

TEXAS UTILITIES SERVICES INC.
AGENT FOR
TEXAS UTILITIES GENERATING COMPANY
ACTING FOR
DALLAS POWER & LIGHT COMPANY
TEXAS ELECTRIC SERVICE COMPANY
TEXAS POWER & LIGHT COMPANY

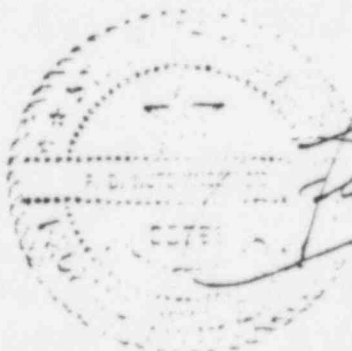
THIS SPECIFICATION COVERS NUCLEAR SAFETY RELATED EQUIPMENT

COMANCHE PEAK STEAM ELECTRIC STATION
UNITS NOS. 1 AND 2

THIS DOCUMENT
AFFECTED BY
DESIGN CHANGES

PROTECTIVE COATINGS
SPECIFICATION 2323-AS-31
APRIL 15, 1977
REVISION 1 - MARCH 15, 1978
REVISION 2 - MARCH 15, 1984

(TUSI REFERENCE 05277)



3/14/84
Date

THIS DOCUMENT
AFFECTED BY
DESIGN CHANGES

GIBBS & HILL, INC.
ENGINEERS, DESIGNERS, CONSTRUCTORS
NEW YORK, NEW YORK

The following DCA's have been incorporated into Revision 2
of Specification 2323-AS-31:

<u>DCA No.</u>	<u>Rev.</u>	<u>Applicable Section</u>
1,028	0	Appendix "C" - Section 6.9b
1,612	0	2.0c.2
1,615	0	4.0a
1,785	0	2.0c.2
1,986	0	6.3a
2,763	0	Appendix B - Items I.1, II.1 and III.1
2,932	1	6.2e, 9.2.3b.2
2,979	0	1.2b 15
4,894	0	1.2b 15
5,031	0	1.2b 15
5,171	1	Appendix "C" - Section 6.2b.4
5,195	0	2.0c.2
5,620	0	Appendix "B" - Items I.11, II.11 and III.8
6,384	0	2.0c.2
7,531	2	2.0c.2
7,571	0	2.0c.2
7,805	0	2.0c.1, 2.0c.3
8,053	0	9.2.3
8,114	0	3.0b.8
9,122	0	Appendix "B" - Item I.12 and Note 2
9,129	0	2.0c.2
9,143	1	2.0c.2
9,231	0	2.0c.2
9,360	0	2.0c.2

<u>DCA No.</u>	<u>Rev.</u>	<u>Applicable Section</u>
9,634	0	2.0c.2
9,917	1	2.0c.2
9,927	0	2.0c.2
11,231	2	1.2b 15
11,232	0	2.0c.2
11,400	1	9.2.2, 9.2.2.1, 9.2.2.2, 9.2.2.3, 9.2.2.4
11,421	1	9.2.1
11,752	2	Appendix "C" - 7.0d
12,111	1	Appendix "C" - 7.0d
12,374	1	2.0c.2
12,421	1	Appendix "C" - 7.0e
12,571	0	Appendix "A" - Table A-4
12,794	0	Appendix "C" - Section 6.8
12,966	0	2.0c.2
13,140	2	2.0c.1, 2.0c.2, 2.0c.3
13,171	0	Appendix "B" - Note 1
13,388	6	2.0c.2
13,429	2	6.2b, 9.2.3b.2
13,640	0	6.2b
13,867	0	8.1c
13,923	0	Appendix "B" - Note 2
13,994	0	8.2i
14,206	0	Appendix "C" - Section 6.6d
14,279	0	Appendix "B" - Items IV.2 and V.12
14,386	0	1.2b.14
14,414	0	2.0c.2
14,976	0	Appendix "B" - Item V.13
15,721	1	Appendix "C" - Section 6.9c
16,151	0	2.0c.2
16,230	1	Appendix "D" - Items 3, 6 and 7
17,475	0	2.0c.2

<u>DCA No.</u>	<u>Rev.</u>	<u>Applicable Section</u>
17,758	0	2.0c.2
17,891	0	2.0c.2
18,143	0	2.0c.2
18,330	0	Appendix "B" - Note 1
18,416	0	7.0b.3
18,510	1	2.0c.2
18,576	0	Appendix "A" - Tables A-1 and A-2
18,632	0	Appendix "D" - Item 12
18,657	0	1.1e
19,050	0	8.1c
19,126	1	7.0b.2
19,409	0	1.1b
19,622	0	Appendix "D" - Item 8
19,704	0	1.2b.13, 1.2b.14
19,812	0	9.2.2, 9.2.2.1, 9.2.2.2, 9.2.2.3, 9.2.2.4

PROTECTIVE COATINGS

CONTENTS

	<u>Title</u>	<u>Page</u>
1.0	SCOPE	1
1.1	WORK INCLUDED	1
1.2	WORK NOT INCLUDED	2
2.0	GENERAL REQUIREMENTS	3
3.0	APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS	5
4.0	DELIVERY AND STORAGE CONDITIONS	6
5.0	MATERIALS	6
6.0	SURFACE PREPARATION	7
6.1	GENERAL	7
6.2	ALL STEEL SURFACES - GENERAL	7
6.3	CONCRETE AND MASONRY SURFACES	8
7.0	FIELD TOUCHUP	10

	<u>Title</u>	<u>Page</u>
8.0	COATING APPLICATION	11
8.1	GENERAL	11
8.2	WORKMANSHIP	12
9.0	QUALITY ASSURANCE, TESTS, AND INSPECTION	13
9.1	GENERAL	13
9.2	TESTS	14
9.2.1	FILM THICKNESS	14
9.2.2	PATCH (ADHESION) TEST	15
9.2.3	INSPECTION	15
10.0	CLEANING	20
11.0	GUARANTEE	20
12.0	TECHNICAL ASSISTANCE	20
APPENDIX "A" - COATING SCHEDULE		
APPENDIX "B" - CPSES FINISH COLOR SCHEDULE		
APPENDIX "C" - QUALITY ASSURANCE FOR COATING USED INSIDE THE CONTAINMENT		
APPENDIX "D" - DEFINITIONS OF DEFECTS		

PROTECTIVE COATINGS

1.0 SCOPE

This specification covers the furnishing of all labor, tools, materials, equipment, and supervision for supplying, delivering, storing, and applying all protective coatings specified herein and shown on the finish schedules drawings.

1.1 WORK INCLUDED

- a. Surface preparation as specified herein
- b. Application of protective coatings to exposed surfaces of the buildings and equipment listed herein, Appendix A.

Generally, exposed surfaces shall mean all surfaces of structures and equipment not encased in concrete, masonry or insulation.

Exposed surfaces rendered inaccessible after shop assembly or during construction shall not require field protective coating application in most cases. In some cases, a review of the equipment function, location, ease of disassembly, and warranty impact shall be required at the discretion of the field engineer to determine protective coating requirements.

DCA
19,409 R.O
Rev. 2

- c. In general, the types of surfaces to be coated shall consist of, but not be limited to, the following:
 1. All concrete blocks
 2. Doors and frames
 3. Elevator shaft enclosure (interior and exterior surfaces)
 4. Concrete surfaces
 5. Structural Steel
 6. Miscellaneous Metal
 7. Hollow Metal

8. Uninsulated piping and valves
 9. Pipe hangers and seismic and pipe whip restraints
 10. Any other carbon steel surfaces in rooms or areas scheduled to receive protective coating (i.e., exterior of pipe sleeves which protrude from walls).
 11. Plaster surfaces
 12. Miscellaneous steel (including surfaces abutting concrete but excluding surfaces against which concrete is to be cast and the interior of pipe sleeves).
- d. If the primed surfaces of certain supplied items prove incompatible with the specified finish protective coatings by failure of testing per Paragraph 9.2.2, it shall be the responsibility of the contractor to clean and apply a tie coat or to remove the incompatible paint and resurface the item as specified herein, Appendix A.
- e. An exempt log for protective coatings shall be maintained. This log will be part of permanent plant records. The log shall describe the item or area coated, the coating system, if known, and square footage of surface involved. All painted surfaces with an unqualified and/or undocumented coating system shall include on the log.

DCA
18,657 R.O
Rev. 2

1.2 WORK NOT INCLUDED

- a. Surfaces, other than those to receive protective coatings, shall be painted in accordance with Specification 2323-AS-30, Finish Painting.
- b. The following surfaces will not require protective coatings under the scope of this contract.
 1. Aluminum
 2. Stainless steel
 3. Priming of mechanical equipment
 4. Brass
 5. Bronze

6. Copper
7. Chromium-plated metals
8. Porcelain enamel finishes
9. Galvanized steel
10. Electrical equipment and raceways
11. Concrete surfaces to which miscellaneous steel has been attached prior to commencement of concrete coating. (Coating will be applied to the edges of the steel items only Caulking will not be required.)
12. Machined surfaces
13. Lubricated surfaces
14. Insulated carbon steel surfaces shall be coated with inorganic zinc primer only
15. All structural steel, miscellaneous steel and pipe hangers outside the Containment Building

DCA
19,704 R.O
Rev. 2

DCA
14,386 R.O
Rev. 2

DCA
2,979 R.O
4,844 R.O
5,031 R.O
11,231 R.O
Rev. 2

2.0 GENERAL REQUIREMENTS

- a. Nothing in this specification shall be construed as relieving the supplier of responsibility for compliance with all applicable codes and regulations.
- b. All coatings supplied under this specification shall have been tested and approved for application in areas exposed to radiation by the Oak Ridge National Laboratories (ORNL) for the United States Nuclear Regulatory Commission (USNRC), and the coating manufacturer.
- c. Surfaces which are not readily accessible or are inaccessible shall be subject to coating, inspection, and documentation as noted below:
 1. Areas which conduit, cable tray, instrumentation equipment, and various miscellaneous items and equipment, cover, or come in contact with supports or backings are typical inaccessible areas. Surface preparation and coating on inaccessible areas shall be

DCA
7805 R.O
13,140 R.O
Rev. 2

on a best effort basis. QC inspection on inaccessible areas is not required.

2. The following are typical items that due to their size and configuration may be considered as inaccessible per this specification:

- 5/8" and smaller hanger rods and clevis clamps;
- Anchor bolts, nuts and washers used for pipe whip and moment restraints, and steam generator support;
- Electrical penetration header plate studs and nuts;
- 1/2" to 1-1/2" pipe spacers;
- Richmond inserts;
- Eye hooks, small bent or flat plates, and small angle clips used as attachments for safety restraint cables;
- Universal joints for valve reach rods;
- 2" and smaller "U" clamps, all clevises, and threaded bolt connections;
- 4" and smaller valves;
- 2-1/2" x 2-1/2" or smaller shims and washer plates;
- 175- and 20-ton Polar Crane Block, crane gear holes, "U" joints and associated equipment;
- Turn buckles, and anchor bolts;
- 3-1/2" or less bearing housing;
- "Torque Lift" equipment;
- Interior pipe sleeves;
- Valve operating mechanisms;

17,891 R.O
18,143 R.O
18,510 R.O
1,612 R.O
1,785 R.O
5,195 R.O
6,384 R.O
7,534 R.O
7,571 R.O
9,129 R.O
9,143 R.O
9,231 R.O
9,360 R.O
9,634 R.O
9,917 R.O
9,927 R.O
11,232 R.O
12,374 R.O
12,966 R.O
13,140 R.O
13,386 R.O
14,414 R.O
16,151 R.O
17,795 R.O
17,756 R.O
Rev. 2

3. Items and/or areas which are not inaccessible per the above, but due to the installation configuration of the

item, the required surface preparation cannot be met shall be considered as limited access areas.

In limited access areas, SSPC-SP10 or equal should be maintained if possible, however, SSPC-SP-6 or equal surface preparation shall be the minimum acceptable.

Except for the above, coating application and documentation in limited access areas shall be as required by the specification.

DCA
7.805R.0
13440R.2
Rev. 2

3.0 APPLICABLE CODES, STANDARDS, AND SPECIFICATIONS

The latest edition of following codes or standards in effect on the date of purchase order shall apply.

a. American National Standards Institute (ANSI)

1. ANSI N101.2, Protective Coatings (Paints) for Light Water Nuclear Reactor Containment Facilities
2. ANSI NS12, Protective Coatings (Paints) for the Nuclear Industry

b. Steel Structures Painting Council (SSPC)

1. SSPC-SP1, Solvent Cleaning
2. SSPC-SP5, White Metal Blast Cleaning
3. SSPC-SP6, Commercial Blast Cleaning
4. SSPC-SP7, Brush-Off Blast Cleaning
5. SSPC-SP8, Pickling
6. SSPC-SP10, Near-White Blast Cleaning
7. SSPC-PA2, Measurement and Determination of Film Thickness
8. Swedish Pictorial Standards SSPC-VIS-1-67T

DCA
SIR.0
Rev. 2

4.0 DELIVERY AND STORAGE CONDITIONS

- a. All coating materials shall be delivered to the jobsite in their original unopened containers, plainly marked with proper designation of the product, and name of manufacturer.
- b. Coatings shall not be delivered so far in advance that they cannot be used within the manufacturer's recommended shelf life. Coatings shall be stored in sealed containers in an area, meeting the manufacturer's storage recommendations.
- c. The coating manufacturer's recommended application instructions shall be included with each shipment of material to the jobsite. For coatings to be used inside the containment, additional documentation as required by Appendix C shall be furnished.
- d. All coating materials shall be stored under cover and at a temperature recommended by the manufacturer.
- e. Manufacturer's product identity forms shall be supplied with materials shipped to the jobsite.

DCA
1,615 R.O
Rev. 2

5.0 MATERIALS

- a. Materials shall be supplied by one of the following protective coating manufacturers:
 1. Ameron Corporation
201 North Berry Street
Brea, California 92621
 2. Carboline Company
328 Hanley Industrial Court
St. Louis, Missouri 63144
 3. Keeler and Long, Inc.
P.O. Box 460
Watertown, Connecticut 06795
 4. Mobil Chemical Company
P.O. Box 250
Edison, New Jersey 08817

5. Thamec Co. Inc.
P.O. Box 1749
Kansas City, Mo. 64141
6. Stonehard, Inc.
Park Avenue
P.O. Box 308
Maple Shade, N.J. 08052
7. Southern Imperial Coatings Corp.
P.O. Box 29077
New Orleans, La. 70189

- b. The contractor shall supply any one of the coatings listed in Appendix "A".

6.0 SURFACE PREPARATION

6.1 GENERAL

- a. All surfaces to be coated shall be prepared in accordance with the requirement specified herein
- b. In addition to the requirements of this specification all necessary surface preparation shall be performed in accordance with the coating manufacturer's latest application instructions.

6.2 ALL STEEL SURFACES - GENERAL

- a. Any oil or grease shall be removed from surfaces to be coated, with clean rags soaked in solvent, in accordance with SSPC-Sp1. Any chemical contamination shall be eliminated by means of neutralization or flushing, or both, prior to additional surface preparation. Solvent and rags shall be changed frequently to ensure their cleanliness.
- b. 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. Weld splatter shall be removed by grinding or sandblasting to the extent required to obtain an acceptable surface for coating. Details regarding weld splatter removal from piping shall in accordance with G&H Specifications 2323-MS-43A, 43B, 44A, 44B and 100.

DCA
13,4298.2

Bulk steel, which will be used for separating into smaller units for fabricating specific assemblies, may have rough cuts ends or edges. This steel need not have the edges smoothed, prior to and for shop coating.

DCA
13,640 R.O
Rev. 2

- c. The proper abrasive for sandblasting required to obtain the specified profile (anchor pattern) as designated in the coating manufacturer's latest application instructions shall be used.
- d. After sandblasting, dust and spent sand shall be removed from the surfaces by brushing, vacuum cleaning, or oil and moisture free air blasting.
- e. The prime coat shall be applied as soon as possible after the blasting preparation is complete. Generally, the time elapsed between blast cleaning and primer application shall not exceed eight hours. In all cases, the criteria of paragraph 9.2.3b2 shall apply.
- f. The minimum degree of sandblasting required shall be in accordance Appendix "A".

DCA
2,932 R.1
Rev. 2

6.3 CONCRETE AND MASONRY SURFACES

- a. All surfaces shall be clean, dry, and free from cement splatter, laitance, mortar and other deleterious matter. Wood splinters and "fuzz" as defined by the field engineer need not be completely removed. Incompatible form-release agents and membrane curing components shall be removed.
- b. Surface defects shall be repaired as follows:
 1. For defects protruding approximately 1/4" or less from the smooth concrete surface, grind defects to a smooth or beveled finish.
 2. For protrusions greater than 1/4", repair with dry pack grout or remove protrusion to a smooth or beveled finish.
 3. Defects on walls shall be repaired to approximately 10'-0" height from the floor slab. Defects above 10'-0" do not have to be repaired, unless deemed essential (as determined by the field engineer) to application and subsequent performance of the coating system.

DCA
1984 R.O
Rev. 2

- c. Loose powdery concrete or mortar shall be removed with a wire brush or high-pressure air before coatings are applied. Proper protection shall be provided to prevent air pressure from spreading dust. All oil, grease, dirt, or foreign matter shall be removed either by steam cleaning with detergent or by scrubbing with a strong commercial detergent and flushing with water. All chemical contamination shall be neutralized and flushed. Felt tip ink markings on concrete outside of containment need not be completely removed.
- d. When the coating manufacturer requires blast cleaning as a surface preparation on concrete, laitance and loose deposits shall be removed by whip sandblasting, or air blasting using high pressure compressed air, approximately 100 psig, or a 4000 psig water blast. Air lines shall be equipped with oil and water traps.
- e. When the manufacturer of protective coating requires acid etching as a concrete surface preparation for his concrete primer, the surface shall be washed down, and etched for 4 or 5 minutes with a 40-percent solution of phosphoric acid diluted with an equal part of water. The surface shall then be neutralized and washed down with water. This neutralizing treatment may vary from the manufacturer's instructions subject to engineer's approval. Proper drainage and fume exhaust shall be provided.
- f. When the manufacturer of protective coating requires a caustic-wash surface preparation, a 10 percent solution of trisodium phosphate or sodium carbonate, 3 pounds per gallon, shall be applied with a brush or mop. The caustic wash shall then be washed off and dried. All residue of trisodium phosphate shall be removed before application of protective coating.
- g. If a residue remains on the concrete, or masonry the surface shall be swept or vacuumed to remove residue.
- h. In areas which contain steel tanks or pipes adjacent to concrete surfaces or masonry to be etched, the concrete surface shall be wet down and a 10-percent solution of phosphoric acid shall be applied. The solution shall be allowed to etch for 10 to 15 minutes before being neutralized. Proper drainage and fume exhaust shall be provided.

7.0 FIELD TOUCHUP

- a. All shop-primed, and shop-topcoated, steel shall be touched up in the field prior to final field-topcoating. Touchup shall include any damaged or masked areas. Sufficient primer to touchup shop-primer or coated equipment will be supplied with the equipment in many cases.
- b. Surface preparation shall be in accordance with manufacturer's written coating repair procedures. The coating repair procedures shall address the following as a minimum:
 1. When substrate is not exposed;
 - Solvent cleaning per SSPC SP-1
 - Hand or power tool cleaning per SSPC SP-2 or 3 to roughen surface.
 - Use of special solvent to enhance adhesion of top coat
 2. When substrate is exposed;
 - Solvent cleaning per SSPC SP-1
 - Remove rust and provide a clean roughened surface by use of abrasive blasting or power tooling as required by the coating manufacturer.
 - Roughen and taper (feather) adjacent undamaged areas by hand or power sanding a sufficient amount to insure a smooth continuous final coating system.

3. Weld areas in Reactor
Building Unit 1 & 2;

- Surface preparation performed in the weld areas of installed items shall yield a minimum surface cleanliness equal to that required of SSPC-SP-6. This area may extend up to 1" from the weld in any direction. Power tooling may be performed with, but not limited to, tools utilizing 3M clean-strip pads, and flapper wheels. Other types of tools used for power tool cleaning shall be subject to engineering approval.

DCA
18,416 R.O
Rev.2

- c. The coating systems specified in this specification shall be used for field-touchup work when touchup coatings are not supplied with equipment.
- d. If a marking paint or ink which does not meet the coating manufacturer's recommendation is used on a primed surface (i.e., Carboline Marking Paste X1000-190 should only be used over Carbozinc 11 primer), then that marking compound should be removed by abrading. If excessive primer is removed repair shall be per paragraph 7.0.b.2.
- e. The repaired areas shall be tested and inspected as defined herein, including Appendix C where applicable.

8.0 COATING APPLICATION

8.1 GENERAL

- a. Coatings shall be applied in strict accordance with manufacturer's instructions. All coatings shall be applied under favorable conditions by qualified applicators. All cleaned metal shall be prime-coated, as specified, immediately after cleaning to prevent new rusting or oxidation of cleaned surfaces.
- b. Coatings shall be used and applied, in accordance with the manufacturer's instructions, without being extended or modified except as called for in these instructions. The

correct surface preparation and condition of surface to be painted shall be rigidly adhered to.

- c. Inadvertent application of coatings to the interior of open members (tube steel, pipe bumpers) which cannot be avoided, shall be quantified and entered into the exempt log per section 1.1 subparagraph E.

DCA
19,050 R.O
13,867 R.O
Rev. 2

8.2 WORKMANSHIP

- a. All coatings shall be applied in a workmanlike manner, in accordance with the most recent written application instructions from the coating manufacturer, and shall be in accordance with ANSI N101.2 (inside containment), and ANSI NS12 (all potentially radioactive and high radiation areas). Coatings shall be applied by conventional or airless spray wherever possible.
- b. The application shall not leave any defects which will affect the performance of the coating system as defined by the coating manufacturer. Definitions of defects are to be included in Appendix "D."
- c. Drying time between coats shall comply with the coating manufacturer's recommendation, with conditions of temperature and humidity taken into consideration.
- d. In areas, other than the containment, where protective coating is specified on the concrete and masonry surfaces, the surfacer and topcoat shall be carried up to a height of 6'-0" to protect against spills and splashes. Above 6'-0" height apply surfacer and topcoat only where noted on the Room Finish Schedule drawings. Surfacers will be applied to full height on block walls scheduled to receive protective coatings. Also above 6'-0" height QA/QC inspection shall not be required.
- e. Hardware, trim, and other items shall be removed, as required, for proper application of coatings.
- f. Imperfections and holes in surfaces to be coated shall be cleaned and filled where required, as recommended by the manufacturer and as approved by the Gibbs & Hill field engineer.

- g. The dry-film thickness of each coat, and of the entire system, shall be per the manufacturers' recommendations based on the application (i.e. steel, concrete, containment). The minimum number of coats required to achieve the specified film thickness shall be provided.
- h. Except where otherwise specified, thinning shall be done where necessary for the workability of the coating material, and shall be in accordance with the coating manufacturer's latest application instructions.
- i. Each coat applied may be a different color or shade from the preceding coat to aid in determining the uniformity and coverage of the coating. When a white finish coat is specified, the last two coats shall be white.
- j. Coatings shall not be applied when the atmospheric conditions do not conform to the recommendations of the coating manufacturer.

DCA
113994 R.O
Rev. 2

9.0 QUALITY ASSURANCE, TESTS, AND INSPECTION

9.1 GENERAL

- a. Quality assurance requirements for coatings applied inside containment shall be as defined by Appendix "C" of this specification.
- b. Coatings applied outside containment shall be tested and inspected as indicated herein. The only documentation shall be the final approved inspection report pending corrective action found necessary. Coatings applied to pipe sleeves cable tray supports outside containment, and areas of concrete receiving protective top coat without surface shall be exempt from testing and inspections.
- c. Shop-primed equipment shall be tested and inspected upon receipt at the jobsite. The contractor shall perform a patch test with the specified topcoat and existing primer to determine proper adhesion. Any failure of a patch test shall be reported in writing to the Gibbs & Hill field engineer for resolution.
- d. Shop-primed equipment to be installed in the containment shall have all documentation requested in Appendix "C".

9.2 TESTS

9.2.1 FILM THICKNESS

Wet film thickness shall be measured for the topcoat on concrete surface after proper application of surfacer. Wet film thickness measurement shall not be used on inorganic zinc coatings. Dry film thickness shall be measured for most carbon steel surfaces which receive coatings using magnetic gauges. The standards of SSPC-PA2-73T shall govern the use, calibration and accuracy of the gauges. Due to the inaccuracy of determining film thickness at edges; appreciable surface curvatures and other geometrical discontinuities, items such as handrails, gratings, stairs, sway struts and checker plate shall be subject to inspection per paragraph 9.2.3 with the exception of the dry film thickness. The following methods shall be used for film thickness determination:

DCA
11,421 R.1
Rev.2

a. Wet-Film Thickness

A wet-film gauge of steel or aluminum, graduated to read in mils to the nearest 2 or 3 mils, shall be used to determine the wet-film thickness of a coating while wet. When using this gauge, the applicator shall divide the desired dry-film thickness by the volume solids of the coating as expressed in a decimal (taking into account the amount of thinning done) to yield the necessary wet-film thickness to produce the desired dry-film thickness.

b. Dry-Film Thickness

An Elcometer Paint Inspector, a Microtest, or similar gauge shall be used to measure the thickness to the nearest mil. The gauge shall be accompanied by a set of standard shims against which it shall be verified by the inspector prior to use. The acceptable tolerance in dry-film thickness when a range is indicated shall be within the specified range. When no range is indicated the thickness shall be the minimum specified with an acceptable tolerance per the coating manufacturer's recommendation. Excessively thick coatings shall be blasted off the surface, and recoating shall be done at applicator's expense.

9.2.2 ADHESION TEST

9.2.2.1 Adhesion testing shall be required for the following:

- a. All painted concrete surfaces - One test every 1,000 square foot for the first 10,000 square feet of concrete coating. Additional testing on concrete shall be performed only as directed by engineer or owner.
- b. All vendor-applied shop-primed equipment shall be tested prior to receiving topcoat.

Equipment primed with materials as noted in Table A-2 shall be exempt from this test only when documentation certifying proper material and application per ANSI N101.4 is provided by the vendor.

- c. As directed by owner or engineer.

