

*Gordon McPhail*  
*424*  
*Reviewed*  
*by Noel Davis*  
*anew*

*Oct 1979*  
~~July 16, 1976~~

INDEXED

REVISION 6, ~~November 22, 1978~~  
Rev 0,

JOB 35-1195

COMANCHE PEAK STEAM ELECTRIC STATION

~~ALFALATE~~  
CONSTRUCTION PROCEDURE

35-1195-CCP-30 -A

~~ALFALATE~~  
COATING STEEL SUBSTRATES INSIDE REACTOR BUILDING  
AND RADIATION AREAS

APPROVED BY:

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APPROVED BY:

*U. D. Douglas* *11/22-78*  
Date  
U. D. Douglas  
Construction Project Manager

PREPARED BY:

*WGH*  
*11/21/78*  
Date  
~~WGH~~ G. McPhail  
Civil Engineers

REVIEWED BY:

*11/24* *U. D. Douglas* *11-29-78*  
Date  
*11-28-78*  
Quality Assurance

BROWN & ROOT, INC.  
HOUSTON, TEXAS

8511070112 851016  
PDR FOIA  
GARDE85-59 PDR

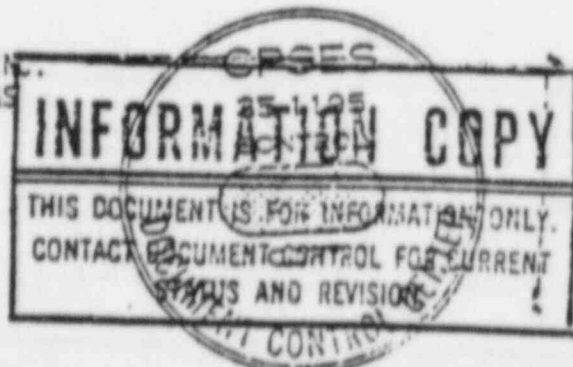


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NOTE

Rev 0.?

This document has been completely retyped for convenience in issuing Revision 6. Vertical lines (change bars) appearing in the margin indicate what information was actually changed, added, or deleted by Revision 6.

## 1. INTRODUCTION

### 1.1 PURPOSE

AN ALTERNATE PRIME COAT SYSTEM UTILIZING  
~~EXISTING~~ ~~OR COAT~~ ~~SYSTEMS~~ WHICH IS  
~~ALSO~~ ~~COATING~~ ~~SHALL~~

#### 1.1.1

The purpose of this procedure is to establish the methods by which the prime and finish coats are to be applied to the containment liners and radiation areas in accordance with specification, drawing, and manufacturer's requirements. This procedure may also be used for coating any steel substrate inside the reactor buildings scheduled to receive Carbo Zinc II primer and Phenoline 305 finish coat.

Manufactured by ameron and Carboline respectively.

### 1.2 SCOPE

#### 1.2.1

The scope of this procedure covers the surface preparation and coating of Unit 1 and 2 steel substrates inside the reactor buildings and radiation areas scheduled to receive protective coatings.

### 1.3 GENERAL DISCUSSION

#### 1.3.1

All coating materials covered by this procedure shall be as manufactured by Carboline Corporation of St. Louis, Missouri. The coating system will consist of a prime coat of Carbo Zinc II with a finish coat of Phenoline 305. In order to protect the prime coat from prolonged exposure, a seal coat consisting of approximately one mil of Phenoline 305, thinned in accordance with Section 4.4.2.4, may be applied over the prime coat. Surface preparation of the seal coat prior to finish coating, shall consist of solvent wiping if exposed longer than 30 days. Finish coating shall be applied when convenient prior to completion of the building ---or, prior to placement of concrete, equipment, or obstructions which would make finish coating impossible.

Manufactured by ameron

Protective Coatings Division  
Brea, Cal

## 2. DEFINITIONS OF TERMS, ABBREVIATIONS AND SYMBOLS

### 2.1 TERMS

#### 2.1.1

Substrate - The uncoated surface to which a coating is applied.

2.2 ABBREVIATIONS

2.2.1 (NONE)

2.3 SYMBOLS

2.3.1 (NONE)

3. SPECIAL ITEMS AND OPERATIONS

3.1 QUALIFICATION OF PERSONNEL

3.1.1 Coating application personnel shall be qualified per previous experience and practical application. In addition, each painter shall have been instructed by the Paint Superintendent or his representative in the use of the produce as consistent with carboline's training procedures, which includes both classroom instruction and a field application demonstration. This shall be verified by completing a form similar to Attachment 1. This form shall be executed by the B&R Paint Superintendent or his representative. A coating manufacturer's representative will be available for technical supervision upon initial painting effort. Applicators performing work to Attachment 2 shall be qualified for "Q" coatings, when applicable.

