TEXAS UTILITIES GENERATING CO. CPSES	INSTRUCTION NUMBER	REVISION	ISSUE DATE	PAGE
	QI-QP-11.4-10	19	JUN 13 1984	1 of 20

INSPECTION OF CONCRETE SUBSTRATE SURFACE PREPARATION AND COATINGS APPLICATION AND REPAIR

PREPARED BY: Fred Dunham 6-13-84 DATE

APPROVED BY: [signature] 6-13-84 DATE

APPROVED BY: [signature] 6-13-84 DATE

1.0 REFERENCES

1-A Gibbs and Hill Specification 2323-AS-31, "Protective Coatings"

1-B CEI-20, "Field Installation of Hilti Bolts"

1-C CCP-12, "Concrete Patching, Finishing, and Preparation of Construction Joints"

1-D CCP-40, "Protective Coating of Concrete Surfaces"

1-E QI-QP-11.0-5, "Inspection of Concrete Repair"

1-F QI-QP-11.4-24, "Reinspection of Protective Coatings on Concrete Substrates for Which Documentation is Missing or Discrepant"

1-G CP-QP-18.0, "Inspection Reports"

1-H CP-QP-15.0, "Tagging Systems"

1-I CP-QP-16.0, "Nonconformances"

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2.0 GENERAL

2.1 PURPOSE AND SCOPE

This instruction shall describe the methods used by Quality Control personnel while performing inspections of application of coatings on a concrete substrate in all areas other than Unit 1.

3.0 INSTRUCTIONS

Application of Nutec 10, 11, 11S and 1201 shall be per Sections 3.1 through 3.9.

Visual inspection of surfaces as addressed by this instruction shall be made at approximately an arm's length from the surface being inspected (where applicable). The area of inspection shall be adequately lighted during the inspection activity. Adequate lighting is defined as the minimum light produced by a two (2) cell battery flashlight.

If a conflict arises between the requirements of this procedure and the requirements of the site specification, Reference 1-A, the requirements of the site specification shall prevail.

3.1 SURFACE PREPARATION

The concrete surface shall be cured a minimum of 28 days prior to application of protective coatings. If the concrete surface is cured with NUTEC 10, coating may be performed after a minimum of 6 days after application of NUTEC 10.

Tie holes, abandoned Hilti bolt holes and spalled concrete as defined in Reference 1-B, and patched per Reference 1-C and grout under base plates which has 3 square feet or less of exposed surface to be coated, may be coated after a 48 hour cure.

3.1.1 Preblast Cleaning Operations

Prior to surface preparation, the QC inspector shall visually examine the surface to be water blasted for heavy deposits of oil and grease. Any heavy oil or grease deposits shall be removed by steam cleaning, trisodium phosphate washing with a mixture of 3-6 pounds TSP per gallon of water, or use of an Imperial recommended detergent.

The QC inspector shall also verify that any detrimental surface irregularities such as projections, fins, or ridges shall be removed by bush hammering, hand or power tooling, grinding, or stoning.

NOTE 1: The preblast visual inspection is required only when surface preparation is by one of the following methods:

a. Water blasting
b. Water blasting with sand injection
c. Dry sandblasting
d. Bush hammering

3.1.2 Methods of Surface Preparation

Water blasting, water blasting with sand injection, acid etching, sand blasting, and power tooling are all acceptable methods of surface preparation. If NUTEC 10 curing membrane has been applied and gives a "glossy" appearance, the surface shall be abraded without completely removing the NUTEC 10 prior to application of the surfacer.

The QC inspector shall note the method(s) used on the Inspection Report (IR), Attachment 1. The inspector shall verify that the method(s) used are in compliance with Reference 1-D. In the event TSP is used, the QC inspector shall verify that the area is flushed with clean water. If sand blasting is used, the QC inspector shall verify that a trap, filter, or separator is installed in the air line.

