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ISHAM, LINCOLN & BEALE  
COUNSELORS AT LAW

RELATED CORRESPONDENCE

DOCKETED  
USNRC

THREE FIRST NATIONAL PLAZA  
CHICAGO, ILLINOIS 60602  
TELEPHONE 312 568-7500  
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NOV -9 110:54

EDWARD S. ISHAM, 1872-1902  
ROBERT T. LINCOLN, 1872-1889  
WILLIAM G. BEALE, 1885-1923

WASHINGTON OFFICE  
1120 CONNECTICUT AVENUE, N.W.  
SUITE 840  
WASHINGTON, D.C. 20036  
202 833-9730

OFFICE OF SETTING  
DOCKETING & SERVICE  
BRANCH

November 7, 1984

Peter B. Bloch, Esquire  
Chairman, Atomic Safety and  
Licensing Board  
U. S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Herbert Grossman, Esquire  
Alternate Chairman  
Atomic Safety and Licensing  
Board  
U. S. Nuclear Regulatory  
Commission  
Washington, D.C. 20555

Dr. Walter H. Jordan  
Administrative Judge  
881 West Outer Drive  
Oak Ridge, Tennessee 37830

Re: In the Matter of Texas Utilities  
Electric Company, et al. (Comanche Peak  
Steam Electric Station, Units 1 and 2)  
Docket Nos. 50-445-2 and 50-446-2

Gentlemen:

The testimony of O.B. Cannon & Son, Inc., i.e.,  
Messrs. Roth, Trallo, Norris and Lipinsky was filed on  
November 5, 1984 by mail from Philadelphia. Attachments A.  
through D. to Mr. Norris' testimony were inadvertently  
omitted from the mailing. Copies of the Cannon Testimony  
that were hand-delivered yesterday to the Licensing Board  
and counsel for the Intervenors, Applicants and NRC Staff  
included the attachments to Mr. Norris' testimony.

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PDR ADDCK 05000445  
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DS03

November 7, 1984

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The purpose of this letter is to provide the Norris' attachments to the other persons on the service list. I apologize for any inconvenience.

Sincerely,

*Joseph Gallo/sv*

Joseph Gallo  
Counsel to Oliver B.  
Cannon & Son, Inc.

JG:sv

cc: Peter Bloch	w/o encl.
Herbert Grossman	"
Walter Jordan	"
Stuart Treby	"
Anthony Roisman	"
Nicholas Reynolds	"
McNeill Watkins	"
Ellen Ginsberg	"

The balance of service list with enclosures

SHIP TO TEXAS UTILITIES GENERATING COMPANY, ATTN: BROWN & ROOT, INC.  
 c/o COMANCHE PEAK STEAM ELECTRIC STATION  
 FM 201, GLEN ROSE, TEXAS 76043

TO TEXAS UTILITIES GENERATING COMPANY  
 P.O. BOX 1002, GLEN ROSE, TEXAS 76043

ATTACHMENT A  
 PURCHASE ORDER

NUMBER BELOW MUST BE SHOWN ON ALL SHIPMENTS, INVOICES AND CORRESPONDENCE

SHIP VIA N/A

SHIPMENT PROMISED BY N/A TERMS NET 30 DAYS REQ. NO. R 21928

P.O. NO. CPF 16245

ORIGINAL NOTIFICATION	CONFIRMATION
X	
F.O.B. SHIPPING POINT PREPAY AND ADD	
ACCOUNT NO. 1-2-9230-940000-108	

TO OLIVER B. CANNON & SON, INC.  
 9001 AIRPORT BLVD.  
 SUITE 801  
 HOUSTON, TEXAS 77061

VENDOR WILL SIGN AND RETURN CARBON COPY OF THIS PURCHASE ORDER ACCEPTING ALL TERMS AND CONDITIONS UNDER WHICH IT IS ISSUED

PLEASE RENDER INVOICES IN DUPLICATE

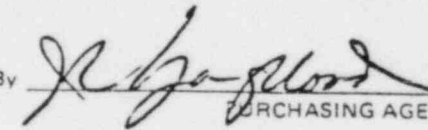
THE TERMS AND CONDITIONS SET OUT ON THE BACK HEREOF AND ANY ATTACHMENTS HERETO ARE A PART OF THIS ORDER AND HAVE THE SAME EFFECT AS IF SET OUT ON THIS SIDE

ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE
			<p>THIS PURCHASE ORDER IS ESTABLISHED WITH OLIVER B. CANNON AND SON, INC. FOR THE PURPOSE OF ANALYZING THE PROTECTIVE COATING PROGRAM AT THE CPSES JOBSITE. THIS WILL BE ACCOMPLISHED BY TWO PHASES OF WORK.</p> <p><u>PHASE I - SCOPE</u></p> <p>OLIVER B. CANNON AND SON INC. WILL SEND A TEAM OF TWO TO THREE INDIVIDUALS (CORPORATE LEVEL MANAGEMENT PERSONNEL) TO THE JOBSITE BEGINNING JULY 19, 1983 FOR A DURATION OF APPROXIMATELY THREE (3) WEEKS TO DO A GENERAL SURVEY AND GET A GENERAL FEEL FOR OUR PROTECTIVE COATING PROGRAM.</p> <p>OLIVER B. CANNON AND SON INC. WILL ORGANIZE THEIR ANALYSIS INTO THE FOLLOWING CATEGORIES:</p> <p>PRODUCTION - WORK PROCEDURES - SCHEDULING - TRAINING &amp; PAINTER QUALIFICATION - QUALITY CONTROL - MANAGEMENT OF COATING EFFORT - SPECIFICATIONS</p> <p>THE ABOVE SERVICES SHALL BE IN ACCORDANCE WITH THE FOLLOWING:</p>		

Direct Payment Exemption Certificate Permit Number 3-00007-5163-3-The Purchaser hereby claims exemption from the Payment of Texas State, Local, MTA Sales & Use Taxes upon its purchases of taxable items on this Order. Purchaser agrees to accrue and pay the tax to the Comptroller of Public Accounts as required by Statute.

INTENDED USE OF MATERIAL	TECHNICAL SERVICES (PMG)	
PREPARED BY	J. YOUNGBLOOD/tr	(817) 897-4881 EXT 347
POSITIONER	J. YOUNGBLOOD	(817) 897-4881 EXT 347

TEXAS UTILITIES GENERATING COMPANY

By  PURCHASING AGENT

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P.O. NO.