3.2 SAFETY REQUIREMENTS

3.2.1 All appropriate health, safety, and fire protection requirements pertaining to surface preparation and coating application shall be followed. It shall be the responsibility of the Safety Department Representative who will be present to establish the frequency of monitoring of the coating work.

3.3 INSTRUMENTS AND THEIR USE

3.3.1 The painting Foreman and General Foreman shall have access to and be familiar with the use of all instruments necessary to insure efficiency of coating applications. This shall include surface profile comparators, holiday detectors, thermometers, and wet and dry film gauges. Viscosity measuring devices will not

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be used. Wet film gauges will be randomly used during coating application as an aid to field personnel on Phenoline 305 only. Readings will be limited to the minimum necessary to control coating thickness.

### 3.4 DOCUMENTATION

- 3.4.1 Records shall be maintained on all attachments listed in Section 5.1. After completion, each form shall be forwarded to the Brown & Root Document Control Center for filing and distribution to the various parties as listed on the distribution sheet.

### 3.5 RECEIVING, STORING AND DISPENSING OF COATING MATERIALS

- 3.5.1 Receiving and Storage - Upon receipt of a shipment of coating materials, the B&R QC Representative accepting shipment shall be responsible for completing all necessary receiving inspection documentation. General receiving procedures shall be done in accordance with Brown & Root Construction Procedure ACP-3. It shall then be segregated from Non-"Q" materials and stored in the paint storage building where temperatures will be maintained between 45° - 110° F. Infrequent dips in air temperature in storage areas as low as 32°F for up to 24 hours is acceptable. Temporary storage may be required at the receiving warehouse due to receiving or other problems.
- 3.5.2 Dispensing - When coating materials are needed in the field, they shall be transferred from the controlled storage area to temporary storage in the field; due to limited shelf-life this shall be done on a "first-in", "first-out" basis. After materials have been partially used from an individual container, the same container cannot be resealed and returned to "Q" storage area. Containers opened and partially used in the "Q" paint storage area may be resealed and the contents used for later "Q" painting. The contents from partially used containers will not be reused after a period of one week has elapsed from date of initial opening.



3.6 SPECIAL COATING PROCEDURE

3.6.1 When items require special coating not covered under the content of this document, the appropriate Project Engineer (Mechanical, Civil, Electrical) shall complete Attachment 2 and transmit it to the Paint Superintendent. A log of all procedures from Attachment 2 shall be maintained by the Project Mechanical Engineer. The following information shall be filled out on each procedure.

3.6.2 Each procedure shall be given an unique number. The scope will describe the working limits of the procedure with detailed work requirements being listed under the requirements section. The approvals section shall have signatures of the following: Project Discipline Engineer (Mechanical, Civil, etc.), QA Manager if coating of item is safety related, TUSI representative when required, Engineer who prepared document, and a revision number and date. Upon completion of the document, distribution shall be made to all holders of this procedure.

3.7 TOUCH-UP AND FINISH COATING OF VENDOR APPLIED COATINGS

3.7.1 Prior to touch-up of primer or application of topcoat, an adhesion test shall be performed by the Brown & Root QC Department. If results are acceptable, work may proceed in accordance with sections 4.4.2.2 through 4.4.2.9.

3.7.2 The QC Inspector or his representative shall notify the responsible area engineer and/or the Paint Superintendent as soon as possible after receipt of a non-conforming item in need of paint repair to allow time for Attachment 2 preparation and a planned schedule for repair.

4. PROCEDURE FOR COATING

4.1 PREPARATION OF SUBSTRATES AND COATING MATERIALS

4.1.1 Surface Preparation for Primer - Under normal conditions, surface preparation shall not begin unless the temperature of the surface to be blasted is 50°F above the dew point. If needed, the surface to be primed shall then be cleaned of any heavy oil or grease deposits in accordance with SSPC-SP10, "Near White Blast Cleaning", hand, or power tool grinding and scaling to achieve ~~1-3 mil~~ 1-2 mil profile. After sand blasting, hand or power tool grinding and scaling, the surface to be primed shall be air blasted and/or solvent wiped to remove all sand and foreign materials. This shall be done until the surface is clean and will not be performed where air-borne contaminants could adhere to tacky paint. Suffi-



~~cient time shall~~ be provided to allow suspended particles to settle before beginning primer placement. If rust forms after blast cleaning, the surface shall be "shower blast" cleaned before painting. Under no case will a blast cleaned surface be exposed for more than 24 hours prior to priming. When applying coatings that will be joined together by a later coating operation, the interface shall be constructed as follows: Overblast the steel to near white metal approximately 12" - 18" beyond the point which will receive primer. Drop back approximately 12" - 18" on the primer when applying the seal-coat.