3.1.3 Post Surface Preparation Operations

After surface preparation, the QC inspector shall visually examine the surface to verify the following:

a) The surface shall be free of construction dust, laitance, and loose deposits, and all adjacent areas cleaned to avoid contamination.

b) All holes greater than 1/2 inch in depth or greater than 2" diameter and cracks greater than 1/32" width are repaired prior to surfacer application.

c) All sharp projections removed.

d) Markings (ink, pencil, chalk, felt tip marker, etc.) solvent wiped in accordance with Reference 1-D.

e) Marking paint removed.

f) Objects protruding from surface are ground or cut smooth until object is flush.

g) All loosely adhering objects embedded are removed.

h) Smooth embedded objects such as plastic or steel roughened. Metal objects are power tool cleaned and solvent wiped.

i) Metal objects larger than 4 square inches are primed.

j) Surface is free of grease, oil, and curing membranes. If grease and oil remain after TSP cleaning, the area shall be chipped out and repaired with dry pack or epoxy grout and inspected by Civil QC in accordance with Reference 1-E.

3.2 MIXING OPERATIONS

3.2.1 Materials

The QC inspector shall verify that the materials to be used are in accordance with Reference 1-D and that each component is identified by a batch number. The QC inspector shall also verify that the shelf life (See Attachment 2) has not expired. NUTEC 10 has an expiration date marked on the container and it shall not be used after that date.

3.2.2 Mixing/Thinning

The QC inspector shall witness all mixing/thinning operations, and verify that mixing/thinning is performed in accordance with Reference 1-D. Induction times for finish mixes are shown in Attachment 2.

3.3 SURFACER APPLICATION

3.3.1 Ambient Conditions

The inspector shall determine air temperature, relative humidity, dew point, and surface temperature of concrete substrate. A calibrated non-mercury filled dry bulb thermometer or a calibrated temperature recorder (Bristol 4069 TH or equivalent) shall be used for air temperature determination. A calibrated non-mercury filled wet bulb thermometer or a calibrated humidity recorder (Bristol 4069 TH or equivalent) shall be used to determine relative humidity. The dew point shall be determined by the difference in dry and wet bulb temperature using the U.S. Department of Commerce Weather Bureau Psychrometric Tables, W.B. No. 235. When dry bulb readings are greater than 100°F, the dew point and relative humidity should be determined using the 100°F reading (note in Remarks Section). The surface temperature shall be determined by placing a calibrated Range 0-250°F thermometer or equivalent in contact with the surface to be coated. The thermometer probe shall remain in contact with the surface until the temperature reading stabilizes.

Minimum and maximum values of surface and ambient temperatures shall be 50°F and 100°F respectively. Infrequent dips in temperature to 40°F is permissible during application and/or cure; however, the elapsed time the temperature is below 50°F shall be added to the cure time. Application of the coating shall not begin unless the surface temperature is 5°F above the dew point.

Humidity may vary as high as 100%; however, free standing water shall be removed. Coating application over a damp surface is permissible. Under no conditions shall NUTEC 11S be applied to a surface containing free standing water. Methods of identifying free standing water are shown in Reference 1-D.

3.3.2 Surface Acceptability

The QC inspector shall visually examine the substrate surface immediately prior to surfacer application to verify that it is free of contamination (dust, laitance, loose deposits and markings).

3.3.3 Air Supply Acceptability

The inspector shall inspect the air supply system for suitable filters/traps/separators. The effectiveness of these items shall be verified by exposing a piece of white cloth to a blast of air for approximately 30 seconds. The cloth shall show no evidence of moisture, oil or foreign matter when examined.

3.3.4 Pot Life

The QC inspector shall verify that the pot life as shown in Attachment 2 is not exceeded.

3.3.5 Qualification of Applicator(s)

The Inspector shall verify (by Qualification Record or list of qualified applicators from QA file) that the coating applicators on each shift are qualified for safety-related coating work.

3.3.6 Dry Film Thickness

The QC inspector shall determine the DFT of the applied surfacer by taking wet film thickness spot measurements and multiplying each reading by the % volume solids (taking in account any thinner used). A minimum of five (5) separate spot wet film thickness (WFT) measurements (See Note 1) spaced evenly over the coated area (See Note 2) shall be taken.

