APPENDIX A

APPENDIX A

FIELD REPORTS AND SUMMARY OF GEOTECHNICAL TESTS

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation
Mill Tailing Reclamation
Church Rock, NM

Job No. 3144JK050
Lab / Invoice No. 31440135
Report No. _____ Date _____

Report By H. Kuebler/WT Date 05/31/94 Reviewed By M. Bacon Date 05/31/94

Prime Contractor Nielson, Inc. Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. began excavating for swale H from station 31+00 to 21+00.

Unexpected site conditions: None

Sampling and/or testing performed: Observation and discussion.

Conformance of materials, operations and/or test results to project requirements: None

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: Discussion with Ed Morales, UNC. concerning testing of centra cell. Testing will be done on each 6" lift. The following will be done for the 1994 season. 235 compaction tests, 118 graduation and atterberg, 16 proctor curve and 47 - 1pt proctor points.

Weather: Clear

Technician / Engineer time on project today: 8

Number of visits today: 1 Time and date for next visit: 06/01/94

Client (5), Billing (1), Field file (1)

273 (1/92 spf)

Western Technologies Inc.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

Mill Tailing Reclamation Lab / Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/01/94 Reviewed By M. Lee Date 06/01/94

Prime Contractor Nielson, Inc. Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued excavating swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Two proctor curves, three compaction tests on swale "H" native subgrade.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: None

Weather: Clear

Technician / Engineer time on project today: 8

Number of visits today: 1 Time and date for next visit: 06/02/94

Client (5), Billing (1), Field file (1)

273

Western Technologies Inc.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

Mill Tailing Reclamation Lab / Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/02/94 Reviewed By M Bum Date 06/02/94

Prime Contractor Nielson, Inc. Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. completed excavating to native subgrade in swale "H" from station 21+00 to station 31+00.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests and visual observation.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: None

Weather: Clear

Technician / Engineer time on project today: 8

Number of visits today: 1 Time and date for next visit: 06/03/94

Client (5), Billing (1), Field file (1)

273

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation
Mill Tailing Reclamation
Church Rock, NM

Job No. 3144JK050
Lab / Invoice No. 31440184
Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/03/94 Reviewed By M. Bu Date 06/03/94

Prime Contractor Nielson, Inc. Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. began to place radon attenuation cover in swale "H".

Unexpected site conditions: None

Sampling and/or testing performed: Visual observation, laboratory testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: I traveled to Hamilton Brothers yard and obtained a gradation sample for .35 aggregate.

Weather: Clear

Technician / Engineer time on project today: 8

Number of visits today: 1 Time and date for next visit: 06/06/94

Client (5), Billing (1), Field file (1)

REVIEW OF CONSTRUCTION

Project UNITED NUCLEAR CORPORATION
CHURCH ROCK URANIUM MILL TAILING RECLAMATION
CHURCH ROCK, NM

Job No. 3144JK050
Lab / Invoice No. 31440184
Report No. _____ Date 06/06/94

Report By H. KUEBLER/WT Date 06/06/94 Reviewed By M. Bram Date 06/15/94

Prime Contractor NEILSON Superintendent H. HAMPSON

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Neilson Inc. began to excavate swale "D" to constructi subgrade elevation.

Unexpected site conditions: N/A

Sampling and/or testing performed: Visual observation and proctors values.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: H. Hampson stated he would need compaction tests for swale "D" on 06/07/94. He would not need compaction testing on swale "H" until later this week

Weather: Clear

Technician / Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/07/94

CLIENT (5), BILLING (1), FIELD FILE (1).

REVIEW OF CONSTRUCTION

Project UNITED NUCLEAR CORPORATION
CHURCH ROCK URANIUM MILL TAILING RECLAMATION
CHURCH ROCK, NM

Job No. 3144JK050
Lab / Invoice No. 31440184
Report No. _____ Date 06/07/94

Report By H. KUEBLER/WT Date 06/07/94 Reviewed By M Bonner Date 06/15/94

Prime Contractor NEILSON Superintendent H. HAMPSON

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued to excavated swale "D" to construction subgrade elevation.

Unexpected site conditions: N/A

Sampling and/or testing performed: Visual observation and compaction testing, proctor values.

Conformance of materials, operations and/or test results to project requirements: Compaction test met project requiremen

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: Ed Morales, UNC stated field and laboratory testing shall be done on top of interm cover on swales and cell site. This will double testing.

Weather: Clear

Technician / Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/08/94

CLIENT (5), BILLING (1), FIELD FILE (1).

REVIEW OF CONSTRUCTION

Project UNITED NUCLEAR CORPORATION — Job No. 3144JK050

CHURCH ROCK URANIUM MILL TAILING RECLAMATION — Lab / Invoice No. 31440184

CHURCH ROCK, NM — Report No. _____ Date 06/08/94

Report By H. KUEBLER/WT Date 06/08/94 Reviewed By M. Burns Date 06/15/94

Prime Contractor NEILSON Superintendent H. HAMPSON

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. completed swale "D" to construction grade and began to place interm cover.

Unexpected site conditions: N/A

Sampling and/or testing performed: Compaction tests on construction subgrade material.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: N/A

Weather: Clear

Technician / Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/09/94

CLIENT (5), BILLING (1), FIELD FILE (1).

Western Technologies Inc.

REVIEW OF CONSTRUCTION

Project UNITED NUCLEAR CORPORATION
CHURCH ROCK URANIUM MILL TAILING RECLAMATION
CHURCH ROCK, NM

Job No. 3144JK050
Lab / Invoice No. 31440184
Report No. _____ Date 06/09/94

Report By H. KUEBLER/WT Date 06/09/94 Reviewed By M. Branner Date 06/15/94

Prime Contractor NEILSON Superintendent H. HAMPSON

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, INc. completed placement of interm cover for swale "D".

Unexpected site conditions: N/A

Sampling and/or testing performed: Visual observation and laboratory testin.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received / from: Nielson, INc. finished compactive effort for swale "D" interm cover late in the afternoon. Herschel Hampson requested WT to do compaction testing on 06/10/94

Weather: Clear

Technician / Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/10/94

CLIENT (5), BILLING (1), FIELD FILE (1).

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/10/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, INC. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson, Inc. did not work today.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests on interm cover of Swales "H" and "D".

Conformance of materials, operations and/or test results to project requirements: Compaction tests indicated Swale "D" and "H" needed to be recompacted in most areas.

Person/persons notified of nonconformance to project requirements: Nielson's Inc. will be notified.

Nonconformance corrected: N/A

Instructions or information received/from: Stations 0+00 to 6+00 and 26+00 to 28+00 of Swale "D" native construction grade consisted of Bedrock. No compaction testing could be done.

Weather: _____

Technician/Engineer time on project today: 8 hrs.

Number of visits today: _____ Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By R. Davis/WT Date 06/14/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Field Densities in Swale "C", contractor began backfilling in Swale "C" from Station 6+00 to 18+00.

Unexpected site conditions: Bedrock from Station 2+00 to 6+00. I was not able to test this area.

Sampling and/or testing performed: Sandcone Field Density Tests (7).

Conformance of materials, operations and/or test results to project requirements: Materials, operations and test results appear to conform to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Hershall Hampson w/ Nielson's - Start Sandcone Densities on Sale "D" in the morning on 6-15-94.

Weather: Windy

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 06/15/94 @ 8:00 am

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By R. Davis/WT Date 06/15/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. began excavating Swales A & B.

Unexpected site conditions: None

Sampling and/or testing performed: Sandcone Field Density Tests (10).

Conformance of materials, operations and/or test results to project requirements: Materials, operations and test results appear to conform to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Hershall Hampson w/ Nielson's - Start Sandcone Densities on Swale "H" in the morning on 6-16-94.

Weather: Windy

Technician/Engineer time on project today: 9 hrs.

Number of visits today: 1 Time and date for next visit: 06/16/94 @ 8:00 am

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/16/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. continued to excavate Swales A & B.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Tests on Swale "H" interm cover.

Conformance of materials, operations and/or test results to project requirements: Compactions tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: _____

Technician/Engineer time on project today: 8 hrs. plus 8 hrs additional Technician

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/17/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. did not work today.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory Tests

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs. plus 8 hrs additional Technician

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/20/94 Reviewed By _____ Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. placed and blue topped radon attenuation cover for Swale "H".

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory Tests

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales informed me Swales A & B Native subgrade are to be compacted to 90% with no moisture specifications. Bedding material will be placed on Native subgrade.

Weather: Clear

Technician/Engineer time on project today: 8 hrs. plus 8 hrs additional Technician

Number of visits today: 1 Time and date for next visit: 06/21/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/21/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. began to place radon attenuation cover along the south end of central cell.

Unexpected site conditions: Afternoon rain showers.

Sampling and/or testing performed: Compaction tests on radon attenuation cover of Swale "H".

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: _____

Technician/Engineer time on project today: 8 hrs. plus 8 hrs additional Technician

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/22/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. placed interm radon attenuation cover south of Swale "H".

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory Tests

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales and I discussed testing frequency on Radon Attenuation cover on swales. Compaction tests shall be every 500 c. yds. and Sieve Analysis Plastic Index every 1000 yds.

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 06/23/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/23/94 Reviewed By [signature] Date 06/29/94

Prime Contractor U.N.C. Superintendent _____

Subcontractor Nielson's, Inc. Superintendent H. Hampson

Work in progress and/or completed since last report: Nielson's, Inc. blue topped radon attenuation cover in Swale "D", Station 0+00 to 10+00.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory Tests

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Compaction tests will be done on Swale "D" from Station 0+00 to 10+00.

Weather: _____

Technician/Engineer time on project today: 8 hrs. plus 8 hrs for additional Technician

Number of visits today: 1 Time and date for next visit: 06/24/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/24/94 Reviewed By [signature] Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today.

Unexpected site conditions: None

Sampling and/or testing performed: Observation and Laboratory Testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: _____

Technician/Engineer time on project today: 8 hrs

Number of visits today: _____ Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/27/94 Reviewed By _____ Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to scarify and recompact Radon Attenuation Cover between grid line 20 to 15.

Unexpected site conditions: None

Sampling and/or testing performed: Visual observation and Laboratory Testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear - temperatures in 90°F

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/28/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/28/94 Reviewed By M. Braun Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place Radon Attenuation Cover in central cell.

Unexpected site conditions: None

Sampling and/or testing performed: Visual observation and Laboratory Testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Nielson's Inc. was notified RAC layer between grid line 20+16 did not meet moisture specifications.

Nonconformance corrected: Nielson's Inc. will rework area.

Instructions or information received/from: N/A

Weather: Clear - temperatures in 90°F

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/29/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/29/94 Reviewed By M. [signature] Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place Radon Attenuation Cover in central cell.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness monitoring on Swale H, visual observation and laboratory testing.

Conformance of materials, operations and/or test results to project requirements: Thickness met project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Grid lines 20 to 15 still drying out.

Weather: Clear - temperatures in 90°F

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 06/30/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440184

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 06/30/94 Reviewed By [signature] Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. bluetopped swale D from Station 9+50, to 20+00, and continued to place Radon Attenuation Cover on central cell.

Unexpected site conditions: None

Sampling and/or testing performed: Visual Observation

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Moisture contents in RAC material is sporadic between grid line 20 to 16.

Nonconformance corrected: Nielson's Inc. will discuss with Ed Morales.

Instructions or information received/from: Herschel Hampson, Neilson's Inc., informed me that a rome plow will be brought to site on Tuesday 7-5-94. Mr. Hampson stated rom plow would cut approximately 12" to 14" into grade. Mr. Hampson is concerned about contaminating site with underlying tailings. He wants to place material to final RAC elevation and excavate test pits for compaction tests.

Weather: Clear - temperatures in 90°F

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/01/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 07/01/94

Report By H. Kuebler/WT Date 07/01/94 Reviewed By _____ Date 07/06/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. didn't work today.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests on Swale D from Station 10+00 to 18+00.

Conformance of materials, operations and/or test results to project requirements: Compaction tests failed.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/05/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 07/05/94 Reviewed By M. Bowen Date 07/12/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. reworked between line 20 and line 19.

Unexpected site conditions: None

Sampling and/or testing performed: Moisture contents, laboratory testing.

Conformance of materials, operations and/or test results to project requirements: Moisture contents are below specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: Nielson's Inc. will rework.

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs + 8 hrs

Number of visits today: 1 Time and date for next visit: 07/06/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 07/06/94 Reviewed By M. Braun Date 07/12/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. moisturized Radon Attenuation Cover, North of Swale H to F14 to I18.

Unexpected site conditions: None

Sampling and/or testing performed: Moisture contents, Laboratory Testing.

Conformance of materials, operations and/or test results to project requirements: Moisture contents indicated area meet with project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Nielson's Inc. requested compaction tests in the area mouth of Swale H.

Weather: Clear

Technician/Engineer time on project today: 8 hrs + 8 hr

Number of visits today: 1 Time and date for next visit: 07/07/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 07/07/94 Reviewed By M. Burn Date 07/12/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. remoisturized between line 20 to 18.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction test on North of Swale H and Laboratory Tests.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Nielson's Inc. requested compaction tests be performed between line 20 to 18.

Weather: Clear

Technician/Engineer time on project today: 8 hrs + 5 hrs

Number of visits today: 1 Time and date for next visit: 07/08/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date _____

Report By H. Kuebler/WT Date 07/08/94 Reviewed By _____ Date 07/12/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. processed Radon Attenuation Cover west of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Nielson's Inc. worked 1/2 a day due to rome plow break down.

Weather: Clear

Technician/Engineer time on project today: 5 hrs

Number of visits today: 1 Time and date for next visit: 07/11/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/11/94 Reviewed By _____ Date 07/18/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. placed D-1.5 aggregate in Swale D between station 2+00 to 8+00.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests.

Conformance of materials, operations and/or test results to project requirements: Compaction tests on line 18 and 17.

Person/persons notified of nonconformance to project requirements: Nielson's Inc. was informed of failing compaction test at D-17, to F-17 and G-18.

Nonconformance corrected: Nielson's Inc. will rework failing areas.

Instructions or information received/from: Ed Morales stated compaction tests will be in every 400 cubic yards of Radon Attenuation Cover.

Weather: _____

Technician/Engineer time on project today: _____

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/12/94 Reviewed By M. Lewis Date 07/18/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. compacted Radon Attenuation Cover between station 20+00 to 28+00 in Swale D and placed D-1.5 aggregate from station 2+00 to 8+00 in Swale D. Nielson's Inc. began to recontour west drainage channel.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction test between station 20+00 to 28+00.

Conformance of materials, operations and/or test results to project requirements: Compaction tests met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales stated combined thickness of bedding material and .35 material shall be a minimum 6" and a maximum of 7 1/2" in Swale H. Total maximum thickness of bedding, .35 material and 3" materials shall be 14".

Weather: _____

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/13/94 Reviewed By _____ Date 07/18/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. placed bedding sand between station 12+00 to 16+00, Swale D.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory tests and thickness measurements on Swale H for .35 Aggregate.

Conformance of materials, operations and/or test results to project requirements: .35 Aggregate thickness met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 7/14/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/14/94 Reviewed By _____ Date 07/18/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to excavate for west control channel and placed fill on exterior slope of the west control channel berm.

Unexpected site conditions: None

Sampling and/or testing performed: Observation, laboratory testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: Nielson's Inc. will rework.

Instructions or information received/from: Herschel Hampson requested thickness measurements be done on Swale D.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/15/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/15/94 Reviewed By M. Date 07/18/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. didn't work today.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements and report preparation.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Nielson's Inc. will be notified of thickness on Swale D between stations 12+00 to 18+00 on bedding sand to be adjusted.

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/18/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/18/94

Report By H. Kuebler/WT Date 07/18/94 Reviewed By N Date 08/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed placement of Radon Attenuation Cover north of Swale H to Grid line 14.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Herschel Hampson w/ Nielson's Inc. requested compaction tests from Grid line 14 to 12 tomorrow afternoon.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/19/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/19/94

Report By H. Kuebler/WT Date 07/19/94 Reviewed By _____ Date 08/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed placement of Radon Attenuation Cover from Grid line 14 to 12.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: I informed Ed Morales, UNC that I was not going to be on project site on Friday 7/22/94. I will work in Farmington office on UNC project documentation on Friday.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/20/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/20/94

Report By H. Kuebler/WT Date 07/20/94 Reviewed By _____ Date 08/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed placement of Radon Attenuation Cover on Grid line 11.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/21/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/21/94

Report By H. Kuebler/WT Date 07/21/94 Reviewed By _____ Date 08/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed placement of Radon Attenuation Cover on Grid point 12 to Grid point 2 along Swale E extending to Swale D.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: WTI has been working extra hours to compensate for not working on project site on Friday 7/22/94. WTI will Invoice extra hours as regular hours for Friday 7/22/94.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/26/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/22/94

Report By H. Kuebler/WT Date 07/22/94 Reviewed By [signature] Date 08/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today.

Unexpected site conditions: N/A

Sampling and/or testing performed: N/A

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: _____

Technician/Engineer time on project today: _____

Number of visits today: _____ Time and date for next visit: _____

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/25/94

Report By H. Kuebler/WT Date 07/25/94 Reviewed By _____ Date 08/04/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to process Radon Attenuation cover in the northern section between Swale D & E.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/26/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/26/94

Report By H. Kuebler/WT Date 07/26/94 Reviewed By N Date 08/04/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. processed Radon Attenuation Cover in the north section between Swale D & E.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/27/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/27/94

Report By H. Kuebler/WT Date 07/27/94 Reviewed By _____ Date 08/04/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to compact Radon Attenuation Cover in an area between Swale D & C.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Moisture samples indicated radon Attenuation cover between Swales D & C were below optimum moisture conditions. Nielson's Inc. was notified and reprocessing began.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/28/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/28/94

Report By H. Kuebler/WT Date 07/28/94 Reviewed By [signature] Date 08/04/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. reprocessed Radon Attenuation Cover between Swales D & C. Nielson's Inc. placed Radon Attenuation Cover in Swale C.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared to have met project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Herschel Hampson with Nielson's Inc. requested compaction tests be performed on Swale C.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 07/29/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440235

Church Rock, NM Report No. _____ Date 7/29/94

Report By H. Kuebler/WT Date 07/29/94 Reviewed By [signature] Date 08/04/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today. UNC surveyed the top of the Radon Attenuation Cover on Swale C.

Unexpected site conditions: N/A

Sampling and/or testing performed: Compaction Tests

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Jim Fletcher with UNC informed me the survey on Swale C Radon Attenuation Cover was not at correct elevations. I was to stop compaction testing until further notice.

Weather: _____

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/01/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/01/94

Report By H. Kuebler/WT Date 08/01/94 Reviewed By _____ Date 08/10/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hambson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. placed additional fill between station 4+00 to station 10+00 in Swale C. Nielson's Inc. continued D^{50} - 1.5 aggregate placement west of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compaction tests appeared to indicate conformance to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales stated D^{50} - 1.5 aggregate thickness between 3" to 4".

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/02/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/02/94

Report By H. Kuebler/WT Date 08/02/94 Reviewed By _____ Date 08/10/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. blue topped Radon Attenuation Cover between Swale E & D and continued D^{50} - 1.5 aggregate.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compaction tests appeared to indicate conformance to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/03/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/03/94

Report By H. Kuebler/WT Date 08/03/94 Reviewed By _____ Date 08/10/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued D^{50} - 1.5 aggregate west of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing

Conformance of materials, operations and/or test results to project requirements: Compaction tests appeared to indicate conformance to project specifications.

Person/persons notified of nonconformance to project requirements: Herschell Hampson was notified of D50 1.5 aggregate failure to meet thickness requirements.

Nonconformance corrected: Nielson's Inc. will rework area.

Instructions or information received/from: _____

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/04/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/04/94

Report By H. Kuebler/WT Date 08/04/94 Reviewed By _____ Date 08/10/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. reworked Grid Line 20 + 19 to obtain correct D^{50} - 1.5 aggregate thickness. Nielson's Inc. blue topped Radon Attenuation Cover in Swale C.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction Testing on Swale C.

Conformance of materials, operations and/or test results to project requirements: Compactions tests appeared indicate conformance to project specifications.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Herschel Hampson requested thickness measurements be performed between Grid Lines 20 to 19.

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/05/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/05/94

Report By H. Kuebler/WT Date 08/05/94 Reviewed By _____ Date 08/10/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today.

Unexpected site conditions: N/A

Sampling and/or testing performed: Thickness Measurements.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: I informed Ed Morales, UNC between line 20 to 19 thickness measurements did not meet specifications.

Nonconformance corrected: Mr. Morales discussed the problem with Nielson's Inc.

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/08/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

'REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/08/94

Report By H. Kuebler/WT Date 08/08/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place D^{50} 1.5 aggregate north of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Visual observation of D^{50} - 1.5 aggregate and laboratory testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/09/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/09/94

Report By H. Kuebler/WT Date 08/09/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place D^{50} - 1.5 aggregate north of swale H. Nielson's Inc. and Western Technologies checked thickness of D^{50} - 1.5 aggregate between line 20 & 19.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory tests and thickness requirements.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements conformed to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear - partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/10/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/10/94

Report By H. Kuebler/WT Date 08/10/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued D^{50} - 1.5 aggregate north of Swale H. Nielson's Inc. blue topped D^{50} - 1.5 aggregate between line 19 to 15, south of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Visual observation and thickness checks.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Nielson's Inc. was notified of failing areas for thickness of D50 - 1.5 aggregate between 19 to 15.

Nonconformance corrected: Nielson's Inc. will correct failing areas.

Instructions or information received/from: _____

Weather: Partly cloudy to cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/11/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/11/94

Report By H. Kuebler/WT Date 08/11/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. corrected areas for D^{50} - 1.5 aggregate between lines 19 to 15 south of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory tests and thickness measurements.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements conformed to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/12/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/12/94

Report By H. Kuebler/WT Date 08/12/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today.

Unexpected site conditions: N/A

Sampling and/or testing performed: Laboratory work and Swale C bedding thickness

Conformance of materials, operations and/or test results to project requirements: Bedding sand between 10+00 to 6+50 appeared to conform to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/16/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/16/94

Report By H. Kuebler/WT Date 08/16/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place D^{50} - 1.5 aggregate between Swale E & D of central cell. Nielson's Inc. began to blue top Swale B native material.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness requirements.

Conformance of materials, operations and/or test results to project requirements: Thickness requirements appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales, UNC, stated Swale B compaction requirements for native subgrade shall be 90% and no moisture requirements. Bedding sand will be placed on native subgrade since no tailing was found.

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/17/94 @ 8:00 am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/17/94

Report By H. Kuebler/WT Date 08/17/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place D^{50} - 1.5 aggregate between Swale E & D of central cell. Nielson's Inc. began to blue top Swale B.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness requirements on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Nielson's Inc. was informed of failing areas.

Nonconformance corrected: Nielson's Inc. will repair failing areas.

Instructions or information received/from: None

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/18/94 @ 8:00am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/18/94

Report By H. Kuebler/WT Date 08/18/94 Reviewed By _____ Date 08/26/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. repaired areas where D^{50} - 1.5 aggregate did not meet project requirements. Nielson's Inc. continued D^{50} - 1.5 aggregate placement between Swale E and D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness requirements and compaction tests on Swale B.

Conformance of materials, operations and/or test results to project requirements: Compaction tests and thickness requirements appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: None

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/19/94 @ 8:00am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/19/94

Report By H. Kuebler/WT Date 08/19/94 Reviewed By _____ Date 08/29/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. did not work today.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness requirements on bedding sand for Swale C and Laboratory testing.

Conformance of materials, operations and/or test results to project requirements: Thickness requirements appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: None

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/22/94 @ 8:00am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

'REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/22/94

Report By H. Kuebler/WT Date 08/22/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place D^{50} 1.5 aggregate in north section between Swale E and D.

Unexpected site conditions: None

Sampling and/or testing performed: D^{50} - 1.5 aggregate thickness K+18.5 to E+12.5, K+17 to G+12.

Conformance of materials, operations and/or test results to project requirements: D^{50} - 1.5 aggregate thickness appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Partly Cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/23/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/23/94

Report By H. Kuebler/WT Date 08/23/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued D^{50} - 1.5 aggregate placement and bedding placement in Swale B.

Unexpected site conditions: None

Sampling and/or testing performed: D^{50} - 1.5 aggregate thickness tests.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Nielson's Inc. will repair areas north of Grid Pint G+12 to K+17, L+6 to M+9 tomorrow.

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: _____

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/24/94

Report By H. Kuebler/WT Date 08/24/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. repaired failing areas of D^{50} - 1.5 aggregate between Grid Point G+12 to K+17, L+6 to M+9.

Unexpected site conditions: None

Sampling and/or testing performed: _____

Conformance of materials, operations and/or test results to project requirements: D50 - 1.5 aggregate thickness to Grid Point L+6 to M+9 appeared to have met thickness requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/25/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/25/94

Report By H. Kuebler/WT Date 08/25/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. placed D^{50} - 1.5 aggregate between Swales D & C and placed soil on D^{50} - 1.5 aggregate 200' north of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory testing and thickness on soil cover at Grid Line #20.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: I informed H. Hampson soil above D^{50} - 1.5 aggregate needed to be 3" to 4" thick.

Nonconformance corrected: Mr. Hampson stated he would check thickness between Grid line 20 and 15.

Instructions or information received/from: Ed Morales stated soil cover above D^{50} - 1.5 aggregate to be 3" to 4" and penetrate at least 2" into D^{50} - 1.5 aggregate.

Weather: Partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 08/26/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/26/94

Report By H. Kuebler/WT Date 08/26/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. didn't work today.

Unexpected site conditions: N/A

Sampling and/or testing performed: Paperwork and bedding sand thickness on Swale B.

Conformance of materials, operations and/or test results to project requirements: Thickness appears to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 5.0 hrs

Number of visits today: 1 Time and date for next visit: 08/29/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/29/94

Report By H. Kuebler/WT Date 08/29/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place soil upon D^{50} - 1.5 aggregate north of Swale D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements of D^{50} - 1.5 aggregate appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/30/94 @ 8:00 am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/30/94

Report By H. Kuebler/WT Date 08/30/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed west control channel and continued to place soil upon D^{50} - 1.5 aggregate north of Swale H.

Unexpected site conditions: None

Sampling and/or testing performed: Compaction tests on west control channel.

Conformance of materials, operations and/or test results to project requirements: Compaction tests appear to indicate conformance to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: None

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 08/31/94 @ 8:00am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440279

Church Rock, NM Report No. _____ Date 08/31/94

Report By H. Kuebler/WT Date 08/31/94 Reviewed By _____ Date 09/01/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place soil upon D^{50} - 1.5 aggregate north of Swale H and Grid Point G+9 and K+9.

