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Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 7

This actice applies to Construction Procedure No. 35-1195- <u>CCP-30</u> Revision 10 This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following pages with the attached:

Page 10 of 13 Page 12 of 13

Reviewed by: Weller 61 Brown 4. Root Quality Assurance Date Reviewed by: Approved by: TUGCO Quality Assurance Date 1-11.73 Sata Construction Project Manager

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 6

This notice applies to Construction Procedure No. 35-1195-<u>CCP-30</u> Revision <u>10</u>. This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following pages with the attached:

Page 8 of 13 Attachment 3 Page 1 of 2 Attachment 3 Page 2 of 2

Reviewed by: 12lle/ 1 Brown 4:2 ITINCA Originat Approved by: TUGCO Quality Assurance Date Prenkum 1-2 5-83 April 20, 1083 Effective Data . 10 Construction Project Manager

Sheet 1 of 2

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 5

This notice applies to Construction Procedure No. 35-1195- CCP-30 Revision 10 . This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following page with the attached:

Page 11 of 13

Reason for change: Additional requirement.

Reviewed by: 53 Data Brown Assurance Originator Reviewed Au! Approved by: TUGCO Qual ity Assurance Date 1-17-92 1/17/83 Effective Date Date oject. Manager

Sheet 1 of 2

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 4

This notice applies to Construction Procedure No. 35-1195- CCP-30 Revision 10. This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following page with the attached:

Page 11 of 13

Reason for change: Change in requirement.

h Welle 12-17-82

Approved by:

1º Project Manager Date "uction

Brown ty Assurance Date 4 300 Jua Reviewed 57 TUGCO Quality Assurance Dace

12/21/82

Effective Data

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Reviewed by:

Sheet 1 of 4

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 3

This notice applies to Construction Procedure No. 35-1195- <u>CCP-30</u> Revision <u>10</u>. This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following pages with the attached:

Page 11 of 13 Page 12 of 13 Page 1 of 1 Attachment 4

Reason for change: Additional requirements

Reviewed by: Jata Brown & Root Qual 1:7 Assurance Data Originat Reviewed by: Approved by: Date TUGCO Qu ity Assurance 9/21/82 -- 5 Effective Date Project Manager anstruction Jata

	ARMS
JOB 35-1195 Comanche Peak Steam Electric Station	DATE Sheet 1 of 2
Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 2	
This notice applies to Construction Procedure No. 35-1195	_ CCP-30 Revision _
This change will be incorporated in the next revision of	the procedure.
Change the procedure as follows:	
Replace the following page with the attached:	
Page 6 of 13	
Reason for change: Additional requirement	
Reviewed by:	
Mach Wells 5/10/82 112 Originator gates Brown & Root	CES .
Reviewed by:	Quality Assurance Da
	Mut. 5%
TUGCO Qualit	y Assurance Da
	1/82 ctive Date

		INDEXED
Сота	JOB 35-1195 nche Peak Steam Elect	DATE DATE
DOCU	Construction Proce MENT CHANGE NOTICE NU	
This notice applies to	Construction Process	re No. 35-1195- CCP-30 Revision 1
This change will be in	corporated in the new	ct revision of the procedure.
Change the procedure a	s follows:	
Replace the following	page with the attac	hed :
Page 5 of 13		
Reason for change: Ac	dditional requiremen	ts
Reason for change: Ac	dditional requiremen	ts
Reason for change: Ac		ts leviewed by:
Reason for change: Ac	R	
~	R <u>2-16-82</u> Data	leviewed by: <u>JA 200 -///52</u> Brown & Root Quality Assurance Da eviewed by:
~	R <u>2-16-82</u> Data	leviewed by: <u> JA 2000 -1:5/52</u> Brown & Root Quality Assurance Da
Approved by:	R <u>2-16-82</u> Data R	leviewed by: <u>JA</u> <u>JC</u> <u>JS</u> Brown & Root Quality Assurance Da eviewed by: <u>Raa</u> <u>Carminance</u> <u>2/11</u> TUGCO Quality Assurance Da
Approved by:	2-16-82 Data R 	leviewed by: <u>JA 200 -///52</u> Brown & Root Quality Assurance Da eviewed by:
Approved by:	2-16-82 Data R 	leviewed by: <u>JA</u> Brown & Root Quality Assurance Da eviewed by: <u>Raa</u> TUGCO Quality Assurance 2/17/82

EROWN & ROOT, INC. CPSES JOB 35-1195		PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE		
		CCP-30	10	1/26/82	2 of 13		
1.0	INTRODUCTION						
1.1	PURPOSE						
1.1.1	which the pri tainment line fication, dra cedure may al the reactor b	f this procedure me and finish coa rs and radiation wing, and manufac so be used for co uildings schedule 305 finish coat.	ats are to be areas in acc turer's requ bating any st ed to receive	applied to th ordance with s irements. Thi eel substrate	e con- peci- s pro- inside		
1.2	SCOPE	SCOPE					
1.2.1	coating of Un	this procedure co it 1 and 2 steel radiation areas	substrates i	nside the reac	tor		
1.3	GENÉRAL DISCU	GENÉRAL DISCUSSION					
1.3.1	factured by C coating shall coat of Pheno posure, a "se line 305, thi over the prim solvent wiped be applied wh prior to plac	aterials covered arboline Corporat consist of a pri line 305. To pro al coat" consisti nned in accordance e coat. Prior to with Phenoline t en convenient pri ement of concrete nish coating impo	tion of St. L me coat of C otect the print of approximation of approximation with Section of finish coat thinner or Xy or to complet e, equipment,	ouis, Missouri arbo Zinc 11 w me coat from p imately one mi on 4.4.2.4, ma ing, the seal lol. Finish c tion of the bu	. The ith a finish rolonged ax- l. of Pheno- y be applied coat shall be oating shall ilding or		
	to shop coate Building, the code number. applied by cr	aintain traceabil d steel cited for se items shall be The code numbers aft personnel. U will be transfer umbers.	installatio steel stamp shall be as pon division	n in the Reactured with a unique signed by QC Profined by QC Profined by CC Profined and the second states of materials,	or ue coating aint and this		
2.0	DEFINITIONS O	F TERMS					
2.1	TERMS						
2.1.1	Substrate - T	he uncoated surfa	ce to which	a coating is a	pplied.		

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SROWN & ROOT, INC. CPSES		PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB	35-1195	CCP-30	10	1/26/82	3 of 13
3.0	SPECIAL ITEMS A	ND OPERATIONS			
3.1	QUALIFICATION O	F PERSONNEL			
3.1.1	Coating applica perience and pr have been instr tive in the use training proced a field applica pleting a form executed by the ative. A coati for technical s performing work when applicable	actical applic ructed by the P a of the produc lures, which in ation demonstra similar to Att Brown & Root ing manufacture supervision upo to Attachment	ation. In ad Paint Superint its as consist cludes both c tion. This s achment 1. T Paint Superin er's represent n initial pai	dition, each p endent or his ent with Carbo lassroom instru- hall be verifi- his form shall tendent or his ative will be nting effort.	ainter shall representa- line's uction and ed by com- be represent- available Applicators
3.2	SAFETY REQUIREM	IENTS			
3.2.1	All appropriate pertaining to s be followed. I Department to e work.	urface prepara t shall be the	tion and coat responsibil:	ing application ty of the Site	n, shall Safety
3.3	INSTRUMENTS AND	THEIR USE			
3.3.1	The painting Fo and be familiar insure efficien surface profile and wet and dry not be used. We application as Readings will be coating thickne	with the use by of coating comparators, film gauges. Wet film gauges an aid to fiel be limited to t	of all instru applications. holiday detec Viscosity me will be rand d personnel o	ments necessar; This shall in tors, thermome asuring devices omly used durin n Phenoline 30	y to nclude ters, s will ng coating 5 only.
3.4	DOCUMENTATION				
3.4.1	Records shall b Section 5.1. A the Brown & Roo bution to the y	fter completio t Document Con	n, each form	shall be forwar or filing and o	ded to