NOTE 1: A spot measurement is a series of three gage readings in the same general area. The WFT gage should be moved a short distance for each gage reading. Discard any unusually high or low gage reading that cannot be repeated consistently. Take an average of these three gage readings as one spot measurement.

NOTE 2: For small areas of coating, five (5) spot measurements shall be taken. For larger areas, 5 spot measurements shall be taken for each 100 square feet (or fraction thereof) of coating.

Thickness of surfacer may vary between 10 and 35 mils. (See Attachment 4 for method of determining percent volume solids.)

3.3.7 Surfacer Repair Work

3.3.7.1 Repair of Runs and Sags

Runs and sags which show evidence of mudcracking shall be abraded flush with the surrounding surface. If after abrading, surfacer is unsatisfactory, remove unsatisfactory, coating to substrate and reapply the surfacer. If after abrading the surfacer is satisfactory, no further repair is necessary.

3.3.7.2 Repair of Contamination

Contamination shall be removed by abrading. If unsatisfactory coating still exists, then the area shall be repaired in accordance with Section 3.3.7.3.

NOTE: Rust stains residue, not necessarily the stain, shall be removed with bristle brush and water or Imperial Thinner #DL-54.

3.3.7.3 Repairs When Touch Up or Recoating is Necessary

For repairs that require either touch up or recoating with NUTEC 11S, NUTEC 11 or NUTEC 1201, the QC inspector shall:

a) Verify ambient conditions are acceptable per Section 3.3.1.

b) Verify surface has been prepared in accordance with Reference 1-D and is free from loose and foreign materials as per Section 3.3.2

c) Verify acceptable materials (per Reference 1-D) are used, and shelf life is not exceeded.

d) Verify that NUTEC 11S, NUTEC 11 or NUTEC 1201 is mixed/thinned in accordance with Section 3.2.

e) Verify pot life is not exceeded per Attachment 2.

f) Verify qualification of applicator(s) per Section 3.3.5.

g) Visually inspect per Section 3.4.2.1.

h) Verify that curing is in accordance with Section 3.4.2.2.

i) Verify dry film thickness in the repair area is in accordance with the following millage requirements:

NUTEC 11S	10 - 35 mils
NUTEC 11	3 - 20 mils
NUTEC 1201	3 - 16 mils

NOTE 1: See Section 3.3.6 and Attachment 4 for DFT calculation using Wet Film Thickness measurement and percent volume solids.

3.4 FINISH COAT APPLICATION

3.4.1 Preapplication Inspection

3.4.1.1 Ambient Conditions

Prior to finish coat application, the QC inspector shall determine ambient conditions in accordance with Section 3.3.1.

3.4.2 Surfacer Post Application Operation

3.4.2.1 Visual Defects Inspection

The inspector shall perform a visual inspection of the surfacer coat NUTEC 11S and NUTEC 11 prior to the finish coat application for the following defects:

a) Runs or sags which show no evidence of mudcracking shall be abraded down to adjoining coating thickness.

b) Stains - rust (red) and zinc oxide (white) stains are acceptable provided loose particles are removed from NUTEC 11S or NUTEC 11 surfaces prior to application of finish coat.

c) Dry spray, over spray, damaged areas, skips, holidays, blisters, bubbling, mudcracking, oil and grease, and contamination are all unacceptable.

Contamination is not allowed.

Unacceptable conditions will be repaired in accordance with Reference 1-D.

3.4.2.2 Surfacer Cure

The inspector shall monitor ambient temperature after the surfacer is applied to determine when cure is adequate for topcoating operations to commence. A calibrated non-mercury filled dry bulb thermometer, calibrated temperature recorder shall be ued for air temperature determination.

Curing time shall be as follows:

Temperature 0°F	Curing Time Before Topcoating with 1201
50-59	72 hrs.
60-69	48 hrs.
70-79	24 hrs.
80-89	18 hrs.
90-100	12 hrs.

Temperature durations below 50°F will be added to the cure time on an hour by hour basis.