Unexpected site conditions: None

Sampling and/or testing performed: Measurement thickness on D^{50} - 1.5 aggregate between Swale C & B. Bedding sand thickness in Swale A.

Conformance of materials, operations and/or test results to project requirements: Bedding and sand thickness in Swale A appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: D^{50} - 1.5 aggregate thickness indicated area between Swale C & B needed to be reworked.

Nonconformance corrected: Nielson's Inc. will rework on later date.

Instructions or information received/from: None

Weather: Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 09/01/94 @ 8:00am

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

'REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/06/94

Report By H. Kuebler/WT Date 09/07/94 Reviewed By _____ Date 09/13/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place soil upon D^{50} 1.5 aggregate in north section between Swale E and D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements on soil on D^{50} - 1.5 aggregate south of swale H.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: Herschel hampson was notified of failing areas.

Nonconformance corrected: Nielson's Inc. will repair at later date.

Instructions or information received/from: _____

Weather: _____

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 09/06/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/06/94

Report By H. Kuebler/WT Date 09/06/94 Reviewed By _____ Date 09/13/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. regraded soil on rock mulch north of Swale H.

Unexpected site conditions: Rain in late afternoon (4:45 pm) shut down project.

Sampling and/or testing performed: Thickness measurements on D^{50} - 1.5 aggregate between Swale C and B.

Conformance of materials, operations and/or test results to project requirements: Thickness measurement appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: None

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales requested me to discuss with Hamilton Brothers D^{50} - 1.5 aggregate crushing schedule.

Weather: Cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 9/7/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/07/94

Report By H. Kuebler/WT Date 09/07/94 Reviewed By _____ Date 09/13/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's drained free standing water from Swales and maintained site roads. Nielson's Inc. began to fill borrow pit #2

Unexpected site conditions: Rain shut down soil placement on rock mulch.

Sampling and/or testing performed: Visual observation and paperwork.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Hamilton Brothers informed me they would phone Ed Morales to discuss D^{50} - 1.5 aggregate crushing scheduling latter in the day. Herschel Hampson and I discussed with Ed Morales thickness of soil on rock mulch. It was agreed among the parties that in some areas the thickness would be more than four inches for adequate drainage. However, thickness will not be greater than seven inches. UNC would prefer thickness between 3 inches to 4 inches over the site.

Weather: _____

Technician/Engineer time on project today: _____

Number of visits today: _____ Time and date for next visit: _____

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/08/94

Report By H. Kuebler/WT Date 09/08/94 Reviewed By _____ Date 09/13/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. began to place bedding sand in west control ditch. Nielson's Inc. continued to place fill from abandoned electrical station site to Borrow Pit #2

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurement in Swale A & B on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 09/10/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. ____ Date 09/09/94

Report By H. Kuebler/WT Date 09/09/94 Reviewed By ____ Date 09/13/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor ____ Superintendent ____

Work in progress and/or completed since last report: Nielson's Inc. was placing bedding sand in west control ditch. Hamilton Brothers was hauling D^{50} - 1.5 aggregate.

Unexpected site conditions: N/A

Sampling and/or testing performed: ____

Conformance of materials, operations and/or test results to project requirements: ____

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: ____

Technician/Engineer time on project today: 4.0 hrs

Number of visits today: 1 Time and date for next visit: 09/12/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/12/94

Report By H. Kuebler/WT Date 09/12/94 Reviewed By _____ Date 09/15/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place bedding sand in west control channel. Nielson's Inc. continued to fill Borrow Pit #2.

Unexpected site conditions: N/A

Sampling and/or testing performed: Check thickness of soil on D50 - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Measurements indicated soil thickness appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: _____

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 09/13/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/13/94

Report By H. Kuebler/WT Date 09/13/94 Reviewed By _____ Date 09/22/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. continued to place bedding sand in west control ditch. Hamilton Brothers continued to haul D^{50} - 1.5 aggregate to site. Nielson's Inc. continued to place soil on D^{50} - 1.5 aggregate between Swale C & B.

Unexpected site conditions: N/A

Sampling and/or testing performed: Measurement thickness on bedding sand in west control ditch.

Conformance of materials, operations and/or test results to project requirements: Bedding Sand appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 09/13/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/14/94

Report By H. Kuebler/WT Date 09/14/94 Reviewed By _____ Date 09/22/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. began to place D^{50} - 1.5 in west control ditch.

Unexpected site conditions: N/A

Sampling and/or testing performed: Thickness measurement on soil on D50 - 1.5 aggregate between Swale C & B.

Conformance of materials, operations and/or test results to project requirements: Thickness measurement appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Partly Cloudy

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 09/15/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/15/94

Report By H. Kuebler/WT Date 09/15/94 Reviewed By _____ Date 09/22/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. placed fill in Borrow Pit #2.

Unexpected site conditions: N/A

Sampling and/or testing performed: D^{50} - 1.5 aggregate thickness measurement in west control ditch.

Conformance of materials, operations and/or test results to project requirements: Thickness measurement appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: I Discussed with Jim Fletcher UNC schedule for 9/16/94. I will be working in Farmington office on UNC Project.

Weather: _____

Technician/Engineer time on project today: 8.0 hrs

Number of visits today: 1 Time and date for next visit: 09/19/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/19/94

Report By H. Kuebler/WT Date 09/19/94 Reviewed By _____ Date 09/27/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. placed fill in Borrow Pit #2 and blue topped soil on D^{50} - 1.5 aggregate on northeast section between Swale E & D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements in northeast section between Swale E & D.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements did not indicate conformance to project requirements in some areas.

Person/persons notified of nonconformance to project requirements: Nielson's Inc. was notified of failing areas.

Nonconformance corrected: Nielson's Inc will repair failing area.

Instructions or information received/from: _____

Weather: Partly Cloudy

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/20/94

Copies: Client (5), Billing (1), Field File (1).

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/20/94

Report By H. Kuebler/WT Date 09/20/94 Reviewed By _____ Date 09/27/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. repaired failing areas for soil cover in northeast section between Swale E & D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurement

Conformance of materials, operations and/or test results to project requirements: Thickness measurements appeared to indicate conformance to project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Partly Cloudy

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/21/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/21/94

Report By H. Kuebler/WT Date 09/21/94 Reviewed By _____ Date 09/27/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued to place fill in Borrow Pit #2.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/22/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/22/94

Report By H. Kuebler/WT Date 09/22/94 Reviewed By _____ Date 09/27/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued to place fill in Borrow Pit #2.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory testing.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Will work on UNC report in Farmington office.

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/26/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. 1 Date 09/26/94

Report By H. Kuebler/WT Date 09/26/94 Reviewed By [signature] Date 10/03/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued to place fill in Borrow Pit #2. Hamilton Brothers hauled D^{50} - 1.5 aggregate to site.

Unexpected site conditions: None

Sampling and/or testing performed: Laboratory testing and paperwork.

Conformance of materials, operations and/or test results to project requirements: N/A

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/27/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. / Date 09/27/94

Report By H. Kuebler/WT Date 09/27/94 Reviewed By [signature] Date 10/03/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson, Inc. continued to place fill in Borrow Pit #2. Hamilton Brothers hauled D^{50} - 1.5 aggregate to site. Nielson's , Inc. placed D^{50} - 1.5 aggregate in north end of section between Swale D & C.

Unexpected site conditions: None

Sampling and/or testing performed: Measurement thickness and paperwork.

Conformance of materials, operations and/or test results to project requirements: Measurements indicated D^{50} - 1.5 aggregate placement met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/28/94

Copies: Client (5), Billing (1), Field File (1).

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440336

Church Rock, NM Report No. _____ Date 09/28/94

Report By H. Kuebler/WT Date 09/28/94 Reviewed By _____ Date 10/03/94

Prime Contractor Nielson's Inc Superintendent H. Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's , Inc. placed D^{50} - 1.5 aggregate in north end of section between D & C. and continued to place fill in Borrow Pit #2. Hamilton Brothers hauled D^{50} - 1.5 aggregate to site.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurement on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Thickness measurements appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: N/A

Weather: Clear

Technician/Engineer time on project today: 8 hrs.

Number of visits today: 1 Time and date for next visit: 09/29/94

Copies: Client (5), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440381

Church Rock, NM Report No. _____ Date 10/03/94

Report By H. Kuebler/WT Date 10/03/94 Reviewed By _____ Date 10/11/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed D^{50} 1.5 aggregate north of Swale D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Measurement indicated D^{50} - 1.5 aggregate appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Clear

Technician/Engineer time on project today: 6 hrs

Number of visits today: 1 Time and date for next visit: 10/04/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440381

Church Rock, NM Report No. _____ Date 10/04/94

Report By H. Kuebler/WT Date 10/04/94 Reviewed By _____ Date 10/11/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor _____ Superintendent _____

Work in progress and/or completed since last report: Nielson's Inc. completed soil cover placement on D^{50} 1.5 rock mulch between Swale D and C.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements on soil cover.

Conformance of materials, operations and/or test results to project requirements: Measurements indicated soil cover appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: _____

Weather: Partly cloudy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 10/05/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440381

Church Rock, NM Report No. / Date 10/05/94

Report By H. Kuebler/WT Date 10/05/94 Reviewed By Date 10/11/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor Superintendent

Work in progress and/or completed since last report: Nielson's Inc. completed soil placement on D^{50} 1.5 aggregate north of Swale D.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurement.

Conformance of materials, operations and/or test results to project requirements: Measurement indicated soil placement appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from:

Weather: Windy

Technician/Engineer time on project today: 8 hrs

Number of visits today: 1 Time and date for next visit: 10/06/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

REVIEW OF CONSTRUCTION

Project United Nuclear Corporation Job No. 3144JK050

1994 Reclamation Lab/ Invoice No. 31440381

Church Rock, NM Report No. / Date 10/06/94

Report By H. Kuebler/WT Date 10/06/94 Reviewed By Date 10/11/94

Prime Contractor Nielson's Inc. Superintendent Herschel Hampson

Subcontractor Superintendent

Work in progress and/or completed since last report: Nielson's Inc. completed D^{50} 1.5 aggregate placement on east berm slope in west control channel.

Unexpected site conditions: None

Sampling and/or testing performed: Thickness measurements on D^{50} - 1.5 aggregate.

Conformance of materials, operations and/or test results to project requirements: Measurement indicated D^{50} - 1.5 aggregate appeared to have met project requirements.

Person/persons notified of nonconformance to project requirements: N/A

Nonconformance corrected: N/A

Instructions or information received/from: Ed Morales requested compaction tests in Borrow Pit #2.

Weather:

Technician/Engineer time on project today: 4 hrs

Number of visits today: 1 Time and date for next visit: 10/10/94

Copies: Client (3), Billing (1), Field File (1).

WESTERN TECHNOLOGIES INC.

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 07/18/94

DATE	TYPE OF TEST	LOCATION	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/15/94	Sandcone	Swale D	Sta. 28+00	---	6978.1	Intern. Cover	112.8	18.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 26+00	---	6978.1	Intern. Cover	121.8	18.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 24+00	---	6977.4	Intern. Cover	117.3	17.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 22+00	---	6979.0	Intern. Cover	119.6	17.6	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 20+00	---	6978.6	Intern. Cover	121.4	17.7	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 18+00	---	6979.1	Intern. Cover	119.3	18.3	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 16+00	---	6980.1	Intern. Cover	119.3	17.5	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 14+00	---	6979.1	Intern. Cover	116.4	16.8	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 12+00	---	6979.8	Intern. Cover	122.4	17.4	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 10+00	---	6980.4	Intern. Cover	110.7	17.4	100	CL	Yes
06/16/94	Sieve, PI	Swale D	Sta. 16+00	---	6979.1	Intern. Cover	---	---	---	---	Yes

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 07/18/94

DATE	TYPE OF TEST	LOCATION	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/15/94	Sandcone	Swale D	Sta. 28+00	---	6978.1	Intern. Cover	112.8	18.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 26+00	---	6978.1	Intern. Cover	121.8	18.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 24+00	---	6977.4	Intern. Cover	117.3	17.1	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 22+00	---	6979.0	Intern. Cover	119.6	17.6	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 20+00	---	6978.6	Intern. Cover	121.4	17.7	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 18+00	---	6979.1	Intern. Cover	119.3	18.3	100+	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 16+00	---	6980.1	Intern. Cover	119.3	17.5	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 14+00	---	6979.1	Intern. Cover	116.4	16.8	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 12+00	---	6979.8	Intern. Cover	122.4	17.4	100	CL	Yes
06/15/94	Sandcone	Swale D	Sta. 10+00	---	6980.4	Intern. Cover	110.7	17.4	100	CL	Yes
06/16/94	Sieve, PI	Swale D	Sta. 16+00	---	6979.1	Intern. Cover	---	---	---	---	Yes

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 07/18/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/20/94	Proctor	Swale H	Sta. 24+00	---	6968.0	RAC	110.4	15.8	---	CL	---
06/20/94	Proctor	Swale B	Sta. 8+00	---	6998.6	Native	114.9	13.8	---	CL	---
06/21/94	Proctor	Swale D	Sta. 5+00	---	6983.0	RAC	113.0	13.6	---	CL	---
06/21/94	Proctor	Swale D	Sta. 20+00	---	6978.2	RAC	113.0	13.4	---	CL	---
06/21/94	Sandcone	Swale H	Sta. 30+00	---	6973.3	RAC	108.8	15.8	---	CL	Yes
06/21/94	Sandcone	Swale H	Sta. 26+00	---	6972.5	RAC	107.9	16.2	---	CL	Yes
06/21/94	Sandcone	Swale H	Sta. 23+00	---	6969.9	RAC	107.4	16.3	---	CL	Yes
06/24/94	Sieve	---	---	---	---	.35 Agg.	---	---	---	---	Yes
06/27/94	Proctor	Swale D	Sta. 26+00	---	6977.1	RAC	111.4	14.8	---	CL	---
06/28/94	Sandcone	Swale D	Sta. 4+00	---	6983.3	RAC	108.0	15.5	---	CL	Yes
06/28/94	Sandcone	Swale D	Sta. 8+00	---	6982.2	RAC	112.9	15.6	---	CL	Yes
06/28/94	Proctor	Swale B	Sta. 14+00	---	6993.6	Native	113.7	14.0	---	CL	---

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 07/18/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/20/94	Proctor	Swale H	Sta. 24+00	---	6968.0	RAC	110.4	15.8	---	CL	---
06/20/94	Proctor	Swale B	Sta. 8+00	---	6998.6	Native	114.9	13.8	---	CL	---
06/21/94	Proctor	Swale D	Sta. 5+00	---	6983.0	RAC	113.0	13.6	---	CL	---
06/21/94	Proctor	Swale D	Sta. 20+00	---	6978.2	RAC	113.0	13.4	---	CL	---
06/21/94	Sandcone	Swale H	Sta. 30+00	---	6973.3	RAC	108.8	15.8	---	CL	Yes
06/21/94	Sandcone	Swale H	Sta. 26+00	---	6972.5	RAC	107.9	16.2	---	CL	Yes
06/21/94	Sandcone	Swale H	Sta. 23+00	---	6969.9	RAC	107.4	16.3	---	CL	Yes
06/24/94	Sieve	---	---	---	---	.35 Agg.	---	---	---	---	Yes
06/27/94	Proctor	Swale D	Sta. 26+00	---	6977.1	RAC	111.4	14.8	---	CL	---
06/28/94	Sandcone	Swale D	Sta. 4+00	---	6983.3	RAC	108.0	15.5	---	CL	Yes
06/28/94	Sandcone	Swale D	Sta. 8+00	---	6982.2	RAC	112.9	15.6	---	CL	Yes
06/28/94	Proctor	Swale B	Sta. 14+00	---	6993.6	Native	113.7	14.0	---	CL	---

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 07/18/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/28/94	Proctor	Swale A	Sta. 6+00	---	7004.1	Native	113.7	14.0	---	CL	---
06/29/94	Sieve	---	---	---	---	.35 Agg.	---	---	---	---	---
07/01/94	Sieve-PI	Swale D	Sta. 5+00	---	6983.0	RAC	---	---	---	CL	Yes

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 07/18/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
06/28/94	Proctor	Swale A	Sta. 6+00	---	7004.1	Native	113.7	14.0	---	CL	---
06/29/94	Sieve	---	---	---	---	.35 Agg.	---	---	---	---	---
07/01/94	Sieve-PI	Swale D	Sta. 5+00	---	6983.0	RAC	---	---	---	CL	Yes

RAC = Radon Attenuation Cover

UNC.K05/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK(

TEST SUMMARY

DATE OF REPORT 10/12/

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/06/94	Proctor	I+19	73300	58870	6969.0	RAC	112.5	12.9	---	CL	Yes
07/06/94	Proctor	K+16	73400	59220	6980.75	RAC	110.5	15.8	---	CL	Yes
07/06/94	Proctor	J+19	73220	58950	6971.4	RAC	113.0	12.6	---	CL	Yes
07/06/94	Sieve & PI	B+20	73660	58270	6952.2	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI	C+19	73670	58410	6964.6	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI	G+20	73340	58660	6963.7	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale H	Sta. 26+00	---	---	6972.5	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale D	Sta. 12+00	---	---	6981.0	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale D	Sta. 20+00	---	---	6978.6	RAC	---	---	---	CL	Yes
07/07/94	Proctor	E+14	73930	58870	6976.2	RAC	114.8	13.8	---	CL	Yes
07/07/94	Proctor	F+14	73710	58820	6973.6	RAC	116.8	14.4	---	CL	Yes
07/07/94	Sandcone	B+20	73660	58270	6965.2	RAC	116.0	12.7	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK(

TEST SUMMARY

DATE OF REPORT 10/12/

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/06/94	Proctor	I+19	73300	58870	6969.0	RAC	112.5	12.9	---	CL	Yes
07/06/94	Proctor	K+16	73400	59220	6980.75	RAC	110.5	15.8	---	CL	Yes
07/06/94	Proctor	J+19	73220	58950	6971.4	RAC	113.0	12.6	---	CL	Yes
07/06/94	Sieve & PI	B+20	73660	58270	6952.2	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI	C+19	73670	58410	6964.6	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI	G+20	73340	58660	6963.7	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale H	Sta. 26+00	---	---	6972.5	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale D	Sta. 12+00	---	---	6981.0	RAC	---	---	---	CL	Yes
07/06/94	Sieve & PI - Swale D	Sta. 20+00	---	---	6978.6	RAC	---	---	---	CL	Yes
07/07/94	Proctor	E+14	73930	58870	6976.2	RAC	114.8	13.8	---	CL	Yes
07/07/94	Proctor	F+14	73710	58820	6973.6	RAC	116.8	14.4	---	CL	Yes
07/07/94	Sandcone	B+20	73660	58270	6965.2	RAC	116.0	12.7	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY

WT JOB NO. 3144JK0

DATE OF REPORT 10/12/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/08/94	Sandcone	F+16	73710	58820	6973.6	RAC	115.4	15.6	99	CL	Yes
07/08/94	Sandcone	G+16	73650	58820	6978.8	RAC	118.0	16.1	100	CL	Yes
07/08/94	Sandcone	I+18	73360	58930	6971.6	RAC	111.0	14.3	99	CL	Yes
07/08/94	Sandcone	J+19	73220	58870	6971.4	RAC	118.2	13.6	100	CL	Yes
07/08/94	Sandcone	H+18	73300	59010	6972.9	RAC	116.7	14.6	100	CL	Yes
07/08/94	Sandcone	F+14	73880	58950	6976.6	RAC	112.9	15.9	96	CL	Yes
07/08/94	Sandcone	G+16	73650	58910	6973.4	RAC	111.3	16.2	95	CL	Yes
07/08/94	Sieve .35 Aggregate	Windrow	---	---	---	---	---	---	---	---	Yes
07/11/94	Sandcone - Swale D	Sta. 20+00	Right Berm	---	6980.9	RAC	108.3	15.2	96	CL	Yes
07/11/94	Sandcone - Swale D	Sta. 25+00	Swale Bottom	---	6977.7	RAC	115.3	14.7	100	CL	Yes
07/11/94	Sandcone - Swale D	Sta. 27+00	Left Berm	---	6978.9	RAC	117.3	14.9	100	CL	Yes
07/11/94	Bedding Sand Thickness Measurement	Swale D	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY

WT JOB NO. 3144JK0

DATE OF REPORT 10/12/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/08/94	Sandcone	F+16	73710	58820	6973.6	RAC	115.4	15.6	99	CL	Yes
07/08/94	Sandcone	G+16	73650	58820	6978.8	RAC	118.0	16.1	100	CL	Yes
07/08/94	Sandcone	I+18	73360	58930	6971.6	RAC	111.0	14.3	99	CL	Yes
07/08/94	Sandcone	J+19	73220	58870	6971.4	RAC	118.2	13.6	100	CL	Yes
07/08/94	Sandcone	H+18	73300	59010	6972.9	RAC	116.7	14.6	100	CL	Yes
07/08/94	Sandcone	F+14	73880	58950	6976.6	RAC	112.9	15.9	96	CL	Yes
07/08/94	Sandcone	G+16	73650	58910	6973.4	RAC	111.3	16.2	95	CL	Yes
07/08/94	Sieve .35 Aggregate	Windrow	---	---	---	---	---	---	---	---	Yes
07/11/94	Sandcone - Swale D	Sta. 20+00	Right Berm	---	6980.9	RAC	108.3	15.2	96	CL	Yes
07/11/94	Sandcone - Swale D	Sta. 25+00	Swale Bottom	---	6977.7	RAC	115.3	14.7	100	CL	Yes
07/11/94	Sandcone - Swale D	Sta. 27+00	Left Berm	---	6978.9	RAC	117.3	14.9	100	CL	Yes
07/11/94	Bedding Sand Thickness Measurement	Swale D	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY

WT JOB NO. 3144JK05

DATE OF REPORT 10/12/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/18/94	Proctor - West Control Ditch	Sta. 19+50	---	---	6957.1	Native	120.1	11.2	---	CL	Yes
07/18/94	Sandcone	E+17	73690	58690	6970.6	RAC	122.5	13.8	100	CL	Yes
07/18/94	Sandcone	D+17 Retest	73770	59610	6974.5	RAC	124.9	14.1	100	CL	Yes
07/18/94	Sandcone	G+18 Retest	73500	59780	6970.1	RAC	113.4	14.6	98	CL	Yes
07/19/94	Proctor	J+13	73700	59340	6980.2	RAC	114.7	14.1	---	CL	Yes
07/19/94	Sieve & PI	F+17	73630	58770	6971.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	H+18	73300	59010	6972.9	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	E+18	73620	58620	6969.8	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	F+16	73710	58830	6973.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	G+14	73800	59030	6977.3	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	C+18	73950	58480	6969.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	A+18	73860	58340	6970.2	RAC	---	---	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY

WT JOB NO. 3144JK0

DATE OF REPORT 10/12/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/18/94	Proctor - West Control Ditch	Sta. 19+50	---	---	6957.1	Native	120.1	11.2	---	CL	Yes
07/18/94	Sandcone	E+17	73690	58690	6970.6	RAC	122.5	13.8	100	CL	Yes
07/18/94	Sandcone	D+17 Retest	73770	59610	6974.5	RAC	124.9	14.1	100	CL	Yes
07/18/94	Sandcone	G+18 Retest	73500	59780	6970.1	RAC	113.4	14.6	98	CL	Yes
07/19/94	Proctor	J+13	73700	59340	6980.2	RAC	114.7	14.1	---	CL	Yes
07/19/94	Sieve & PI	F+17	73630	58770	6971.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	H+18	73300	59010	6972.9	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	E+18	73620	58620	6969.8	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	F+16	73710	58830	6973.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	G+14	73800	59030	6977.3	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	C+18	73950	58480	6969.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	A+18	73860	58340	6970.2	RAC	---	---	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/19/94	Sieve & PI	C+17	73820	58530	6977.0	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	F.5+13.5	73950	58950	6977.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	J+13	73730	59340	6980.4	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	J+17	73380	59080	6975.2	RAC	---	---	---	CL	Yes
07/19/94	Sandcone	A+14.5	74150	58540	6975.6	RAC	114.1	15.4	98	CL	Yes
07/19/94	Sandcone	B+14.5	74120	58630	6977.4	RAC	112.3	15.8	100	CL	Yes
07/19/94	Sandcone	C+15	73990	58660	6975.2	RAC	110.4	15.6	98	CL	Yes
07/20/94	Proctor	B+13	73260	58650	6977.2	RAC	116.1	13.4	---	CL	Yes
07/20/94	Proctor Point	D+18	73590	58550	6970.1	RAC	114.8	13.8	---	CL	Yes
07/20/94	Proctor Point	K+18	73250	59080	6973.3	RAC	114.6	14.6	---	CL	Yes
07/20/94	Proctor Point	C+13.5	74090	58750	6976.5	RAC	114.7	14.1	---	CL	Yes
07/21/94	Proctor Point	H+15	73670	59050	6976.5	RAC	114.8	13.8	---	CL	Yes
07/20/94	Sandcone	B+13	74180	58700	6977.2	RAC	89.3	15.1	77	CL	No
07/20/94	Sandcone	B+13 Retest 07/20/94	74180	58700	6977.2	RAC	87.6	15.1	75	CL	No
07/20/94	Sandcone	C+13.5	74090	58750	6976.5	RAC	120.6	14.3	100	CL	Yes
07/20/94	Sandcone	A+13	74320	58620	6975.5	RAC	119.3	14.7	100	CL	Yes
07/20/94	Sandcone	A+14	74180	58570	6975.6	RAC	117.0	13.9	100	CL	Yes
07/20/94	Sandcone	C+14.5	74010	58700	6976.3	RAC	109.9	15.3	96	CL	Yes
07/20/94	Sandcone	D+15	73910	58750	6975.3	RAC	114.5	15.1	100	CL	Yes
07/20/94	Sandcone	E+15	73800	58820	6975.2	RAC	117.6	14.6	100	CL	Yes
07/20/94	Sandcone	D+14	74000	58800	6976.5	RAC	121.4	14.3	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/19/94	Sieve & PI	C+17	73820	58530	6977.0	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	F.5+13.5	73950	58950	6977.7	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	J+13	73730	59340	6980.4	RAC	---	---	---	CL	Yes
07/19/94	Sieve & PI	J+17	73380	59080	6975.2	RAC	---	---	---	CL	Yes
07/19/94	Sandcone	A+14.5	74150	58540	6975.6	RAC	114.1	15.4	98	CL	Yes
07/19/94	Sandcone	B+14.5	74120	58630	6977.4	RAC	112.3	15.8	100	CL	Yes
07/19/94	Sandcone	C+15	73990	58660	6975.2	RAC	110.4	15.6	98	CL	Yes
07/20/94	Proctor	B+13	73260	58650	6977.2	RAC	116.1	13.4	---	CL	Yes
07/20/94	Proctor Point	D+18	73590	58550	6970.1	RAC	114.8	13.8	---	CL	Yes
07/20/94	Proctor Point	K+18	73250	59080	6973.3	RAC	114.6	14.6	---	CL	Yes
07/20/94	Proctor Point	C+13.5	74090	58750	6976.5	RAC	114.7	14.1	---	CL	Yes
07/21/94	Proctor Point	H+15	73670	59050	6976.5	RAC	114.8	13.8	---	CL	Yes
07/20/94	Sandcone	B+13	74180	58700	6977.2	RAC	89.3	15.1	77	CL	No
07/20/94	Sandcone	B+13 Retest 07/20/94	74180	58700	6977.2	RAC	87.6	15.1	75	CL	No
07/20/94	Sandcone	C+13.5	74090	58750	6976.5	RAC	120.6	14.3	100	CL	Yes
07/20/94	Sandcone	A+13	74320	58620	6975.5	RAC	119.3	14.7	100	CL	Yes
07/20/94	Sandcone	A+14	74180	58570	6975.6	RAC	117.0	13.9	100	CL	Yes
07/20/94	Sandcone	C+14.5	74010	58700	6976.3	RAC	109.9	15.3	96	CL	Yes
07/20/94	Sandcone	D+15	73910	58750	6975.3	RAC	114.5	15.1	100	CL	Yes
07/20/94	Sandcone	E+15	73800	58820	6975.2	RAC	117.6	14.6	100	CL	Yes
07/20/94	Sandcone	D+14	74000	58800	6976.5	RAC	121.4	14.3	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/21/94	Sandcone	G+14.5	73780	59000	6978.1	RAC	121.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+14	73800	59030	6977.3	RAC	112.7	14.8	97	CL	Yes
07/21/94	Sandcone	F+13	73950	59030	6977.7	RAC	112.1	15.1	99	CL	Yes
07/21/94	Sandcone	F+12.5	73980	59030	6977.7	RAC	114.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+13	73890	59100	6978.4	RAC	111.2	16.0	97	CL	Yes
07/21/94	Sandcone	H+14	73730	59110	6977.6	RAC	113.6	16.2	97	CL	Yes
07/21/94	Sandcone	I+15	73600	59120	6977.1	RAC	110.6	14.6	98	CL	Yes
07/21/94	Sandcone	J+16	73460	59140	6977.4	RAC	110.9	15.7	98	CL	Yes
07/21/94	Sandcone	K+17	73320	59170	6978.3	RAC	108.7	16.1	98	CL	Yes
07/22/94	Sandcone	L+17	73250	59220	6983.9	RAC	121.4	13.9	100	CL	Yes
07/22/94	Sandcone	K+16.5	73360	59200	6979.0	RAC	116.0	15.9	100	CL	Yes
07/22/94	Sandcone	K+16	73380	59210	6980.7	RAC	121.0	14.2	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0E