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3.5	RECEIVING, STOP	RAGE AND DISPENS	SING OF COAT	ING MATERIALS	
3.5.1	materials, the be responsible documentation. dance with Brow then be segreg storage buildin 45° - 110°F. as low as 32°F	Storage - Upon r B&R QC Represer for completing General receiv wn & Root Constr ated from Non-"(ng where tempera Infrequent dips for up to 24 ho required at the ems.	ntative acce all necessa ving procedu ruction Proc Q" materials atures will in air temp burs are acc	pting shipment ry receiving in res shall be in edure CP-CPM 8. and stored in be maintained be erature in store eptable. Tempo	shall spection accor- 1. It shall the paint etween age areas rary
3.5.2	it shall be tr temporary stor to limited sne a "first-in", partially used cannot be rese use. Containe paint storage used for "Q" p tents from par	hen coating math ansferred from ta age area or area lf-life of coat "first-out" bas from an individ aled and return rs opened and pa area may be res- ainting. With tially used con days has elapsed	the controll a of intende ing material is. After ma dual contain ed to "Q" st artially dis ealed and th the exceptio tainers shal	ed area to a de d use in the fi s, this snall b terials have be er, the said co orage area for tributed from t te remaining con n of thinners, 1 not be reused	signated eld. Due e done on en ntainer later he "Q" tents the con- after
3.6	SPECIAL COATIN	G 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 Site Coating Engineer. The following information shall be completed on each procedure.				
3.6.2	describe the w work requireme The approvals Project Discip Marager if coa when required, number and dat	shall be given orking limits or nts being lister section shall h line Engineer (ting of item is Engineer who p e. Upon comple to all holders	f the proced d under the ave signatur Mechanical, safety rela repared docu tion of the	ure with detail requirements se es of the follo Civil, etc.), Q ited, TUSI repre iment, and a rev document, distr	ed ction. wing: A sentative ision

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3.7	TOUCH-UP AND FIN	SH COATING OF V					
3.7.1	Prior to touch-up coated items othe adhesion test sha ment. If results	TOUCH-UP AND FINISH COATING OF VENDOR APPLIED COATINGS Prior to touch-up of primer or application of topcoat on vendor coated items other than pipe hanger support components, an adhesion test shall be performed by the Brown & Root QC Depart- ment. 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 e gineer and/or the Paint Superintendent as soon as possible after receipt of a nonconforming item in need of paint repair to allow time for Attachment 2 preparation and a planned schedule for repair.						
4.0	PROCEDURE FOR COA	PROCEDURE FOR COATING					
4.1	PREPARATION OF SU	PREPARATION OF SUBSTRATES AND COATING MATERIALS					
4.1.1	Surface Preparati not begin unless power tooled is 5 be primed shall t in accordance wit	the temperature OF above the de then be cleaned	of the surfa w point. If of any heavy	ce to be blast needed, the su oil or grease	ed and/or and/or		
	Small amounts of operations. The power tool operat "near white" blas is preferred, a m above surface pre blasted and/or so contaminants from where air-borne c cient time shall settle before beg	surface shall t tions to achieve t cleaning. All inimum of 1 mil paration, the s lvent wiped to the surface. ontaminants cou be provided to	hen be cleane an equivalen though 1-3 mi . profile is urface to be remove dust, Air blasting ld adhere to .	d by blast, ha t of SSPC-SP10 1. surface pro required. Aft primed shall b sand or foreig shall not be p tacky paint.	ind or -63, file the e air n performed Suffi-		

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	the steel t the point w approximate When applyi	or power tool c to near white met which will receively 1" in from ed ng seal or finis pproximately 12"	al approximat e primer. Pl ge of cleaned h coat on eit	ely 3" - 6" be ace border tap area and prim ther of above m	eyond be le. hethods
4.1.2	(not to exceed spatter omitted in accordance w that surface de the area to be	spatter and oth .031" for contai by others will with SSPC-SP-2 an efects are severe repaired will be a. All protrusio ontour.	nment liners) be removed by d SSPC-SP-3. enough to re blocked out	- If needed, Painting Pers If it is deta equire later re and spot paint	weld sonnel ermined epair, ted
4.1.3	viously been co tight residue o	oval is required bated in accordan of primer which m ad substrate is a	ce with this ay remain in	procedure, sha	idows or
4.2	SURFACE PREPARA	TION FOR FINISH	COAT		
4.2.1	if needed, of a use of a manufa areas that have primer is expos hand, or power wiping the area and needle scal	ation for the fin any oil or grease acturer recommend been seal-coate sed, oil and grea tool grinding, a a prior to replac ling should be eq with no size limi ined.	. This shall ed cleanser of d. On areas se will be re nd needle sca ing the prime uivalent to a	be accomplish or cleansing me where the Cari emoved by sand aling and then er. Power too a near white b	hed by the athod on bo Zinc 11 blasting, by solvent grinding last SP-10
4.2.2	determine the c	nperature and rel dew point tempera ess the substrate	ture. Phenol	line 305 finis	n_coat shall
4.3	PREPARATION OF	COATING MATERIAL	.s		
4.3.1	kit consisting thoroughly mixed agitation and of by weight in a using a suitab The mixture sha shall be contro two guarts of	rimer, Carbo Zinc of a base and zi ed. Zinc filler mixed until free proportion of 10 le scale to achie all then be strai olled by adding t thinner par gallo own in Attachment	inc filler. If shall then be of lumps. Pa parts base to ave a plus or ined through a chinner, as re on of Carbo Z	First the base e added under of artial mixes si to 22 parts zi minus 2 perce a 30-mesh scre equired, but si	shall be constant hall be mixed nc filler nt accuracy. en. Viscosit hall not exce

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4.3.2 Finish Coat - The finish coat, Phenoline 305, is packaged in a two component kit consisting of Phenoline 305 base, Part A, and a Phenoline catalyst, Part B. Mixes are made by combining and thoroughly mixing the base and catalyst. Partial mixes may be made by combining, in a ratio by volume, four parts base to one part catalyst. Viscosity shall be controlled by adding thinner, as required, but shall not exceed two quarts of thinner per gallon of Phenoline 305. Pot life of Phenoline 305 shall be shown on Attachment 4.

- 4.4 APPLICATION OF PRIME AND FINISH COATING
- 4.4.1 Prime Coat
- 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 become tack free 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 $40^{\circ} - 95^{\circ}$ F and $40^{\circ} - 110^{\circ}$ F respectively; however, primer may be applied within an ambient range of $0^{\circ} - 130^{\circ}$ F and a surface temparature range of $0^{\circ} - 200^{\circ}$ F. Carbo-Zinc 11 may be thinned up to 2 quarts per gallon for application; however, when using higher thinning levels at or below normal temperature range, care must be taken to obtain proper film build. Above 85°F it is advisable to use up to 2 quarts per gallon to minimize dry spray. In ro case shall carboline limits be exceeded.
 - Humidity values vary from 10 to 95% however, coating shall not be applied to a wet or damp surface.
 - Thickness of prime coat shall have a minimum dry film thickness of 2 mils and a maximum of 4.5 mils. Minimum and maximum spot test values shall be 1.5 and 5.5 mils respective'.
 - A double regulated pot having an adequate air volume supply shall be used.
 - As a guide, coating material may be applied using a 50% overlap with each pass while holding a gun 8-10 inches from the surface. Cross hatch application is permissible.