NUTEC 11S may be touched up or recoated with #11 or #11S as soon as the initial coat has dried such that the paint shall not adhere to the thumb when downward pressure is exerted on the paint film while turning a 90° angle. (This does not refer to the two pass application method.)

3.4.2.3 Air Supply Acceptability

The QC inspector shall verify the air supply is acceptable per Section 3.3.3.

3.4.2.4 Qualification of Applicator(s)

The Inspector shall verify (by Qualification Record or list of qualified applicators from QA file) that the coating applicators on each shift are qualified for safety-related coating work.

3.4.2.5 Verify that Nutec 1201 is mixed/thinned per Section 3.2.

3.4.3 Finish Coat Application

3.4.3.1 Pot Life

The QC inspector shall verify that the pot life of NUTEC 1201 has not been exceeded. Pot life is shown on Attachment 2.

3.4.3.2 Dry Film Thickness

The inspector shall determine the DFT of the applied finish coat by taking wet film thickness spot measurements and multiplying each reading by the % volume solids. A minimum of five (5) separate spot wet film thickness (WFT) measurements (See Note 1) spaced evenly over the coated area (See Note 2) shall be taken.

NOTE 1: A spot measurement is a series of three measurements in the same general area. The WFT gage should be moved a short distance for each gage reading. Discard any unusually high or low gage reading that cannot be repeated consistently. Take an average of these three gage readings as one spot measurement.

NOTE 2: For small areas of coating, five (5) spot measurements shall be taken. For larger areas, 5 spot measurements shall be taken for each 100 square feet (or fraction thereof) of coating.

(See Attachment 4 for method of determining percent volume solids.)

The total DFT of NUTEC 1201, recoat and existing coat shall not exceed 16 mils.

3.5 FINISH COAT REPAIRS

For repairs in the NUTEC 1201 Finish Coat, the QC Inspector shall verify the following:

a) The inspector shall determine the DFT of the existing coated surface (prior to recoating) by either, or one of the two following methods.

1) Using the DFT readings acquired during the backfit documentation (Reference 1-F).

2) The scratch test of the Nutec 1201 finish coat shall be performed using a Mark II Tooke Inspection Gage equipped with a 2x tip. Five separate readings spaced randomly over each finish coated area of 100 square feet or less shall be taken.

b) Verify that the surface is prepared as required by Reference 1-D.

c) Verify that runs and sags which show evidence of mudcracking are abraded flush with the surrounding surface. If after abrading the finish coat is still unsatisfactory, verify that unsatisfactory coating is removed to the substrate and repaired per Steps (d) through (k) below.

d) Verify that all contamination is removed from surface.

e) Verify that the surface is solvent wiped.

f) Verify that NUTEC 1201 is mixed/thinned per Section 3.2.

g) Verify air supply acceptability per Section 3.4.2.3.

h) Verify that pot life is not exceeded per Section 3.4.3.1.

i) Verify applicator(s) qualification per Section 3.4.2.4.

j) Verify cure time for recoat. Recoating time for NUTEC 1201 is 24 hours.

k) Verify dry film thickness of the recoat per Section 3.4.3.2.

NOTE: If present, the tie in interface between concrete coatings and steel coatings shall be inspected during the finish coat final acceptance of both systems.

3.6 FINISH COAT FINAL ACCEPTANCE INSPECTION PRIOR TO AREA TURNOVER

Immediately prior to turnover of each area within the RCB, a final visual inspection in accordance with the following subsections shall be performed on exposed finish coated concrete substrates.

3.6.1 Finish Coat Cure

Prior to performing finish coat final acceptance inspections, the inspector shall verify that the finish coat has cured for the minimum of 24 hours.

3.6.2 Finish Coat Continuity Inspection

The QC inspector shall visually inspect the continuity of the finish coat after a minimum cure of 24 hours. The maximum number of permissible pinholes is shown on Attachment 3. No more than 2 points of discontinuity shall occur within an area having a radius of six inches (using a point of discontinuity as the center of the circle). No more than 40% of the total number of allowable points of discontinuity shall occur within any one area equal to 25% of the total area. The pinholes that are beyond the acceptance of Attachment 3 shall be repaired in accordance with Section 3.5 and 3.6.3.