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/21/94	Sandcone	G+14.5	73780	59000	6978.1	RAC	121.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+14	73800	59030	6977.3	RAC	112.7	14.8	97	CL	Yes
07/21/94	Sandcone	F+13	73950	59030	6977.7	RAC	112.1	15.1	99	CL	Yes
07/21/94	Sandcone	F+12.5	73980	59030	6977.7	RAC	114.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+13	73890	59100	6978.4	RAC	111.2	16.0	97	CL	Yes
07/21/94	Sandcone	H+14	73730	59110	6977.6	RAC	113.6	16.2	97	CL	Yes
07/21/94	Sandcone	I+15	73600	59120	6977.1	RAC	110.6	14.6	98	CL	Yes
07/21/94	Sandcone	J+16	73460	59140	6977.4	RAC	110.9	15.7	98	CL	Yes
07/21/94	Sandcone	K+17	73320	59170	6978.3	RAC	108.7	16.1	98	CL	Yes
07/22/94	Sandcone	L+17	73250	59220	6983.9	RAC	121.4	13.9	100	CL	Yes
07/22/94	Sandcone	K+16.5	73360	59200	6979.0	RAC	116.0	15.9	100	CL	Yes
07/22/94	Sandcone	K+16	73380	59210	6980.7	RAC	121.0	14.2	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPO.. ION 1994 RECLAMATION

TEST SUMMARY

W a NO. 3144JK0E

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/25/94	Sieve & PI	O+7	73900	60020	6980.0	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	P+8	73700	60100	6982.1	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	S+9	73420	60270	6987.9	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	L+11	73940	59620	6986.1	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	J+11	73840	59460	6980.7	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	K+19	73160	59020	---??	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	L+16	73340	59300	6985.5	RAC	---	---	---	CL	Yes
07/26/94	Sieve & PI	L+7	74020	59870	6979.3	RAC	---	---	---	CL	Yes
07/26/94	Sieve & PI	G+14	73800	59040	6977.7	RAC	---	---	---	CL	Yes
07/26/94	Sandcone	H+10.5	73920	59300	6979.9	RAC	122.4	14.1	100	CL	Yes
07/26/94	Sandcone	I+9.5	73970	59410	6979.9	RAC	122.9	15.0	100	CL	Yes
07/26/94	Sandcone	K+9	73900	59660	6981.0	RAC	119.4	14.8	100	CL	Yes
07/26/94	Sandcone	K+8	74000	59730	6979.9	RAC	116.8	15.7	100	CL	Yes
07/26/94	Sandcone	M+7	73950	59970	6980.0	RAC	120.0	14.2	100	CL	Yes
07/26/94	Sandcone	M.5+7.5	73900	59960	6980.0	RAC	109.6	15.1	96	CL	Yes
07/27/94	Proctor Point	O+4	74040	60300	6980.4	RAC	114.1	13.8	---	CL	Yes
07/27/94	Proctor Point	P+7.5	73720	60150	6981.6	RAC	114.1	13.8	---	CL	Yes
07/27/94	Proctor Point	P+5	73970	60310	6979.8	RAC	118.0	12.0	---	CL	Yes
07/27/94	Sandcone	M+6	74050	60000	6978.9	RAC	114.7	13.6	97	CL	Yes
07/27/94	Sandcone	M+5	74110	60080	6978.0	RAC	113.7	13.7	96	CL	Yes
07/27/94	Sandcone	N+4	74120	60220	6979.8	RAC	115.8	14.4	100	CL	Yes
07/27/94	Sandcone	M+2	74350	60260	6979.8	RAC	111.7	14.3	97	CL	Yes
07/27/94	Sandcone	O+5	73980	60220	6969.0	RAC	110.3	14.2	95	CL	Yes
07/27/94	Sandcone	O+5 Retest 07/27/94	73980	60220	6969.0	RAC	114.6	14.8	99	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPO... ION 1994 RECLAMATION

TEST SUMMARY

W... B NO. 3144JK0E

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/25/94	Sieve & PI	O+7	73900	60020	6980.0	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	P+8	73700	60100	6982.1	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	S+9	73420	60270	6987.9	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	L+11	73940	59620	6986.1	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	J+11	73840	59460	6980.7	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	K+19	73160	59020	---??	RAC	---	---	---	CL	Yes
07/25/94	Sieve & PI	L+16	73340	59300	6985.5	RAC	---	---	---	CL	Yes
07/26/94	Sieve & PI	L+7	74020	59870	6979.3	RAC	---	---	---	CL	Yes
07/26/94	Sieve & PI	G+14	73800	59040	6977.7	RAC	---	---	---	CL	Yes
07/26/94	Sandcone	H+10.5	73920	59300	6979.9	RAC	122.4	14.1	100	CL	Yes
07/26/94	Sandcone	I+9.5	73970	59410	6979.9	RAC	122.9	15.0	100	CL	Yes
07/26/94	Sandcone	K+9	73900	59660	6981.0	RAC	119.4	14.8	100	CL	Yes
07/26/94	Sandcone	K+8	74000	59730	6979.9	RAC	116.8	15.7	100	CL	Yes
07/26/94	Sandcone	M+7	73950	59970	6980.0	RAC	120.0	14.2	100	CL	Yes
07/26/94	Sandcone	M.5+7.5	73900	59960	6980.0	RAC	109.6	15.1	96	CL	Yes
07/27/94	Proctor Point	O+4	74040	60300	6980.4	RAC	114.1	13.8	---	CL	Yes
07/27/94	Proctor Point	P+7.5	73720	60150	6981.6	RAC	114.1	13.8	---	CL	Yes
07/27/94	Proctor Point	P+5	73970	60310	6979.8	RAC	118.0	12.0	---	CL	Yes
07/27/94	Sandcone	M+6	74050	60000	6978.9	RAC	114.7	13.6	97	CL	Yes
07/27/94	Sandcone	M+5	74110	60080	6978.0	RAC	113.7	13.7	96	CL	Yes
07/27/94	Sandcone	N+4	74120	60220	6979.8	RAC	115.8	14.4	100	CL	Yes
07/27/94	Sandcone	M+2	74350	60260	6979.8	RAC	111.7	14.3	97	CL	Yes
07/27/94	Sandcone	O+5	73980	60220	6969.0	RAC	110.3	14.2	95	CL	Yes
07/27/94	Sandcone	O+5 Retest 07/27/94	73980	60220	6969.0	RAC	114.6	14.8	99	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CO... ...ON 1994 RECLAMATION

...B NO. 3144JK0E

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/27/94	Proctor Point	O+11	73520	59850	6992.7	RAC	114.7	14.1	---	CL	Yes
07/27/94	Proctor	L+11	73700	59620	6936.1	RAC	118.0	12.0	---	CL	Yes
07/27/94	Proctor Point	Q+4.5	73900	60420	6980.0	RAC	115.7	13.3	---	CL	Yes
07/28/94	Proctor	L+16	73230	59280	6985.4	RAC	116.6	12.8	---	CL	Yes
07/28/94	Sandcone	N+7	73900	60020	6979.0	RAC	117.1	14.8	100	CL	Yes
07/28/94	Sandcone	O+6	73900	60160	6980.9	RAC	115.6	15.2	100	CL	Yes
07/28/94	Sandcone	O+4.5	74100	60300	6980.4	RAC	112.7	14.8	99	CL	Yes
07/28/94	Sandcone	N+7.5	73850	60000	6980.7	RAC	117.6	13.9	100	CL	Yes
07/28/94	Sandcone	N+5	74050	60160	6978.6	RAC	119.1	14.7	100	CL	Yes
07/28/94	Sieve & Pl	L+8	73950	59800	6980.5	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	K+10	73850	59600	6981.7	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	E+16	73760	58760	6971.4	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	I+16	73520	59060	6975.3	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	I+10	73980	59440	6979.9	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	O+4	73050	60300	6980.4	RAC	---	---	---	CL	Yes
08/01/94	Sandcone	K.5+11	73750	59580	6982.9	RAC	116.9	13.6	100	CL	Yes
08/01/94	Sandcone	M+9	73800	59820	6983.8	RAC	123.9	14.2	100	CL	Yes
08/01/94	Sandcone	N+8.5	73780	59920	6984.0	RAC	121.3	13.9	100	CL	Yes
08/01/94	Sandcone	O+8.5	73750	60000	6984.7	RAC	126.6	13.7	100	CL	Yes
08/01/94	Sandcone	Q+7.5	73650	60230	6981.0	RAC	119.3	13.9	100	CL	Yes
08/01/94	Sandcone	L+17	73250	59240	6988.9	RAC	121.4	14.2	100	CL	Yes
08/01/94	Sandcone	K.5+15	73430	59260	6985.3	RAC	116.8	13.6	100	CL	Yes
08/01/94	Sandcone	L+16	73300	59220	6985.7	RAC	121.5	13.9	100	CL	Yes
08/01/94	Sandcone	L+15	73400	59350	6986.9	RAC	118.6	13.1	100	CL	Yes
08/01/94	Sandcone	K.5+14	73520	59400	6985.0	RAC	121.1	11.7	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CO... ...ON 1994 RECLAMATION

...B NO. 3144JK0E

TEST SUMMARY

DATE OF REPORT 10/13/9...

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/27/94	Proctor Point	O+11	73520	59850	6992.7	RAC	114.7	14.1	---	CL	Yes
07/27/94	Proctor	L+11	73700	59620	6936.1	RAC	118.0	12.0	---	CL	Yes
07/27/94	Proctor Point	Q+4.5	73900	60420	6980.0	RAC	115.7	13.3	---	CL	Yes
07/28/94	Proctor	L+16	73230	59280	6985.4	RAC	116.6	12.8	---	CL	Yes
07/28/94	Sandcone	N+7	73900	60020	6979.0	RAC	117.1	14.8	100	CL	Yes
07/28/94	Sandcone	O+6	73900	60160	6980.9	RAC	115.6	15.2	100	CL	Yes
07/28/94	Sandcone	O+4.5	74100	60300	6980.4	RAC	112.7	14.8	99	CL	Yes
07/28/94	Sandcone	N+7.5	73850	60000	6980.7	RAC	117.6	13.9	100	CL	Yes
07/28/94	Sandcone	N+5	74050	60160	6978.6	RAC	119.1	14.7	100	CL	Yes
07/28/94	Sieve & Pl	L+8	73950	59800	6980.5	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	K+10	73850	59600	6981.7	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	E+16	73760	58760	6971.4	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	I+16	73520	59060	6975.3	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	I+10	73980	59440	6979.9	RAC	---	---	---	CL	Yes
07/28/94	Sieve & Pl	O+4	73050	60300	6980.4	RAC	---	---	---	CL	Yes
08/01/94	Sandcone	K.5+11	73750	59580	6982.9	RAC	116.9	13.6	100	CL	Yes
08/01/94	Sandcone	M+9	73800	59820	6983.8	RAC	123.9	14.2	100	CL	Yes
08/01/94	Sandcone	N+8.5	73780	59920	6984.0	RAC	121.3	13.9	100	CL	Yes
08/01/94	Sandcone	O+8.5	73750	60000	6984.7	RAC	126.6	13.7	100	CL	Yes
08/01/94	Sandcone	Q+7.5	73650	60230	6981.0	RAC	119.3	13.9	100	CL	Yes
08/01/94	Sandcone	L+17	73250	59240	6988.9	RAC	121.4	14.2	100	CL	Yes
08/01/94	Sandcone	K.5+15	73430	59260	6985.3	RAC	116.8	13.6	100	CL	Yes
08/01/94	Sandcone	L+16	73300	59220	6985.7	RAC	121.5	13.9	100	CL	Yes
08/01/94	Sandcone	L+15	73400	59350	6986.9	RAC	118.6	13.1	100	CL	Yes
08/01/94	Sandcone	K.5+14	73520	59400	6985.0	RAC	121.1	11.7	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPO[illegible]ION 1994 RECLAMATION

W[illegible]B NO. 3144JK0[illegible]

TEST SUMMARY

DATE OF REPORT 10/13/9[illegible]

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/01/94	Thickness Measurement D 50 1.5 Aggregate	Swale D	---	---	---	---	---	---	---	---	---??
08/01/94	Proctor Point	M+9	73800	59820	6983.8	RAC	114.1	13.8	---	CL	Yes
08/01/94	Proctor Point	K+11	73750	59580	6982.9	RAC	115.8	12.8	---	CL	Yes
08/01/94	Proctor Point	L+16	73300	59220	6985.7	RAC	116.6	12.8	---	CL	Yes
08/01/94	Proctor Point	K.5+14	73520	59400	6985.0	RAC	115.3	10.0	---	CL	Yes
08/01/94	Proctor Point	N+13	73440	59560	6997.2	RAC	114.7	14.1	---	CL	Yes
08/01/94	Proctor Point	L+14.5	73520	59400	6985.0	RAC	116.1	13.4	---	CL	Yes
08/02/94	Proctor Point	R+7	73650	60320	6981.4	RAC	115.7	13.3	---	CL	Yes
08/02/94	Proctor Point	N+10	73660	59840	6987.8	RAC	114.1	13.8	---	CL	Yes
08/02/94	Sandcone	L+14	73480	59430	6987.1	RAC	119.8	13.6	100	CL	Yes
08/02/94	Sandcone	M+11	73640	59700	6988.7	RAC	118.1	13.6	100	CL	Yes
08/02/94	Sandcone	N+10	73660	59840	6987.8	RAC	122.6	13.8	100	CL	Yes
08/02/94	Sandcone	P+9	73610	60050	6986.0	RAC	114.1	14.2	100	CL	Yes
08/02/94	Sandcone	R+7	73650	60320	6981.4	RAC	113.1	14.2	98	CL	Yes
08/02/94	Sandcone	Q+8	73640	60200	6981.8	RAC	116.1	13.9	100	CL	Yes
08/02/94	Sandcone	O+9	73650	60030	6981.8	RAC	124.5	14.5	100	CL	Yes
08/02/94	Sandcone	M+10	73720	59760	6986.8	RAC	111.6	13.1	98	CL	Yes
08/02/94	Sandcone	L+12	73630	59550	6986.9	RAC	117.8	13.8	100	CL	Yes
08/03/94	Sandcone	S+8.5	73470	60320	6994.1	RAC	112.5	14.3	97	CL	Yes
08/03/94	Sandcone	P+10	73540	59990	6989.7	RAC	108.8	14.3	95	CL	Yes
08/03/94	Sandcone	N+10.5	73620	59800	6990.6	RAC	109.9	14.0	96	CL	Yes
08/03/94	Sandcone	M+12	73570	59630	6990.9	RAC	116.5	13.9	100	CL	Yes
08/04/94	Proctor Point	Q+9	73550	60120	6986.5	RAC	116.5	13.0	---	CL	Yes
08/04/94	Sieve - D50 1.5 Aggregate	Hamilton Brothers	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover
UNCWK SUM/cb

UNITED NUCLEAR CORPO. ION 1994 RECLAMATION

W JB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/01/94	Thickness Measurement D 50 1.5 Aggregate	Swale D	---	---	---	---	---	---	---	---	---??
08/01/94	Proctor Point	M+9	73800	59820	6983.8	RAC	114.1	13.8	---	CL	Yes
08/01/94	Proctor Point	K+11	73750	59580	6982.9	RAC	115.8	12.8	---	CL	Yes
08/01/94	Proctor Point	L+16	73300	59220	6985.7	RAC	116.6	12.8	---	CL	Yes
08/01/94	Proctor Point	K.5+14	73520	59400	6985.0	RAC	115.3	10.0	---	CL	Yes
08/01/94	Proctor Point	N+13	73440	59560	6997.2	RAC	114.7	14.1	---	CL	Yes
08/01/94	Proctor Point	L+14.5	73520	59400	6985.0	RAC	116.1	13.4	---	CL	Yes
08/02/94	Proctor Point	R+7	73650	60320	6981.4	RAC	115.7	13.3	---	CL	Yes
08/02/94	Proctor Point	N+10	73660	59840	6987.8	RAC	114.1	13.8	---	CL	Yes
08/02/94	Sandcone	L+14	73480	59430	6987.1	RAC	119.8	13.6	100	CL	Yes
08/02/94	Sandcone	M+11	73640	59700	6988.7	RAC	118.1	13.6	100	CL	Yes
08/02/94	Sandcone	N+10	73660	59840	6987.8	RAC	122.6	13.8	100	CL	Yes
08/02/94	Sandcone	P+9	73610	60050	6986.0	RAC	114.1	14.2	100	CL	Yes
08/02/94	Sandcone	R+7	73650	60320	6981.4	RAC	113.1	14.2	98	CL	Yes
08/02/94	Sandcone	Q+8	73640	60200	6981.8	RAC	116.1	13.9	100	CL	Yes
08/02/94	Sandcone	O+9	73650	60030	6981.8	RAC	124.5	14.5	100	CL	Yes
08/02/94	Sandcone	M+10	73720	59760	6986.8	RAC	111.6	13.1	98	CL	Yes
08/02/94	Sandcone	L+12	73630	59550	6986.9	RAC	117.8	13.8	100	CL	Yes
08/03/94	Sandcone	S+8.5	73470	60320	6994.1	RAC	112.5	14.3	97	CL	Yes
08/03/94	Sandcone	P+10	73540	59990	6989.7	RAC	108.8	14.3	95	CL	Yes
08/03/94	Sandcone	N+10.5	73620	59800	6990.6	RAC	109.9	14.0	96	CL	Yes
08/03/94	Sandcone	M+12	73570	59630	6990.9	RAC	116.5	13.9	100	CL	Yes
08/04/94	Proctor Point	Q+9	73550	60120	6986.5	RAC	116.5	13.0	---	CL	Yes
08/04/94	Sieve - D50 1.5 Aggregate	Hamilton Brothers	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover
UNCWK SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/05/94	Sieve & PI	D+14	74000	58800	6976.5	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q.5+6.5	73710	60320	6981.4	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q+3.5	73960	60460	6980.9	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	P+10	73540	59990	6989.7	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	L+12	73630	59550	6986.9	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	A+14.5	74150	58540	6975.6	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	I+15	73600	59120	6977.1	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q+5.5	73820	60350	6980.2	RAC	---	---	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/05/94	Sieve & PI	D+14	74000	58800	6976.5	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q.5+6.5	73710	60320	6981.4	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q+3.5	73960	60460	6980.9	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	P+10	73540	59990	6989.7	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	L+12	73630	59550	6986.9	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	A+14.5	74150	58540	6975.6	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	I+15	73600	59120	6977.1	RAC	---	---	---	CL	Yes
08/05/94	Sieve & PI	Q+5.5	73820	60350	6980.2	RAC	---	---	---	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/15/94	Sandcone - Swale C	Sta. 10+00	Right Berm	---	6990.7	RAC	111.4	13.9	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 8+00	Bottom	---	6989.8	RAC	120.6	15.6	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 6+00	Left Berm	---	6992.8	RAC	116.8	14.9	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 4+00	Bottom	---	6991.8	RAC	113.1	14.2	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 16+00	Right Berm	---	6987.8	RAC	115.6	15.0	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 14+00	Left Berm	---	6988.8	RAC	111.9	15.0	99	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 12+00	Bottom	---	6987.8	RAC	115.5	14.6	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 2+00	Bottom	---	6992.8	RAC	114.6	14.0	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 14+00	Swale Bottom	---	6993.6	Native	115.2	11.9	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 12+00	West Berm	---	6995.3	Native	99.6	7.9	88	CL	No
08/18/94	Sandcone - Swale B	Retest #2 08/18/94	---	---	6995.3	Native	102.1	6.8	90	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 10+00	Swale Bottom	---	6997.0	Native	115.0	8.1	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 8+00	West Berm	---	6998.6	Native	114.8	7.7	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/15/94	Sandcone - Swale C	Sta. 10+00	Right Berm	---	6990.7	RAC	111.4	13.9	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 8+00	Bottom	---	6989.8	RAC	120.6	15.6	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 6+00	Left Berm	---	6992.8	RAC	116.8	14.9	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 4+00	Bottom	---	6991.8	RAC	113.1	14.2	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 16+00	Right Berm	---	6987.8	RAC	115.6	15.0	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 14+00	Left Berm	---	6988.8	RAC	111.9	15.0	99	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 12+00	Bottom	---	6987.8	RAC	115.5	14.6	100	CL	Yes
08/15/94	Sandcone - Swale C	Sta. 2+00	Bottom	---	6992.8	RAC	114.6	14.0	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 14+00	Swale Bottom	---	6993.6	Native	115.2	11.9	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 12+00	West Berm	---	6995.3	Native	99.6	7.9	88	CL	No
08/18/94	Sandcone - Swale B	Retest #2 08/18/94	---	---	6995.3	Native	102.1	6.8	90	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 10+00	Swale Bottom	---	6997.0	Native	115.0	8.1	100	CL	Yes
08/18/94	Sandcone - Swale B	Sta. 8+00	West Berm	---	6998.6	Native	114.8	7.7	100	CL	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/30/94	Sandcone - West Control Ditch	Sta. 12+00	---	---	6958.3	Native	116.0	6.8	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 14+00	---	---	6959.4	Native	120.8	11.0	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 16+00	---	---	6956.5	Native	113.7	6.2	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 18+00	---	---	6957.7	Native	113.5	7.4	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 20+00	---	---	6956.4	Native	115.2	6.9	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 22+00	---	---	6956.0	Native	121.0	11.6	100	CL	Yes
08/31/94	Thickness Requirement Bedding Sand Swale A	---	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover

UNCWK SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/9

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/30/94	Sandcone - West Control Ditch	Sta. 12+00	---	---	6958.3	Native	116.0	6.8	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 14+00	---	---	6959.4	Native	120.8	11.0	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 16+00	---	---	6956.5	Native	113.7	6.2	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 18+00	---	---	6957.7	Native	113.5	7.4	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 20+00	---	---	6956.4	Native	115.2	6.9	100	CL	Yes
08/30/94	Sandcone - West Control Ditch	Sta. 22+00	---	---	6956.0	Native	121.0	11.6	100	CL	Yes
08/31/94	Thickness Requirement Bedding Sand Swale A	---	---	---	---	---	---	---	---	---	Yes

RAC Radon Attenuation Cover

UNCWK SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
09/14/94	Sieve & PI	L+17	73250	59220	6983.9	RAC	---	---	---	CL	Yes
09/14/94	Sieve & PI	G+18	73490	58780	6969.7	RAC	---	---	---	CL	Yes
09/15/94	Thickness Requirement D50 1.5 Aggregate	West Control Ditch	---	---	---	---	---	---	---	CL	Yes
09/15/94	Sandcone - Swale D Retest of #1 7/01/94	---	---	---	---	---	112.9	15.2	100	CL	Yes
09/19/94	Soil Cover on D50 1.5 Aggregate	Central Cell	---	---	---	---	---	---	---	---	Yes
09/20/94	Sieve & PI	N+12	73510	59710	6994.0	RAC	---	---	---	CL	Yes
09/26/94	Sieve - D50 1.5 Aggregate	Windrow	---	---	---	---	---	---	---	---	Yes
09/26/94	Sieve & PI - Swale C	Sta. 13+00	---	---	6987.8	RAC	---	---	---	CL	Yes
09/26/94	Sieve & PI - Swale C	Sta. 8+00	---	---	6990.3	RAC	---	---	---	CL	Yes
09/26/94	Sieve & PI - Swale C	Sta. 4+00	---	---	6992.3	RAC	---	---	---	CL	Yes
09/29/94	Thickness Requirement D50 1.5 Aggregate Placement	Central Cell	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK0

TEST SUMMARY

DATE OF REPORT 10/13/

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
09/14/94	Sieve & PI	L+17	73250	59220	6983.9	RAC	---	---	---	CL	Yes
09/14/94	Sieve & PI	G+18	73490	58780	6969.7	RAC	---	---	---	CL	Yes
09/15/94	Thickness Requirement D50 1.5 Aggregate	West Control Ditch	---	---	---	---	---	---	---	CL	Yes
09/15/94	Sandcone - Swale D Retest of #1 7/01/94	---	---	---	---	---	112.9	15.2	100	CL	Yes
09/19/94	Soil Cover on D50 1.5 Aggregate	Central Cell	---	---	---	---	---	---	---	---	Yes
09/20/94	Sieve & PI	N+12	73510	59710	6994.0	RAC	---	---	---	CL	Yes
09/26/94	Sieve - D50 1.5 Aggregate	Windrow	---	---	---	---	---	---	---	---	Yes
09/26/94	Sieve & PI - Swale C	Sta. 13+00	---	---	6987.8	RAC	---	---	---	CL	Yes
09/26/94	Sieve & PI - Swale C	Sta. 8+00	---	---	6990.3	RAC	---	---	---	CL	Yes
09/26/94	Sieve & PI - Swale C	Sta. 4+00	---	---	6992.3	RAC	---	---	---	CL	Yes
09/29/94	Thickness Requirement D50 1.5 Aggregate Placement	Central Cell	---	---	---	---	---	---	---	---	Yes

RAC-Radon Attenuation Cover

UNCWK.SUM/cb

APPENDIX B

APPENDIX B

SOIL RADON BARRIER EVALUATION

APPENDIX B

RADON EVALUATION OF INTERIM COVER

United Nuclear measured the radon flux over the tailings area after completion of the interim cover in October 1991. The results of this survey, included as Attachment A, indicated that the radon flux over the South and North Cells was within design parameters, but the radon flux over the Central Cell was elevated in some locations. A core sampling and analysis investigation conducted in late 1992 and early 1993 indicated that lenses of more radioactive, fine tailings were present near the tailings surface in those areas exhibiting elevated flux values. These fine tailings may have migrated upwards and been mixed with the coarse tailings during regrading of the cell surface.