- 4.1.2 Removal of Weld Spatter and Other Minor Surface Imperfections (NOT TO EXCEED .031" FOR CONTAINMENT LINERS) - If needed, weld spatter omitted by others will be removed by Painting Personnel in accordance with SSPC-SP-2, and SP-3. In areas where grinding and needle scaling is required, this will be witnessed by a Brown & Root QC Representative. If it is determined that surface defects are severe enough to require later repair, then the area to be repaired will be blocked out and spot painted at a later date. All edges, protrusions, and peaks shall be ground smooth to a rounded contour; as a guide 1/8-inch radius of the contour may be used.

#### 4.2 SURFACE PREPARATION FOR FINISH COAT

- 4.2.1 Surface preparation for the finish coat shall consist of the removal, if needed of any oil or grease. This shall be accomplished by use of a manufacturer recommended cleanser or cleansing method on areas that have been seal-coated. On areas where the ~~primer~~ *seal-coat* is exposed, oil and grease will be removed by sand blasting, hand, or power tool grinding, and needle scaling and then by solvent wiping the area prior to replacing the primer. Power tool grinding and needle scaling should be equivalent to a near white blast SP-10 specification with no size limitation as long as the millage requirements are obtained.

- 4.2.2 The ambient temperature and relative humidity should be measured to determine the dew point temperature. Phenoline 305 finish coat should not be applied unless the substrate temperature is more than 5° F above the dew point.

#### 4.3 PREPARATION OF COATING MATERIALS

- 4.3.1 Primer - The primer, ~~Carbo Zinc 11~~ <sup>Dimetecote 6</sup>, is packaged in a two component kit consisting of a base and zinc filler. The base shall be thoroughly mixed first. Zinc filler shall then be added under constant agitation and mixed until free of lumps. Partial mixes shall be mixed by weight in a proportion of ~~10~~ <sup>15</sup> parts base to ~~3~~ parts zinc filler using a suitable scale to achieve a plus or minus 2 percent accuracy. The mixture shall then be strained through a 30-mesh screen. Viscosity shall be controlled by adding thinner as required up to the maximum allowed by the latest revision of Carboline publication number, October 75-N, except recoating mixes (refer to Section 4.4.1.2). Primer coat shall be gray or green. ~~Dimetecote 6 application instructions.~~

- 4.3.2 Finish Coat - The finish coat consists of ~~Phenoline 305~~ <sup>Carbonex</sup>, to which is added a catalyst. This shall be thoroughly mixed while combining in a ratio, by volume, of four parts Phenoline 305 to one part catalyst; the finish color shall be as required by the governing specification. Viscosity control shall be accomplished by adding thinner up to the maximum amount permitted by the latest revision of Carboline Publication Number 473, (except recoating mixes - refer to Section 4.4.1.4).

#### 4.4 APPLICATION OF PRIME AND FINISH COATING

- 4.4.1 Prime Coat: ~~(Carbo Zinc 11)~~ <sup>Dimetecote 6</sup> Ameron ~~Dimetecote 6~~

- 4.4.1.1 Coating material shall be applied using conventional spray equipment with agitated pressure pots having a maximum hose length of 75 feet. Care must be taken to assure that air and material pressures are adjusted to compensate the additional length of hose from 50' to 75' in length. The primer shall be allowed to dry as much as possible ( $\frac{1}{2}$  hr. min. @ 70°F, 50% R.H.) before start of other construction operations which could create contamination problems. Any runs or sags having a detrimental effect on the coating system shall be removed and repaired. The following application parameters shall also be followed:

1. Normal conditions of ambient and surface temperature shall be 40° - ~~50°~~ and 40° - ~~110°~~ F, respectively; however, primer may be applied within an ambient range of 0° - 130°F and a surface temperature range of 0° - 200°F. Under other than normal conditions, it may be advisable to use more thinner to reduce dry spray. If surface temperature is above 85°F, it is advisable to use between 1 pint and 2 quarts ~~Carbo Zinc Thinner #33 per gallon Carbo Zinc 11~~. In no case shall Carboline limits be exceeded.

*of Amercoat 100 thinner per gallon of Dimetecote 6 to get wet application.*  
thinner #101



2. Humidity values may vary from 10 to 95% however, coating shall not be applied to a wet or damp surface.
3. Thickness of prime coat shall be a minimum of 2 mils and a maximum of 4.5 mils. Minimum ~~and maximum~~ spot test values shall be 1.5 mils ~~and 4.5 mils~~. *at 11*
4. A double regulated pot having a adequate air volume supply shall be used.
5. Coating material shall be applied using a 50% overlap with each pass while holding the gun 8-10 inches from the surface. Cross hatch application is permissible.
6. Curing time shall be as follows, depending upon approximate temperature and relative humidity conditions:

<u>Temperature with over 50% R.H.</u>	<u>Curing Time Before Topcoating</u>
00°F.	7 days
40°F.	24 hours
60°F.	24 <del>to</del> hours
80°F.	24 <del>to</del> hours
100°F.	12 <del>to</del> hours

*Demitecote 6*  
 If required, the cure of ~~Carbo Zinc 11~~ may be accelerated by use of water spray after allowing at least one hour cure after application. This shall be done as often as required using clean water having a ph range of 6 to 8. If used, a filter system will be installed in order to assure proper cleanliness of the curing water.