3.6.3 Visual Examination

The QC inspector shall visually examine the finish coated surface for the following defects:

a) Runs and sags which show no evidence of mudcracking are acceptable. Unacceptable runs and sags will be repaired in accordance with Section 3.5.

b) At the time of the final inspection, pinholes and small discontinuities may be repaired with no reinspection required of these areas.

c) Skips, holidays, damaged areas, blisters, bubbles, and fish eyes will be repaired in accordance with Section 3.5.

d) Contamination detrimental to the coating film is unacceptable. Area must be repaired per Section 3.5.

e) Color and Gloss Uniformity - the coated surface shall have uniform color and gloss. Those surfaces which are nonuniform shall be repaired in accordance with Section 3.5. This requirement shall not be applicable to areas exhibiting runs and sags which have been abraded.

3.7 APPLICATION OF NUTEC 10 CURING COMPOUND

3.7.1 The QC Inspector shall verify that the green concrete has been cleaned per Reference 1-D.

3.7.2 The QC Inspector shall verify that NUTEC 10 is not applied under inclement conditions and that the surface temperatures are above 50°F. Areas of visible moisture or standing water are unacceptable.

3.7.3 The QC Inspector shall verify that the NUTEC 10 air supply and equipment shall be in accordance with Paragraph 3.3.3. NUTEC 10 may also be applied by brush or roller.

3.7.4 NUTEC 10 shall be mixed per Paragraph 3.2. The NUTEC 10 has a pot life of (1) one hour at 75°F. If the NUTEC 10 gives the appearance of crawling and does not penetrate the concrete, the material shall be removed from the concrete by solvent and a clean cloth. All the expired material shall be discarded.

3.7.5 NUTEC 10 shall be applied in accordance with Reference 1-D. Apply NUTEC 10 at a spreading rate of approximately 350-400 sq. ft./gal.

3.7.6 The QC Inspector shall verify that during application of NUTEC 10, areas with sags, surface irregularities or excessive buildup shall be removed with solvent and a clean cloth, and material reapplied.

3.8 DOCUMENTATION

Results of all inspections discussed in Sections 3.1 through 3.5 shall be documented on an Inspection Report, Attachment 1, in accordance with Reference 1-G. Results of the inspections discussed in Section 3.6 shall be documented on an Inspection Report, Attachment 5 in accordance with Reference 1-G. Results of all inspections discussed in Section 3.7 shall be documented on an Inspection Report (Attachment 6) in accordance with Reference 1-G.

NOTE: A reject tag will be applied to any unsat area, with the inspection report, inspector's name, and phone extension listed per Reference 1-H.

3.9 MAPPING

For each IR generated in accordance with Section 3.3, 3.4 and 3.6, a sketch shall be attached to indicate the location and size of the applicable coating application (See Note 3). The individual sketches from each IR shall be used to prepare composite maps which shall cover in scope a specific room, compartment, quadrant or cavity within the Reactor Containment Building.

For concrete surfaces which have received coatings prior to 11/11/81 (issuance date of Rev. 2 of this procedure) a unique number shall be assigned to the original inspection checklist. This number shall be transferred to the applicable area on the composite map in order to provide traceability to the original checklist. For any coatings applied after 11/11/81, the IR number shall be transferred to the area on the composite map.

The composite maps shall be maintained by the QC Supervisor, or his designee, until the entire surface in a given area has been coated, at which time, the completed map shall be transmitted to the PPRV.

NOTE 1: Separate composite maps shall be maintained for the surfacer and finish coats.

NOTE 2: Coating repairs requiring recoating shall be mapped but repairs requiring only touch up need not be mapped.