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	coating may b with the flat nickle. (Min cure verifica achieved). A lines for cur humidity. It accelerated b of one hour m water spray. recommended t conjunction w 5 to 9. App	is sufficientl be burnished rat t portion of a s nor amounts of 2 ation, however, Attachment 3 may re to topcoat ti f required, the by the use of wa nust elapse betw Below 25% relate to obtain the devith water curir lication of wate as necessary to	ther than remo smooth edged of inc dust may a burnished s be utilized une of CZ-11 a cure of carbo ater spray, ho veen applicat: tive humidity esired cure. bg shall have er spray for of	oved when rubb coin such as a be removed du surface must b as general gu bove 25% rela cinc II may owever, a mini ion of coating (, water curin Water utilize a PH factor f curing purpose	ed ring e ide- tive be mum and g is d in rom
4.4.1.2	Recoating of Carl major defects per surface to be rec with Carboline TI appreciable disco shall then be the gallon mix. This total DFT. Only should be given to using a 50% mix. cured per section	to Zinc 11 Prime r section 4.4.2. coated shall be hinner #33. Wip bloration is not inned by using to s will be applie two recoats may to spray applica The primed sur	er - Prior to 9 are present wiped with c bing shall con ticed on the two quarts Can ed to achieve y be applied. ation and dry.	recoating, if t, the entire lean rags mois ntinue until m rags. Carbo Z rboline NO. 33 a 2.0 - 4.5 m Special atte film thicknes	primed tened c inc 11 per ils ntion s when
4.4.1.3	Repair of Sags and be adraded with a mils. Sags or re mud-cracking will factory after all if coating surfact tool grind to nee A satisfactory co the metal surfact	an aluminum scre uns 5.5 mils or l not be repaire brading, then fi ce is unsatisfac ar white metal bating is consid	een or sandpap less which si ed. If coatin inish coat may ctory, blast, is required an dered one hav	per to 2.0 to now no evidenc ng surface is y be applied; hand abrade o nd primer coat ing no mud-cra	5.5 e of satis- however, r power re-applied.
4.4.1.4	Brush touch-up pa dance with the fo		e done on the	prime coat in	accor-
	Prime Coat:				
	Prime Coat: 1. Carboline Ap Bulletin - O		uction (Carbo	Zinc 11)	

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4.4.1.5	millage or mag			ed by abrading, i r repair per sect	
4.4.1.6	sarily the sta		e brush and w	, though not nece water or Carbolin	
4.4.1.7	Coating Interi interfacing.	face - Refer to :	Section 4.4.3	3.0 for coating	
4.4.2	Finish Coat				
	discontinuitie coating thinne kit of Phenol "striped" with stated above. welds, etc., t sufficiently t coating operat etc., as state initial finish to become tack proceed which other foreign accordance with are acceptable Any runs or sa shall be remove shall govern:	es may receive a ed by using two ine 305. To aid h Phenoline unth In either "str time should be a to maintain a "s tions. The init ed above, shall h coating operat k free before an could create con matter. A cont th NACE T-6F-3 Co e such as holida ags having a det yed and repaired	n initial coa quarts Phenol in continuit inned instead iping" or ini- llotted for t ealing" effect ial coating of be considered ion. The mat y other const ntamination p inuity check ondition "C". ys, voids, s) rimental effect.	ther sharp geomet at of 1-2 mils fi line Thinner per ty at edges, edge d of the 50% mixt itial coating of the coating to ha at prior to conti of edges, stripin d part of the tot terial shall be a truction operatio problems by dust shall be perform No gross disco kips, bubbles, an act on the coatin wing application	nish each gallor s may be ure as edges, rden nuing g, al llowed ns or ed in ntinuities d misses. g system parameters
	application 120°F after may be the mix. The the best w	on shall be 50° er material has inned up to 2 qui ratio of thinned	- 120 ⁰ F. Ten become "tack arts of Pheno r to Phenolir e., usually a	Ambient temperatu apperature may ris free". Phenolin pline Thinner per ne will be that w advantageous to u	e above e 305 gallon hich gives
	2. Minimum an 85% respec		s of relative	e humidity shall	be 0% and
				applied using a gun 8-10 inches f	
			2		

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	4. Curing and tim	ie to recoat Phe	enoline 305 sh	all be as shown	n below:
	Between Coats	Ten	nperature ^O F	Final Co	ure
	72 hours 36 hours 18 hours 12 hours		50 - 59 60 - 74 75 - 89 90 and above	12 da 8 da 4 da 2 da	ys ys
	5. Phenoline thir recoated after	nned at 50% and 4 hours of cur	applied as a re at or above	seal coat may 75 ⁰ F.	þe
	 Tack free shall foreign contant 	ll be defined as minants will not			h
		ting system sha ls, with a minin theck of 11.5 m	num spot check	film thickness of 7 mils and	range a
4.4.2.2	Repair of Runs and DFT of the Phenol are visible, then power tool grindin occurs, top coat recoated is outlin (Section 4.4.2.4)	ine 305 is with runs and sags y ng followed by s will be consider ned in the Repa	in 1.9 - 4.5 m will be remove solvent wiping red acceptable	ils. If crack d to primer by . If no crack . Area will b	s ing e
4.4.2.3	Repair of Embedded be removed by abra repair of pinholes performed until co satisfied.	ading and then is and discontinu	recoated as ou uities. Recoa	tli. J in the ting shall not	be
4.4.2.4	Repair of Pinholes and Discontinuities - Loose particles shall be removed by brushing or vacuum r compressed air. The affected area shall be solvent wiped with Phenoline 305 Thinner or xylol. Pinholes and small discontinuities may be repaired at the time of final inspection without a later reinspection of the repair. If the repair area requires recoating, recoat the area with Phenoline 305 thinned 50%. Recoated areas require cure to final inspection time per section 4.5.1.				
4.4.2.5	Repair of Scratch areas will be abr moved. The area #33 for primer, C and repaired with damage is conside Zinc 11 and Pheno defect per sectio the perimeter of sufficient distan Thickness shall b	aded until loos shall then be s arboline Phenol appropriate co red a minor def line 305 if dam n 4.4.2.9. All the cleaned are ce ot ensure a	ely adherent p olvent wiped (ine thinner or ating, i.e., P ect per sectio aged area is c edges of exis a shall be "fe smooth blend w	articles are r Carboline thin xylol for top henoline 305 i n 4.4.2.8 and onsidered a ma ting coating a athered" back with existing c	e- ner coat) f Carbo jor round a

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.4.2.6	Brush touch-up p accordance with		be done on the	finish coat	in
	1. Carboline Ap 775.	oplication Inst	ruction (Pheno	line 305) Bul	lletin
		oduct Data She B. Brush touch n no area restr	-up and comple		
4.4.2.7	Treatment of Rus stains or minute pared by solvent overcoating with with Section 4.4	e metallic part t wiping with P n a coat of Phe	icles, then su henoline 305 T	face shall thinner or xy	be pre- lol and
1.4.2.8	Repair of Topcoa defined as an ar diameter circle the entire lengt line 305 finish steel to ensure rounding 305 fir Spray or brush f the damaged area amount to insure	rea, either cir could not be co th.) Blast or surrounding th contaminant fr nish with Carbo Phenoline 305 f a. Overlap on 5	cular or linea ompletely inso abrade, by mac e damaged area ee surface. S line's Phenoli inish at appro o the surround	r, in which a ribed at any hine cr hand and clean an olvent wipe to ne Thinner or ximately 4 m ling coating a	point along , the Pheno- ny exposed the sur- r xylol. il DFT over
4.4.2.9	Repair of Topcoa defined as an ar diameter circle the entire lengt damaged area. H order to prepare ing surface prep Specification. mil blast profi	rea, either cir could be compl th.) Spot blas Power tool or h e the surface f paration shall A surface roug	cular or linea etely inscribe t or abrade, m and abrading m or Carbo Zinc be equivalent hness equivale	ar, in which a d at any poin machine or han must be very 11 touch-up. to a near whi	a ½" nt or along nd, the thorough in The result- ite SP-10
4.4.3.0	Coating Interface coat, the exist distance to ensu- the 305/CZ11 sys primers shall be	ing coating sha ure a smooth fi stem and the 30	<pre>11 be "feather nal coating sy 5/D6 system, t</pre>	red back" a su tem. When in the interface	ufficient rterfacing
4.4.2.1	Cure of Minor To 4.4.2.8, which a spected for fina in Section 4.4.	are noted in th al acceptance a	e topccat and	repaired, ma ecoat time a	