PURCHASE ORDER CONTINUATION SHEET

PF 16245

ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE		
			<p><u>FEE SCHEDULE</u></p> <p>OLIVER B. CANNON AND SON, INC. SHALL INVOICE TUGCO FOR THEIR SERVICES IN ACCORDANCE WITH THE FOLLOWING SCHEDULE.</p> <p>A. MANAGEMENT PERSONNEL (CORPORATE LEVEL) \$500.00/DAY</p> <p>B. LINE PERSONNEL (WORKING LEVEL CRAFT) 400.00/DAY</p> <p>C. TECHNICAL PERSONNEL</p> <p>1. SITE 350.00/DAY</p> <p>2. OFFICE 250.00/DAY</p> <p>D. CLERICAL PERSONNEL COST</p> <p>E. TO A,B,C, &amp; D ABOVE ADD 16% FOR OVERHEAD</p> <p>F. TEST EQUIPMENT (IF NECESSARY) PER OBC LIST XIII</p> <p>EXPENSES SHALL BE INVOICED AT ACTUAL COST TO OLIVER B. CANNON AND SON, INC. AND SHALL COMPLY WITH COMANCHE PEAK TRAVEL POLICY AS FOLLOWS:</p> <p>1. MEALS - ACTUAL COST BUT NOT TO EXCEED TWENTY-FIVE (25) DOLLARS PER DAY.</p> <p>2. RENT CAR - RENTAL CAR SHALL BE A FORD FAIRMONT, CHEVROLET MALIBU, OR NOVA, OR AND EQUIVALENT SIZED CAR. IF ONE OF THE ABOVE MENTIONED CARS IS NOT AVAILABLE, A SMALLER CAR SHALL BE USED. IF ONLY A LARGER CAR IS AVAILABLE IT SHALL BE SO NOTED ON THE RENTAL RECEIPT.</p> <p>3. FLIGHT ARRANGEMENTS - AIR TRAVEL SHALL BE BY ECONOMY CLASS ONLY.</p> <p>4. ENTERTAINMENT - NOT REIMBURSABLE EXPENSES.</p> <p>5. MOTEL/HOTEL - ACCOMMODATIONS SHALL BE IN GRANBURY, GLEN ROSE, OR CLEBURNE ONLY.</p>				

ALL TERMS AND CONDITIONS SHOWN ON THE FACE AND REVERSE OF THE SIGNED SHEET OF THIS ORDER ARE EFFECTIVE COVERING THE ABOVE ITEMS AS THOUGH REPEATED HEREON.

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PURCHASE ORDER CONTINUATION SHEET

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ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE
			<p>PROPER DOCUMENTATION AND RECEIPTS SHALL ACCOMPANY ALL INVOICES. (ie: TIME SHEETS, AIR FARE RECEIPT, AND MOTEL RECEIPT)</p> <p>THE ABOVE RATES ARE FIRM AND NOT SUBJECT TO ESCALATION.</p> <p>OLIVER B. CANNON AND SON, INC. IS REQUIRED TO REFERENCE PURCHASE ORDER NUMBER ON ALL INVOICES AND CORRESPONDENCE PERTAINING TO THIS PURCHASE ORDER.</p> <p><u>FIXED FEE</u> TUGCO SHALL PAY OLIVER B. CANNON AND SON, INC. A FIXED FEE OF \$63,000.00. THIS FIXED FEE IS OVER AND ABOVE THE DAILY RATE STRUCTURE OUTLINE IN THIS PURCHASE ORDER. FIXED FEE IS PAYABLE TO OLIVER B. CANNON ON SEPTEMBER 15, 1983. IF WORK IS CONTINUED PAST SEPTEMBER 15, 1983 A NEW FIXED FEE WILL BE NEGOTIATED.</p> <p><u>PERSONNEL QUALIFICATIONS</u> OLIVER B. CANNON AND SON, INC. SHALL FURNISH QUALIFICATION DATA AND RESUMES FOR THE PERSONNEL ASSIGNED TO WORK UNDER THE SCOPE OF THIS PURCHASE ORDER.</p> <p>THE ESTIMATED PURCHASE AMOUNT OF PHASE I OF THIS PURCHASE ORDER IS NOT TO EXCEED \$100,000.00 UNLESS AUTHORIZED BY WRITTEN SUPPLEMENT.</p> <p><u>PHASE II</u> THE SCOPE OF PHASE II IS DEFINED AS A COMPREHENSIVE STUDY OF THE PROTECTIVE COATINGS PROGRAM WITH ASSOCIATED RECOMMENDATIONS AND OBSERVATIONS. IF THIS SCOPE OF WORK IS REQUIRED IT WILL BE ADDED BY A SUPPLEMENT TO THIS PURCHASE ORDER.</p> <p><u>TERMS AND CONDITIONS</u> TERMS AND CONDITIONS ON THE REVERSE SIDE OF THIS PURCHASE ORDER DO NOT APPLY. FOR TERMS AND CONDITIONS REFER TO ATTACHMENT NO. 2.</p> <p><u>INSURANCE REQUIREMENTS</u> BEFORE WORK CAN COMMENCE, SELLER MUST FURNISH TO BUYER COMPLETED CERTIFICATE OF INSURANCE, FORM NO. 4500-0008, ATTACHED, SIGNED BY AUTHORIZED REPRESENTATIVE OF INSURANCE COMPANIES AFFORDING COVERAGE.</p>		

ALL TERMS AND CONDITIONS SHOWN ON THE FACE AND REVERSE OF THE SIGNED SHEET OF THIS ORDER ARE EFFECTIVE COVERING THE ABOVE ITEMS AS THOUGH REPEATED HEREON.

# TERMS AND CONDITIONS

## 1. INTERPRETATION

In case of any conflict or inconsistency between these Supplementary Terms and Conditions, the Purchase Order or Contract to which they are attached and the Specifications, Drawings and other documents, if any, the Purchase Order or Contract, and the Specifications, Drawings and other documents, if any, shall prevail over these Supplementary Terms and Conditions.

All provisions hereof, in favor of the Purchaser, which constitute acceptance of responsibility by the Seller, waives of responsibility of the Purchaser, indemnification of the Purchaser and agreements to defend or save harmless the Purchaser, shall likewise inure to the benefit of Agent and/or Engineer.