NOTE 3: The following parameters (as necessary) should be considered for descriptions of test areas on the sketch.

a. Bottom and Top Elevations (vertical and diagonal surfaces) or Elevation of Surface (horizontal surfaces).

b. Dimensions in relation to Azimuths, column lines, reactor centerline or other components of known location.

c. Whether concrete substrate is wall, ceiling, floor, beam or column.

d. Quadrant, compartment, cavity or room in which inspection area is located.

e. Unit number.

f. Relation of surface to Cardinal Directions (i.e. North, South, etc.).

3.10 NONCONFORMANCES

Nonconforming conditions such as coating failure due to loss of adhesion or indeterminate/unacceptable conditions which cannot be repaired or corrected as per existing procedures shall be documented on a Nonconformance Report (NCR) in accordance with Reference 1-I. The NCR number shall be referenced on the Inspection Report, if applicable.

ATTACHMENT 1

COMANCHE PEAK STEAM ELECTRIC STATION

INSPECTION REPORT

SHEET 1 OF 2

ITEM DESCRIPTION	IDENTIFICATION NO.	SYSTEM/STRUCTURE DESIGNATION
PROTECTIVE COATINGS		
SPEC NO. / REV	REF DOC. & REV & CHANGE NO	MEASURE OR TEST EQUIPMENT NO
AS-31	QI-QP-11.4-10 Rev.	

☐ IN PROCESS INSPECTION ☐ PRE INSTALLATION VERIFICATION ☐ INSTALLATION INSPECTION ☐ FINAL INSPECTION ☐ PRETEST INSPECTION

INSP. RESULTS

☐ INSPECTION COMPLETED, ALL APPLICABLE ITEMS SATISFACTORY

☐ INSPECTION COMPLETED, UNSATISFACTORY ITEMS LISTED BELOW

QC INSPECTOR DATE

ITEM NO	INSPECTION ATTRIBUTES	SAT	UNSAT	DATE	QC SIGNATURE
	COAT NO.: SURFACER FINISH COAT				
	ORIGINAL REPAIR				
1.	VERIFY SURFACE FREE OF GREASE AND OIL PER PARA. 3.1.1 (REQUIRED ONLY IF SURFACE PREPARATION IS BY ONE OF THE FOLLOWING:)				
	a. WATER BLASTING				
	b. WATER BLASTING WITH SAND INJECTION				
	c. DRY SAND BLASTING				
	d. BRUSH HAMMERING				
2.	VERIFY SURFACE PREPARATION IN ACCORDANCE WITH CCP-40. LIST METHODS OF SURFACE PREPARATION:				
3.	VERIFY SURFACE PREPARATION ACCEPTABLE AND ALL LOOSE AND FOREIGN MATERIAL REMOVED PER PARA. 3.1.3				
4.	VERIFY CONCRETE CURING/REPAIRS COMPLETE (SURFACER ONLY) PER PARA. 3.1. and 3.1.3)				
5.	VERIFY CURE TIME OF PREVIOUS COAT BEFORE FINISH COATING PER PARA. 3.4.2.2 (FINISH COAT ONLY)				
6.	RECORD TOOK GARGE READINGS PER PARA. 3.5 (FINISH COAT REPAIRS ONLY) MIN. DFT: MAX. DFT: AVG. DFT:				
7.	VERIFY COATED SURFACER FREE OF UNACCEPTABLE DEFECTS PRIOR TO FINISH COAT ONLY PER PARA. 3.4.2.1				
8.	VERIFY MIXING OPERATIONS PER PARA. 3.2 a. LIST MATERIAL NAME: b. BATCH NUMBER(S) OF MATERIAL: THINNER CURING AGENT BASE FILLER				
9.	VERIFY THAT SHELF LIFE OF COATING MATERIALS HAS NOT EXPIRED.				

(CONTINUED ON NEXT PAGE)

ATTACHMENT 1 (Continued)

COMANCHE PEAK STEAM ELECTRIC STATION

INSPECTION REPORT

QI-QP-11.4-10, R.

(SUPPLEMENTAL) Sheet 2 of 2

FOR FULL HEADINGS, SEE SHEET 1 NO.