4.4.1.2

*Demitecote 6*  
Recoating of ~~Carbo Zinc 11~~ Primer - Prior to recoating, the entire primed surface to be recoated will be wiped with clean rags moistened with Carboline Thinner #33. Wiping will continue until no discoloration is noticed on the rags. Carbo Zinc 11 shall then be thinned by using two quarts Carboline Thinner #33 per gallon. This will be applied in order to achieve 2.0 - 4.5 mils total DFT. (Only two overcoats shall be applied.) Special attention should be given to spray application and dry film thickness. The primed surface shall not be recoated until cured per Section 4.4.1.1.6.

*Surf. shall be free of all oil, grease or other contaminants. A wash down with Trisodium Phosphate (TSP) or detergent, using a stiff bristle brush, followed by flushing with fresh water is required. Allow surface to dry before recoating. Do not solvent wipe the surface to remove grease.*

4.4.1.3 Repair of Sags and Runs - Sags or runs in excess of 5.5 mils will be abraded with an aluminum screen or sandpaper to 2.0 to 5.5 mils. Sags or runs 5.5 mils or less which show no evidence of mud-cracking will not be repaired. If coating surface is satisfactory after abrading, then finish coat may be applied; however, if coating surface is unsatisfactory, blast, hand abrade or power tool grind to near white metal is required and primer coat re-applied. A satisfactory coating is considered one having no mud-cracking to the metal surface as visible to the unaided eye.

4.4.1.4 Brush touch-up painting shall be done on the prime coat in accordance with the following:

Prime Coat:

~~am Dimetol 6 application instructions~~ R 11-78  
1. Carboline Application Instructions (Carbo Zinc 11).  
Bulletin - October 76-N

~~Dimetol 6 application instructions~~ Product bulletin R 6-79  
2. Carboline Product Data Sheet (Carbo Zinc 11)  
~~Bulletin - October 76-N~~. Brush touch-up allowed on areas one square foot or less.

4.4.1.5 Repair of Embedded Foreign Particles - Embedded foreign particles shall be removed by abrading and recoated as outlined in Section 4.4.1.2.

4.4.1.6 Treatment of Rust Stains - Remove residue, though not necessarily the stain, with bristle brush and water. ~~Carboline~~ Allow to dry thoroughly. ~~with Carboline~~

4.4.2 Finish Coat ~~Carboline~~ ~~Phenoline 305~~ ~~Carboline~~ ~~Phenoline 305~~

4.4.2.1 Finish coating shall be applied using conventional, airless, brush or roller. Weld seams may be given an initial coat of 1-2 mils finish coating thinned by using two quarts Phenoline Thinner per each gallon kit Phenoline 305. The material shall be allowed to dry as much as possible before any other construction operations proceed which could create contamination problems by dust or other foreign matter. A continuity check shall be performed in accordance with NACE T-6F-3 Condition "C". No gross discontinuities are acceptable such as holidays, voids, skips, bubbles, and misses. Any runs or sags having a detrimental effect on the coating system shall be removed and repaired. The following application parameters shall govern:

1. The permissible range of surface and ambient temperature shall be 50 - 120 degrees F. However, when surface temperatures are outside the range of 60 - 85 degrees F. or ambient temperature outside 65 - 85 degrees F., it is permissible to use up to two quarts of Phenoline Thinner per gallon kit of Phenoline 305. The amount of thinner used under these conditions (1 1/2 pints-2 quarts) shall be that which gives the best workable mix under the given temperature conditions, i.e., usually advantageous to use more thinner at lower temperature.
2. Minimum and maximum values of relative humidity shall be 0% and 85% respectively.
3. Thickness of coating shall be minimum of 2.5 mils and a maximum of 5.5 mils. Minimum and maximum spot test values shall be 1.9 and 6.5 mils respectively.
4. Coating material shall be applied using a 50% overlap with each pass while holding the gun 8-10 inches from the surface.
5. Recoating time of Phenoline 305 is 12 hours at 90 degrees F. or 18 hours at 75 degrees F. and 50% R.H. Phenoline 305 thinned at two quarts Phenoline Thinner per gallon kit may be recoated after four hours. After 30 days it shall be solvent wiped prior to recoating with Phenoline 305 Thinner.
6. Tack free time at 75 degrees and 50% R.H. is 9 hours.
7. Full cure is achieved in 7 days at 75 degrees F. and 50% R.H.