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4.5	FINAL ACCEPTANCE	TESTING	1		
\$.5.1	Final acceptance cure of 24 hours a paragraph 4 is sa	and cure for rec			
	After final inspector the QC inspector signing the final to the B&R Paint S ance is made.	shall document t acceptance reco	he final accepted. A copy w	otance by compl ill then be tra	eting and insmitted
4.6	HOLD POINTS				
4.6.1	Onsite receipt of	coating materia	1s.		
4.6.2	Substrates before	and following s	urface prepara	ation.	
4.6.3	Mixing and prepara	ation of coating	material for	application.	
4.6.4	Film characterist	ics after drying	and curing.		
4.6.5	Control of ambient phases of the coat		surface temp	eratures during	a11
5.0	SUPPORTING INFORMA	ATION			
5.1	ATTACHMENTS				
	 Painter Qualit Special Coatin CZ 11 Cure to Pot Life CZ 11 	ng Procedure Topcoat Time	305		
5.2	REFERENCES 1. Gibbs & Hill S "Containment S	Specification 23 Steel Liner", La			
	2. Steel Structur	res Paint Counci	1, Volume 2, S	Second Edition	
		poration "Applic Revision and Bul Revision and 473	letin Number 7	75 - data shee	ts
		patings (Paints) inment Facilitie		er Nuclear	
		Specification 23	23-AS-31		

BROWN & ROOT, CPSES	INC.	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB 35-1195		CCP-30	10	1/26/82	13 of 13
		Specification Erection", Late	est Revision		
1.					
	"Nuclear Pip	bing", Latest R	levision		
8.	"Nuclear Pip Gibbs & Hill "Non-Nuclear	Ding", Latest R Specification Piping" Specification	evision 2323-MS-448	,	

BROWN & ROOT, INC. CPSES	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB 35-1195	CCP-30	10	1/26/82	1 of 1
	ATTACHMENT 1			
COMANCHE PE	ROWN & ROOT, INC EAK STEAM ELECTI	RIC STATION		
Painte	er Qualification	n Record		
	GENERAL DATA			
Date	R	eport Number		<u></u>
	TECHNICAL DAT	A		
Name of Painter				
Summary of Field Experience				
Experience with Followirg P	roduct Types			
		<u> </u>		
Application Test for Specif	ind Subetrata			
Application lest for specif	Ted Substrate_			
Additional Qualifications (School)			
	Signat	ure		
Distribution: Painting Sup Q.C. Departm Tugco CA Vau	t.	Applica	tor's Field Su	pervisor
		<u>></u>		

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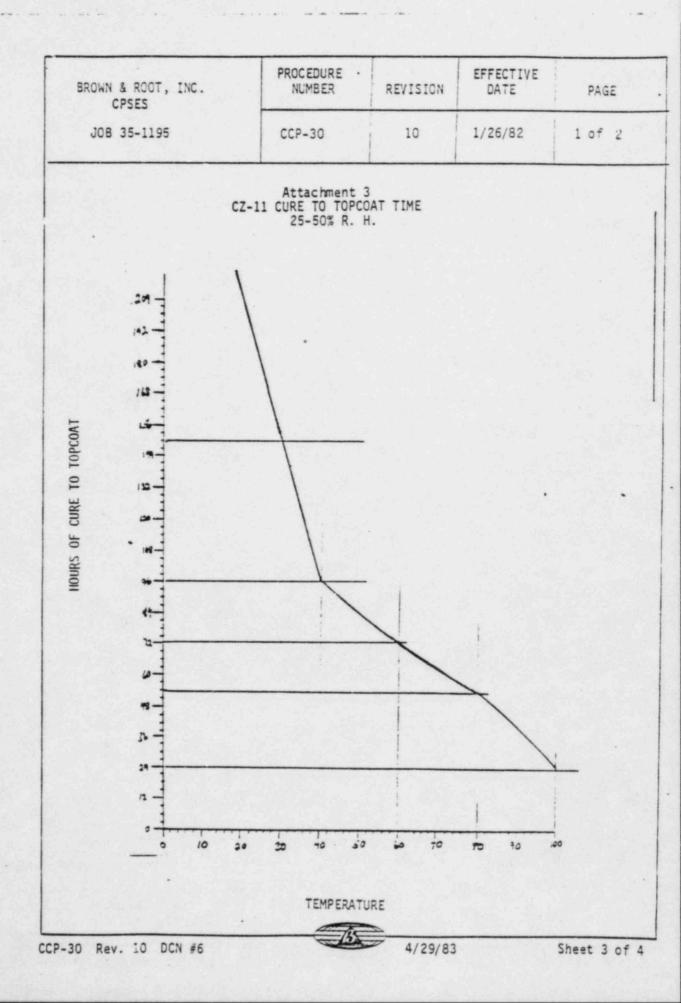
Seat Access

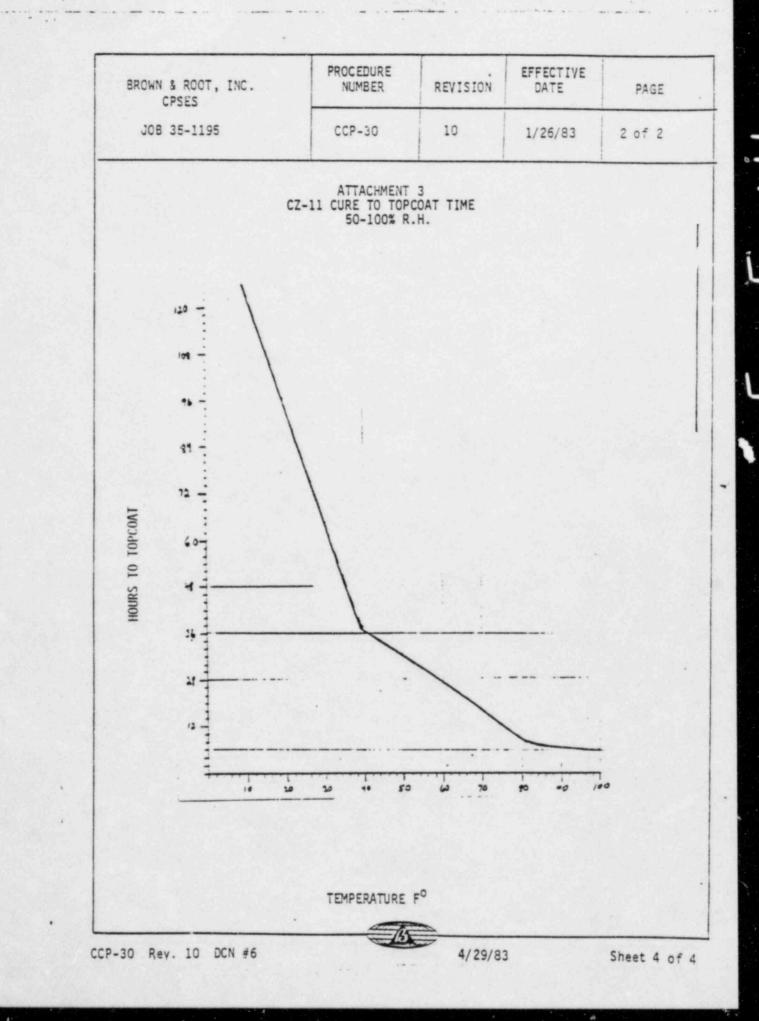
BROWN & ROOT, INC. CPSES	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB 35-1195	CCP-30	10	1/26/82	1 of 2
"Q" Coating "Non-Q" Coating	ATTACHMENT 2		Sheetof Procedure # RevDate	
SPECIAL SPECIAL		E NO		
REQUIREMENTS :				
REFERENCE DOCUMENTS		APPROV	ALS	
REFERENCE DOCUMENTS			<u>AL 5</u>	
REFERENCE DOCUMENTS		PDE		
REFERENCE DOCUMENTS		PDE		
REFERENCE DOCUMENTS		PDE QA/QC _ TUSI		