Whenever used in this Order, any supplements hereto, or related correspondence:

1. "OWNER" — Dallas Power & Light Company, Texas Electric Service Company and Texas Power & Light Company.
2. "PURCHASER" — Texas Utilities Generating Company which has been engaged by the Owner as its Purchaser and Operator (whenever it shall serve in such a capacity in relation to the Owner).
3. "AGENT" — Texas Utilities Services Inc., which has been engaged by Purchaser as its Agent (whenever it shall serve in such capacity in relation to the Purchaser).
4. "ENGINEER" — Texas Utilities Services Inc., which has been engaged by the Purchaser to act as its design engineer and shall have authority to prepare drawings and specifications, make inquiries for purchases, review Seller's design, and inspect and expedite factory production and such other authority as Owner or Purchaser may delegate to it.
5. "SELLER" or "CONTRACTOR" shall mean the party providing Equipment pursuant to this Order.
6. "ORDER" shall mean, collectively, the Purchase Order to which these Supplementary Terms and Conditions are attached, these Supplementary Terms and Conditions, Specifications and Drawings, and all other documents, if any, attached to such Purchase Order.
7. "PRICE" shall mean the amount paid by the Purchaser to the Seller in consideration of the provision of the Equipment.
8. "EQUIPMENT" shall mean all of the materials, apparatus, structures and related services provided pursuant to this Order.
9. "WORK" shall mean all of the supplies, equipment, engineering, design, workmanship, labor and any other services or thing furnished or used by the Seller in providing the Equipment.

## 2. SUPPLEMENTS

Any revisions and amendments to the Order shall be effected by a Supplement to the Order, which supplement shall be furnished to the Seller in writing.

## 3. PROVISION FOR CANCELLATION

At any time after the acceptance of this Order the Purchaser shall have the absolute right to cancel the entire Order upon the payment to the Seller for all disbursements and expenses which the Seller has incurred or become obligated for prior to date of notice of cancellation, less the reasonable resale value of equipment which shall have been obtained or ordered to become an integral part of the Equipment plus a sum as profit bearing the same ratio to the profit that the Seller would have received upon completing the Work as the Work done bears to the entire amount of Work to be done by the Seller under this Order.

## 4. FACTORY INSPECTION AND TESTS

The purchaser shall have the right to inspect any Equipment, workmanship, labor and any other thing furnished or used by the Seller under this Order.

## 5. OPERATING & MAINTENANCE INSTRUCTIONS

Thirty (30) copies of Operating & Maintenance Instructions, to adequately define the Equipment furnished, shall be provided prior to shipment, each bound in a separate folder and each clearly identified with the project and the Order. Data sheets shall be included for each item of Equipment and all standard bulletins or literature shall define the specific components furnished if more than one model or type are described in the same document.

## 6. ROUTING

The Purchaser shall specify the carriers and routing to be used providing the carrier(s) or routing specified does not increase the Seller's cost; however the Seller shall not modify the Purchaser's instructions in this respect without prior approval by the Purchaser. The Seller agrees to furnish the Purchaser careful estimates of net and gross weights, expected shipping points and shipping classifications.

## 7. DRAWINGS

The review of the Seller's drawings by the Purchaser or comments of the Purchaser thereon, as contemplated by the Order, shall not relieve the Seller from entire responsibility for correctness of engineering design, workmanship, material and all other matters or for any other liability hereunder. While the Seller agrees to follow any and all comments on drawings made by the Purchaser, in so far as such comments are acceptable to the Seller, this shall not relieve or release the Seller from entire responsibility, unless otherwise agreed in writing.

## 8. PATENTS

The Seller warrants that it will have title to all Equipment furnished hereunder and the right to sell such Equipment. The Seller shall, at its own expense, defend any suit or proceeding brought against the Purchaser so far as said suit or proceeding is based on a claim that any Equipment or any part thereof, or any use thereof in the reasonable contemplation of the parties at the time of its purchase, furnished under this Order constitutes an infringement of any United States patent, if notified promptly in writing and given authority, information and assistance (at the Seller's expense) for the defense of same, and the Seller shall pay all damages and costs awarded therein against the Purchaser. In case the Equipment or any part thereof or any use thereof in the reasonable contemplation of the parties at the time of its purchase is in such suit held to constitute infringement and its use enjoined, the Seller shall, promptly and at its own expense, either: 1) procure for the Purchaser the right to continue using said Equipment; or 2) replace same with noninfringing Equipment satisfactory to the Purchaser; or 3) modify the Equipment, in a way satisfactory to the Purchaser so it becomes noninfringing. The foregoing states the entire liability of the Seller for patent infringement by said Equipment or any part or use thereof.

## 9. GUARANTEE

The Seller warrants to the Purchaser that all Equipment furnished under this Order shall be free from defects either in design, material or workmanship and shall be suited in all respects both for the purposes for which it is specified hereunder to be sold and for all other uses for which it may be represented in writing by the Seller to be suited. The Seller also warrants to the Purchaser the successful operation of all such Equipment. The Seller shall be required to correct any defects which may appear in such Equipment within one year from the date it is first put into service, such service to begin within a reasonable time after the delivery of such Equipment. Except to the extent hereinafter in this paragraph otherwise provided, the Seller's liability under this Article shall in no case (except as to implied warranty of title) exceed the cost of repairing, or of supplying a replacement for, any defective parts or materials. If the Equipment furnished under this Order is installed by the Seller and any defect or defects in design, material or workmanship appears within the period of time in this paragraph above set forth, then, in addition to repairing, or furnishing a replacement for, any defective parts or materials, the Seller shall negotiate with the Purchaser as to the extent of the additional burden or responsibility, if any, that Seller shall assume in completely and satisfactorily correcting any such defect or defects.

The warranties in this Article contained assumes that the Equipment furnished under this Order, if not installed by the Seller, is properly installed, and that such Equipment is properly used and maintained.

## 10. DELAY

In the event of any delay due to causes beyond the Seller's reasonable control, such as acts of God, acts of the Purchaser, acts of civil or military authority, priorities, fires, strikes, floods, epidemics, quarantine restrictions, war, riot, delays in transportation, car shortages, and inability due to causes beyond its reasonable control to obtain necessary labor, materials, or manufacturing facilities, the date of delivery shall be extended for a period equal to the time lost by reason of the delay.

## 11. ASSIGNMENT

Without the written consent of the Purchaser being first obtained, the Seller shall not assign this Order, or any part thereof, and any such consent shall not relieve the Seller from full responsibility and liability for the due performance of all of the terms and conditions hereof. In the event that such consent is given, the Seller shall remain fully responsible to the Purchaser for acts and omissions of the Seller's assignee and the Seller shall save the Purchaser harmless from any and all loss and expense caused thereby.