9.2.2.2 The number of tests to be performed on vendor primed equipment shall be:

- a. For large areas of single component equipment - one test per 500 square feet.
- b. For equipment with several components:
 - 1) From 1-10 items - Test 20 percent
 - 2) Over 10 items - Test 10 percent

9.2.2.3 The following test methods shall be used:

- a. For equipment and surfaces inside the containment (or to be installed inside the containment) and which receive coating materials as noted in Table A-2 the Elcometer 106 Adhesion Tester shall be used in accordance with the recommendations of the manufacturer of the instrument. Five dollies (surface area permitting) tested to 250 pounds, four of which meet 250 pounds, shall constitute an acceptable test.
- b. For equipment outside containment ASTM D3359-78 test method (results 5A and 4A) are acceptable or other test methods listed in ASTM-D01.43 Table A5A-8 as directed by owner may be used.

DCA
11,400 R.1
19,812 R.0

Rev. 2

- 9.2.2.4 As adhesion tests are destructive, repair to damaged coating shall be done in accordance with the coating manufacturers recommendations.

DCA
11,400 R.I.
19,812 R.O.
Rev.2

9.2.3 INSPECTION

The services of competent inspectors shall be furnished to ensure compliance with the coating manufacturer requirements and the requirements set forth within this specification. All phases of the coating activities inside the containment structures shall be subject to inspection. A documented final inspection of the cured coating in areas covered by this specification outside containment structures shall be required. The contractors coating department shall be responsible for compliance with the manufacturer's requirements and those set forth herein for all in-process coating activities in areas covered by this specification which are outside containment structures.

DCA
8,053 R.O.
Rev.2

- a. The coating inspector shall check all documentation required for various coating applications. As examples: 1) inside containment all documents required by Appendix C shall be completed and 2) shop-primed equipment shall have patch test report, jobsite receipt inspection report, and final coating report.
- b. Coating defects as defined by Appendix D shall be visually checked on concrete and steel surfaces for each phase of coating application as follows:

1. Surface Preparation of Concrete - The following conditions, if observed, must be corrected before coating application.

- | | | |
|--------------------|---|--|
| - Porosity (Holes) | : | All holes greater than 2" diameter |
| | | Many small holes at inspector's discretion |
| - Roughness | : | Protrusion greater than 1/8" |
| - Cracking | : | All cracks greater than 1/32" in width |
| - Laitance | : | Removal is required |

- Foreign Contaminants : Removal is required
- 2. Surface Preparation of Steel - The following conditions, if observed, must be corrected before coating application.
 - Foreign Contaminants : Complete removal is required
 - Welds and Edges : Smooth, with weld splatter removed to the extent required to obtain an acceptable surface for coating
 - Blast Profile : Must conform to SSPC standards
 - Rust or Rust Bloom : Complete removal is required
- 3. Coating Application - The following conditions, if observed, should be noted and corrected per the repair procedures recommended by the coating manufacturer. High dry film thickness may be acceptable in areas outside the containment if the following conditions are within acceptable limits and the coating manufacturer's minimum adhesion requirements are satisfied.

DCA
2932 R.1
13,429 R.2

Rev.2

Gibbs & Hill, Inc.
 Specification 2323-AS-31
 Revision 2
 March 15, 1984
 Page 18

<u>Condition</u>	<u>Pipe or Tank Lining</u>	<u>Concrete Surfacer</u>	<u>Concrete Topcoats</u>	<u>Inorganic Zinc Primer</u>	<u>Organic Primer</u>	<u>Organic Topcoat</u>
*Pinholes	X		X			X
*Blisters	X	X	X			X
*Color & Gloss Uni- formity			X			X
Bubbling	X	X	X		X	X
*Fish eyes	X	X	X		X	X
*Orange- Peel	X	X	X		X	X
*Mud Crack- ing	X	X		X		
Curing Prop- erties	X	X	X	X	X	X
*Runs & Sags	X	X	X	X	X	X
Film Thick- ness, Dry	X			X	X	X
Film Thick- ness, Wet		X	X			
*Holidays, Missed Areas	X	X	X	X	X	X
*Dry Spray	X	X	X	X	X	X

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Page 19

<u>Condition</u>	<u>Pipe or Tank Lining</u>	<u>Concrete Surfacer</u>	<u>Concrete Topcoats</u>	<u>Inorganic Zinc Primer</u>	<u>Organic Primer</u>	<u>Organic Topcoat</u>
Foreign Con- taminants	X	X	X	X	X	X
Mechanical Damage	X	X	X	X	X	X
Uniformity	X	X	X	X	X	X

X = observed conditions to be corrected
* = condition is defined in Appendix D

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Page 20

10.0 CLEANING

The Contractor shall remove all unnecessary equipment and surplus material during the course of the work and shall remove all of his equipment, scaffolding materials, and trash at the completion of the job.

11.0 GUARANTEE

All protective coating systems shall be guaranteed by the contractor against defective material and installation for a period of one year.

12.0 TECHNICAL ASSISTANCE

The coating manufacturer shall make available to the contractor's and the field engineering personnel a qualified technical representative at all times during coating application. The qualifications of the representative shall be submitted with proposals for evaluation.

APPENDIX "A"

COATING SCHEDULE

TABLE A-1	List of Approved Materials
A-2	Approved Coating Systems for Use in Containment
A-3	Approved Coating Systems for Use in Radioactive Areas Outside of Containment
A-4	Finish Coatings for Shop-Primed Equipment

APPENDIX "A"
PROTECTIVE COATINGS
TABLE A-1
LIST OF APPROVED MATERIALS

COATING ITEM NO.	TYPE OF COATING	% ZINC DRY FILM	FILM FORM- ING SOLIDS	MANUFACTURER	PRODUCT NAME AND NO.
PC-P-1	Self-curing inorganic zinc alkyl silicate base inorganic zinc	85%	--	Ameron	Dimetecote 6
		86%	--	Carboline Company	Carbo Zinc 11
		83%	--	Mobil Chemical Company	Mobil Zinc 7, 13-F-12
		87%	--	Inemec	Ineme-Zinc 92E-12
PC-P-2	Self-curing inorganic zinc alkyl silicate base inorganic zinc	82%	--	Ameron	Dimetecote E-Z
		75%	--	Carboline Company	Carbo Zinc 12
		79%	--	Mobil Chemical Company	Mobil Zinc 11, 13-F-11
		75%	--	Inemec	Ineme-Zinc 92E-12
PC-P-3	Epoxy surfacer - Sprayable organic based including primer where required	-	100%	Ameron	Nu-Klad 1871 Surfacer
		-	96%	Carboline Company	Carboline #195
		-	96%	Mobil Chemical	46 x 29 Sprayable epoxy
		-	80%	Keeler & Long	65485 epoxy Surfacer
		-	100%	Southern Imperial	No. 3 Surfacer

APPENDIX "A"
PROTECTIVE COATINGS
TABLE A-1
LIST OF APPROVED MATERIALS

COATING ITEM NO.	TYPE OF COATING	% ZINC DRY FILM	FILM FORM- ING SOLIDS	MANUFACTURER	PRODUCT NAME AND NO.
FC-P-4	Epoxy surfacer-organic grade	-	100%	Southern Imperial	Notes No. 11 or 11S
		-	100%	Stonehard	StoneIner 5 Surfacor
		-	100%	Ameron	Nuklad 110AA Surfacor
		-	100%	Carboline	306 IG Surfacor
		-	100%	Stonehard	StoneIner 5 Surfacor

APPENDIX "A"
PROTECTIVE COATINGS
TABLE A-1
LIST OF APPROVED MATERIALS

COATING ITEM NO.	TYPE OF COATING	% ZINC DRY FILM	FILM FORM- ING SOLIDS	MANUFACTURER	PRODUCT NAME AND NO.
PC-P-5	Epoxy Surfacer-water based including primer where required	-	97%	Mobil	46 x 28 Surfacing Compound
		-	70%	Ameron	No. 2112
		-	68%	Carboline	No. 295 WB
		-	-	Mobil	46 x 27
		-	75%, 90%	Southern Imperial	No. 11, 11S
PC-P-6	Epoxy - Polyamide primer	-	-	Keeler & Long	No. 910h
		-	-	Carboline	No. 191 Primer
PC-F-1	Epoxy Modified Phenolic or Epoxy - Polyamide	-	72% Resin 65% Catalyst	Ameron	Amercoat 66
		-	55.9%	Carboline Company	Phenoline 305
		-	64%	Mobil Chemical Company	89 Series
		-	53%	Keeler & Long	7475 Epoxy Enamel
		-	56%	Southern Imperial	Reactive 1201
PC-F-2	Water Base Epoxy Topcoat	-	54%	Inomec	Epoxyline 66
		-	58%	Ameron	Amercoat No. 2109 or 2118

DCA
18,576 R.O
Rev. 2

Gibbs & Hill, Inc.
Specification 2323-A5-31
Revision 2
March 15, 1984
Sheet 6 of 6

APPENDIX "A"
PROTECTIVE COATINGS
TABLE A-1
LIST OF APPROVED MATERIALS

COATING ITEM NO.	TYPE OF COATING	% ZINC DRY FILM	FILM FORM- ING SOLIDS	MANUFACTURER	PRODUCT NAME AND NO.
PC-1-1	Upgrading Tie Coat	32%		Carbolite	No. 288 WB
		50%		Mobil	Series 98
				Southern Imperial	Reactic No. 1222
				Kentler & Long	No. 910h
		40%		Tremec	ChemPride No. 77
		42%		Carbolite	Rustbond B HBX
		32.5%		Ameron	Amercoat No. 105
		42%		Mobil	13-R-50 Chromox
				Kentler & Long	No. 910h

Gibbs & Hill, Inc.
 Specification 2323-AS-31
 Revision 2
 March 15, 1984
 Sheet 1 of 2

APPENDIX "A"

TABLE A-2

APPROVED COATING SYSTEMS FOR USE IN CONTAINMENT³

Rev. 2

Steel¹

<u>Manufacturer</u>	<u>Primer</u>	<u>Topcoats</u>
Ameron	Dimetecote 6 or E-Z	Amercoat 66
Carboline	<u>Carbozinc 11</u>	<u>Phenoline 305</u>
Mobil	Mobil-Zinc 7(13-F-12)	Series 89
Themec	Theme-Zinc 92E-12	Epoxoline 66
Southern Imperial	Durazine 560	<u>Reactic 1201</u>
Ameron/Carboline	Dimetecote 6	Phenoline 305
Carboline	Carboline 191 Primer*	Phenoline 305

DCA
 19,576 R.O.
 Rev. 2

Concrete²

<u>Manufacturer</u>	<u>Surfacer</u>	<u>Topcoat</u>
Ameron	Nu-Klad 110AA	Amercoat 66
Carboline	No. 195	Phenoline 305
Mobil	46-x-29 Epoxy	Series 89
Stonehard/Themec	Stonliner 5	Epoxoline 66
Southern Imperial	NUTEC 11S *	Reactic 1201
Keeler & Long	No. 6548S	No. 7475

* For Repair Use Only

DCA
 19,576 R.O.
 Rev. 2

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 2 of 2

Notes

1. Minimum surface preparation shall be near white metal blast cleaning per SSPC SP-10.
2. Surface preparation shall be as recommended by the manufacturer.
3. It is essential that coating systems be used only as specified above, unless an alternate system is proposed by a coating manufacturer and subsequently approved by the Engineer.
4. NUTEC 11S or NUTEC 11 may be used for touchup.

Gibbs & Hill, Inc.
 Specification 2023-AS-31
 Revision 2
 March 15, 1984
 Sheet 1 of 2

APPENDIX "A"

TABLE A-3

APPROVED COATING SYSTEMS FOR USE IN RADIOACTIVE AREAS OUTSIDE OF CONTAINMENT³

Rev 2

Steel¹

<u>Manufacturer</u>	<u>Surface Prep.</u>	<u>Primer⁴</u>	<u>Topcoat</u>	Rev 2
Ameron	SP-6	Dimetecote E-Z	Amercoat 66 or 2118	
Carboline	SP-6	Carbozinc 11	Phenoline 305	
Mobil	SP-6	Mobilzinc 11 (13-F-11)	Series 89	
Keeler & Long	SP-6	6548 Epoxy	7475 Epoxy Enamel	
Southern Imperial	SP-6	Durazinc 560 or No. 6	Reactic 1201	
Tnemec	SP-6	Tneme-Zinc 92E-12	Epoxoline 66	

Concrete² (Floor & Dado)

<u>Manufacturer</u>	<u>Surfacer</u>	<u>Topcoat</u>
Ameron	Nu-Klad 110AA	Amercoat 66
Carboline	No. 195	No. 288WB
Mobil	46 x 29 Epoxy Surf.	Series 89
Stonehard/Tnemec	Stonliner 5	Epoxoline 66
Southern Imperial	No. 11 or 11S Surfacer	Reactic 1201
Keeler & Long	6548S Epoxy Surf.	7475 Epoxy Enamel

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 2 of 2

Concrete² (Walls & Ceilings)

<u>Manufacturer</u>	<u>Surfacer</u>	<u>Topcoat</u>
Ameron	No. 1871	Amercoat 66
Carboline	No. 295WB	No. 288WB
Mobil	46 x 27	Series 98
Stonehard/Tnemec	Stonliner 5	Epoxoline 66
Southern Imperial	No. 11 or 11S Surfacer	Reactic 1201
Keeler & Long	6548S Epoxy Surf.	7475 Epoxy Enamel

Notes

1. Gratings, handrails and stairs will be galvanized per specifications governing their procurement.
2. Surface preparation shall be as recommended by the manufacturer.
3. It is essential that coating systems be used only as specified above.
4. Single package inorganic zinc primers may be substituted as follows:

Carboline: Carbozinc SP-81

Mobil : Mobilzinc 13-G-10

APPENDIX "A"

TABLE A-4

FINISH COATINGS FOR SHOP PRIMED EQUIPMENT

NOTES

1. New equipment is not included on this list.

000000

TELE UTILITIES SERVICES INC.
COMMERCIAL PLAS STEAM ELECTRIC STATION
1000 OF 100000 INSTALLATION
EARTH CONCRETE'S FOR STAY PILES, PILES, PILES

STREET NO. AS 31
 STREET NO. 1 or 13
 DATE 2-1-77 - 84

Sharp applied
N.D. - no available data.

• Sing applied
N.D. : no ov

[illegible]

TABLE 1

TEAS UTILITIES SERVICES INC.
COMMERCIAL POWER PLANT FACILITY STATION
1000 DE ZAROW INDUSTRIAL BLVD
CHICAGO, ILL 60642-1000

STREET NO. AS-3 REV. 2.
 BOX NO. 6 OF 13
 DATE 3-15-87

[illegible]

1990-1991

100 00 2020

TEARS WITHIN SERVICES INC.
COMMERCIAL PEARL BEAM ELECTRIC STATION
1000-02 2300-00 INSTALLATION
FINANCIAL CONTROLS, INC. 1000-02 2300-00

Street no. As 810v.2
 built in 6. or 13
 no. 3-15-87

TOWER P. & NO.	TYPE NO.	EQUIPMENT	MANUFACTURER	SURFACE PREPARATION	PRIME COAT A			INTERMEDIATE COAT	FINISH COAT	FIELD TOWERS (Pencil)
					MANUFACTURER	APP. VISC.	CONCRETE TYPE			
	MS 43	Reinforcing Steel	Steel - no painting required							
	MS 44	Reinforcing Steel								
CP- 0549	MS 45	Original Coating Water Bolt Exchanger	Waltham Bolt Exch.	Smooth						
CP- 0550	MS 50	Original's Spray Bolt Exchanger	Joseph Out & Home Inc.	Smooth						
CP- 0551	MS 51	Steel Fuel Bolt Bolt Exchanger	Joseph Out & Home Inc.							
CP- 0552	MS 52	Twelve Flange Coating Water Bolt Exchanger	Waltham Bolt Exch.							
	MS 53	Open								
	MS 54	Steam Generator Steamline Bolt Exchanger	Joseph Out & Home, Inc.							
	MS 55	B 2 Supply System								
	MS 56	B 2 Supply System								
	MS 57	DR Supply System								
	MS 58	Open								
CP- 0559	MS 59	Condenser Tubes	Philips Bridge Brass Co.	Copper - metal Alloy - no painting required						
CP- 0560	MS 60	Am. Condenser	Superior Steel Company	Smooth						

Add base nutrient only

FOR MORE COPIES, FOR SHOP PLACES & QUANTITIES

DATE 7 2 13

3-15-84

TIME P. M.	DATE	EVENT	SELLER	Surface Preparation	Prima Coat	Intermediate Coat	Finish Coat	FIELD
CP-001	08-01	Concrete Formwork & Water Box Drying Temp	Smith Engineering	Doublet	Waterbury Road	Pl. D.	Zinc Chromate	NOTE 1
CP-002	08-02	Oilstone Plates - Doublet						NOTE 2
CP-003	08-03	Oilstone Plates - Doublet						NOTE 3
CP-004	08-04	Spent Fuel Pool Doublet	George Ford & Terry	Spent Fuel	Carbonate II		NOTE 4	NOTE 5
CP-005	08-05	Shop Fabricated Doublet	Applied Engineering Co.	Blot Clean SP 6	"	"	NOTE 6	NOTE 7
CP-006	08-06	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 8	NOTE 9
CP-007	08-07	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 10	NOTE 11
CP-008	08-08	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 12	NOTE 13
CP-009	08-09	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 14	NOTE 15
CP-010	08-10	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 16	NOTE 17
CP-011	08-11	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 18	NOTE 19
CP-012	08-12	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 20	NOTE 21
CP-013	08-13	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 22	NOTE 23
CP-014	08-14	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 24	NOTE 25
CP-015	08-15	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 26	NOTE 27
CP-016	08-16	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 28	NOTE 29
CP-017	08-17	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 30	NOTE 31
CP-018	08-18	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 32	NOTE 33
CP-019	08-19	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 34	NOTE 35
CP-020	08-20	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 36	NOTE 37
CP-021	08-21	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 38	NOTE 39
CP-022	08-22	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 40	NOTE 41
CP-023	08-23	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 42	NOTE 43
CP-024	08-24	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 44	NOTE 45
CP-025	08-25	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 46	NOTE 47
CP-026	08-26	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 48	NOTE 49
CP-027	08-27	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 50	NOTE 51
CP-028	08-28	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 52	NOTE 53
CP-029	08-29	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 54	NOTE 55
CP-030	08-30	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 56	NOTE 57
CP-031	08-31	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 58	NOTE 59
CP-032	08-32	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 60	NOTE 61
CP-033	08-33	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 62	NOTE 63
CP-034	08-34	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 64	NOTE 65
CP-035	08-35	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 66	NOTE 67
CP-036	08-36	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 68	NOTE 69
CP-037	08-37	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 70	NOTE 71
CP-038	08-38	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 72	NOTE 73
CP-039	08-39	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 74	NOTE 75
CP-040	08-40	Shop Fabricated Tanks - Non-Doublet	A. B. M. Co.	Blot Clean SP 6	Carbonate II		NOTE 76	NOTE 77

TABLE 4
TEXAS UTILITIES SERVICES INC.
COMANCHE PEAK STEAM ELECTRIC STATION
1980-82 2300 MW INSTALLATION
FINISH COATINGS FOR SHOP PRIMED EQUIPMENT

REPORT NO. AS-31 Rev 2
SHEET NO. 8 OF 13
DATE 3-15-84

ITEM NO.	SPEC. NO.	EQUIPMENT	SENDER	SURFACE PREPARATION	PRIMER COAT*	GENERIC TYPE	INTERMEDIATE COAT	FINISH COAT	FIELD TOUCH UP (PRIMER)
P-015	MS-25	1" L. Water Valves	HENRY FRANK CO.	Sand blast	Carbit PL Co	4x2	INC CHROMA	NOTE 3	NOTE 7
P-016	MS-26	Main Steam Isolation Valves	International	Sand blast	Heesman	4x2	Zinc rich	NOTE 1	NOTE 7
P-017	MS-27	Main Steam Safety Valves	Looby Steam & Valve	Sand blast	Mott	4x2	Self curing	NOTE 1	NOTE 7
P-018	MS-28	Main Steam Relief Valves	Fisher Control Co.	Blast Clean SP-6	Carbozinc 11	4x2	Inorganic Zinc	NOTE 1	NOTE 7
P-019	MS-29	Steam Pump Valves	Fisher Control Co.	"	191 Primer	"	Epoxy-Polyamide	NONE	NOTE 6
P-020	MS-30	IVAC Water Chiller (Nuclear)		"	"	"	"	"	NOTE 6
P-021	MS-31	IVAC Water Chiller (Nuclear)		"	"	"	"	"	
P-022	MS-32	IVAC Auxiliary Condensers		"	"	"	"	"	
P-023	MS-33	IVAC Atmospheric Steam Trains		"	"	"	"	"	
P-024	MS-34	IVAC Fans (Non-nuclear Safety R.)		"	"	"	"	"	
P-025	MS-35	IVAC Fans (Nuclear)	Buffalo Forge Co.	Blast Clean SP-6	Wisconsin Prot. Coating	Plasite 7122	Epoxy	Plasite 7122	Plasite 7122
P-026	MS-36	PX-VAHCB-01, 02		Solvent Clean SP-1 Power Tool SP-3	Dereka Metal	Primer No. 505	Alkyd	NOTE 1	NOTE 7
P-027	MS-37	PX-VAHCB-03, 04		"	Dupont	473-975	Alkyd	NOTE 3	NOTE 7
P-028	MS-38	P1-VAHCB-04, 05		"	"	"	"	"	
P-029	MS-39	P2-VAHCB-04, 05		"	"	"	"	"	
P-030	MS-40	PC-VAHCB-02		"	"	"	"	"	
P-031	MS-41	PC-VAHCB-05		"	"	"	"	"	
P-032	MS-42	PC-VAHCB-07		"	"	"	"	"	
P-033	MS-43	PC-VAHCB-07		"	"	"	"	"	
P-034	MS-44	PC-VAHCB-07		"	"	"	"	"	
P-035	MS-45	PC-VAHCB-07		"	"	"	"	"	
P-036	MS-46	PC-VAHCB-07		"	"	"	"	"	
P-037	MS-47	PC-VAHCB-07		"	"	"	"	"	
P-038	MS-48	PC-VAHCB-07		"	"	"	"	"	
P-039	MS-49	PC-VAHCB-07		"	"	"	"	"	
P-040	MS-50	PC-VAHCB-07		"	"	"	"	"	
P-041	MS-51	PC-VAHCB-07		"	"	"	"	"	
P-042	MS-52	PC-VAHCB-07		"	"	"	"	"	
P-043	MS-53	PC-VAHCB-07		"	"	"	"	"	
P-044	MS-54	PC-VAHCB-07		"	"	"	"	"	
P-045	MS-55	PC-VAHCB-07		"	"	"	"	"	
P-046	MS-56	PC-VAHCB-07		"	"	"	"	"	
P-047	MS-57	PC-VAHCB-07		"	"	"	"	"	
P-048	MS-58	PC-VAHCB-07		"	"	"	"	"	
P-049	MS-59	PC-VAHCB-07		"	"	"	"	"	
P-050	MS-60	PC-VAHCB-07		"	"	"	"	"	
P-051	MS-61	PC-VAHCB-07		"	"	"	"	"	
P-052	MS-62	PC-VAHCB-07		"	"	"	"	"	
P-053	MS-63	PC-VAHCB-07		"	"	"	"	"	
P-054	MS-64	PC-VAHCB-07		"	"	"	"	"	
P-055	MS-65	PC-VAHCB-07		"	"	"	"	"	
P-056	MS-66	PC-VAHCB-07		"	"	"	"	"	
P-057	MS-67	PC-VAHCB-07		"	"	"	"	"	
P-058	MS-68	PC-VAHCB-07		"	"	"	"	"	
P-059	MS-69	PC-VAHCB-07		"	"	"	"	"	
P-060	MS-70	PC-VAHCB-07		"	"	"	"	"	
P-061	MS-71	PC-VAHCB-07		"	"	"	"	"	
P-062	MS-72	PC-VAHCB-07		"	"	"	"	"	
P-063	MS-73	PC-VAHCB-07		"	"	"	"	"	
P-064	MS-74	PC-VAHCB-07		"	"	"	"	"	
P-065	MS-75	PC-VAHCB-07		"	"	"	"	"	
P-066	MS-76	PC-VAHCB-07		"	"	"	"	"	
P-067	MS-77	PC-VAHCB-07		"	"	"	"	"	
P-068	MS-78	PC-VAHCB-07		"	"	"	"	"	
P-069	MS-79	PC-VAHCB-07		"	"	"	"	"	
P-070	MS-80	PC-VAHCB-07		"	"	"	"	"	
P-071	MS-81	PC-VAHCB-07		"	"	"	"	"	
P-072	MS-82	PC-VAHCB-07		"	"	"	"	"	
P-073	MS-83	PC-VAHCB-07		"	"	"	"	"	
P-074	MS-84	PC-VAHCB-07		"	"	"	"	"	
P-075	MS-85	PC-VAHCB-07		"	"	"	"	"	
P-076	MS-86	PC-VAHCB-07		"	"	"	"	"	
P-077	MS-87	PC-VAHCB-07		"	"	"	"	"	
P-078	MS-88	PC-VAHCB-07		"	"	"	"	"	
P-079	MS-89	PC-VAHCB-07		"	"	"	"	"	
P-080	MS-90	PC-VAHCB-07		"	"	"	"	"	
P-081	MS-91	PC-VAHCB-07		"	"	"	"	"	
P-082	MS-92	PC-VAHCB-07		"	"	"	"	"	
P-083	MS-93	PC-VAHCB-07		"	"	"	"	"	
P-084	MS-94	PC-VAHCB-07		"	"	"	"	"	
P-085	MS-95	PC-VAHCB-07		"	"	"	"	"	
P-086	MS-96	PC-VAHCB-07		"	"	"	"	"	
P-087	MS-97	PC-VAHCB-07		"	"	"	"	"	
P-088	MS-98	PC-VAHCB-07		"	"	"	"	"	
P-089	MS-99	PC-VAHCB-07		"	"	"	"	"	
P-090	MS-100	PC-VAHCB-07		"	"	"	"	"	
P-091	MS-101	PC-VAHCB-07		"	"	"	"	"	
P-092	MS-102	PC-VAHCB-07		"	"	"	"	"	
P-093	MS-103	PC-VAHCB-07		"	"	"	"	"	
P-094	MS-104	PC-VAHCB-07		"	"	"	"	"	
P-095	MS-105	PC-VAHCB-07		"	"	"	"	"	
P-096	MS-106	PC-VAHCB-07		"	"	"	"	"	
P-097	MS-107	PC-VAHCB-07		"	"	"	"	"	
P-098	MS-108	PC-VAHCB-07		"	"	"	"	"	
P-099	MS-109	PC-VAHCB-07		"	"	"	"	"	
P-100	MS-110	PC-VAHCB-07		"	"	"	"	"	
P-101	MS-111	PC-VAHCB-07		"	"	"	"	"	
P-102	MS-112	PC-VAHCB-07		"	"	"	"	"	
P-103	MS-113	PC-VAHCB-07		"	"	"	"	"	
P-104	MS-114	PC-VAHCB-07		"	"	"	"	"	
P-105	MS-115	PC-VAHCB-07		"	"	"	"	"	
P-106	MS-116	PC-VAHCB-07		"	"	"	"	"	
P-107	MS-117	PC-VAHCB-07		"	"	"	"	"	
P-108	MS-118	PC-VAHCB-07		"	"	"	"	"	
P-109	MS-119	PC-VAHCB-07		"	"	"	"	"	
P-110	MS-120	PC-VAHCB-07		"	"	"	"	"	
P-111	MS-121	PC-VAHCB-07		"	"	"	"	"	
P-112	MS-122	PC-VAHCB-07		"	"	"	"	"	
P-113	MS-123	PC-VAHCB-07		"	"	"	"	"	
P-114	MS-124	PC-VAHCB-07		"	"	"	"	"	
P-115	MS-125	PC-VAHCB-07		"	"	"	"	"	
P-116	MS-126	PC-VAHCB-07		"	"	"	"	"	
P-117	MS-127	PC-VAHCB-07		"	"	"	"	"	
P-118	MS-128	PC-VAHCB-07		"	"	"	"	"	
P-119	MS-129	PC-VAHCB-07		"	"	"	"	"	
P-120	MS-130	PC-VAHCB-07		"	"	"	"	"	
P-121	MS-131	PC-VAHCB-07		"	"	"	"	"	
P-122	MS-132	PC-VAHCB-07		"	"	"	"	"	
P-123	MS-133	PC-VAHCB-07		"	"	"	"	"	
P-124	MS-134	PC-VAHCB-07		"	"	"	"	"	
P-125	MS-135	PC-VAHCB-07		"	"	"	"	"	
P-126	MS-136	PC-VAHCB-07		"	"	"	"	"	
P-127	MS-137	PC-VAHCB-07		"	"	"	"	"	
P-128	MS-138	PC-VAHCB-07		"	"	"	"	"	
P-129	MS-139	PC-VAHCB-07		"	"	"	"	"	
P-130	MS-140	PC-VAHCB-07		"	"	"	"	"	
P-131	MS-141	PC-VAHCB-07		"	"	"	"	"	
P-132	MS-142	PC-VAHCB-07		"	"	"	"	"	
P-133	MS-143	PC-VAHCB-07		"	"	"	"	"	
P-134	MS-144	PC-VAHCB-07		"	"	"	"	"	
P-135	MS-145	PC-VAHCB-07		"	"	"	"	"	
P-136	MS-146	PC-VAHCB-07		"	"	"	"	"	
P-137	MS-147	PC-VAHCB-07		"	"	"	"	"	
P-138	MS-148	PC-VAHCB-07		"	"	"	"	"	
P-139	MS-149	PC-VAHCB-07		"	"	"	"	"	
P-140	MS-150	PC-VAHCB-07		"	"	"	"	"	
P-141	MS-151	PC-VAHCB-07		"	"	"	"	"	
P-142	MS-152	PC-VAHCB-07		"	"	"	"	"	
P-143	MS-153	PC-VAHCB-07		"	"	"	"	"	
P-144	MS-154	PC-VAHCB-07		"	"	"	"	"	
P-145	MS-155	PC-VAHCB-07		"	"	"	"	"	
P-146	MS-156	PC-VAHCB-07		"	"	"	"	"	
P-147	MS-157	PC-VAHCB-07		"	"	"	"	"	
P-148	MS-158	PC-VAHCB-07		"	"	"	"	"	
P-149	MS-159	PC-VAHCB-07		"	"	"	"	"	
P-150	MS-160	PC-VAHCB-07		"	"	"	"	"	
P-151	MS-161	PC-VAHCB-07		"	"	"	"	"	
P-152	MS-162	PC-VAHCB-07		"	"	"	"	"	
P-153	MS-163	PC-VAHCB-07		"	"	"	"	"	
P-154	MS-164	PC-VAHCB-07		"	"	"	"	"	
P-155	MS-165	PC-VAHCB-07		"	"	"	"	"	
P-156	MS-166	PC-VAHCB-07		"	"	"	"	"	
P-157	MS-167	PC-VAHCB-07		"	"	"	"	"	
P-158	MS-168	PC-VAHCB-07		"	"	"	"	"	
P-159	MS-169	PC-VAHCB-07		"	"	"	"	"	
P-160	MS-170	PC-VAHCB-07		"	"	"	"	"	
P-161	MS-171	PC-VAHCB-07		"	"	"	"	"	
P-162	MS-172	PC-VAHCB-07		"	"	"	"	"	
P-163	MS-173	PC-VAHCB-07		"	"	"	"	"	
P-164	MS-174	PC-VAHCB-07		"	"	"	"	"	
P-165	MS-175	PC-VAHCB-07		"	"	"	"	"	
P-166	MS-176	PC-VAHCB-07		"	"	"	"	"	
P-167	MS-177	PC-VAHCB-07		"	"	"	"	"	
P-168	MS-178	PC-VAHCB-07		"	"	"	"	"	
P-169	MS-179	PC-VAHCB-07		"	"	"	"	"	
P-170	MS-180	PC-VAHCB-07		"	"	"	"	"	
P-171	MS-181	PC-VAHCB-07		"	"	"	"	"	
P-172	MS-182	PC-VAHCB-07		"	"	"	"	"	
P-173	MS-183	PC-VAHCB-07		"	"	"	"	"	
P-174	MS-184	PC-VAHCB-07		"	"	"	"	"	
P-175	MS-185	PC-VAHCB-07		"	"	"	"	"	
P-176	MS-186	PC-VAHCB-07		"	"	"	"	"	
P-177	MS-187	PC-VAHCB-07		"	"	"	"	"	
P-178	MS-188	PC-VAHCB-07		"	"	"	"	"	
P-179	MS-189	PC-VAHCB-07		"	"	"	"	"	
P-180	MS-190	PC-VAHCB-07		"	"	"	"	"	
P-181	MS-191	PC-VAHCB-07		"	"	"	"	"	
P-182	MS-192	PC-VAHCB-07		"	"	"	"	"	
P-183	MS-193	PC-VAHCB-07							

