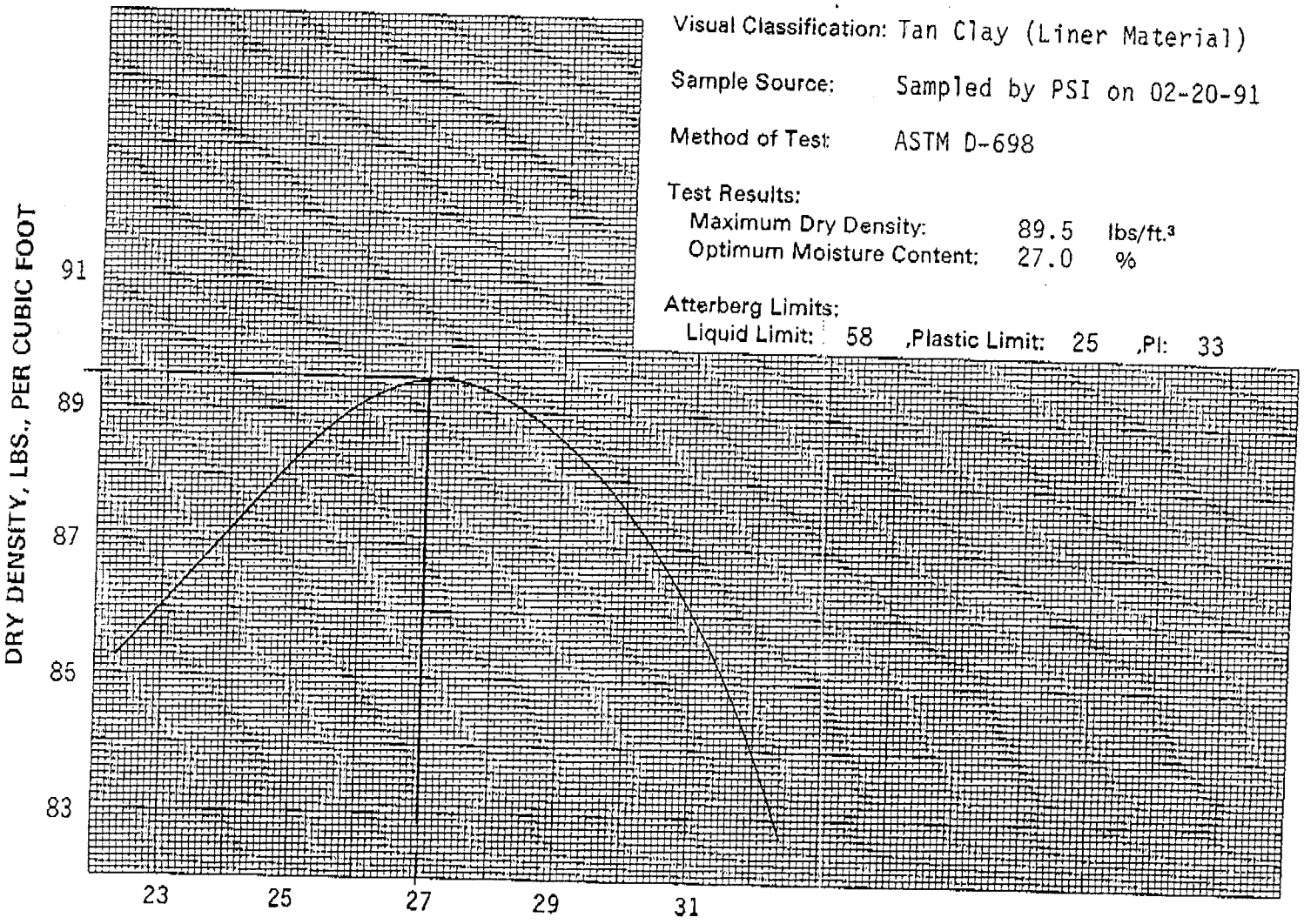
Visual Classification: Tan Clay (Liner Material)

Sample Source: Sampled by PSI on 02-20-91

Method of Test: ASTM D-698

Test Results:
Maximum Dry Density: 89.5 lbs/ft.³
Optimum Moisture Content: 27.0 %

Atterberg Limits:
Liquid Limit: 58 ,Plastic Limit: 25 ,PI: 33



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To [illegible] POLICE From MARIN

Respectfully submitted,
Professional Service Industries, Inc.

, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-23

TEST DATA

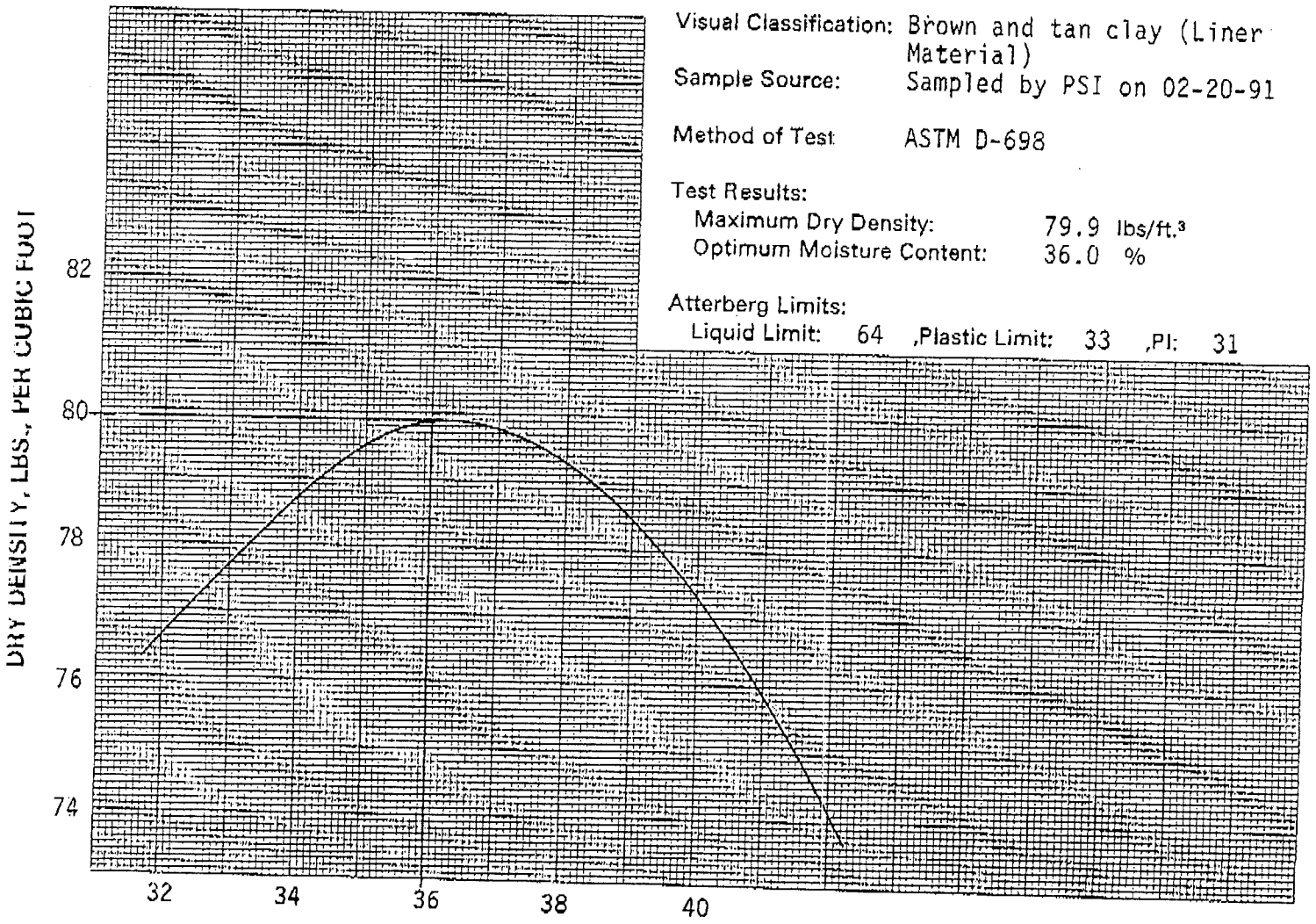
Visual Classification: Brown and tan clay (Liner Material)

Sample Source: Sampled by PSI on 02-20-91

Method of Test: ASTM D-698

Test Results:
Maximum Dry Density: 79.9 lbs/ft.³
Optimum Moisture Content: 36.0 %

Atterberg Limits:
Liquid Limit: 64 ,Plastic Limit: 33 ,PI: 31



cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-23

TEST DATA

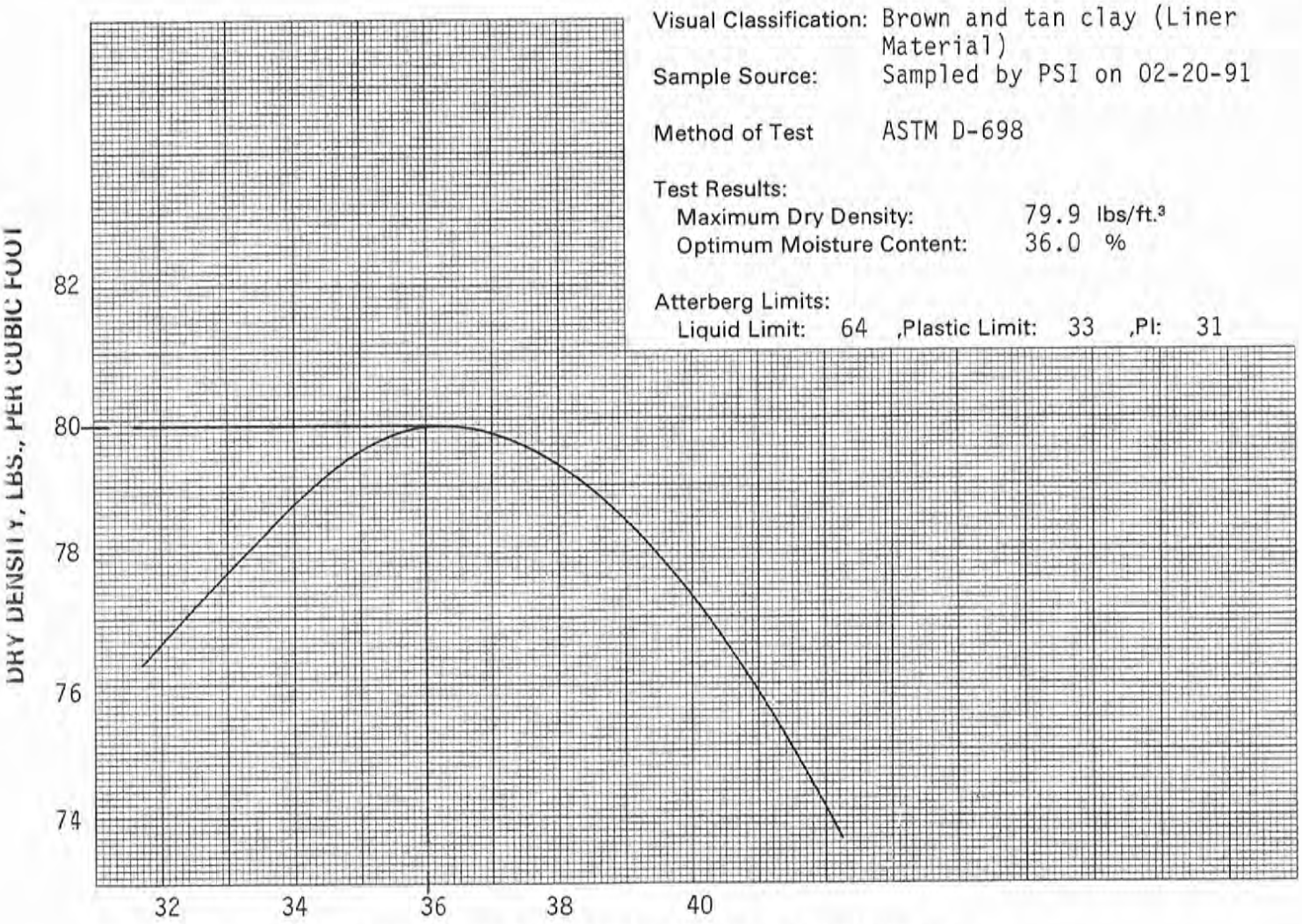
Visual Classification: Brown and tan clay (Liner Material)

Sample Source: Sampled by PSI on 02-20-91

Method of Test ASTM D-698

Test Results:
Maximum Dry Density: 79.9 lbs/ft.³
Optimum Moisture Content: 36.0 %

