

PRE-CONSTRUCTION MEETING

5/13/88

- TOPICS:
- A. Explanation of Forms
 - B. Compaction of Contaminant in Area 5
 - C. Compaction of In-Place Radon Barrier Material
 - D. Safety

- A. 1. Attachment 1 - This form will be used as a guide for all pre-construction meetings.
- 2. Punch List - Items will be discussed to ensure there is no confusion between MK-F and ICC over the Quality and Engineering requirements.
- 3. Earthwork/Erosion Protection Checklist - These forms will not be used during the meeting unless the need arises. Basically this form is MK-F's in-house inspection format and will be completed by Q.C. during construction.
- B. See Punch List Items 1 & 2
- C. See Punch List Item 3
- D. 1. Warning lights and/or stops will be required on the two County road crossings near Collins Ranch.
- 2. Make sure heavy equipment has functional back-up alarms and fire extinguishers.

MK-F would like to emphasize that these meetings are not just eye wash. The plans, procedures and methods of operation discussed in the Pre-Construction meeting will be strictly followed.

We look forward to successfully completing the remaining construction activities this season and getting out the gate in '88.

82303 880
WAS. 2
WM-39 PDC

INSPECTION PROCEDURE
PREPARATORY INSPECTION REPORT

Project: LKV-01.3050 UMTRA
Feature of Work: DISPOSAL SITE AREA #5 AND RADON BARRIER PLACEMENT
Supervisor: TOM B. (MK-F)
CONTRACTOR: INDUSTRIAL CONSTRUCTORS

The following items at a minimum are to be discussed at this meeting.

1. Review of the contract drawings and specifications.
2. Approval of shop drawings.
3. Approval of inspection and test reports on materials.
4. Availability of materials and equipment required.
5. Completion of previous operations.
6. Any preparatory steps dependent on the given feature of work to be started.
7. Environmental and safety precautions to be observed.
8. Quality standards to be applied to the work.
9. Testing requirements of the work.
10. Preparatory inspection requirements of the Inspection Procedure for the given feature of work.

Remarks: SEE ATTACHED QUALITY PLAN/LIST.

Date of Inspection: 05-1 88
Resident Inspector: BILL TATE (MK-F) for [signature] 05/13/88
Supervisor of Feature Work: TOM C. (MK-F)

QUALITY CONTROL PUNCH LIST DATE PREPARED 05-11-88

SUMMARY
FOR DISPOSAL SITE - PRE-CONSTRUCTION
MEETING

Item # 1 Date 11-19-87 Location/Site D/S ENCAPSULATION CELL

Date Corrective Action to be Completed by 6-19-88 OR BEFORE PLACING MTL IN AREA #5

LINER MATERIALS (I.E) PLASTIC REMOVED FROM POND #1 AND PLACED ON TOP OF THE ENCAPSULATION CELL (AREA #5) NEEDS TO BE CUT UP INTO 1'-0" X 10'-0" STRIPS PER SPEC. 02050 REF. QDR-008 ENGINEERING CONCURRENCE - 11-19-88

NOTE: ENGINEERING AND QUALITY CONTROL WILL HAVE TO CONCLUDE THAT THIS WORK IS COMPLETED PRIOR TO PLACING OR COMPACTING ANY MATERIAL OVER THE PLASTIC.

Current Status: I.C.C. HAS COMPLETED APPROXIMATELY 50-60% OF THE CUTTING OF THE PLASTIC AND SHOULD BE ABLE TO CLEAN UP THE REMAINING PORTION WITH ABOUT 1 DAYS EFFORT.

Item # 2 Date 11-19-87 Location/Site D/S ENCAPSULATION CELL

Date Corrective Action to be Completed by 6-19-88 OR AFTER SUBGRADE, ELV. AND COMPACTION IS VERIFIED

SEDIMENT TYPE MATERIAL WAS EXCAVATED FROM POND #1 AND PLACED WITHIN THE ENCAPSULATION CELL AREA #5 THIS MATERIAL NEEDS TO BE REWORKED PER SPEC. 02200 REF QDR-007 ENGINEERING CONCURRENCE 11-19-87