Gibbs & Hill, Inc.

ENGINEERING DESIGN CONSULTING FIRM
NEW YORK

100 NO. 2333

TABLE A-4

TEXAS UTILITIES SERVICES INC.
CORRANCO PEAK STEAM ELECTRIC STATION
1000-02 2200 MW INSTALLATION
FINISH COATINGS FOR SHD PRIMED EQUIPMENT

REPORT NO. 45-71 Rev. 2
SHEET NO. 9 OF 13
DATE 3-15-84

TOWER P. E. NO.	SPEC. NO.	EQUIPMENT	SELLER	SURFACE PREPARATION	PRIME COAT			INTERMEDIATE COAT	FINISH COAT	FIELD TOUCHUP (PRIME & A)
					APPROXIMATE	AMTS. DESIG	GENERIC TYPE			
CP- 0089	ME-89	MEC Pulling Coil	Buffalo Forge	wire brush SP 2 Aer-hol SP 2	Davis Paint #6	P. 280	Zinc dust alkyl	NOTE 1	NOTE 1	NOTE 7
	ME-90	ETAC - Electrical Heating Coils								
CP- 0091	ME-91	ETAC - Automatic Filters	American Air Filter	Galvanized - no painting required						
CP- 0092	ME-92	ETAC - Thermal Pro- cessing	Joy Manufacturing	Sandblast	Carboline Co	Carboline II	Self curing inorganic zinc	NONE	Carboline Co Marline 305A Pragles	NOTE 6
	ME-92B	ETAC - Thermal Pro- cessing								
	ME-93	Pool Inspection System								
CP- 0150	ME-150	Pre-treatment and Makeup Dew. Water System	Hagerford & Terry	Sandblast	Mobil	13 Y 5	Zinc Chromate	NOTE 3	NOTE 3 (Mobil Series 89 enamel)	NOTE 7
	ME-151	Open								
CP- 0152	ME-152	Steam Generator Blowdown & Cleanup System	Hagerford & Terry	Sandblast	Carboline Co	Carboline II	SELF CURING inorganic zinc	NONE	NOTE 2	NOTE 6
CP- 0153	ME-153	Secondary Chemical Feed System	Power Specialty Co., Inc.	LATER	LATER	LATER	LATER			
	ME-154	Primary Sampling & Monitoring System								
CP- 0155	ME-155	Secondary Sampling & Monitoring System	Delphi Industries	Sandblast	Andrews	Acid Etch P-1000	Acid Etch P-1000	NONE	Pittsburgh Acid Etch P-1000 & WATER KATIK Shannon AD 491 C-221	Mobil Series 12 Enamel Nobil Series 81 Enamel 305
CP- 0156	ME-156	Chlorination System	Fletcher & Porter Co.	Aer-hol	Shannon- Williams	AB 69N1	N.D.	NONE		
	ME-157	Open								

TRUCK P. N. NO.	SPEC. NO.	EQUIPMENT	SELLER	SURFACE PREPARATION	PRIMER COAT #	EXTENDING COAT	FINISH COAT	FIELD TOUCHUP PRIMER
					APPLICABLE MATERIAL	APPLICABLE MATERIAL	APPLICABLE MATERIAL	
	SP-3734	Open						
CP-0154B	SP-3734	Laboratory Furnishings	Eschmeyer Scientific	Phosphate Wash	Aluminum Welding	EC olive	Acrylic	Supplied with equipment
CP-016D	SP-160	Continental Hydrogen Analyzer	Dalphi Industries	Sandblast	Cardinal	N.D.	N.D.	Mobile Service Unit
CP-0161	SP-161	Solid Automatic Bolter	Elenco Equipment	Sandblast	Ketoflony	7107	Epoxy	Supplied as finish
CP-0162	SP-162	Solid Automatic Drumming System	Protective Packaging Co.	Sandblast	Caroline Co.	Carboline II	Self curing inorganic	NOTE 6
CP-0163	SP-163	Reveron Control System	Union Carbide					
CP-0164	SP-164	Control Valves - Ballcock	Fisher Control	Blast Clean SP-6	Caroline Co	191 Primer	Epoxy-Bi-grade	NOTE 6
CP-0165	SP-165	Control Valves - Ballcock	Fisher Control	"	"	"	"	"
CP-0166	SP-166	Process Automatic Valves						
CP-0167	SP-167	Power Operated Diaphragm Type Valve						
CP-0168	SP-168	Control Bore	Palanca Electric	Sandblast Phosphate Wash	Alclad Brist	107 A	Final Flame- retardant	Supplied as finish
CP-0169	SP-169	Instrument Bore						
CP-0170	SP-170	Open						
CP-0171	SP-171	Open						

TABLE A-4

TEXAS UTILITIES SERVICES INC.
COMBUSTION FURNACE STEAM ELECTRIC STATION
1000-01 2000 MW INSTALLATION
FINISH COATING FOR SHOP FURNISHED EQUIPMENT

REPORT NO. AS-2182
DATE 11/10/84
BY 3-15-84

ITEM NO.	ITEM	EQUIPMENT	REMARKS
100-610	Open		
100-611	Control Systems		
100-612	Boilers - Multiple & Large Tank		
100-613	Modular Tubing Boilers		
100-614	Pressure Gauges		
100-615	Pressure Switches		
100-616	Indicating Differential Pressure Switches		
100-617	Gauge Glasses		
100-618	Flow Indicators		
100-619			
100-620	Level Switches		
100-621	Temperature Indicators		
100-622	Thermocouples & RTD assemblies		
100-623	Barometric Pressure Transmitters		
100-624	Flow Elements		

No Painting Required

TABLE A-4

Notes

| Rev. 2

1. Use any of the following coatings:

<u>Manufacturer</u>	<u>Intermediate</u>	<u>Finish</u>
Ameron	185	2109
Keeler & Long	2001	9104
Mobil	13-R-10	Series 89
Southern Imperial	1215	1201
Tnemec	77-Chempride	Epoxoline 66

Before coating application all surfaces shall be cleaned to remove all surface contaminants such as dirt, grease and oil.

2. Use any of the following coatings:

<u>Manufacturer</u>	<u>Finish</u>
Ameron	2218
Carboline	Phenoline 305
Keeler & Long	7475
Mobil	Series 89
Southern Imperial	Reactic 1201
Tnemec	Epoxoline 66

3. Use finish coat as recommended by Specification AS-30.

| Rev. 2

4. a) Pipe shall have surface preparation and be prime coated per specification Nos. 2323-MS-43A, 43B, 44A and 44B, and any DECD's thereto

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Page 13 of 13

- b) Pipe to be insulated shall not receive any intermediate or finish coat
 - c) Pipe not to receive insulation, and located inside the containment shall receive a finish coat of Carboline Company's Phenoline 305
 - d) Pipe not to be insulated located in radioactive area shall receive an intermediate and finish coat per Note 1 above.
 - e) Pipe not to be insulated located in non-radioactive areas shall receive an intermediate and finish coat per Specification No. 2323-AS-30
- 5. All equipment to be located inside the containment shall be coated in accordance with the Q.A. requirement of Appendix C of this specification.
 - 6. Touchup coating shall be identical to primer.
 - 7. Touchup coating shall be of the same generic type as the primer.

APPENDIX "B"

CPSES FINISH COLOR SCHEDULE

NOTE:

This schedule has been prepared as guide only and does not cover the complete scope of work.

The colors indicated are to be similar to the manufacturer's product numbers listed on pages 1 through 6 of this Appendix.

| Rev z

APPENDIX "B"

PRODUCT NUMBERS

<u>COLOR</u>	<u>MANUFACTURER (or Equivalent) AND COLOR NUMBER</u>
White	Keeler & Long 7475
Cream	Keeler & Long E-2-8700 Keeler & Long T-2-8700
Off-white	Keeler & Long T-3-8591 Keeler & Long V-3-8591
Light Gray	Keeler & Long E-2-8928 Keeler & Long T-2-8928
Gray Green	Keeler & Long E-2-8577 Exxon AS 6437
Light Green	Keeler & Long E-2-2338 Exxon AS 6813
Black	Exxon EX 6679 Exxon AS 6433
Light Buff	Keeler & Long E-2-8939 Keeler & Long T-2-8939
Red Orange	Exxon AS 6457
Red	Exxon AS 6825
Yellow	Exxon AS 6827

Note: Exxon has been excluded from the list of approved manufacturers as they no longer manufacture paint.

Gibbs & Hill, Inc.
 Specification 2323-AS-31
 Revision 2
 March 15, 1984
 Page 2 of 6

CPSES PAINT SCHEDULE

<u>AREA</u>		<u>COLOR</u> (Note 1)	DCA 13,171 R.O. 19,330 R.O. Rev. 2
I.	Containment		
1.	Concrete - Walls & Ceilings - Floors and 6-inch (approx.) base	White Light Gray	DCA 2,763 R.O. Rev. 2
2.	Steel - Liner - Structural, Stair Stringers and Risers	White Gray Green	
3.	Process Piping (Exposed), Pipe Supports Imbeds in Concrete	Light Gray	
4.	Cranes - Polar - Other	White Gray Green	
5.	HVAC Equipment - Housings	White	
6.	Equipment - Pumps, Motors, etc.	Light Green	
7.	Elevator - Interior - Doors	Cream Gray Green	
8.	Instrument Cabinets	Light Buff	
9.	Handrails	Cream	
10.	Valves - Uninsulated - Handwheels	Light Gray Black	
11.	Pipe Chases	Light Gray	DCA 5,620 R.O. Rev. 2
12.	Weld Plate Embeds (Note 2)	White	DCA 9,122 R.O. Rev. 2

II. Auxiliary Building, Fuel Building,
Safeguards Building

1.	Concrete - Walls & Ceilings - Floors and 6-inch (approx.) base	White Light Gray	DCA 2,763 R.O Rev. 2
2.	Steel - Structural, Stair Stringers and Risers	Gray Green	
3.	Process Piping (Exposed), Pipe Supports, Imbeds	Light Gray	
4.	Cranes	Gray Green	
5.	HVAC Equipment	Match Walls	
6.	Equipment - Pumps, Motors, etc.	Light Green	
7.	Elevator - Interior - Doors	Cream Gray Green	
8.	Switchgear, Motor Control Centers, Control Panels, Instrument Cabinets	Light Buff	
9.	Handrails	Cream	
10.	Valves - Uninsulated - Handwheels	Light Gray Black	
11.	Pipe Chases	Light Gray	DCA 5,620 R.O Rev. 2

III Control Building

1.	Concrete - Walls in offices, labs, shops, control room, etc., in uncontrolled access areas	Off-white	
	- Walls in controlled access areas	White	
	- Floors in controlled access areas and 6-inch (approx.) base	Light Gray	DCA 2,763 R.O Rev. 2
2.	Steel - Structural, Stair Stringers and Risers		

	- in controlled access areas	Gray Green	
	- other areas	Gray Green	
3.	Process Piping (Exposed), Pipe Supports, imbeds		
	- in controlled access areas	Light Gray	
	- other areas	Light Gray	
4.	HVAC Equipment	Match Walls	
5.	Equipment - Pumps, Motors, etc.	Light Green	
6.	Switchgear, Motor Control Centers, Control Panels, Instrument Cabinets	Light Buff	
7.	Valves - Uninsulated - Handwheels	Light Gray	
8.	Pipe Chases	Light Gray	DCA 5,620 R.O Rev. 2
IV.	Turbine Building		
1.	Condensers	Light Green	
2.	Control Panels - Miscellaneous	Light Buff	
3.	Cranes - Operating Deck Gantry Cranes - Others	Light Green Gray Green	DCA 14,279 R.O Rev. 2
4.	Doors, Frames & Trim - Interior - Exterior	Gray Green Gray Green	
5.	Electrical Equipment - Transformers - Switchgear, Motor Control Centers, Enclosed Bus - Isolated Phase Duct (Non-Alum)	Gray Green Light Buff Red Orange	
6.	Elevators - Doors	Gray Green	
7.	Feedwater Heaters - Exposed Steel	Light Green	
8.	Handrails - Exterior - Interior	Cream Cream	
9.	Pipe Supports, Hangers, Concrete Imbeds		

	- Exterior	Light Gray
	- Interior	Light Gray
10.	Turbine Generators	Gray Green
11.	Structural Steel, Platforms, Stair Stringers & Risers - Exterior	Gray Green
	- Interior	Gray Green
12.	Miscellaneous Equipment - Motors, Pumps, etc.	Light Green
13.	Tanks - Uninsulated	Gray Green
14.	Valves - Uninsulated	Light Gray
	- Handwheel	Black
15.	Start-up Boiler - Miscellaneous Equipment	Light Green
16.	Process Piping (Exposed)	Light Green
17.	Water Treatment Equipment	
	- Pumps, Motors	Light Green
	- Tanks	Gray Green
V.	Miscellaneous and Common Equipment	
1.	Fire Equipment - Hydrants, Hose Enclosures Pumps, Valves	Red
2.	Guard Posts	Yellow
3.	Process Piping - Exposed	Light Gray
4.	Structural Steel, Stair Stringers and Riser, Platforms	
	- Exterior	Gray Green
	- Interior	Gray Green
5.	Tanks - Uninsulated	Gray Green
6.	Valves - Uninsulated	Light Gray
	- Handwheels	Black
7.	HVAC Equipment - Housings	Match Walls

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Page 6 of 6

8.	Equipment - Pumps, Motors	Light Green	
9.	Interior Walls - Offices, Shops Warehouse, and other miscellaneous buildings	Off-white	
10.	Pipe Supports, Hangers, Imbeds in Concrete	Light Gray	
11.	Instrument Cabinets	Light Buff	
12.	Cranes - Circulating Water Gantry Crane - Others	Light Green Gray Green	DCA 14,279 R.O Rev.2
13.	Fire Hose Station Supports	Light Gray	DCA 14,976 R.O Rev.2

Note 1: Color "White" may be utilized as alternate color for and of the colors specified. This includes initial application, recoating, or for finish coat repairs.

DCA
18,330 R.O
Rev.2

Note 2: Weld plate embeds which are rendered unusable by the Project Civil Engineer or his designee, shall receive red topcoat rather than the specified light gray or white. Red topcoat shall be applied as soon as possible following rendering the embed unusable.

DCA
9,122 R.O
13,923 R.O
Rev.2

APPENDIX C

QUALITY ASSURANCE FOR COATINGS USED INSIDE THE CONTAINMENT

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 1 of 17

1.0 SCOPE

- a. This Appendix sets forth the Quality Assurance requirements for protective coatings applied to structures or equipment for the Comanche Peak Steam Electric Station. This appendix will be applicable to both onsite and offsite activities as directed by the owner.

1.1 APPLICATION OF THIS APPENDIX

- a. This Appendix applies to protective coatings and their application to surfaces for Comanche Peak Steam Electric Station as listed in ANSI N101.2 and comprise requirements applicable to Class I coating service level for the nuclear reactor containment facilities.
- b. Class I coating service level applies to systems and components of nuclear facilities within the reactor containment building which are essential (1) to prevent postulated accidents which could affect the public health and safety or (2) to mitigate the consequences of these accidents. The quality assurance for Class I service level shall conform to the requirements of this standard.
- c. Because of the impracticality of imposing all the requirements of this appendix on specific items (requiring only a small quantity of coating material), the Owner, consistent with his Quality Assurance Program, will accept affidavits of certification from vendors attesting to the quality for a shop or field coating. Section 6.10 sets forth requirements to for this nonconformance.

2.0 GENERAL REQUIREMENTS

2.1 PURPOSE AND SCOPE

- a. This section defines the general quality assurance requirements necessary for compliance with this Appendix. General requirements shall apply to all other sections of this standard.
- b. The scope includes:
 1. Quality Assurance Requirements
 2. Quality Assurance Program
 3. Quality Control Program
 4. Conditions of Work
 5. Control Measures for Ambient Conditions
 6. References to Other Standards

2.2 QUALITY ASSURANCE REQUIREMENTS

The general quality assurance requirements necessary to meet the purpose of this Appendix shall include a Quality Assurance Program incorporating a Quality Control Program. This program shall be structured to meet the pertinent requirements of 10CFR50 Appendix B, and ANSI N45.2. The procedures established shall be authoritative and mandatory. All deviations from these procedures shall be reviewed by, and shall be subject to approval by, the Owner or his designated representative for protective coatings.

2.3 QUALITY ASSURANCE PROGRAM

- a. The Quality Assurance Program shall consist of the implementation and documentation, of written policies, procedures, or instructions, to establish quality assurance for the coating materials and the coating manufacturer, the coating applicator, and the coating inspection agency.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 3 of 17

b. Coating Materials and Coating Manufacturer

1. All protective coating materials shall meet the applicable requirements of ANSI 101.2 as evaluated and approved by the Owner or his designated representative.
2. The coating manufacturer shall furnish to the Owner the following:
 - a. A Quality Assurance Program which shall describe his current practices for quality control of the specified coating materials.
 - b. A description of his technical and field service capabilities.
 - c. The recommended application procedures for each coating system supplied by the coating manufacturer. These procedures shall include each substrate to be covered and all methods of applications as covered by Gibbs & Hill Specification 2323-AS-31. This shall include maximum and minimum ambient conditions at which application can be properly made. Clarification of recommended procedures and potential problem area shall be resolved at the site meeting outlined in Section 2.5.b of this Appendix.

c. Coating Applicator - The coating applicator shall furnish a Quality Assurance Program which shall describe his current or proposed practices for application of the specified coatings.

d. Coating Inspection Agency

1. All protective coating material, application and coating materials shall be inspected to meet the applicable requirements of ANSI N101.2. The applicable requirements and level of inspection shall be the sole responsibility of the Owner. The coating inspection agency shall inspect to the requirements and levels as directed by the Owner.
2. The coating inspecting agency shall furnish to the Owner a Quality Assurance Program which will describe its practices for inspection of the specified coatings.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 4 of 17

2.4 QUALITY CONTROL PROGRAM

The Quality Control Program shall include shop and/or field control of all the physical measures necessary to insure that the completed coating work meets all requirements set forth by the Owner. Control of all work (shop, field, plant, product, etc.) shall meet the requirements stated in this Appendix.

2.5 CONDITIONS OF WORK

To insure that the purpose of this Appendix and the requirements of the project specification are met, it is essential to comply with the following conditions of work:

- a. During the bid period for supplying the coating materials prior to awarding of the contract, all parties to the coating bids or the coating contract shall understand the conditions of work in the shop and/or field including all interface relationships and responsibilities. (This understanding may be achieved by a meeting of bidders at the project site during the bid period.)
- b. Before the start of the coating work in the shop and/or field, there shall be a shop and/or site meeting if directed by the Owner or his representative. Attendees will be as determined by the Owner.
 1. At this meeting, agreements shall be reached as to the interpretation of levels of acceptance or rejection of the coating work. Each phase of the work, such as receipt and storage of coating materials, equipment to be used, preparation of substrates and/or previously primed surfaces application of each coat of the coating system, degree and extent of inspection and testings, etc., shall be specifically and thoroughly reviewed.
 2. Also at this meeting, or a later meeting, a field demonstration of surface preparation and coating application shall be conducted and an agreement shall be reached regarding the demonstration's conformance with the project specification providing a baseline for future inspection.
 - a) Agreements reached shall be prepared as a quality control document for the Owner by his assigned representative and shall constitute the basis for

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 5 of 17

inspection and for acceptance or rejection of each phase of the work.

- b) Additional meetings may be held as directed by the Owner for resolution of any problems not covered in previous meetings.

2.6 CONTROL MEASURES FOR AMBIENT CONDITIONS

Acceptable measures for control of ambient conditions shall be as defined in this Appendix and the project specification. The applicator's written Quality Control Program shall stipulate the measures to be taken to assure that appropriate controls are fully implemented.

3.0 COATING MATERIALS

3.1 PURPOSE AND SCOPE

This section defines the scope of quality assurance requirements for the coating materials manufactured and delivered to the shop and/or the field.