ITEM NO.	INSPECTION ATTRIBUTES	SAT	UNSAT	DATE	Q C SIGNATURE
10.	VERIFY QUALIFICATION OF APPLICATORS (LIST APPLICATORS)				
11.	VERIFY AMBIENT CONDITIONS PER PARA. 3.3.1				
	DRY BULB: WET BULB:				
	SURFACE TEMP.: DEW POINT:				
	RELATIVE HUMIDITY:				
12.	VERIFY AIR SUPPLY FREE OF CONTAMINATION AND THAT TRAP				
	FILTERS, AND SEPARATORS ARE INSTALLED				
13.	RECORD WET FILM THICKNESS:				
14.	% VOLUME SOLIDS:				
	DFT = WET x % VOL SOL				
	MIN. WET: MIN. DFT:				
	MAX. WET: MAX. DFT:				
	AVG. WET: AVG. DFT:				
	(RECORD ADDITIONAL SETS OF READINGS IN REMARKS)				

REMARKS: (DWGS, SPECS, ETC.)

RELATED NCR NO. ☐ I R CLOSED ☐ DATE SIGNATURE QC INSPECTOR

TUGCO QA

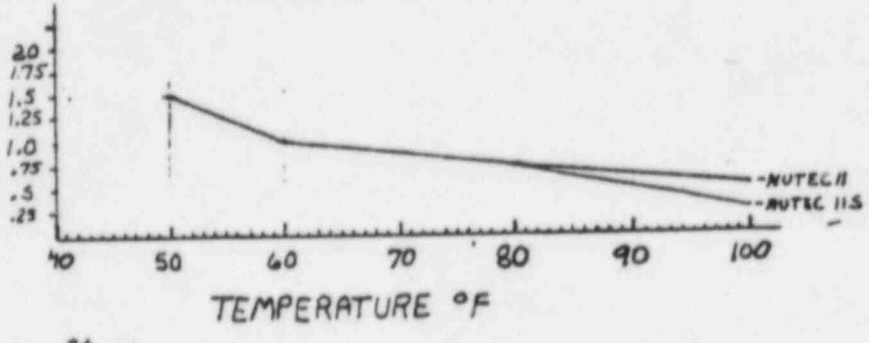
Form No. 1

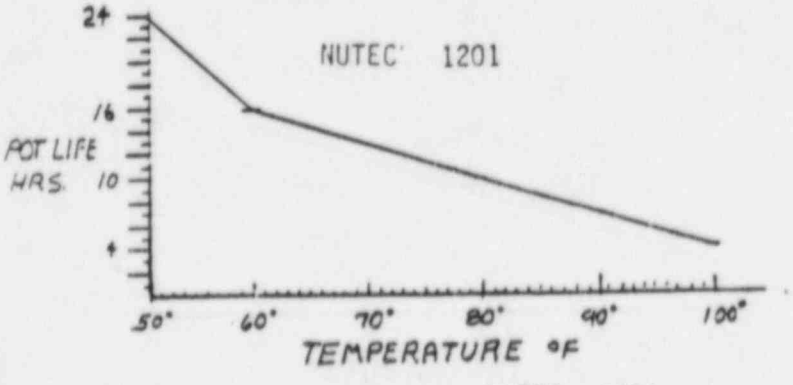
ATTACHMENT 2

Material	Shelf Life
Nutec 11 Base & Curing Agent	12 months
Nutec 11S Base & Curing Agent	12 months
Nutec 1201 Base & Curing Agent	12 months
Thinnners and Sand Filler	Unlimited

POT LIFE

NUTEC 11S and 11





INDUCTION TIMES FOR NUTEC 1201

Temp. (°F)	
50-59	45 min.
60-69	30 min.
70-79	20 min.
80-90	10 min.
91-100	None

ATTACHMENT 3

Surface Area (sq. ft.)	Total Allowable Number of Points of Discontinuity
Up to 10	1
10-50	2
50-100	5
100-500	10
500-1000	15
1000-5000	25

No gross discontinuities are acceptable.