Atterberg Limits:
Liquid Limit: 64 ,Plastic Limit: 33 ,PI: 31



cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-22

TEST DATA

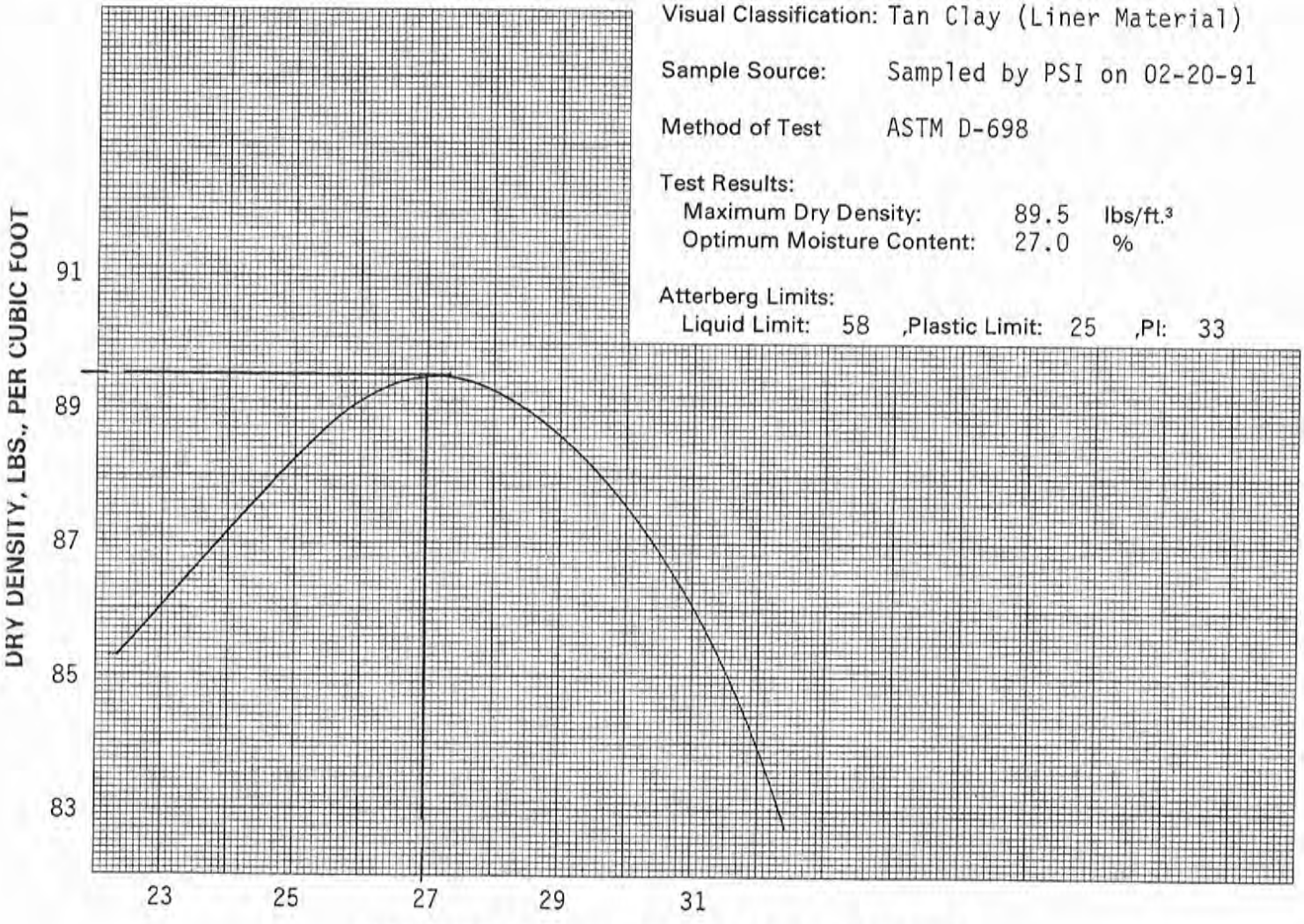
Visual Classification: Tan Clay (Liner Material)

Sample Source: Sampled by PSI on 02-20-91

Method of Test ASTM D-698

Test Results:
Maximum Dry Density: 89.5 lbs/ft.³
Optimum Moisture Content: 27.0 %

Atterberg Limits:
Liquid Limit: 58 ,Plastic Limit: 25 ,PI: 33



cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-24

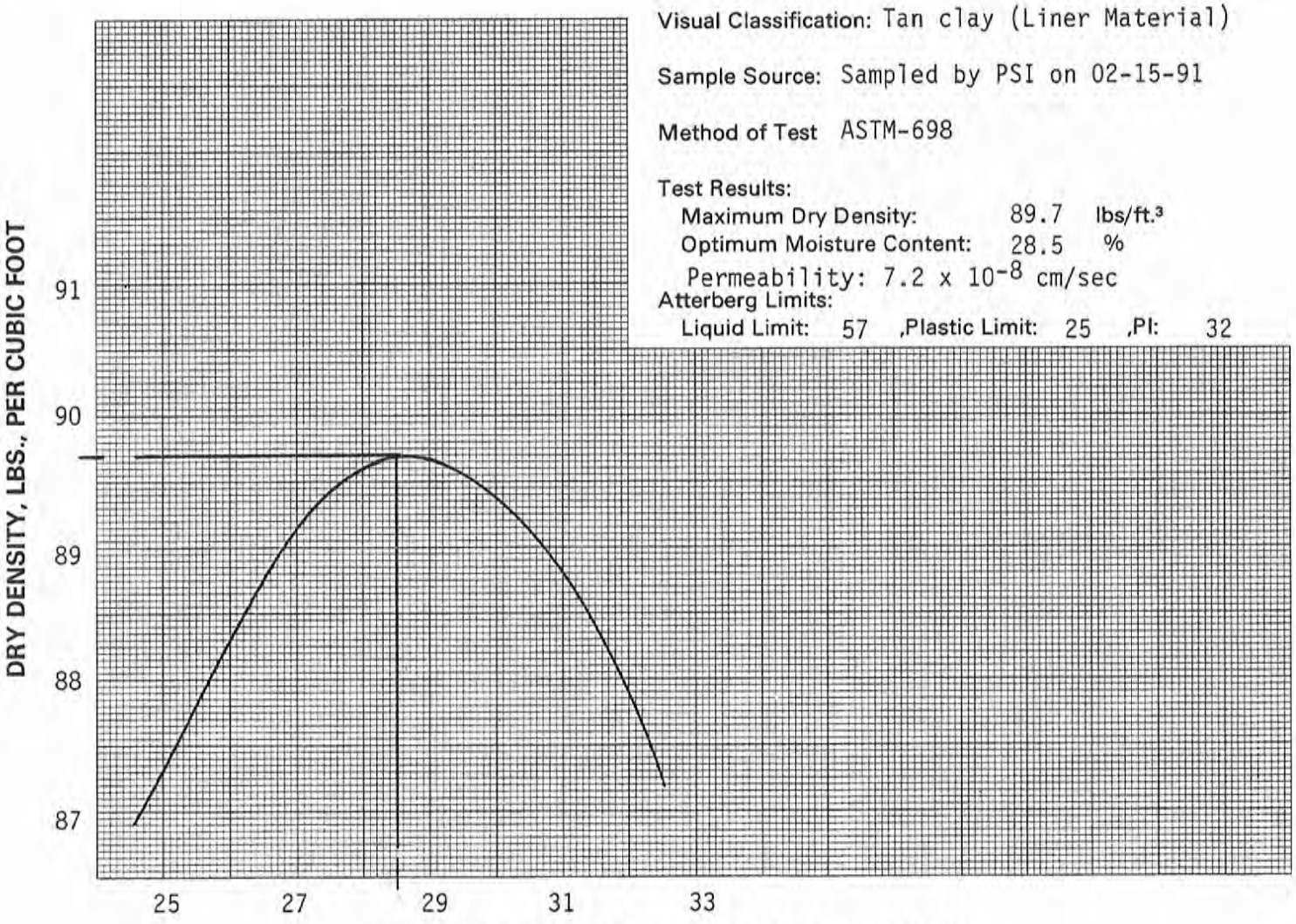
TEST DATA

Visual Classification: Tan clay (Liner Material)

Sample Source: Sampled by PSI on 02-15-91

Method of Test ASTM-698

Test Results:
Maximum Dry Density: 89.7 lbs/ft.³
Optimum Moisture Content: 28.5 %
Permeability: 7.2×10^{-8} cm/sec
Atterberg Limits:
Liquid Limit: 57 ,Plastic Limit: 25 ,PI: 32



cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 26, 1991

OUR REPORT NO.: 311-00155-25

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 26, 1991

OUR REPORT NO.: 311-00155-25

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-26-91	Up slope 26th lift	2	89.8	32.2	85.5	95.2	1-A
2	02-26-91	Up slope 26th lift	2	89.8	30.4	87.0	96.9	1-A
3	02-26-91	Up slope 25th lift	2	89.8	29.5	88.0	98.0	1-A
4	02-26-91	Up slope 25th lift	2	89.8	30.2	87.2	97.1	1-A
5	02-26-91	Up slope 27th lift	2	89.8	30.3	86.7	96.5	1-A
6	02-26-91	Up slope 27th lift	2	89.8	29.3	88.5	98.6	1-A

TEST LOCATION:

1	Ash pond B - north slope N 3 + 20 and E 14 + 20
2	Ash pond B - north slope N 3 + 30 and E 18 + 20
3	Ash pond B - north slope N 3 + 30 and E 22 + 00
4	Ash pond B - north slope N 3 + 30 and N 28 + 00
5	Ash pond B - north slope N 3 + 20 and E 15 + 20
6	Ash pond B - north slope N 3 + 25 and E 19 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 26, 1991

OUR REPORT NO.: 314-00155-25 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-26-91	Up slope 26th lift	2	89.8	31.0	87.0	96.9	1-A
8	02-26-91	Up slope 26th lift	2	89.8	31.0	87.0	96.9	1-A
9	02-26-91	Up slope 28th lift	2	89.8	29.5	88.0	98.0	1-A
10	02-26-91	Up slope 28th lift	2	89.8	30.3	87.5	97.4	1-A

TEST LOCATION:

7	Ash pond B - north slope N 3 + 30 and E 24 + 25
8	Ash pond B - north slope N 3 + 30 and E 29 + 50
9	Ash pond B - north slope N 3 + 20 and E 14 + 50
10	Ash pond B - north slope N 3 + 25 and E 18 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 27, 1991

OUR REPORT NO.: 311-00155-26 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 27, 1991

OUR REPORT NO. 311-00155-26 Page 2 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-27-91	29th lift Upslope	2	89.8	31.0	87.0	96.9	1-A
2	02-27-91	29th lift Upslope	2	89.8	30.5	87.7	97.7	1-A
3	02-27-91	26th lift Upslope	2	89.8	30.7	87.2	97.1	1-A
4	02-27-91	26th lift Upslope	2	89.8	29.3	87.0	96.9	1-A
5	02-27-91	18th lift Upslope	2	89.8	31.0	87.0	96.9	1-A
6	02-27-91	30th lift Upslope	2	89.8	29.8	88.2	98.2	1-A

TEST LOCATION:

1	Ash pond B - north slope at N3 + 25 and E15 + 75
2	Ash pond B - north slope at N3 + 30 and E20 + 50
3	Ash pond B - north slope at N3 + 35 and E24 + 00
4	Ash pond B - north slope at N3 + 30 and E29 + 00
5	Ash pond B - north slope at N3 + 20 and E14 + 00
6	Ash pond B - north slope at N3 + 33 and E18 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 27, 1991

OUR REPORT NO.: 311-00155-26 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-27-91	27th lift Upslope	2	89.8	30.7	87.2	97.1	1-A
8	02-27-91	27th lift Upslope	2	89.8	29.4	88.5	98.6	1-A
9	02-27-91	31st lift Upslope	2	89.8	31.8	88.0	98.0	1-A
10	02-27-91	31st lift Upslope	2	89.8	31.1	86.2	96.0	1-A
11	02-27-91	28th lift Upslope	2	89.8	30.3	87.5	97.4	1-A
12	02-27-91	28th lift Upslope	2	89.8	30.6	86.5	96.3	1-A

TEST LOCATION:

7	Ash pond B - north slope at N3 + 30 and E22 + 00
8	Ash pond B - north slope at N3 + 30 and E28 + 50
9	Ash pond B - north slope at N3 + 20 and E15 + 50
10	Ash pond B - north slope at N3 + 30 and E19 + 50
11	Ash pond B - north slope at N3 + 36 and E22 + 20
12	Ash pond B - north slope at N3 + 35 and E27 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-27 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-27 Page 2 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	02-28-91	26th lift Upslope	2	89.8	31.6	87.0	96.9	1-A
2	02-28-91	32nd lift Upslope	2	89.8	30.3	88.2	98.2	1-A
3	02-28-91	27th lift Upslope	2	89.8	29.9	88.5	98.5	1-A
4	02-28-91	27th lift Upslope	2	89.8	29.6	88.7	98.8	1-A
5	02-28-91	28th lift Upslope	2	89.8	28.5	89.5	99.7	1-A
6	02-28-91	33rd lift Upslope	2	89.8	29.6	89.5	99.7	1-A

TEST LOCATION:

1	Ash pond B - north slope at N3 + 25 and E 15 + 50
2	Ash pond B - north slope at N3 + 30 and E 20 + 00
3	Ash pond B - north slope at N3 + 33 and E 24 + 50
4	Ash pond B - north slope at N3 + 30 and E 31 + 00
5	Ash pond B - north slope at N3 + 30 and E 15 + 00
6	Ash pond B - north slope at N3 + 35 and E 18 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: February 28, 1991

OUR REPORT NO.: 311-00155-27 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	02-28-91	27th lift Upslope	2	89.8	29.8	88.2	98.2	1-A
8	02-28-91	27th lift Upslope	2	89.8	31.1	87.7	97.1	1-A
9	02-28-91	28th lift Upslope	2	89.8	29.2	89.0	99.1	1-A
10	02-28-91	33rd lift Upslope	2	89.8	30.6	87.1	97.3	1-A

TEST LOCATION:

7	Ash pond B - north slope at N3 + 40 and E 23 + 00
8	Ash pond B - north slope at N3 + 40 and E 28 + 75
9	Ash pond B - north slope at N3 + 35 and E 15 + 00
10	Ash pond B - north slope at N3 + 40 and E 18 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 1, 1991

OUR REPORT NO.: 311-00155-28 Page 1 of 4

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 1, 1991

OUR REPORT NO: 311-00155-28 Page 2 of 4

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-01-91	LIFT 29 up slope	2	89.8	30.2	86.0	95.8	1-A
2	03-01-91	LIFT 33 up slope	2	89.8	31.8	85.0	94.6	1-B
3	03-01-91	LIFT 29 up slope	2	89.8	32.2	85.5	95.2	1-A
4	03-01-91	LIFT 29 up slope	2	89.8	31.4	84.5	94.1	1-B
5	03-01-91	LIFT 29 up slope	2	89.8	30.6	86.5	96.3	1-A-C
6	03-01-91	LIFT 29 up slope	2	89.8	30.8	86.0	95.8	1-A-C

TEST LOCATION:

1	Ash pond B north slope-at N 3 + 35 and E 14 + 75
2	Ash pond B north slope-at N 3 + 40 and E 20 + 80
3	Ash pond B north slope-at N 3 + 50 and E 25 + 00
4	Ash pond B north slope-at N 3 + 45 and E 29 + 00
5	Retest of test #2 on this date
6	Retest of test #4 on this date

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 1, 1991

OUR REPORT NO.: 311-00155-28 Page 3 of 4

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	03-01-91	LIFT 30 up slope	2	89.8	29.9	87.0	96.9	1-A
8	03-01-91	LIFT 34 up slope	2	89.8	30.5	86.2	96.0	1-A
9	03-01-91	LIFT 31 up slope	2	89.8	31.2	85.7	95.4	1-A
10	03-01-91	LIFT 31 up slope	2	89.8	31.2	85.0	94.6	1-B
11	03-01-91	LIFT 31 up slope	2	89.8	31.1	86.2	96.0	1-A-C
12	03-01-91	LIFT 32 up slope	2	89.8	30.7	85.7	95.4	1-A

TEST LOCATION:

7	Ash pond B north slope-at N 3 + 30 and E 15 + 20
8	Ash pond B north slope-at N 3 + 38 and E 17 + 75
9	Ash pond B north slope-at N 3 + 50 and E 23 + 50
10	Ash pond B north slope-at N 3 + 50 and E 27 + 20
11	Retest of test #10 on this date
12	Ash pond B north slope-at N 3 + 50 and E 23 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 1, 1991

OUR REPORT NO: 311-00155-28 Page 4 of 4

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
13	03-01-91	LIFT 32 up slope	2	89.8	30.2	87.2	97.1	1-A
14	03-01-91	LIFT 33 up slope	2	89.8	31.6	85.5	95.2	1-A
15	03-01-91	LIFT 33 up slope	2	89.8	31.6	85.5	95.2	1-A
16	03-01-91	LIFT 34 up slope	2	89.8	30.7	85.7	95.4	1-A
17	03-01-91	LIFT 34 up slope	2	89.8	31.4	85.2	94.9	1-A

TEST LOCATION:

13	Ash pond B north slope-at N 3 + 50 and E 27 + 50
14	Ash pond B north slope-at N 3 + 50 and E 21 + 50
15	Ash pond B north slope-at N 3 + 50 and E 28 + 20
16	Ash pond B north slope-at N 3 + 53 and E 21 + 00
17	Ash pond B north slope-at N 3 + 53 and E 27 + 57

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 4, 1991

OUR REPORT NO.: 311-00155-29 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 4, 1991

OUR REPORT NO.: 311-00155-29

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-04-91	LIFT 28 up slope	2	89.8	30.2	86.0	95.7	1-A
2	03-04-91	LIFT 35 up slope	2	89.8	30.2	87.2	97.1	1-A
3	03-04-91	LIFT 35 up slope	2	89.8	30.1	85.7	95.4	1-A
4	03-04-91	LIFT 33 up slope	2	89.8	31.3	85.7	95.4	1-A
5	03-04-91	LIFT 29 up slope	2	89.8	29.2	86.7	96.5	1-A
6	03-04-91	LIFT 36 up slope	2	89.8	29.0	87.2	97.1	1-A

TEST LOCATION:

1	Ash pond B north slope-at N 3 + 30 and E 14 + 25
2	Ash pond B north slope-at N 3 + 45 and E 19 + 00
3	Ash pond B north slope-at N 3 + 52 and E 23 + 50
4	Ash pond B north slope-at N 3 + 50 and E 28 + 75
5	Ash pond B north slope-at N 3 + 30 and E 14 + 75
6	Ash pond B north slope-at N 3 + 47 and E 20 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 4, 1991

OUR REPORT NO.: 311-00155-29 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	03-04-91	LIFT 34 up slope	2	89.8	31.6	85.5	95.2	1-A
8	03-04-91	LIFT 34 up slope	2	89.8	28.0	87.7	97.7	1-A

TEST LOCATION:

7	Ash pond B north slope-at N 3 + 50 and E 23 + 50
8	Ash pond B north slope-at N 3 + 50 and E 29 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 5, 1991

OUR REPORT NO.: 311-00155-30 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 5, 1991

OUR REPORT NO.: 311-00155-30 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-05-91	final lift up slope	2	89.8	29.6	87.2	97.1	1-A
2	03-05-91	final lift up slope	2	89.8	31.7	86.2	96.0	1-A
3	03-05-91	LIFT 35 up slope	2	89.8	30.0	86.5	96.3	1-A
4	03-05-91	LIFT 35 up slope	2	89.8	31.0	85.5	95.2	1-A
5	03-05-91	final lift up slope	2	89.8	30.3	86.7	96.5	1-A
6	03-05-91	final lift up slope	2	89.8	30.3	85.2	95.0	1-A

TEST LOCATION:

1	Ash pond B north slope-at N 3 + 43 and E 22 + 00
2	Ash pond B north slope-at N 3 + 45 and E 27 + 00
3	Ash pond B north slope-at N 3 + 50 and E 23 + 00
4	Ash pond B north slope-at N 3 + 50 and E 29 + 50
5	Ash pond B north slope-at N 3 + 52 and E 22 + 50
6	Ash pond B north slope-at N 3 + 50 and E 28 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 6, 1991

OUR REPORT NO.: 311-00155-31 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction testing to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 6, 1991

OUR REPORT NO.: 311-00155-31

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-06-91	LIFT 19 up slope	2	89.8	31.6	85.5	95.2	1-A
2	03-06-91	LIFT 20 up slope	2	89.8	30.1	85.7	95.4	1-A
3	03-06-91	LIFT 21 up slope	2	89.8	28.1	88.2	98.2	1-A
4	03-06-91	LIFT 18 up slope	2	89.8	31.4	85.2	95.0	1-A
5	03-06-91	LIFT 19 up slope	2	89.8	29.6	86.0	95.7	1-A
6	03-06-91	LIFT 20 up slope	2	89.8	31.4	85.2	95.0	1-A

TEST LOCATION:

1	Ash pond B north slope-at 3 + 25 and E 12 + 75
2	Ash pond B north slope-at 3 + 27 and E 13 + 20
3	Ash pond B north slope-at 3 + 25 and E 12 + 80
4	Ash pond B west slope-at 3 + 19 and E 12 + 50
5	Ash pond B west slope-at 3 + 16 and E 12 + 50
6	Ash pond B west slope-at 3 + 30 and E 12 + 55

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

Respectfully submitted,
Professional Service Industries, Inc.

/mr

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 7, 1991

OUR REPORT NO.: 311-00155-32 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction testing to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 7, 1991

OUR REPORT NO.: 311-00155-32

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-07-91	LIFT 21 up slope	2	89.8	29.8	88.2	98.2	1-A
2	03-07-91	final lift up slope	2	89.8	28.6	88.4	98.4	1-A
3	03-07-91	floor rebuild	2	89.8	29.0	87.2	97.1	1-A
4	03-07-91	LIFT 22 up slope	2	89.8	29.2	88.7	98.8	1-A
5	03-07-91	LIFT 7 up slope	2	89.8	29.9	87.0	96.9	1-A
6	03-07-91	LIFT 8 up slope	2	89.8	30.8	86.0	95.8	1-A

TEST LOCATION:

1	Ash pond B west slope-N 2 + 90 and E 12 + 25
2	Ash pond B north slope-N 3 + 50 and E 12 + 75
3	Ash pond B floor rebuild-N 2 + 50 and E 34 + 20
4	Ash pond B west slope-N 3 + 00 and E 12 + 20
5	Ash pond B north slope-N 3 + 20 and E 34 + 50
6	Ash pond B north slope-N 3 + 21 and E 35 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 8, 1991

OUR REPORT NO.: 311-00155-33 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 8, 1991

OUR REPORT NO.: 311-00155-33

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-08-91	LIFT 5 up slope	2	89.2	31.2	85.0	94.7	1-A
2	03-08-91	LIFT 6 up slope	2	89.2	30.0	86.5	96.3	1-A
3	03-08-91	LIFT 9 up slope	2	89.2	30.8	87.5	97.4	1-A
4	03-08-91	LIFT 10 up slope	2	89.2	31.0	85.5	95.2	1-A
5	03-08-91	LIFT 7 up slope	2	89.2	30.3	85.2	94.9	1-A
6	03-08-91	LIFT 11 up slope	2	89.2	30.2	86.0	95.8	1-A

TEST LOCATION:

1	Ash pond B east slope-at N 3 + 06 and E 36 + 05
2	Ash pond B east slope-at N 3 + 00 and E 36 + 05
3	Ash pond B north slope-at N 3 + 10 and E 35 + 50
4	Ash pond B north slope-at N 3 + 10 and E 32 + 80
5	Ash pond B east slope-at N 2 + 75 and E 36 + 10
6	Ash pond B north slope-at N 3 + 10 and E 33 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 8, 1991

OUR REPORT NO.: 311-00155-33

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	03-08-91	LIFT 8 up slope	2	89.8	31.6	85.5	95.2	1-A
8	03-08-91	LIFT 12 up slope	2	89.8	28.6	86.7	96.5	1-A
9	03-08-91	LIFT 9 up slope	2	89.8	29.3	87.0	96.9	1-A
10	03-08-91	LIFT 13 up slope	2	89.8	29.0	87.2	97.1	1-A
11	03-08-91	LIFT 10 up slope	2	89.8	31.4	85.2	94.9	1-A

TEST LOCATION:

7	Ash pond B east slope-at N 2 + 75 and E 36 + 10
8	Ash pond B north slope-at N 3 + 15 and E 34 + 00
9	Ash pond B east slope-at N 2 + 85 and E 36 + 15
10	Ash pond B north slope-at N 3 + 15 and E 33 + 20
11	Ash pond B east slope at N 2 + 80 and E 36 + 10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF MOISTURE DENSITY RELATIONSHIP OF SOIL