The scope includes:

- a. Manufacturing
- b. Product Identity
- c. Labeling of Materials
- d. Sample Retention
- e. Performance Verification of Shop and/or Field-applied Coating Systems
- f. Quality Assurance documentation

3.2 MANUFACTURING

The coating manufacturer shall maintain a Quality Assurance Program and shall provide documentation to show the quality of a given coating system as supplied is reasonably identical to the coating system previously qualified under ANSI N101.2. The coating system shall be requalified by the coating manufacturer if there are changes in formulation or end-product properties

which prevent the coating manufacturer from certifying the coating system to ANSI N101.2. Procedures for certification shall be incorporated within the coating manufacturer's Quality Assurance Program.

3.3 PRODUCT IDENTITY

- a. The manufacturer shall certify that the product identities of the materials being supplied meet the requirements of the project specification for the intended service. To establish identity, the Owner or his representative shall be furnished with a "Coating Manufacturer's Product Identity Certification" for each batch.

- b. A materials control program shall be maintained to insure the identity of the coating materials as received and as applied, to insure that the coating materials have not been adulterated or altered in any manner from the coating manufacturer's written recommendations, and to assure that no materials which have exceeded their recommended shelf life are applied without authorization by the Owner or his representatives.

- c. Labeling of Materials

Each container shall be labeled with the product designation. The label or container shall bear a batch number or other factory marking, permanently affixed, showing the individual lot or batch designation. If the batch number or other factory marking does not incorporate the date of manufacture, the date shall appear separately on the label or container.

- d. Sample Retention

Retained batch samples from products furnished for the work shall be kept by the coating manufacturer for the stated shelf life but no longer than two years from date of manufacture.

- e. Performance Verification of Shop and/or Field Applied Coating Systems Tests as discussed in ANSI N101.2 will be performed on specimens of each coating system used to verify that the performance of each shop and/or field applied coating system is comparable to that of the same coating system qualified under ANSI N101.2.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 7 of 17

f. Quality-Assurance Documentation

1. Quality Assurance Documentation shall be for Class I coating service level as stated in Sections 3.3a and 3.3b.
2. Appropriate forms for quality assurance documentation will be developed by the coating manufacturer, coating applicator and the coating inspection agency. All applicable forms will be reviewed by the Owner prior to use.

4.0 SURFACE PREPARATION OF SUBSTRATES

4.1

This section defines the quality assurance requirements for the surface preparation of substrates or of previously primed surfaces in the shop and/or field.

4.2

- a. The surface preparation of substrates or of previously primed surfaces shall conform to the applicable requirements of ANSI N101.2 and to the project specification with the exception listed below.
- b. If ANSI N101.2 and the project specification are in conflict, the more stringent requirement will govern.
- c. Inspection methods shall insure that specification requirements for all substrates, including previously primed surfaces are met.
- d. For surfaces as described in Section 1.1.d which arrived at the job site primed but with no finish coat shall be handled on a per case basis as directed by the Owner. Specific areas of prime coat thicknesses and touchup and compatibility of the two coating systems will be addressed by the Owner for each case. The finish coat shall be applied and inspected under the equipment's governing specification and this Appendix.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 8 of 17

4.3

Contamination of substrates with matter deleterious to the Coating and its intended function shall be prevented as outlined within the Gibbs & Hill Specification 2323-AS-31. Contamination of substrates shall be addressed at the site meeting, Section 2.5.b., where steps to handle this problem will be set forth.

4.5 QUALITY ASSURANCE DOCUMENTATION

When directed by the Owner, the coating applicator shall report daily on surface preparation conditions encountered during each shift for each area of work. This report shall be verified by the Owner or his representative. Forms for daily reports shall be initially prepared by the coating applicator prior to use.

5.0 APPLICATION OF COATING SYSTEMS

5.1

This section defines the quality assurance requirements necessary for compliance to meet the performance requirements of the coating system.

5.2 APPLICATION PROCEDURES

- a. The coating applicator shall submit to the Owner written application procedures for applying each coating system on each substrate or on each previously coated surface. These procedures shall be consistent with the project specification and coating manufacturer's recommendations. Conflicts between the specification and the manufacturer's recommendations shall be resolved at the site meeting, Section 2.5.b or by the Owner if identified at a later date.
- b. These application procedures shall provide information on the following:
 1. Qualification of application personnel
 2. Receiving, storing, handling, and dispensing of coating materials
 3. Application equipment

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 9 of 17

4. Application parameters, such as environmental conditions, regulation of equipment, ventilation, cleanliness, viscosity, viscosity control, film-thickness control, number of coats, intercoat requirements such as curing time, and other factors deemed pertinent by the Owner.
5. Field preparation of coating material, such as mixing, thinning, activating, and other pertinent factors.
6. Health, safety, fire, and all other applicable protection requirements
7. Instruments, and their proper use, for measuring relative humidity, temperature, and wet and dry film thickness, for detecting holidays, etc.

5.3 QUALIFICATION OF PERSONNEL

All application personnel shall be qualified in accordance with the coating applicator's qualification procedure which shall be submitted to the Owner or his representative for review.

5.4 QUALITY ASSURANCE DOCUMENTATION

- a. The coating applicator shall generate the forms to document proper receiving, storing, handling and dispensing of painting materials.
- b. Qualifications of application personnel shall be maintained.

6.0 COATING INSPECTION

6.1 PURPOSE AND SCOPE

This section defines the quality assurance requirements for a uniform procedure of inspection to insure that the completed coating work meets the requirements of the project specification.

6.2 GENERAL REQUIREMENTS

- a. Inspection of shop and field coating work shall be performed by qualified personnel to insure that the coating work conforms to the project specifications.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 10 of 17

b. Inspection shall include all phases of work which affect the performance of the coating. Routine inspections shall be made and reported for the following:

1. Onsite receipt of coating materials
2. Substrates before and following surface preparation
3. Mixing and preparation of coating materials for application
4. Film characteristics after drying and curing excluding common stock steel without unique numbers.

The following guidelines shall be maintained on items which are governed as described above:

- a) Common stock steel to receive protective coating is to be shopblasted and rimed per AS-31 standards.
 - b) Inspection of blast shall be in accordance with AS-31.
 - c) Upon acceptance of blast, common stock item shall be primed and allowed to dry sufficiently to prevent easy damage, and then transferred to laydown area.
 - d) Shop seal-coated common stock items shall be transferred to laydown areas, following sufficient curing to prevent coating damage.
 - e) Inspection for final coating acceptability shall not be given for common-stock steel prior to the items permanent location.
 - f) All repair and finish coating on "Q" coated common stock shall be per this specification.
5. Control of ambient conditions and surface temperatures during all phases of the coating work.

DCA
5/7/84

Rev 2

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 11 of 17

6.3 QUALIFICATION OF COATING INSPECTORS

- a. Each inspector assigned to the work shall be qualified. The inspection agency shall include requirements for qualifying the coating inspectors in its Quality Assurance Program. The specific qualifications of a given inspector assigned to the work will be provided to the Owner or his representative. These qualifications shall include his prior training and inspection experience with generic coating system similar to those used for the work in question.

6.4 SCOPE OF INSPECTION

- a. Basis of inspection of coating work shall be per site agreement as stated in Section 2.5.b.
- b. The coating manufacturer shall have access to the material storage areas, the coating work, in the shop or the field, for the purpose of advising the Owner, the coating applicator and the coating inspection agency on all aspects of the coating work.

6.5 STORAGE

Facilities for storage of materials and the storage conditions shall meet the specification requirements.

6.6 COATING MATERIALS AND APPLICATION

- a. Before use, coatings shall be routinely inspected to confirm that they meet the project specification requirements for type and identification of each material.
- b. Mixing and Thinning

Mixing and thinning of coatings shall be routinely inspected. Only the type and quantity of converter and thinner recommended by the coating manufacturer shall be used.

- c. Application

Each coat of material shall be inspected to specification requirements. Inspection shall determine compliance with specified requirements for cure, surface smoothness, texture, and workmanship.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 12 of 17

d. Control of Ambient Conditions

Inspection shall determine compliance of control measures for ambient conditions and surface temperatures compatible with the coating used and consistent with the project specification and the most current coating manufacturer's recommendations.

(Note: At temperatures above 100 F, readings with nonmercury-filled thermometers in Psychrometers cannot be taken. At temperatures above 100 F, if accurate wet-bulb readings can be taken, utilize the accurate wet-bulb reading and a dry bulb reading of 100 F. The 100 F dry-bulb reading utilized under the above conditions will yield a conservative dew point and relative humidity.)

DCA
14,206 R.O

Rev.2

6.7 SUBSTRATE AND SURFACE PREPARATION

- a. The substrate shall be inspected by the inspection agency and coating applicator to determine its suitability for subsequent coating work. Acceptance criteria shall be as outlined within the governing specification. Unsuitable substrate conditions not corrected by the coating applicator shall be reported to in writing to the Owner or his representative for appropriate action.
- b. The substrate after the specified surface preparation and prior to coating application, shall be inspected for compliance with specified requirements.
- c. The surface of each previously applied coating shall be inspected prior to application of a subsequent coat for compliance with specified requirements.

6.8 DRY-FILM THICKNESS (DFT) OF COATINGS

The specified dry-film thickness of each coat and of the coating system shall conform to the tolerances in accordance with SSPC-PA-2-72P. Any unusually high or low gauge reading that cannot be repeated consistently shall be discarded. Gauges shall be the Elcometer Paint Inspector, a Microtest or similar Owner (engineer) approved gauge that measures the thickness to the nearest mil. The method for using the gauges to determine thickness shall be per agreement in meeting of Section 2.5.b.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 13 of 17

When performing surfacer and/or topcoat repair work, and the damaged area is 2 sq. in. or less in size, or the damage is a scratch 1/4 in. in width or less, regardless of length, substantiating or recording film thickness on the damaged area repair shall not be required. All applicable inspections and documentation, other than the above, shall be maintained.

DCA
12,794-R.0
Rev. 2

6.9 COATING INSPECTION EQUIPMENT

- a. The accepted standard for determining film thickness for magnetic substrates shall be the DFT measurement: the WFT measurement shall be used for guide purposes only on steel surfaces. The setting of the gauges for the DFT measurement shall be performed on the blast-cleaned or coated surface of the area where the coating work and inspection will be performed. The specified minimum dry-film thickness of each coat and of the coating system shall be determined in accordance with SSPC-PA2. The maximum thickness shall not exceed that specified within the governing specification.
 1. The coating applicator shall furnish a sufficient number of wet-film thickness (WFT) gauges so that his personnel may periodically check the thickness of coatings being applied. The coating inspection agency shall furnish each of its inspectors with similiar WFT gages.
 2. The coating applicator shall furnish his personnel with properly calibrated approved magnetic gauges for checking dry-film thickness. The coating inspection agency shall furnish its inspectors with identical properly calibrated gauges.
 3. Mutually acceptable certified calibration shims shall be used by both the coating applicator and the coating inspection agency in order to insure proper and equal calibration. Calibration of dry-film thickness gages shall be maintained throughout the course of the coating work. Method of calibration shall be as agreed to in the site meeting per Section 2.5.b.
- b. Dry-film thickness on nonmagnetic surfaces shall be determined by measuring the quantity of coating material used over a measured surface area. The quantity shall be based on the volume solids content of the coating. A WFT gauge may be used to estimate the applied film thickness but must be used

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 14 of 17

immediately after the coating application. Scratch gauges may also be used.

Frequencies of tests should parallel the guidelines given in SSPC-PA2-73T. DFT tests using the Tooke Gage or other scratch gages should be used only for coating thickness verifications where required.

DCA
1,028
Rev 2

- c. Holidays, skips, and pinholes shall be detected by visual inspection and the use of a holiday detector for the Containment liner. Holidays, skips, and pinholes for other coated areas and/or items shall be visually inspected only. Holiday detectors utilized shall be operated at a voltage that will not destroy the integrity of the coating such that it will not perform to the requirements of ANSI N101.2.
- d. The coating inspection agency shall furnish holiday detectors, scratch gauges, and other special inspection equipment if needed.

DCA
15,721 R.1
Rev 2

6.10 DEVIATIONS AND REMEDIAL ACTIONS

- a. Uncorrected deviations from the Gibbs & Hill Specification 2323-AS-31 or the appropriate governing specification shall be reported by the inspection agency to the Owner or his representative for appropriate action.

b.

1. Corrective remedial action for deviations shall be in accordance with project specifications and/or per agreements reached in the site meeting Section 2.5.b.
2. Major runs and sags that affect coating system performance, as defined by the site meeting per Section 2.5.b, shall not be acceptable. If they do occur, they shall be removed to the bare substrate or to the previously acceptable coat and then the area shall be recoated if necessary to meet the governing specification requirements. Minor runs or sags, as defined, that do not affect film quality and/or coating system performance are acceptable.
3. Skips and damaged areas shall not be acceptable. Acceptance criteria for holidays shall be defined in the Gibbs & Hill Specification 2323-AS-31 for various film

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 15 of 17

thickness, with the requirements of appropriate NACE designations agreed in site meeting per Section 2.5.b. If any of these deviations or any defective work does occur, as detected visually or by a holiday detector, the defective areas shall be removed, by suitable means, to the bare substrate or to the previously acceptable coat and shall then be recoated.

- c. Documentation shall be in accordance with requirements set forth in this Appendix for original work. Forms used for quality assurance documentation shall be submitted to the Owner for review.

7.0 QUALITY ASSURANCE DOCUMENTATION

- a. Sufficient quality assurance records and documents shall be maintained to furnish evidence of compliance with the Quality Assurance Procedure.
- b. Maintenance of Documentation
 - 1. Copies of all Quality Assurance/Quality Control documentation shall be maintained by the Owner as an integral part of the Quality Assurance Program.
 - 2. Each of the other parties to the coating work shall, as directed by the Owner, maintain copies of that portion of the documentation applicable to his respective part of the work. Copies shall be maintained for a minimum of five years after completion of the coating work, unless otherwise directed by the Owner.
- c. Distribution of documentation shall be specified by the Owner and appropriate distribution shall be shown on each form.
- d. To aid in certification of existing protective coatings which do not have complete documentation as required by this specification, the minimum guidelines for adhesion testing on areas as stated above shall be as follows:
 - 1. For large essentially one component equipment or areas with large surface areas such as rooms or liner plate: One test per each 500 square feet of surface area.
 - 2. Supports such as cable tray, conduit pipe, etc.: Test 10 percent of supports considered.

DCA
11,752R.2
12,111R.1

Rev.2

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 16 of 17

3. Miscellaneous and embedded steel: One test in each 500 linear feet.

Areas and/or items which are inaccessible because of installation of permanent items or equipment, and items, due to their size and/or configuration, that will not accommodate an Elcometer adhesion tester, shall not be subject to said adhesion testing.

Areas of failed coating shall be localized and removed. The area shall then be recoated in accordance with the coating manufacturers instructions and governing procedures.

- e. To aid in certification of existing seal or finish coated areas or items which do not have adequate documentation as required by this specification, the minimum guidelines for film thickness measurements shall be as follows:

1. Scratch tests shall be performed by the use of Mark II Tooke inspection gauge or equal.

2. When performing scratch (Tooke gauge) tests on coated steel items, readings of total film thickness shall be compared to readings taken with a calibrated Microtest pull off gauge or equal. The compared readings shall not vary by more than 0.5 mil.

3. Quantity of scratch tests shall be as follows:

- a) Items or areas involving 10 sq. ft. or more in surface area shall have five scratch tests performed, evenly spaced over the given area, on each 100 sq. ft. of affected area. A minimum of five tests shall be performed on the specific area or item.
- b) Items or areas involving less than 10 sq. ft. shall have only sufficient tests performed to substantiate existing coating thickness.
- c) Areas or items which would not be subject to DFT readings with magnetic pull-off gauges, because of geometrical discontinuities or appreciable surface curvature, shall not be subject to scratch testing.
- d) Areas or items which will not accommodate the use of a Tooke Tester, due to installation of equipment or

DCA
11,752R.2
12,111R.1

Rev.2

DCA
12,421R.1

Rev.2

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 17 of 17

the configuration of the item, shall not be subject to said test.

- e) In the event a reading is found outside the procedural acceptable limits, additional readings shall be taken to determine the extent of unacceptable coating thickness.

DCA
12,4,1 Q.1
Rev.2

APPENDIX D

DEFINITION OF DEFECTS

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 1 of 5

DEFINITIONS OF DEFECTS

1. PINHOLES

Appearance: Minor discontinuities in coating which expose primer or substrate. NACE T-6F-3 condition "B" for thick films and condition "C" for thin films

Cause: Improper spray techniques; poor gun adjustment; bubbles blown onto wet coating; gun held too close to surface

Remedy: Brush a coat into the pinholed area. Several passes may be required.

Prevention: Adjust air and pot pressure to optimum spray conditions for each coating. Hold gun 8 to 12 inches from surface for conventional spray; 16 to 24 inches for airless spray

2. BLISTERING

Appearance: Small, swelled areas like bubbles or pimples; can appear weeks after application

Cause: Water, oil, solvent, air, or dirt trapped under surface. Expansion of vapor from trapped material raises blisters.

Remedy: Sand and refinish damaged areas.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 2 of 5

Prevention: Thoroughly clean, treat, and dry surface; keep air lines free of dirt and water; thin coating material properly; allow sufficient time for natural drying between coats (fanning promotes surface drying which can trap moisture).

3. ORANGE PEEL

Appearance: Dents in surface; resembles orange skin. Moderate amount is acceptable.

Cause: Droplets of coating dry before they run together; improper spray gun handling; solvent is too fast; wrong gun adjustment; air temperature too high.

Remedy: Rub smooth with rubbing compound or sand and refinish as necessary.

Prevention: Increase air pressure for air spray; decrease fluid pressure for airless spray; use slower thinner; use gun at proper distance from work.

DCA
162308.1
Rev. 2

4. FISHEYES, POOR WETTING

Appearance: Small openings (fisheyes) in wet film exposing old surface or previous coat.

Cause: Silicone and other surface contaminants that repel coating.

Remedy: Remove coating while still wet, clean surface with solvent and refinish.

Prevention: Properly clean surface; add fisheye preventer if available to coating sprayed over old film containing silicone; keep contaminating waxes, lubricants, and greases from painting area.

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 3 of 5

5. ALLIGATORING

Appearance: Like alligator hide or cracked clay

Cause: Application of a hard coating over a softer coating; continued polymerization and shrinkage of a coating from the interior.

Remedy: Blast off and recoat

Prevention: Select a coating with high adhesion. Never apply hard, tough coating such as an epoxy on softer primers.

6. RUNS

Appearance: Wet coating running down surface in rivulets.

Cause: Too much thinner; extra slow thinner; surface too cold or improperly cleaned; coat is too wet.

Remedy: Remove coating and refinish as necessary.

Prevention: Use specified thinners; thoroughly clean surface to be coated; keep surface to be coated at room temperature; properly adjust gun and hold at proper distance from work.

DCA
16,230 R.1
Rev. 2

7. SAGS

Appearance: Curtains of coating slipping down surface.

Cause: Coating is too heavy; insufficient drying time between coats; insufficient thinner; poor atomization; gun too close to work; gun out of adjustment.

Remedy: Remove coating and refinish as necessary.

DCA
16,230 R.1
Rev. 2

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 4 of 5

Prevention: Adjust air and fluid pressure for air spray; increase fluid pressure or use smaller nozzle for airless spray; properly thin coating; keep gun farther from work.

8. DRY SPRAY

Appearance: Sand-like or dust-like surface texture on the surface, minor amount of adherent dry spray is acceptable on final finish coat.

DCA
19,622 R.O
Rev. 2

Cause: Usually wrong ambient conditions for application, causing premature solvent flash. Atomization air too high. Spray gun held too far from surface being sprayed, not enough thinner. Improper spray techniques.

Remedy: Abrade with a wire screen.

Prevention: Keep atomization air low use 40 psi or less. Keep spray gun within 8" or closer during hot and windy weather. Keep gun parallel to the surface being sprayed.

9. MUDCRACKING

Appearance: Cracks in surface.

Cause: A hard dry skin forms over the softer inner layer which contains trapped solvent.

Remedy: Blast or grind off and recoat.

Prevention: Adjust spraying procedure to allow solvent to flash off from bottom layers. Limit thickness of inorganic zinc to 6 mils DFT

Gibbs & Hill, Inc.
Specification 2323-AS-31
Revision 2
March 15, 1984
Sheet 5 of 5

10. COLOR AND GLOSS NONUNIFORMITY

Appearance: Milky haze or mist in finish.

Cause: Condensation of moisture in wet film due to cooling effect produced by thinner evaporation; incompatible thinner.

Remedy: Recoat using slower drying thinner; eliminate humid conditions and recoat as necessary.

Prevention: Use retarder or slow-dry thinner; do not paint in hot humid atmosphere; keep surface at room temperature; properly adjust gun; avoid fanning with gun.

11. HOLIDAYS

Appearance: A skip, discontinuity or void in a coating film

Cause: Improper spray techniques

Remedy: Brush a coat into the skipped area and feather onto adjacent coating.
See 1. PINHOLES.

Prevention: Check lapping, arcing and triggering of applicator.

12. CONTAINMENT

A foreign substance, inadvertently added to coating or found on a substrate, that adversely affects the application, adhesion, curing and/or subsequent performance of the applied coating. Atmospheric moisture and condensation can be considered to be substrate containments.

DCA
18,632 R.O

Rev. 2

Note: The remedies noted above are only guidelines and shall not be applicable when repair procedures are available from the coating manufacturer.

TIN, FILE, ARMS

COMANCHE PEAK STEAM ELECTRIC STATION ARMS
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATION

(X) (WILL) (WILL NOT) BE INCORPORATED

AUTHORIZATION NO. 1244-REV. 1
DATESAFETY RELATED: ☒ YES ☐ NO

1. DESCRIPTION OF CHANGE/DEVIATION/CONFORMANCE

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 0 4-15-77

** THIS DOCUMENT VOIDS AND SUPERSEDES DC/DDA-1244 Rev. Issue Date

B. DETAILS PROBLEM: The polar crane rail girders were protectively coated, but during rework on the crane rail the coating in several areas has been removed. These areas are: (1) scratches resulting from shifting the crane rail, and (2) original weld areas for the rail clip tie-down brackets which were ground smooth.

SOLUTION: The areas under the crane rail and tie-down brackets do not require protective coating. Damaged areas on the crane girders which will be exposed after assembly will be repaired as required.

2. SUPPORTING DOCUMENTATION

FOR OFFICE USE ONLY
ENGINEERING USE ONLY
RECEIVE
MAR 14 1978
RECEIVE

3. SIGNATURES OBJ/ss 3-10-78

A. APPROVED BY: [Signature] 3-14-78
G&H Representative Date

B. APPROVED BY: [Signature] 3-14-78
Responsible Engineer Date

C. APPROVED BY: [Signature] 3/13/78
Project Engineer or Engineering Supervisor Date

4. STANDARD DISTRIBUTION

TUGCO Site QA (1)	B&R Field (Original) (1)
G&H New York (1)	B&R Site QA (1)
G&H Dallas (1)	

TYP. FILE ARMS.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATIONARMS
NOTED

(XNDD) (WILL NOT) BE INCORPORATED

AUTHORIZATION NO. 1261

SAFETY RELATED: ☒ YES ☐ NO

1. DESCRIPTION OF CHANGE/DEVIAATION/CLARIFICATION

A. APPLICABLE SPEC/ENX/SEEN/ENX 2323-AS-31 0 4-15-77
Rev. Issue Date

B. DETAILS PROBLEM: In the Reactor Buildings, rotofoam was used for the compressible filler between the top of concrete walls and the underside of the floor slab. Does this rotofoam receive protective coating?

SOLUTION: The compressible filler will not be coated.

If, during application of the concrete coating on the ceiling and walls, paint is accidentally placed on the rotofoam, it does not require removal.

FOR OFFICE AND
ENGINEERING USE ONLY
RECEIVE
MAR 09 1978
RECEIVE

2. SUPPORTING DOCUMENTATION

3. SIGNATURES CBJ/ss 3-8-78

A. APPROVED BY: [Signature] 3/8/78
GCM Representative DateB. APPROVED BY: N/A
Responsible Engineer DateC. APPROVED BY: N/A 3-8-78
Project Engineer or Engineering Supervisor Date

4. STANDARD DISTRIBUTION

TUSCO Site QA (1) BSR Field (Original) (1)
GCM New York (1) BSR Site QA (1)
GCM Dallas (1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (XXXXXX) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 1836 Rev. 3

1. SAFETY RELATED DOCUMENT: XX YES NO

2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/EXEMPTIONS: 2523-41-538 2323-AS-31

REV. 4
2

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 1836 REV. 2.

Protective coating requirements for the interior of the elevator enclosures

inside the Reactor Buildings shall be as follows: Concrete Coatings up to elevation 818'-0" shall be per the requirements of AS-31.

Concrete coatings above elevation 818'-0" shall be, as a minimum, a "seal coat" of Mutec 1201 applied under the guidelines of AS-30. Protective Coatings applied to steel surfaces, other than liner plate, shall be applied under the guidelines of AS-30. No topcoat is required over Carbolines inorganic zinc primer.

35-1195
RECEIVED

AUG 02 1984

4. SUPPORTING DOCUMENTATION:

GTN-2318: TWX-1604

DOCUMENT CONTROL

5. APPROVAL SIGNATURES:

MW/db

7-31-84

A. ORIGINATOR:

DATE

7-31-84

B. DESIGN REPRESENTATIVE:

CR Horton

DATE

8-1-84

C. DESIGN REVIEW PRIOR TO ISSUE:

N/A (CR Horton)

DATE

8-1-84

6. STANDARD DISTRIBUTION:

AP'S (ORIGINAL) (2)
QUALITY ENGINEERING (1)
DOTS FOR ORIG. DESIGN (1)Civil Engineering (1)
Design Review (1)

Westinghouse (1)

Site DG (1)

DCA FORM 3-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATION

ARMS
INDEXED

THIS ARMS (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS.

AUTHORIZATION NO. 3372

SAFETY RELATED DOCUMENT: X YES NO

1. DESCRIPTION OF CHANGE/DEVIATION

A. APPLICABLE SPEC/ENCL. 2523-1531 1 3-15-78
Rev. Issue Date

B. DETAILS During painting of frames for the 10 removable block walls in the G-A wall and the wall 11'-6" west of G-A, above elevation 862'-6" in the Auxiliary Bldg paint overspray accumulated on the frame surfaces which will be in contact with the concrete. Nelson studs attached to the frames do not have a coating of paint.
Reference paragraph 1.1.c.12

SOLUTION: Paint on the face of these frames in contact with concrete is not critical; therefore, the frames are acceptable as is.