ATTACHMENT 4

Percent volume solids for unthinned concrete coatings are as follows:

NUTEC 11 - 78%
NUTEC 11S - 88%
NUTEC 1201 - 54%

EXAMPLE: 11 mils WFT X 54% = 5.94 mils DFT

For thinned mixes:

$$\% \text{ Volume Solids} = \frac{\text{Volume of unthinned coating}}{\text{Volume of unthinned coating + Volume thinner}} \times \% \text{ Volume Solids (unthinned)}$$

NOTE: In above equation, volume must be expressed in the same unit of measure.

ATTACHMENT 5

COMANCHE PEAK STEAM ELECTRIC STATION

INSPECTION REPORT

SHEET ___ OF ___ NO 1

ITEM DESCRIPTION: PROTECTIVE COATINGS 2 | IDENTIFICATION NO 3 | SYSTEM / STRUCTURE DESIGNATION 4

SPEC NO 5 | REV 6 | REF QC DOC & REV & CHANGE NO: QI-QP-11.4-10, Rev. 7 | MEASURE OR TEST EQUIP IDENT NO 8

☐ IN PROCESS INSPECTION ☐ PRE INSTALLATION VERIFICATION ☐ INSTALLATION INSPECTION ☐ FINAL INSPECTION ☐ PRETEST INSPECTION 9

NSP RESULTS

☐ INSPECTION COMPLETED, ALL APPLICABLE ITEMS SATISFACTORY

☐ INSPECTION COMPLETED, UNSATISFACTORY ITEMS LISTED BELOW

QC INSPECTOR ____ DATE ____ 10

ITEM NO 11	INSPECTION ATTRIBUTES 12	SAT	UNSAT	DATE	QC SIGNATURE 13
	FINISH COAT FINAL ACCEPTANCE				
1.	Verify cure of finish coat per Para. 3.6.1.				
2.	Verify finish coat continuity per Para. 3.6.2.				
3.	Visually inspect finish coat per Para. 3.6.3.				

REMARKS (DWGS, SPECS, ETC.) 14

RELATED NCR NO 15 | I R CLOSED ☐ DATE | SIGNATURE QC INSPECTOR 16

ATTACHMENT 6

COMANCHE PEAK STEAM ELECTRIC STATION

INSPECTION REPORT

SHEET 1 OF 1

NO. 1

ITEM DESCRIPTION 2	IDENTIFICATION NO. 3	SYSTEM/STRUCTURE DESIGNATION 4
NUTEC 10		

SPEC. NO. 5	REV. 6	REF Q.C. DOC. & REV. & CHANGE NO 7	MEASURE OR TEST EQUIP IDENT. NO. 8
AS-31		QI-QP-11.4-10, Rev.	

☐ IN PROCESS INSPECTION ☐ PRE INSTALLATION VERIFICATION ☐ INSTALLATION INSPECTION ☐ FINAL INSPECTION ☐ PRE TEST INSPECTION 9

INSP. RESULTS

☐ INSPECTION COMPLETED, ALL APPLICABLE ITEMS SATISFACTORY

☐ INSPECTION COMPLETED, UNSATISFACTORY ITEMS LISTED BELOW

QC INSPECTOR DATE 10

ITEM NO. 11	INSPECTION ATTRIBUTES 12	SAT	UNSAT	DATE	QC SIGNATURE 13
1.	Verify concrete has been cleaned per Para. 3.7.1				
2.	Verify that NUTEC 10 is not applied under inclement conditions per Para. 3.7.2				
3.	Verify that the NUTEC 10 air supply and equipment is in accordance with Ref. 1-A, per Para. 3.7.3.				
4.	Verify mixing operations per Para. 3.7.4.				
5.	Verify qualification of applicators (List applicators) per Para. 3.3.5.				
6.	Verify the application rate of NUTEC 10 per Para. 3.7.5.				
7.	Verify coated surface free of unacceptable defects, sags, surface irregularities or excessive build up per Para. 3.7.6.				

REMARKS (DWGS, SPECS, ETC.) 14

RELATED NCR NO. 15 | I.R. CLOSED ☐ DATE | SIGNATURE QC INSPECTOR 16