The 1992 and 1993 investigation, included as Attachment B, also provided as-built physical and radiological parameters for the Central Cell that allowed for predicting the radon flux after placement of the final cover. The RADON computer model was used to perform the analysis of the approved 6-inch final cover design and of modified 9-inch and 12-inch final covers. A 1-foot thick existing interim cover and a 16.4-foot mixed layer of coarse and fine tailings were used in the model to approximate as-built conditions. The soil and radiological properties assigned to the layers are presented in Table 1 and are based on the average values from the 1992-1993 investigation.

The modeling results for a 6-inch, 9-inch and 12-inch final cover over the Central Cell are presented in Tables 2, 3 and 4, respectively. Table 2 shows that the approved 6-inch cover design would reduce the average radon flux over the entire tailings area to 19.3 picoCuries per square meter per second ($pCi/m^2/s$) and the maximum flux in the Central Cell to 51.7 $pCi/m^2/s$. Although this exit flux met Nuclear Regulatory Commission (NRC) requirements that the average maximum exit flux not exceed 20 $pCi/m^2/s$, United Nuclear Corporation elected to place an additional 3 inches of soil (i.e., 9 inches of final cover) for added safety. Table 3 shows that the 9-inch final cover design has a predicted average radon exit flux of 17.6 $pCi/m^2/s$, which exceeds NRC's exit flux requirement by 2.4 $pCi/m^2/s$.

TABLE 1

RADON INPUT PARAMETERS - CENTRAL CELL
UNITED NUCLEAR CORPORATION

Layer	Thickness (in)	Porosity	Density g/cm³	Radium Content pCi/g	Emanation Coefficient	Long Term Moisture %	Radon Diffusion Coefficient cm²/s
Tailings	197	0.37	1.68	see note 5	0.12	6	0.0231
Existing Soil Cover	12	0.31	1.85	4.7	0.33	12.9	0.0072
New Soil Cover	see note 8	0.31	1.85	0	0	12.9	0.0072

Notes:

1. 197 in. (500 cm) thickness for tailings is recommended by NRC (Regulatory Guide 3.64).
2. Porosity is determined from Porosity = 1 - density of soil/(density of water x specific gravity)
3. Tailings density determined by averaging density values (other that soil cover material).
4. Soil cover density determined by averaging soil cover density values.
5. Radium Content and Emanation Coefficient for Tailings were determined by considering only values from 0 to 4 feet beneath soil cover because radium content in soils nearer the soil cover will effect radon exit flux more than radium contents in deeper soils. RADON simulations were performed with the following radium contents:
   - Overall Radium Content over central cell from data is approximately 200 pCi/g.
   - Moderate Radium Content average is approximately 250 pCi/g (see Core Samples 17A, 13G, and 9G).
   - High Radium Content is approximately 543 pCi/g (see Core Sample 17I).
6. Long-term moisture contents from 1991 UNC Reclamation Plan.
7. Radium Diffusion Coefficient determined from averaging diffusion coefficient results.
8. Radon simulations with New Soil Cover Thicknesses of 6", 9" , and 12" are performed over the average, moderate, and high flux areas in the central cell.

TABLE 2

RADON COVER EVALUATION
SCENARIO 1 - PLACE ADDITIONAL 6 INCHES OF SOIL COVER ON TOP OF 1 FOOT OF INTERIM COVER IN CENTRAL CELL
UNITED NUCLEAR CORPORATION

Area Designation and Description	Additional Soil Cover over Interim Cover (in)	Approximate Area (Acres)	Approximate Soil Cover Volume (cy)	Radon Exit Flux (pCi/m²/s)	Area x Radon Flux (Acres - pCi/m²/s)
1. North/South Cells, Evap. Ponds	6	73	58,887	16.2	1,183
2. Borrow Pit No. 2	6	5	4,033	5.4	27
3. Central Cell Low Exit Flux Area	6	43.1	34,767	19.6	845
4. Central Cell Moderately High Exit Flux Area	6	12.2	9,841	24.2	295
5. Central Cell High Exit Flux Area	6	6.7	5,405	51.7	346
Totals		140	112,933		2,696
		Average Radon Flux = over entire site	2696 / 140	= 19.3 pCi/m²/s	

Notes:

1. Central cell moderate high flux area is area around Samples 17A, 13G, and 9G. Central cell high flux area is area around Sample 17I. Central cell low flux area is all other remaining area in central cell.
2. Radon Flux estimated by RADON computer Model.
3. Evap. Ponds soil and radiological properties assumed same as north and south cell properties.
4. Zero radium content assumed in soil cover material for areas listed under designation 1 & 2 above.
5. Borrow Pit No. 2 area soil properties assumed same as other areas. Radon exit flux for Borrow Pit No. 2 calculated by initially assuming an exit flux of 10 pCi/m²/s with 12 inches of cover over tailings, back calculating source term, and using this source term, computing exit flux with an additional 6 inches of soil cover over the 12 inches soil cover.
6. Soil properties provided in September 28, 1993 letter from UNC were averaged and assumed representative of entire site and used with RADON model.
7. Long term moisture contents from 1991 UNC Reclamation Plan.

TABLE 3

RADON COVER EVALUATION
SCENARIO 2 - PLACE ADDITIONAL 9 INCHES OF SOIL COVER ON TOP OF 1 FOOT OF INTERIM COVER IN CENTRAL CELL
UNITED NUCLEAR CORPORATION

Area Designation and Description	Additional Soil Cover over Interim Cover (in)	Approximate Area (Acres)	Approximate Soil Cover Volume (cy)	Radon Exit Flux ($pCi/m^2/s$)	Area x Radon Flux (Acres - $pCi/m^2/s$)
1. North/South Cells, Evap. Ponds	6	73	58,887	16.2	1,183
2. Borrow Pit No. 2	6	5	4,033	5.4	27
3. Central Cell Low Exit Flux Area	9	43.1	52,151	16.6	715
4. Central Cell Moderately High Exit Flux Area	9	12.2	14,762	20.6	251
5. Central Cell High Exit Flux Area	9	6.7	8,107	43.9	294
Totals		140	137,940		2,471

Average Radon Flux over entire site = $\frac{2471}{140}$ = 17.6 $pCi/m^2/s$

Notes:

1. Central cell moderate high flux area is area around Samples 17A, 13G, and 9G. Central cell high flux area is area around Sample 17I. Central cell low flux area is all other remaining area in central cell.
2. Radon flux estimated by RADON computer model.
3. Evap. Ponds soil and radiological properties assumed same as north and south cell properties.
4. Zero radium content assumed in soil cover material for areas listed under designation 1 & 2 above.
5. Borrow Pit No. 2 area soil properties assumed same as other areas. Radon exit flux for Borrow Pit No. 2 calculated by initially assuming an exit flux of 10 $pCi/m^2/s$ with 12 inches of cover over tailings, back calculating source term, and using this source term, computing exit flux with an additional 6 inches of soil cover over the 12 inches soil cover.
6. Soil properties provided in September 28, 1993 letter from UNC were averaged and assumed representative of entire site and used with RADON model.
7. Long-term moisture contents from 1991 UNC Reclamation Plan.

TABLE 4

RADON COVER EVALUATION
SCENARIO 3 - PLACE ADDITIONAL 12 INCHES OF SOIL COVER ON TOP OF 1 FOOT OF INTERIM COVER IN CENTRAL CELL
UNITED NUCLEAR CORPORATION

Area Designation and Description	Additional Soil Cover over Interim Cover (in)	Approximate Area (Acres)	Approximate Soil Cover Volume (cy)	Radon Exit Flux (pCi/m²/s)	Area x Radon Flux (Acres - pCi/m²/s)
1. North/South Cells, Evap. Ponds	6	73	58,887	16.2	1,183
2. Borrow Pit No. 2	6	5	4,033	5.4	27
3. Central Cell Low Exit Flux Area	12	43.1	69,535	14.2	612
4. Central Cell Moderately High Exit Flux Area	12	12.2	19,683	17.6	215
5. Central Cell High Exit Flux Area	12	6.7	10,809	37.6	252
Totals		140	162,947		2,288

Average Radon Flux over entire site = $\frac{2288}{140}$ = 16.3 pCi/m²/s

Notes:

1. Central cell moderate high flux area is area around Samples 17A, 13G, and 9G. Central cell high flux area is area around Sample 17I. Central cell low flux area is all other remaining area in central cell.
2. Radon flux estimated by RADON computer model.
3. Evap. Ponds soil and radiological properties assumed same as north and south cell properties.
4. Zero radium content assumed in soil cover material for areas listed under designation 1 & 2 above.
5. Borrow Pit No. 2 area soil properties assumed same as other areas. Radon exit flux for Borrow Pit No. 2 calculated by initially assuming an exit flux of 10 pCi/m²/s with 12 inches of cover over tailings, back calculating source term, and using this source term, computing exit flux with an additional 6 inches of soil cover over the 12 inches soil cover.
6. Soil properties provided in September 28, 1993 letter from UNC were averaged and assumed representative of entire site and used with RADON model.
7. Long-term moisture contents from 1991 UNC Reclamation Plan.

ATTACHMENT A

RADON FLUX MEASUREMENTS

ENERGY LABORATORIES, INC.
P. O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
[illegible]

Large Area Activated Charcoal Canister (LAACC) Radon Flux Report

Project: United Nuclear Corporation
Site: Churchrock
[illegible]
Report Date: October 29, 1991

Date Set: October 21, 1991
Date Remove: October 22, 1991
[illegible]
Date Counted: October 24, 1991

Method: UNC personnel set, retrieved, and transferred charcoal for LAACCs
EPA Method 115 per 40 CFR 61 (NESHAPs)
Radon Flux measurements have been corrected
for instrument & charcoal background counts

Lab I.D.	LAACC #	Canister #	Location	10/21/91 Time Set	10/22/91 Time Remove	Radon Flux pCi/m2s
91-40927	1	107	21 A	09:47	09:29	15.8
91-40928	2	108	23 A	09:49	09:30	70.3
91-40929	3	109	25 A	09:50	09:31	4.2
91-40930	4	110	27 A	09:52	09:32	254
Duplicate						252
91-40931	5	111	29 A	09:54	09:33	23.2
91-40932	6	112	31 A	09:56	09:34	51.0
91-40933	7	113	33 A	09:57	09:34	0.6
91-40934	8	114	35 A	09:59	09:35	25.2
91-40935	9	115	37 A	10:01	09:35	14.3
91-40936	10	116	39 A	10:02	09:36	57.9
91-40937	11	117	41 A	10:04	09:37	2.7
91-40938	12	118	43 B	10:05	09:38	1.7
91-40939	13	119	41 C	10:06	09:40	74.3
91-40940	14	120	39 C	10:08	09:42	115
Duplicate						115
91-40941	15	121	37 C	10:10	09:44	8.3
91-40942	16	122	35 C	10:12	10:02	2.8
91-40943	17	123	33 C	10:13	10:04	21.0
91-40944	18	124	31 C	10:15	10:04	87.7
91-40945	19	125	29 C	10:16	10:05	14.3
91-40946	20	126	29 E	10:18	10:06	0.9
91-40947	21	127	31 E	10:19	10:08	1.6
91-40948	22	128	33 E	10:21	10:09	1.8
91-40949	23	129	35 E	10:22	10:10	22.4
91-40950	24	130	37 E	10:24	10:11	1.0
Duplicate						1.2
91-40951	25	131	39 E	10:25	10:12	21.5
91-40952	26	132	35 G	10:27	10:13	2.4
91-40953	27	133	33 G	10:28	10:14	0.5
91-40954	28	134	31 G	10:29	10:15	2.8
91-40955	29	135	29 G	10:30	10:16	1.1
91-40956	30	136	29 I	10:31	10:39	0.8
91-40957	31	137	31 I	10:33	10:39	2.4
91-40958	32	138	34 I	10:34	10:40	2.0

LI

Large Area Activated Charcoal Canister (LAACC) Radon Flux Report

Project: United Nuclear Corporation
Site: Churchrock
Location: Central Cell Covered Tails
Report Date: October 29, 1991

Date Set: October 21, 1991
Date Remove: October 22, 1991
Date Counted: October 24, 1991

Lab I.D.	LAACC #	Canister #	Location	10/21/91 Time Set	10/22/91 Time Remove	Radon Flux pCi/m2s
91-40959	33	139	19 A	10:38	10:42	2.5
91-40960	34	140	19 C	10:40	10:43	1.5
Duplicate						1.4
91-40961	35	141	19 E	10:42	10:44	2.6
91-40962	36	142	19 G	10:44	10:45	35.0
91-40963	37	143	19 I	10:45	10:45	3.7
91-40964	38	144	17 K	10:48	10:47	0.7
91-40965	39	145	17 I	10:51	10:48	260
91-40966	40	146	17 G	10:52	10:49	448
91-40967	41	147	17 E	10:55	10:50	85.7
91-40968	42	148	17 C	10:57	10:50	9.2
91-40969	43	149	17 A	10:59	10:51	128
91-40970	44	150	15 A	11:01	10:59	28.5
Duplicate						28.7
91-40971	45	151	15 C	11:04	11:00	1.2
91-40972	46	152	15 E	11:06	11:01	137
91-40973	47	153	15 G	11:09	11:02	67.0
91-40974	48	154	15 I	11:10	11:04	8.5
91-40975	49	155	15 K	11:13	11:07	11.0
91-40976	50	156	15 M	11:17	11:09	248
91-40977	51	157	13 M	11:20	11:11	349
91-40978	52	158	13 K	11:24	11:12	3.5
91-40979	53	159	13 I	11:28	11:14	160
91-40980	54	160	13 G	11:30	11:15	29.6
91-40981	55	161	13 E	11:33	11:17	4.4
91-40982	56	162	13 C	11:36	11:17	95.3
91-40983	57	163	11 A→13A	11:40	11:18	27.7
91-40984	58	164	11 A	11:42	11:33	5.6
91-40985	59	165	11 C	11:45	11:34	156
91-40986	60	166	11 E	11:47	11:34	42.1
91-40987	61	167	11 G	11:49	11:35	90.4
Duplicate						89.8
91-40988	62	168	11 I	11:51	11:36	53.2
91-40989	63	169	11 K	11:54	11:38	360
91-40990	64	170	11 M	11:57	11:39	792
91-40991	65	171	11 O	11:59	11:40	120
91-40992	66	172	9 O	12:00	11:42	35.8

-41-

Large Area Activated Charcoal Canister (LAACC) Radon Flux Report

Project: United Nuclear Corporation
Site: Churchrock
Location: Central/North Cell Covered Tails
Report Date: October 29, 1991

Date Set: October 21, 1991
Date Remove: October 22, 1991
Date Counted: October 24, 1991

Lab I.D.	LAACC #	Canister #	Location	10/21/91 Time Set	10/22/91 Time Remove	Radon Flux pCi/m2s
91-40993	67	173	9 A	12:10	11:50	5.4
91-40994	68	174	7 A	12:11	11:51	14.0
91-40995	69	175	5 A	12:14	11:51	5.9
91-40996	70	176	3 A	12:15	11:52	3.5
91-40997	71	177	1 A	12:17	11:53	1.6
Duplicate						1.5
91-40998	72	178	-1 A	12:19	11:54	3.8
91-40999	73	179	-3 C	12:24	12:13	14.7
91-41000	74	180	-1 C	12:27	12:14	0.7
91-41001	75	181	1 C	12:29	12:15	159
91-41002	76	182	3 C	12:31	12:15	58.6
91-41003	77	183	5 C	12:33	12:16	34.6
91-41004	78	184	7 C	12:35	12:16	7.7
91-41005	79	185	9 C	12:36	12:17	5.1
91-41006	80	186	9 E	12:40	12:18	11.6
91-41007	81	187	7 E	12:42	12:19	44.4
Duplicate						46.5
91-41008	82	188	5 E	12:44	12:20	20.5
91-41009	83	189	3 E	12:46	12:21	63.4
91-41010	84	190	1 E	12:48	12:22	21.2
91-41011	85	191	-1 E	12:51	12:22	33.7
91-41012	86	192	-3 E	12:52	12:23	4.1
91-41013	87	193	-7 E	13:59	13:37	1.1
91-41014	88	194	-5 E	14:03	13:40	1.8
91-41015	89	195	-3 G	14:04	13:42	50.7
91-41016	90	196	1 G	14:17	14:01	11.4
91-41017	91	197	3 G	14:19	14:02	5.2
Duplicate						4.9
91-41018	92	198	5 G	14:23	14:03	0.8
91-41019	93	199	7 G	14:26	14:05	13.9
91-41020	94	200	9 G	14:30	14:06	149
91-41021	95	201	9 I	14:33	14:08	263
91-41022	96	202	7 I	14:35	14:10	57.7
91-41023	97	203	5 I	14:38	14:14	1.9
91-41024	98	204	3 I	14:40	14:15	0.8
91-41025	99	205	1 I	14:43	14:16	8.6
91-41026	100	206	-1 I	14:45	14:17	3.0
91-41027	101	207	-3 I	14:46	14:19	7.6
Duplicate						8.3
91-41028	102	208	-5 I	14:48	14:20	18.7
91-41029	103	209	-9 I	14:51	14:24	1.6
91-41030	104	210	3 K	14:53	14:48	9.8

FIJ

Large Area Activated Charcoal Canister (LAACC) Radon Flux Report

Project: United Nuclear Corporation
Site: Churchrock
Location: Central/North Cell Covered Tails
Report Date: October 29, 1991

Date Set: October 21, 1991
Date Remove: October 22, 1991
Date Counted: October 24, 1991

Lab I.D.	LAACC #	Canister #	Location	10/21/91 Time Set	10/22/91 Time Remove	Radon Flux pCi/m2s
91-41031	105	211	5 K	14:56	14:50	2.8
91-41032	106	212	7 K	14:57	14:51	157
91-41033	107	213	9 K	14:59	14:53	86.0
91-41034	108	214	9 M	15:01	15:00	1.1
91-41035	109	215	7 M	15:03	15:01	1.8
91-41036	110	216	5 M	15:05	15:02	55.3
91-41037	111	217	3 M	15:07	15:03	61.0
91-41038	112	218	1 M	15:09	15:06	2.9
91-41039	113	219	1 O	15:10	15:07	57.8
91-41040	114	220	3 O	15:13	15:09	104
91-41041	115	221	5 O	15:14	15:10	8.9
91-41042	116	222	7 O	15:15	15:11	8.0

Quality Assurance/Quality Control Data

Date Set: October 21, 1991 **Date Remove:** October 22, 1991

Date Counted	Blank Charcoal Lot #1 cpm	Blank Charcoal Lot #2 cpm	Standard No. 1 cpm	Standard No. 2 cpm
10/24/91	115	166	1740	3447
	121	147	1725	3471
	102	152	1755	3522

Total Number Of Laboratory Duplicates: 10

Total Number of Measurements On South Cell: 32
Total Number of Measurements On Central Cell: 34
Total Number of Measurements On Central/North Cell: 50

Number of Measurements On Interim Covered Area: 116

Average Radon Flux For Total Area: 55.0 pCi/m2s
Minimum: 0.50 pCi/m2s
Maximum: 792 pCi/m2s

Average Radon Flux for South Cell: 28.3 pCi/m2s
Average Radon Flux for Central Cell: 112 pCi/m2s
Average Radon Flux for Central/North Cell: 33.3 pCi/m2s

QUALITY ASSURANCE MANAGER:

Energy Laboratories, Inc.
P.O. Box 3258
Casper, WY 82602

ATTACHMENT B

CORE SAMPLING AND ANALYSIS

UNITED NUCLEAR CORPORATION

P.O. Box 3077
Gallup, New Mexico 87305-3077

Telephone: (505) 722-6651
Fax: (505) 722-6654

Memorandum

To: Juan Velasquez

Date: May 27, 1993

From: Edward M. Morales

Subject: Central Cell Soil Sample Results

Enclosed are two copies of the Radium 226, and Emanation Coefficient results from Energy Labs. Two copies of the Diffusion Coefficient results from Rogers and Assoc. Two copies of the results from Western Tech on the Density, Moisture, Particle size (hydrometer and specific Gravity).

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER, WY 82601 • FAX (307) 234-1639

UNITED NUCLEAR CORPORATION
SOIL ANALYSIS REPORT

P.O. # EW-49-12-92

Report Date: 12-29-92

ELI #	Sample ID	Sample Date	Ra226 pCi/gm	Ra226 Prec. +/-
92-47201	17 A	11-19-92	44.5	0.8
92-47202	15 C	11-19-92	214	1.8
92-47203	17 I	11-19-92	134	1.5
92-47204	13 G	11-19-92	142	1.5
92-47205	11 K	11-20-92	42.6	0.8
92-47206	9 G	11-20-92	26.6	0.7
92-47207	13 R	11-20-92	218	1.9
92-47208	11 M	11-20-92	117	1.3
92-47209	9 M	11-20-92	80.2	1.5
92-47210	5 M	11-20-92	66.2	1.0

Report Approved By: DB Rea

kmk

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER, WY 82601 • FAX (307) 234-1639

SOIL ANALYSIS REPORT - UNC MINING & MILLING

Project: Central Cell Covered Tailing

Report Date: 02/11/93

LAB I.D.	SAMPLE/DEPTH, FT. I.D.		Ra226 pCi/gm (Chemical)	Net CPM [1] A°	Net CPM [2] A∞	(A∞ - A°)/A∞ [3]
93-0545	17A	0-1	6.4 ± 0.3	5.0	9.6	0.4792
93-0546	17A	1.8-2.4	221 ± 1.6	590	680	0.1324
93-0547	17A	3-4	252 ± 1.7	566	671	0.1568
93-0548	17A	4-5	175 ± 1.4	462	523	0.1176
93-0549	17A	5.8-6.5	114 ± 1.2	306	362	0.1540
93-0550	9M	0-1	5.5 ± 0.3	6.5	7.4	0.1216
93-0551	9M	2-2.5	181 ± 1.4	466	503	0.0745
93-0552	9M	3.3-4.0	96.2 ± 1.1	220	256	0.1418
93-0553	9M	5-5.5	98.8 ± 1.0	284	307	0.0737
93-0554	9M	6.2-7.0	78.7 ± 1.0	200	225	0.1129
93-0555	13G	0-1	2.1 ± 0.3	6.6	14.3	0.5385
93-0556	13G	1.0-1.5	2.5 ± 0.2	8.6	11.7	0.2650
93-0557	13G	3.3-4.0	313 ± 1.9	406	455	0.1079
93-0558	13G	4.0-4.9	216 ± 1.6	473	534	0.1128
93-0559	13G	5.8-6.5	123 ± 1.2	365	444	0.1771
93-0560	11M	0-1	4.1 ± 0.2	8.5	11.3	0.2478
93-0561	11M	1.5-2.5	100 ± 1.1	254	298	0.1465
93-0562	11M	2.5-5.0	84.0 ± 1.0	232	252	0.0813
93-0563	11M	4-5	93.1 ± 1.0	223	246	0.0935
93-0564	11M	6.4-7.5	98.0 ± 1.0	252	271	0.0680
93-0565	9G	0-1	1.7 ± 0.1	4.0	5.8	0.3103
93-0566	9G	1.4-2.5	137 ± 1.2	323	355	0.0912
93-0567	9G	3.3-4	208 ± 2.0	747	811	0.0781
93-0568	9G	4-5	281 ± 1.8	754	842	0.1049
93-0569	9G	5.8-6.5	82.2 ± 1.0	183	207	0.1167
93-0570	9G	6.5-7.0	432 ± 2.2	823	904	0.0897
93-0571	17I	0-0.9	4.9 ± 0.2	1.9	10.2	0.8137
93-0572	17I	.9-1.5	9.2 ± 0.3	10.0	10.0	0.0000
93-0573	17I	1.6-2.3	8.2 ± 0.3	9.1	11.6	0.2155
93-0574	17I	3.0-4.1	363 ± 2.0	898	967	0.0721
93-0575	17I	4.1-4.8	723 ± 2.8	1537	1695	0.0929
93-0576	17I	6.1-6.8	191 ± 2.0	469	521	0.1001

[1] A° - Net CPM after de-emanation
[2] A∞ - Net CPM after full ingrowth
[3] (A∞ - A°)/A∞ Radon Emanation Coefficient

Report Approved By: R.A. Laslug
kmk

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER, WY 82601 • FAX (307) 234-1639