## 12. NO OTHER UNDERSTANDINGS

There are no other understandings between the parties other than as set forth in the Order. All communications, either verbal or written, made prior to the date of this Order are hereby abrogated and withdrawn.

## 13. OSHA

Seller represents and warrants that all articles and services covered by this Purchase Order meet or exceed the safety standard established and promulgated under the Federal Occupational Safety and Health Law (Public Law 91-957) and its regulations in effect or proposed as of the date of this Order.

## 14. EEOC

Seller agrees to comply with all applicable Federal and State laws and regulations forbidding discrimination against employees because of race, color, religion, national origin, sex, age, or physical or mental condition, or otherwise pertaining to employers and employment practices. The seven numbered subparagraphs of Section 202 of Subpart B of Executive Order No. 11246 are incorporated herein by reference and are binding upon the Seller.

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PURCHASE ORDER CONTINUATION SHEET

PF 16245

ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE
			<p>SELLER IS TO MAINTAIN AT HIS OWN EXPENSE, WITH SUBROGATION WAIVED AGAINST BUYER AND THE PRINCIPAL ON WHOSE WORK BUYER IS ENGAGED, THROUGHOUT THE DURATION OF THE ABOVE SERVICES A MINIMUM INSURANCE AS FOLLOWS:</p> <p>A. STATUTORY WORKMEN'S COMPENSATION.</p> <p>B. COMPREHENSIVE GENERAL LIABILITY</p> <p>BODILY INJURY - \$300,000.00 EACH OCCURRENCE</p> <p>PROPERTY DAMAGE - \$100,000.00 EACH OCCURRENCE \$100,000.00 AGGREGATE</p> <p>C. COMPREHENSIVE AUTOMOBILE LIABILITY</p> <p>BODILY INJURY - \$100,000.00 EACH PERSON - \$300,000.00 EACH OCCURRENCE</p> <p>PROPERTY DAMAGE - \$ 50,000.00 EACH OCCURRENCE</p> <p>D. EMPLOYER LIABILITY - \$100,000.00</p> <p>E. EXCESS LIABILITY - \$1,000,000.00 COMBINED SINGLE LIMIT</p> <p>SELLER SHALL FURNISH CERTIFICATE OF THE FOREGOING INSURANCE TO BUYER, PROVIDING THIRTY (30) DAYS NOTICE BY REGISTERED MAIL TO BUYER AS TO CANCELLATION OR MATERIAL CHANGES.</p> <p>MAIL CERTIFICATION TO:</p> <p>TEXAS UTILITIES GENERATING COMPANY P. O. BOX 1002 GLEN ROSE, TEXAS 76043 ATTN: EXPEDITING DEPARTMENT</p>		

ALL TERMS AND CONDITIONS SHOWN ON THE FACE AND REVERSE OF THE SIGNED SHEET OF THIS ORDER ARE EFFECTIVE COVERING THE ABOVE ITEMS AS THOUGH REPEATED HEREON.

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PURCHASE ORDER CONTINUATION SHEET

ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE
			<p><u>ATTACHMENTS</u></p> <p>ATTACHMENT NO. 1 - OLIVER B. CANNON &amp; SON INC.'S CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENT DATED JANUARY 1, 1983, LIST XIII</p> <p>ATTACHMENT NO. 2 - STANDARD TERMS &amp; CONDITIONS - REV. 0</p> <p>ATTACHMENT NO. 3 - TUGCO CERTIFICATE OF INSURANCE FORM 4500-0008</p>		

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ATTACHMENT

STANDARDS, TERMS AND CONDITIONS

INTRODUCTION

These Terms and Conditions define the relations and responsibilities of the various parties involved in the purchase and supply of the services being specified.

CONTRACT DOCUMENTS

In case of any conflict or inconsistency between these Terms and Conditions, the Purchase Order or Contract to which they are attached and the Specifications, Drawings and other documents, if any, relating to the Purchase Order or Contract, Specifications, Drawings and other documents, if any, shall prevail over these Terms and Conditions.

All provisions hereof in favor of the Purchaser, or which constitute acceptance of responsibility by the Seller, or waivers of responsibility of the Purchaser, or agreements of indemnification of the Purchaser or to defend or save harmless the Purchaser shall likewise inure to the benefit of the Agent and/or Engineer.

DEFINITIONS

Whenever they appear in these Terms and Conditions, the Specifications or the Purchase Order, the terms listed will be used in the sense and shall have the meaning set forth below.

- 'Owner': Those parties named as Owners in the Joint Ownership Agreement for the Comanche Peak Steam Electric Station, dated January 2, 1979, as amended.
- 'Purchaser': Texas Utilities Generating Company which has been engaged by the Owner as its Purchaser and Operator (whenever it shall serve in such a capacity in relation to the Owner).
- 'Agent': Texas Utilities Services Inc., which has been engaged by Purchaser as its Agent (whenever it shall serve in such capacity in relation to the Purchaser).
- 'Engineer': Texas Utilities Services, Inc. which has been engaged by the Agent to act as its design engineer and shall have authority to prepare drawings and specifications, review Seller's design and inspect and expedite factory production and such other authority as Owner or Purchaser may delegate to it.

'Seller',  
'Vendor' or  
'Contractor': The party providing Services pursuant to this order.

'Constructor' Brown & Root, Inc. which has been engaged by the Agent to construct the Plant.

'Order': The Purchase Order or Contract to which these Terms and Conditions are attached, these Terms and Conditions, and any Specifications and Drawings, and all other documents, if any, attached to or specifically made a part of such Purchase Order or Contract and any amendments or supplements thereto.

'Price': The contract price set forth in the Contract or Purchase Order whenever these Terms and Conditions are attached to or incorporated in a Contract or Purchase Order, and otherwise shall mean the amount paid by the Purchaser to the Seller in consideration for the provision of the Services.

'Work': All of the testing procedures, engineering, design, workmanship, labor and any other services furnished or used.

TAXES

All present or future Federal, State, Municipal or other lawful taxes applicable by reason of the sale or delivery of the Services purchased hereunder shall be for the Purchaser's account at cost, except that any tax imposed directly against the Seller shall be for the Seller's account.