SUPPORTING DOCUMENTATION

1. SIGNATURES RBW/ss 8-8-78

A. APPROVED BY: [Signature] 8-8-78
G&R Representative DATE

B. APPROVED BY: [Signature] 8-8-78
Responsible Engineer DATE

C. APPROVED BY: NA DATE
Vendor Duly Authorized Representative (Title)

STANDARD DISTRIBUTION

1000 Site QA (1)
GEN New York (1)
GEN Dallas (1)
GEN Field (Original) (1)
GEN Site QA (1)

JOB NO. 85-1195

RECEIVE

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATION

ARMS

INDEXED

SPEC. FILE ARMS, CS
(WILL NOT) BE INCORPORATED
DESIGN DOCUMENTS.

AUTHORIZATION NO. 2293

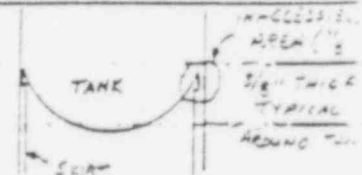
SAFETY RELATED DOCUMENT: ☒ YES ☐ NO

1. DESCRIPTION OF CHANGE/EXPLANATION/CLARIFICATION

A. APPLICABLE SPEC/ENGINEERING 2323-AS-31 1 3-15-78
Rev. Issue Date

B. DETAILS During repair of the coating on the Waste Gas Decay Tanks, tag numbers TBX-GHATCD-001 through -010, an area between the bottom of the tank and the inside surface of the skirt was encountered where the primer could not be repaired. This area varies from 1/8" thick to 3/8" thick. Please advise of the necessary repair work.

SOLUTION: Per Section 1.1.b, paragraph 3, these inaccessible exposed steel surfaces are generally not protectively coated pending review by the field engineer. This equipment has been researched, and the area involved may be primed over the existing substrate condition. The prime coat is intended for sealing purposes only, and will not meet AS-31 protectively coatings requirements.



2. SUPPORTING DOCUMENTATION

FOR OFFICE AND
ENGINEERING USE ONLY

3. SIGNATURES OBJ/ss 8-11-78

A. APPROVED BY: Bennett Jones
GCR Representative

8/11/78
DATE

B. APPROVED BY: N/A
Responsible Engineer

DATE

C. APPROVED BY: N/A
Vendor Duly Authorized Representative
(Title)

DATE

4. STANDARD DISTRIBUTION

PROJECT MGR QA (1)
GEN MGR QA (1)
GEN MGR QA (1)
GEN MGR QA (1)
GEN MGR QA (1)
GEN MGR QA (1)

JOB NO 35-1195
RECEIVED
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATION

SLC FILE ARMS CS
(will) (will not) be INCORPORATED
IN DESIGN DOCUMENTS.

AUTHORIZATION NO. 1336

SAFETY RELATED DOCUMENT: ☒ YES ☐ NO

1. DESCRIPTION OF CHANGE/DEVIATION/EXPLANATION

A. APPLICABLE SPEC/DOCUMENT 1333-AS-31 1 3-15-78
Rev. Issue Date

B. DETAILS Outside the Containment Buildings, request permission to apply specification 1333-AS-30 coatings to electrical cable tray hangers in areas designated as Note 3 rooms per drawings 1333-41-0537 and -0638. As this will consist of approximately seven rooms, the total surface area of coatings affected is minor. This approval would assist the field construction effort by simplifying requirements for larger coatings.

SOLUTION: The change proposed above is acceptable. Specification AS-31

will be revised as follows: "Section 1.1.2.3 - Structural Steel (excluding electrical cable tray hangers located outside the Containment Buildings)." JOB NO. 35-1193

2. SUPPORTING DOCUMENTATION

3. SIGNATURES CBJ/ss 3-11-78

A. APPROVED BY: [Signature] 3-21-78
Gen Representative DATE

B. APPROVED BY: [Signature] 3/21/78
Responsible Engineer DATE

C. APPROVED BY: [Signature] N/A
Vendor Fully Authorized Representative (Title) DATE

4. STANDARD DISTRIBUTION

1000 0100 01
0000 0000 00
0000 0000 00
0000 0000 00
0000 0000 00
0000 0000 00

CONDONCHIE RAIL STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATION

BLG, FILE, ARMS CS
XIII (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS.

AUTHORIZATION NO. 2395

SAFETY RELATED DOCUMENT: X YES NO

1. DESCRIPTION OF ~~CHANGE~~/DEVIATION/CLARIFICATION

A. APPLICABLE SPEC ~~ADDC/DOCUMENT~~ 2323-AS-31 1 5-13-78
Rev. Issue Date

B. DETAILS Request permission to protectively coat the concrete floor in room 62E with white topcoat rather than the light gray topcoat as called for in Appendix "B". This would assist the construction schedule as the light gray concrete coating is not on-site. (Room 62E is in the Safeguard Building #1).

SOLUTION: The proposed deviation in color for the floor in room 62E is acceptable. This elevation 785'-6" floor will be covered at elevation 790'-6" by metal grating, and will not adversely affect the desired aesthetics of the finish schedule.

SUPPORTING DOCUMENTATION

FOR OFFICE AND
ENGINEERING USE ONLY

2. SIGNATURES OBS/sa 8-13-78

A. APPROVED BY: <u>[Signature]</u>	<u>8-23-78</u>
G&R Representative	DATE
B. APPROVED BY: <u>[Signature]</u>	<u>8/23/78</u>
Responsible Engineer	DATE
C. APPROVED BY: <u>N/A</u>	<u> </u>
Vendor Only Authorized Representative	DATE
(Title)	

STANDARD DISTRIBUTION

RUCCO Site QA
G&R New York
G&R Dallas
G&R Seattle (Original)
G&R Site QA

(1)
(1)
(1)
(1)
(1)

JCB NO. 35-1195
RECEIVE
R D
RECEIVED

FILE, ARMS, LEH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE/DESIGN DEVIATION AUTHORIZATIONARMS
INDEXED~~RECEIVED~~ (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS.AUTHORIZATION NO. 2951
DATE 3-15-77SAFETY RELATED DOCUMENT X YES NO1. DESCRIPTION OF CHANGE/DEVIATION/ELABORATIONA. APPLICABLE SPEC/~~REFERENCE~~ 2323-AS-31 1 3-15-77
Rev. Issue DateB. DETAILS The eleven lighting panels located in Reactor Building #1 shown on drawing 2323-EI-0942-02, were received on site and were galvanized. Per drawing 2323-EI-1800, Sheet 111, these panels were to receive special finish, which implies an AS-31 category coating. However, to reblast and repaint the panels would destroy these thin-walled carbon steel panels. Request approval to leave the galvanizing on the panel surface; apply a tie coat of carboline 1037 WP (wash primer) and apply the Phenoline 305 topcoat. The inside mounting surface and all exterior surfaces would be painted in this manner; the inside surface of the panels will be left galvanized.The proposed method of coating the lighting panels is acceptable.2. SUPPORTING DOCUMENTATIONGTT-3064; TWX-10,473

JOB NO. 35-1195

RECEIVED
NOV 12 1978
R D3. SIGNATURES OBJ/ss 11-8-78A. APPROVED BY: [Signature] 11/15/78
G&H Representative DateB. APPROVED BY: [Signature] 11/15/78
Responsible Engineer Date4. STANDARD DISTRIBUTIONTUGCO Site QA (1)
G&H New York (1)
B&R Field (Original) (1)
B&R Site QA (1)

FILE, ARMS, LEH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONARMS
INDEXED~~XXXXXX~~ (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 2988

SAFETY RELATED DOCUMENT X YES NO1. DESCRIPTION: DESIGN CHANGE YES X NOA. APPLICABLE SPEC/~~XXXXXX~~ 2323-AS-311
REV.

B. DETAILS The containment liner located between azimuth 80° and 105° in Containment #2, elevation 819'-6-3/4" thru 860'-0" has been rendered inaccessible to QA final inspection due to setting of a permanent steel form within 4" of the containment liner. The containment liner has received one prime coat of Carbozinc 11 with a 305 topcoat per AS-31. The permanent steel form was coated with two coats of Carbozinc 11.

Documentation of the coating application, in accordance with the requirements of AS-31, behind the steel form has been verified by the QA department. Due to the permanent steel form being secured, the area behind the form, between the liner and form has been declared inaccessible. As permitted by Section

2. SUPPORTING DOCUMENTATION 1.1.b of AS-31, this will advise that the area describe above has been reviewed, and is declared inaccessible. The final inspection on the carbon steel liner area and on the permanent steel form is not required.

3. SIGNATURES: GDM/ss 11-16-78A. APPROVED BY: [Signature]
G&H Representative11-22-78
DateB. APPROVED BY: [Signature]
Responsible Engineer11-16-78
Date4. STANDARD DISTRIBUTION:

B&R Field (Original) (1)
G&H-New York (1)
TUGCO Site QA (1)
B&R Site QA (1)

JOB NO. 35-1195

R E C E I V E
NOV 30 1978
R E C E I V E D

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONARMS
INDEXED(WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. _____

SAFETY RELATED DOCUMENT X YES NO1. DESCRIPTION: DESIGN CHANGEYES X NOA. APPLICABLE SPECIFICATION AS-311
REV.

B. DETAILS Request authorization to delete the protective coating located on the walls and overhead in the electrical chase located east of AS wall, elevation 807', between 1'-3" south of 7 7S to 8-S.

SOLUTION: Due to the possibility of contamination leaking into the electrical chase from 810' elevation, protective coatings shall be applied per AS-31 to the electrical chase floor and six inches up the walls. Coatings shall be applied to the walls and overhead area which come within one foot of the electrical chase hatches on 810'-0" elevation to assure that decontamination.

2. SUPPORTING DOCUMENTATION requirements can be satisfied.3. SIGNATURES: GDM:ss 12-14-78

A. APPROVED BY:

G&H Representative

Date

B. APPROVED BY:

Responsible Engineer

12-14-78
Date4. STANDARD DISTRIBUTION:

B&R Field (Original) (1)
G&H-New York (1)
TUGCO Site QA (1)
B&R Site QA (1)

JOB NO. 35-1195

R E C E I V E
DEC 28 1978
R E C E I V E D

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

NOTED (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 4640, Rev. 1

SAFETY RELATED DOCUMENT YES NO

1. DESCRIPTION

A. APPLICABLE SPEC. TAG/DOCUMENT 2323-AS-31 REV. 1

*THIS DOCUMENT VOIDS AND SUPERCEDES DCA #4640, REV. 0

B. DETAILS In Containment #1 & #2, request authorization to declare the

1/4" carbon steel cavity liner and orifice plate assemblies, elevation 824'-0" - 833'-0", inaccessible.

SOLUTION: Due to the carbon steel cavity liner being placed within 4" of the reactor core insulation, the coating requirements for the liner prior to the initial setting shall be per AS-11 standards and void to QA inspection after placement due to inaccessibility.

The orifice plates, stiffeners, and associated supports from elevation 824'-0-1/2" 829'-9-1/2" shall be coated per AS-21 and will not be subject to final QA (cont. on page 2)

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM:pew 7-2-79

A. APPROVED BY:

GSM Representative

Date

B. APPROVED BY:

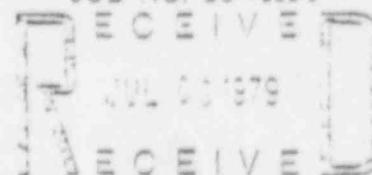
Responsible Engineer

Date

4. STANDARD DISTRIBUTION:

B&R Field (Original) (1)
GSM New York (1)
GSM Dallas (1)
TUGCO Site QA (1)
B&R Site QA (1)
FEDC Site (1)

JOB NO. 35-1195



inspection on coating requirements.

All damaged areas on the cavity liner and orifice plate assemblies which are rendered accessible to brush touch-up shall be recoated and exempt from AS-31 criteria.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(ORDIN) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 4843

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPEC/REQUIREMENT 2323-AS-31 REV. 1

B. DETAILS Inside surfaces of the carbon steel anchor bolt brackets
on the Boric Acid Storage Tanks, as shown on the attached view, are in-
accessible for protective coating application per AS-31 tolerances.SOLUTION: Per Section 1.1b of AS-31, these areas shall be
considered inaccessible; however, in order to prevent corrosion, an attempt
will be made to apply the prime and finish coats per AS-31 requirements.
No QC inspection will be required after application.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 6-5-79

A. APPROVED BY:

GDM Representative

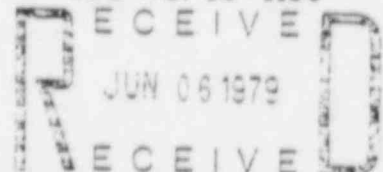
Date

B. APPROVED BY:

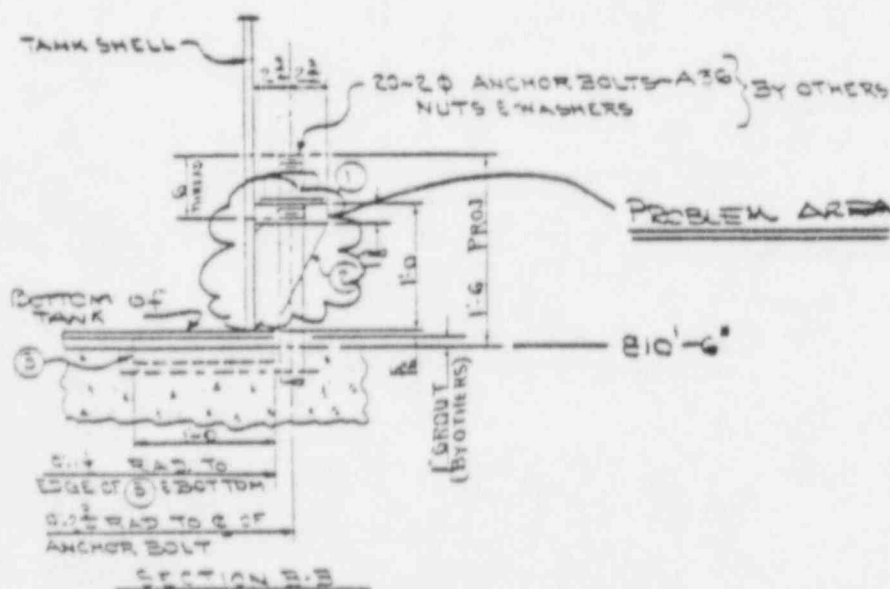
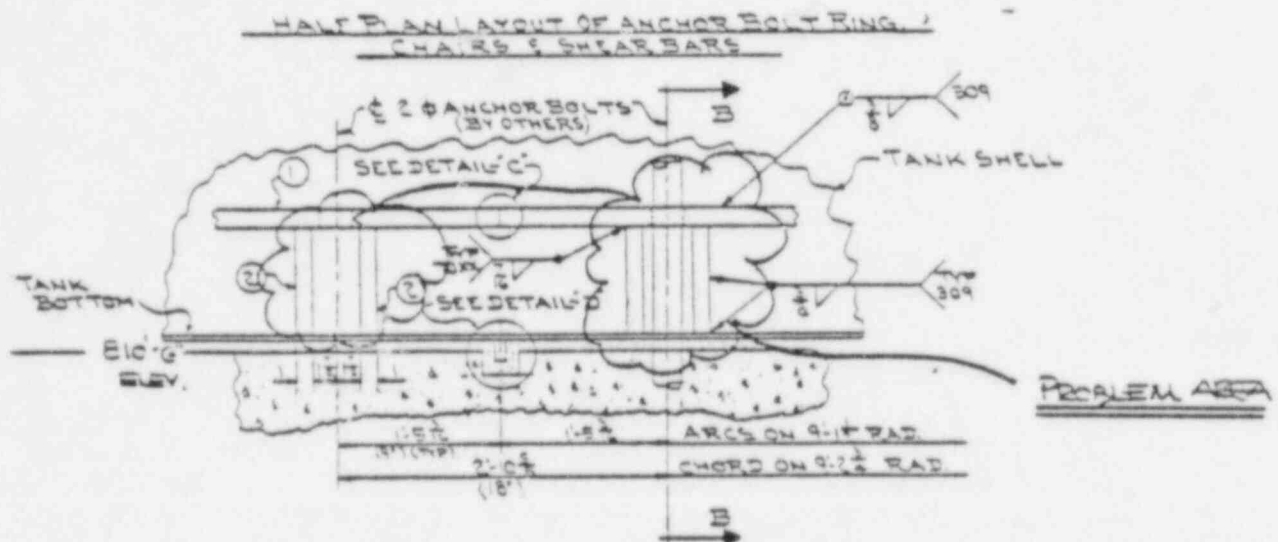
Responsible Engineer

JOB NO. 354195

4. STANDARD DISTRIBUTION:

BGR Field (Original) (1)
GDM New York (1)
GDM Dallas (1)
TUGCO Site CA (1)
BGR Site CA (1)

BORIC ACID STORAGE TANK ANCHOR BOLT RING 810'-0" AUXILIARY BLDG.



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XNDL) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS. 4926, REV. 1

1. SAFETY RELATED DOCUMENT: ☒ YES ☐ NO2. ORIGINATOR: CPPE ☒ ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/REQUIREMENT 223-AS-31 REV. 1

B. DETAILS THIS REVISIONS VOIDS AND SUPERSEDES DCA-4926, REV. 0.

Repainting of the six (6) Pre-Access Air Filtration units exterior surfaces, for Reactor Building # 1 and #2 is required due to an unacceptable vendor coating. During sandblasting the areas listed below cannot be blasted within AS-31 requirements.

(1) Weld imperfections which cause recessed areas and deep pits.

(2) Areas located behind and under the exterior support angle.

(3) Areas at steel joint and intersections where small amounts of vendor coating remains. Request that the above areas be deleted from AS-31 inspection requirements.

SOLUTION: Due to the small amount of area involved the above areas shall be coated without OC inspection, all remaining exterior surface shall remain under AS-31 inspection and coating requirements.

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: MW/psw

6/11/81

A. ORIGINATOR:

DATE

6/11/81

B. DESIGN REPRESENTATIVE:

DATE

6-11-81

6. VENDOR TRANSMITTAL REQUIRED: YES ☐ NO ☒

7. STANDARD DISTRIBUTION:

1-500 (Original)
Quality Engineering
for C. O. Design.

JOB NO. 35-1193

FORM 11-80

RECEIVED
JUN 11 1981
RECEIVED

CONVANCE RIVER STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

AUTHORIZATION NO. 5002

SAFETY RELATED DOCUMENT X YES NO

A. ~~SECRET~~ ~~SECRET~~ ~~SECRET~~ * 2323-AS-31 REV. 1

SOLUTION: Prior to bolting the electrical penetration flanges together, the recessed areas shall be lightly hand sanded and topcoated with Carboline 305. Being that the primer/topcoat system is not a full "Q" system, final inspection will not be required. The exposed exterior electrical penetrations shall be governed by the AS-31 requirement.

FSE-00182

3. SIGNATURES: GDM/ss 6-21-79

Approved by: L. E. Stein Date: 6-21-79

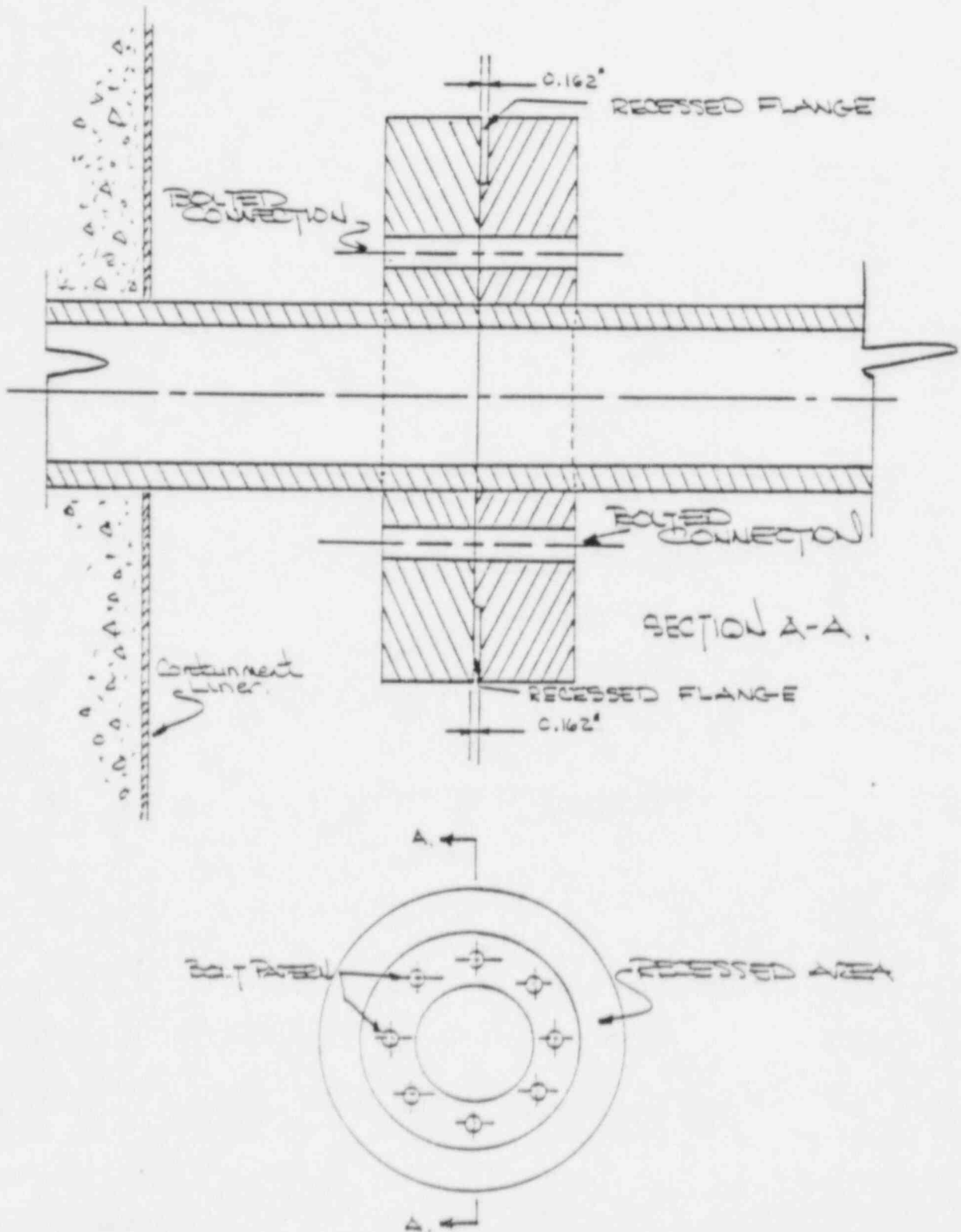
DATE: 10/20/2010 BY: John H. H. H. H. Q-21-F

$$\frac{1}{\omega} \frac{d\omega}{dt} = \frac{1}{\omega} \frac{d}{dt} \left(\frac{2\pi}{\lambda} \right) = \frac{1}{\omega} \frac{d}{dt} \left(\frac{2\pi}{\lambda} \right) = \frac{1}{\omega} \frac{d}{dt} \left(\frac{2\pi}{\lambda} \right) = \frac{1}{\omega} \frac{d}{dt} \left(\frac{2\pi}{\lambda} \right)$$
[illegible]

JCEB NO. 35-1193

RECEIVED
JUN 25 1979
RECEIVED

ELECTRICAL PENETRATION FLANGES, RB#1.2.



spec, file, arms, leh, tugco

CONNACHE PEAK STRAIN ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONXXXXX (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 5092

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION

A. APPLICABLE SPECIFICATIONS

2323-AS-31

REV. 1

B. DETAILS

The equipment hatches located in Reactor Building #1 and #2, centerline elevation 838'-6", have floor grating brackets welded to the interior equipment hatch carbon steel surfaces. The brackets are welded in such a manner that areas exist between the two brackets and in bolt connection holes that cannot be coated per AS-31 standards. Request that these areas be considered inaccessible and void from final QA inspection.

SOLUTION: The solution as stated above is acceptable in deleting the final inspection on coating requirements for the areas indicated.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 7-3-79

A. APPROVED BY:

GDM Representative

Date

B. APPROVED BY:

Responsible Engineer

Date

4. STANDARD DISTRIBUTION:

2323-AS-31 (Original)
GDM New York
GDM Boston
TUGCO site
MOR site
WEC site

JOB NO. 83-1197

RECEIVE

JUL 26 1979

RECEIVE

SPEC, FILE, ARMS, HAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXXX) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 5482

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPEC ~~XXXXXXXXXX~~ 2323-AS-31 REV. 1

B. DETAILS Areas exist on the steel liner behind the Permanent Containment Purge System ductwork from 950'-7" to 1069'-0", Azimuth 67° Reactor Building #1 and #2 which cannot be coated per AS-31 equipments due to removal of the dome stiffener plates by C.B.&I. Request clarification.

SOLUTION: Per Section 1.1b of AS-31, these areas shall be considered inaccessible; however, in order to prevent corrosion, an attempt will be made to repair and apply the prime and finish coats per AS-31 requirements. No QC inspection will be required after application.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 8-27-79

A. APPROVED BY:

GDM Representative

8-27-79
Date

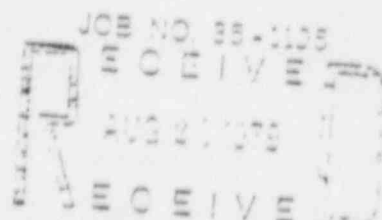
B. APPROVED BY:

Originating Engineer

8/27/79
Date

4. STANDARD DISTRIBUTION:

ESR Field (Original) (1)
GDM New York (1)
GDM Dallas (1)
TUGCO Site CA (1)
FUG site (1)



SPEC, FILE, ARMS, HAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(XXXXX) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENT

AUTHORIZATION NO. 5504

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION

A. APPLICABLE SPEC ~~XXXXXXXXXXXX~~ 2525-AS-31 REV. 1

B. DETAILS Areas exist behind the name plates on the component cooling water drain tanks in Reactor Building #1 and #2, 808'-0" elevation which cannot be coated per AS-31 standards. Request that these areas behind the plates be void to final QA inspection.