SOIL ANALYSIS REPORT - UNC

SAMPLE I.D.:	13K 4.0-5.0	13K 6.5-7.5	13K 5.8-6.5	13K 1.3-1.8	13K 3.3-4.0
Report Date:	05-25-93	05-25-93	05-25-93	05-25-93	05-25-93
Sample Number:	93-15412	93-15413	93-15414	93-15415	93-15416
RADIOMETRIC pCi/g:					
Ra226 - Chemical	102	199	108	10.7	84.3
Ra Prec. +/-	0.9	1.3	1.0	0.3	0.9
Radon Emanation:					
A° - Initial Activity net cpm after de-emanation	462	597	432	36.0	378
A∞ - Final Activity net cpm after 15 days	494	665	441	37.0	393
Radon Emanation Coefficient (A∞ - A°)/A∞	0.0648	0.1023	0.0204	0.0270	0.0382

Report Approved By: R.A. Seeling

kmk e315412.unc

ENERGY LABORATORIES

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER, WY 82601 • FAX (307) 234-1639

SOIL ANALYSIS REPORT - UNC

SAMPLE I.D.:	5M 0-2.5	5M 5.8-7.5	5M 5.0-5.8
Report Date:	05-25-93	05-25-93	05-25-93
Sample Number:	93-15417	93-15418	93-15419
RADIOMETRIC pCi/g:			
Ra226 - Chemical	1.2	95.0	143
Ra Prec. +/-	0.1	0.9	1.1
Radon Emanation:			
A° - Initial Activity net cpm after de-emanation	5.0	436	633
A∞ - Final Activity net cpm after 15 days	8.0	446	646
Radon Emanation Coefficient (A∞ - A°)/A∞	0.3750	0.0224	0.0201

Report Approved By: R.A. Searling

kmk 9315412.unc

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER WY 82601 • FAX (307) 234-1639

SOIL ANALYSIS REPORT - UNC

SAMPLE I.D.:	11K 0.0-1.0	11K 6.3-7.0	11K 5.3-6.0	11K 4.0-4.7
Report Date:	05-25-93	05-25-93	05-25-93	05-25-93
Sample Number:	93-15420	93-15421	93-15422	93-15423
RADIOMETRIC pCi/g:				
Ra226 - Chemical	2.1	73.8	17.9	16.4
Ra Prec. +/-	0.1	0.8	0.2	0.2
Radon Emanation:				
A° = Initial Activity net cpm after de-emanation	11.0	322	380	277
A_∞ - Final Activity net cpm after 15 days	12.0	341	407	324
Radon Emanation Coefficient $(A_\infty - A^\circ)/A_\infty$	0.0833	0.0557	0.0663	0.1451

Report Approved By: R.A. Hanley

kmk e315412.unc

ENERGY LABORATORIES, INC.
P.O. BOX 3258 • CASPER, WY 82602 • PHONE (307) 235-0515
254 NORTH CENTER, SUITE 100 • CASPER WY 82601 • FAX (307) 234-1639

SOIL ANALYSIS REPORT - UNC

SAMPLE I.D.:	15C 7.0-7.5	15C 6.3-7.0	15C 0-1.0	15C 4.1-4.8	15C 1.6-2.3	15C 2.9-3.6
Report Date:	05-25-93	05-25-93	05-25-93	05-25-93	05-25-93	05-25-93
Sample Number:	93-15424	93-15425	93-15426	93-15427	93-15428	93-15429
RADIOMETRIC pCi/g:						
Ra226 - Chemical	32.3	55.8	0.5	41.1	0.4	43.5
Ra Prec. +/-	0.2	0.3	0.04	0.3	0.02	0.3
Radon Emanation:						
A° - Initial Activity net cpm after de-emanation	715	1228	9.0	837	7.0	1111
A_∞ - Final Activity net cpm after 15 days	853	1321	9.0	890	8.0	1185
Radon Emanation Coefficient $(A_\infty - A^\circ)/A_\infty$	0.1618	0.0704	0.0000	0.0596	0.1250	0.0624

Report Approved By: R.A. Laarling

kmk s931412.unc

Rogers & Associates Engineering Corporation

REPORT OF RADON DIFFUSION COEFFICIENT MEASUREMENTS
(TIME-DEPENDENT DIFFUSION TEST METHOD RAE-SQAP-3.6)

Report Date 3/19/93

Contract C 9300/5

By TKR

Sample Identification Soils from Sites 15C, 13K, 11K, 5M

Submitted by United Nuclear Corporation Date Received 2/1/93

Sample ID	Moisture (Dry Wt. %)	Density (g/cm^3)	Radon Diffusion Coefficient (cm^2/s)	Saturation (Mp/P)	Specific Gravity
5M 0-2.5	7.9	1.88	1.1E-02	0.50	2.67
5M 5.0-5.8	7.8	1.45	4.0E-02	0.25	2.63
5M 6.8-7.5	6.0	1.66	3.3E-02	0.27	2.65
11K 0-1.0	11.5	1.90	8.8E-04	0.74	2.70
11K 4.0-4.7	6.1	1.53	1.6E-02	0.22	2.66
11K 5.3-6.0	7.1	1.53	4.2E-02	0.26	2.66
11K 6.3-7.0	8.6	1.92	6.3E-03	0.58	2.67
13K 1.3-1.8	9.2	1.75	1.6E-02	0.46	2.68
13K 3.3-4.0	5.1	1.74	5.1E-02	0.26	2.67
13K 4.0-5.0	7.1	1.69	4.9E-02	0.33	2.65
13K 5.8-6.5	7.1	1.65	2.7E-02	0.31	2.64
15C 0-1.0	12.7	1.77	9.6E-04	0.66	2.68
15C 1.6-2.3	11.1	1.82	4.3E-03	0.63	2.69
15C 2.9-3.6	13.0	1.76	5.2E-03	0.67	2.67
15C 4.1-4.8	12.4	1.82	2.6E-03	0.71	2.68
15C 6.3-7.0	18.8	1.70	2.8E-04	0.88	2.67

RAE

Post Office Box 330
Salt Lake City • Utah 84110
(801) 263-1600

LABORATORY REPORT

United Nuclear Corporation
P.O. Box 3077
Gallup, New Mexico 87305

Job Number 3142JB1
Invoice Number 314205
Date of Report 12/31/
Reviewed by J Boyd

Project Fall 1992 Reclamation Location Church Rock Mine, Churchrock, New Mexico Authorized by E. Morales/UNC Date 12-08-
Sampled and Submitted by Enviro-Drill Inc. Date 11-19, 11-20 and 11-21-1992 Tested by H. Kuebler & T. Krake/Western Technologies

BORING NO.	DEPTH, FT.	MATERIAL TYPE	SPECIFIC GRAVITY	MOISTURE CONTENT, %	DRY DENSITY PCF	PERCENT PASSING U.S. STANDARD SIEVE OR DIAMETER					
						#10	#30	#50	#100	#200	0.001 mn
5M	0-1	Silty Clay, Soil Cover	2.67	8.5	124.4	100	98	97	89	66	16
5M	5-5.8	Coarse Tailings	2.63	8.5	90.0	100	89	55	28	20	5
5M	6.8-7.5	Coarse Tailings	2.65	6.4	103.2	100	87	53	22	11	2
9M	0-1	Silty Clay, Soil Cover	2.69	13.9	115.8	100	98	96	86	62	19
9M	2-2.5	Silty Clay, Soil Cover	2.65	7.4	116.9	100	90	63	31	21	4
9M	3.3-4	Coarse Tailings	2.68	6.9	105.2	100	83	43	15	9	3
9M	5-5.5	Coarse Tailings	2.68	7.1	N/A	100	86	48	17	15	4
9M	6.2-7	Coarse Tailings	2.65	7.1	112.3	100	87	51	17	10	2
9G	0-1	Sandy Clay, Soil Cover	2.66	8.4	105.5	100	99	98	80	60	19
9G	3.3-4	Coarse Tailings	2.68	9.8	113.4	100	89	60	29	18	4
9G	4-5	Coarse Tailings	2.64	7.5	N/A	100	88	51	20	10	2
9G	5.8-6.5	Coarse Tailings w/Slime	2.65	27.3	77.5	100	89	59	32	22	6
11K	0-1	Silty Clay, Soil Cover	2.70	12.5	117.2	100	98	96	87	69	26
11K	1.5-2	Silty Clay, Soil Cover	2.68	9.9	116.7	100	98	96	86	66	23
11K	3.3-4	Tailings	2.68	10.7	100.7	100	78	41	18	12	3
11K	4-4.7	Fine Tailings w/Brn. Clay	2.66	7.0	95.5	100	87	48	15	12	2

LABORATORY REPORT

United Nuclear Corporation
P.O. Box 3077
Gallup, New Mexico 87305

Job Number 3142JB1
Invoice Number 314205
Date of Report 12/31/
Reviewed by

Project Fall 1992 Reclamation Location Church Rock Mine, Churchrock, New Mexico Authorized by E. Morales/UNC Date 12-08-
Sampled and Submitted by Enviro-Drill Inc. Date 11-19, 11-20 and 11-21-1992 Tested by H. Kuebler & T. Krake/Western Technologies

BORING NO.	DEPTH, FT.	MATERIAL TYPE	SPECIFIC GRAVITY	MOISTURE CONTENT, %	DRY DENSITY PCF	PERCENT PASSING U.S. STANDARD SIEVE OR DIAMETER					
						#10	#30	#50	#100	#200	0.001 mi
11K	6.3-7.0	Fine Tailings w/Brn. Clay	2.67	9.3	94.6	100	89	57	29	22	5
11M	0-1	Silty Clay, Soil Cover	2.69	12.5	107.8	100	98	97	91	79	14
11M	1.5-2.5	Sand w/Coal	2.67	4.8	116.4	100	88	52	18	12	4
11M	2.5-5	Coarse Tailings	2.68	4.9	100.5	100	89	53	22	16	3
11M	4-5	Coarse Tailings	2.64	5.0	N/A	100	85	46	15	9	2
11M	6.4-7.5	Coarse Tailings	2.69	4.7	102.4	100	87	47	17	11	3
13G	0-1	Silty Clay, Soil Cover	2.69	9.8	121.7	100	98	96	87	64	24
13G	1-1.5	Fine Tailings w/Slime	2.69	12.0	117.1	100	98	97	92	76	26
13G	3.3-4	Fine Tailings w/Slime	2.66	12.8	99.5	100	88	56	25	17	4
13G	4-4.9	Fine Tailings, No Slime	2.67	8.0	100.6	100	88	67	41	12	3
13G	5.8-6.5	Fine Tailings, No Slime	2.65	5.9	94.9	100	90	74	52	17	6
13K	0-1.3	Silty Clay, Soil Cover	2.70	16.3	119.2	100	99	98	91	70	23
13K	1.3-1.8	Sandy Clay, Soil Cover	2.68	10.2	122.8	100	94	84	69	50	16
13K	3.3-4	Sand Tailings	2.67	5.2	108.6	100	86	50	16	8	2
13K	4-5	Sand Tailings	2.65	7.2	N/A	100	85	49	17	10	2
13K	5.8-6.5	Sand Tailings w/Trace Slime	2.64	7.8	101.9	100	79	40	14	10	3

LABORATORY REPORT

United Nuclear Corporation
P.O. Box 3077
Gallup, New Mexico 87305

Job Number 3142JB1
Invoice Number 314205
Date of Report 12/31/
Reviewed by

Project Fall 1992 Reclamation Location Church Rock Mine, Churchrock, New Mexico Authorized by E. Morales/UNC Date 12-08-
Sampled and Submitted by Enviro-Drill Inc. Date 11-19, 11-20 and 11-21-1992 Tested by H. Kuebler & T. Krake/Western Technologies

BORING NO.	DEPTH, FT.	MATERIAL TYPE	SPECIFIC GRAVITY	MOISTURE CONTENT, %	DRY DENSITY PCF	PERCENT PASSING U.S. STANDARD SIEVE OR DIAMETER					
						#10	#30	#50	#100	#200	0.001 m
15C	0-1	Silty Clay, Soil Cover	2.68	14.7	121.1	100	98	96	87	65	24
15C	1.6-2.3	Sandy Clay w/Sandstone	2.69	12.2	112.2	100	97	95	85	62	22
15C	2.9-3.6	Fine Tailings w/Slime	2.67	14.4	110.0	100	94	69	34	24	3
15C	4.1-4.8	Fine Tailings w/Slime	2.68	14.0	112.1	100	95	76	38	23	4
15C	6.3-7.0	Fine Tailings w/Slime	2.67	19.0	98.1	100	95	74	38	23	4
17A	0-1	Silty Clay, Soil Cover	2.69	10.8	89.5	100	99	97	90	70	27
17A	1.8-2.4	Coarse Tailings w/Brn. Clay	2.69	11.1	117.2	100	92	68	38	26	6
17A	3.2-4.0	Coarse Tailings w/Brn. Clay	2.63	13.4	112.5	100	91	59	29	21	3
17A	4-5	Coarse Tailings w/Trace Slime	2.69	14.1	N/A	100	93	71	37	25	5
17A	5.8-6.5	Coarse Tailings w/Trace Slime	2.66	13.7	114.6	100	92	69	36	25	6
17I	0-0.9	Silty Clay, Soil Cover	2.70	15.5	113.6	100	99	97	87	66	22
17I	0.9-1.5	Silty Clay, Soil Cover	2.67	13.0	118.1	100	99	98	90	67	23
17I	1.6-2.3	Silty Clay, Soil Cover	2.70	12.4	117.6	100	99	98	89	63	19
17I	3.0-4.1	Fine Tailings w/Slime	2.67	11.5	112.2	100	99	89	59	45	3
17I	4.1-4.8	Fine Tailings w/Slime	2.67	17.1	109.5	100	99	86	47	31	4
17I	6.1-6.8	Fine Tailings w/Slime	2.69	13.3	93.8	100	99	88	52	39	3

APPENDIX C

APPENDIX C

PHYSICAL PROPERTIES OF SOILS, RADON ATTENUATION COVER

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/11/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
07/06/94	B+20	73660	58270	6965.2	100	97	95	92	76	55.5	12	CL	Yes
07/06/94	C+19	73670	58410	6964.6	100	97	96	94	78	61.9	16	CL	Yes
07/06/94	G+20	73340	58660	6963.7	98	93	90	86	62	47.6	10	CL	Yes
07/19/94	F+17	73630	58770	6971.7	100	97	94	90	68	48.7	7	CL	Yes
07/19/94	H+18	73300	59010	6972.9	100	98	95	92	70	60	14	CL	Yes
07/19/94	E+18	73620	58620	6969.8	100	99	97	94	80	73.8	10	CL	Yes
07/19/94	F+16	73710	58830	6973.7	100	98	95	92	82	55.3	7	CL	Yes
07/19/94	G+14	73800	59030	6977.3	100	95	92	87	70	45.3	4	CL	Yes
07/19/94	C+18	73950	58480	6969.7	100	97	95	93	83	61.2	15	CL	Yes
07/19/94	A+18	73860	58340	6970.2	100	99	97	94	76	50.8	10	CL	Yes
07/19/94	C+17	73820	58530	6977.0	100	98	97	94	78	56.1	7	CL	Yes
07/19/94	F.5+13.5	73950	58950	6977.7	100	99	95	92	66	45.9	9	CL	Yes

1994.UNC/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/11/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
07/19/94	J+13	73730	59340	6980.4	98	94	91	88	66	47.6	9	CL	Yes
07/19/94	J+17	73380	59080	6975.2	100	99	97	95	80	52.6	9	CL	Yes
07/25/94	O+7	73900	60020	6980.0	100	96	95	93	82	55.1	9	CL	Yes
07/25/94	P+8	73700	60100	6982.1	100	98	97	95	78	62.4	8	CL	Yes
07/25/94	S+9	73420	60270	6987.9	99	96	94	90	66	46.5	2	ML	Yes
07/25/94	L+11	73940	59620	6986.1	100	97	95	92	77	49	8	CL	Yes
07/25/94	J+11	73840	59460	6980.7	100	98	97	94	83	60.2	16	CL	Yes
07/25/94	K+19	73160	59020	6974.5	100	99	97	95	81	56.2	2	ML	Yes
07/25/94	L+16	73340	59300	6985.5	100	96	95	93	81	56.2	11	CL	Yes
07/26/94	L+7	74020	59870	6979.3	100	97	95	93	84	55.5	10	CL	Yes
07/26/94	G+14	73800	59040	6977.7	98	95	93	91	86	51.2	11	CL	Yes
07/28/94	L+8	73950	59800	6980.5	100	98	96	94	81	56.3	10	CL	Yes

1994.UNC/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/11/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
07/28/94	K + 10	73850	59600	6981.7	100	98	97	95	86	60.0	14	CL	Yes
07/28/94	E + 16	73760	58760	6971.4	100	98	96	93	82	56.2	16	CL	Yes
07/28/94	I + 16	73520	59060	6975.3	100	97	96	93	82	60.0	13	CL	Yes
07/28/94	I + 10	73980	59440	6979.9	99	97	96	93	79	54.7	13	CL	Yes
07/28/94	O + 4	73050	60300	6980.4	100	96	94	92	82	57.1	8	CL	Yes
08/05/94	A + 16	74050	58450	6973.1	100	97	96	94	83	59.0	10	CL	Yes
08/05/94	C + 14.5	74010	58700	6976.3	100	98	97	94	85	62.9	17	CL	Yes
08/05/94	H + 16.5	73560	58950	6974.6	100	98	97	94	85	57.7	10	CL	Yes
08/05/94	O + 6	73900	60160	6980.9	100	98	96	94	83	61.2	11	CL	Yes
08/05/94	N + 7	73900	60020	6979.0	100	98	97	96	88	66.7	10	CL	Yes
08/05/94	N + 4	74120	60220	6979.8	100	98	96	93	83	54.0	7	CL	Yes
08/05/94	M + 2	74350	60260	6979.8	100	99	97	95	86	62.0	7	CL	Yes

1994 UNC/cb

Dist Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/11/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
08/05/94	M+5	74110	60080	6978.0	100	96	95	92	82	50.8	6	CL	Yes
08/05/94	O+12	73450	59800	6977.4	100	97	95	92	79	53.7	6	CL	Yes
08/05/94	F+13.5	73900	59000	6976.4	100	98	96	93	62	52.0	10	CL	Yes
08/05/94	E+15	73800	58820	6975.2	99	97	95	93	84	59.9	9	CL	Yes
08/05/94	E+13	74000	58950	6977.3	99	98	96	92	78	55.3	2	ML	Yes
08/05/94	D+18	73520	58420	6964.6	100	96	94	92	82	58.0	10	CL	Yes
08/05/94	D+14	74000	58800	6976.5	100	98	96	94	91	55.4	9	CL	Yes
08/05/94	Q.5+6.5	73710	60320	6981.4	99	95	92	88	69	36.9	12	CL	Yes
08/05/94	Q.5+3.5	73960	60460	6980.9	100	97	95	92	79	44.9	6	ML/CL	Yes
08/05/94	P+10	73540	59990	6989.7	100	98	96	93	82	57.4	7	CL	Yes
08/05/94	L+12	73630	59550	6986.9	100	97	95	91	78	52.9	4	CL/ML	Yes
08/05/94	A+14.5	74150	58540	6975.6	100	97	96	94	84	62.0	5	CL/ML	Yes

1994 UNC/cb

Dist Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/11/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
08/05/94	I+15	73600	59120	6977.1	100	98	96	93	82	57.1	7	CL/ML	Yes
08/05/94	Q+5.5	73820	60350	6980.2	100	98	97	94	83	56.2	6	CL/ML	Yes
09/09/94	N+11	73590	59760	6990.6	100	97	95	92	81	56.7	10	CL	Yes
09/09/94	M+6	74050	60000	6978.9	99	97	95	92	80	53.4	16	CL	Yes
09/09/94	O+7.5	73790	60050	6980.7	100	99	98	97	90	68.9	14	CL	Yes
09/09/94	S+10	73340	60220	6994.1	100	95	94	91	81	56.8	10	CL	Yes
09/12/94	H+14	73730	59110	6977.6	98	96	95	93	83	61.1	6	CL	Yes
09/12/94	I+17	73450	59000	6974.6	100	97	95	91	80	51.0	17	CL	Yes
09/12/94	Q+8	73640	60200	6981.8	99	98	96	94	82	54.0	9	CL	Yes
09/12/94	G+18	73250	58780	6969.7	100	99	98	95	85	60.0	13	CL	Yes
09/14/94	L+17	73250	59220	6983.9	100	97	96	94	84	60.0	13	CL	Yes
09/20/94	N+12	73510	59710	6994.0	100	98	97	94	83	56.9	11	CL	Yes

1994.UNC/cb

Dist: Client (3) Field File (1) Billing (1)

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK05(

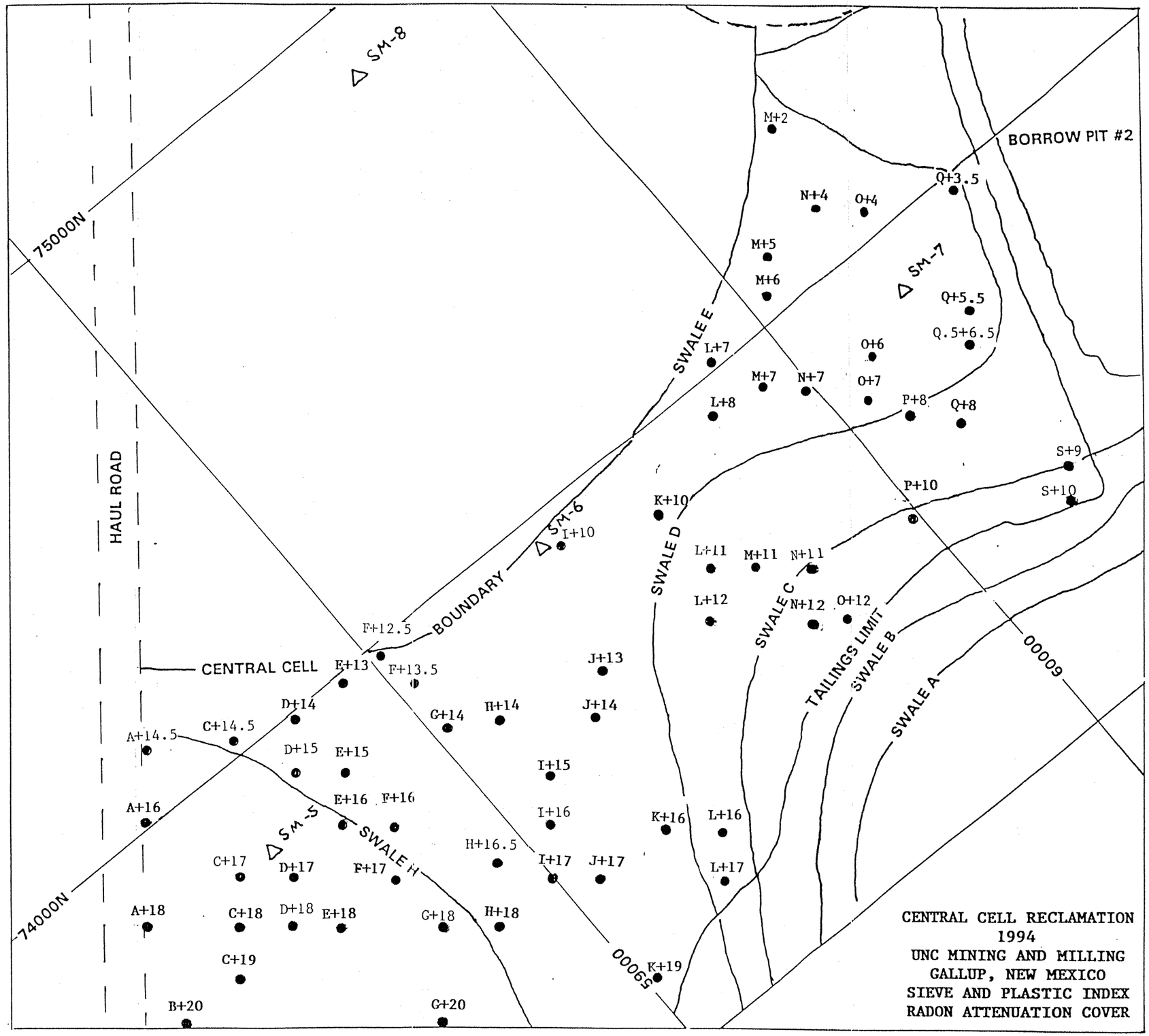
TEST SUMMARY FOR RAC MATERIAL

DATE OF REPORT 10/19/94

DATE	GRID	NORTHING	EASTING	ELEV.	3/4" SPEC. 95-100%	#4 SPEC. 90-100%	#10 SPEC. 85-100%	#40 SPEC. 65-100%	#100 SPEC. 50-100%	#200 SPEC. 40-85%	PLASTICITY INDEX	USCS SOIL CLASS	WITHIN SPECS. ?
10/14/94	F+12.5	73980	59030	6977.7	100	98	96	93	82	50.2	10	CL	Yes
10/14/94	D+17	73770	58610	6971.4	100	97	96	94	84	56.7	8	CL	Yes
10/14/94	D+15	73910	58750	6975.3	100	97	96	92	79	51.2	11	CL	Yes
10/14/94	M+7	73950	59970	6980.0	100	98	97	93	81	55.0	11	CL	Yes
10/14/94	M+11	73640	59700	6988.7	100	97	96	94	85	62.2	5	CL	Yes
10/14/94	J+14	73610	59270	6979.3	100	98	97	95	85	60.0	14	CL	Yes
10/14/94	K+16	73380	59210	6980.7	100	97	96	94	85	60.2	5	CL	Yes

1994.UNC/cb

Dist: Client (3) Field File (1) Billing (1)


SM-8
SM-7
SM-6
SM-5
75000N
74000N
59000
00009
HAUL ROAD
CENTRAL CELL
BOUNDARY
SWALE E
SWALE D
SWALE C
SWALE B
SWALE A
SWALE H
TAILINGS LIMIT
BORROW PIT #2
M+2
Q+3.5
N+4
O+4
M+5
M+6
Q+5.5
Q.5+6.5
L+7
O+6
M+7
N+7
O+7
L+8
P+8
Q+8
S+9
P+10
S+10
K+10
I+10
L+11
M+11
N+11
L+12
N+12
O+12
F+12.5
E+13
F+13.5
J+13
D+14
G+14
H+14
J+14
C+14.5
A+14.5
D+15
E+15
I+15
A+16
E+16
F+16
I+16
K+16
L+16
H+16.5
C+17
D+17
F+17
I+17
J+17
L+17
A+18
C+18
D+18
E+18
G+18
H+18
C+19
K+19
B+20
G+20
CENTRAL CELL RECLAMATION
1994
UNC MINING AND MILLING
GALLUP, NEW MEXICO
SIEVE AND PLASTIC INDEX
RADON ATTENUATION COVER

Western Technologies Inc.
The Quality People
Since 1955

400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/18/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC) Sampled By: H. Kuebler/WT Date 07/06/94