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 19, 1991

OUR REPORT NO.: 311-00155-34

TEST DATA

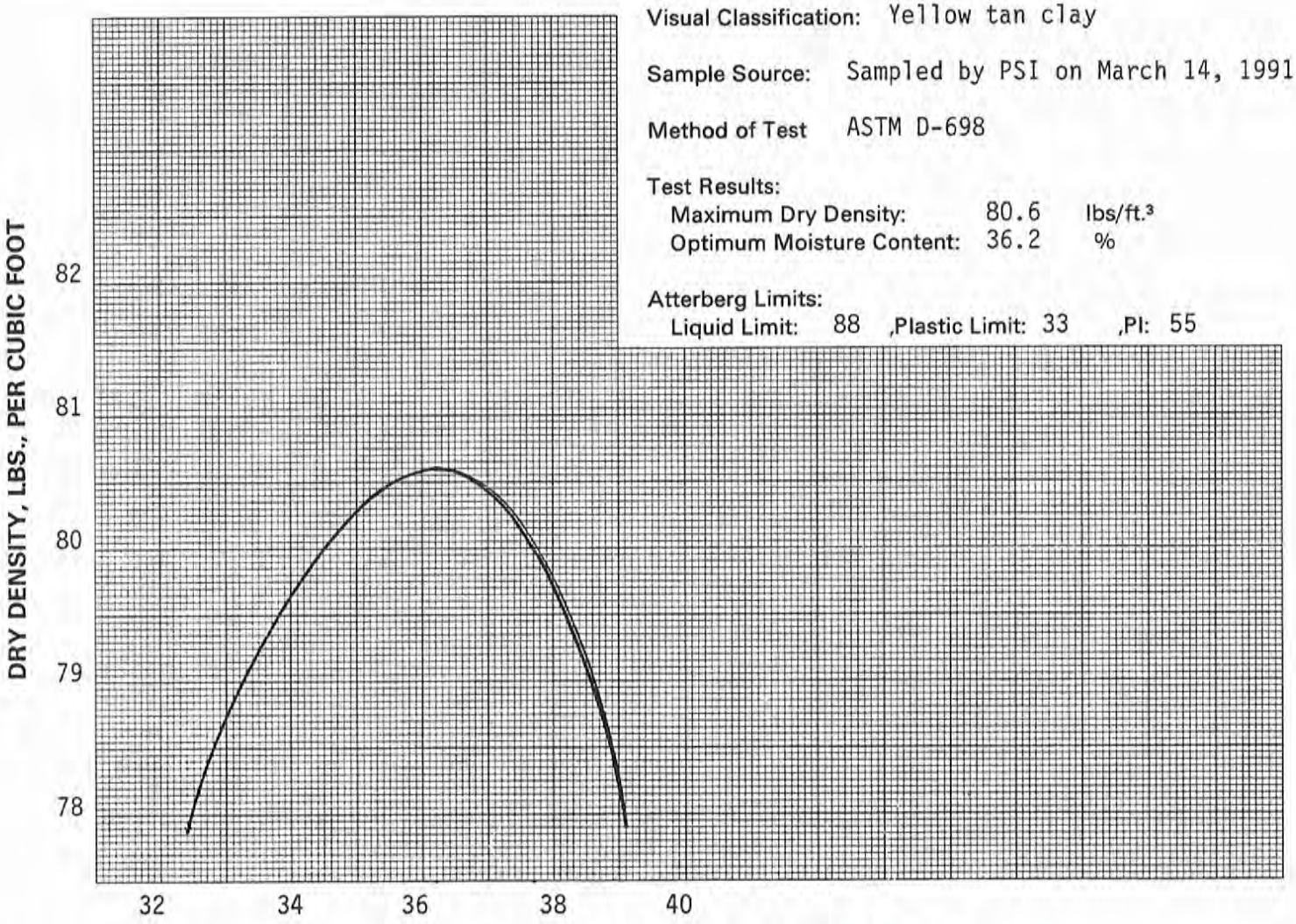
Visual Classification: Yellow tan clay

Sample Source: Sampled by PSI on March 14, 1991

Method of Test ASTM D-698

Test Results:
Maximum Dry Density: 80.6 lbs/ft.³
Optimum Moisture Content: 36.2 %

Atterberg Limits:
Liquid Limit: 88 ,Plastic Limit: 33 ,PI: 55



cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 11, 1991

OUR REPORT NO.: 311-00155-35 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 11, 1991

OUR REPORT NO.: 311-00155-35 Page 2 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-11-91	LIFT 11 up slope	2	89.8	30.3	86.7	96.5	1-A
2	03-11-91	LIFT 12 up slope	2	89.8	30.0	86.5	96.3	1-A
3	03-11-91	LIFT 13 up slope	2	89.8	28.4	87.7	97.7	1-A
4	03-11-91	LIFT 14 up slope	2	89.8	29.2	86.7	96.5	1-A
5	03-11-91	LIFT 15 up slope	2	89.8	31.2	85.0	95.0	1-A
6	03-11-91	LIFT 14 up slope	2	89.8	30.7	85.7	95.4	1-A

TEST LOCATION:

1	Ash pond B east slope-at N 3 + 35 and E 36 + 25
2	Ash pond B east slope-at N 3 + 40 and E 26 + 20
3	Ash pond B east slope-at N 3 + 45 and E 36 + 00
4	Ash pond B north slope-at N 3 + 50 and E 34 + 75
5	Ash pond B north slope-at N 3 + 50 and E 35 + 00
6	Ash pond B east slope-at N 3 + 45 and E 36 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 11, 1991

OUR REPORT NO.: 311-00155-35 Page 3 of 3

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	03-11-91	LIFT 16 up slope	2	89.8	31.0	85.5	95.2	1-A
8	03-11-91	LIFT 17 up slope	2	89.8	30.4	85.5	95.2	1-A
9	03-11-91	LIFT 18 up slope	2	89.8	30.7	85.7	95.4	1-A
10	03-11-91	LIFT 19 up slope	2	89.8	29.9	86.2	96.0	1-A

TEST LOCATION:

7	Ash pond B north slope-at N 3 + 50 and E 35 + 50
8	Ash pond B east slope-at N 3 + 45 and E 36 + 25
9	Ash pond B north slope-at N 3 + 53 and E 35 + 00
10	Ash pond B east slope-at N 3 + 45 and E 36 + 25

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 12, 1991

OUR REPORT NO.: 311-00155-36 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 12, 1991

OUR REPORT NO.: 311-00155-36 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-12-91	LIFT 19 up slope	2	89.8	29.0	87.2	97.1	1-A
2	03-12-91	LIFT 20 up slope	2	89.8	30.2	86.0	95.8	1-A
3	03-12-91	LIFT 20 up slope	2	89.8	29.4	86.2	96.0	1-A
4	03-12-91	LIFT 21 up slope	2	89.8	30.7	85.7	95.4	1-A

TEST LOCATION:

1	Ash pond B north slope-at N 3 + 53 and E 35 + 20
2	Ash pond B east slope-at N 3 + 45 and E 36 + 25
3	Ash pond B north slope-at N 3 + 52 and E 34 + 75
4	Ash pond B east slope-at N 2 + 90 and E 36 + 25

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 18, 1991

OUR REPORT NO.: 311-00155-37 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4" above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 18, 1991

OUR REPORT NO.: 311-00155-37 Page 2 of 2

TEST DATA: Optimum moisture: (23, 36.0%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-18-91	1st lift	23	79.9	29.2	88.2	110.4	1-D
2	03-18-91	1st lift	23	79.9	32.1	86.7	108.5	1-D
3	03-18-91	1st lift	23	79.9	34.5	82.5	103.3	1-D
4	03-18-91	1st lift	23	79.9	27.6	89.7	112.3	1-D
5	03-18-91	1st lift	23	79.9	35.4	82.0	102.6	1-D

TEST LOCATION:

1	Ash Pond B floor rebuilding - at N 2 + 15 and E 14 + 75
2	Ash Pond B floor rebuilding - at N 2 + 15 and E 15 + 50
3	Ash Pond B floor rebuilding - at N 2 + 05 and E 19 + 00
4	Ash Pond B floor rebuilding - at N 2 + 85 and E 22 + 35
5	Ash Pond B floor rebuilding - at N 2 + 85 and E 19 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 19, 1991

OUR REPORT NO.: 311-00155-38 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 19, 1991

OUR REPORT NO.: 311-00155-38 Page 2 of 2

TEST DATA: Optimum moisture: (23, 36.0%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-19-01	2nd lift floor	23	79.9	27.7	88.5	110.8	1-D
2	03-19-91	2nd lift floor	23	79.9	31.8	85.7	107.3	1-D
3	03-19-91	2nd lift floor	23	79.9	30.3	85.2	105.7	1-D
4	03-19-91	2nd lift floor	23	79.9	29.5	85.7	106.3	1-D
5	03-19-91	2nd lift floor	23	79.9	34.1	82.0	101.7	1-D
6	03-19-91	2nd lift floor	23	79.9	35.7	80.7	100.1	1-D

TEST LOCATION:

1	Ash Pond B Floor Rebuilding - at N 2 + 60 and E 24 + 75
2	Ash Pond B Floor Rebuilding - at N 2 + 60 and E 26 + 50
3	Ash Pond B Floor Rebuilding - at N 2 + 60 and E 28 + 25
4	Ash Pond B Floor Rebuilding - at N 2 + 60 and E 30 + 25
5	Ash Pond B Floor Rebuilding - at N 2 + 30 and E 15 + 00
6	Ash Pond B Floor Rebuilding - at N 2 + 30 and E 17 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
D. MOISTURE IN EXCESS OF SPECIFICATIONS

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 19, 1991

OUR REPORT NO.: 311-00155-38

TEST DATA: Optimum moisture: (23, 36.0%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	03-19-91	2nd lift floor	23	79.9	33.6	82.7	102.6	1-D
8	03-19-91	2nd lift floor	23	79.9	34.8	81.2	100.7	1-D
9	03-19-91	2nd lift floor	23	79.9	35.9	80.2	99.5	1-D
10	03-19-91	2nd lift floor	23	79.9	34.8	80.5	99.9	1-D
11	03-19-91	2nd lift floor	23	79.9	33.7	81.5	101.1	1-D
12	03-19-91	2nd lift floor	23	79.7	34.4	80.7	100.1	1-D

TEST LOCATION:

7	Ash Pond B Floor Rebuilding - at N 2 + 00 and E 17 + 00
8	Ash Pond B Floor Rebuilding - at N 2 + 25 and E 14 + 75
9	Ash Pond B Floor Rebuilding - at N 2 + 25 and E 16 + 00
10	Ash Pond B Floor Rebuilding - at N 2 + 20 and E 17 + 50
11	Ash Pond B Floor Rebuilding - at N 2 + 45 and E 18 + 50
12	Ash Pond B Floor Rebuilding - at N 2 + 80 and E 18 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
D. MOISTURE IN EXCESS OF SPECIFICATIONS

REMARKS:

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Roadway Improvements
San Miguel Power Plant

DATE: March 19, 1991

OUR REPORT NO.: 311-00155-39 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum or 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Roadway Improvements
San Miguel Power Plant

DATE: March 27, 1991

OUR REPORT NO.: 311-00155-39

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-27-91	2nd lift floor	34	80.6	35.4	82.7	103.1	1-E
2	03-27-91	2nd lift floor	34	80.6	34.8	82.0	102.2	1-E
3	03-27-91	2nd lift floor	34	80.6	37.8	80.2	99.5	1-A
4	03-27-91	2nd lift floor	34	80.6	39.0	80.2	99.5	1-A
5	03-27-91	2nd lift floor	34	80.6	37.3	80.5	99.5	1-A
6	03-27-91	2nd lift floor	34	80.6	35.0	83.7	103.8	Lacks moisture

TEST LOCATION:

1	Retest of test #5 on 03-19-91; re: PSI Report No. 311-00087-38
2	Retest of test #6 on 03-19-91; re: PSI Report No. 311-00087-38
3	Retest of test #1 on 03-19-91; re: PSI Report No. 311-00087-38
4	Retest of test #2 on 03-19-91; re: PSI Report No. 311-00087-38
5	Retest of test #3 on 03-19-91; re: PSI Report No. 311-00087-38
6	Retest of test #4 on 03-19-91; re: PSI Report No. 311-00087-38

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 13, 1991

OUR REPORT NO.: 311-00155-40 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 13, 1991

OUR REPORT NO.: 311-00155-40 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-13-91	1st floor Lift	2	89.8	29.6	87.2	97.1	1-A
2	03-13-91	1st floor Lift	2	89.8	30.7	86.7	96.5	1-A
3	03-13-91	1st floor Lift	2	89.8	29.0	87.2	97.1	1-A
4	03-13-91	1st floor Lift	2	89.8	32.2	84.7	94.3	1-B
5	03-13-91	1st floor Lift	2	89.8	31.1	86.2	96.0	1-A-C