NOTE: SUBGRADE ELV. AND PASSING SUBGRADE DENSITY TEST NEED TO BE VERIFIED PRIOR TO DOING ANY OF THE ABOVE REWORK

ELV. VERIFICATION BY ENGINEERING, PASSING DENSITY TEST BY QUALITY CONTROL SPEC. 02200

Current Status: SOME WORK WAS DONE IN AREA #5 TO CONTROL EROSION ONLY

QUALITY CONTROL WILL HAVE NEW PROCTORS FOR THIS AREA BY 05-16-88

QUALITY CONTROL PURCH LIST

SUMMARY

Item # 3 Date 12-29-88 Location/Site DIS ENCAPSULATION CELL

Date Corrective Action to be Completed by 6-19-88 OR BEFORE 2ND LIFT CAN BE PLACED

BECAUSE OF INCLEMENT WEATHER AND WINTER SHUT DOWN, THE FIRST LIFT OF THE RADON BARRIER WAS LEFT NOT MEETING THE MOISTURE AND COMPACTION REQUIREMENTS OF SPEC. 02200 MOISTURE: @ OR GREATER DURING COMPACTION OF MATERIALS AS DETERMINED BY ASTM-D698 STANDARD PROCTOR. DENSITY: RADON BARRIER MATERIALS SHALL BE COMPACTED TO AT LEAST 100% OF MAXIMUM DRY DENSITY AS DETERMINED BY ASTM-D698

Current Status: I.C.C. HAS WORKED THE MATERIALS IN A FASHION TO HELP PREVENT ANY EROSION. REF. 02200 3.4.A.5. AND 02200 3.2.B.2.b.

NOTE: 1 THE QUALITY CONTROL DEPT. HAS RE-VERIFIED THE MATERIALS ON AREAS 1, 2, 3, & 4 FOR GRADATION AND P.I. REQUIREMENTS, AND HAVE FOUND THESE AREAS MEET THE 12.85% γ_d EST. ON ENCAPSULATION CELL, WITH REQUIREMENTS OF SPEC. 02200 2.1.C.2.b 7 TEST = 1 PER 1,833 γ_d PLACED, WITH A VERIFICATION TEST TOTAL: 11 TEST, PASSING

NOTE: 2 THE QUALITY CONTROL DEPT. ON 05-12-88 OBTAINED (3) SAMPLES FOR MOISTURE VERIFICATION RESULTS = 46.2%, 46.4% AND 43.9%, WE HAVE ALSO RAN A NEW PROCTOR TO VERIFY WHAT OUR NEW OPT. MOISTURE AND MAX. DRY UNIT WEIGHT WILL BE.

RESULTS:

NOTE: 3 THE NUMBER OF PASSING TEST REQUIRED ARE AS FOLLOWS

(FIRST LIFT) SLOPES (ALL) (17) DENSITIES - I.E. BELOW CATCH POINT!!

(FIRST LIFT) AREA 4 AND 5 (17) DENSITIES - I.E. ABOVE CATCH POINT!!

(2ND LIFT) SLOPES (ALL) (17) DENSITIES - I.E. BELOW CATCH POINT!!

(2ND LIFT) AREA 4 AND 5 (17) DENSITIES - I.E. ABOVE CATCH POINT!!

NOTE: 4 2ND LIFT AND ANY ADDITIONAL RADON BARRIER MATERIALS MUST MEET THE REQUIREMENTS OF SPEC. 02200 2.1.C.2.b. GRADATION AND P.I. TESTING, AND SPEC. 02200 3.4.D.2.b & C FREQUENCY OF 1 TEST PER 2,000 γ_d PLACED

NOTE: 5 BEFORE 2ND LIFT CAN BE PLACED, THE FIRST LIFT ELEV. AND THICKNESS MUST BE VERIFIED BY MKF ENGINEERS AND THE QUALITY DEPT. ADDITION MATERIALS MAY BE USED ON FIRST LIFT TO ADJUST ELEV. & OR ON 2ND LIFT IF 1ST LIFT IS BOUGHT OFF.