Source: Grid Pt. B-20, 7360 N & 58270 E. Submitted By: R.Whitaker/WT Date 07/07/94

Elevation 6965.2 Authorized By: Client Date 07/06/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	90	
100	76	50-100
200	55.5	40-85

Expansive Properties of Cohesive Soil

Water Content ____

Dry Density, pcf ____

Maximum Swell, % ____

Surcharge, KSF ____

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density ____

Optimum Moisture, % ____

Plasticity Index, ASTM D4318

Liquid Limit 29

Plasticity Index 12

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235.12/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/18/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay (RAC) Sampled By: H. Kuebler/WT Date 07/06/94

Source: Grid Pt. C- 19, 73670 N. & 58410 E. Submitted By: R.Whitaker/WT Date 07/07/94

Elevation 6964.6 Authorized By: Client Date 07/06/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	89	
100	78	50-100
200	61.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	30
Plasticity Index	16

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235.10/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/18/94

Project: Church Rock Uranium Mill Tailings Reclamation
Location: Churck Rock, NM
Material: Sandy Lean Clay, (RAC)
Source: Grid Pt. G-20, 73340 N & 58660 E.
Elevation 6963.7

Sampled By: H. Kuebler/WT Date 07/06/94
Submitted By: R.Whitaker/WT Date 07/07/94
Authorized By: Client Date 07/06/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	98	95-100
1/2"	97	
3/8"	97	
1/4"		
No. 4	93	90-100
8	90	
10	90	85-100
16	88	
30	87	
40	86	65-100
50	78	
100	62	50-100
200	47.6	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	10

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235.13/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay,(RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. F-17, 73630 N & 58770 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6977.7 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	97	90-100
8	95	
10	94	85-100
16	93	
30	91	
40	90	65-100
50	88	
100	68	50-100
200	48.7	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	7

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235.31/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay,(RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. H-18, 73300 N & 59010 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6972.9 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	96	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	90	
100	70	50-100
200	60.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	30
Plasticity Index	14

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235.32/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Lean Clay W/Sand,(RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. E-18, 73620 N & 58620 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6969.8 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	98	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	92	
100	80	50-100
200	73.8	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	10

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235.29/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/27/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay, (RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. F-16, 73710 N & 58830 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6973.7 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	96	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	82	50-100
200	55.3	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	7

Copies to: Addressee (3), Billing (1), Field File (1).
235.24/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/27/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay, (RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. G-14, 73800 N & 59030 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6977.3 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	97	
1/4"		
No. 4	95	90-100
8	92	
10	92	85-100
16	90	
30	88	
40	87	65-100
50	85	
100	70	50-100
200	45.3	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	4

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235.25/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/27/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC)
Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. C-18, 73950 N & 58480 E.
Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6969.7
Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	95	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	83	50-100
200	61.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	15

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235.28/bc

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Farmington, New Mexico 87401
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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/27/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC)
Source: Grid Pt. A-18, 73860 N & 58340 E.
Elevation 6970.2

Sampled By: H. Kuebler/WT Date 07/19/94
Submitted By: H. Kuebler/WT Date 07/19/94
Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	76	50-100
200	50.8	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	10

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235.26/bc

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(505) 327-4966 • fax 327-5293

LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 07/27/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay, (RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. C-17, 73820 N & 58530 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6977.0 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	78	50-100
200	56.1	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	7

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Lean Clay W/Sand,(RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. F.5-13.5,73950 N & 58950 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6977.7 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	97	
10	97	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	66	50-100
200	45.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay,(RAC)
Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. J-13, 73730 N & 59340 E.
Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6980.4
Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	98	95-100
1/2"	97	
3/8"	96	
1/4"		
No. 4	94	90-100
8	92	
10	91	85-100
16	90	
30	89	
40	88	65-100
50	86	
100	66	50-100
200	47.6	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay,(RAC) Sampled By: H. Kuebler/WT Date 07/19/94

Source: Grid Pt. J-17, 73380 N & 59080 E. Submitted By: H. Kuebler/WT Date 07/19/94

Elevation 6975.2 Authorized By: Client Date 07/19/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	98	
10	97	85-100
16	96	
30	95	
40	95	65-100
50	93	
100	80	50-100
200	52.6	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 07/25/94

Source: (0+7) 73900 N. & 60020 E. — Submitted By: H. Kuebler/WT — Date 07/25/94

Elevation 6980.0 — Authorized By: Client — Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100 -	100
3/4"	100	95-100
1/2"	100	
3/8"	98	
1/4"		
No. 4	96	90-100
8	95	
10	95	85-100
16	94	
30	93	65-100
40	93	
50	92	
100	82	50-100
200	55.1	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 28
Plasticity Index 9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC) Sampled By: H. Kuebler/WT Date 07/25/94

Source: (P-8) 73700 N. & 60100 E. Submitted By: H. Kuebler/WT Date 07/25/94

Elevation 6982.1 Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100 -	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	96	65-100
40	95	
50	93	
100	78	50-100
200	62.4	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 29
Plasticity Index 8

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PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Silt

Source: (S-9) 73420 N. & 60270 E.
Elevation 6987.9

Sampled By: H. Kuebler/WT Date 07/25/94
Submitted By: H. Kuebler/WT Date 07/25/94
Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	96	90-100
8	94	
10	94	85-100
16	92	
30	91	65-100
40	90	
50	89	
100	66	50-100
200	46.5	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 23
Plasticity Index 2

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PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC) Sampled By: H. Kuebler/WT Date 07/25/94

Source: (L-11) 73940 N. & 59620 E. Submitted By: H. Kuebler/WT Date 07/25/94

Elevation 6986.1 Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	95	85-100
16	94	
30	93	65-100
40	92	
50	91	
100	77	50-100
200	49.0	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 29
Plasticity Index 8

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC)

Source: (J-11) 73840 N. & 59460 E.
Elevation 6980.7

Sampled By: H. Kuebler/WT Date 07/25/94
Submitted By: H. Kuebler/WT Date 07/25/94
Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	65-100
40	94	
50	93	
100	83	50-100
200	60.2	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 29
Plasticity Index 16

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Silt,(RAC)

Source: Grid Pt. K-19, 73160 N & 59020 E.
Elevation 6980.7

Sampled By: H. Kuebler/WT Date 07/25/94
Submitted By: H. Kuebler/WT Date 07/25/94
Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	98	
10	97	85-100
16	97	
30	96	
40	95	65-100
50	93	
100	81	50-100
200	56.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	20
Plasticity Index	2

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC)

Source: (L-16) 73340 N. & 59300 E.
Elevation 6985.5

Sampled By: H. Kuebler/WT Date 07/25/94
Submitted By: H. Kuebler/WT Date 07/25/94
Authorized By: Client Date 07/25/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	96	90-100
8	95	
10	95	85-100
16	94	
30	93	65-100
40	93	
50	91	
100	81	50-100
200	56.0	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 30.4
Plasticity Index 11

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/02/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC)

Source: Grid Pt. L-7, 74020 N & 59870 E.
Elevation 6979.3

Sampled By: H. Kuebler/WT Date 07/26/94
Submitted By: H. Kuebler/WT Date 07/26/94
Authorized By: Client Date 07/26/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	98	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	94	
40	93	65-100
50	92	
100	84	50-100
200	55.5	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	10

Copies to: Addressee (3), Billing (1), Field File (1).
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Farmington, New Mexico 87401
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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation
Location: Churck Rock, NM
Material: Sandy Lean Clay, (RAC)
Source: Grid Pt. G-14, 73800 N & 59040 E.
Elevation 6977.2

Sampled By: H. Kuebler/WT Date 07/26/94
Submitted By: H. Kuebler/WT Date 07/26/94
Authorized By: Client Date 07/26/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	98	95-100
1/2"	97	
3/8"	96	
1/4"		
No. 4	95	90-100
8	94	
10	93	85-100
16	92	
30	91	
40	91	65-100
50	90	
100	86	50-100
200	51.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	30
Plasticity Index	11

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Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC)

Source: (L-8) 73950 N. & 59800 E.
Elevation 6980.5

Sampled By: H. Kuebler/WT Date 07/28/94
Submitted By: H. Kuebler/WT Date 07/28/94
Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	96	
30	95	65-100
40	94	
50	93	
100	81	50-100
200	56.3	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 25.7
Plasticity Index 10

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235.106/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC)

Source: Grid Pt. K-10, 73850 N & 59600 E.
Elevation 6981.7

Sampled By: H. Kuebler/WT Date 07/28/94
Submitted By: H. Kuebler/WT Date 07/28/94
Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	95	65-100
50	94	
100	86	50-100
200	60.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	14

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC)
Source: (E+16) 73760 N. & 58760 E.
Elevation 6971.4

Sampled By: H. Kuebler/WT Date 07/28/94
Submitted By: H. Kuebler/WT Date 07/28/94
Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	96	
30	94	65-100
40	93	
50	92	
100	82	50-100
200	56.2	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 31.6
Plasticity Index 16

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LABORATORY REPORT

PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC) Sampled By: H. Kuebler/WT Date 07/28/94

Source: (I-16) 73520 N. & 59060 E. Submitted By: H. Kuebler/WT Date 07/28/94

Elevation 6975.3 Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100 -	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	65-100
40	93	
50	91	
100	82	50-100
200	60.0	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 26.6
Plasticity Index 13

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PHYSICAL PROPERTIES OF AGGREGATE

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Church Rock, NM

Material: Sandy Lean Clay (RAC) Sampled By: H. Kuebler/WT Date 07/28/94

Source: (I-10) 73980 N. & 59440 E. Submitted By: H. Kuebler/WT Date 07/28/94

Elevation 6979.9 Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	65-100
40	93	
50	92	
100	79	50-100
200	54.7	40-85

Moisture Density Relations, pcf
(ASTM D698 Method C)
Maximum Dry Density, pcf
Optimum Moisture, %

Plasticity Index, ASTM D4318
Liquid Limit 29.2
Plasticity Index 13

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440235
Report Date: 08/10/94

Project: Church Rock Uranium Mill Tailings Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay, (RAC)
Source: Grid Pt. O-4, 73050 N & 60300 E.
Elevation 6980.4

Sampled By: H. Kuebler/WT Date 07/28/94
Submitted By: H. Kuebler/WT Date 07/28/94
Authorized By: Client Date 07/28/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	96	90-100
8	95	
10	94	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	82	50-100
200	57.1	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	24
Plasticity Index	8

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay
Sampled By: H. Kuebler/WT Date 08/05/94

Source: (A-16) 74050 N. & 58450 E.
Submitted By: H. Kuebler/WT Date 08/05/94

Elevation 6973.1
Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	92	
100	83	50-100
200	59.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (C-14.5) 74010 N. & 58700 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6976.3 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	85	50-100
200	62.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	33
Plasticity Index	17

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (H-16.5) 73560 N. & 58950 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6974.6 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	85	50-100
200	57.7	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay (RAC) Sampled By: H. Kuebler/WT Date 08/05/94

Source: (O-6) 73900 N. & 60160 E. Submitted By: H. Kuebler/WT Date 08/05/94

Elevation 6980.9 Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	98	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	93	
100	83	50-100
200	61.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	11

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (N+7) 73900 N. & 60020 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6979.0 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"	100	
No. 4	98	90-100
8	97	
10	97	85-100
16	97	
30	96	
40	96	65-100
50	95	
100	88	50-100
200	66.7	40-85

Expansive Properties of Cohesive Soil

Water Content
Dry Density, pcf
Maximum Swell, %
Surcharge, KSF

Moisture Density Relations, pcf
(ASTM D698A)

Maximum Dry Density
Optimum Moisture, %

Plasticity Index, ASTM D4318

Liquid Limit 29
Plasticity Index 10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (N-4) 74120 N. & 60220 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6979.8 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	83	50-100
200	54.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	7

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279.2/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (M-2) 74350 N. & 60260 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6979.8 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	95	65-100
50	94	
100	86	50-100
200	62.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	7

Copies to: Addressee (3), Billing (1)
279.3/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Bos 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 08/23/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay
Sampled By: H. Kuebler/WT Date 08/05/94

Source: (M-5) 74110 N. & 60080 E.
Submitted By: H. Kuebler/WT Date 08/05/94

Elevation 6978.0
Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	96	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	82	50-100
200	50.8	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	6

Copies to: Addressee (3), Billing (1)
279.5/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (O+12) 73450 N. & 59800 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6977.4 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	79	50-100
200	53.7	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	6

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (F-13.5) 73900 N. & 59000 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6976.4 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	62	50-100
200	52.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay

Source: (E-15) 73800 N. & 58820 E.
Elevation 6975.2

Sampled By: H. Kuebler/WT Date 08/05/94
Submitted By: H. Kuebler/WT Date 08/05/94
Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	95	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	84	50-100
200	59.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	29
Plasticity Index	9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silt — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (E+13) 74000 N. & 58950 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6977.3 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"		
3/8"	99	
1/4"		
No. 4	98	90-100
8	96	
10	96	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	78	50-100
200	55.3	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	21
Plasticity Index	2

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay
Sampled By: H. Kuebler/WT Date 08/05/94

Source: (D+18) 73520 N. & 58420 E.
Submitted By: H. Kuebler/WT Date 08/05/94

Elevation 6964.6
Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	97	
1/4"		
No. 4	96	90-100
8	95	
10	94	85-100
16	93	
30	92	
40	92	65-100
50	91	
100	82	50-100
200	58.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (D-14) 74000 N. & 58800 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6976.5 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	93	
100	91	50-100
200	55.4	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	9

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (Q.5 & 6.5) 73710 N. & 60320 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6981.4 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"		
3/8"	98	
1/4"		
No. 4	95	90-100
8	92	
10	92	85-100
16	90	
30	89	
40	88	65-100
50	86	
100	69	50-100
200	36.9	40-85

Expansive Properties of Cohesive Soil

Water Content _____

Dry Density, pcf _____

Maximum Swell, % _____

Surcharge, KSF _____

Moisture Density Relations, pcf
(ASTM D698A)

Maximum Dry Density _____

Optimum Moisture, % _____

Plasticity Index, ASTM D4318

Liquid Limit 31

Plasticity Index 12

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation
Location: Churck Rock, NM
Material: Sandy Silty Clay
Source: (Q+3.5) 73960 N. & 60460 E.
Elevation 6980.9

Sampled By: H. Kuebler/WT Date 08/05/94
Submitted By: H. Kuebler/WT Date 08/05/94
Authorized By: Client Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	79	50-100
200	44.9	40-85

Expansive Properties of Cohesive Soil

Water Content _____
Dry Density, pcf _____
Maximum Swell, % _____
Surcharge, KSF _____

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density _____
Optimum Moisture, % _____

Plasticity Index, ASTM D4318

Liquid Limit 25
Plasticity Index 6

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (P+10) 73540 N. & 59990 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6989.7 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	82	50-100
200	57.4	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	7

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (L-12) 73630 N. & 59550 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6986.9 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	93	
30	92	
40	91	65-100
50	89	
100	78	50-100
200	52.9	40-85

Expansive Properties of Cohesive Soil

Water Content _____

Dry Density, pcf _____

Maximum Swell, % _____

Surcharge, KSF _____

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density _____

Optimum Moisture, % _____

Plasticity Index, ASTM D4318

Liquid Limit 18

Plasticity Index 4

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (A+14.5) 74150 N. & 58540 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6975.6 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	92	
100	84	50-100
200	62.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	5

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Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (I+15) 73600 N. & 59120 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6977.1 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	95	
30	94	
40	93	65-100
50	91	
100	82	50-100
200	57.1	40-85

Expansive Properties of Cohesive Soil

Water Content _____

Dry Density, pcf _____

Maximum Swell, % _____

Surcharge, KSF _____

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density _____

Optimum Moisture, % _____

Plasticity Index, ASTM D4318

Liquid Limit 26

Plasticity Index 7

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 08/05/94

Source: (Q+5.5) 73820 N. & 60350 E. — Submitted By: H. Kuebler/WT — Date 08/05/94

Elevation 6980.2 — Authorized By: Client — Date 08/05/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	83	50-100
200	56.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	24
Plasticity Index	6

Copies to: Addressee (3), Billing (1)
279.012/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440279
Report Date: 09/01/94

Project: 1994 Reclamation
Location: Churck Rock, NM
Material: Sandy Lean Clay
Source: Borrow Area East of Evap. Ponds

Sampled By: H. Kuebler/WT Date 08/23/94
Submitted By: H. Kuebler/WT Date 08/23/94
Authorized By: Client Date 08/23/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"		
3/4"	100	95-100
1/2"	100	
3/8"		
1/4"		
No. 4	99	90-100
8	98	
10	98	85-100
16	97	
30	96	
40	96	65-100
50	95	
100	78	50-100
200	66.4	40-85

Expansive Properties of Cohesive Soil

Water Content
Dry Density, pcf
Maximum Swell, %
Surcharge, KSF

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density
Optimum Moisture, %

Plasticity Index, ASTM D4318

Liquid Limit 30
Plasticity Index 12

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/13/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay

Source: (N+11) 73590 N. & 59760 E.
Elevation 6990.6

Sampled By: H. Kuebler/WT Date 09/09/94
Submitted By: H. Kuebler/WT Date 09/09/94
Authorized By: Client Date 09/09/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	81	50-100
200	56.7	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf
(ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/13/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/09/94

Source: (M+6) 74050 N. & 60000 E. — Submitted By: H. Kuebler/WT — Date 09/09/94

Elevation 6978.9 — Authorized By: Client — Date 09/09/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"		
3/8"	98	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	92	65-100
50	91	
100	80	50-100
200	53.4	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	31
Plasticity Index	16

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK05C
Lab/Inv. No. 31440336
Report Date: 09/13/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/09/94

Source: (O+7.5) 73790 N. & 60050 E. — Submitted By: H. Kuebler/WT — Date 09/09/94

Elevation 6980.7 — Authorized By: Client — Date 09/09/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"		
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	98	
10	98	85-100
16	98	
30	97	
40	97	65-100
50	96	
100	90	50-100
200	68.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	31
Plasticity Index	14

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/13/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/09/94

Source: (S+10) 73340 N. & 60220 E. — Submitted By: H. Kuebler/WT — Date 09/09/94

Elevation 6994.1 — Authorized By: Client — Date 09/09/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"		
3/4"	100	95-100
1/2"	98	
3/8"	97	
1/4"		
No. 4	95	90-100
8	94	
10	94	85-100
16	93	
30	92	
40	91	65-100
50	90	
100	81	50-100
200	56.8	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/22/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/12/94

Source: (H+14) 73730 N. & 59110 E. — Submitted By: H. Kuebler/WT — Date 09/12/94

Elevation 6977.6 — Authorized By: Client — Date 09/12/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"	100	
1"	98	100
3/4"	98	95-100
1/2"	97	
3/8"	97	
1/4"		
No. 4	96	90-100
8	95	
10	95	85-100
16	94	
30	93	
40	93	65-100
50	92	
100	83	50-100
200	61.1	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	23
Plasticity Index	6

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/22/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/12/94

Source: (I+17) 73450 N. & 59000 E. — Submitted By: H. Kuebler/WT — Date 09/12/94

Elevation 6974.6 — Authorized By: Client — Date 09/12/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	98	
1/4"		
No. 4	97	90-100
8	95	
10	95	85-100
16	94	
30	92	
40	91	65-100
50	90	
100	80	50-100
200	50.8	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	23
Plasticity Index	6

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/21/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/12/94

Source: (Q+8) 73640 N. & 60200 E. — Submitted By: H. Kuebler/WT — Date 09/12/94

Elevation 6981.8 — Authorized By: Client — Date 09/12/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	99	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	98	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	93	
100	82	50-100
200	54.4	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	26
Plasticity Index	9

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336.5/bc

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/22/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/12/94

Source: (L-17) 73250 N. & 59220 E. — Submitted By: H. Kuebler/WT — Date 09/12/94

Elevation 6983.9 — Authorized By: Client — Date 09/12/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	98	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	92	
100	84	50-100
200	60.4	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	30
Plasticity Index	13

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/22/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/12/94

Source: (G-18) 73490 N. & 58780 E. — Submitted By: H. Kuebler/WT — Date 09/12/94

Elevation 6969.7 — Authorized By: Client — Date 09/12/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	100	
1/4"		
No. 4	99	90-100
8	98	
10	98	85-100
16	97	
30	96	
40	95	65-100
50	94	
100	85	50-100
200	60.0	40-85

Expansive Properties of Cohesive Soil

Water Content ____
Dry Density, pcf ____
Maximum Swell, % ____
Surcharge, KSF ____

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density ____
Optimum Moisture, % ____

Plasticity Index, ASTM D4318

Liquid Limit 28
Plasticity Index 13

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440336
Report Date: 09/26/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 09/20/94

Source: (N+12) 73510 N. & 59710 E. — Submitted By: H. Kuebler/WT — Date 09/20/94

Elevation 6994.0 — Authorized By: Client — Date 09/20/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	94	65-100
50	93	
100	83	50-100
200	56.9	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	27
Plasticity Index	11

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Farmington, New Mexico 87401
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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. F-12.5, 73980 N & 59030 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6977.7 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	96	85-100
16	95	
30	94	
40	93	65-100
50	92	
100	82	50-100
200	50.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	10

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. D+17, 73770 N & 58610 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6971.4 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	98	
1/4"		
No. 4	97	90-100
8	97	
10	96	85-100
16	96	
30	94	
40	94	65-100
50	93	
100	84	50-100
200	56.7	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	8

Copies to: Addressee (3), Billing (1), Field File (1).
381.6/bc

The above services and report were performed pursuant to the terms and conditions of the agreement or proposal, if any, between WT and client. WT warrants that this was performed under the appropriate standard of care, including the skill and judgement that is reasonably expected from similarly situated professionals. No other warranty, guaranty, or representation, either expressed or implied is included or intended.

REVIEWED BY

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400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. D+15, 73910 N & 58750 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6975.3 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	93	
40	92	65-100
50	90	
100	79	50-100
200	51.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	30
Plasticity Index	11

Copies to: Addressee (3), Billing (1), Field File (1).
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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. M-7, 73950 N & 59970 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6980.0 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	94	
40	93	65-100
50	91	
100	81	50-100
200	55.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	28
Plasticity Index	11

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. M+11, 73640 N & 59700 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6988.7 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	99	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	93	
100	85	50-100
200	62.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	5

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Lean Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. J-14, 73610 N & 59270 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6979.3 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	100	
3/8"	99	
1/4"		
No. 4	98	90-100
8	97	
10	97	85-100
16	96	
30	95	
40	95	65-100
50	94	
100	85	50-100
200	60.0	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	31
Plasticity Index	14

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LABORATORY REPORT

PHYSICAL PROPERTIES OF SOILS

Client: United Nuclear Corporation
Post Office Box 3077
Gallup, New Mexico 87305
ATTN: Mr. Ed Morales

Job No. 3144JK050
Lab/Inv. No. 31440381
Report Date: 10/18/94

Project: 1994 Reclamation

Location: Churck Rock, NM

Material: Sandy Silty Clay — Sampled By: H. Kuebler/WT — Date 10/14/94

Source: Grid Pt. K-16, 73380 N & 59210 E. — Submitted By: H. Kuebler/WT — Date 10/14/94

Elevation 6980.7 — Authorized By: Client — Date 10/14/94

SIEVE ANALYSIS, ASTM C136 & C117

Sieve Size	% Passing Accumulative	Specification (As Required)
2"		
1-1/2"		
1-1/8"		
1"	100	100
3/4"	100	95-100
1/2"	99	
3/8"	98	
1/4"		
No. 4	97	90-100
8	96	
10	96	85-100
16	95	
30	94	
40	94	65-100
50	93	
100	85	50-100
200	60.2	40-85

Expansive Properties of Cohesive Soil

Water Content	
Dry Density, pcf	
Maximum Swell, %	
Surcharge, KSF	

Moisture Density Relations, pcf (ASTM D698A)

Maximum Dry Density	
Optimum Moisture, %	

Plasticity Index, ASTM D4318

Liquid Limit	25
Plasticity Index	5

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APPENDIX
D

APPENDIX D

FIELD DENSITY TESTS, RADON ATTENUATION COVER

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK050

TEST SUMMARY FOR SANDCONE DENSITIES

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/07/94	Sandcone	B+20	73660	58270	6965.2	RAC	116.0	12.7	100	CL	Yes
07/07/94	Sandcone	D+20	73520	58420	6964.6	RAC	109.6	14.0	95	CL	Yes
07/07/94	Sandcone	G+20	73340	58660	6963.7	RAC	115.3	13.4	100	CL	Yes
07/07/94	Sandcone	G+19	73440	58730	6968.0	RAC	116.6	11.8	100	CL	Yes
07/07/94	Sandcone	A+19	73790	58270	6966.8	RAC	115.2	14.0	100	CL	Yes
07/08/94	Sandcone	F+16	73710	58820	6973.6	RAC	115.4	15.6	99	CL	Yes
07/08/94	Sandcone	G+16	73650	58820	6978.8	RAC	118.0	16.1	100	CL	Yes
07/08/94	Sandcone	I+18	73360	58930	6971.6	RAC	111.0	14.3	99	CL	Yes
07/08/94	Sandcone	J+19	73220	58870	6971.4	RAC	118.2	13.6	100	CL	Yes
07/08/94	Sandcone	H+18	73300	59010	6972.9	RAC	116.7	14.6	100	CL	Yes
07/08/94	Sandcone	F+14	73880	58950	6976.6	RAC	112.9	15.9	96	CL	Yes
07/08/94	Sandcone	G+16	73650	58910	6973.4	RAC	111.3	16.2	95	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK05(

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/08/94	Sandcone	H+17	73520	58920	6972.5	RAC	119.8	13.9	100	CL	Yes
07/08/94	Sandcone	I+19	73450	59000	6973.6	RAC	115.2	13.8	100	CL	Yes
07/08/94	Sandcone	A+20	73720	58200	6965.7	RAC	110.7	16.1	97	CL	Yes
07/08/94	Sandcone	E+20	73310	58500	6964.4	RAC	116.3	15.8	100	CL	Yes
07/08/94	Sandcone	C+19	73670	58410	6964.6	RAC	115.7	16.4	100	CL	Yes
07/08/94	Sandcone	D+20	73530	58420	6964.7	RAC	110.6	16.5	97	CL	Yes
07/08/94	Sandcone	E+19	73550	58560	6968.0	RAC	111.3	15.1	97	CL	Yes
07/12/94	Sandcone	A+18	73860	58340	6970.2	RAC	115.8	16.2	100	CL	Yes
07/12/94	Sandcone	C+18	73750	58480	6969.7	RAC	111.9	17.0	99	CL	Yes
07/12/94	Sandcone	E+18	73620	58620	6969.8	RAC	112.7	16.8	100	CL	Yes
07/12/94	Sandcone	G+18	73490	58780	6969.7	RAC	98.3	16.5	87	CL	No
07/12/94	Sandcone	F+17	73630	58770	6971.7	RAC	101.8	17.2	90	CL	No