TEST LOCATION:

1	Ash Pond B - Rebuilding floor N 2 + 00 and E 33 + 50
2	Ash Pond B - Rebuilding floor N 2 + 00 and E 29 + 75
3	Ash Pond B - Rebuilding floor N 2 + 85 and E 34 + 00
4	Ash Pond B - Rebuilding floor N 2 + 85 and E 29 + 45
5	Retest of #4 above

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 14, 1991

OUR REPORT NO.: 311-00155-41 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 14, 1991

OUR REPORT NO.: 311-00155-41

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-14-91	LIFT 2	2	89.2	28.6	90.2	100.4	1-A
2	03-14-91	LIFT 2	2	89.2	29.4	88.5	98.6	1-A
3	03-14-91	LIFT 2	2	89.2	31.0	86.2	96.0	1-A

TEST LOCATION:

1	Ash pond B floor rebuilding-at N 2 + 25 and E 32 + 50
2	Ash pond B floor rebuilding-at N 2 + 85 and E 32 + 60
3	Ash pond B floor rebuilding-at N 2 + 25 and E 29 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 15, 1991

OUR REPORT NO.: 311-00155-42 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: March 15, 1991

OUR REPORT NO.: 311-00155-42 Page 2 of 2

TEST DATA: Optimum moisture: (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	03-15-91	LIFT 3 floor	2	89.8	28.4	89.2	99.3	1-A
2	03-15-91	LIFT 3 floor	2	89.8	29.6	88.7	98.8	1-A
3	03-15-91	LIFT 3 floor	2	89.8	28.8	88.5	98.6	1-A
4	03-15-91	LIFT 3 floor	2	89.8	29.8	88.2	98.2	1-A

TEST LOCATION:

1	Ash pond B floor rebuild- N 2 + 10 and E 34 + 75
2	Ash pond B floor rebuild- N 2 + 80 and E 35 + 00
3	Ash pond B floor rebuild- N 2 + 75 and E 29 + 50
4	Ash pond B floor rebuild- N 2 + 00 and E 29 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 22, 1991

OUR REPORT NO.: 311-00155-43

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 22, 1991

OUR REPORT NO.: 311-00155-43 Page 2 of 2

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-22-91	LIFT 1	34	80.6	36.4	81.0	100.5	1-A
2	04-22-91	LIFT 1	34	80.6	36.8	79.7	98.9	1-A
3	04-22-91	LIFT 1	34	80.6	36.3	80.7	100.1	1-A

TEST LOCATION:

1	Ash pond B - floor key, south slope at N 1 + 75 and E 35 + 25
2	Ash pond B - floor key, south slope at N 1 + 75 and E 34 + 25
3	Ash pond B - floor key, south slope at N 1 + 75 and E 33 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 23, 1991

OUR REPORT NO.: 311-00155-44

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 23, 1991

OUR REPORT NO.: 311-00155-44

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-23-91	LIFT 2	34	80.6	40.0	79.3	98.4	1-A
2	04-23-91	LIFT 1	34	80.6	39.9	77.2	95.2	1-A
3	04-23-91	LIFT 1	34	80.6	38.7	77.5	96.2	1-A
4	04-23-91	LIFT 1	34	80.6	38.0	77.5	96.2	1-A
5	04-23-91	LIFT 3	34	80.6	38.9	79.2	98.3	1-A
6	04-23-91	LIFT 3	34	80.6	40.2	76.7	95.2	1-A

TEST LOCATION:

1	Ash pond B south slope N 1 + 75 and E 35 + 00
2	Ash pond B south slope N 1 + 75 and E 25 + 50
3	Ash pond B south slope N 1 + 75 and E 18 + 50
4	Ash pond B south slope N 1 + 75 and E 15 + 75
5	Ash pond B south slope N 1 + 75 and E 35 + 00
6	Ash pond B south slope N 1 + 75 and E 33 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 24, 1991

OUR REPORT NO.: 311-00155-45 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Two bull dozers, a water truck, a compactor, and one scraper worked until lunch. In the afternoon, more scrapers came for the remainder of the shift.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 24, 1991

OUR REPORT NO.: 311-00155-45

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-24-91	LIFT 2	34	80.6	41.7	78.7	97.6	1-A
2	04-24-91	LIFT 2	34	80.6	43.7	75.5	93.6	1-D
3	04-24-91	LIFT 2	34	80.6	39.5	79.2	98.3	1-A
4	04-24-91	LIFT 4	34	80.6	41.3	77.5	96.1	1-A
5	04-24-91	LIFT 2	34	80.6	41.9	77.5	96.1	1-A
6	04-24-91	LIFT 4	34	80.6	37.0	81.0	100.5	1-A

TEST LOCATION:

1	Ash pond B south slope at N 1 + 75 and E 14 + 75
2	Ash pond B south slope at N 1 + 75 and E 18 + 50
3	Ash pond B south slope at N 1 + 75 and E 31 + 20
4	Ash pond B south slope at N 1 + 75 and E 31 + 00
5	Retest of #2 same page at E 18 + 50
6	Ash pond B south slope N 1 + 75 and E 32 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
D. MOISTURE IN EXCESS OF SPECIFICATIONS

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 24, 1991

OUR REPORT NO.: 311-00155-45 Page 3 of 3

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	04-24-91	LIFT 4	34	80.6	37.6	81.0	100.5	1-A
8	04-24-91	LIFT 2	34	80.6	41.5	77.7	96.4	1-A
9	04-24-91	LIFT 2	34	80.6	39.7	78.0	96.8	1-A
10	04-24-91	LIFT 2	34	80.6	39.0	77.7	96.4	1-A
11	04-24-91	LIFT 5	34	80.6	38.7	78.2	97.0	1-A
12	04-24-91	LIFT 5	34	80.6	38.9	79.2	98.3	1-A

TEST LOCATION:

7	Ash pond B south slope at N 1 + 75 and E 29 + 20
8	Ash pond B south slope at N 1 + 75 and E 25 + 00
9	Ash pond B south slope at N 1 + 75 and E 17 + 25
10	Ash pond B south slope at N 1 + 75 and E 14 + 50
11	Ash pond B south slope at N 1 + 60 and E 34 + 75
12	Ash pond B south slope at N 1 + 60 and E 32 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 25, 1991

OUR REPORT NO.: 311-00155-46 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 25, 1991

OUR REPORT NO.: 311-00155-46 Page 2 of 3

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-25-91	LIFT 3	34	80.6	34.2	84.2	104.4	1-E
2	04-25-91	LIFT 3	34	80.6	43.7	76.2	94.5	1-E
3	04-25-91	LIFT 3	34	80.6	33.0	85.2	105.7	1-E
4	04-25-91	LIFT 6	34	80.6	36.7	83.0	103.0	1-A
5	04-25-91	LIFT 6	34	80.6	37.3	81.2	100.7	1-A
6	04-25-91	LIFT 6	34	80.6	40.8	76.7	95.2	1-A

TEST LOCATION:

1	Ash pond B south slope at N 1 + 75 and E 13 + 50
2	Ash pond B south slope at N 1 + 75 and E 16 + 50
3	Ash pond B south slope at N 1 + 75 and E 26 + 50
4	Ash pond B south slope at N 1 + 75 and E 34 + 75
5	Ash pond B south slope at N 1 + 75 and E 32 + 20
6	Retest of test #1 same page

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 25, 1991

OUR REPORT NO.: 311-00155-46 Page 3 of 3

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	04-24-91	LIFT 3	34	80.6	37.3	80.5	99.9	1-A
8	04-24-91	LIFT 3	34	80.6	39.7	78.0	96.8	1-A
9	04-24-91	LIFT 3	34	80.6	39.5	78.5	97.4	1-A
10	04-24-91	LIFT 4	34	80.6	40.5	77.2	95.8	1-A
11	04-24-91	LIFT 4	34	80.6	37.8	80.2	99.5	1-A
12	04-24-91	LIFT 4	34	80.6	38.8	80.0	99.2	1-A

TEST LOCATION:

7	Retest of test #2 same page
8	Retest of test #3 same page
9	Ash pond B south slope at N 1 + 75 and E 29 + 50
10	Ash pond B south slope at N 1 + 75 and E 14 + 50
11	Ash pond B south slope at N 1 + 75 and E 18 + 00
12	Ash pond B south slope at N 1 + 75 and E 24 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 26, 1991

OUR REPORT NO.: 311-00155-47 Page 1 of 2

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

Equipment used on this date consisted of a water truck, a sheepsfoot roller and one scraper. Work was halted at 10-30 because of equipment breakdown.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 26, 1991

OUR REPORT NO.: 311-00155-47

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-26-91	Lift 7	34	80.6	39.4	77.5	96.2	1-A
2	04-26-91	Lift 7	34	80.6	38.0	79.0	98.0	1-A
3	04-26-91	Lift 4	34	80.6	38.2	80.7	100.1	1-A
4	04-26-91	Lift 4	34	80.6	39.1	80.5	99.9	1-A
5	04-26-91	Lift 4	34	80.6	39.4	80.0	99.2	1-A

TEST LOCATION:

1	Ash pond B east slope - N 2 + 75 and E 35 + 25
2	Ash pond B south slope - N 1 + 75 and E 32 + 50
3	Ash pond B south slope - N 1 + 75 and E 28 + 00
4	Ash pond B south slope - N 1 + 75 and E 24 + 00
5	Ash pond B south slope - N 1 + 75 and E 14 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 29, 1991

OUR REPORT NO.: 311-00155-48 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professinonal Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. A compactor, a bulldozer with a disc, and a water truck were used before lunch to bring the material up to moisture specifications. Before the next lift was started, after lunch, two scrapers came and the next lift was started.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

cc: (2) Above
/mr

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 29, 1991

OUR REPORT NO.: 311-00155-48

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-29-91	LIFT 7	34	80.6	41.6	77.7	96.4	1-A
2	04-29-91	LIFT 7	34	80.6	36.7	83.0	103.0	1-A
3	04-29-91	LIFT 5	34	80.6	38.9	79.2	98.3	1-A
4	04-29-91	LIFT 5	34	80.6	38.2	80.7	100.1	1-A
5	04-29-91	LIFT 7	34	80.6	38.2	78.5	97.4	1-A
6	04-29-91	LIFT 8	34	80.6	38.0	79.0	98.0	1-A

TEST LOCATION:

1	Ash pond B south slope at N 1 + 50 and E 34 + 85
2	Ash pond B south slope at N 1 + 50 and E 29 + 50
3	Ash pond B south slope at N 1 + 75 and E 15 + 00
4	Ash pond B south slope at N 1 + 75 and E 21 + 50
5	Ash pond B east slope at N 2 + 15 and E 35 + 15
6	Ash pond B south slope at N 1 + 50 and E 33 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 29, 1991

OUR REPORT NO.: 311-00155-48 Page 3 of 3

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	04-29-91	LIFT 8	34	80.6	32.8	81.7	101.4	1-A
8	04-29-91	LIFT 9	34	80.6	38.1	80.0	99.2	1-A
9	04-29-91	LIFT 9	34	80.6	40.3	77.7	96.4	1-A
10	04-29-91	LIFT 9	34	80.6	38.9	77.0	95.5	1-A
11	04-29-91	LIFT 9	34	80.6	39.4	77.5	96.1	1-A

TEST LOCATION:

7	Ash pond B south slope at N 1 + 50 and E 28 + 00
8	Retest of test #7 on same date
9	Ash pond B east slope at N 2 + 10 and E 35 + 15
10	Ash pond B south slope at N 1 + 50 and E 34 + 00
11	Ash pond B south slope at N 1 + 50 and E 31 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 30, 1991

OUR REPORT NO.: 311-00155-49 Page 1 of 5

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. The equipment used on this date consisted of two bulldozers, a compactor, a watertruck, and three scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 30, 1991

OUR REPORT NO.: 311-00155-49

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	04-30-91	LIFT 10	34	80.6	39.6	79.5	98.6	1-A
2	04-30-91	LIFT 10	34	80.6	41.4	79.2	98.3	1-A
3	04-30-91	LIFT 9	34	80.6	31.6	87.0	107.9	1-E
4	04-30-91	LIFT 9	34	80.6	37.0	81.0	100.5	1-A
5	04-30-91	LIFT 6	34	80.6	35.1	82.5	102.4	1-E
6	04-30-91	LIFT 6	34	80.6	38.1	80.0	99.2	1-A

TEST LOCATION:

1	Ash pond B east slope N 2 + 40 and E 36 + 00
2	Ash pond B south slope N 1 + 50 and E 33 + 00
3	Ash pond B south slope N 1 + 50 and E 28 + 20
4	Ash pond B south slope N 1 + 50 and E 24 + 00
5	Ash pond B south slope N 1 + 50 and E 14 + 50
6	Ash pond B south slope N 1 + 50 and E 16 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 30, 1991

OUR REPORT NO.: 311-00155-49

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	04-30-91	LIFT 10	34	80.6	37.4	81.5	101.1	1-A
8	04-30-91	LIFT 11	34	80.6	37.9	80.5	99.9	1-A
9	04-30-91	LIFT 9	34	80.6	37.6	81.0	100.5	1-A-C
10	04-30-91	LIFT 12	34	80.6	36.7	81.2	100.7	1-A
11	04-30-91	LIFT 6	34	80.6	37.2	80.2	99.5	1-A-C
12	04-30-91	LIFT 6	34	80.6	41.2	77.5	96.2	1-A

TEST LOCATION:

7	Ash pond B south slope N 1 + 50 and E 21 + 00
8	Ash pond B east slope N 1 + 95 and E 36 + 25
9	Ash pond B Retest of test #3 on same date
10	Ash pond B south slope N 1 + 50 and E 32 + 00
11	Ash pond B Retest of test #5 on same date
12	Ash pond B south slope N 1 + 50 and E 28 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 30, 1991

OUR REPORT NO.: 311-00155-49 Page 4 of 5

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
13	04-30-91	LIFT 6	34	80.6	35.2	81.7	101.4	1-E
14	04-30-91	LIFT 6	34	80.6	40.9	77.7	96.4	1-A
15	04-30-91	LIFT 6	34	80.6	40.6	77.5	96.2	1-A
16	04-30-91	LIFT 6	34	80.6	39.1	78.7	97.6	1-A-C
17	04-30-91	LIFT 13	34	80.6	37.8	80.2	99.5	1-A
18	04-30-91	LIFT 13	34	80.6	41.3	77.5	96.2	1-A

TEST LOCATION:

13	Ash pond B south slope N 1 + 50 and E 24 + 00
14	Ash pond B south slope N 1 + 50 and E 14 + 00
15	Ash pond B south slope N 1 + 50 and E 18 + 00
16	Ash pond B retest of test #13 same date
17	Ash pond B south slope N 1 + 40 and E 35 + 80
18	Ash pond B south slope N 1 + 40 and E 32 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: April 30, 1991

OUR REPORT NO.: 311-00155-49 Page 5 of 5

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
19	04-30-91	LIFT 7	34	80.6	39.9	77.2	95.8	1-A
20	04-30-91	LIFT 7	34	80.6	41.0	78.0	96.8	1-A
21	04-30-91	LIFT 7	34	80.6	38.5	80.5	99.9	1-A
22	04-30-91	LIFT 7	34	80.6	39.8	78.7	97.6	1-A

TEST LOCATION:

19	Ash pond B south slope N 1 + 50 and E 25 + 50
20	Ash pond B south slope N 1 + 50 and E 22 + 50
21	Ash pond B south slope N 1 + 50 and E 18 + 75
22	Ash pond B south slope N 1 + 50 and E 14 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power plant

DATE: May 1, 1991

OUR REPORT NO.: 311-00155-50 Page 1 of 4

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attaced for your review.

Equipment used on this date consisted of a compactor, two bulldozers, one with a disc, a water truck and three scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 1, 1991

OUR REPORT NO.: 311-00155-50

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-01-91	Lift 14	34	80.6	39.5	78.5	97.4	1-A
2	05-01-91	Lift 14	34	80.6	41.0	78.0	96.8	1-A
3	05-01-91	Lift 8	34	80.6	40.7	78.2	97.0	1-A
4	05-01-91	Lift 8	34	80.6	38.8	78.5	97.4	1-A
5	05-01-91	Lift 8	34	80.6	39.3	79.7	98.9	1-A
6	05-01-91	Lift 15	34	80.6	40.9	77.0	95.5	1-A

TEST LOCATION:

1	Ash pond B south slope, N 1 + 30 and E 35 + 00
2	Ash pond B south slope, N 1 + 30 and E 29 + 00
3	Ash pond B south slope, N 1 + 45 and E 23 + 50
4	Ash pond B south slope, N 1 + 45 and E 19 + 00
5	Ash pond B south slope, N 1 + 45 and E 13 + 50
6	Ash pond B east slope, N 2 + 20 and E 36 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 1, 1991

OUR REPORT NO.: 311-00155-50 Page 3 of 4

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	05-01-91	Lift 15	34	80.6	33.7	83.0	103.0	1-E
8	05-01-91	Lift 15	34	80.6	39.4	77.5	96.2	1-A-C
9	05-01-91	Lift 9	34	80.6	40.9	77.7	96.4	1-A
10	05-01-91	Lift 9	34	80.6	41.3	78.2	97.0	1-A
11	05-01-91	Lift 9	34	80.6	39.8	78.7	97.6	1-A
12	05-01-91	Lift 16	34	80.6	38.4	80.2	99.5	1-A

TEST LOCATION:

7	Ash pond B south slope, N 1 + 30 and E 35 + 75
8	Ash pond B retest of #7 of this report
9	Ash pond B south slope, N 1 + 40 and E 26 + 00
10	Ash pond B south slope, N 1 + 40 and E 21 + 00
11	Ash pond B south slope, N 1 + 40 and E 14 + 00
12	Ash pond B south slope, N 1 + 30 and E 35 + 75

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 1, 1991

OUR REPORT NO.: 311-00155-50

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
13	05-01-91	Lift 16	34	80.6	40.9	77.7	96.4	1-A
14	05-01-91	Lift 10	34	80.6	40.4	78.7	97.6	1-A
15	05-01-91	Lift 10	34	80.6	40.9	77.7	96.4	1-A
16	05-01-91	Lift 10	34	80.6	38.8	78.5	97.4	1-A
17	05-01-91	Lift 10	34	80.6	37.9	80.5	99.9	1-A

TEST LOCATION:

13	Ash pond B south slope, N 1 + 35 and E 31 + 00
14	Ash pond B south slope, N 1 + 35 and E 27 + 50
15	Ash pond B south slope, N 1 + 35 and E 22 + 20
16	Ash pond B south slope, N 1 + 40 and E 17 + 50
17	Ash pond B south slope, N 1 + 40 and E 14 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 2, 1991

OUR REPORT NO.: 311-00155-51

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

Two bull dozers and a scraper were used to process material and seal it off. Work was cancelled because of rain.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 2, 1991

OUR REPORT NO.: 311-00155-51

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-02-91	LIFT 11	34	80.6	40.0	77.7	96.4	1-A
2	05-02-91	LIFT 11	34	80.6	40.8	79.2	98.3	1-A
3	05-02-91	LIFT 11	34	80.6	37.0	81.0	100.5	1-A
4	05-02-91	LIFT 16	34	80.6	38.5	80.5	99.9	1-A

TEST LOCATION:

1	Ash pond B south slope N 1 + 45 and E 15 + 00
2	Ash pond B south slope N 1 + 45 and E 19 + 50
3	Ash pond B south slope N 1 + 35 and E 25 + 00
4	Ash pond B south slope N 1 + 30 and E 32 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 3, 1991

OUR REPORT NO.: 311-00155-52

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review.

The middle section of lift #11 south slope remixed to a more homogeneous mixture and recompacted. Water was added, the mixture remixed and compacted to specifications. Equipment used on this date consisted of two bulldozers, a water truck, and compactor; three scrapers were also used at the project after lunch.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 3, 1991

OUR REPORT NO.: 311-00155-52

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-03-91	Lift 17	34	80.6	39.6	80.2	99.5	1-A
2	05-03-91	Lift 17	34	80.6	39.5	79.2	98.3	1-A
3	05-03-91	Lift 17	34	80.6	38.6	79.7	98.9	1-A
4	05-03-91	Lift 12	34	80.6	36.6	81.2	100.7	1-A
5	05-03-91	Lift 12	34	80.6	38.9	79.2	98.3	1-A
6	05-03-91	Lift 12	34	80.6	39.9	79.0	98.0	1-A

TEST LOCATION:

1	Ash Pond B east slope - N 2 + 45 and E 36 + 30
2	Ash Pond B south slope - N 1 + 35 and E 35 + 00
3	Ash Pond B south slope - N 1 + 35 and E 32 + 00
4	Ash Pond B south slope - N 1 + 35 and E 26 + 50
5	Ash Pond B south slope - N 1 + 35 and E 23 + 00
6	Ash Pond B south slope - N 1 + 35 and E 18 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 6, 1991

OUR REPORT NO.: 311-00155-53

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested bu Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consists of:

Two bulldozers, a water truck, a compactor, three scrapers, and a maintainer. Most of the morning the previous weeks' lift had to be reworked to bring the moisture back to specifications before anymore lifts could be placed.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 6, 1991

OUR REPORT NO.: 311-00155-53

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-06-91	Lift 18	34	80.6	38.4	79.5	98.6	1-A
2	05-06-91	Lift 18	34	80.6	37.9	78.7	97.6	1-A
3	05-06-91	Lift 13	34	80.6	36.9	78.5	97.4	1-A
4	05-06-91	Lift 13	34	80.6	37.0	79.2	98.3	1-A
5	05-06-91	Lift 13	34	80.6	38.6	79.0	98.0	1-A
6	05-06-91	Lift 19	34	80.6	40.9	77.0	95.5	1-A

TEST LOCATION:

1	Ash pond B south slope - N 1 + 35 and E 33 + 00
2	Ash pond B south slope - N 1 + 40 and E 28 + 50
3	Ash pond B south slope - N 1 + 40 and E 24 + 50
4	Ash pond B south slope - N 1 + 45 and E 17 + 75
5	Ash pond B south slope - N 1 + 45 and E 14 + 75
6	Ash pond B south slope - N 1 + 35 and E 35 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 6, 1991

OUR REPORT NO.: 311-00155-53

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	05-06-91	Lift 19	34	80.6	40.0	77.5	96.2	1-A

TEST LOCATION:

7	Ash Pond B south slope - N 1 + 30 and E 33 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 8, 1991

OUR REPORT NO.: 311-00155-54

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a water truck, and two bulldozers. Due to rain, work for the remainder of the day was cancelled.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 8, 1991

OUR REPORT NO.: 311-00155-54

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-08-91	Lift 21	34	80.6	38.7	78.2	97.0	1-A
2	05-08-91	Lift 21	34	80.6	42.7	76.7	95.1	1-E
3	05-08-91	Lift 21	34	80.6	34.2	84.2	104.5	1-D

TEST LOCATION:

1	Ash pond B east slope N 2 + 60 and E 36 + 20
2	Ash pond B south slope - N 1 + 30 and E 34 + 00
3	Ash pond B south slope - N 1 + 30 and E 33 + 80

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION
E. MOISTURE BELOW SPECIFICATIONS
D. MOISTURE IN EXCESS OF SPECIFICATIONS

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 7, 1991

OUR REPORT NO.: 311-00155-55

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a water truck, a compactor, two bulldozers, and three scrapers. Work was called off at noon because of rain.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: May 7, 1991

OUR REPORT NO.: 311-00155-55

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	05-07-91	LIFT 20	34	80.6	40.0	77.0	95.5	1-A
2	05-07-91	LIFT 20	34	80.6	38.6	79.0	98.0	1-A
3	05-07-91	LIFT 14	34	80.6	38.2	79.2	98.3	1-A
4	05-07-91	LIFT 14	34	80.6	40.0	77.5	96.2	1-A
5	05-07-91	LIFT 14	34	80.6	38.2	78.5	97.4	1-A

TEST LOCATION:

1	Ash pond B east slope - N 2 + 20 and E 36 + 25
2	Ash pond B south slope - N 1 + 30 and E 33 + 50
3	Ash pond B south slope - N 1 + 35 and E 27 + 50
4	Ash pond B south slope - N 1 + 40 and E 18 + 50
5	Ash pond B south slope - N 1 + 40 and E 14 + 75

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr (1) Durand-Hollis/Kinnison
(1) Larry Saunders
(1) Bob Opitz, P.E.
(1) Edens, Harper, & Reiffert

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 4, 1991

OUR REPORT NO.: 311-00155-56

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment used today consisted of a maintainer, a water truck, two bulldozers, a disc, a roller, and three scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 4, 1991

OUR REPORT NO.: 311-00155-56

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-04-91	LIFT 22	34	80.6	38.4	78.0	96.8	1-A
2	06-04-91	LIFT 22	34	80.6	37.6	78.5	97.4	1-A
3	06-04-91	LIFT 22	34	80.6	37.0	77.0	95.5	1-A
4	06-04-91	LIFT 15	34	80.6	37.6	81.0	100.5	1-A
5	06-04-91	LIFT 15	34	80.6	36.5	82.0	101.7	1-A
6	06-04-91	LIFT 23	34	80.6	36.8	79.7	98.9	1-A