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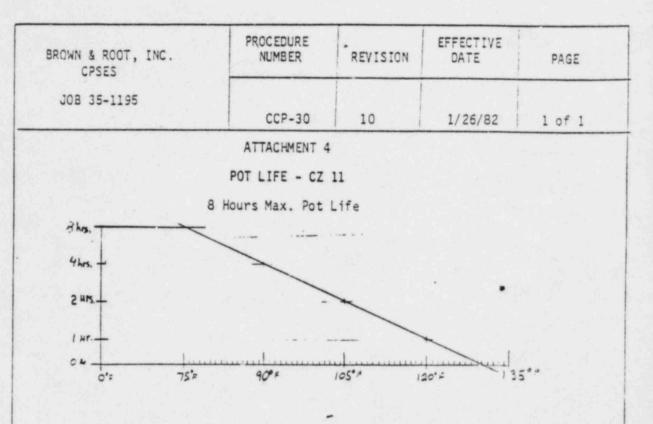
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BROWN & ROOT, INC. CPSES	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB 35-1195	CCP-30	10	1/26/82	2 of 2
	1 667-30	1		and the second se
	1 007-30		Sheet	
A	TTACHMENT 2 (Con		Sheet	of





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POT LIFE PHENOLINE 305

TEMPERATURE (OF)	UNTHINNED	THINNED-50%
50 - 54 55 - 59 60 - 64 65 - 69 70 - 74 75 - 79 80 - 84 85 - 89 90 - 95	10 hrs 7 hrs 4½ hrs 3½ hrs 2 hrs 1½ hrs 1½ hrs 1½ hrs 1 hr	24 hrs 24 hrs

Pot life for coatings thinned up to but not including max. amount of thinner allowed, use pot life for unthinned material.

For spray application, pot life as stated above is recommended maximum times and should be utilized for a basis for coating usage time; however, actual pot life may be longer. If coating when temperature is above 95°F, or if pot life as stated above has been exceeded, the actual pot life ends when proper atomization and spraying becomes difficult and the coating loses body and begins to sag. When utilizing other than spray application methods, pot life shall be as stated in the above table.

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BROWN & ROOT, INC. CPSES JOB 35-1195	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
008 33-1135	CCP-30A	2	9/20/82	1 of 13
TITLE:	ORIGINATOR:	March	Wills	9.11÷18
COATING STEEL SUBSTRATES INSIDE REACTOR BUILDING & RADIATION AREAS	REVIEWED BY:	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Alles	9/16/15
	APPROVED BY		PROJECT MANAGE	0ATE 7-17-5- R DATE
0.1 TABLE OF CONTE	NTS	DON 1 ====		
1.0INTRODUCTION1.1PURPOSE1.2SCOPE1.3GENERAL DISCUS		001 A 3 4 4	12	912
2.0DEFINITIONS OF2.1TERMS2.2ABBREVIATIONS2.3SYMBOLS	TERMS, ABBREVI	# 5 ATIONS AND SYMB	ols	10
3.6 SPECIAL COATING	OF PERSONNEL MENTS D THEIR USE RING AND DISPENS			S
4.2 SURFACE PREPARA 4.3 PREPARATION OF	SUBSTRATES AND ATION FOR FINISH COATING MATERIA PRIME AND FINIS	I COAT	ALS	
5.0 <u>SUPPORTING INFO</u> 5.1 ATTACHMENTS 5.2 REFERENCES	ORMATION		27	
		-	• •	

COMANCHE PEAK STEAM ELECTRIC STATION

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 6

Notice applicable to Construction Procedure No. 35-1195- CCP-30A Rev. 2 This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following pages with the attached: Page 6 of 13 Page 9 of 13 Page 12 of 13

Approved by:

1 11-16-83 ruction Project Manager Date

183

TUGCO Quality Assurance

Reviewed by:

Date

November 16. 1983 Effective Date

COMANCHE PEAK STEAM ELECTRIC STATION

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 5

Notice applicable to Construction Procedure No. 35-1195- CCP-30A Rev. 2 This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following page with the attached: Page 1 of 1; Attachment 3

Approved by:

Reviewed by:

Will 11/2/03 N/A / Jan Standing 11/2/83 Date Brown & Root Quality Assurance Date

TUGCO Quality Assurance Date

Construction Project Manager Date November 2 1023 Effective Date

COMANCHL PEAK STEAM ELECTRIC STATION

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 4

Notice applicable to Construction Procedure No. 35-1195- CCP-30A Rev. 2 This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following page(s) with the attached: Page 12 of 13

Oria

Approved by:

Reviewed by:

Welle 10/13/87 NA Lune Ha Brown & Root Quality

TUGCO Quality Assurance Date

153 Project Manager Date ion

October 17, 1983 Effective Date

COMANCHE PEAK STEAM ELECTRIC STATION

Construction Procedure DOCUMENT CHANGE NOTICE NUMBER 3

Notice applicable to Construction Procedure No. 35-1195- CCP-30A Rev. 2 This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Please replace the following pages with the attached: Page 12 of 13 Page 13 of 13 Attachment 3: Page 1 of 1

** Page 13 accompanies this DCN to show paragraphal movement only.

Welle 9/21/83 N/2 + . Date Brown & R Originator

Approved by:

Root Quality Assurance

BRANDT O Quality Assurance

Construction Project Manager Date

September 22, 1983 Effective Date

Reviewed by:

Sheet 1 of 2

Construction Procedure DOCUMENT CHANGE .. ICE NUMBER 2

This notice applies to Construction Procedure No. 35-1195- CCP-30A Revision 2. This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following page with the attached:

Page 11 of 13

Reason for change: Additional requirement.

Reviewed by: Cloth 11-23 1-12-00 arown Assuranc Reviewed own Approved by: TUGCO Qual 1ty Assurance Date 1/17/83 1-17m Effective Date oject Manager Data

Sheet 1 of 2

Construction Procedure
DOCUMENT CHANGE NOTICE NUMBER 1

This notice applies to Construction Procedure No. 35-1195-<u>CCP-30A</u> Revision <u>2</u>. This change will be incorporated in the next revision of the procedure.

Change the procedure as follows:

Replace the following page with the attached:

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Page 11 of 13

Reason for change: Change in requirement.

		Reviewed by:
Marh Welle.	12-17-82	2 NH CAR
Originator	Date	Brown & Root Quality Assurance Date
		Reviewed by Milli Totally
Approved by:		TUGCO Quality Assurance Date
10 Denekun	12	
Construction Project Manager	Data	Effective Jate
	T	

BROWN & CPS	ROOT, INC.	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB 35	The second second	CCP-30A	2	9/20/82	2 of 13
1.0	INTRODUCTION	<u>.</u>			
1.1	PURPOSE				
1.1.1	prime coat s shall be app in accordance requirements steel substr primer or Di	of this procedur system utilizing lied to the cont with specification . This procedur ate inside the r metcote 6 and Ph d Carboline resp	existing topo tainment liner ation, drawing "e may also be "eactor build tenoline 305 f	coat system. rs and radiati g, and manufac e used for coat ings scheduled	Coatings ion areas turer's ating any to receive
1.2	SCOPE				
1.2.1	coating of U	this procedure nit 1 and 2 stee d radiation area	al substrates	inside the re	actor
1.3	GENERAL DISC	USSION		98. And	
1.3.1	manufactured or Ameron Pr coating syst Ameron with order to pro coat consist in accordanc coat. Surfa shall consis Finish coati of the build	materials covered by Carboline Co otective Coating em will consist a finish coat of tect the prime co ing of approxima e with Section 4 ce preparation of t of solvent wip ng shall be appl ing or, prio ons which would	propriation of s Division, E of a prime co Phenoline 30 toat from prol tely one mil 1.4.2.4, may b f the seal co ing if expose ied when conv r to placement	St. Louis. Mi Brea, Californ bat of Dimetco D5 by Carbolin onged exposur of Phenoline be applied ove bat prior to f ed longer than renient prior at of concrete	issouri ita. The ite 6 by ite. In re, a seal 305. thinned in the prime inish coating 30 days. to completion e, equipment,
	to shop coat these items number. The by craft per	maintain traceab ed steel cited f shall be steel s code number sha sonne'. Upon di sferred along wi	or installati tamped with a 11 be assigne vision of mat	on in the Rea unique coati d by QC Paint erials, this	ctor Building ng code and applied unique number
2.0	DEFINITIONS	OF TERMS, ABBREV	IATIONS AND S	YMBOLS	
2.1	TERMS				
2.1.1	Substrate -	The uncoated sur	face to which	a coating is	applied.
e-di-			-		