- 4.4.2.2 Repair of Runs and Sags - Runs or sags will be abraded until the DFT of the Phenoline 305 is within 1.9 - 4.5 mils. If cracks are visible, then runs and sags will be removed to primer by power tool grinding followed by solvent wiping. If no cracking occurs, top coat will be considered acceptable. Area will be recoated as outlined in the Repair of Pinholes and Discontinuities (Section 4.4.2.4).
- 4.4.2.3 Repair of Embedded Foreign Particles - Foreign particles shall be removed by abrading and then recoated as outlined in the repair of pinholes and discontinuities. Recoating shall not be performed until 18 hours @ 75 degrees F. or 12 hours @ 90 degrees F. have elapsed.



4.4.2.4 Repair of Pinholes and Discontinuities - Loose particles shall be removed by brushing or vacuum. The entire area shall then be solvent wiped using Phenoline 305 Thinner and recoated using thinned down Phenoline 305 consisting of two quarts Phenoline Thinner per each gallon kit of Phenoline 305 applied at approximately 1-2 mils DFT. (See Section 4.4.2.3 for recoating time.)

4.4.2.5 Repair of Scratches and Damaged Areas - Any scratches or damaged areas will be abraded until loosely adherent particles are removed. The area will then be solvent wiped (~~Carboline Thinner #33 for primer, Phenoline Thinner for topcoat~~), and repaired with appropriate coating, i.e., Phenoline 305 if damage does not extend to primer; ~~Carbo 210~~ and Phenoline 305 if primer is damaged (if area is considered a major defect). Thickness shall be as required for the pertinent coating. If damage extends to metal and is considered a major defect (Refer to Section 4.4.2.9), damaged area will be blasted, hand or machine ground until bare metal is exposed. ~~If power grinding, grind and/or needle scale until a profile of approximately one mil is achieved.~~ All edges of existing coating around perimeter of cleaned area shall be feathered back approximately 2 inches.

*Amended 12/2/78*

*diminished 6/2/78*

4.4.2.6 Brush touch-up painting shall be done on the finish coat in accordance with the following:

1. Carboline Application Instructions (Phenoline 305) Bulletin 775.
2. Carboline Product Data Sheet (Phenoline 305 Primer and Finish) Bulletin 473. Brush touch-up and complete application is allowed with no area restrictions.

4.4.2.7 Treatment of Rust Stains - If surface is contaminated with rust stains or minute metallic particles, then surface shall be prepared by solvent wiping with Phenoline 305 Thinner and overcoating with a coat of Phenoline 305 prepared in accordance with Section 4.4.2.4.

4.4.2.8 Repair of Topcoat/~~6701~~ Minor Defect - (Minor defects are defined as an area, either circular or linear, in which a  $\frac{1}{2}$ " diameter circle could not be completely inscribed at any point along the entire length.) Blast or abrade, by machine or hand, the Phenoline 305 finish surrounding the damaged area and grind any exposed steel to a bright finish. Solvent wipe the surrounding 305 finish with Carboline Surface Preparation I. Spray or brush apply Phenoline 305 finish at Four mils nominal D.F.T. over the damaged area, overlap at least one inch onto the surrounding 305 finish.

*D-6*

*Phendine*  
*2/25*

*DI-METCOTE 6 paint*

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4.4.2.9 Repair of ~~Topcoat~~ Major Defects - (Major defects are defined as an area, either circular or linear, in which a 1/2" diameter circle could be completely inscribed at any point or along the entire length.) Spot blast or abrade, by machine or hand, the damaged area. Power tool or hand abrading must be very thorough in order to prepare the surface for ~~carbozinc touch-up~~ *di-metacote touch up*. The profile shall be equivalent to a near white SP-10 Specification. ~~A surface roughness equivalent to a minimum of one mil blast profile shall be obtained.~~ *not be polished by wire brushing or other means.*

4.5 FINAL ACCEPTANCE TESTING

4.5.1 After coating system cure, final inspection, and resolution of all discrepancies is completed, the QC Inspector shall document the final acceptance by completing and signing the final acceptance record and will transmit a copy of this record to the B&R Paint Superintendent as soon as possible after final acceptance is made.

4.6 HOLD POINTS

- 4.6.1 Onsite receipt of coating materials.
- 4.6.2 Substrates before and following surface preparation.
- 4.6.3 Mixing and preparation of coating material for application.
- 4.6.4 Film characteristics after drying and curing.
- 4.6.5 Control of ambient conditions and surface temperatures during all phases of the coating work.