WK-FERGUSON COMPANY

Radon Barrier Locations

P.O. BOX 1060

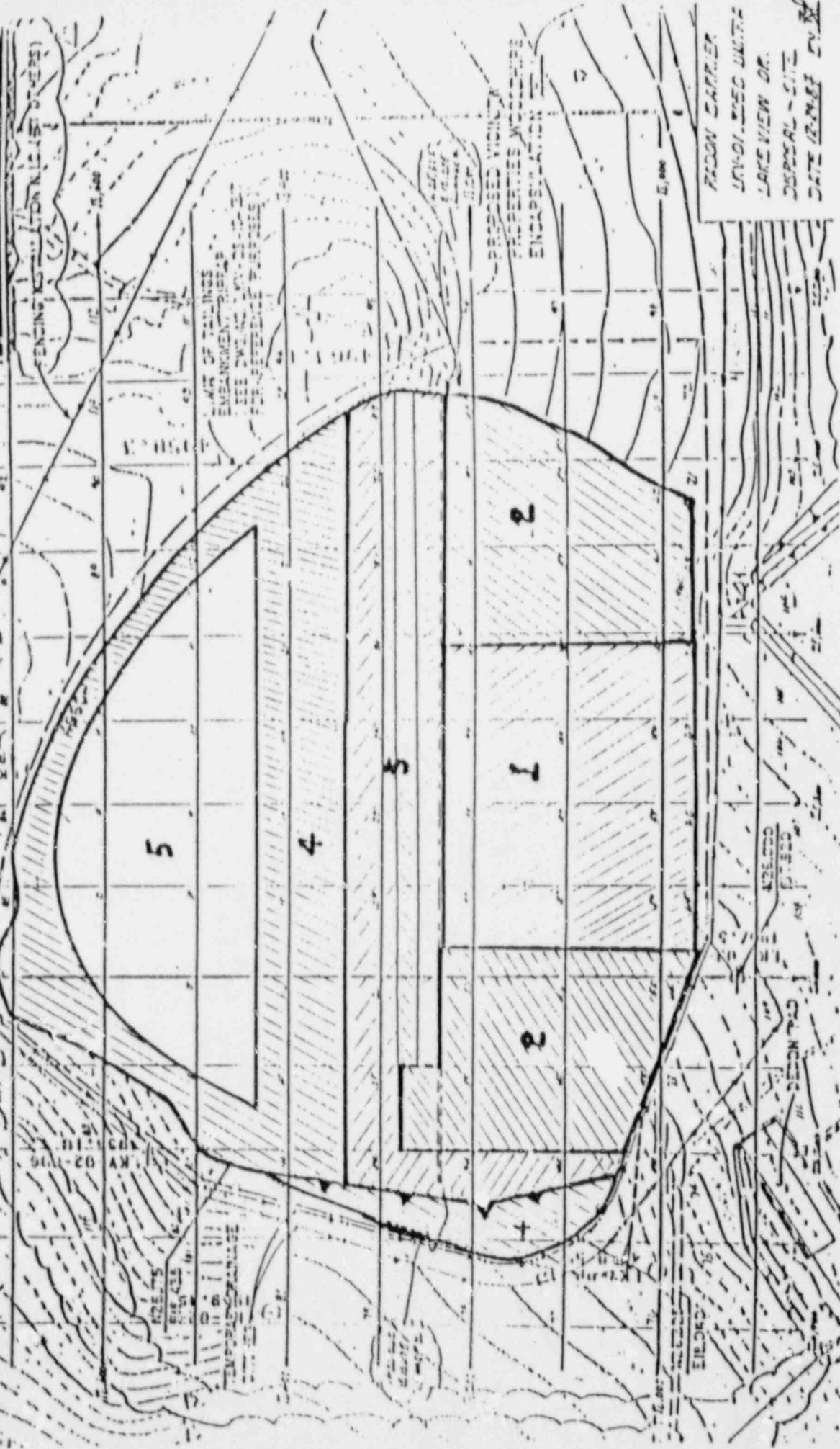
LAKEVIEW, OREGON 97630

TESTING STATUS

AND

TESTING STATUS

LEGEND
▲ DENSITY TEST (1000 PSI)
● GRADE/TEMP TEST (1000 PSI)
■ P.T. TEST (1000 PSI)
||||| AREAS PAVED
XXXX AREAS RELEASED (HOLD)



A EFFORT DISCONTINUED DO TO WEATHER & WINTER SNOW DOWN

Moisture Compaction
NONE

Gravitation
Area #1 = Pass
Area #2 = Pass
Area #3 & 4 = Pass

P.T. Testing
Area #1 = Pass
Area #2 = Pass
Area #3 & 4 = Pass

ORIGINAL

QA REVIEWED FOR
QUALITY REQUIREMENTSBY: *W. H. H. 5/1/88*QA ENTRY NO. *1649*

MK-FERGUSON

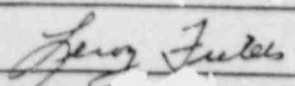
A MORGAN KNUDSEN COMPANY

DAILY INSPECTION REPORT

Complete form in detail. If more space is needed, use another sheet.