BROWN & ROOT, INC. CPSES		PROCEDURE NUMBER	REVISION	EFFECTIVE	PAGE
JOB 35-1	195	CCP-30A	2 .	9/20/82	3 of 13
2.2	ABBREVIATIONS				
2.2.1	(NONE)				
2.3	SYMBOLS				
2.3.1	(NONE)				
3.0	SPECIAL ITEMS	AND OPERATIONS			
3.1	QUALIFICATION	OF PERSONNEL			
3 1	experience an er shall have his represent carboline's a classroom ins shall be veri This form sha representativ be available effort. Appl	cation personnel d practical apple been instructed ative in the use nd Ameron trair truction and a fied by complete 11 be executed b e. A coating ma for technical su icators perform "Q" coatings, w	lication. In by the Paint a of the produ- ing procedures ield applicat ing form sim by the B&R Pat anufacturer's upervision upo ing work to At	addition, ea Superintend act as consis s, which incl tion demonstr nilar to Atta int Superinte representati on initial pa ttachment 2 s	ch paint- ent or tent with udes both ation. This chment 1. ndent or his ve will inting
3.2	SAFETY REQUIR	EMENTS			
3.2.1	pertaining to be followed. Department Re	te health, safet surface prepara It shall be the presentative who monitoring of th	tion and coat responsibility will be pres	ting applicat ity of the Sa sent to estab	ion shall fety
3.3	INSTRUMENTS A	ND THEIR USE			
3.3.1		Foreman and Gene	all instrument	ts necessary	

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	& ROOT, INC. CPSES	PROCEDURE	REVISION	EFFECTIVE DATE	PAGE
JOB	35-1195	CCP-30A	2	9/20/82	4 of 13
	cation as an a	s will be randoml id to field perso be limited to the ess.	nnel on Pheno	line 305 only.	
3.4	DOCUMENTATION				
3.4.1	Section 5.1. A the Brown & Roo	be maintained on After completions of Document Contr various parties a	, each form s ol Center for	hall be forwar filing and di	ded to stri-
3.5	RECEIVING, STOP	AGE AND DISPENSI	NG OF COATING	MATERIALS	
3.5.1	materials, the be responsible documentation. accordance with It shall then to the paint stora between 45°F - storage areas a Temporary stora	Storage - Upon re B&R QC Represent for completing a General receivin Brown & Root Co be segregated fro age building wher 110°F. Infreque is low as 32°F fo age may be requir r other problems.	ative accepti 11 necessary ng procedures nstruction Pr m Non-"Q" mat e temperature nt dips in ai r up to 24 ho ed at the rec	ng shipment sh receiving insp shall be done cocedure CP-CPM cerials and sto s will be main r temperature burs is accepta	all pection i 8.1. pred in ptained in uble.
3.5.2	shall be transi storage in the done on a "firs partially used cannot be resea opened and part resealed and th exception of th	then coating mater ferred from the c field; due to lin st-in", "first-ou from an individu aled and returned tially used in th the contents used minners, the cont used after a perio opening.	ontrolled sto mited shelf-1 t" basis. Af al container, to "Q" stora e "Q" paint s for later "Q" ents from par	rage area to t ife this shall ter materials the same cont ge area. Cont torage area ma painting. Wi tially used co	emporary be have been cainer cainers by be th the ontainers
3.6	SPECIAL COATING	PROCEDURE			
3.6.1	When items requ of this documer	ire special coat	ing not cover	ed under the c	

BROWN & ROOT, INC. CPSES JOB 35-1195		PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE		
		CCP-30A	2	9/20/82	5 of 13		
3.6.2	describe the wo work requiremen The approvals s Project Discipl Quality Enginee TUSI representa and a revision	shall be given a orking limits of its being listed ection shall hav ine Engineer (Me ering if coating tive when requir number and date. all be made to a	the procedure under the red e signatures chanical, Civ of item is sa ed, Engineer Upon comple	e with detailed quirements sect of the followi vil, etc.), The afety related, who prepared of etion of the do	d tion. ing: JGCO document, ocument.		
3.7	TOUCH-UP AND FI	NISH COATING OF	VENDOR APPLIE	D 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.						
4.0	PROCEDURE FOR C	OATING					
4.1	PREPARATION OF	SUBSTRATES AND C	OATING MATERI	ALS			
	not begin unles power tooled is be primed shall	tion for Primer s the temperatur 5 ⁰ F above the d then be cleaned ith SSPC-SP-1-63	e of the surf ew point. If of any heavy	ace to be blas needed, the s oil or grease	ited and/or		
	operations. Th power tool oper "near white" bl. is preferred, a above surface p blasted and/or contaminants fro where air-borne cient time shal settle before b surface prepara primer applicat tool cleaned su priming without coatings that w	f grease or oil e surface shall ations to achiev ast cleaning. A minimum of 1 mi reparation, the solvent wiped to om the surface. contaminants cou l be provided to eginning primer tion, the rusted ion. Under no ca rface be exposed additional clean ill be joined to hall be construct	then be clean e an equivale lthough 1-3 m l. profile is surface to be remove dust, Air blasting uld adhere to allow suspen application. area shall b for more tha ning of the s gether by a l	ed by blast, h nt of SSPC-SP1 il. surface pr required. Af primed shall sand or forei shall not be tacky paint. ded particles If rust forms e re-cleaned b last, hand, or n 24 hours pri urface. When ater coating o	and or 0-63, ofile ter the be air gn performed Suffi- to after efore power or to applying		
		(The second sec	-				

BROWN & ROOT, INC. CPSES		PROCEDURE NUMBEP	REVISION	EFFECTIVE DATE	PAGE	
JOB	35-1195	CCP-30A	2	9/20/82	6 of 13	
	white meatal will receive	approximatel; 1	2" - 18" beyo ack approxima	the steel to nea nd the point whic tely 12" - 18" fr	h	
	steel to nea which will r from edge of	r white metal ap eceive primer. cleaned area an er of above meth	proximately 3 Place border d prime. Whe	border tape - Cle " - 6" beyond the tape approximatel n applying seal o approximately 12	point y l'' in r finish	
4.1.2	Removal of weld s exceed .031" for others will be re and SSPC-SP-3. I to require later spot painted at a to a rounded cont	containment line moved by Paintin f it is determin- repair, the area later date. Al	<pre>rs) - If need g Personnel i ed that surfa- to be repair</pre>	ed, weld spatter in accordance with ce defects are se ed will be blocke	omitted by SSPC-SP-2 vere enough d out and	
4.1.3	If coating removal is required from an area or item which has previously been coated in accordance with this procedure, shadows or tight residue of primer which may remain in the profile of the previously prepared sub- strate is acceptable. However, areas with residues of Carboline 191 Primer shall be recoated with Carboline 191 Primer. Areas with residues of inorganic zinc may be coated with either inorganic zinc or Carboline 191 Primer. It is not required that such areas meet the criteria of SSPC-SP10 or SSPC-SP6.					
4.2	SURFACE PREPARATIO	ON FOR FINISH CO.	AT			
4.2.1	Surface preparation needed, of any off manufacturer record been seal-coated. and grease will be	l or grease. Thi nmended cleanser On areas where e removed by sand	is shall be ad or cleansing the Carbo Zir d blasting, ha	complished by the method on areas t ic ll primer is ex and, or power tool	e use of a that have posed, oil grinding,	

- and needle scaling and then by solvent wiping the area prior to replaceing the primer. Power tool grinding and needle scaling should yield surface cleanliness equal to that of SSPC-SP-10 "near white" blast cleaning. Power tooled areas should be kept to a minimum however no size limitation is imposed providing acceptable surface cleanliness is achieved.
- 4.2.2 The ambient temperature and relative humidity shall be measured to determine the dew point temperature. Phenoline 305 finish shall not be applied unless the substrate temperature is 5°F or more above the dew point.