TEST LOCATION:

1	Ash Pond B - N 1 + 20 and E 33 + 00
2	Ash Pond B - N 1 + 15 and E 35 + 50
3	Ash Pond B - N 2 + 30 and E 36 + 00
4	Ash Pond B - N 1 + 30 and E 26 + 00
5	Ash Pond B - N 1 + 30 and E 21 + 50
6	Ash Pond B - N 1 + 30 and E 35 + 60

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 4, 1991

OUR REPORT NO.: 311-00155-56

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-04-91	LIFT 16	34	80.6	37.1	80.2	99.5	1-A
8	06-04-91	LIFT 16	34	80.6	38.0	79.0	98.0	1-A
9	06-04-91	LIFT 24	34	80.6	38.1	80.5	99.9	1-A
10	06-04-91	LIFT 24	34	80.6	38.1	78.2	97.0	1-A
11	06-04-91	LIFT 25	34	80.6	38.0	79.7	98.9	1-A
12	06-04-91	LIFT 25	34	80.6	36.3	78.5	97.4	1-A

TEST LOCATION:

7	Ash Pond B - N 1 + 30 and E 21 + 00
8	Ash Pond B - N 1 + 30 and E 16 + 25
9	Ash Pond B - N 1 + 10 and E 35 + 20
10	Ash Pond B - N 1 + 10 and E 33 + 00
11	Ash Pond B - N 2 + 00 and E 36 + 00
12	Ash Pond B - N 1 + 10 and E 33 + 80

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5 SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 5, 1991

OUR REPORT NO.: 311-00155-57

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment used on this date consisted of two water trucks, three bulldozers, a maintainer, a disc, a compactor, and three scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton , Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 5, 1991

OUR REPORT NO.: 311-00155-57

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-05-91	Lift 26	34	80.6	36.6	80.5	99.9	1-A
2	06-05-91	Lift 26	34	80.6	38.9	79.2	98.3	1-A
3	06-05-91	Lift 17	34	80.6	36.8	79.7	98.9	1-A
4	06-05-91	Lift 27	34	80.6	38.1	78.2	97.0	1-A
5	06-05-91	Lift 27	34	80.6	37.3	79.0	98.0	1-A
6	06-05-91	Lift 18	34	80.6	36.5	79.5	98.6	1-A

TEST LOCATION:

1	Ash Pond B - N 1 + 10 and E 34 + 50
2	Ash Pond B - N 1 + 10 and E 31 + 00
3	Ash Pond B - N 1 + 25 and E 26 + 00
4	Ash Pond B - N 1 + 10 and E 35 + 50
5	Ash Pond B - N 1 + 10 and E 32 + 00
6	Ash Pond B - N 1 + 25 and E 22 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton , Texas 78026

Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 5, 1991

OUR REPORT NO.: 311-00155-57

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-05-91	Lift 18	34	80.6	36.4	79.2	98.3	1-A
8	06-05-91	Lift 18	34	80.6	37.9	78.7	97.6	1-A

TEST LOCATION:

7	Ash pond B - N 1 + 30 and E 19 + 00
8	Ash pond B - N 1 + 30 and E 15 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2 BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 6, 1991

OUR REPORT NO.: 311-00155-58

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment used on this day consisted of a maintainer, a watertruck, a disc, a roller, two scrapers, and three bulldozers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 6, 1991

OUR REPORT NO.: 311-00155-58

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-06-91	LIFT 18	34	80.6	36.7	79.0	98.0	1-A
2	06-06-91	LIFT 18	34	80.6	39.2	77.2	95.8	1-A
3	06-06-91	LIFT 18	34	80.6	39.1	78.0	96.8	1-A
4	06-06-91	LIFT 19	34	80.6	39.2	77.2	95.8	1-A
5	06-06-91	LIFT 19	34	80.6	37.9	78.7	97.6	1-A
6	06-06-91	LIFT 19	34	80.6	38.2	78.5	97.4	1-A

TEST LOCATION:

1	Ash Pond B - N 1 + 25 and E 27 + 00
2	Ash Pond B - N 1 + 30 and E 19 + 00
3	Ash Pond B - N 1 + 25 and E 14 + 00
4	Ash Pond B - N 1 + 25 and E 22 + 00
5	Ash Pond B - N 1 + 30 and E 18 + 50
6	Ash Pond B - N 1 + 30 and E 14 + 20

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 6, 1991

OUR REPORT NO.: 311-00155-58

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-06-91	LIFT 20	34	80.6	38.7	78.2	97.0	1-A
8	06-06-91	LIFT 20	34	80.6	39.1	78.7	97.6	1-A
9	06-06-91	LIFT 20	34	80.6	38.1	78.2	97.0	1-A
10	06-06-91	LIFT 21	34	80.6	39.4	78.2	97.0	1-A
11	06-06-91	LIFT 21	34	80.6	37.9	78.7	97.6	1-A

TEST LOCATION:

7	Ash Pond B - N 1 + 25 and E 17 + 50
8	Ash Pond B - N 1 + 25 and E 23 + 50
9	Ash Pond B - N 1 + 25 and E 14 + 50
10	Ash Pond B - N 1 + 25 and E 24 + 50
11	Ash Pond B - N 1 + 25 and E 19 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above
/mr

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 7, 1991

OUR REPORT NO.: 311-00155-59

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a compactor, a disc, two watertrucks, two bulldozers, and two scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 7, 1991

OUR REPORT NO.: 311-00155-59

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-07-91	Lift 22	36	80.6	40.9	77.0	95.5	1-A
2	06-07-91	Lift 22	36	80.6	37.6	79.2	98.3	1-A
3	06-07-91	Lift 22	36	80.6	38.2	79.2	98.3	1-A
4	06-07-91	Lift 23	36	80.6	37.5	79.2	98.3	1-A
5	06-07-91	Lift 23	36	80.6	39.5	78.5	97.4	1-A
6	06-07-91	Lift 23	36	80.6	36.5	80.2	99.5	1-A

TEST LOCATION:

1	Ash pond B - N 1 + 20 and E 27 + 00
2	Ash pond B - N 1 + 20 and E 24 + 50
3	Ash pond B - N 1 + 25 and E 14 + 00
4	Ash pond B - N 1 + 20 and E 18 + 00
5	Ash pond B - N 1 + 20 and E 26 + 75
6	Ash pond B - N 1 + 20 and E 16 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 7, 1991

OUR REPORT NO.: 311-00155-59

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-07-91	Lift 24	34	80.6	37.4	79.7	98.9	1-A
8	06-07-91	Lift 24	34	80.6	37.2	78.7	97.6	1-A
9	06-07-91	Final	34	80.6	37.4	79.7	98.9	1-A
10	06-07-91	Final	34	80.6	37.1	79.5	98.6	1-A
11	06-07-91	Final	34	80.6	38.1	78.2	97.0	1-A
12	06-07-91	Final	34	80.6	38.6	79.7	98.9	1-A

TEST LOCATION:

7	Ash Pond B - N 1 + 15 and E 19 + 00
8	Ash Pond B - N 1 + 15 and E 24 + 00
9	Ash Pond B Floor Area - N 2 + 10 and E 35 + 00
10	Ash Pond B Floor Area - N 2 + 20 and E 32 + 75
11	Ash Pond B Floor Area - N 2 + 80 and E 33 + 00
12	Ash Pond B Floor Area - N 2 + 70 and E 35 + 30

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 10, 1991

OUR REPORT NO.: 311-00155-60

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: one maintainer, one compactor, two bulldozers, two scrapers, and one water truck.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 10, 1991

OUR REPORT NO.: 311-00155-60

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-10-91	Lift 25	34	80.6	37.1	80.2	99.5	1-A
2	06-10-91	Lift 25	34	80.6	39.4	77.5	96.1	1-A
3	06-10-91	Lift 24	34	80.6	36.3	80.7	100.1	1-A
4	06-10-91	Lift 26	34	80.6	37.6	79.2	98.3	1-A
5	06-10-91	Lift 26	34	80.6	38.6	79.0	98.0	1-A
6	06-10-91	Lift 25	34	80.6	36.1	81.2	100.7	1-A

TEST LOCATION:

1	Ash pond B - at N 1 + 20 and E 20 + 00
2	Ash pond B - at N 1 + 20 and E 25 + 40
3	Ash pond B - at N 1 + 20 and E 17 + 50
4	Ash pond B - at N 1 + 20 and E 26 + 50
5	Ash pond B - at N 1 + 20 and E 19 + 25
6	Ash pond B - at N 1 + 25 and E 16 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 10, 1991

OUR REPORT NO.: 311-00155-60

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-10-91	Lift 26	34	80.6	37.1	79.5	98.6	1-A
8	06-10-91	Lift 27	34	80.6	38.4	80.2	99.5	1-A
9	06-10-91	Lift 27	34	80.8	37.6	79.2	98.3	1-A
10	06-10-91	Lift 27	34	80.6	38.5	78.7	97.6	1-A
11	06-10-91	Lift 28	34	80.6	38.6	79.7	98.9	1-A
12	06-10-91	Lift 28	34	80.6	37.7	79.5	98.6	1-A

TEST LOCATION:

7	Ash pond B - at N 1 + 20 and E 15 + 00
8	Ash pond B - at N 1 + 20 and E 19 + 50
9	Ash pond B - at N 1 + 20 and E 27 + 00
10	Ash pond B - at N 1 + 20 and E 13 + 75
11	Ash pond B - at N 1 + 20 and E 18 + 50
12	Ash pond B - at N 1 + 25 and E 25 + 75

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 11, 1991

OUR REPORT NO.: 311-00155-61

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a compactor, a water truck, two dulldozers, and three scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 11, 1991

OUR REPORT NO.: 311-00155-61

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-11-91	Lift 27	34	80.6	37.4	79.7	98.9	1-A
2	06-11-91	Lift 28	34	80.6	36.8	79.7	98.9	1-A
3	06-11-91	Lift 28	34	80.6	38.5	80.0	99.2	1-A
4	06-11-91	Lift 28	34	80.6	38.0	79.0	98.0	1-A
5	06-11-91	Lift 29	34	80.6	38.1	80.0	99.2	1-A
6	06-11-91	Lift 29	34	80.6	39.1	78.7	97.6	1-A

TEST LOCATION:

1	Ash pond B - at N 1 + 15 and E 13 + 75
2	Ash pond B - at N 1 + 15 and E 27 + 00
3	Ash pond B - at N 1 + 15 and E 21 + 00
4	Ash pond B - at N 1 + 15 and E 15 + 50
5	Ash pond B - at N 1 + 15 and E 26 + 00
6	Ash pond B - at N 1 + 15 and E 22 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 11, 1991

OUR REPORT NO.: 311-00155-61

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-11-91	Lift 29	34	80.6	39.9	79.0	98.0	1-A
8	06-11-91	Lift 30	34	80.6	38.7	78.2	97.0	1-A
9	06-11-91	Lift 30	34	80.6	40.3	77.7	96.4	1-A
10	06-11-91	Lift 30	34	80.6	40.6	77.5	96.1	1-A
11	06-11-91	Final	34	80.6	40.9	77.7	96.4	1-A
12	06-11-91	Final	34	80.6	39.6	77.7	96.4	1-A

TEST LOCATION:

7	Ash pond B - at N 1 + 15 and E 15 + 00
8	Ash pond B - at N 1 + 15 and E 22 + 00
9	Ash pond B - at N 1 + 15 and E 26 + 50
10	Ash pond B - at N 1 + 15 and E 16 + 00
11	Ash pond B - at N 1 + 10 and E 21 + 00
12	Ash pond B - at N 1 + 10 and E 27 + 00

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Three Burwood Lane • San Antonio, TX 78216-7071 • Phone: 512/342-9377

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 12, 1991

OUR REPORT NO.: 311-00155-62 Page 1 of 3

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consists of: a maintainer, a compactor, a water truck, two bulldozers and two scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above
/hw

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 12, 1991

OUR REPORT NO.: 311-00155-62

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	6-12-91	Final	34	80.6	38.7	78.2	97.0	1-A
2	6-12-91	Lift 2	34	80.6	37.7	79.5	98.6	1-A
3	6-12-91	Lift 4	34	80.6	36.9	80.0	99.2	1-A
4	6-12-91	Lift 6	34	80.6	38.9	79.2	98.3	1-A
5	6-12-91	Lift 8	34	80.6	39.4	77.5	96.1	1-A
6	6-12-91	Lift 10	34	80.6	38.4	80.2	99.5	1-A