Attach pertinent information such as test reports, delivery slips, references

1. Contractor <i>Nielson's - Wheeler Pit</i>		2. Report No. <i>DIR-182</i>	
3. Contract number, site and activity <i>3050 - DURANGO - UMTRAP</i>		4. Sheet No. <i>1 of 1</i>	
5. Weather <input checked="" type="radio"/> Fair <input type="radio"/> Cloudy Max. Wind <i>—</i> Temp: (0900) <i>—</i> °F (1600) <i>75</i> °F		6. Date <i>5-4-88</i>	
Spec. Paragraph And/or Dwg. No.	7. Construction work performed to day and location of work	Complies with P&S	
		Yes	No
	<i>Charles Payton, MK-E geologist, still on site</i>	<i>NA</i>	<i>NA</i>
	<i>Continuing with inspection of material being</i>		
	<i>produced at Wheeler Pit</i>		
	<i>Dave Trautner, Gambert & Associates, obtained</i>		
	<i>sample (Type "B" material) today. Sample will</i>		
	<i>be used for petrographic examination, Los Angeles</i>		
	<i>Roth test, sodium sulfate soundness, absorption,</i>		
	<i>and specific gravity. This sample will also</i>		
	<i>serve as 5,000 yds³ test for type "B" rep-rop</i>		
	<i>material. Picture of sample showing "good"</i>		
	<i>and "marginal" specimen of material were taken</i>		
	<i>by C. Payton, MK-E, and Ben Fenger, MK-F.</i>		
	<i>After Gambert & Associates had washed sample</i>		
	<i>at their laboratory, I took C. Payton then to</i>		
	<i>take pictures. Nielson's supervising personnel</i>		
	<i>aware of action being taken.</i>		
	<i>Production at Wheeler Pit continues with Nielson's</i>	<i>NA</i>	<i>NA</i>
	<i>making adjustments to the screening process. Observed</i>		
	<i>them removing oversize material from type "C" rep-</i>		
	<i>prop material. No activity on clay operation</i>		

Spec. Paragraph And/or Dwg. No.	8. Description of deficiencies discovered today and location. Proposed remedial action, and expected date rework will be completed		Report No. DZ-182	
	NA			
Spec. Paragraph And/or Dwg. No.	Refer to Report Nos	9. Rework completed this date	Complies with P&S	
			Yes	No
		NA		
Spec. Paragraph And/or Dwg. No.	10. Sampling and testing performed on and off jobsite this date (insert results below, then follow up with submission of original signed formal reports)			
	Type of test performed	By Whom	Results	Pass/Fail
	NA			
11. Remarks (Include directions received from client, reason for job delay, visits by client's Rep. unusual weather conditions and other information pertinent to the quality of the job).				
NA				
12. Contractors Certification				
This report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.				
			Date 5-4-88	



QA ENTRY NO. 164

Complete form in detail. If more space is needed, use another sheet.
Attach pertinent information such as test reports, delivery slips, references.

[illegible]