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/12/94	Sandcone	B+17	73890	58460	6972.1	RAC	111.4	16.3	99	CL	Yes
07/12/94	Sandcone	D+17	73760	58610	6971.4	RAC	103.9	17.0	92	CL	No
07/18/94	Sandcone	E+17	73690	58690	6970.6	RAC	122.5	13.8	100	CL	Yes
07/18/94	Sandcone	D+17 Retest 7/12/94	73770	59610	6974.5	RAC	124.9	14.1	100	CL	Yes
07/18/94	Sandcone	G+18 Retest 7/12/94	73500	59780	6970.1	RAC	113.4	14.6	98	CL	Yes
07/19/94	Sandcone	A+16.5	73960	58410	6971.7	RAC	121.9	15.8	100	CL	Yes
07/19/94	Sandcone	C+16.5	73860	58560	6972.9	RAC	112.7	15.9	100	CL	Yes
07/19/94	Sandcone	D+16.5	73760	58650	6970.4	RAC	117.0	15.6	100	CL	Yes
07/19/94	Sandcone	F+16.5 Retest 7/12/94	73680	58810	6972.7	RAC	121.2	15.1	100	CL	Yes
07/19/94	Sandcone	E+16	73710	58820	6973.7	RAC	123.5	14.8	100	CL	Yes
07/19/94	Sandcone	C+16	73900	58600	6973.6	RAC	119.5	16.8	100	CL	Yes
07/19/94	Sandcone	A+16	74050	58450	6973.1	RAC	117.6	15.7	100	CL	Yes

RAC = Radon Attenuation Cover

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UNITED NUCLEAR CORPORATION 1994 RECLAMATION

WT JOB NO. 3144JK050

TEST SUMMARY FOR SANDCONE DENSITIES

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/19/94	Sandcone	A+14.5	74150	58540	6975.6	RAC	114.1	15.4	98	CL	Yes
07/19/94	Sandcone	B+14.5	74120	58630	6977.4	RAC	112.3	15.8	100	CL	Yes
07/19/94	Sandcone	C+15	73990	58660	6975.2	RAC	110.4	15.6	98	CL	Yes
07/20/94	Sandcone	B+13	74180	58700	6977.2	RAC	89.3	15.1	77	CL	No
07/20/94	Sandcone	B+13 Retest 7/20/94	74180	58700	6977.2	RAC	87.6	15.1	75	CL	No
07/20/94	Sandcone	C+13.5	74090	58750	6976.5	RAC	120.6	14.3	100	CL	Yes
07/20/94	Sandcone	A+13	74320	58620	6975.5	RAC	119.3	14.7	100	CL	Yes
07/20/94	Sandcone	A+14	74180	58570	6975.6	RAC	117.0	13.9	100	CL	Yes
07/20/94	Sandcone	C+14.5	74010	58700	6976.3	RAC	109.9	15.3	96	CL	Yes
07/20/94	Sandcone	D+15	73910	58750	6975.3	RAC	114.5	15.1	100	CL	Yes
07/20/94	Sandcone	E+15	73800	58820	6975.2	RAC	117.6	14.6	100	CL	Yes
07/20/94	Sandcone	D+14	74000	58800	6976.5	RAC	121.4	14.3	100	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/20/94	Sandcone	B+13 Retest 7/20/94	74180	58700	6977.2	RAC	114.7	15.2	99	CL	Yes
07/20/94	Sandcone	F+13.5	73900	59000	6976.4	RAC	113.4	14.6	97	CL	Yes
07/20/94	Sandcone	G+15	73720	58980	6975.6	RAC	121.8	15.5	100	CL	Yes
07/20/94	Sandcone	H+16	73580	58990	6974.3	RAC	114.0	16.1	100	CL	Yes
07/20/94	Sandcone	I+17	73450	59000	6974.6	RAC	110.1	16.0	97	CL	Yes
07/20/94	Sandcone	J+18	73300	59020	6973.3	RAC	119.0	14.7	100	CL	Yes
07/20/94	Sandcone	K+19	73190	59020	6974.5	RAC	122.9	13.9	100	CL	Yes
07/20/94	Sandcone	K+19.5	73150	59000	6973.3	RAC	122.8	15.3	100	CL	Yes
07/20/94	Sandcone	K+18	73250	59080	6975.6	RAC	122.1	14.4	100	CL	Yes
07/20/94	Sandcone	J+17	73380	59080	6976.2	RAC	114.7	15.7	100	CL	Yes
07/20/94	Sandcone	I+16	73520	59060	6975.2	RAC	113.0	16.1	100	CL	Yes
07/21/94	Sandcone	H+15	73670	59050	6976.5	RAC	118.7	15.8	100	CL	Yes

RAC = Radon Attenuation Cover

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UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/21/94	Sandcone	G+14.5	73780	59000	6978.1	RAC	121.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+14	73800	59030	6977.3	RAC	112.7	14.8	97	CL	Yes
07/21/94	Sandcone	F+13	73950	59030	6977.7	RAC	112.1	15.1	99	CL	Yes
07/21/94	Sandcone	F+12.5	73980	59030	6977.7	RAC	114.5	15.1	100	CL	Yes
07/21/94	Sandcone	G+13	73890	59100	6978.4	RAC	111.2	16.0	97	CL	Yes
07/21/94	Sandcone	H+14	73730	59110	6977.6	RAC	113.6	16.2	97	CL	Yes
07/21/94	Sandcone	I+15	73600	59120	6977.1	RAC	110.6	14.6	98	CL	Yes
07/21/94	Sandcone	J+16	73460	59140	6977.4	RAC	110.9	15.7	98	CL	Yes
07/21/94	Sandcone	K+17	73320	59170	6978.3	RAC	108.7	16.1	98	CL	Yes
07/22/94	Sandcone	L+17	73250	59220	6983.9	RAC	121.4	13.9	100	CL	Yes
07/22/94	Sandcone	K+16.5	73360	59200	6979.0	RAC	116.0	15.9	100	CL	Yes
07/22/94	Sandcone	K+16	73380	59210	6980.7	RAC	121.0	14.2	100	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/22/94	Sandcone	J+15	73466	59130	6977.1	RAC	120.3	15.9	100	CL	Yes
07/22/94	Sandcone	H+12	73900	59240	6979.9	RAC	120.8	14.4	100	CL	Yes
07/22/94	Sandcone	J+11	73830	59450	6980.5	RAC	116.5	14.4	100	CL	Yes
07/22/94	Sandcone	K+10	73910	59580	6981.9	RAC	120.4	14.8	100	CL	Yes
07/22/94	Sandcone	L+8	73940	59820	6980.5	RAC	120.0	15.1	100	CL	Yes
07/22/94	Sandcone	M+8	73880	59980	6981.2	RAC	115.4	14.6	100	CL	Yes
07/22/94	Sandcone	N+8	73820	59980	6981.0	RAC	118.1	14.2	100	CL	Yes
07/25/94	Sandcone	G+12.5	73900	59160	6979.6	RAC	111.1	14.6	98	CL	Yes
07/25/94	Sandcone	H+11	73980	59300	6979.9	RAC	116.6	14.2	100	CL	Yes
07/25/94	Sandcone	I+13	73750	59260	6979.3	RAC	114.1	14.5	100	CL	Yes
07/25/94	Sandcone	J+14	73610	59270	6979.3	RAC	118.9	14.6	100	CL	Yes
07/25/94	Sandcone	K+14	73620	59270	6979.5	RAC	114.0	15.1	99	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/26/94	Sandcone	H + 10.5	73920	59300	6979.9	RAC	122.4	14.1	100	CL	Yes
07/26/94	Sandcone	I + 9.5	73970	59410	6979.9	RAC	122.9	15.0	100	CL	Yes
07/26/94	Sandcone	K + 9	73900	59660	6981.0	RAC	119.4	14.8	100	CL	Yes
07/26/94	Sandcone	K + 8	74000	59730	6979.9	RAC	116.8	15.7	100	CL	Yes
07/26/94	Sandcone	M + 7	73950	59970	6980.0	RAC	120.0	14.2	100	CL	Yes
07/26/94	Sandcone	M.5 + 7.5	73900	59960	6980.0	RAC	109.6	15.1	96	CL	Yes
07/27/94	Sandcone	M + 6	74050	60000	6978.9	RAC	114.7	13.6	97	CL	Yes
07/27/94	Sandcone	M + 5	74110	60080	6978.0	RAC	113.7	13.7	96	CL	Yes
07/27/94	Sandcone	N + 4	74120	60220	6979.8	RAC	115.8	14.4	100	CL	Yes
07/27/94	Sandcone	M + 2	74350	60260	6979.8	RAC	111.7	14.3	97	CL	Yes
07/27/94	Sandcone	O + 5	73980	60220	6969.0	RAC	110.3	14.2	95	CL	Yes
07/27/94	Sandcone	O + 5 Retest 7/27/94	73980	60220	6969.0	RAC	114.6	14.8	99	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/27/94	Sandcone	O+4	74040	60300	6980.4	RAC	117.0	14.5	100	CL	Yes
07/27/94	Sandcone	K+13	73600	59410	6983.4	RAC	122.5	15.0	100	CL	Yes
07/27/94	Sandcone	K+10	73860	59600	6981.6	RAC	121.3	14.6	100	CL	Yes
07/27/94	Sandcone	P+3.5	74050	60400	6980.7	RAC	119.0	14.5	100	CL	Yes
07/27/94	Sandcone	O+7.5	73800	60070	6980.7	RAC	115.7	13.8	100	CL	Yes
07/27/94	Sandcone	P+5	73970	60310	6979.8	RAC	114.9	13.8	97	CL	Yes
07/27/94	Sandcone	Q+4.5	73900	60420	6980.0	RAC	116.7	14.2	100	CL	Yes
07/27/94	Sandcone	Q+3.5	73960	60460	6980.9	RAC	115.7	13.7	100	CL	Yes
07/27/94	Sandcone	Q+5.5	73820	60350	6980.2	RAC	115.6	13.5	100	CL	Yes
07/27/94	Sandcone	P+7.5	73720	60150	6981.6	RAC	118.9	14.6	100	CL	Yes
07/27/94	Sandcone	Q.5+6.5	73710	60320	6981.4	RAC	120.7	14.2	100	CL	Yes
07/27/94	Sandcone	Q+6	73780	60310	6980.4	RAC	116.5	14.8	100	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK05

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
07/28/94	Sandcone	N+7	73900	60020	6979.0	RAC	117.1	14.8	100	CL	Yes
07/28/94	Sandcone	O+6	73900	60160	6080.9	RAC	115.6	15.2	100	CL	Yes
07/28/94	Sandcone	O+4.5	74100	60300	6980.4	RAC	112.7	14.8	99	CL	Yes
07/28/94	Sandcone	N+7.5	73850	60000	6980.7	RAC	117.6	13.9	100	CL	Yes
07/28/94	Sandcone	N+5	74050	60160	6978.6	RAC	119.1	14.7	100	CL	Yes
08/01/94	Sandcone	K.5+11	73750	59580	6982.9	RAC	116.9	13.6	100	CL	Yes
08/01/94	Sandcone	M+9	73800	59820	6983.8	RAC	123.9	14.2	100	CL	Yes
08/01/94	Sandcone	N+8.5	73780	59920	6984.0	RAC	121.3	13.9	100	CL	Yes
08/01/94	Sandcone	O+8.5	73750	60000	6984.7	RAC	126.6	13.7	100	CL	Yes
08/01/94	Sandcone	Q+7.5	73650	60230	6981.0	RAC	119.3	13.9	100	CL	Yes
08/01/94	Sandcone	L+17	73250	59240	6988.9	RAC	121.4	14.2	100	CL	Yes
08/01/94	Sandcone	K.5+15	73430	59260	6985.3	RAC	116.8	13.6	100	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/01/94	Sandcone	L+16	73300	59220	6985.7	RAC	121.5	13.9	100	CL	Yes
08/01/94	Sandcone	L+15	73400	59350	6986.9	RAC	118.6	13.1	100	CL	Yes
08/01/94	Sandcone	K.5+14	73520	59400	6985.0	RAC	121.1	11.7	100	CL	Yes
08/02/94	Sandcone	L+14	73480	59430	6987.1	RAC	119.8	13.6	100	CL	Yes
08/02/94	Sandcone	M+11	73640	59700	6988.7	RAC	118.1	13.6	100	CL	Yes
08/02/94	Sandcone	N+10	73660	59840	6987.8	RAC	122.6	13.8	100	CL	Yes
08/02/94	Sandcone	P+9	73610	60050	6986.0	RAC	114.1	14.2	100	CL	Yes
08/02/94	Sandcone	R+7	73650	60320	6981.4	RAC	113.1	14.2	98	CL	Yes
08/02/94	Sandcone	Q+8	73640	60200	6981.8	RAC	116.1	13.9	100	CL	Yes
08/02/94	Sandcone	O+9	73650	60030	6981.8	RAC	124.5	14.5	100	CL	Yes
08/02/94	Sandcone	M+10	73720	59760	6986.8	RAC	111.6	13.1	98	CL	Yes
08/02/94	Sandcone	L+12	73630	59550	6986.9	RAC	117.8	13.8	100	CL	Yes

RAC = Radon Attenuation Cover

JK050.SUM/cb

UNITED NUCLEAR CORPORATION 1994 RECLAMATION

TEST SUMMARY FOR SANDCONE DENSITIES

WT JOB NO. 3144JK050

DATE OF REPORT 08/29/94

DATE	TYPE OF TEST	GRID	NORTHING	EASTING	ELEV.	MATERIAL TYPE	DENSITY, PCF	MOISTURE, %	RELATIVE COMPACTION	USCS SOIL CLASS	WITHIN SPECS. ?
08/03/94	Sandcone	S+8.5	73470	60320	6994.1	RAC	112.5	14.3	97	CL	Yes
08/03/94	Sandcone	P+10	73540	59990	6989.7	RAC	108.8	14.3	95	CL	Yes
08/03/94	Sandcone	N+10.5	73620	59800	6990.6	RAC	109.9	14.0	96	CL	Yes
08/03/94	Sandcone	M+12	73570	59630	6990.9	RAC	116.5	13.9	100	CL	Yes
08/08/94	Sandcone	S+10	73340	60220	6994.1	RAC	118.2	14.6	100	CL	Yes
08/08/94	Sandcone	O+10.5	73600	59950	6989.1	RAC	112.4	14.2	99	CL	Yes
08/08/94	Sandcone	P.5+10.0	73530	60030	6990.0	RAC	115.1	14.1	100	CL	Yes
08/08/94	Sandcone	O+12	73450	59800	6977.4	RAC	113.2	14.3	99	CL	Yes
08/08/94	Sandcone	N+12	73510	59710	6994.0	RAC	112.5	14.3	99	CL	Yes
08/08/94	Sandcone	N+13	73440	59650	6997.3	RAC	108.9	15.9	95	CL	Yes
08/08/94	Sandcone	M+14	73420	59500	6993.0	RAC	117.1	13.5	100	CL	Yes

RAC = Radon Attenuation Cover

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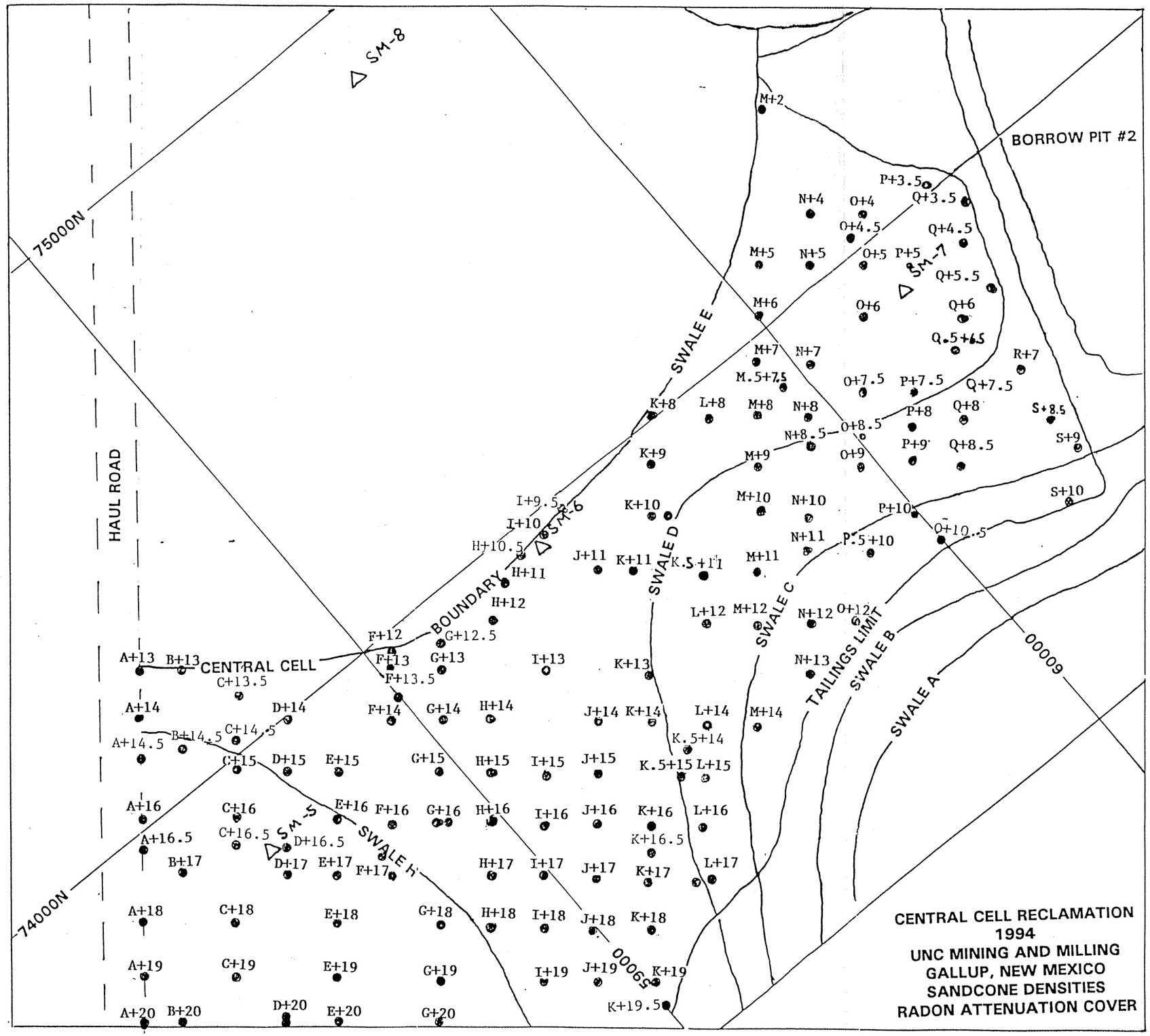
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HAUL ROAD
BORROW PIT #2
SWALE E
SM-7
SWALE D
SM-6
BOUNDARY
SWALE C
TAILINGS LIMIT
SWALE B
SWALE A
CENTRAL CELL
SM-5
SWALE H
74000N
59000
00009
M+2
P+3.5
Q+3.5
N+4
O+4
O+4.5
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Q.5+6.5
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E+20
G+20
K+19.5
CENTRAL CELL RECLAMATION
1994
UNC MINING AND MILLING
GALLUP, NEW MEXICO
SANDCONE DENSITIES
RADON ATTENUATION COVER

Western Technologies Inc.
The Quality People
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400 South Lorena Avenue
Farmington, New Mexico 87401
(505) 327-4966 • fax 327-5293

SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-2*
REPORT DATE *07-13-94*
REVIEWED BY *M. Branson*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *07-07-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	12.7	115.8	100	115.7	95	12.3 to 14.3	YES
2	14.0	109.5	95	115.7	95	12.3 to 14.3	YES
3	13.4	115.4	100+	112.5	95	12.9 to 14.9	YES
4	11.8	116.5	100+	115.3	95	10.0 to 12.0	YES
5	14.0	115.1	99	115.7	95	12.3 to 14.3	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	7/7	Grid point B-20, 93660 N. & 58270 E.	6965.2
2	7/7	Grid point D-20, 73520 N. & 58420 E.	6964.6
3	7/7	Grid point G-20, 73340 N. & 58660 E.	6963.7
4	7/7	Grid point G-19, 73440 N. & 58730 E.	6968.0
5	7/7	Grid point A-19, 73790 N. & 58270 E.	6966.8

+DATUM: *Elev. of Test = Bottom of 6" RAC*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	G+19 RAC BOTTOMLIFT	10.0	115.3	698-A
SANDY LEAN CLAY (RAC)	GRID PT A-19 BOTTOM LIFT	12.3	115.7	698-A
SANDY SILTY CLAY	GRIDPT I-19 RAC BOTTOMLIFT	12.9	112.5	698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-5*
REPORT DATE *07-18-94*
REVIEWED BY *M. Branson*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *07-08-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	15.6	115.3	99	116.8	95	12.4 to 16.4	YES
2	16.1	116.9	100	116.8	95	12.4 to 16.4	YES
3	14.3	111.1	99	112.5	95	10.9 to 14.9	YES
4	13.6	118.4	100+	113.0	95	10.6 to 14.6	YES
5	14.6	116.7	100+	112.5	95	10.9 to 14.9	YES
6	15.9	112.3	96	116.8	95	12.4 to 16.4	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/08	Grid Pt F-16 73710 N. & 58820 E.	6973.6
2	07/08	Grid Pt G-16 73650 N. & 58820 E.	6973.8
3	07/08	Grid Pt I-18 73360 N. & 58930 E.	6971.6
4	07/08	Grid Pt J-19 73220 N. & 58870 E.	6971.4
5	07/08	Grid Pt H-18 73300 N. & 59010 E.	6972.9
6	07/08	Grid Pt F-14 73880 N. & 58950 E.	6976.6

+DATUM: *Test Elev. = Radon Atten. Cover Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-2922/D-3017
2	Subgrade	ASTM D-2922/D-3017
3	Subgrade	ASTM D-2922/D-3017
4	Subgrade	ASTM D-2922/D-3017
5	Subgrade	ASTM D-2922/D-3017
6	Subgrade	ASTM D-2922/D-3017

MOISTURE/DENSITY RELATIONSHIP		OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
MATERIAL DESCRIPTION	SOURCE			
SANDY SILTY CLAY	GRIDPT I-19 RAC BOTTOMLIFT	12.9	112.5	698-A
SANDY SILTY CLAY	GRIDPT J-19 TOPLIFT	12.6	113.0	698-A
SANDY LEAN CLAY	BORROW PIT #2 STOCKPILE	14.4	116.8	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-5*
REPORT DATE *07-18-94*
REVIEWED BY *M. Branson*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *07-08-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	16.2	111.2	95	116.8	95	12.4 to 16.4	YES
8	13.9	119.8	100+	113.0	95	10.6 to 14.6	YES
9	13.8	115.2	100+	113.0	95	10.6 to 14.6	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	07/08	Grid Pt G-16 73650 N. & 58910 E.	6973.4
8	07/08	Grid Pt H-17 73520 N. & 58920 E.	6972.5
9	07/08	Grid Pt I-19 73450 N. & 59000 E.	6973.6

+DATUM: *Test Elev. = Radon Atten. Cover Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-2922/D-3017
8	Subgrade	ASTM D-2922/D-3017
9	Subgrade	ASTM D-2922/D-3017

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-3*
REPORT DATE *07-13-94*
REVIEWED BY *M. Branson*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *07-08-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	16.1	110.7	97	114.6	95	14.6 to 16.6	YES
2	15.8	116.3	100+	114.6	95	14.6 to 16.6	YES
3	16.4	115.7	100+	114.6	95	14.6 to 16.6	YES
4	16.5	110.6	97	114.6	95	14.6 to 16.6	YES
5	15.1	111.3	97	114.6	95	14.6 to 16.6	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM -
1	7/8	Grid Point A-20, 73720 N. & 58200 E.	6965.
2	7/8	Grid Point E-20, 73310 N. & 58500 E.	6964.
3	7/8	Grid Point C-19, 73670 N. & 58410 E.	6964.
4	7/8	Grid Point D-20, 73530 N. & 58420 E.	6964.
5	7/8	Grid Point E-19, 73550 N. & 58560 E.	6968.