TEXAS STATE SALES/USE TAX  
Texas Limited Sales, Excise and Use Tax  
DIRECT PAYMENT EXEMPTION CERTIFICATE  
Permit Number 3-00007-5163-3

The services described herein are purchased under the above Direct Payment Permit, and Texas Utilities Generating Company Inc., will pay any such tax imposed therein direct to the State of Texas.

Texas Sales/Use Tax does not apply to charges for Transportation (except for Orders placed FOB Destination), Erection and/or Service Engineer. Therefore, if such charges are included in the Order Price, these charges must be shown as separate items on the invoice.

### TERMINATION

Either party upon fifteen (15) days prior written notice may terminate any purchase order issued under this Agreement and such termination can be either for convenience of TUGCO or for the default of SELLER. In the event of any such termination, SELLER shall be paid reasonable and proper termination charges including any and all sums then due and payable hereunder plus the expenses associated with the termination, including any additional expense incurred by reason of termination of SELLER'S agreements with its subcontractors and suppliers, and allocated in contemplation of purchase agreement performance. Upon such termination, all completed work and work in progress, prepared at the site and by SELLER specifically for TUGCO in performing this Agreement shall become the property of TUGCO. Such materials shall be delivered to TUGCO at time of termination.

### INSURANCE AND INDEMNITY

- A. SELLER will furnish proof of insurance on Texas Utilities Generating Company Form 4500-0008 which will meet the prescribed limits as set forth on this form. Insurance coverage must be kept current through the life of this Agreement. Such coverages shall contain provisions that no cancellation or material changes in the policies shall become effective except on fifteen (15) days advance written notice thereof to the office of TUGCO.
1. Site Insurance
    - a. If TUGCO Procures property damage insurance applicable to occurrences at the site and third party non-nuclear liability insurance, or either of such types of insurance, such insurance will either name SELLER and its subcontractors and suppliers of any tier, as additional insureds or provide that they will be protected as their interest may appear.
    - b. TUGCO will, at his own cost, prior to the arrival of nuclear fuel at the site, secure and thereafter maintain in force, with respect to the project, protection against liability arising out of, or resulting from a nuclear incident (as defined in the Atomic Energy Act of 1954, as amended) as follows:
      - (1) Liability insurance from the Nuclear Energy Liability Property Insurance Association (NEL-PIA) and/or the Mutual Atomic Energy Liability Underwriters (MAELU), or equivalent insurance, in such amount and such form as will meet the financial protection requirements of the U.S. Nuclear Regulatory Commission (NRC) pursuant to Subsection 170 (b) of the Atomic Energy Act of 1954, as amended. This insurance will include the interest of TUGCO and any other person or organization that may have legal responsibility for damage caused by the nuclear energy hazard.

- (2) A Government Indemnity Agreement with the NRC pursuant to Subsection 170 (c) of the Atomic Energy Act of 1954, as amended.

TUGCO shall continue to provide such insurance and indemnity against the foregoing risks with coverage in such amount and form as may be required by the Nuclear Regulatory Commission; provided, however, that if the nuclear liability protection system in effect on the date of this Agreement expires or is repealed, changed, or modified, TUGCO will, without cost to SELLER maintain liability protection through Government Indemnity, limitation of liability, and/or liability insurance which will not result in a material impairment of the protection afforded SELLER, its subcontractors and suppliers, of any tier, by such nuclear liability protection system which is in effect as of the effective date of this Agreement taking into account the availability of insurance, customary practice in the United States electric utility industry for plants of similar size and character, and other relevant factors in light of the then existing conditions. In any event, the protection provided pursuant to this provision shall remain in effect until the decommissioning of the nuclear plant.

2. Waivers by TUGCO

Neither SELLER nor its subcontractors or suppliers of any tier, shall be liable for loss of, damage to, or loss of use of any property or equipment wherever located, including such loss, damage, or loss of use arising out of or resulting from a "nuclear incident." TUGCO waives and to the extent permitted by its insurers will require its insurers to waive all rights of recovery against SELLER, its subcontractors and suppliers of any tier, on account of any such loss, damage, or loss of use.

In addition, TUGCO waives and will require its insurers to waive all rights of recovery against SELLER, its subcontractors and suppliers, of any tier, for any and all costs or expenses arising out of or in connection with the investigation and settlement of claims or the defense of suits for damage resulting from the nuclear energy hazard.

TUGCO shall obtain for the benefit of SELLER, its subcontractors and suppliers, of any tier, protection against liability for, arising out of, or resulting from damage to any property or equipment located at the plant site which is used or intended for use by TUGCO in connection with the operation of the nuclear power plant (including but not limited to the fuel) and which is owned by parties other than TUGCO.

INDEPENDENT CONTRACTOR

It is understood and agreed that SELLER shall be an independent contractor in the performance of this Agreement and shall not act as an agent or representative of TUGCO.

COMPLIANCE WITH LAWS

SELLER shall observe and abide by all applicable Federal and State laws including but not limited to such rules and regulations of the Equal Employment Opportunity Commission, the Office of Federal Contract Compliance, the Department of Labor, the Fair Labor Standards Act and the Federal Occupational Safety and Health Law (Public Law 91957) as of the date of this order.

WORK RULE COMPLIANCE

SELLER understand and agrees to abide by all established work rules and work periods established by TUGCO.

INDEMNIFICATION

SELLER shall indemnify and hold harmless TUGCO, its Agents and employees from and against all damages, losses, and expense arising out of or resulting from the performance of the work, provided that any such damage, loss or expense (a) is attributable to bodily injury, sickness, disease or death or to injury to any person or destruction of tangible property belonging to a third party and (b) is caused by the sole negligence of SELLER; provided, however, that this indemnification will not apply to any such injuries (including death), damages, or losses which result from a "nuclear incident" as defined in the Atomic Energy Act of 1954, as amended.

NONASSIGNMENT

This Agreement or any Purchase Order issued pursuant to this Agreement will not be assigned by either party without the prior written consent of the other party, which consent will not be reasonably withheld. Any purported assignment without such prior written consent shall be null and void.

NON-DISCLOSURE

TUGCO and SELLER may have a proprietary interest in certain portions of the information that will be furnished to the other pursuant to this Agreement. Each party will keep in confidence and will not disclose any such information which is specifically designated as being proprietary to the other without the prior written permission of the other. The provisions of this paragraph shall not apply to information, notwithstanding any confidential designation thereof, which is known to the other party without limitation or restriction at the time of disclosure, which is or becomes generally available to the public without breach of the Agreement, or which is received from a third person without limitation or restriction at the time of disclosure.