Spec. Paragraph And/or Dwg. No.	8. Description of deficiencies discovered today and location. Proposed remedial action, and expected date rework will be completed		Report No. DLR-182	
R.A.I.R. 6.1.1	Failing Sandcones (CF-S-473) Nelson's will rework area and a retest is planned for 5-5-88 AM.			
Spec. Paragraph And/or Dwg. No.	Refer to Report Nos	9. Rework completed this date	Complies with P&S Yes No	
R.A.I.R. 6.1.1	CF-S-466-21	Passing	✓	
10. Sampling and testing performed on and off jobsite this date (insert results below, then follow up with submission of original signed formal reports)				
Spec. Paragraph And/or Dwg. No.	Type of test performed	By Whom	Results	Pass/Fail
R.A.I.R. 6.1.1	11 Sandcones	8 Skels 5 With	10 Pass 1 Fail	
R.A.I.R. 6.1.5	1 firm point probe	5 With	N/A	N/A
R.A.I.R. 6.1.6	2 ore point probes	5 With	N/A	N/A
R.A.I.R. 6.1.7	2 sand density calibrations	5 With	N/A	N/A
11. Remarks (Include directions received from client, reason for job delay, visits by client's Rep. unusual weather conditions and other information pertinent to the quality of the job).				
Tailings were imported to insure proper sandness, lift thickness, and compaction. Compaction was unsatisfactory (CF-S-473) in the area indicated on the test. V.P. material stabilized in the south-east corner of the fill was ^{SW S-480} being spread and compacted. Approximately 7000 yds ³ of tailings and 6000 yds ³ of V.P. Material was placed today.				
12. Contractors Certification This report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.				
John Wille				Date 5-4-88



ORIGINAL

EARTHWORK

Inspection/Verification Checklist 5-4-88

QA REVIEWED FOR
QUALITY REQUIREMENTS
BY Mark D. 5/4/88
QA ENTRY NO. 1649

DZR-82
Page 3 of 11

Material Type Fillings Contractor Nielson's Inc.
Location Disposal Cell 300-Durango NMRA

1. Materials are obtained from required excavations, approved stockpiles, or from approved borrow areas.
2. Material does not contain excessive amounts of organics or deleterious substances in accordance with specified requirements.
3. Maximum particle size is not greater than the compacted lift thickness in any dimension and meets the specified compaction requirements.
4. Required lines, levels, contours, and datum are identified prior to the start of earthwork operations.
5. Contaminated and uncontaminated materials are kept separated during earthwork operations.
6. Excavations are carried out to the lines and grades specified, or as required by Health Physics personnel.
7. Earthwork operations are conducted in such a manner as to prevent free standing water, contamination of uncontaminated materials, and to protect exposed surfaces from erosion.
8. All unstable material, large stones, and debris is removed from bottoms of excavations to a minimum depth of 12 inches.
9. Material is placed and compacted to the lines and grades in accordance with specified requirements.
10. The method of dumping and spreading the material ensures the uniform distribution of the material.
11. Material is placed to a grade no flatter than 2 percent to facilitate drainage of water.
12. Materials are not placed on frozen subgrade, nor are frozen materials used as fill.

S A T	U N S A T	N / A
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		
✓		

ORIGINAL

13. The loose thickness of each layer of material is not greater than that required to achieve required compaction, and in no case exceeds the maximum specified lift thickness requirement.
14. Each layer of material is compacted to at least the minimum specified percent of maximum dry density required.
15. During compaction the moisture content of the material is maintained to achieve specified density, moisture is uniformly distributed, and moisture is maintained within the specified limits as applicable.
16. Material placed at lower densities than specified or at moisture contents outside of the specified limits is reworked to meet the specified requirements or is removed and replaced with acceptable material.
17. Equipment utilized for transporting, placing, or compacting is in accordance with the specified requirements.

S A T	U N S A T	N / A
✓		
	✓	
✓		
✓		
✓		

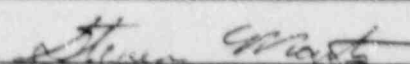
Remarks Unsatisfactory indication on item 14 refers to CF-5-473

Steve Wille 5-488 Robert H. [Signature] 5/4/88
Inspector Date Reviewed By Date



Complete form in detail. If more space is needed, use another sheet.
Attach pertinent information such as test reports, delivery slips, references.

[illegible]