5. SUPPORTING INFORMATION

5.1 ATTACHMENTS

- 1. Painter Qualification Record
- 2. Special Coating Procedure

(CONTINUED ON NEXT PAGE)





5.2

REFERENCES

1. Gibbs & Hill Specification 2323-SS-14,  
"Containment Steel Liner", Latest Revision
2. Steel Structures Paint Council, Volume 2, Second Edition
3. Carboline Corporation "Application Instructions",  
~~October 76-N Revision and Bulletin Number 775 - data sheets~~  
October 76-N Revision, and 473, Latest Revision

54. ANSI N 101.2,  
"Protective Coatings (Paints) for Light Water Nuclear  
Reactor Containment Facilities"

48. Gibbs & Hill Specification 2323-AS-31,  
"Protective Coatings", Latest Revision

78. Gibbs & Hill Specification 2323-MS-101,  
"Equipment Erection", Latest Revision

77. Gibbs & Hill Specification 2323-MS-438,  
"Nuclear Piping", Latest Revision

48. Gibbs & Hill Specification 2323-MS-448,  
"Non-Nuclear Piping"

108. Gibbs & Hill Specification 2323-MS-100,  
"Piping Erection"

110. Gibbs & Hill Specification 2323-SS-17,  
"Miscellaneous Steel", Latest Revision

4. Ameron Protective Coating Division  
Dimetacote 6 "Application Instructions".  
R 11-78  
Dimetacote 6 Production Bulletin R 6-79



ATTACHMENT 1

BROWN & ROOT, INC.  
COMANCHE PEAK STEAM ELECTRIC STATION

Painter Qualification Record

GENERAL DATA

Date \_\_\_\_\_ Report Number \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

TECHNICAL DATA

Name of Painter \_\_\_\_\_

Summary of Field Experience \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Experience with Following Product Types \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Application Test for Specified Substrate \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Additional Qualifications (School) \_\_\_\_\_

\_\_\_\_\_

Signature \_\_\_\_\_

Applicator's Field Supervisor

Distribution: Painting Supt.  
Q.C. Department



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"Q" Coating \_\_\_\_\_

ATTACHMENT 2

Sheet \_\_\_\_\_ of \_\_\_\_\_  
Procedure # \_\_\_\_\_

"Non-Q" Coating \_\_\_\_\_

Rev. \_\_\_\_\_ Date \_\_\_\_\_

SPECIAL COATING PROCEDURE NO. \_\_\_\_\_

SCOPE \_\_\_\_\_

REQUIREMENTS:

REFERENCE DOCUMENTS

APPROVALS

PDE \_\_\_\_\_

QA/QC \_\_\_\_\_

TUST \_\_\_\_\_

ENGINEER \_\_\_\_\_

REV. \_\_\_\_\_ DATE: \_\_\_\_\_



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Sheet \_\_\_\_ of \_\_\_\_

ATTACHMENT 2 (Continued)

Procedure # \_\_\_\_\_

Rev. \_\_\_\_ Date \_\_\_\_\_

REQUIREMENTS (Continued)



6801 Silsbee Avenue  
Post Office Box 33327  
Houston, Texas 77033  
(713) 644-5662

**Ameron**

Protective Coatings  
Division

October 1, 1979

VBR-12450

Mr. Gordon McPhail  
Commanche Peak Nuclear Plant  
Brown & Root, Inc.  
P. O. Box 1001  
Glenrose, Texas 76043

Dear Gordon:

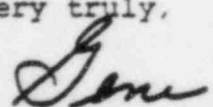
Attached is our revision to your specification as you requested. If you have any questions, please feel free to call me.

I discussed the Dimetecote 6 availability situation with Manny Neries. It seems as though the present stock that he maintains is committed for STP and NPS. He can, however, stock for your requirements in gallon containers as you require, if we should reach some agreement and initiate a blanket purchase order. With this in mind, I do not foresee any problems in Ameron supplying your primer requirements.

I also discussed with Noel Duvic, the gaps in the steel plates that must be sealed. He feels that after blasting and priming, the gaps can be filled, by spatula, with NuKlad 111 Surfacing. Then the topcoat can be applied. I have enclosed a technical data sheet for this product.

If I can be of further assistance, please feel free to call me.

Very truly,

  
Gene Centofanti, P.E.  
Sr. Engineering Services  
Representative

GC:mh  
Attachments

JOB NO. 35-1195  
RECEIVED

JAN 14 1980

B & R DCC DIST.

PROJECT MTR.	
PROJECT ENR.	
QA MTR.	/
PROJECT COST ENR.	/
TUGBO QA	
PROJECT GEN. MTR.	
ARMS	1w/a
G. McPhail	1w/a
VBR	1w/a



MEMO TO FILE

~~TO~~ FROM: V. Lelien

Date: Oct 2, 1984

Subject: Coatings Manufacture approval of CPSES  
Application Procedures. (QA file)

Met with Tony Vega 9/20/84 AM, requested  
above listed info. He in turn called in Chuck  
Welch (QA supervisor) to handle the TRT's request.  
On 9/24/84 Chuck still had not ~~not~~ obtained  
the location of the requested information. On  
10/1/84 the TRT again contacted Chuck Welch  
(Ext 640) at 9:30 AM. He still had not located  
the requested information and said he would locate  
it.