SOLUTION: Due to the small area involved (roughly 2" - 4") these areas shall be void to inspection, however, in order to prevent future corrosion, an attempt will be made to apply a prime and finish coat to the above areas.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 8-28-79

A. APPROVED BY:

GDM Representative

8-28-79
Date

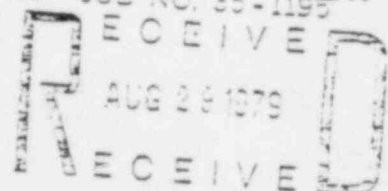
B. APPROVED BY:

Originating Engineer JOB NO. 35-1195

8/28/79
Date

4. STANDARD DISTRIBUTION:

BGR Field (Original) (1)
GEM New York (1)
GEM Dallas (1)
TUGCO Site CA (1)
PSUG Site (1)



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~NOT~~ BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 5510 Rev. 1

1. SAFETY RELATED DOCUMENT: ☒ YES ☐ NO2. ORIGINATOR: CPPE ☒ ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/DOC/DCD NO. 2323-AS-31 REV. Rev. 1

B. DETAILS This revision ~~is~~ and supersedes DCA 5510 Rev. 0.

To allow for increased visibility during construction and operation, request
the following areas be coated with 1201 white rather than 1201 grey:

Auxiliary Building E1. 830' - 6", room 215, 211 and 217, Demineralizer

Pits: Auxiliary Building E1. 852' - 6", room 235 openings to Demineralizer

Pits. room 234 openings to Filter Pits.

Solution: To allow for increased visibility in the listed areas, the
above color deviation is acceptable.

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: MW:smb

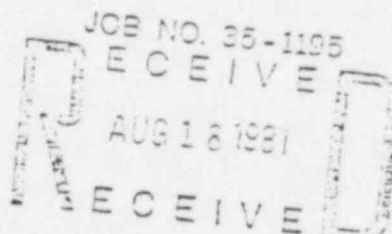
August 17, 1981

A. ORIGINATOR: *T. M. ...* DATE 8/17/81B. DESIGN REPRESENTATIVE: *R. M. ...* DATE 8-17-816. VENDOR TRANSMITTAL REQUIRED: YES ☐ NO ☒

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
TS for Orig. Design. (1)

DCA FORM 11-80



PEC, FILE, ARMS, HAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC PLANT
DESIGN CHANGE AUTHORIZATION(X) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 5975

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPEC/DOC/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS Weld areas exist on the backside of the conduit hangers against the containment liner which cannot be coated under AS-31 requirements. These areas are between Azimuth 280°-284°, elevation 905'-0" to 1006'-0", Reactor Building #1. Request authorization to coat areas under AS-30 condition.

SOLUTION: Due to the small areas involved, these areas will be repaired per AS-30. However, in order to prevent corrosion, an attempt will be made to apply a prime and finish coat to the weld areas.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 10-25-79

A. APPROVED BY:

G&H Representative

10-25-79
Date

B. APPROVED BY:

Originating Engineer

10/25/79
Date

4. STANDARD DISTRIBUTION:

B&R Field (Original) (1)
G&H New York (1)
G&H Dallas (1)
TUGCO Site CA (1)
F&S Site (1)

RECEIVED
OCT 25 1979
RECEIVE

CONVERSE PHASE STREAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXXXX) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 6230

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPECIFICATION 2323-AS-31 REV. 1

B. DETAILS An area exists in Containment Building #1 elevation 880'-885'-6". Azimuth 150° thru 210° in which the liner plate has received damage to the zinc primer in five (5) localized locations. Due to construction of the 885' slab, repair of the damaged primer is not possible due to long cure times involved prior to topcoating which would hold up slab construction. Request that this area be seal coated with topcoat without repair to the damaged primer.

SOLUTION: Upon completion of the 885' slab between Azimuth 150° thru 210° the slab will be within 6" of the liner plate

(CONTINUED ON PAGE 2 of 2)

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 12-6-79

A. APPROVED BY:

R.B. Williams
Gen Representative

12-6-79
Date

B. APPROVED BY:

Gordon MacFarlane
Originating Engineer

12/6/79
Date

4. STANDARD DISTRIBUTION:

DOE Field (Original) (1)
GCH New York (1)
GCH Dallas (1)
TUGCO Site (1)
FSDG Site (1)

causing the steel area behind the slab to be inaccessible to coating and QC inspection per AS-31 requirements. For this reason, it is of greater importance to neglect the minor inorganic zinc repair in order to topcoat the area that will be rendered inaccessible at a later date but maintain decontaminability, due to topcoat application at this time.

spec, file, arms, nah, tugco

CONACHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(THIS WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTSAUTHORIZATION NO. 6236**FOR OFFICE AND
ENGINEERING USE ONLY**SAFETY RELATED DOCUMENT X YES NO1. DESCRIPTION:A. APPLICABLE SPEC/~~XXXXXXXXXX~~ 2523-AS-31 REV. 1

B. DETAILS In the Reactor Building, the Reactor Vessel head bolt racks CPl-FHSESR-01 thru 18 have imperfections in the steel substraight that cannot be blasted out thus violating AS-31 SSPC-SP10 criteria.

SOLUTION: After visual inspection of the eighteen bolt racks for Reactor Building #1, authorization is given deleting these racks from Q inspection but that coating requirements per AS-31 remain.

2. SUPPORTING DOCUMENTATION3. SIGNATURES: GDM/ss 12-6-79

A. APPROVED BY: RB Williams 12-6-79
Genl Representative Date

B. APPROVED BY: Dodon MacHale 12/6/79
Originating engineer Date

4. STANDARD DISTRIBUTION:

BCP Field (Original) (1)
CSH New York (1)
CSH Dallas (1)
TUGCO Site QA (1)
TUGCO Site (1)

RECEIVED
12-6-79
12-6-79
12-6-79

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(X) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 6583

FOR OFFICE AND
ENGINEERING USE ONLY

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPEC, INSTRUCTIONS 2323-AS-31 REV. 1

B. DETAILS Request authorization to topcoat zinc primed embeds in the pipe chase walls, Safeguards #2, elevation 810'-0". Room 82 with Grey #1201 topcoat.

SOLUTION: Southern Imperials #1201 topcoat is recommended over steel with inorganic zinc primer. The proposed change is therefore acceptable as long as adhesion is obtained per AS-31 standards.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 1-3-80

A. APPROVED BY: R. B. Williams 1-3-80
GDM Representative Date

B. APPROVED BY: John Mac Hail 1/3/80
Originating Engineer Date

4. STANDARD DISTRIBUTION:

BGR Field (Original) (1)
GDM New York (1)
GDM Dallas (1)
TUGCO Site QA (1)
FSUG Site (1)

JOB NO. 00-1107
RECEIVE
JAN 03 1980
RECEIVE

PEC, FILE, ARMS, NAE, TUGCO

COMMANCHEE TRAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (XXXXXX) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 6546

FOR OFFICE AND
ENGINEERING USE ONLY

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

1. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD 2323-AS-31 REV. 1

B. DETAILS Request clarification on protective coating criteria for Rooms 263A Fuel Building elevation 832'-0" and Room 255 Auxiliary Building elevation 810'-6".

SOLUTION: Due to the intended design of Room 263A, Spent Fuel Cask area, the room shall be protectively coated full height including the ceiling area. Drawing 2323-A1-0537 will be revised accordingly to incorporate "Note 5".

In Room 255 Auxiliary Building 810'-6" elevation, protective coatings shall be applied full height and carried up the shaft to meet the existing coating requirements called out in Room 233 Auxiliary Building elevation 852'-6", designated in the Room Finish Schedule.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 1-23-80

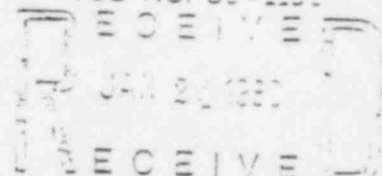
A. APPROVED BY: R.B. Williams 1-23-80
GDM Representative Date

B. APPROVED BY: John Marshall 1/23/80
Originating Engineer Date

4. STANDARD DISTRIBUTION:

BSR Field (Original) (1)
GDM New York (1)
GDM Dallas (1)
TUGCO Site QA (1)
PSUG Site (1)

JOB NO. 05-1101



file, arms, hah, tugco, spec

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 6639

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER

1. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD 2323-AS-31 REV. 1

B. DETAILS In Room 201 of the Fuel Building, areas exist on bolted connections which cannot be coated per AS-31 after erection of the 35 stainless steel storage racks. Request guidance on coating requirements for these bolted areas.

SOLUTION: The six support channels for the storage racks are bolted to the north and south walls with 1-3/8" and 1" diameter bolts with associated nuts and washers. Prior to placement of the 1-3/8" diameter bolts, nuts and washers the assemblies will be sandblasted at the shop and primed per AS-31 requirements. The smaller 1" diameter bolts, nuts and washers will be power tooled per AS-30 and primed with C111 prior to final erection. Once in place both sizes of bolts, nuts and washers will be topcoated with AS-31 coatings and void to final inspection.

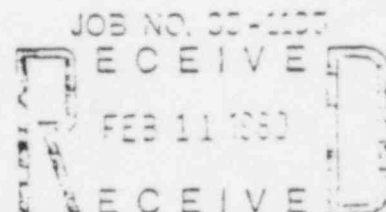
2. SUPPORTING DOCUMENTATION

3. SIGNATURES: GDM/ss 2-7-80

A. APPROVED BY: R. B. Williams 2-7-80
Design Representative DateB. APPROVED BY: Donald W. Pirel 2-7-80
Originator Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)



HAB, TUGCO, SPEC, SPEC

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7318

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER

1. DESCRIPTION

A. APPLICABLE SPEC/DOC/DOCUMENT# 2323-AS-30 2323-AS-31 REV. 0

B. DETAILS In room #51 of Safeguard Building Unit #1, a steel embed exists in the west wall directly behind a piece of electrical equipment that has been set. At the present time the embed has not been coated per AS-31 guidelines as required by the room schedule. Due to limited access, request that this embed be deleted from O coating requirements.

SOLUTION: The steel embed shall be deleted from O inspection per AS-31.

The steel surface shall be prepared per AS-30 and primed with an inorganic zinc, topcoat application shall be that required to protect the primer from contamination as needed.

2. SUPPORTING DOCUMENTATION

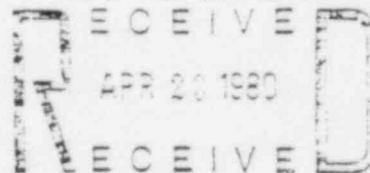
3. SIGNATURES: GDM/dt 4/22/80

A. APPROVED BY: Jerry A. Allen 4/23/80
Design Representative DateB. APPROVED BY: Heidi Madril 4/22/80
Originator Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)

JOB NO. 35-1195



SPEC. HAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(XXXX) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7506

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-30
2323-AS-31 REV. 0
1

B. DETAILS Due to coating requirements in the rooms in which the waste decay tanks are mounted, Aux. Bldg. 352'-6" elevation, the exterior steel surface of the tanks tag # TBX-GHATGD-01 thru 010 shall be coated per AS-31 requirements up 6'-0" from the floor. The tanks above 6'-0" shall be coated under AS-30 guidelines; however, AS-31 coatings and color requirements and primer shall be maintained.

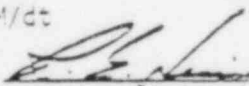
2. SUPPORTING DOCUMENTATION

3. SIGNATURES:

GDM/dt

5/9/88

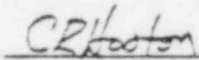
A. APPROVED BY:



Design Representative

5-12-88
Date

B. APPROVED BY:



Originator

5-12-88
Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)

JOB NO. 00-1107
RECEIVED
MAY 11 1988
RECEIVED

spec, hah, tugco

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7769

**FOR OFFICE AND
ENGINEERING USE ONLY**SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPECIFICATION 2323-AS-31 REV. 1

B. DETAILS There are areas in Rooms 268 and 272 of the Fuel Bldg. which require coatings per AS-31. However, due to addition of electrical conduit and HVAC ductwork, these areas are neither coatable nor inspectable.


SOLUTION: Rooms 268 and 272 are Note 1 rooms. As such, AS-31 coatings are required only 6' up on the walls. In cases where HVAC ductwork is in close proximity to the walls, only coat behind the HVAC ductwork approx. 6" with AS-31 coatings. The remainder of the wall behind this ductwork should be considered inaccessible and therefore, not subject to coating. In cases where electrical conduit and equipment adjacent to the walls, coat with AS-31 materials on a "best effort" basis.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JS/dt

6/9/80

A. APPROVED BY:



Design Representative

6/9/80

Date

B. APPROVED BY:



Originator

6/9/80

Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)

JOB NO. 00-100
RECEIVED
JUN 11 1980
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(XXXX) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7789

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS Due to partial inaccessibility of concrete pad under 10 gas decay tanks in Auxiliary Bldg. El. 852'6" this area cannot be prepared and coated or inspected per AS-31 requirements.

SOLUTION: These pad areas, the interior faces of the tank skirts, and the tank bottoms are to be coated with AS-31 materials in accordance with manufacturers written instructions. However, QC final inspection is waived.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JS/dt

6/10/80

A. APPROVED BY:

Design Representative

Date

B. APPROVED BY:

Originator

Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)

JOB NO. 35-1195

RECEIVE

JUN 11 1980

RECEIVE

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(A) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7825

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD AS-31 REV. 1

B. DETAILS The nuts and bolts at the flange connections on, the Spent Fuel Pool Cooling Heat Exchangers, equipment #'s CPX-SFAHSP-01 and 0-2 have not been primed. Due to inaccessibility of some surfaces, surface preparation and coating of these nuts and bolts, per AS-31 is not possible at this time.

SOLUTION: The total surface area in question is relatively small. These nuts and bolts shall be removed from the scope of work of AS-31 and included in AS-30. All surface preparation and coating to be done to AS-30 requirements. Top coat, however, will be that material specified in AS-31 for this area.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JCS/dt

6/16/80

A. APPROVED BY:

Design Representative

16 June 80
Date

B. APPROVED BY:

Originator

16 June 80
Date

4. STANDARD DISTRIBUTION:

APU'S (Original) (1)
Quality Engineering (1)
Original Designer (if CPPE originated) (1)

JOB NO. 35-1195
RECEIVED
JUN 17 1980
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) XXXXXXXX BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 7864

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

a. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

b. DETAILS There exists, areas of steel substrate on the containment side of the Personnel Air-Lock at E1. 832' that are inaccessible for proper surface preparation and coating as required by Spec. AS-31. These areas include the door hinges and areas behind hydraulic and electrical equipment as well as some other small areas which cannot be adequately protected from damage. Request that these areas be deleted from the AS-31 scope of work. SOLUTION: Due to the inaccessibility of these areas for proper surface preparation and coating and due to the high cost of disassembly of the hydraulic and electrical equipment as well as the possible warranty problems arising because of sand or other abrasive materials contaminating and for damaging bearings.

(cont'd on page 2 of 2)

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JDS/dt

6/18/80

a. APPROVED BY:

Design Representative

18 June 80

Date

b. APPROVED BY:

Originator

18 June 80

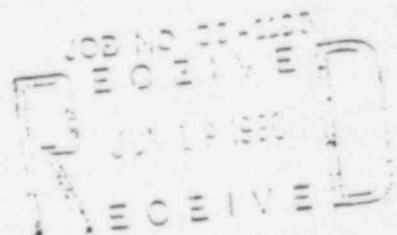
Date

4. STANDARD DISTRIBUTION:

APRIS (Original)

Quality Engineering

Original Designer (if CPPE originated)



and electrical or hydraulic components, approval is hereby granted to remove the inaccessible areas of the Personnel Air-Lock from the requirements of AS-31 per para. 1.1B of AD-31. However, the surfaces in question will be cleaned and coated on a "best effort" basis with AS-31 specified materials. QC to monitor ambient conditions, application procedures, and curing requirements. QC inspection of surface preparation and final acceptance is not required.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (XXXXXX) BE INCORPORATED
IN DESIGN DOCUMENTSAUTHORIZATION NO. 7973 Rev. 1 ☒This revision voids and supersedes all SAFETY RELATED DOCUMENT ☒ YES ☐ NO
DCA 7973 Rev. 0.ORIGINATOR: OPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE Specification 2323-AS-31 REV. 1

B. DETAILS PROBLEM: The 8 fans: CP1-VAFNBL-01, 02, 03 and 04 and CP2-VAFNBL-01, 02, 03 and 04 are not primed in accordance with AS-31. The zinc that has been applied appears to have been applied over an existing paint. (probably a standard shop paint). The zinc is mud-cracking and flaking off. Request permission to coat as follows: 1st remove the loose, flaking and mud cracking zinc. 2nd solvent wipe according to SSPC-SP-1. 3rd apply Mobil Chromox 13-R-50 as a tie primer to permit top coating as required. SOLUTION: The recommended solution is acceptable. Due to the inaccessibility of areas of these blower housings and motor supports, all work done will be on a "best effort" basis and QC final inspection will not be required.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES:

JDS/dt 7/30/80
Civil EngineeringA. APPROVED BY: [Signature] Design Representative 7/30/80
DateB. APPROVED BY: [Signature] Originator 7/30/80
Date

4. STANDARD DISTRIBUTION:

2XMS (Original) (1)
Quality Engineering (1)
Technical Services for Original Designer (if OPPE originated)

JOS NO. 35-1195

RECEIVE

AUG 04 1980

RECEIVE

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONCHANGE INDEX: OEI _____
: II _____
: III XX _____

(WILL) (WILL/NOT) BE INCORPORATED IN DESIGN DOCUMENT DCA NO. 8115 Rev. 2

1. SAFETY RELATED DOCUMENT: XX YES _____ NO _____

2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER _____

3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA-8115 Rev. 1.

PROBLEM: There exists several areas in Reactor Building #1 and #2 that are inaccessible for coating and inspection per AS-31 requirements. These areas include concrete faces and liner plate and are as follows:

- 1) The concrete faces of the elevator housing and adjacent liner plate.
- 2) The face of columns 15, 16, 2, 1, and 3 adjacent to the liner plate and the liner plate @ EL. 851' and above.

SOLUTION: Prepare and coat these areas on a "best effort" basis with materials specified in AS-31. Final OC inspection shall not be required.

4. SUPPORTING DOCUMENTATION:

35-1195
RECEIVED

SEP 08 1983

5. APPROVAL SIGNATURES: TK/sgr

DOCUMENT CONTROL

9-7-83

A. ORIGINATOR: *TK/sgr* DATE 9/5/83B. DESIGN REPRESENTATIVE: *CR Hooten* DATE 9/8/83

6. VENDOR TRANSMITTAL REQUIRED: YES _____ NO _____ XX _____

7. STANDARD DISTRIBUTION:

APMS (Original)
Quality Engineering
TS for Orig. Design
Westinghouse-Site

(1) Peter Bush-OA Spec. Spvr. (1) DCA FORM 11-80
(1) Civil Engineering (1) Admin. Rev 7-82
(1)
(1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~CHANGES~~ BE INCORPORATED
IN DESIGN DOCUMENTSAUTHORIZATION NO. 8150SAFETY RELATED DOCUMENT ☒ YES ☐ NO
ORIGINAL DESIGNER ☒ ORIGINAL DESIGNER

1. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD 2323-AS-31 REV. 1B. DETAILS In room #249 3 El. 820' east wall and Rm #261 El. 824' west and south wall, there are areas that cannot be coated to AS-31 requirements because conduit and other electrical equipment renders portions of these walls inaccessible for coating and inspection.SOLUTION: The areas in question will be cleaned and coated using AS-31 materials. This work will be done on a "best effort" basis and final QC inspection shall not be required.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JDS/dt 7/25/80

A. APPROVED BY: [Signature] 25 JUL 80
Design Representative DateB. APPROVED BY: [Signature] 25 JUL 80
Originator Date

4. STANDARD DISTRIBUTION:

(1)
Quality Engineering (1)
Issued: 1 copy for Original Designer (if DPE originated)

JOB NO. 03-1108

RECEIVED

JUL 26 1980

RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTSAUTHORIZATION NO. 8189SAFETY RELATED DOCUMENT X YES NOORIGINATOR: CPPE X ORIGINAL DESIGNER 1. DESCRIPTION:A. APPLICABLE SPEC/~~XXXXXXXXXX~~ 2323-AS-31 REV. 1

B. DETAILS On elevation 810' in Safeguards 1 there are two equipment stands for TBX-GHREEL-01 that have been installed prior to coating the floor. Also, there are inaccessible areas on the stands themselves. SOLUTION: Coat the areas that are inaccessible on a "best effort" basis using AS-31 specified coatings. No final QC inspection shall be required.

**FOR OFFICE AND
ENGINEERING USE ONLY**

2. SUPPORTING DOCUMENTATION3. SIGNATURES: JDC/dt 7/31/80

A. APPROVED BY: *James A. Allen* 31 JUL 80
Design Representative Date

B. APPROVED BY: *[Signature]* 31 JUL 80
Originator Date

4. STANDARD DISTRIBUTION:

SPMS (Original)
Civil Engineering
Technical Services for Original Designer (if CPPE originated)

JOB NO. 00-1107

RECEIVED

RECEIVED

RECEIVED

RAE, TUGOO, SPEC

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONCHANGES (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 8232

SAFETY RELATED DOCUMENT ☒ YES ☐ NOORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD/REVISION 2223-AS-31 REV. 1

B. DETAILS In Reactor Building #1 some Carboline Phenoline 305 color #0800 was inadvertently applied to the liner. Phenoline 305 color #0800 should have been applied. The shade difference is minor. The affected areas are as follows:
 (1) E1 + 988' Az 30°-35°; Az 45°-50°; Az 60°-65° and Az 85°-90° (2) E1, +995' -- 1005' Az 235°-245°.

SOLUTION: The material applied is acceptable.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: JDS/dt

8/5/80

A. APPROVED BY:

Design Representative

8/5/80
Date

B. APPROVED BY:

Originator

8/5/80
Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
 Quality Engineering (1)
 Technical Services for Original Designer (if CPPE originated)

JOB NO. 35-1195

RECEIVED

AUG 07 1980

RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 8484

SAFETY RELATED DOCUMENT XX YES NOORIGINATOR: CPPE XX ORIGINAL DESIGNER

1. DESCRIPTION:

A. APPLICABLE SPEC/REFERENCE 2323-AS-31 REV. 1

B. DETAILS The Analyzer and Sample Conditioning Panel, CP1-SSPAS-01 located in room 115 of the Auxiliary Building has been set prior to protectively coating the floor. Sufficient clearance does not exist to permit application of protective coating per AS-31 guidelines. Solution: The area beneath the equipment shall be coated with 1201 only. This application will not be inspected on a "0" basis.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: DGS/dt 9/23/80

A. APPROVED BY: Richard M. Kiser
Design Representative9-23-80
DateB. APPROVED BY: D. A. Sutto
Originator9/23/80
Date

4. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
Technical Services for Original Designer (if CPPE originated) (1)

JOB NO. 05-1195

RECEIVE

SEP 25 1980

RECEIVE

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 8616

SAFETY RELATED DOCUMENT XX YES NOORIGINATOR: CPPE XX ORIGINAL DESIGNER

1. DESCRIPTION:

A. APPLICABLE DRAINAGE/REPAIRMENT 2323-AS-31 REV. 1B. DETAILS Due to surface preparation methods employed under AS-31 requirements,
extensive damage may result to internal components of the main electrical terminal
box in crane #TBC-SHS-CMC-01.SOLUTION: Surface preparation shall be under AS-30 requirements, however AS-31
coatings will be used. O.C. inspection will not be necessary.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: MW/dt

9/26/80

A. APPROVED BY:

Richard M. Kissner
Design Representative9-29-80
Date

B. APPROVED BY:

Mark Wells
Originator9/29/80
Date

4. STANDARD DISTRIBUTION:

ARMS (Original)

Quality Engineering

Technical Services for Original Designer (if CPPE originates)

JOB NO. 35-1195

RECEIVED
OCT 01 1980
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 8640

SAFETY RELATED DOCUMENT XX YES NOORIGINATOR: CPPE XX ORIGINAL DESIGNER

1. DESCRIPTION:

A. APPLICABLE SPEC/UNEXCESSARY 232-AS-31 REV. 1

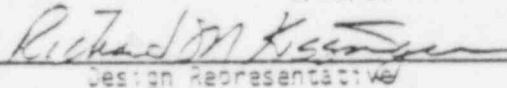
B. DETAILS In R81, below the pressurizer tank at AZ 45⁰ E1 254', there are twelve open eyebolts welded to the reinforcement sleeve. Due to the close proximity of the Pressurizer Immersion Heater Terminals and the size of the eyebolts, request coating under AS-31 requirements be removed. SOLUTION: The twelve eyebolts shall be deleted from AS-31 requirements and placed under AS-30 requirements, however AS-31 coatings shall be used.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: MW/dt

9/30/80

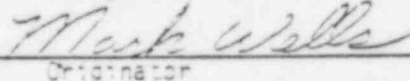
A. APPROVED BY:



Design Representative

9-30-80
Date

B. APPROVED BY:



Originator

9/30/80
Date

4. STANDARD DISTRIBUTION:

ARMS (Original)

(1)

Quality Engineering

(1)

Technical Services for Original Designer (if CPPE originates)

JOB NO. 35-1195

RECEIVED

OCT 01 1980

RECEIVED

FOR OFFICE AND
ENGINEERING USE ONLY

FIGURE 1.

Page 1 of 1

SPEC, RAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

XXXXXX (WILL NOT) BE INCORPORATED
IN DESIGN DOCUMENTS

AUTHORIZATION NO. 8685

SAFETY RELATED DOCUMENT ☒ YES ☐ NO

ORIGINATOR: CPPE ☒ ORIGINAL DESIGNER ☐

1. DESCRIPTION:

A. APPLICABLE SPEC/~~XXXXXXXXXX~~ 2323-AS-31 REV. 1

B. DETAILS On E1, 808' RBI there are two sections of HVAC duct, #CPES-1-7 and
SSD-15-CRCS-1-12, that are embedded in concrete. Some areas above, beside, and
behind the duct have less than 6" working clearance. Request that these areas be
deleted from the scope of AS-31. SOLUTION: The areas shall be coated under AS-30
guidelines using coatings specified in AS-31 for that area. QC Inspection will not
be necessary.