Spec. Paragraph And/or Dwg. No.	8. Description of deficiencies discovered today and location. Proposed remedial action, and expected date rework will be completed		Report No. DI 2-82	
N/A	NONE			
Spec. Paragraph And/or Dwg. No.	Refer to Report Nos	9. Rework completed this date	Complies with P&S	
			Yes	No
N/A	N/A	NONE		
Spec. Paragraph And/or Dwg. No.	10. Sampling and testing performed on and off jobsite this date (insert results below, then follow up with submission of original signed formal reports)			
	Type of test performed	By Whom	Results	Pass/Fail
02300 3.3	(2) MOISTURE/DENSITY NUCLEAR TESTS	STEVE MARTE	(1) PASS (1) FAIL	P F
02300 3.3	(1) ONE POINT DENSITY CHECK	STEVE MARTE	(1) PASS	P
02300 3.3	(1) SANDONE/NUCLEAR COMPRESSION	STEVE MARTE	(1) PASS	P
11. Remarks	(Include directions received from client, reason for job delay, visits by client's Rep. unusual weather conditions and other information pertinent to the quality of the job).			
<p>Box of NUCLEAR WAS NEEDED FOR THE (1) DENSITY/</p> <p>MOISTURE TEST THAT FAILED. THE BOX WAS ONCE AGAIN DELIVERED TO</p> <p>ALLOW FOR DRYING. A REUSE WAS TAKEN OF NUCLEAR DESKING THE LOW</p> <p>PERCENT TO ALLOW FOR DRYING BELOW -1% OF CRUSHED MOISTURE.</p>				
12. Contractors Certification				
This report is complete and correct and all material and equipment used and work performed during this reporting period are in compliance with the contract plans and specifications, to the best of my knowledge, except as noted above.				
				Date 5/4/88



EARTHWORK

Inspection/Verification Checklist

CAUTIONED FOR
REQUIREMENTS

BY Submittal 5/4/88
QA ENTRY NO. 1649

Material Type LOW PERMEABILITY Contractor W. S. S. S. S.
Location DEBRIS CELL

1. Materials are obtained from required excavations, approved stockpiles, or from approved borrow areas.
2. Material does not contain excessive amounts of organics or deleterious substances in accordance with specified requirements.
3. Maximum particle size is not greater than the compacted lift thickness in any dimension and meets the specified compaction requirements.
4. Required lines, levels, contours, and datum are identified prior to the start of earthwork operations.
5. Contaminated and uncontaminated materials are kept separated during earthwork operations.
6. Excavations are carried out to the lines and grades specified, or as required by Health Physics personnel.
7. Earthwork operations are conducted in such a manner as to prevent free standing water, contamination of uncontaminated materials, and to protect exposed surfaces from erosion.
8. All unstable material, large stones, and debris is removed from bottoms of excavations to a minimum depth of 12 inches.
9. Material is placed and compacted to the lines and grades in accordance with specified requirements.
10. The method of dumping and spreading the material ensures the uniform distribution of the material.
11. Material is placed to a grade no flatter than 2 percent to facilitate drainage of water.
12. Materials are not placed on frozen subgrade, nor are frozen materials used as fill.

S A T	U N S A T	N / A
/		
/		
/		
/		
/		
/		
/		
/		
/		
/		
/		

ORIGINAL

Page 7 of 11
DSR-182
QA REVIEWED FOR
QUALITY REQUIREMENTS
BY Robert Clark 5/14/88
QA ENTRY NO. 1647

13. The loose thickness of each layer of material is not greater than that required to achieve required compaction, and in no case exceeds the maximum specified lift thickness requirement.
14. Each layer of material is compacted to at least the minimum specified percent of maximum dry density required.
15. During compaction the moisture content of the material is maintained to achieve specified density, moisture is uniformly distributed, and moisture is maintained within the specified limits as applicable.
16. Material placed at lower densities than specified or at moisture contents outside of the specified limits is reworked to meet the specified requirements or is removed and replaced with acceptable material.
17. Equipment utilized for transporting, placing, or compacting is in accordance with the specified requirements.

S A T	U N S A T	N / A
✓		
✓		
✓		
✓		
✓		

Remarks No DEFECTS WERE FOUND TODAY.

Steven W. [Signature] 5/14/88 Robert Clark 5/14/88
Inspector Date Reviewed By Date

Daily Inspection Report

Wednesday, May 4, 1988

ORIGINAL

QA REVIEWED FOR
QUALITY REQUIREMENTS

BY *[Signature]* 5/4/88

QA ENTRY NO. 1679

Chuck, Leroy and Steve took a sample for the petrographic analysis with Lambert from Wheeler pit. Chuck has been on the phone to San Francisco quite a bit this PM.

Bill and I met with Weldon at Bodo to look at the low perm installation around the exit road at the cell. Weldon wants an inspection for clean after lunch. Bill G. looked at the ditch. It needs more cleaning before it can be passed.