### PATENT INDEMNITY

SELLER will defend any suits or proceedings brought against TUGCO so far as based on any allegation that any service or process furnished hereunder by , or any part thereof or use thereof, for its intended purpose, constitutes an infringement of any patent, if SELLER is notified promptly in writing and given authority, information and assistance for the defense of such suit or proceeding. SELLER will not be responsible for any settlement of such suit or proceeding made without its written consent. SELLER will pay all damages and costs awarded in any suit or proceeding so defended. In the event any service or process which is the subject hereof, or any part or use thereof, for its intended purpose, is determined, as a result of any suit or proceeding, to constitute an infringement of a patent, or its use is enjoined, SELLER will at its own cost and expense, either: (a) procure for TUGCO the right to continue using such service or process or part thereof, or (b) replace it with substantially equivalent noninfringing, or (c) modify it so it becomes non-infringing without detracting from its functional capability. This indemnity shall not apply to the extent that any service or process furnished hereunder, or any part thereof, is (a) supplied according to TUGCO's design or instructions wherein compliance therewith has caused SELLER to deviate from its normal course of performance, (b) modified by TUGCO, or (c) combined by TUGCO with items not furnished hereunder and by reason of said design, instruction, modification, or combination or suit or proceeding is brought against TUGCO.

The foregoing states the entire liability of SELLER with respect to patent infringement.

### WARRANTIES

#### A. Services

SELLER warrants that the recommendations, guidance and performance of its personnel will reflect competent professional knowledge and judgment. In the event any portion of the services supplied hereunder fails to comply with this warranty obligation and SELLER is so notified in writing prior to one (1) year after completion of such portion, SELLER will correctly perform such portion of the services at no additional cost to TUGCO or, at TUGCO's option, will refund the amount of the compensation paid for such portion.

#### B. Limitation of Warranties and Remedies

The WARRANTIES SET FORTH IN THIS ARTICLE ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER WARRANTIES WHETHER STATUTORY, EXPRESS, OR IMPLIED (INCLUDING ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND ALL WARRANTIES ARISING FROM COURSE OF DEALING OR USAGE OF TRADE). The remedies provided above are TUGCO's sole and exclusive remedies for any failure by SELLER to comply with the warranty provisions, whether claims by TUGCO are based in contract, in tort (including negligence and strict liability), or otherwise.

#### FORCE MAJEURE

- A. SELLER will not be liable for failure to perform or delay in performance resulting from any cause beyond SELLER's reasonable control or acts of God, acts of civil or military authority, acts (including delays, failure to act, or priorities) of any governmental authority or TUGCO, insurrection or riot, sabotage, fire, flood, strikes, work stoppage or other labor difficulties, embargoes, car shortages, fuel or energy shortages, wrecks, major equipment breakdown, delays in transportation, or failure or delay beyond its reasonable control in obtaining necessary manufacturing facilities, labor, or materials, from SELLER's usual sources; provided, however, that SELLER will notify TUGCO in writing of any such event within thirty (30) days after SELLER becomes aware of its occurrence.
- B. In the event of a delay in performance due to such causes, the time of performance of the work will be extended by a period of time reasonably necessary to overcome the effect of the delay. The cost of any special measures taken by SELLER at the request of TUGCO to overcome such effect or the cost to SELLER of delays resulting from any acts by TUGCO will be for TUGCO's account.
- C. Notwithstanding paragraph B, above, if TUGCO is unable to sustain the necessary schedule delay, TUGCO may terminate any affected Purchase Order upon reasonable prior written notice to SELLER and payment of reasonable and proper termination charges.

#### LIMITATION OF LIABILITY

Neither SELLER nor its subcontractors and suppliers, of any tier, will be liable to TUGCO or TUSI whether in contract, in tort (including negligence and strict liability), under any warranty, or otherwise, for any special, indirect, incidental, or consequential loss or damage, or loss of use of equipment or power system, expenses involving costs of capital, loss of profits or revenues or the loss of use thereof, cost of purchased or replacement power (including additional expenses incurred in using existing power facilities), or claims of customers of TUGCO. The REMEDIES set forth herein are exclusive; and the total cumulative liability of SELLER whether in contract, in tort (including negligence and strict liability), under any warranty, or otherwise will be limited to the replacement value of the service or the market value of the service furnished under this Agreement on which such liability is based as of the date of the claim or the expiration of the warranty period applicable to such service, whichever is earlier.

#### TRANSFER

Prior to the transfer to another party of any work product submitted as the result of any services performed or the transfer of any interest in such work product, TUGCO shall obtain for SELLER written assurances from the

transferee of limitation of and protection against liability following the proposed transfer at least equivalent to that afforded SELLER, its subcontractors and suppliers of any tier, under the provisions of this Agreement. Transfer contrary to the provisions of this Article shall, in addition to any other legal or equitable rights of SELLER, make TUGCO the indemnitor of SELLER, its subcontractors and suppliers of any tier, against any liabilities incurred by SELLER, its subcontractors and suppliers of any tier, excess of those that would have been incurred had no such transfer taken place.

RIGHT TO AUDIT

TUGCO shall have the right to examine and audit the books and records of SELLER at any reasonable time. Such books and records of SELLER will be maintained in accordance with generally accepted principals of accounting and will be adequate to enable determination of; (1) the substantiation and accuracy of any payments required to be made under this agreement; and (2) compliance with the provisions of this agreement.

REVISIONS OR AMENDMENTS

Any revisions and amendments to the order shall be effected by a supplement to the order, which supplement shall be furnished in writing. All terms and conditions of the original purchase order remain in effect in full except those items specifically addressed in the supplement.