BROWN & ROOT, INC. CPSES		PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB	35-1195	CCP-30A	2	9/20/82	7 of 13
4.3	PREPARATION OF CO	DATING MATERIAL	s		
4.3.1	Primer - The prim nent kit consist be thoroughly mix der constant agit mixes shall be mi to 15 parts zinc or minus 2 percer through a 30-mest ing thinner as re revision of Dimet shall be reddish	ing of a base a ked first. Zin tation and mixe ixed by weight filler using a nt accuracy. T n screen. Visc equired up to t tcote 6 applica	nd zinc fille c filler sha d until free in a proport suitable sca he mixture sh osity shall t he maximum al tion instruct	er. The base s of lumps. Par ion of 6.4 part ale to achieve hall then be st be controlled b llowed by the l tions. Primer	shall ed un- tial is base a plus crained by add- atest coat
4.3.2	Finish Coat - The to which is added combining in a ra part catalyst; th specification. Y thinner as requir gallon of 305. F with Attachment 3	i a catalyst. Itio by volume, ne finish color Viscosity contro red, but shall i Pot life for fin	This shall be of four part shall be as ol shall be a not exceed ty	e thoroughly mi ts Phenoline 30 required by th accomplished by yo quarts of th	xed while 5 to one e governing adding
4.4	APPLICATION OF PR	IME AND FINISH	COATING		
4.4.1	Prime Coat: (Ame	eron Dimetcote (6)		
4.4.1.1	Coating materials ment with agitate 75 feet. The pri start of other co ination problems. the coating syste application param	ed pressure pot: mer shall be al nstruction oper Any runs or s m shall be remo	s having a ma llowed to bec rations which sags having a oved and repa	iximum hose len come tack free could create detrimental e ired. The fol	gth of before contam- ffect on
	conditions, i dry spray. I able to use b	tions of ambient nd 40° 130°F, thin an ambient ange of 0° - 20 t may be advisa f surface tempe etween 1 pint a on of Dimetcote	DOFF. Under able to use m erature is ab and 2 quarts	other than nor ore thinner to ove 85°F, it i of Amercoat th	mal reduce s advis-

- BROWN & ROOT, INC. CPSES JOB 35-1195		PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE	
		CCP-30A	2	9/20/82	8 of 13	
	2.	Humidity val shall not be	lues may vary fr applied to a w	om 10 to 95% Met or damp su	however, coat rface.	ing
	3.	and a maximu	f prime coat sha um of 5 mils. M 1 5.5 mils respe	inimum spot t	um dry film of est values sha	f 2 mils ill be
	4.	A double reg shall be use	ulated pot havi ed.	ng an adequat	e air volume s	supply
	5.	overlap with	coating materia each pass whil Cross hatch a	e holding the	gun 8-10 inch	1 50% nes from
	6.	Curing time surface temp	shall be as fol perature and rel	lows, dependi ative humidit	ng upon appro y conditions:	iximate
		TEMPERATURE	WITH OVER 50% R	.н. Ве	Curing Time fore Topcoatin	
		40 -	990		24 hours	
		1000	and above		12 hours	
	NOTI	on "coin defined a when the	r curing, below test" method fo s: the coating coating may be th the flat por	r determining is sufficien burnished rat	cure. "Coin tly cured for her than remov	Test" is topcoat ed when
	wata tion hav	er spray afte n. This shal ing a ph rang talled in ord	cure of Dimetco r allowing at 1 1 be done as of e of 6 to 8. I er to assure pro	east one hour ten as requir f used, a fil	cure after ap ed using clean ter system wil	plica- water l be
4.4.1.2	oil Sect or c with a fi 4.4. and	, grease and tion 4.2.1) detergent, us n fresh water inal cleaning .2.9 are pres	etcote 6 Primer other contaminar A wash down with ing a stiff bris is required. I method. If no ent and the prim accordance with	nts. (Remove h Trisodium P stle brush, fi Do not solven major defect ned surface to	oil or grease hosphate (T.S. ollowed by flu t wipe the sur s as defined i o be recoated	per P.) shing face as n Section is cured

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	& ROOT, INC. PSES	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE
JOB	35-1195	CCP-30A	2	9/20/82	9 of 13
4.4.1.3	Repair of Sags an abraded with an a Sags or runs 5.5. will not be repai abrading, then Ca coating surface i grind to near whi A satisfactory co the metal surface	luminum screen of mils or less whi red. If coating rbolines finish of n unsatisfactory te metal is requirating is consider	r sandpaper to ich sholw no ev surface is san coat may be app , blast, hand a ired and primer ered one having	2.0 to 5.5. mil vidence of mud-o tisfactory after plied; however, abrade or power t coat re-applie g no mud-crackin	s. racking if tool d.
4.4.1.4	Brush touch-up pa with the following	inting shall be o g:	ione on the pri	ime coat in acco	rdance
	touchup - 14	application instr 4 square inches. Product bulletin		3. Max. allowab	le
4.4.1.5	Repair of Embedded shall be removed b result, recoat or respectively.	d Foreign Particl by abrading. If	les - Embedded low millage or	major defects	
4.4.1.6	Treatment of Stain the stain with bri or Amercoat #12 cl	istle brush and w	ater or Carbol	ine Thinner #33	
4.4.1.7	Coating Interface	- Refer to Secti	on 4.4.3.0 for	coating interf	acing.
4.4.2	Finish Coat; Cart	ooline, Phenoline	305		
4.4.2.1	Finish coating sha or roller. Weld s tinuities may rece thinned by using to Phenoline 305. To with Phenoline unt In either "stripin should be allotted a "sealing" effect coating of edges, part of the total be allowed to beco proceed which coul foreign matter. A with NACE T-6F-3 C able such as holid sags having a detr	seams, edges and eive an initial c two quarts Phenol b aid in continui thinned instead o ng" or initial co i for the coating prior to contin striping, etc., initial finish c ome tack free bef d create contami continuity chec Condition "C". N lays, voids, skip	other sharp ge oat of 1-2 mil ine Thinner pe ty at edges, e f the 50% mixt ating of edges to harden suf uing coating o as stated abov oating operati ore any other nation problem k shall b2 per o gross discon s, bubbles, an	ometrical disco s finish coating r each gallon k dges may be "st ure as stated at , welds, etc., ficiently to mat perations. The e, shall be cons on. The material construction ope s by dust or oth formed in accord tinuities are ac d misses. Any t	n- g it of riped" bove. time intain initial sidered al shall erations her iance ccept- runs or

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CCP-30A Rev. 2 DCN #6

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BROWN C	ROOT PSES	, INC.	PROCEDURE NUMBER	REVISION	DATE	PAGE
JOB 35-1195		CCP-30A	2	9/20/82	10 of 13	
	and	repaired.	The following a	pplication pa	rameters shall	govern:
	1.	application become "tac line 305 ma per gallon which gives	ible range of su shall be 50° - k free", tempera y be thinned up mix. The ratio the best workal thinner at lowe	120°F. After ature may risk to 2 quarts of of thinner to ble mix; i.e.	r the material e above 120 ⁰ F. of Phenoline T o Phenoline wi , usually adva	has Pheno- hinner 11 be that
	2.	Minimum and and 85% res	maximum values pectively.	of relative	humidity shall	be 0º
	3.	As a guide. lap with eac surface.	coating materia ch pass while ho	al shall be a olding the gui	pplied using a n 8-10 inches	50% over- from the
	4.	Curing and	time to recoat P	Phenoline 305	shall be as s	hown below:
		Between Coa	ts Temper	rature ^O F	Final Cu	re
		72 hour 36 hour 18 hour 12 hour	s 60 s 75	- 59 - 74 - 89 and above	12 day 8 day 4 day 2 day	s s
		Phenoline th recoated af	hinned at 50% ar ter 4 hours cure	nd applied as a at or above	a seal coat ma 75 ⁰ F.	ay be
	5.	Tack free si contaminant:	hall be defined s will not adher	as the extent e to the coat	t of cure which ting.	h foreign
	6.	of 7-11 mil:	bating system sh s with a minimum of 11.5 mils.	nall have a dr n spot check o	y film thickno of 7 mils and a	ess range a maximum
.4.2.2	DFT visi grir coat	pair of Runs and Lags - Runs or sags will be abraded until the T of the Phenoline 305 is within 1.9 - 4.5 mils. If cracks are sible, then runs and sags will be removed to primer by power too inding followed by solvent wiping. If no cracking occurs, top at will be considered acceptable. Refer to Section 4.4.2.1(4) or cure to recoat time.				
.4.2.3	remo	ved by abrac	ded Foreign Part ling and then re discontinuities	coated as out	lined in the r	repair