+DATUM: *Elev. of Test = Top of RAC*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	LINE A-18 RAC TOPLIFT	14.6	114.6	698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

.IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-6*
REPORT DATE *07-18-94*
REVIEWED BY *M. Branson*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-12-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	16.2	115.7	100+	114.6	95	12.6 to 16.6	YES
2	17.0	111.8	99	112.9	95	13.3 to 17.3	YES
3	16.8	112.5	100	112.9	95	13.3 to 17.3	YES
4	16.5	98.2	87	112.9	95	13.3 to 17.3	NO
5	17.2	101.9	90	112.9	95	13.3 to 17.3	NO
6	16.3	111.5	99	112.9	95	13.3 to 17.3	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
1	07/12	Grid Pt A-18 73860 N. & 58340 E.	6970.2
2	07/12	Grid Pt C-18 73750 N. & 58480 E.	6969.7
3	07/12	Grid Pt E-18 73620 N. & 58620 E.	6969.8
4	07/12	Grid Pt G-18 73490 N. & 58780 E.	6969.7
5	07/12	Grid Pt F-17 73630 N. & 58770 E.	6971.7
6	07/12	Grid Pt B-17 73890 N. & 58460 E.	6972.1

+DATUM: *Test Elev. = Radon Attenuation Cover*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	LINE A-18 RAC TOPLIFT	14.6	114.6	698-A
SANDY LEAN CLAY	GRID PT C-16(RAC) TOP LIFT	15.3	112.9	698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-6*
REPORT DATE *07-18-94*
REVIEWED BY *M. Branson*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-12-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	*17.0*	*104.0*	*92*	*112.9*	*95*	*13.3 to 17.3*	*NO*

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	*07/12*	*Grid Pt D-17 73760 N. & 58610 E.*	*6971.4*

+DATUM: *Test Elev. = Radon Attenuation Cover*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	*Subgrade*	*ASTM D-1556/AASHTO T-217*

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SOIL/AGGREGATE FIELD DENSITY TEST

ıENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-8*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-18-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	13.8	122.4	100+	115.7	95	11.6 to 15.6	YES
2	14.1	119.1	100+	115.7	95	11.6 to 15.6	YES
3	14.6	114.1	99	115.3	95	10.9 to 14.9	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
1	07/18	Grid Point E+17, 73690 N. & 58690 E.	6970.6
2	07/18	Grid Point D+17, 73770 N. & 59610 E.	6974.5
3	07/18	Grid Point G+18, 73500 N. & 59780 E.	6970.1

+DATUM: *Test Elevation = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP		OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
MATERIAL DESCRIPTION	SOURCE			
CLAYEY SAND	NATIVE T-17	13.6	115.7	D698-A
Sandy Clay (RAC)	Borrow Pit #2 Stockpile	12.9	115.3	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
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Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-9*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-19-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	15.8	121.9	100+	112.9	95	13.3 to 17.3	YES
2	15.9	112.8	100	112.9	95	13.3 to 17.3	YES
3	15.6	117.2	100+	112.9	95	13.3 to 17.3	YES
4	15.1	121.2	100+	112.9	95	13.3 to 17.3	YES
5	14.8	123.5	100+	112.9	95	13.3 to 17.3	YES
6	16.8	119.6	100+	112.9	95	13.3 to 17.3	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/19	Grid Point A+16.5, 73960 N. & 58410 E.	6971.7
2	07/19	Grid Point C+16.5, 73860 N. & 58560 E.	6972.9
3	07/19	Grid Point D+16.5, 73760 N. & 58650 E.	6970.4
4	07/19	Grid Point F+16.5, 73680 N. & 58810 E.	6972.7
5	07/19	Grid Point E+16, 73710 N. & 58820 E.	6973.7
6	07/19	Grid Point C+16, 73900 N. & 58600 E.	6973.6

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	GRID PT C-16(RAC) TOP LIFT	15.3	112.9	D698-A
Sandy Clay (RAC)	Borrow Pit #2 Stockpile	13.4	116.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-9*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-19-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	13.4	120.0	100+	116.1	95	11.4 to 15.4	YES
8	15.4	116.0	100	116.1	95	11.4 to 15.4	YES
9	15.8	112.2	99	112.9	95	13.3 to 17.3	YES
10	15.6	110.4	98	112.9	95	13.3 to 17.3	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	07/19	Grid Point A+16, 74050 N. & 58450 E.	6973.1
8	07/19	Grid Point A+14.5, 74150 N. & 58540 E.	6975.6
9	07/19	Grid Point B+14.5, 74120 N. & 58630 E.	6977.4
10	07/19	Grid Point C+15, 73990 N. & 58660 E.	6975.2

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
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Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-10*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *07-20-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	15.1	89.2	77	116.1	95	11.4 to 15.4	NO
2	15.1	87.5	75	116.1	95	11.4 to 15.4	NO
3	14.3	120.5	100+	114.7	95	12.1 to 16.1	YES
4	14.7	119.5	100+	116.1	95	11.4 to 15.4	YES
5	13.9	117.3	100+	116.1	95	11.4 to 15.4	YES
6	15.3	109.9	96	114.7	95	12.1 to 16.1	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/20	Grid Point B+13, 74180 N. & 58700 E.	6977.2
2	07/20	Retest #1 (07/20/94)	6977.2
3	07/20	Grid Point C+13.5, 74090 N. & 58750 E.	6976.5
4	07/20	Grid Point A+13, 74320 N. & 58620 E.	6975.5
5	07/20	Grid Point A+14, 74180 N. & 58570 E.	6975.6
6	07/20	Grid Point C+14.5, 74010 N. & 58700 E.	6976.3

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	LINE A-18 RAC TOPLIFT	14.6	114.6	D698-A
SANDY SILTY CLAY	GRIDPT J-19 TOPLIFT	12.6	113.0	D698-A
BROWN CLAYEY SAND	73710N.&58820E. ELV=6973.6	14.4	116.8	D698-A
CLAYEY SAND	GRID PT E-14 73930N&58870E	13.8	114.8	D698-A
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
CLAYEY SAND	T-16	14.2	113.0	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
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Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-10*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
DATE : *07-20-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	15.1	114.6	100	114.8	95	11.8 to 15.8	YES
8	14.6	117.5	100+	114.8	95	11.8 to 15.8	YES
9	14.3	121.4	100+	115.8	95	10.8 to 14.8	YES
10	15.2	114.6	99	116.1	95	11.4 to 15.4	YES
11	14.6	113.6	97	116.8	95	12.4 to 16.4	YES
12	15.5	121.6	100+	114.8	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	07/20	Grid Point D+15, 73910 N. & 58750 E.	6975.3
8	07/20	Grid Point E+15, 73800 N. & 58820 E.	6975.2
9	07/20	Grid Point D+14, 74000 N. & 58800 E.	6976.5
10	07/20	Retest #2 (07/20/94)	6977.2
11	07/20	Grid Point F+13.5, 73900 N. & 59000 E.	6976.4
12	07/20	Grid Point G+15, 73720 N. & 58980 E.	6975.6

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217
11	Subgrade	ASTM D-1556/AASHTO T-217
12	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
NATIVE SUBGRADE	GRID G1.14	12.8	115.8	D698-A
Sandy Clay (RAC)	Borrow Pit #2 Stockpile	13.4	116.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
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JOB NO. *3144JK050*
LAB/INV NO. *31440235-10*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *3*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-20-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
13	16.1	113.9	100+	113.0	95	12.2 to 16.2	YES
14	16.0	110.0	97	113.0	95	12.2 to 16.2	YES
15	14.7	119.0	100+	114.6	95	12.6 to 16.6	YES
16	13.9	122.9	100+	113.0	95	10.6 to 14.6	YES
17	15.3	122.8	100+	114.6	95	12.6 to 16.6	YES
18	14.4	122.2	100+	114.6	95	12.6 to 16.6	YES
19	15.7	114.8	100+	113.0	95	12.2 to 16.2	YES
20	16.1	113.1	100	113.0	95	12.2 to 16.2	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
13	07/20	Grid Point H+16, 73580 N. & 58990 E.	6974.3
14	07/20	Grid Point I+17, 73450 N. & 59000 E.	6974.6
15	07/20	Grid Point J+18, 73300 N. & 59020 E.	6973.3
16	07/20	Grid Point K+19, 73190 N. & 59020 E.	6974.5
17	07/20	Grid Point K+19.5, 73150 N. & 59000 E.	6973.3
18	07/20	Grid Point K+18, 73250 N. & 59080 E.	6975.6
19	07/20	Grid Point J+17, 73380 N. & 59080 E.	6976.2
20	07/20	Grid Point I+16, 73520 N. & 59060 E.	6975.2

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
13	Subgrade	ASTM D-1556/AASHTO T-217
14	Subgrade	ASTM D-1556/AASHTO T-217
15	Subgrade	ASTM D-1556/AASHTO T-217
16	Subgrade	ASTM D-1556/AASHTO T-217
17	Subgrade	ASTM D-1556/AASHTO T-217
18	Subgrade	ASTM D-1556/AASHTO T-217
19	Subgrade	ASTM D-1556/AASHTO T-217
20	Subgrade	ASTM D-1556/AASHTO T-217

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-11*
REPORT DATE *08-25-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-21-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	15.8	118.9	100+	114.8	95	11.8 to 15.8	YES
2	15.1	121.4	100+	114.8	95	11.8 to 15.8	YES
3	14.8	112.7	97	115.8	95	10.8 to 14.8	YES
4	15.1	112.1	99	113.6	95	11.4 to 15.4	YES
5	15.1	114.5	100+	113.6	95	11.4 to 15.4	YES
6	16.0	111.1	97	114.7	95	12.1 to 16.1	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
1	07/21	Grid Point H+15, 73670 N. & 59050 E.	6976.5
2	07/21	Grid Point G+14.5, 73780 N. & 59000 E.	6978.1
3	07/21	Grid Point G+14, 73800 N. & 59030 E.	6977.3
4	07/21	Grid Point F+13, 73950 N. & 59030 E.	6977.7
5	07/21	Grid Point F+12.5, 73980 N. & 59030 E.	6977.7
6	07/21	Grid Point G+13, 73890 N. & 59100 E.	6978.4

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY SILTY CLAY	GRIDPT K-16 BOTTOMLIFT	15.8	110.5	D698-A
BROWN CLAYEY SAND	73710N.&58820E. ELV=6973.6	14.4	116.8	D698-A
CLAYEY SAND	GRID PT E-14 73930N&58870E	13.8	114.8	D698-A
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
CLAYEY SAND	T-16	14.2	113.0	D698-A
NATIVE SUBGRADE	GRID G1.14	12.8	115.8	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-11*
REPORT DATE *08-25-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-21-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	16.2	113.7	97	116.8	95	12.4 to 16.4	YES
8	14.6	110.6	98	113.0	95	12.2 to 16.2	YES
9	15.7	111.0	98	113.0	95	12.2 to 16.2	YES
10	16.1	108.8	98	110.5	95	13.8 to 17.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	07/21	Grid Point H+14, 73730 N. & 59110 E.	6977.6
8	07/21	Grid Point I+15, 73600 N. & 59120 E.	6977.1
9	07/21	Grid Point J+16, 73460 N. & 59140 E.	6977.4
10	07/21	Grid Point K+17, 73320 N. & 59170 E.	6978.3

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY CLAY	J-10 ELEVATION 6979.8	13.4	113.6	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
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Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-12*
REPORT DATE *08-25-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-22-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	13.9	121.4	100+	114.1	95	10.5 to 14.5	YES
2	14.4	117.4	100+	114.1	95	10.5 to 14.5	YES
3	14.2	121.0	100+	116.6	95	10.8 to 14.8	YES
4	15.9	120.1	100+	113.0	95	12.2 to 16.2	YES
5	14.4	120.8	100+	114.7	95	12.1 to 16.1	YES
6	14.4	116.5	100+	114.8	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/22	Grid Point L+17, 73250 N. & 59220 E.	6983.9
2	07/22	Grid Point K+16.5, 73360 N. & 59200 E.	6979.0
3	07/22	Grid Point K+16, 73380 N. & 59210 E.	6980.7
4	07/22	Grid Point J+15, 73460 N. & 59130 E.	6977.1
5	07/22	Grid Point H+12, 73900 N. & 59240 E.	6979.9
6	07/22	Grid Point J+11, 73830 N. & 59450 E.	6980.5

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
CLAYEY SAND	GRID PT E-14 73930N&58870E	13.8	114.8	D698-A
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
CLAYEY SAND	T-16	14.2	113.0	D698-A
SANDY CLAY	GRID L-7 ELEVATION 6979.3	12.5	114.1	D698-A
SANDY CLAY	J-10 ELEVATION 6979.8	13.4	113.6	D698-A
Sany Clay	L-16	12.8	116.6	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-12*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-22-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	14.8	120.4	100+	113.6	95	11.4 to 15.4	YES
8	15.1	120.0	100+	114.1	95	11.8 to 15.8	YES
9	14.6	115.3	100+	114.1	95	11.8 to 15.8	YES
10	14.2	118.2	100+	114.1	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	07/22	Grid Point K+10, 73910 N. & 59580 E.	6981.9
8	07/22	Grid Point L+8, 73940 N. & 59820 E.	6980.5
9	07/22	Grid Point M+8, 73880 N. & 59880 E.	6981.2
10	07/22	Grid Point N+8, 73820 N. & 59980 E.	6981.0

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
Sandy Clay	P-8	13.8	114.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-13*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-25-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	14.6	111.0	98	113.6	95	11.4 to 15.4	YES
2	14.2	116.6	100+	114.8	95	11.8 to 15.8	YES
3	14.5	114.2	100	114.7	95	12.1 to 16.1	YES
4	14.6	118.7	100+	114.7	95	12.1 to 16.1	YES
5	15.1	113.9	99	114.7	95	12.1 to 16.1	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/25	Grid Point G+12.5, 73900 N. & 59160 E.	6979.6
2	07/25	Grid Point H+11, 73980 N. & 59300 E.	6979.9
3	07/25	Grid Point I+13, 73750 N. & 59260 E.	6979.3
4	07/25	Grid Point J+14, 73610 N. & 59270 E.	6979.3
5	07/25	Grid Point K+14, 73620 N. & 59270 E.	6979.5

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
CLAYEY SAND	GRID PT E-14 73930N&58870E	13.8	114.8	D698-A
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
SANDY CLAY	J-10 ELEVATION 6979.8	13.4	113.6	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-14*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-26-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	14.1	122.4	100+	114.8	95	11.8 to 15.8	YES
2	15.0	121.1	100+	114.8	95	11.8 to 15.8	YES
3	14.8	119.3	100+	114.8	95	11.8 to 15.8	YES
4	15.7	116.8	100+	114.8	95	11.8 to 15.8	YES
5	14.2	120.9	100+	114.1	95	10.5 to 14.5	YES
6	15.1	109.7	96	114.1	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/26	Grid Point H+10.5, 73920 N. & 59300 E.	6979.9
2	07/26	Grid Point I+9.5, 73970 N. & 59410 E.	6979.9
3	07/26	Grid Point K+9, 73900 N. & 59660 E.	6981.0
4	07/26	Grid Point K+8, 74000 N. & 59730 E.	6979.9
5	07/26	Grid Point M+7, 73950 N. & 59970 E.	6980.0
6	07/26	Grid Point M.5+7.5, 73900 N. & 59960 E.	6980.0

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
CLAYEY SAND	GRID PT E-14 73930N&58870E	13.8	114.8	D698-A
SANDY CLAY	GRID L-7 ELEVATION 6979.3	12.5	114.1	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-15*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-27-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	13.6	114.7	97	118.0	95	10.0 to 14.0	YES
2	13.7	113.7	96	118.0	95	10.0 to 14.0	YES
3	14.4	115.7	100+	114.1	95	11.8 to 15.8	YES
4	14.3	111.8	97	115.7	95	11.3 to 15.3	YES
6	14.2	110.2	95	115.7	95	11.3 to 15.3	YES
7	14.8	114.5	99	115.7	95	11.3 to 15.3	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/27	Grid Point M-6, 74050 N. & 60000 E.	6978.9
2	07/27	Grid Point M-5, 74110 N. & 60080 E.	6978.0
3	07/27	Grid Point N-4, 74120 N. & 60220 E.	6979.8
4	07/27	Grid Point M-2, 74350 N. & 60260 E.	6979.8
6	07/27	Grid Point O+5, 73980 N. & 60220 E.	6969.0
7	07/27	Retest #6 (07/27/94)	6969.0

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217
7	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
NATIVE SUBGRADE	GRID G1.14	12.8	115.8	D698-A
SANDY CLAY	O-7 ELEVATION 6980.5	13.3	115.7	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A
Sandy Clay	L-11	12.0	118.0	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-15*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-27-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
8	14.5	117.1	100+	114.1	95	11.8 to 15.8	YES
9	15.0	122.4	100+	114.7	95	12.1 to 16.1	YES
10	14.6	121.0	100+	115.8	95	10.8 to 14.8	YES
11	14.5	119.3	100+	114.1	95	11.8 to 15.8	YES
12	13.8	115.9	100	115.7	95	11.3 to 15.3	YES
13	13.8	114.7	97	118.0	95	10.0 to 14.0	YES
14	14.2	116.7	100+	115.7	95	11.3 to 15.3	YES
15	13.7	115.6	100	115.7	95	11.3 to 15.3	YES
16	13.5	115.5	100	115.7	95	11.3 to 15.3	YES
17	14.6	119.0	100+	114.1	95	11.8 to 15.8	YES
18	14.2	120.4	100+	115.7	95	11.3 to 15.3	YES

TEST 'O.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
8	07/27	Grid Point O+4, 74040 N. & 60300 E.	6980.4
9	07/27	Grid Point K+13, 73600 N. & 59410 E.	6983.4
10	07/27	Grid Point K+10, 73860 N. & 59600 E.	6981.6
11	07/27	Grid Point P+3.5, 74050 N. & 60400 E.	6980.7
12	07/27	Grid Point O+7.5, 73800 N. & 60070 E.	6980.7
13	07/27	Grid Point P+5, 73970 N. & 60310 E.	6979.8
14	07/27	Grid Point Q+4.5, 73900 N. & 60420 E.	6980.0
15	07/27	Grid Point Q+3.5, 73960 N. & 60460 E.	6980.9
16	07/27	Grid Point Q+5.5, 73820 N. & 60350 E.	6980.2
17	07/27	Grid Point P+7-5, 73720 N. & 60150 E.	6981.6
18	07/27	Grid Point Q5+6-5, 73710 N. & 60320 E.	6981.4

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217
11	Subgrade	ASTM D-1556/AASHTO T-217
12	Subgrade	ASTM D-1556/AASHTO T-217
13	Subgrade	ASTM D-1556/AASHTO T-217
14	Subgrade	ASTM D-1556/AASHTO T-217
15	Subgrade	ASTM D-1556/AASHTO T-217
16	Subgrade	ASTM D-1556/AASHTO T-217
17	Subgrade	ASTM D-1556/AASHTO T-217
18	Subgrade	ASTM D-1556/AASHTO T-217

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SOIL/AGGREGATE FIELD DENSITY TEST

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Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440235-15*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *3*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *07-27-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
19	*14.8*	*116.5*	*100+*	*115.7*	*95*	*11.3 to 15.3*	*YES*

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
19	*07/27*	*Grid Point Q+6, 73780 N. & 60310 E.*	*6980.4*

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
19	*Subgrade*	*ASTM D-1556/AASHTO T-217*

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
Post Office Box 3077
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JOB NO. *3144JK050*
LAB/INV NO. *31440235-16*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *07-28-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	14.8	117.0	100+	114.1	95	11.8 to 15.8	YES
2	15.2	115.5	100	115.7	95	11.3 to 15.3	YES
3	14.8	112.7	99	114.1	95	11.8 to 15.8	YES
4	13.9	117.7	100+	114.1	95	11.8 to 15.8	YES
5	14.7	119.2	100+	114.1	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	07/28	Grid Point N+7, 73900 N. & 60020 E.	6979.0
2	07/28	Grid Point O+6, 73900 N. & 60160 E.	6080.9
3	07/28	Grid Point O+4.5, 74100 N. & 60300 E.	6980.4
4	07/28	Grid Point N+7.5, 73850 N. & 60000 E.	6980.7
5	07/28	Grid Point N+5, 74050 N. & 60160 E.	6978.6

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY CLAY	0-7 ELEVATION 6980.5	13.3	115.7	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

CLIENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440279*
REPORT DATE *08-25-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *08-01-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	13.6	116.8	100+	115.8	95	10.8 to 14.8	YES
2	14.2	123.9	100+	114.1	95	11.8 to 15.8	YES
3	13.9	121.4	100+	114.1	95	11.8 to 15.8	YES
4	13.7	126.5	100+	118.0	95	10.0 to 14.0	YES
5	13.9	119.3	100+	118.0	95	10.0 to 14.0	YES
6	14.2	121.3	100+	114.1	95	10.5 to 14.5	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	08/01	Grid Point K.5+11, 73750 N. & 59580 E.	6982.9
2	08/01	Grid Point M+9, 73800 N. & 59820 E.	6983.8
3	08/01	Grid Point N+8.5, 73780 N. & 59920 E.	6984.0
4	08/01	Grid Point O+8.5, 73750 N. & 60000 E.	6984.7
5	08/01	Grid Point Q+7.5, 73650 N. & 60230 E.	6981.0
6	08/01	Grid Point L-17, 73250 N. & 59240 E.	6988.9

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY LEAN CLAY	G+19 RAC BOTTOMLIFT	10.0	115.3	D698-A
NATIVE SUBGRADE	GRID G1.14	12.8	115.8	D698-A
SANDY CLAY	GRID L-7 ELEVATION 6979.3	12.5	114.1	D698-A
Sany Clay	L-16	12.8	116.6	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A
Sandy Clay	L-11	12.0	118.0	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440279*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *08-01-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	13.6	117.0	100	116.6	95	10.8 to 14.8	YES
8	13.9	121.6	100+	116.6	95	10.8 to 14.8	YES
9	13.1	118.5	100+	116.6	95	10.8 to 14.8	YES
10	11.7	121.3	100+	115.3	95	8.0 to 12.0	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
7	08/01	Grid Point K.5+15, 73430 N. & 59260 E.	6985.3
8	08/01	Grid Point L-16, 73300 N. & 59220 E.	6985.7
9	08/01	Grid Point L-15, 73400 N. & 59350 E.	6986.9
10	08/01	Grid Point K.5-14, 73520 N. & 59400 E.	6985.0

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217
10	Subgrade	ASTM D-1556/AASHTO T-217

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SOIL/AGGREGATE FIELD DENSITY TEST

.ENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440279-1*
REPORT DATE *08-25-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *08-02-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	13.6	119.8	100+	116.1	95	11.4 to 15.4	YES
2	13.6	118.0	100	118.0	95	10.0 to 14.0	YES
3	13.8	122.5	100+	114.1	95	11.8 to 15.8	YES
4	14.2	114.1	100	114.1	95	11.8 to 15.8	YES
5	14.2	113.3	98	115.7	95	11.3 to 15.3	YES
6	13.9	116.1	100	116.5	95	11.0 to 15.0	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM+
1	08/02	Grid Point L+14, 73480 N. & 59430 E.	6987.1
2	08/02	Grid Point M+11, 73640 N. & 59700 E.	6988.7
3	08/02	Grid Point N+10, 73660 N. & 59840 E.	6987.8
4	08/02	Grid Point P+9, 73610 N. & 60050 E.	6986.0
5	08/02	Grid Point R+7, 73650 N. & 60320 E.	6981.4
6	08/02	Grid Point Q+8, 73640 N. & 60200 E.	6981.8

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
SANDY CLAY	O-7 ELEVATION 6980.5	13.3	115.7	D698-A
Sandy Clay	S-9	13.0	116.5	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A
Sandy Clay	L-11	12.0	118.0	D698-A
Sandy Clay (RAC)	Borrow Pit #2 Stockpile	13.4	116.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
Post Office Box 3077
Gallup, NM 87305

JOB NO. *3144JK050*
LAB/INV NO. *31440279-1*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*
DATE : *08-02-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	14.5	124.4	100+	114.1	95	11.8 to 15.8	YES
8	13.1	111.6	98	114.1	95	11.8 to 15.8	YES
9	13.8	117.8	100	118.0	95	10.0 to 14.0	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	08/02	Grid Point O+9, 73650 N. & 60030 E.	6981.8
8	08/02	Grid Point M+10, 73720 N. & 59760 E.	6986.8
9	08/02	Grid Point L+12, 73630 N. & 59550 E.	6986.9

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	Subgrade	ASTM D-1556/AASHTO T-217
8	Subgrade	ASTM D-1556/AASHTO T-217
9	Subgrade	ASTM D-1556/AASHTO T-217

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
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JOB NO. *3144JK050*
LAB/INV NO. *31440279-2*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *08-03-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	14.3	112.8	97	116.5	95	11.0 to 15.0	YES
2	14.3	117.9	100+	114.1	95	11.8 to 15.8	YES
3	14.0	109.9	96	114.1	95	11.8 to 15.8	YES
4	13.9	116.6	100+	114.1	95	11.8 to 15.8	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	08/03	Grid Point S+8.5, 73470 N. & 60320 E.	6994.1
2	08/03	Grid Point P+10, 73540 N. & 59990 E.	6989.7
3	08/03	Grid Point N+10.5, 73620 N. & 59800 E.	6990.6
4	08/03	Grid Point M+12, 73570 N. & 59630 E.	6990.9

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP				
MATERIAL DESCRIPTION	SOURCE	OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
Sandy Clay	S-9	13.0	116.5	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

IENT : *UNC Mining and Milling*
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JOB NO. *3144JK050*
LAB/INV NO. *31440279-3*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *1*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales* DATE : *08-08-94*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
1	14.6	118.2	100+	116.5	95	11.0 to 15.0	YES
2	14.2	112.4	98	114.7	95	12.1 to 16.1	YES
3	14.1	115.1	100	114.7	95	12.1 to 16.1	YES
4	14.3	113.2	99	114.7	95	12.1 to 16.1	YES
5	14.3	112.4	99	114.1	95	11.8 to 15.8	YES
6	15.9	108.9	95	114.7	95	12.1 to 16.1	YES

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
1	08/08	Grid Point S+10, 73340 N. & 60220 E.	6994.1
2	08/08	Grid Point O+10.5, 73600 N. & 59950 E.	6989.1
3	08/08	Grid Point P.5+10, 73530 N. & 60030 E.	6990.0
4	08/08	Grid Point O+.12, 73450 N. & 59800 E.	6977.4
5	08/08	Grid Point N+12, 73510 N. & 59710 E.	6994.0
6	08/08	Grid Point N+13, 73440 N. & 59650 E.	6997.3

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
1	Subgrade	ASTM D-1556/AASHTO T-217
2	Subgrade	ASTM D-1556/AASHTO T-217
3	Subgrade	ASTM D-1556/AASHTO T-217
4	Subgrade	ASTM D-1556/AASHTO T-217
5	Subgrade	ASTM D-1556/AASHTO T-217
6	Subgrade	ASTM D-1556/AASHTO T-217

MOISTURE/DENSITY RELATIONSHIP		OPTIMUM MOISTURE (%)	MAXIMUM DRY DENSITY (pcf)	TESTED PER ASTM
MATERIAL DESCRIPTION	SOURCE			
SANDY CLAY	UNC J-13	14.1	114.7	D698-A
Sandy Clay	S-9	13.0	116.5	D698-A
Sandy Clay	P-8	13.8	114.1	D698-A
Sandy Clay (RAC)	Borrow Pit #2 Stockpile	13.4	116.1	D698-A

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SOIL/AGGREGATE FIELD DENSITY TEST

ENT : *UNC Mining and Milling*
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JOB NO. *3144JK050*
LAB/INV NO. *31440279-3*
REPORT DATE *08-24-94*
REVIEWED BY *R. Zubrod*
PAGE *2*

PROJECT : *1994 Reclamation*
LOCATION : *McKinley County, NM*
AUTHORIZED BY : *Ed Morales*
TEST LOCATIONS DESIGNATED BY : *H. Kuebler/WT*

DATE : *08-08-94*

TEST NO.	IN-PLACE MOISTURE (%)	IN-PLACE DRY DENSITY (pcf)	IN-PLACE COMPACTION (%)	MAXIMUM DENSITY (pcf)	REQUIRED COMPACTION (%)	REQUIRED MOISTURE (%)	WITHIN SPECS?
7	*13.5*	*117.1*	*100+*	*116.1*	*95*	*11.4 to 15.4*	*YES*

TEST NO.	TEST DATE	TEST LOCATION	ELEVATION DATUM +
7	*08/08*	*Grid Point M+14, 73420 N. & 59500 E.*	*6993.0*

+DATUM: *Elevation of Test = RAC Material*

TEST NO.	COMMENTS	FIELD DENSITY TEST METHOD
7	*Subgrade*	*ASTM D-1556/AASHTO T-217*