*Corrosion  
Control Services*

ATTACHMENT 1  
PURCHASE ORDER CPF 16245  
DATED: 8/1/83

# OLIVER B. CANNON & SON, INC.

*Industrial Painting Specialists*

5600 WOODLAND AVENUE · PHILADELPHIA, PA 19143  
AREA CODE (215) 729-4600 · TWX 710-670-0482

## CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENT

January 1, 1983

LIST XIII

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

		<u>PER</u> <u>DAY</u>	<u>PER</u> <u>WEEK</u>	<u>PER</u> <u>MONTH</u>
<u>A. AIR SUPPLY EQUIPMENT :</u>				
<u>AIR COMPRESSORS</u>				
1.	15 CFM	19.50	60.25	174.00
2.	40 CFM	20.50	69.75	218.00
3.	55 CFM	20.50	69.75	218.00
4.	85 CFM	34.25	109.00	315.00
5.	100 CFM	36.75	116.00	340.00
6.	125 CFM	40.25	130.00	377.00
7.	150 CFM	47.00	146.00	425.00
8.	185 CFM	64.25	189.00	548.00
9.	210 CFM	69.75	215.00	633.00
10.	250 CFM	82.75	253.00	746.00
11.	315 CFM	96.75	307.00	888.00
12.	365 CFM	113.00	326.00	933.00
12a.	425 CFM	119.00	384.00	1,105.00
13.	600 CFM	153.00	477.00	1,345.00
14.	750 CFM	182.00	568.00	1,609.00
15.	900 CFM	212.00	639.00	1,901.00
16.	1050 CFM	244.00	778.00	2,197.00
17.	1200 CFM	298.00	874.00	2,514.00
18.	1500 CFM	300.00	1,040.00	2,900.00
19.	1600 CFM	302.00	1,043.00	2,952.00
20.	2000 CFM	450.00	1,400.00	4,200.00
<u>AIR COMPRESSORS (SILENCED)</u>				
1.	85 CFM	42.00	120.00	345.00
2.	125 CFM	55.25	159.00	459.00
3.	250 CFM	97.50	281.00	810.00
4.	425 CFM	130.00	393.00	1,192.00
5.	600 CFM	165.00	484.00	1,390.00
6.	750 CFM	201.00	596.00	1,738.00
7.	1000 CFM	290.00	880.00	2,675.00
8.	1200 CFM	315.00	955.00	2,713.00
9.	1750 CFM	467.00	1,414.00	4,285.00
<u>AIR SUPPLY ACCESSORIES</u>				
51.	3/4" X 50' Air Hose	4.40	11.75	28.50
52.	1" X 50' Air Hose	5.40	14.50	37.25
53.	1-1/2" X 50' Air Hose	10.50	28.75	80.75
54.	Air Manifold	7.25	22.00	66.00
55.	2" X 25' Air Hose	8.20	25.75	70.25
56.	3" X 25' Air Hose	11.00	33.00	90.00

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
<b>B. <u>POWER TOOLS :</u></b>				
1.	Grinders/Sanders	14.50	43.50	132.00
2.	Chipping Hammers	13.50	41.00	124.00
3.	Needle Guns	13.50	41.00	124.00
4.	Floor Sanders	10.00	30.00	90.00
5.	Scabblor - Type L-7	84.00	255.00	772.00
6.	Roto.Peen (Desco Brader)	18.00	54.00	163.50
<b>C. <u>SANDBLAST EQUIPMENT :</u></b>				
<u>BLAST UNITS</u>				
1.	100# Unit Only	24.25	72.25	198.00
2.	300# Unit Only	36.75	113.00	324.00
3.	600# Unit Only	48.50	145.00	393.00
3a.	900# Unit Only	67.75	205.00	622.00
4.	5 Ton Bulk Unit Only, Mobile	131.00	397.00	1,203.00
5.	6 Ton Bulk Unit Only, Mobile	140.00	425.00	1,287.00
6.	7 Ton Bulk Unit Only, Mobile	151.00	458.00	1,388.00
7.	22 Ton Bulk Unit Only, Stationary	165.00	500.00	1,516.00
8.	40 Ton Bulk Unit Only, Stationary	214.00	648.00	1,965.00
9.	TR 4600 39 Ton Bulk Unit, Mobile	434.00	1,317.00	3,992.00
10.	TR 4600 39 Ton Bulk Unit, Mobile with VRU 5600	700.00	2,124.00	6,438.00
11.	Spin Blasting Unit	82.50	250.00	750.00
12.	Hollow Blasting Unit	31.00	92.00	275.00
<u>BLAST UNIT ACCESSORIES</u>				
21.	Breathing Air Purifier	7.50	22.25	74.00
22.	50' Breath Line for Hood	1.60	4.75	14.50
23.	Air Fed Blast Hood	18.25	47.75	132.00
24.	Pneumatic Dead Man Control Valve	13.50	41.00	124.00
25.	50' Dead Man Hose 1/4"	1.75	5.25	16.00
26.	Electric Dead Man Control Switch	14.00	42.50	129.00
27.	50' Electric Cord #214	1.75	5.00	15.25
28.	50' Blast Hose 3/4"	8.45	23.50	64.00
29.	50' Blast Hose 1-1/4" - 1-1/2"	14.75	37.00	105.00
30.	Whip (per 10' sections)	5.00	00	34.50
31.	Moisture Separator	9.00	27.75	84.00
32.	Moisture Separator Above 1000 CFM	34.00	102.50	310.50
33.	Nozzle	12.00	33.00	89.50
34.	Air Receiver	26.00	79.00	237.50

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENT

CONTRACTOR OWNED

		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
<u>STORAGE HOPPERS/TRAILERS</u>				
41.	35 - 40 Ton	101.50	306.00	927.00
42.	Air Slide	113.00	342.00	1,036.00
43.	4" X 25' Transfer Hose	3.25	9.50	28.50

SAND REMOVAL EQUIPMENT

50.	Copus Mucking Pump	84.00	255.00	774.00
51.	Sand Hog	40.00	120.00	360.00
52.	2" X 50' Sand Hog Hose	11.75	35.50	107.00
53.	3" X 50' Sand Hog Hose	15.50	42.00	127.50
54.	4" X 50' Sand Hog Hose	16.50	50.00	151.50
55.	Auto Dump	71.25	216.00	654.00

D. VACUUM RECOVERY EQUIPMENT :

1.	Utility Blaster	71.25	216.00	654.00
2.	Super Utility Blaster	136.00	441.00	1,246.00
3.	Electric Dust Collector	103.25	313.00	948.00
4.	10" Vacuum Recovery Unit	264.00	799.00	2,423.00
5.	15" Vacuum Recovery Unit	627.00	1,899.00	5,753.00
6.	23" Water Vacuum - Electric	650.00	1,970.00	5,968.00

BLAST UNIT AND RECOVERY EQUIPMENT ACCESSORIES

11.	4" X 20' Vacuum Pipe	2.65	8.00	24.00
12.	2" Vacuum Hose, per foot			3.95
13.	3" Vacuum Hose, per foot			4.60
14.	4" Vacuum Hose, per foot			5.85