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4.4.2.4	shall be removed shall then be so recoated using two quarts Pheno line 305 applied	les and Discontin d by brushing or olvent wiped usin thinned down Phen oline Thinner per d at approximatel recoating time.)	vacuum. The g Phenoline 3 oline 305 con each gallon	entire area 05 Thinner and sisting of kit of Pheno-
4.4.2.5	damaged areas w are removed. The cleaner for primand repaired with damage does not if primer is dan ness shall be as extends to metal 4.4.2.9), damage bare metal is ex meter of cleaned	he area will then mer, Phenoline Th th appropriate co extend to primer maged (if area is s required for th 1 and is consider ed area will be b xposed. All edge	til loosely a be solvent w inner#305 or ating, i.e., ; Dimetcote 6 considered a e pertinent c ed a major de lasted, hand s of existing eathered back	dherent particles iped (Amercoat 12 xylol for topcoat), Phenoline 305 if and Phenoline 305 major defect). Thick- oating. If damage fect (Refer to Section or machine ground until coating around peri- a sufficient amount
4.4.2.6	accordance with			finish coat in ine 305) Bulletin
	2. Carboline Pr Bulletin 473	roduct Data Sheet 3. Brush touch-u h no area restric	p and complet	05 Primer and Finish) e application is
4.2.7	stains or minute pared by solvent	e metallic partic t wiping with Phen n a coat of Pheno	les, then sur noline 305 Th	aminated with rust face shall be pre- inner or xylol and ared in accordance with
4.4.2.8	fined as an area circle could not entire length.) line 305 finish steel to ensure rounding 305 fin brush Phenoline damaged area.	a, either circular be completely in Blast or abrade surrounding the c contaminant free tish with Carbolin 305 finish at app	r or linear, hscribed at an , by machine of damaged areas surface. So he 305 thinner proximately 4 surrounding co	Minor defects are de- in which a ½" diameter ny point along the or hand, the Pheno- and clean any exposed lvent wipe the sur- r or xylol. Spray or mil DFT over the bating a sufficient bat system.

and the second sec	& ROOT, INC. PSES	PROCEDURE NUMBER	REVISION	EFFECTIVE DATE	PAGE		
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4.4.2.9	Repair of Phenoli (Major defects an which a '4" diamet along the entire damaged area. Po order to prepare shall not be poli	te defined as an ter circle could length.) Spot b ower tool or hand the surface for	area, either of be completely last or abrade abrading must Dimetcote 6 to	inscribed at any , machine or har be very thoroug ouch-up. The sur	r, in point or d, the h in		
4.4.3.0	Coating Interface - At coating interface for finish and/or primer coat, the existing coating shall be "feathered back" a sufficient distance to ensure a smooth final coating system. When performing coating interfacing the interface of the coatings or systems shall be a maximum of approximately 1 ¹ / ₂ inch in width. Within the inter- face area, overlapping of any materials or systems is acceptable.						
4.4.3.1	Cure of Minor Topcoat Repair - Minor defects, as defined in Section 4.4.2.8, which are noted in the topcoat and repaired, may be inspected for final acceptance after cure to recoat time as stated in Section 4.4.2.1(4) has been satisfied. Full cure to topcoat repairs shall be satisfied prior to placement into service.						
4.5	FINAL ACCEPTANCE	TESTING					
4.5.1	Final acceptance cure of 24 hours paragraph 4 is sa	and cure for rec					
	louch up of minor procedure may be reinspection of t	done at time of :					
	After final inspe the QC inspector signing the final to the B&R Paint ance is made.	shall document the acceptance record	he final accep rd. A copy wi	tance by complet 11 then be trans	ing and mitted		
4.6	HOLD POINTS						
4.6.1	Onsite reciept of	coating matieria	els.				
4.6.2	Substrates before	and following su	urface prepara	tion			
4.6.3	Mixing and prepar	ation of coating	material for	application.			
4.6.4	Film characterist	ics after drying	and curing.				
4.6.5	Control of ambien phases of the coa		surface tempe	ratures during a	11		
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5.0	SUE	PORTING INFORM	ATION			
5.1	ATT	ACHMENTS				
	2.	Painter Quali Special Coati Pot Life Phen	fication Record ng Procedure oline 305	1		
5.2	REF	ERENCES				
	1.	Gibbs & Hill "Containment	Specification 2 Steel Liner", 1	1323-SS-14, atest Revision	1	
	2.	Steel Structu	res Paint Counc	il, Volume 2,	Second Edition	
	3.		poration "Appli Revision, and 4			
	4.	Ameron Protec "Application Production Bu	tive Coating Di Instructions". Lletin R 6-79	vision Dimetco R 11-78, Dime	nte 6 tcote 6	
	6.		Specification 2 Datings", Lates			
	7.		Specification 2 ection", Latest			
	8.	Gibbs & Hill S "Nuclear Pipis	Specification 2 ng", Latest Rev	323-MS-438, ision		
	9.	Gibbs & Hill S "Non-Nuclear 1	Specification 2 Piping"	323-MS-448,		
	10.	Gibbs & Hill S "Piping Erects	Specification 2 lon"	323-MS-100,		
	11.		Specification 2 Steel", Lates			

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	ATTACHMENT 1	
COMANCHE	BROWN & ROOT, INC. PEAK STEAM ELECTRIC STATION	
Pain	ter Qualification Record	
	GENERAL DATA	
Date	Report Number	
	TECHNICAL DATA	
Name of Painter		
Summary of Field Experienc	e	
Experience with Following	Product Types	
Experience with Following	Product Types	
	Product Types	
Application Test for Specif		_
Application Test for Specif	fied Substrate	_
Application Test for Specif	fied Substrate	
Application Test for Specin Additional Qualifications (fied Substrate	
Application Test for Specin Additional Qualifications Distribution: Painting Sup G.C. Depart	fied Substrate	

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	ATTACHMENT 2			
"Q" Coating		Sh Pr	eet of ocedure #	
"Non-Q" Coating	<u></u>	Re	v Da	te
SPECTAL C	OATING PROCEDURE	NO		
SCOPE	CATING PROCEDURE			
JUUFE				
AFOUTOFUENTS				
REQUIREMENTS :				
REFERENCE DOCUMENTS		APPROVA	LS	
REFERENCE DOCUMENTS_				
REFERENCE DOCUMENTS_		PDE		
REFERENCE DOCUMENTS		PDE		
REFERENCE DOCUMENTS_		PDE QA/QC TUSI		
REFERENCE DOCUMENTS_		PDE QA/QC TUSI ENGINEE	R	
REFERENCE DOCUMENTS_		PDE QA/QC TUSI ENGINEE		

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ATTACHMENT 3

POT LIFE PHENOLINE 305

TEMPERATURE (°F)	UNTHINNED	THINNED-50%
50-54	10 hrs	24 hrs
55-59	7 hrs	24 hts
60-64	45 hrs	24 hrs
65-69	3½ hrs	24 hrs
70-74	2 hrs	24 hrs
75-79	1's hrs	24 hrs
80-84	ly hrs	24 hrs
85-89	1's hrs	24 hrs
90-95	l hrs	24 hrs

Pot life stated above for unthinned coatings are the recormended times and should be utilized as a guideline for coating to see time, however, actual pot life may be longer. For unthinned coatings or coatings thinned 50% or less, actual pot life is determined by the applicability of the coating.

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