As of 1 PM on Oct 2, 1984 Chuck still had  
not provided the TRT with the location of  
the requested info.

9/19/84

Procedures Review - Approved from  
Manufacturers

① <sup>TK</sup> CCP-40, Rev 3, 11/4/81 } Imperial  
② CCP-40, Rev 5, 8/18/82 }

③ CCP-30, Rev 7, 5/7/81 } Carbolme  
④ <sup>TK</sup> CCP-30, Rev 11, 8/16/83 }

⑤ QI-QP-11.4-24, Rev 2, 2/25/82 } Imperial  
⑥ QI-QP-11.4-24, Rev 5, 7/5/83 }

⑦ QI-QP-11.4-23, Rev 5, 4/5/82 } Carbolme +  
⑧ QI-QP-11.4-23, Rev 9, 7/29/83 } Ameran

⑨ <sup>TK</sup> CCP-30A, Rev 3, 10/17/79 } Ameran  
⑩ CCP-30A, Rev 3, 12/6/83 }

See  
Green

On 10/14/84 @ 1 PM talked @ Tom Kelly, #s-23  
and 10 for production procedures had not been located  
as yet. He implied that the manufacturer had been  
requested to either send duplicates or approvals  
of these revs. He had no knowledge of their receipt as yet

9/20/84

- ① 12.4-23+24 No approval from manufacturer
- ② Eng. or AS-31 Provides tech details
- ③ QE does not have nor needs justification for eng. chgs. before April 84
- ④ Since ~ April 84 QE has been using a document that says manufacturer approves chgs

talk to Fred Sunkam

P.O. Box 29077 New Orleans, Louisiana 70189 U.S.A. 504-254-1433



NUCLEAR

June 16, 1982

*Rec'd  
9/19/84  
CP*

Mr. Mark Wells  
Brown & Root  
Comanche Peak  
P.O. Box 1001  
Glen Rose, Texas 76043

Dear Mark:

I have reviewed Revision 3 of your construction procedure CCP-40, and find it acceptable. I have made some comments (attached) which may be helpful with your next revision. I am also sending to you our latest revision of the 11S/11/1201 application procedure. If you have any questions, please do not hesitate to call me.

Sincerely,

*Gerry*  
Gerald E. Arnold  
Nutec Product Manager

GEA:dg

Encl: Application Procedure 11S/11/1201  
Comments to Revision 3

cc: Robert Taylor *RT*  
Vivian Martinez  
File

COMMENTS

✓ A. 1.3.1 and throughout Specification

Change Reactic 1201 to NUTEC 1201 - Although these two are one and the same, Imperial has officially used the name, NUTEC, for the past two years and all containers received by the jobsite will be labeled as such.

— B. 4.1.1.2

Delete "completely"

Insert: Residual marking remaining in pores below the plane of the surface is acceptable.

✓ C. 4.1.1.3

In #4 change "one square inch" to four square inches.

✓ D. 4.2.1.1

Delete "sand" in "sand filler." Other pigments besides sand are present in the filler component.

✓ E. 4.2.2.1 Induction Times

Change as indicated below to be consistent with written Imperial procedures.

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

\* Product Temperatures

F. 4.3.1.1

— 1. I believe "48 days" should be "48 hours"

— 2. In #5 change recoat times as indicated to be consistent with Imperial procedures.

50-59°F	- 72 hrs.
60-69°F	- 48 hrs.
70-79°F	- 24 hrs.
80-89°F	- 18 hrs.
91-100°F	- 12 hrs.

✓ 3. In #6 delete "touched -up or." This section deals with a full coating of the dried NUTEC 11S with another coat of NUTEC 11S or a full coat of NUTEC 11. The dry to touch definition was included in the specification to determine recoat times when the cure time or temperature was in question.



## F. 4.3.1.1 (Con't)

4. In #7 change "recoated" to "touched-up." This change will allow almost immediate touch-up on repair to the NUTEC 11S without prolonged cure time. As it reads now, it contradicts #6.

G. Mark, I did not go over completely the calculations to determine whether or not the weights in Attachments 2 and 3 are correct. However, I did note that there is a decimal point missing in the 1 quart extension in Attachment 3 and my calculations come up with slightly different numbers. I think it would be a good idea to have someone recheck the numbers.