TEST LOCATION:

1	Ash Pond B - N1+10 and E14+00
2	Ash Pond B - N2+20 and E12+00
3	Ash Pond B - N2+30 and E12+25
4	Ash Pond B - N2+20 and E12+25
5	Ash Pond B - N2+35 and E12+25
6	Ash Pond B - N2+20 and E12+25

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 12, 1991

OUR REPORT NO.: 311-00155-62

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO.	DATE	ELEV. / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	6-12-91	Lift 12	34	80.6	38.8	78.7	97.6	1-A
8	6-12-91	Lift 14	34	80.6	38.0	79.0	98.0	1-A
9	6-12-91	Lift 16	34	80.6	37.8	80.2	99.5	1-A
10	6-12-91	Lift 18	34	80.6	36.5	80.2	99.5	1-A
11	6-12-91	Lift 20	34	80.6	38.6	79.0	98.0	1-A

TEST LOCATION:

7	Ash Pond B - N2+20 and E12+25
8	Ash Pond B - N2+30 and E12+00
9	Ash Pond B - N2+20 and E12+00
10	Ash Pond B - N2+30 and E12+10
11	Ash Pond B - N2+25 and E12+10

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a compactor, a water truck, two bulldozers, and two scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-13-91	Final	34	80.6	36.7	81.2	100.7	1-A
2	06-13-91	Final	34	80.6	36.4	81.0	100.5	1-A
3	06-13-91	Final	34	80.6	38.8	78.5	97.4	1-A
4	06-13-91	Final	34	80.6	37.3	80.5	99.9	1-A
5	06-13-91	Final	34	80.6	36.9	80.0	99.2	1-A
6	06-13-91	Final	34	80.6	37.0	81.0	100.5	1-A

TEST LOCATION:

1	Ash Pond B floor area - N 2 + 10 and E 27 + 50
2	Ash Pond B floor area - N 2 + 70 and E 23 + 00
3	Ash Pond B floor area - N 2 + 60 and E 20 + 00
4	Ash Pond B floor area - N 2 + 10 and E 17 + 50
5	Ash Pond B floor area - N 2 + 50 and E 15 + 00
6	Ash Pond B floor area - N 2 + 20 and E 13 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

TEST DATA: Optimum moisture: (34, 36.2%), (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-13-91	Lift 24	34	80.6	38.0	79.0	98.0	1-A
8	06-13-91	Lift 26	34	80.6	38.4	79.5	98.6	1-A
9	06-13-91	Lift 28	34	80.6	38.5	78.7	97.6	1-A
10	06-13-91	Lift 30	34	80.6	38.9	79.2	98.3	1-A
11	06-13-91	Final	2	89.8	28.5	89.5	99.7	1-A
12	06-13-91	Final	2	89.8	28.5	88.7	98.8	1-A

TEST LOCATION:

7	Ash Pond B floor area - N 2 + 20 and E 12 + 10
8	Ash Pond B floor area - N 2 + 10 and E 12 + 20
9	Ash Pond B floor area - N 2 + 25 and E 12 + 25
10	Ash Pond B floor area - N 2 + 10 and E 12 + 10
11	Ash Pond B floor area - N 2 + 30 and E 12 + 25
12	Ash Pond B floor area - N 2 + 00 and E 12 + 30

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

NOTED MAR 29 1979 R. J. BOYLE

NFS / NATIONAL SOIL SERVICES, INC. CONSULTING ENGINEERS
214-330-9211
P. O. BOX 24596
4087 SHILLING WAY
DALLAS, TEXAS 75224

March 19, 1979
Job No. 75285-13

RECEIVED
MAR 23 1979
S. M. E. C., INC.
JOURDANTON, TEXAS 78026

San Miguel Electric Cooperative, Inc.
P. O. Box 280
Jourdanton, Texas 78026

Attention: Mr. Ernest I. Wohlschlegel, P.E.
General Manager

SAN MIGUEL STEAM ELECTRIC STATION
GROUNDWATER PROTECTION

Gentlemen:

In accordance with our recent discussions we are supplying the following information to satisfy questions raised during the issuance of a permit for the operations of various impoundments at the San Miguel Steam Electric Station. These questions were raised by Mr. Bill Brown and Mr. Roy Miller, Enforcement and Field Operations Division of the Texas Department of Water Resources. It is understood that satisfactory answers to these questions will allow operation of the various impoundments.

With respect to the question concerning construction of the blanketed area of the yard drainage retention pond - it was noted during the original certification program that the southeast quadrant of the yard drainage retention pond contained soil materials which probably would not meet State requirements for groundwater protection. A subsequent testing program consisting of liquid and plastic limit determinations, percent passing No. 200 sieve determinations, and falling head permeability testing, confirmed this fact. As a result of these studies, a three-foot compacted blanket of dark gray clay (Unified Soil Classification - CH) was placed over the entire southeast quadrant of the yard drainage retention pond. These clays were obtained from required site excavation. Before samples could be obtained to verify in-place density of this blanket, excessive rainfall resulted in approximately three feet of water over the blanket. Continued excessive amounts of rainfall throughout the summer, fall, and winter have continued to keep the yard drainage retention pond filled. Accordingly, in-place densities and permeability testing have not been conducted on samples obtained from the compacted blanket. However, observations made during the selection of the materials and the liquid limits and plasticity indices, would indicate that the blanket material will adequately meet the permeability requirements of 1×10^{-7} cm/sec. Liquid limits of the blanket materials varied from 55.5 percent to 59.0 percent and the plasticity indices ranged from 23.3 to 44.0.

With respect to the question concerning materials used in the other impounding areas, the materials used for construction of dikes were obtained from required on-site excavations and consisted entirely of sandy clays and clays of moderate to high plasticity. (Unified Soil Classification - CL and/or CH) These embankments were constructed by placing the clay materials in loose lifts not exceeding nine-inches in thickness and compacting to a density equivalent to 95-percent of the maximum dry unit weight determined utilizing the Texas Highway Test Method, Tex 113-E. These clay soils were compacted at a moisture content ranging from one-percent below the optimum value to four-percent above the optimum value. The permeability of compacted samples was not defined, since results of permeability determinations on undisturbed samples indicated that the coefficient of permeabilities were less than 1×10^{-7} cm/sec, and it can be concluded that comparable or lower permeabilities would be developed by reworking and compaction of the cohesive borrow.

We appreciate the opportunity to provide this additional information and trust it is sufficient for your needs. If you have questions, or need further information, please contact us.

Very truly yours,

NFS/NATIONAL SOIL SERVICES, INC.

Pierce L. Chandler, Jr., P.E.

PLC/nf

cc: San Miguel Electric Cooperative, Inc.
Mr. Gerald Camber

Tippett and Gee
Mr. M. L. Hughes

Professional Service Industries, Inc.

REPORT OF INSPECTION SERVICES

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

REMARKS: Technician: J. Schlomach

SUMMARY OF INSPECTION

As requested by Mr. Dennis Price of your firm, a representative of Professional Service Industries, Inc. arrived at the above referenced project to conduct compaction testing. Test results are attached for your review. Equipment available on this date consisted of: a maintainer, a compactor, a water truck, two bulldozers, and two scrapers.

CONDITIONS REQUIRING CORRECTION - CORRECTIVE ACTION TAKEN

None. Project specifications require compaction to be a minimum of 95% at a moisture content of optimum to 4% above optimum.

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

TEST DATA: Optimum moisture: (34, 36.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
1	06-13-91	Final	34	80.6	36.7	81.2	100.7	1-A
2	06-13-91	Final	34	80.6	36.4	81.0	100.5	1-A
3	06-13-91	Final	34	80.6	38.8	78.5	97.4	1-A
4	06-13-91	Final	34	80.6	37.3	80.5	99.9	1-A
5	06-13-91	Final	34	80.6	36.9	80.0	99.2	1-A
6	06-13-91	Final	34	80.6	37.0	81.0	100.5	1-A

TEST LOCATION:

1	Ash Pond B floor area - N 2 + 10 and E 27 + 50
2	Ash Pond B floor area - N 2 + 70 and E 23 + 00
3	Ash Pond B floor area - N 2 + 60 and E 20 + 00
4	Ash Pond B floor area - N 2 + 10 and E 17 + 50
5	Ash Pond B floor area - N 2 + 50 and E 15 + 00
6	Ash Pond B floor area - N 2 + 20 and E 13 + 50

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

Professional Service Industries, Inc.

REPORT OF FIELD COMPACTION TESTS

TESTED FOR: MORRISON-KNUDSEN
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

PROJECT: Ash Pond B Liner
San Miguel Power Plant

DATE: June 13, 1991

OUR REPORT NO.: 311-00155-63

TEST DATA: Optimum moisture: (34, 36.2%), (2, 28.2%)

TEST NO	DATE	ELEV / DEPTH	SOIL ID NUMBER	MAXIMUM LAB DRY DENSITY	WATER CONTENT	IN PLACE DRY DENSITY	PER CENT COMPACTION	COMMENT *
7	06-13-91	Lift 24	34	80.6	38.0	79.0	98.0	1-A
8	06-13-91	Lift 26	34	80.6	38.4	79.5	98.6	1-A
9	06-13-91	Lift 28	34	80.6	38.5	78.7	97.6	1-A
10	06-13-91	Lift 30	34	80.6	38.9	79.2	98.3	1-A
11	06-13-91	Final	2	89.8	28.5	89.5	99.7	1-A
12	06-13-91	Final	2	89.8	28.5	88.7	98.8	1-A

TEST LOCATION:

7	Ash Pond B floor area - N 2 + 20 and E 12 + 10
8	Ash Pond B floor area - N 2 + 10 and E 12 + 20
9	Ash Pond B floor area - N 2 + 25 and E 12 + 25
10	Ash Pond B floor area - N 2 + 10 and E 12 + 10
11	Ash Pond B floor area - N 2 + 30 and E 12 + 25
12	Ash Pond B floor area - N 2 + 00 and E 12 + 30

NOTES: DENSITIES SHOWN: Lbs. per cubic foot
WATER CONTENT: Per Cent of dry weight
PERCENT COMPACTION: Based on maximum dry density obtained on sample indicated by soil ID number.

* 1. FILL MATERIAL
2. BACKFILL
3. BASE COURSE
4. SUBBASE
5. SOIL CEMENT
6. OTHER

A. TEST RESULTS COMPLY WITH SPECIFICATIONS
B. RECOMPACTION REQUIRED
C. TEST IS AFTER RECOMPACTION

REMARKS:

cc: (2) Above

Respectfully submitted,
Professional Service Industries, Inc.

ATTACHMENT B

PSI SOILS DATA SUMMARY STATEMENT
ASH POND 1-B

Professional Service Industries, Inc.

July 12, 1991

Morrison-Knudsen
P.O. Box 850
Jourdanton, Texas 78026
Attn: Mr. Dennis Price, P.E.

Re: Ash Pond B Liner
San Miguel Power Plant
Materials Testing
Jourdanton, Texas
PSI Report No: 311-00155-64

Mr. Dennis Price,

As requested, Professional Service Industries, Inc. has provided an engineering technician to test compaction and moisture levels during the reconstruction of the Ash Pond B Clay Liner. Our technician also sampled material being used to construct the Clay Liner as directed by Morrison-Knudsen. Field and laboratory test data indicated the following:

1. Clay was placed at a compaction level of 95% or greater and a moisture level of optimum to 4% above optimum.

2. Samples of the clay placed as liner material were tested and found to have the following characteristics:

Liquid Limit:	greater than 30
Plasticity Index:	greater than 15
Permeability:	less than 1×10^{-7} cm/sec.

Should you have any questions concerning this report, contact our office at your earliest convenience.

Repectfully submitted,

PROFESSIONAL SERVICE INDUSTRIES, INC.

John A. Marin
Division Manager
Construction Services

JAM/bt

ATTACHMENT C

ATASCOSA MINING CO. CONSTRUCTION CERTIFICATION ASH POND 1-B

ATASCOSA MINING CO.
P. O. Box 850
Jourdanton, Texas 78026

August 19, 1991

Mr. Ron Magel
Chief Engineer
San Miguel Electric Cooperative, Inc.
P.O. Box 280
Jourdanton, TX 78026

SUBJECT: Ash Pond B
Clay Liner Thickness

Dear Mr. Magel:

This is to certify that clay liner for San Miguel's Ash Pond B was replaced under my supervision and that said liner, as placed, had a minimum thickness of 3.0 feet at all locations of the interior up the design elevation of 315.0 feet, mean sea level.

Dennis C. Price

Dennis C. Price, P.E. 60131
Manager, Project Engineering

DCP/db

cc: F.E. Grubaugh

0935D