2. SUPPORTING DOCUMENTATION

3. SIGNATURES: MW/dt

10/8/80

A. APPROVED BY: Richard M. K... 10-8-80
Design Representative Date

B. APPROVED BY: Mark Wells 10-8-80
Originator Date

4. STANDARD DISTRIBUTION:

IRMS (Original)
Quality Engineering
Technical Services for Original Designer (if CPPE originated)

JCB NO. 35-1103
RECEIVED
OCT 09 1980
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXX) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 9045

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS In RBI at el. 828' - 832', there are two areas that have limited work clearance between HVAC duct and concrete, preventing surface preparation and coating of the concrete under AS31 guidelines. Areas are on the column side and behind duct #RMD1, joints 15 and 16 at 126°; behind duct #SMD2, joints 15, 16, and 17 at 180°. Solution: the two areas shall be deleted from coating and inspections under AS-31 criteria. However, the areas shall be cleaned and coated using AS-31 coatings under AS30 guidelines.

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: Mw/bgf 11-11-80

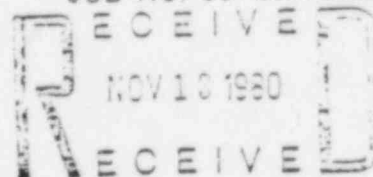
A. ORIGINATOR: Mark Weller DATE 11/11/80B. DESIGN REPRESENTATIVE: R.M. Kissinger DATE 11/12/80

6. VENDOR ACTION: REQUIRED N/A

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
 Quality Engineering (1)
 TS for Orig. Design. (1)

JOB NO. 00-110-DCA FORM 10-80



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXXXX (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 9430

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER 1
3. DESCRIPTION:

A. APPLICABLE SPEC/ENGINEERING 2323-AS-31 REV. 1

B. DETAILS On E1. 810'-6", 831'-6", and E1. 852'-6" of Auxiliary Building,
there are ventilation openings that cannot be coated to AS-31 requirements per paragraph
1.1B. Request that openings at the following locations be deleted from AS-31 requirements

1) E1. 810'-6" 2' W. of FA X 2' S of 6A

2) E1. 610'-6" 2' W of FA X 9' S of 6A

3) E1. 831'-6" 2' W of FA X 2' S of 6A

4) E1. 831'-6" 1' W of FA X 9' S of 6A

5) E1. 852'-6" 4' W of FA X 10' S of 6A

6) E1. 852'-6" 4' W of FA X 5' S of 5A

SOLUTION: Due to the close proximity of the HVAC duct through these openings,
the openings shall be coated on a best effort basis under AS-30 guidelines.

SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: MW/bgf 1-8-81
- A. ORIGINATOR: Mark Wells DATE 1/8/81
- B. DESIGN REPRESENTATIVE: RM Heston DATE 1-8-81
6. VENDOR TRANSMITTAL REQUIRED: YES NO XX
7. STANDARD DISTRIBUTION: DCA FORM 11-80

ARMS (Original) (1)
Quality Engineering (1)
To For Orig. Design. (1)

JOB NO. 03-1107
RECEIVE
JAN 08 1981
RECEIVE

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(X) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 9642 Rev. 1

1. SAFETY RELATED DOCUMENT: YY YES NO NO2. ORIGINATOR: CPPE YY ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/ONG/DOCUMENT

REV. 1

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 9642 REV. 0.

In RBL, problems exist with coating the support frames for lighting fixtures which are attached to the polar crane support brackets. These brackets have a "Q" shop coat of primer which was applied before installation. However, HVAC duct work was installed in close proximity to the above support frames rendering all but the top portion of many inaccessible for finish coat per AS-31 requirements. Request that all but the top two feet of the following hangers be coated under AS-30 guidelines:

Hanger E7886, E7887, E7898, E789, E7890, E7891, E7892

SOLUTION: On the above listed hangers, only the top two feet shall be subject to AS-31 guidelines. The remainder of the hanger shall be coated under AS-30 guidelines utilizing AS-31 specified coatings.

4. SUPPORTING DOCUMENTATION:

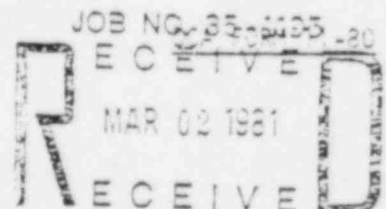
5. APPROVAL SIGNATURES: W:jb

February 24, 1981

A. ORIGINATOR: [Signature]DATE 2-24-81B. DESIGN REPRESENTATIVE: [Signature]DATE 2-25-816. VENDOR TRANSMITTAL REQUIRED: YES NO YY

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
TS for Orig. Design. (1)



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(X) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 9883

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/~~XXXXXXXXXX~~

2323-MS-44B

2323-AS-31

REV. 3
1B. DETAILS The leak chase system in Reactor Bldg. #1 & #2 have 1/4" Ø and 1/2" Øschedule 80 piping stubups approximately 4" to 8" above the el. 808'-0" floor slab.Due to the small diameter of the piping, reducers, nipples, ells, plugs & couplingsused in the assembly of the test plug apparatus, the system cannot be inspected perthe requirements of specification AS-31 or ANSI N5.12 and N101.2. Therefore, thissystem will be painted per specification 2323-AS-30 requirements, but will be coatedwith AS-31 material. The leak chase system is shown on dwg. 2323-M1-0512-01 and-M2-0512-01 (Sections E-E & F-F); -M1-0512-02 & -M2-0512-02 (Section D-D);-M1-0512-02 & -M2-0512-02 (Sect. B-B); 2323-S1-0512 & -S2-0512 (Sect. 6-6).

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: OBJ/bgf 3-27-81

A. ORIGINATOR: O. B. JonesDATE 3/27/81B. DESIGN REPRESENTATIVE: [Signature]DATE 3-27-816. VENDOR TRANSMITTAL REQUIRED: YES NO X

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
TS for Orig. Design. (1)

JOB NO. 352CA:532M 11-80

RECEIVED
MAR 27 1981
RECEIVED

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXXX) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 10,364

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/REQUIREMENT 2323-AS-31 REV. 1B. DETAILS Areas located on the lower portion of the Emergency Air Lock inContainment I and II are inaccessible for coating in accordance with the abovespecification. Request that the areas under question be removed from AS-31requirements. Sol: The shaded areas shown in Section A. and B. of Page 2 of thisDocument shall be coated under AS-30 guidelines, however, AS-31 coating shall be usedFOR OFFICE AND
ENGINEERING USE ONLY

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: MW/psw

6/4/81

A. ORIGINATOR: Mark Wells

DATE

6-1-81B. DESIGN REPRESENTATIVE: RM Keesen

DATE

6-4-816. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

DCA FORM 11-80

ARMS (Original) (1)
Quality Engineering (1)
TS for Orig. Design. (1)

JOB NO. 35-1195

RECEIVED
JUN 05 1981
RECEIVED

EMERGENCY
AIR LOCK

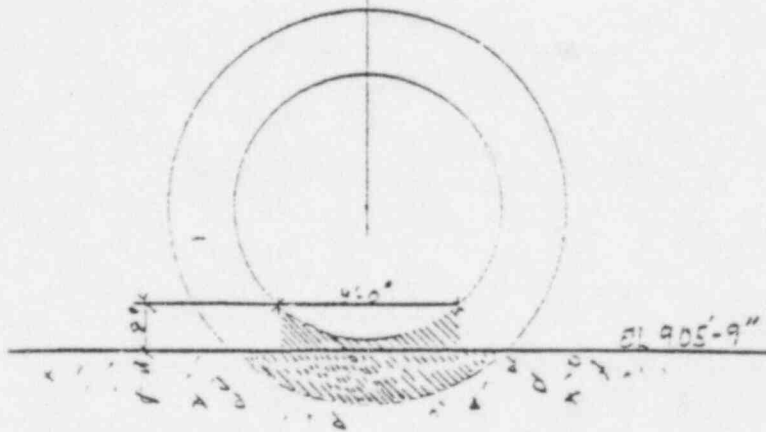
EL 99'-0"

EL 90'-9"

liner

SECTION A

±150° RBE
±30° RBE



EMERGENCY AIR LOCK
SECTION B

Brown & Root Inc.

HOUSTON, TEXAS



CONT. NO.

35-1195

TITLE

OWNER

TEXAS UTILITIES SERVICES

LOCATION OF PROJECT

G. P. S. E. S.

GLEN P.

E. TEXAS

DWG. NO.

DCA-10,364

PAGE 2 of 2

DRAWN BY

CHECKED

APPROVED

DATE

SHT. /

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~XXXXXX~~ BE INCORPORATED IN DESIGN DOCUMENTSDCA NO. 10,782 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA-10,782 Rev. 0.

In RSI #2 the Containment Sump Pump Housings were not vendor coated with a coating which meets ANSI 101-2 criteria. Due to the limited area of coating and the impracticability of disassembly, request the pumps be coated under AS30 requirements.

Solution: The exposed carbon steel surfaces of the subject pumps shall be coated under AS30 requirements; however, a minimum of 1 mil profile shall be obtained and coatings used shall be AS31 specified coatings. This document affects the following Pumps (1) CP1-WPAPCS-01 (2) CP1-WPAPCS-02 (3) CP1-WPAPCS-03 (4) CP1-WPAPCS-04 (5) CP1-WPAPRS-01 (6) CP1-WPAPRS-02 (7) CP2-WPAPCS-1 (8) CP2-WPAPCS-2 (9) CP2-WPAPCS-3 (10) CP2-WPAPCS-4 (11) CP2-WPAPRS-02 (12) CP2-WPAPRS-01

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES: MW/sgf

5-12-82

A. ORIGINATOR: MMDATE 5-12-82B. DESIGN REPRESENTATIVE: RMDATE 5-13-826. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

DCA FORM 11-81

1. SPEC (2.000.001)
2. SPEC (2.000.001)
3. SPEC (2.000.001)
4. SPEC (2.000.001)
5. SPEC (2.000.001)
6. SPEC (2.000.001)
7. SPEC (2.000.001)
8. SPEC (2.000.001)
9. SPEC (2.000.001)
10. SPEC (2.000.001)

JOB NO. 35-1195
RECEIVED
MAY 13 1982
RECEIVED

COMANCHE PEAK STEAM ELECT. CO. STATION
DESIGN CHANGE AUTHORIZATION

(XXX) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 10,786

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/STANDARD 2320-AS-01 REV. 1B. DETAILS In Reactor I there are three pipe hangers which are located partially behind HVAC Ductwork rendering them partially inaccessible per section 1.1b of the above specification. The hangers are as follows: VA-1-005-027-C82R,VA-1-005-025-C82R, VA-1-005-024-C82R, and at elevation 912, 922 and 931 respectively.Request the inaccessible areas be coated on a best effort basis under AS-30.Sol: The inaccessible areas, shown as shaded areas on attached drawing, shall be removed from AS-31 coating and inspection requirements and coated on a best effort basis. All remaining portions shall be coated under full AS-31 requirements.

4. SUPPORTING DOCUMENTATION: MW:kss

FOR OFFICE AND
ENGINEERING USE ONLY
8-12-81

5. APPROVAL SIGNATURES:

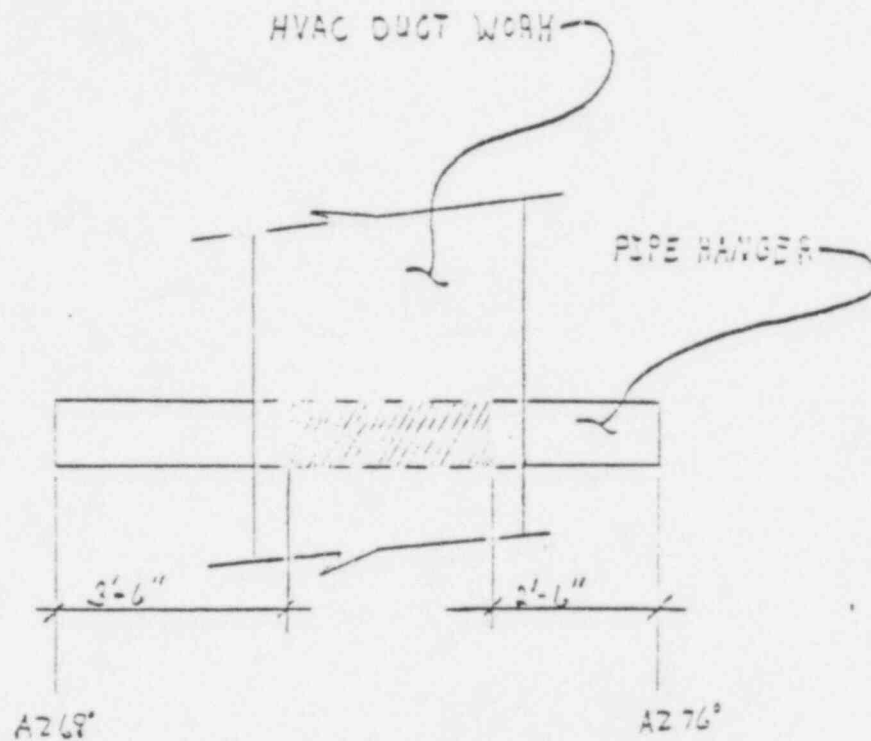
A. ORIGINATOR: [Signature] DATE 8/12/81B. DESIGN REPRESENTATIVE: [Signature] DATE 8/18/816. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

DCA FORM 11-80

RMS (Original)
Quality Engineering
for Orig. Design.JOB NO. 35-1195
RECEIVED
AUG 16 1981
RECEIVED

Page 2
 OCT 10, 1980



HANGER * VAH-005-027-C82R	EL 912'
HANGER * VAH-005-028-C82R	EL 922'
HANGER * YAH-005-024-C82R	EL 931'

Brown & Root Inc.

HOUSTON, TEXAS



CONT. NO.
 00.1100

TITLE _____
 OWNER TEXAS UTILITIES SERVICES INC.
 LOCATION OF PROJECT C.P.S.E.S. CLEVELAND TEXAS

DWG NO.

DRAWN BY	CHECKED	APPROVED	DATE	SHT
----------	---------	----------	------	-----

SPEC, HAH, TUGCO

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION~~XXXXXX~~ (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENTS

DCA NO. 11,016

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/~~XXXXXX~~ 2323-AS-31 REV. 1

B. DETAILS In Containment Building 1, Room 153, the sump pit which contains the reactor cavity sump pumps was inadvertently topcoated without inspection as required by Appendix C Section 6.7C of the above referenced specification. The Nutec 11S, to which the Reactic 1201 topcoat was applied, was inspected and applied on 8/10/81. On 8/11/81, approximately 32 hours following application of the 11S, the sump pit was coated utilizing a portion of the 1201 topcoat which was mixed for the containment sump drains on el. 810'. Material used was Batch #2879-E042 for Base; Batch #2880-E042 for Cure; and Batch #2450-H212 for thinner. Inspection of each previously applied coating, prior to topcoating, is for detection of contaminants and deleterious substrates which could affect the adhesion and performance of the topcoat. Adhesion testing was requested by site engineering and performed by site P.C.C.C. personnel. The test yielded no coating failure with glue

4. SUPPORTING DOCUMENTATION:
- FOR OFFICE USE ONLY

5. APPROVAL SIGNATURES: MW/psw

9-15-81

A. ORIGINATOR: V. J. [Signature] DATE 9-15-81B. DESIGN REPRESENTATIVE: [Signature] DATE 9-15-81

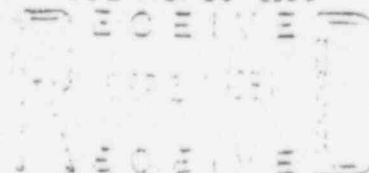
6. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
To for Orig. Design. (1)

JOB NO. 03-1107

DCA FORM 11-80



9-15-81

failing at 200 to 700 PSI with an average of 500 PSI. Request the requirement for substrate inspection, by P.C.Q.C., prior to topcoating be waived for the Reactor 1 sump pit located in Room 153.

Solution: Due to the results of the adhesion testing, and the acceptable general appearance of the coating, the substrate inspection prior to topcoating shall be waived; however all other inspections and documentation requirements shall remain for the subject sump.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONCHANGE INDEX: CEI
: II
: III XX

(WILL) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT DCA NO. 12,145 Rev. 3

1. SAFETY RELATED DOCUMENT: XX YES NO

2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA-12,145 Rev. 1.

Clarification is requested on acceptable coating thickness of coatings when performing "backfit" inspections on areas with discrepant or lack of documentation. SOLUTION: When inspections are performed in accordance with established backfit inspection procedures, acceptable primer thickness shall be .0015 in. to .007 in.. No minimum topcoat thickness shall be specified however, the topcoat shall provide full "hiding" properties of the primer. Maximum combined thickness of primer and topcoat average shall be .013 in. with maximum spot check of .015 in..

35 1195
RECEIVED

4. SUPPORTING DOCUMENTATION:

AUG 18 1983

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/sgr

8-18-83

A. ORIGINATOR:

DATE 8-18-83

B. DESIGN REPRESENTATIVE:

DATE 8-18-83

6. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

APMS (Original)
Quality Engineering
TS for Orig. Design
Westinghouse-Site

(1) Peter Bush-QA Spec. Spvr.	(1) DCA FORM 11-80
(1) Civil Engineering	(1) Admin. Rev 7-83
(1)	
(1)	

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATIONCHANGE INDEX:CEI _____
: II _____
:III XX(WILL) ~~(WILL)~~ BE INCORPORATED IN DESIGN DOCUMENT DCA NO. 14,737

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER _____
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 1

B. DETAILS When brush repairing pinholes with NUTEC 1201 topcoat, often the brushed area does not have the gloss which the surrounding coating has. Request clarification of the acceptability of touch up areas which exhibit little or no gloss. Solution: NUTEC 1201 topcoat is a low sheen topcoat, when brush applied, 1201 will often dry to a flat finish.

For decontamination purpose, 1201 replace "a coating" is not required to have gloss surface but should be smooth and continuous, therefore, for small repair areas such as for pinholes, gloss and gloss uniformity is not required provided the coating is smooth and continuous.

4. SUPPORTING DOCUMENTATION:

JOB NO. 35-1195

RECEIVE

OCT 13 1982

RECEIVE

5. APPROVAL SIGNATURES: MW/sgf

10-13-82

A. ORIGINATOR: Mark WellsDATE 10-13-82B. DESIGN REPRESENTATIVE: CR HootenDATE 10-13-82

6. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

ARMS (Original) (1)
Quality Engineering (1)
TS for Orig. Design (1)
Westinghouse-Site (1)
Civil Engineering (1)

DCI FORM 11-80
Admin. Rev 7-82

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~XXXXXX~~ BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 16,106 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO

GIBBS & HILL, INC.

2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT XXXXXXXXXXXX 2323-AS-31

APR 04 1984

REV. 2

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 16,106 Rev. 0.

In Containment structures various tube steel supports which do not have end

caps, have coating on interior which has been applied without QC inspection and possibly over rusted steel. Request clarification on this item.

SOLUTION: If coating failed from these areas it would do so in a sporadic manner and involve only minute amounts of coatings. Gross coating failure causing clogging of the Containment spray pumps from these areas is not likely. Coatings extending into open tube steel members resulting from spray operations performed on the ends & exterior of the member is acceptable.

FOR OFFICE USE ONLY

35-1195

RECEIVED

APR 03 1984

GIBBS & HILL, INC.

APR 04 1984

4. SUPPORTING DOCUMENTATION: DOCUMENT CONTROL

Protective Coating Exempt Log Item #32 for Unit 1

5. APPROVAL SIGNATURES: MW/bb

4-2-84

A. ORIGINATOR: Mark Welch

DATE

4-2-84

B. DESIGN REPRESENTATIVE: EPH

DATE

4-3-84

C. DESIGN REVIEW PRIOR TO ISSUE: P. J. Shon

DATE

4/4/84

6. VENDOR RELATED CHANGE: XX NO YES: P. O. NUMBER:

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL) (1)
 QUALITY ENGINEERING (1)
 OCTG FOR ORIG. DESIGN (1)
 WESTINGHOUSE (1)

Mark Welch-OA (1)
 Civil Engineering (1)
 Design Review (1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

CHANGE INDEX: OET
: II
: III AA

(WILL) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT DCA NO. 18,177

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/ENG DOCUMENT 2323-AS-31 REV. 1

B. DETAILS Clarification is requested for painting requirements of the Pneumatic cylinders for apposed blade HVAC dampers in Reactor Building #1 and 2.

SOLUTION: The above cylinders shall be coated under AS-31 requirements except for areas 1/2" from exposed gasket or seal materials and 1/2" around the perimeter of penetrating components including the penetrating component itself.

FOR OFFICE USE
35-1195
RECEIVED
JUL 21 1983

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: Mw/sgn

7-20-83

A. ORIGINATOR: *M. W. S. G. N.* DATE 7-2-83

B. DESIGN REPRESENTATIVE: *C. R. H. S. T. N.* DATE 7-20-83

6. VENDOR TRANSMITTAL REQUIRED: YES NO XX

7. STANDARD DISTRIBUTION:

APMS (Original)
Quality Engineering
TS for Orig. Design
Westinghouse-File

(1) Peter Bush-OA Spec. Sgvr. (1) DCA FORM 11-80
(1) Civil Engineering (1) Admin. Rev 7-82
(1)
(1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION~~XXXXXX~~ (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 18,869

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/STANDARD 2323-AS-31 REV. 1B. DETAILS Protective Coating on some pipe hangers was burnt ordiscolored during Hot Functional Testing.The areas of coating burnt or discolored during Hot FunctionalTesting need not be repaired and is acceptable.35-1195
RECEIVED

4. SUPPORTING DOCUMENTATION:

OCT 04 1983

DOCUMENT CONTROL

5. APPROVAL SIGNATURES:

10-3-83

A. ORIGINATOR: [Signature]DATE 10/3/83B. DESIGN REPRESENTATIVE: CR HortonDATE 10/4/83C. DESIGN REVIEW PRIOR TO ISSUE: ~ N/A ~DATE 6. VENDOR RELATED CHANGE XX NO YES: P.O. NUMBER

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL)

(1) Mark Welch-OA Spec. Sovr. (1)

QUALITY ENGINEERING

(1) Civil Engineering (1)

DCTG FOR ORIG. DESIGN

(1)

RECEIVED

NOV 08 1983

HIBBS & HILL, Inc.

PAGE 1 OF 2

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(XXXX) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 18,989 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/ ~~2022-AS-31~~ 2323-AS-31 REV. 1B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA-18,989 Rev. 0.

PROBLEM: There is no provision in the specification for either coating or

not coating exposed epoxy grout at the edge of base plates. Alsoclarification is needed as to "what is an interface" for coatingpurposes where base plates meet walls, ceilings, or floors.

SOLUTION: The coating of exposed epoxy grout is not required. If, for

appearance, it is coated it may be coated with either Carboline

Rheoline 305 or Southern Imperial Nuflex 1205. 3.5.1195

4. SUPPORTING DOCUMENTATION:

RECEIVED

NOV 09 1982

5. APPROVAL SIGNATURES: TK/sgr

DOCUMENT CONTROL

A. ORIGINATOR: James C. Hill DATE 11/5/83B. DESIGN REPRESENTATIVE: RM Hester DATE 11-8-83C. DESIGN REVIEW PRIOR TO ISSUE: Patel DATE 11-8-836. VENDOR RELATED CHANGE XX NO YES: P.O. NUMBER

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL)	(1)	Mark Welch-CA Spec. Svr.	(1)
QUALITY ENGINEERING	(1)	Civil Engineering	(1)
DOTG FOR ORIG. DESIGN	(1)		

DCA FORM 9-83

SOLUTION: coatings to be in accordance with established
(Continued) applicable site procedures. Coatings applied to
the above may be applied without QC inspection.

Where gap between base plate and wall, ceiling,
or floor is less than the gap which requires epoxy
grout it shall be considered an interface for
coating purposes. It is not expected that coating
will bridge gap at all times.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (XXXXXX) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 19,812 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 2B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 19,812 Rev. 0.PROBLEM: There is a lack of clarity in paragraph 9.2.2 as written.SOLUTION: Rewrite paragraph 9.2.2 as follows:9.2.2 Adhesion Test9.2.2.1 Adhesion testing shall be required for the following:

(a) All painted concrete surfaces--One test every 1,000 square foot for the first 10,000 square feet of concrete coating. Additional testing on concrete shall be performed only as directed by engineer or owner.

(b) All vendor-applied shop-primed equipment shall be tested prior to receiving topcoat. Equipment primed with materials as noted in Table A-2 shall be exempt from this test only when documentation certifying proper material and application per procurement specification is provided by the vendor.

4. SUPPORTING DOCUMENTATION

35-1195
RECEIVED

MAY 20 1984

MAY 20 1984

DOCUMENT CONTROL

5. APPROVAL SIGNATURES TK/bb

5-24-84

A. ORIGINATOR: Thomas C. Kelly DATE 5/23/84B. DESIGN REPRESENTATIVE: R. K. King DATE 5-25-84C. DESIGN REVIEW PRIOR TO ISSUE: R. K. King DATE 5-24-84

6. STANDARD DISTRIBUTION

Mark Welch-DA (1)
Civil Engineering (1)
Design Review (1)

Site DG (1)

Westinghouse (1) DCA FORM 3-14

ASST. CHIEF OF STAFF
CHIEF OF STAFF
CHIEF OF BUREAU
CHIEF OF DIVISION
CHIEF OF SECTION
CHIEF OF UNIT

(c) As directed by owner or engineer.

9.2.2.2 The number of tests to be performed on vendor primed equipment shall be:

(a) For large areas of single component equipment - one test per 500 square feet.

(b) For equipment with several components:

- (1) From 1-10 items - Test 20 percent
- (2) Over 10 items - Test 10 percent

9.2.2.3 The following test methods shall be used:

(a) For equipment and surfaces inside the containment (or to be installed inside the containment) and which receive coating materials as noted in Table A-2 the Elcometer 106 Adhesion Tester shall be used in accordance with the recommendations of the manufacturer of the instrument. Five dollies (surface area permitting) tested to 250 pounds, four of which meet 250 pounds, constitute as acceptable test.

(b) For equipment outside containment ASTM D3359-78 test method (results 5A and 4A) are acceptable or other test methods listed in ASTM D01.43 Table A5A-8 as directed by owner may be used.

9.2.2.4 As adhesion tests are destructive, repair to damage coating shall be done in accordance with coating manufacturers recommendations.