In my February 17, 1981 letter, I indicated that the mixing ratio for 1201 white is 52.3 base: 7.7 (lbs) cure for a five gallon kit:

Therefore:

Quantity	Base	Cure
5 gallons	52 lbs 4.8 oz.	7 lbs. 11.2 oz.
1 quart	2 lbs 9.8 oz.	6.2 oz.

TEXAS UTILITIES GENERATING COMPANY

P O BOX 1002 GLEN ROSE TEXAS 76043

9/22/84  
CCP

CPPA: 37,712

March 26, 1984

Imperial Professional Coatings  
P.O. Box 29077  
New Orleans, Louisiana 70189

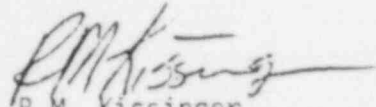
COMANCHE PEAK STEAM ELECTRIC STATION  
CCP 40 VENDOR REVIEW

Dear Mr. Arnold:

Please find enclosed one copy of construction procedure CCP 40  
Rev. 7 for review and comment.

Please review this procedure at your earliest convenience and send  
questions or comments to this office.

Sincerely

  
R.M. Kissinger  
Project Civil Engineer

<sup>T.W.</sup>  
RMK/MW/bb  
attachment  
cc: ARMS (OL, 1A)  
Finis Peyton - Purchasing (1L, 1A)



PROTECTIVE COATINGS

FOR CORROSION RESISTANCE • FIRE PROTECTION • WATERPROOFING

AREA CODE 314  
844-1000

CABLE - CARBOCO - ST. LOUIS  
TELEX - 44-7332

REPLY TO:  
CARBOLINE COMPANY  
1325 19th ST. - STE. 3-B  
PLANO, TX. 75074  
(214) 424-7512

7/12/84  
@CP

November 9, 1983

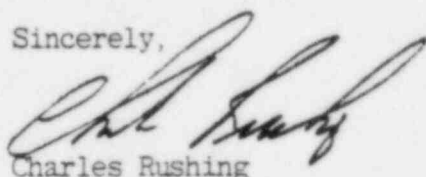
Texas Utilities Services, Inc.  
P. O. Box 1002  
Glen Rose, Texas 76043

Attention: Mr. R. M. Kissinger  
Project Civil Engineer

Dear Mr. Kissinger,

The enclosed Procedure CCP-30 Revision II has been reviewed, and found to be satisfactory.

Sincerely,



Charles Rushing

TEXAS UTILITIES SERVICES INC.

P. O. BOX 1002 • GLEN ROSE, TEXAS 76043

CPPA-34,792

October 27, 1983

Carboline Company  
1325 19th ST.-STE. 3-B  
Plano, Texas 75074

Attn: Charles Rushing

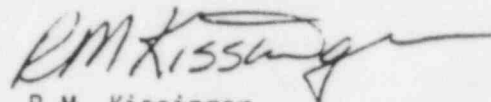
COMANCHE PEAK STEAM ELECTRIC STATION  
CONSTRUCTION PROCEDURE CCP-30

Dear Mr. Rushing,

Please find enclosed one copy of construction Procedure CCP-30  
Revision 11 for your review and comment.

Please review this procedure and return all questions or comments  
to this office.

Very truly yours,



R.M. Kissinger  
Project Civil Engineer

<sup>MW</sup>  
RMK/MW/sgr

cc: Steven Harrison - Carboline Co. St. Louis, Mo.  
ARMS

9/21/87

## Procedures Review

### ① Major - Construction Procedures (4)

① CCP-30, Coating Steel Substrates Inside  
R.B. + Rad. Areas.

② CCP-30 M1 thru M9 Special Coating Procedures

③ CCP-30A Coating Steel Substrates Inside  
R.B. + Rad. Areas.

[D6/305]

④ CCP-40 Protective Coatings of Concrete Surfaces

### ② Major - Quality Procedures

CPSES TRT

INTERNAL ☒

EXTERNAL ☐

Telephone Memorandum

RE: Final Engineering Walkdown Procedure (Coatings)

CALL DATE: 10/4/89 TIME: N/A A.M. 3:05 P.M.

INCOMING: \_\_\_\_\_

OUTGOING: X

BETWEEN Thomas Kelly OF

EBASCO

ADDRESS: TUGCO Ext. 249

AND \_\_\_\_\_

OF TRT COATINGS TEAM

SUMMARY OF DISCUSSION:

(2 calls) The TRT asked what is the procedure number of the procedure to be used by engineering to check protective coatings after the last Q/C Final Inspection. The answer was CA-EI-40-51.

In a second call he restated the same procedure number. He also stated that the purpose of the procedure is to ensure Non-Q items had been painted and to provide engineering final inspection of the Q coatings. In the event any Q coatings were observed to need repairs, the appropriate forms are completed. The engineering inspection is recorded by area in memo form. As of this date all of the engineering inspections have been completed for unit 1.

COPIES TO:

Bell Wells