I met with Emeric and James Ranch employees on the seeded area above the pile to look at the stand of grass. There is definitely grass coming. More each time I look. If it can survive this summer I think it will be good enough.

Melco broke a water line at the Giant Station, but patched it up and finished the clean up. CDH tomorrow.

Melco finished the clean up at the water treatment plant. CDH tomorrow. Alan is working with them on material for backfill. Need source, proctor, radiological clearance.

Don Blasdel notified us that Jake's insurance certificate was out of date. A call to his agent verified he has liability insurance but we need to know about workman's comp. Alan will check with Jake tomorrow.

Clyde is putting asphalt emulsion on the top of the big pile to help control dust from blowing. 3-4 PM.

Dawn's tire man dropped a tire on his toe. He lost the end of his big toe. Went to emergency room about 7-7:30 PM.

Dawn mechanics working without good lights at night.

Jim Powers *JRP*

Process Site - Push, load and haul tailings to Bodo, 185 loads. Cat D-8L, 2 Cat 988, 14 Dawn trucks. Cat D-6 pulled Mack truck on top of large pile. Water truck maintaining roads. 4 Nielsons trucks hauling v.p. material, 51 loads.

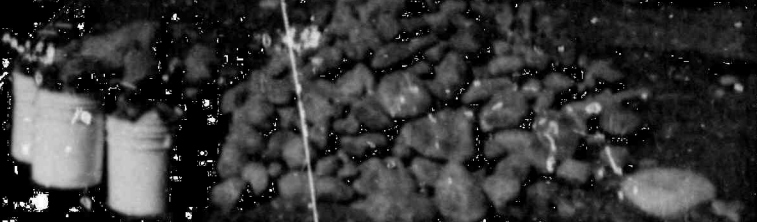
Bodo - Spread and compact tailings, Cat 14G, Cat water wagon, Cat D-6 Cat D-8. Cat D-9, Cat 14G, and Cat 531 excavate Cox dam and place low perm west of Cox dam. Met with Bob Steele, Jim Powers, Weldon Wood about leaving haul roads intact on north and south slopes. Agreed that all areas would slope to drain. Cat D-9 excavating far most western south slope of cell and placing material for far most western dike. Cat 966 and laborers relocate 6" water line from Cox lake to temp. pond, SE of DS-2. Cat D-8, Cat 531 and Cat 950B excavate from clay stockpile N of Bodo decon and fill in areas on low perm on north slope. Met with Bob Steele, Bruce Berry and Roy Davis on north slope at Bodo. 1. Steel drum low perm before placing tailings. 2. East slope needs compacted in 12" layers. 3. Question low perm between haul road.

Wheeler pit - Screening plant running today. Chuck Payton and Leroy Fields took field samples, 8" Type B. 10.5% would not pass durability by weight. Took 4629 lbs. to Lambert for petrographic testing.

Bill Bill Zebick



Wheeler-Looking at weighing of rock
 of petrographic sample. C. Payton,
 L. Fields, D. Trautner, 8½ minus
 sample, 10.5% bad rock



Wheeler-Looking at petrographic sample
 pile. Bad rock in buckets, good rock
 in pile



Wheeler - Looking at assorted bad
rock samples.



Wheeler-Looking northeast at Wheeler
pit in operation

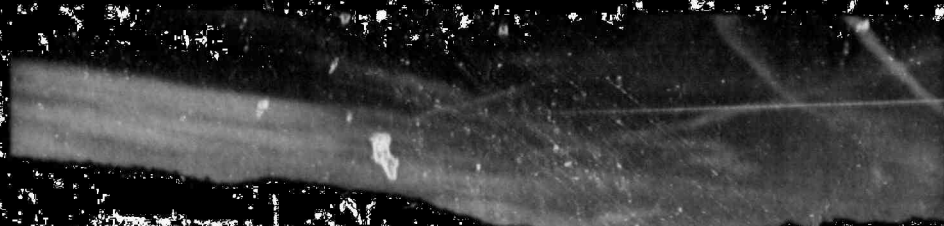
Bodo - Looking west at dozer
spreading v.p. material on cell



Bodo - Looking at lift thickness
from grader pass



Bodo - Looking at same lift after
compaction



Bodo - Looking northeast at
installation and disking of low perm
north and west of Cox lake