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~(WILL)~~ BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 19,943

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/~~XXX DOCUMENT~~ 2323-AS-31 REV. 1B. DETAILS One time deviation to allow coating of crane rails embeds

with Carbozinc II top coated with Imperial 1201 finish coat. The embeds are

located at EL. 860' and 905' of Unit I.

4. SUPPORTING DOCUMENTATION:

Imperial Test Report 553-81

5. APPROVAL SIGNATURES: TK/db

2-24-84

A. ORIGINATOR: [Signature]DATE 2-24-84B. DESIGN REPRESENTATIVE: [Signature]DATE 2-24-84C. DESIGN REVIEW PRIOR TO ISSUE: [Signature]DATE 3-6-846. VENDOR RELATED CHANGE: YY NO YES: P. O. NUMBER:

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL) (1)

Mark Welch-CA (1)

QUALITY ENGINEERING (1)

Civil Engineering (1)

COPS FOR ORIG. DESIGN (1)

Design Review (1)

WASTINGHOUSE (1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (XXXXXX) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 19,985 Rev. 2

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

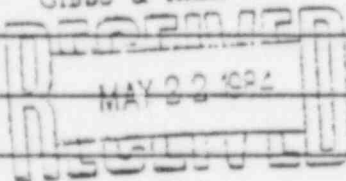
FOR OFFICE AND
ENGINEERING USE ONLY

A. APPLICABLE SPEC/XXXXXXXXXXXX 2323-AS-31 REV. 2

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 19,985 Rev. 1.

See attached:

GIBBS & HILL INC.

35-1195
RECEIVED

MAY 22 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES:

MW/bc

5-22-84

A. ORIGINATOR:

Mark Wells

DATE 5-22-84

B. DESIGN REPRESENTATIVE:

R.M. Kesting

DATE 5-22-84

C. DESIGN REVIEW PRIOR TO ISSUE:

NA M.A. Thirtle

DATE 5-22-84

6. STANDARD DISTRIBUTION:

ASME ORIGINAL (1)

ASME ENGINEERING (1)

ASME FOR O&M, CHICAGO (1)

Mark Welch-OA (1)

Civil Engineering (1)

Design Review (1)

Westinghouse (1)

site DG (1)

DCA FORM 3-84

In Section 7.0 Paragraph b, Item 2, add the following "major/minor" defect criteria for repair of applied steel coatings: Minor Defects - Minor defects are defined as an area, either circular or linear, in which a 1/2" diameter circle could not be completely inscribed at any point along the entire length, and/or defective area greater than 1/2" in width, but not to exceed 4 square inches in area, either of which may extend to substrate. At a minimum, minor defects shall be repaired by blasting or abrading by hand or power any exposed steel substrate to ensure cleanliness equal to that required in the area in which the defect exists. Existing surrounding coatings shall be abraded as required to remove any loose coatings or contaminants. At a minimum, topcoat shall then be applied to a thickness sufficient to ensure a smooth transition to existing surrounding coatings.

Major Defects: Defective areas exceeding the parameters as stated above for minor defects shall be considered a "major defect". Major defects shall be repaired by blasting or power tooling any exposed steel substrate to ensure cleanliness equal to that required in the area the defect exists. Existing surrounding coatings shall be abraded to remove any loose coatings or contaminants. Replace coatings in the affected area as required, i.e., primer and/or finish, as required.

RECEIVED

MAR 06 1984

SPEC TUGCO(2)

Page 1 of 1

GIBBS & HILL Inc

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) ~~(XXXXXX)~~ BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 10,096

1. SAFETY RELATED DOCUMENT: XX YES NO

2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

FOR OFFICE AND
ENGINEERING USE ONLY

A. APPLICABLE SPEC/DWG/DOCUMENT 2923-AS-31 REV. 1

B. DETAILS Item 1) Section 6.3 paragraph a states that all "Surfaces shall be clean, dry and free from cement splatter...". Concrete surfacer may be applied over "damp" concrete by the coating manufactures recommendations.

Solution: Add the following 'Note' after Section 6.3 paragraph a: Concrete surfacer may be applied over "damp" concrete if allowed by the coating manufacturer, but at no time shall the surfacer be applied over free standing water.

Item 2) In Section 9.2.3 paragraph b item 3, delete the requirement to correct "fish eyes" and "orange peel" in concrete surfacer. Justification - fish eyes or orange peel will not appear in concrete surfacer due to viscosity of the material and "trowling" during application.

35-1195
RECEIVED

MAR 13 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb

3-4-84

A. ORIGINATOR: Mark Welch DATE 3-4-84

B. DESIGN REPRESENTATIVE: RMX DATE 3-6-84

C. DESIGN REVIEW PRIOR TO ISSUE: NA DATE 3-12-84

6. VENDOR RELATED CHANGE: XX NO YES P. O. NUMBER: _____

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL)	(1)	Mark Welch-OA	(1)
QUALITY ENGINEERING	(1)	Civil Engineering	(1)
DCTS FOR ORIG. DESIGN	(1)	Design Review	(1)
WESTINGHOUSE	(1)		

DCA FORM 9-83

APR 11 1984

DOMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (XXXXXXXXXX) BE INCORPORATED IN DESIGN DOCUMENT DCI NO. 20170

1. SAFETY RELATED DOCUMENT: XXX YES

2. ORIGINATOR: CPPE XXX ORIGINAL DESIGNER

3. DESCRIPTION:

G&H Spec. 2323-AS-31

A. APPLICABLE SPEC/DWG/XXXXXXXXX

2323-S1-0514

REV. 4

B. DETAILS The "life lines" at approx. (+3") elevation 953'-8" and

1000'-4" which were placed for construction personnel safety shall remain for

operations. Replace the existing wire ropes with 3/8"-7 x 19 stainless steel

non-Q aircraft cable. The 24 cable guide clips(1 3/4" x 1 3/4" x 3/4" min.

thick) at each elevation located above the girders are to be N.N.S. and shall

remain as is. At the top elevation the 2'-4" long (L3 x 3 x 3/16") cable guide

extensions are to be N.N.S. and shall remain as is, bolted to the clips with

3/4" Ø A-325 bolts and snug tight. Protective coating applied to said supports

shall be placed under 2323-AS-30 requirements, however 2323-AS-31 specified

materials shall be utilized.

35-1195

RECEIVED

4. SUPPORTING DOCUMENTATION:

APR 16 1984

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: HLP/cb

April 10, 1984

A. ORIGINATOR:

Henry L. Paulose

DATE 4-10-84

B. DESIGN REPRESENTATIVE:

G.W.L. Vetterlin

DATE 4-11-84

C. DESIGN REVIEW PRIOR TO ISSUE:

L.H.A.S.

DATE 4-12-84

6. VENDOR RELATED CHANGE 10% NO

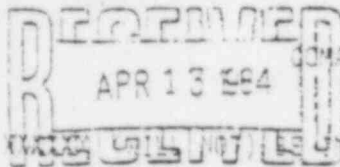
YES: P.O. NUMBER

7. STANDARD DISTRIBUTION:

JUL 17 1984
DCI FOR CRIS. DESIGN
WESTINGHOUSE

Design

DCI FORM 1-82



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

NOT INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20252

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:
 - A. APPLICABLE SPEC/REFERENCE 2323-AS-31 REV. 2
 - B. DETAILS Clarification is requested on coating of the exposed ends on pipe sleeves on pipe vents embeded in concrete. Also on floor elevation 860'-0" in RB-1 area 39 and 40, exposed ends on vent pipe sleeves were inadvertently primed under AS-30 requirements.

SOLUTION: Exposed ends on embeded pipe sleeves and pipe vents require no coating application. The items listed above which were primed under AS-30 requirements shall be used as is with no further coating required.

FOR OFFICE AND
ENGINEERING USE ONLY

25-1195
RECEIVED

APR 17 1984

4. SUPPORTING DOCUMENTATION:

Protective coating exempt log #35

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb

4-13-84

A. ORIGINATOR:

Mark Welch

DATE

4-13-84

B. DESIGN REPRESENTATIVE:

RM King

DATE

4-13-84

C. DESIGN REVIEW PRIOR TO ISSUE:

D. Patel

DATE

4-16-84

6. VENDOR RELATED CHANGE:

XX NO

YES: P. O. NUMBER:

7. STANDARD DISTRIBUTION:

ASME (ORIGINAL)

(1)

Mark Welch-OA

(1)

QUALITY ENGINEERING

(1)

Civil Engineering

(1)

SCS FOR ORIG. DESIGN

(1)

Design Review

(1)

WESTINGHOUSE

(1)

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~XXXXXX~~ BE INCORPORATED IN DESIGN DOCUMENTDCA NO. 202531. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/~~XXXXX~~DOCUMENT 2323-AS-31 REV. 2B. DETAILS There are items on cranes, and monorails where mechanical movement of parts such as hoists, cables, wheels, and other operating mechanisms cause damage to applied finished coatings. Request clarification regarding touch-up of these surfaces.SOLUTION: These areas, once coated and accepted to applicable site procedures, shall require no further coating application or touch-up unless otherwise directed by the field engineer.

GIBBS & HILL, INC.

RECEIVED
APR 16 1984FOR OFFICE AND
ENGINEERING USE ONLY
APR 17 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb

4-13-84

A. ORIGINATOR: [Signature] DATE 4-13-84B. DESIGN REPRESENTATIVE: [Signature] DATE 4-16-84C. DESIGN REVIEW PRIOR TO ISSUE: [Signature] DATE 4-16-846. VENDOR RELATED CHANGE: XX NO YES: P. O. NUMBER:

7. STANDARD DISTRIBUTION:

ARMS (ORIGINAL)	(1)	Mark Welch-CA	(1)
QUALITY ENGINEERING	(1)	Civil Engineering	(1)
CCS FOR ORIG. DESIGN	(1)	Design Review	(1)
TESTINGHOUSE	(1)		

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL (XXXXXX) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20257

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

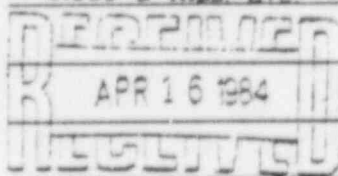
A. APPLICABLE SPEC/DNXXXXXX 2323-AS-31 REV. 2

B. DETAILS SUBJECT: The previously coated expanding metal grating on the rotating access crane platform-walkway has been damaged or worn, exposing primer and substrate.

SOLUTION: Due to the configuration of the expanding metal grating on the rotating access crane, the subject grating shall be repaired under 2323-AS-30 guidelines using 2323-AS-31 specified coatings.

ENGINEERING USE ONLY

GIBBS & HILL, INC.



35-1195
RECEIVED

APR 17 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES:

MW/bb

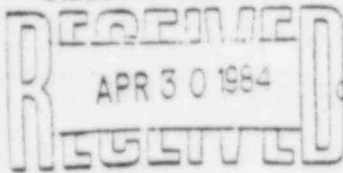
4-13-84

A. ORIGINATOR: Mark Welch DATE 4-13-84B. DESIGN REPRESENTATIVE: D. J. H. H. H. DATE 4-13-84C. DESIGN REVIEW PRIOR TO ISSUE: initial DATE 4-16-84

6. VENDOR RELATED CHANGE:
- XX
- NO
-
- YES: P. O. NUMBER:
-

7. STANDARD DISTRIBUTION:

ASNS (ORIGINAL)	(1)	Mark Welch-QA	(1)
QUALITY ENGINEERING	(1)	Civil Engineering	(1)
DATA FOR ORIG. DESIGN	(1)	Design Review	(1)
WETTINGHOUSE	(1)		



COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) ~~XXXXXX~~ BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20295

1. SAFETY RELATED DOCUMENT: XX YES _____ NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER _____
3. DESCRIPTION:

A. APPLICABLE SPEC/ ~~XXXXXX~~ 2323-AS-31 REV. 2

B. DETAILS Add item 16 to Section 1.2 subparagraph B as follows:

Coatings on signs or applied to items as identification designations.

FOR OFFICE AND
ENGINEERING USE ONLY

35-1195
RECEIVED

MAY 03 1984

DOCUMENT CONTROL

4. SUPPORTING DOCUMENTATION:

5. APPROVAL SIGNATURES:

MW/bb

4-27-84

A. ORIGINATOR: Mark Wells DATE 4-27-84

B. DESIGN REPRESENTATIVE: RMK DATE 4-30-84

C. DESIGN REVIEW PRIOR TO ISSUE: Spencer DATE 5-1-84

6. STANDARD DISTRIBUTION:

ASB (ORIGINAL)
CONSTRUCTION
DESIGN REVIEW
DESIGN REVIEW

(1)
(1)
(1)

Mark Welch-OA (1)
Civil Engineering (1)
Design Review (1)

Westinghouse (1)

Site DG (1)

DCA FORM 2-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (X) (X) (X) (X) (X) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20369

1. SAFETY RELATED DOCUMENT: XX YES NO2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER

3. DESCRIPTION:

A. APPLICABLE SPEC/XWORK/DOCUMENT# 2323-AS-31 REV. 2

B. DETAILS Revise appendix B of AS-31 as follows:

Item (1) Area 1, item 3, add a comma after pipe supports.

Item (2) Page 6 of 6, add new note 3 as follows - Color requirements shall be
as specified herein or as otherwise directed by the owner or his representative.

FOR OFFICE USE ONLY

ENGINEERING DEPARTMENT

MAY 09 1984

35-1195
RECEIVED

MAY 09 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb

5-8-84

A. ORIGINATOR: Mark WelchDATE 5/8/84B. DESIGN REPRESENTATIVE: DM KistnerDATE 5-8-84C. DESIGN REVIEW PRIOR TO ISSUE: [Signature]DATE 5-9-84

6. FURTHER DISTRIBUTION:

Mark Welch-OA (1)
Civil Engineering (1)
Design Review (1)

Site DG (1)

ASIS (ORIGINAL)
QUALITY ENGINEERING
NOTED FOR ORIGINATOR

Westinghouse (1)

DCA FORM 1-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) ~~XXXXXX~~ BE INCORPORATED IN DESIGN DOCUMENTDCA NO. 20398 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC ~~XXXXXX~~ DOCUMENT: 2323-AS-31 REV. 2B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 20398 Rev. 0.

ITEM 1: Add note after section 7.0.b item 1 subparagraph 3: In addition to the preceding, a surface condition that results after removing contaminants that have accumulated on inorganic zinc primed surfaces by thoroughly solvent wiping, is acceptable for coating application.

(Continued on page 2)

FOR OFFICE USE ONLY
DATE: 6-13-84
BY: [Signature]

35-1195
RECEIVED

- 4.
- SUPPORTING DOCUMENTATION:

JUN 15 1984

DOCUMENT CONTROL

- 5.
- APPROVAL SIGNATURES:
- MW/bb

6-13-84

A. ORIGINATOR: [Signature] DATE 6-13-84

B. DESIGN REPRESENTATIVE: CRHooten DATE 6-13-84

C. DESIGN REVIEW CHECKED BY: N/A CRHooten DATE 6-13-84

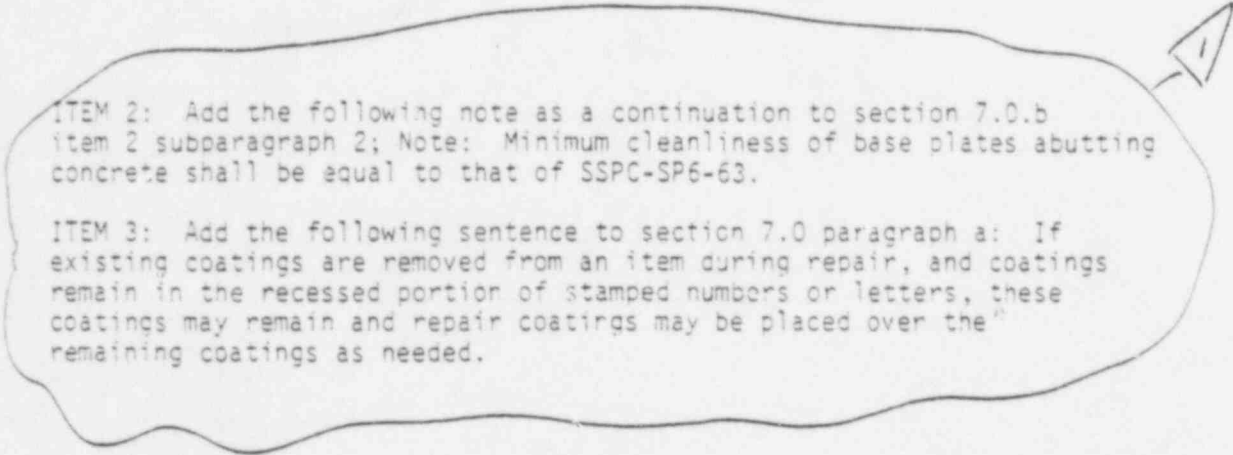
- 6.
- REMARKS:

Mark Welch-CA (1)
Civil Engineering (1)
Design Review (1)
Westinghouse (1)

site DG (1)

DATE: 6-13-84
BY: [Signature]
FOR OFFICE USE ONLY

DCA FORM 2-84



ITEM 2: Add the following note as a continuation to section 7.0.b item 2 subparagraph 2; Note: Minimum cleanliness of base plates abutting concrete shall be equal to that of SSPC-SP6-63.

ITEM 3: Add the following sentence to section 7.0 paragraph a: If existing coatings are removed from an item during repair, and coatings remain in the recessed portion of stamped numbers or letters, these coatings may remain and repair coatings may be placed over the remaining coatings as needed.

COMANCHE PEAK STEAM ELECTRIC STATION DESIGN CHANGE AUTHORIZATION

(WILL) (~~WILL NOT~~) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20512 Rev. 3

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/~~DESIGN DOCUMENT~~ 2323-AS-31 REV. 2B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 20512 Rev. 2.

Add the following note in the above applicable specification following section

9.2.3.b subparagraph 3; NOTE: Hair line cracks appearing in concrete finish coat (Nutec 1201) after application shall be repaired by light sanding and applying additional finish coat to that area. Hair line cracks appearing in surfacer coat (Nutec 11S, Nutec 11) are acceptable.

FOR OFFICE FILE
GIBBS & HILL
35-1195-
RECEIVED
JUL 26 1984
RECEIVED
JUL 26 1984

DOCUMENT CONTROL

4. SUPPORTING DOCUMENTATION:

GTT-10418

5. APPROVAL SIGNATURES:

MW/bb

7-19-84

A. ORIGINATOR:

DATE

B. DESIGN REPRESENTATIVE:

DATE

C. DESIGN REVIEW PRIOR TO ISSUE:

DATE

6. STANDARD DISTRIBUTION:

1-015 ORIGINAL
1-015 ENGINEERING
1-015 FOR ORIG. DESIGN

Civil Engineering (1)
Design Review (1)
Westinghouse (1)
PDSS (1)

DCA FORM 1-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION(WILL) (~~WILL~~ ~~NOW~~) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20530 Rev. 1

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 2

B. DETAILS THIS REVISION VOIDS AND SUPERSEDES DCA 20530 REV. 0.
Add the following note to Appendix A, Table A-2 following the

title of approved coating systems for use in containment: Note: With written
authorization from the Project Civil Engineer or his designee, Carbolines
Inorganic Zinc #CZ11 may be utilized without topcoat on items as deemed necessary.

35-1195
RECEIVED

JUN 26 1984

4. SUPPORTING DOCUMENTATION:

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb

6-21-84

A. ORIGINATOR:

DATE 6-21-84

B. DESIGN REPRESENTATIVE:

DATE 6-21-84

C. DESIGN REVIEW PRIOR TO ISSUE:

DATE 6-24-84

6. STANDARD DISTRIBUTION:

ARMS (ORIGINAL) (1)
QUALITY ENGINEERING (1)
DCTG FOR ORIG. DESIGN (1)Mark Welch-QA (1)
Civil Engineering (1)
Design Review (1)
Westinghouse (1)
FDSG (1)

DCA FORM 3-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) ~~(WILL)~~ BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20616

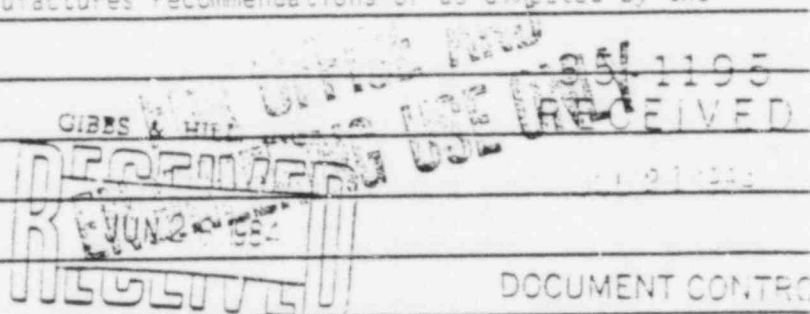
1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 2B. DETAILS Item (1) - Revise Section 8.2 paragraph d as follows:

Protective coatings shall be applied to concrete and masonry surfaces where indicated on the room finish schedule drawings. Block walls scheduled to receive protective coatings shall receive surfacer and topcoat full height of said wall. Inspections required shall be as indicated in section 9.0.

Item (2) - Revise Section 8.2 paragraph f as follows:

Imperfections and holes in surfaces to be coated shall be cleaned and filled where required in accordance with the manufactures recommendations or as directed by the responsible engineer.



- 4.
- SUPPORTING DOCUMENTATION
- :

- 5.
- APPROVAL SIGNATURES
- : MW/bb

6-28-84

- A. ORIGINATOR: DATE
- B. DESIGN REPRESENTATIVE: DATE
- C. DESIGN REVIEW PRIOR TO ISSUE: DATE

- 6.
- STANDARD DISTRIBUTION
- :

ARMS (ORIGINAL) (1)

QUALITY ENGINEERING (1)

DOTS FOR ORIG. DESIGN (1)

Mark Welch-OA (1)

Civil Engineering (1)

Design Review (1)

Westinghouse (2)

FOSS (1)

DCA FORM 3-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO 20705

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPECIFICATION/DOCUMENT 2323-AS-31 REV. 2

B. DETAILS In Reactor Building Unit #1, portions of the exposed coating on the Excess Letdown Heat Exchanger have been damaged requiring repair. Also the cover plates and associated mechanical equipment for the containment sump drain pumps require coating repair.

SOLUTION: Due to the installed configuration of the items noted above, coating requirements shall be as follows: The exposed portion of the Excess Letdown Heat Exchanger which requires coating shall be primed with inorganic zinc only, as a minimum. The cover plates and associated mechanical equipment for the containment sump drain pumps shall receive the required coating system.

Coating activities on the above listed items shall be performed under the guidelines of specification 2323-AS-30.

4. SUPPORTING DOCUMENTATION:
Protective Coating Exempt Log Item #43

35-1195
RECEIVED

JUL 18 1984

DOCUMENT CONTROL

5. APPROVAL SIGNATURES: MW/bb 7-17-84
A. ORIGINATOR: Mark Wells DATE 7-17-84
B. DESIGN REPRESENTATIVE: CR Horton DATE 7-17-84
C. DESIGN REVIEW PRIOR TO ISSUE: N/A CR Horton DATE 7-17-84

6. STANDARD DISTRIBUTION:

ARMS (ORIGINAL) (1)
QUALITY ENGINEERING (1)
DCTS FOR ORIG. DESIGN (1)

Civil Engineering (1)
Design Review (1)

Westinghouse (1)
Site PG

(1) DCA FORM 3-84

COMANCHE PEAK STEAM ELECTRIC STATION
DESIGN CHANGE AUTHORIZATION

(WILL) (WILL NOT) BE INCORPORATED IN DESIGN DOCUMENT

DCA NO. 20759

1. SAFETY RELATED DOCUMENT: XX YES NO
2. ORIGINATOR: CPPE XX ORIGINAL DESIGNER
3. DESCRIPTION:

A. APPLICABLE SPEC/DWG/DOCUMENT 2323-AS-31 REV. 2

B. DETAILS In Reactor Building Unit 1, the access ladder, located at approx. center-line of the elevator machine room from elevation 959'-9" to 1003'-6", including the ladders, associated platforms, safety cage, and attachments require coating repair. In addition to the above, a minor amount of coating applied to the liner plate requires repair located behind the platforms and around the ladder attachments. Due to the location and configuration of the above, coating under AS-31 requirements is not feasible.

SOLUTION: Coating repair and application to the above listed item and area shall be performed under the guidelines of specification 2323-AS-31.

35-1195
RECEIVED

JUL 26 1984

4. SUPPORTING DOCUMENTATION:

Protective Coating Exemption Log Item 447

5. APPROVAL SIGNATURES:

MW/db

7-25-84

A. ORIGINATOR: [Signature] DATE 7-25-84B. DESIGN REPRESENTATIVE: [Signature] DATE 7-25-84C. DESIGN REVIEW PRIOR TO ISSUE: [Signature] DATE 7-25-84

6. STANDARD DISTRIBUTION:

ARIS (ORIGINAL) (2)
QUALITY ENGINEERING (2)
DCO FOR ORIG. DESIGN (2)

Civil Engineering (1)
Design Review (1)

Westinghouse (1)
Site DG (1)

DCA FORM 3-84

Gibbs & Hill, Inc.

11 Penn Plaza
New York, New York 10001
212 760-4438
Telex
Domestic 127636 968694
International 428813 234475
A Dravo Company

March 15, 1984

GTN- 68650

Texas Utilities Generating Company
Post Office Box 1002
Glen Rose, Texas 76043

Attention: Mr. J. B. George
Vice President/Project Gen. Mgr.

Gentlemen:

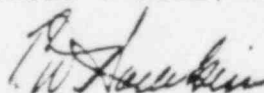
TEXAS UTILITIES GENERATING COMPANY
COMANCHE PEAK STEAM ELECTRIC STATION
G&H PROJECT NO. 2323
PROTECTIVE COATINGS
SPECIFICATION 2323-AS-31

Enclosed for your information and use is one copy of Specification 2323-AS-31, revision 2 dated March 15, 1984, entitled Protective Coatings. Please note that a copy of this Specification was forwarded, via P. M. Milam, to Dr. R. Iotti of Epasco Services on March 15, 1984, for his information.

If you have any questions relative to this transmittal, do not hesitate to contact this office.

Very truly yours,

GIBBS & HILL, Inc.



Robert E. Ballard, Jr.
Project Manager

REBa-TDH:lc
1 Letter

CC: ARMS (B&R Site) OL

~~---~~ P. D. Calder (TUSI Site) 1L 1A

P. M. Milam (TUSI NY) 1L

Dravo