E. WATERBLASTING EQUIPMENT :

1.	Waterblast Unit 7,000 to 10,000 PSI	274.00	830.00	2,514.00
2.	Waterblast Unit 6,000 PSI	254.00	768.00	2,328.00
3.	Waterblast Unit 10,000 PSI(2 lances)			
	truck mounted - 20 gal. per minute	353.50	1,071.00	3,245.00
6.	Hydro-clean Unit - 1,000 PSI	48.85	148.00	448.00

WATERBLAST ACCESSORIES

11.	50' Discharge Hose	15.00	45.25	137.00
12.	50' Suction Hose	2.00	6.00	18.50
13.	Waterblast Gun	9.75	29.50	89.50
14.	Foot Control Valve	10.50	32.00	97.00

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

	<u>PER</u> <u>DAY</u>	<u>PER</u> <u>WEEK</u>	<u>PER</u> <u>MONTH</u>
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F. STEAM CLEANERS (Chemicals Not Included) :

1.	Steam Cleaner - 100#	34.00	103.50	314.00
2.	Steam Cleaner - 150#	38.50	116.00	352.00
11.	Steam Hose (per 25' Sections)	2.50	7.50	23.00
12.	Steam Gun	1.00	3.00	8.75

G. CONVENTIONAL SPRAY EQUIPMENT :CONVENTIONAL SPRAY UNITS

1.	2 Gallon Tank Unit Only	14.00	42.00	126.50
2.	5 Gallon Tank Unit Only	18.50	55.50	168.00
3.	10 Gallon Tank Unit Only	23.00	69.50	210.00
4.	2 Gallon Agitated Tank Unit Only	20.50	62.50	189.00
5.	5 Gallon Agitated Tank Unit Only	27.00	81.00	245.00
6.	10 Gallon Agitated Tank Unit Only	37.00	111.00	336.00

CONVENTIONAL SPRAY UNIT ACCESSORIES

12.	Drill Mixer	4.50	13.50	40.50
13.	Conventional Spray Gun	5.00	15.00	45.00
14.	Conventional Pole Gun	6.00	18.50	54.00
15.	Conventional Spray Heater	6.50	19.50	59.00
16.	3/8" X 50' Conventional Spray Hose	2.25	6.75	20.00
17.	1/2" X 50' Conventional Spray Hose	3.00	9.00	27.00
18.	5/16" X 50' Air Hose	2.00	6.00	17.50

H. AIRLESS SPRAY EQUIPMENT :AIRLESS SPRAY UNITS

1.	Graco Electric	46.00	140.00	423.50
2.	Wagner Electric	46.00	140.00	423.50
3.	Wagner Gasoline	46.00	140.00	423.50
4.	Monarch - 22:1	20.00	60.00	181.00
5.	President - 28:1	35.00	106.00	321.50
6.	President - 30:1	35.00	106.00	321.50
7.	Bulldog - 30:1	46.50	140.25	425.00
8.	Bulldog - 45:1	48.00	146.00	441.50
9.	King - 45:1	48.00	146.00	441.50
10.	King - 55:1	50.00	151.00	457.50
11.	Speed Flow - 28:1	49.00	148.50	450.00

AIRLESS SPRAY ACCESSORIES

21.	1/4" X 50' Airless Hose	3.75	11.00	33.00
22.	3/8" X 50' Airless Hose	8.00	24.50	74.00
23.	1/2" X 50' Airless Hose	11.00	33.00	100.00
24.	Airless Gun	5.50	16.75	50.50
25.	Airless Pole Gun	7.00	21.00	63.00
26.	Airless Spray Heater	12.00	36.00	108.00

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
<b>I. HEAVY MATERIAL SPRAY EQUIPMENT :</b>				
<u>HEAVY MATERIAL SPRAY UNITS</u>				
1.	Standard Pump - 8:1	24.50	74.00	223.50
2.	High Capacity Pump - 10:1	42.00	127.00	384.00
3.	Bulldog Pump - 45:1	47.00	142.00	430.00
4.	King Pump-45:1 with Ram Elevator	56.50	171.25	519.00
5.	King Pump-45:1 with Modified Hopper Feed	55.00	166.00	503.00
6.	Grover Pump - 10:1	48.00	145.00	439.00
7.	Binks - 30:1 Special Polyester	60.00	180.75	547.75
8.	Essex Model #9 Plaster Pump	57.00	172.50	522.50
9.	King Pump 20:1	48.00	146.00	441.50
<u>HEAVY MATERIAL SPRAY UNIT ACCESSORIES</u>				
21.	3/8" X 50' Air Hose	2.00	5.50	17.00
22.	1/2" X 50' Material Hose	4.25	12.50	38.00
23.	3/4" X 50' Material Hose	5.00	15.00	45.00
24.	1" X 50' Material Hose	9.50	29.00	88.00
25.	Mastic Gun	5.00	15.00	45.00
26.	Mastic Pole Gun	6.50	20.00	60.00
27.	Drum Heater	2.00	6.00	18.50
<b>J. SCAFFOLDING AND RIGGING EQUIPMENT :</b>				
<u>STEP LADDERS</u>				
1.	6'	2.50	7.00	21.25
2.	8'	2.50	7.25	22.00
3.	10'	2.50	7.70	23.00
4.	12'	3.00	8.50	25.75
5.	14' and over	3.00	9.00	27.00
<u>EXTENSION LADDERS</u>				
6.	20' and under	2.25	7.00	21.25
7.	24'	2.75	8.00	24.25
8.	26'	3.00	9.00	27.00
9.	28'	3.25	9.75	29.50
10.	30'	3.50	10.50	32.00
11.	32'	3.75	11.75	35.50
12.	36'	4.25	13.25	40.00
13.	40'	4.75	14.50	44.00
<u>SCAFFOLDING AND RIGGING EQUIPMENT :</u>				
<u>PICKS AND TRUSSES</u>				
14.	10' - 16'	2.50	7.00	20.75
15.	18' - 24'	3.25	14.00	43.00
16.	26' - 32'	5.50	16.50	50.00
17.	34' - 36'	5.50	16.50	50.00
18.	38' - 40'	6.50	20.00	60.00

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

<u>RIGS</u>		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
21.	Block and Fall	2.00	6.00	18.50
22.	Air or Elec. Sky Climber/Power Climber	38.50	117.00	355.00
23.	Air or Elec. Spider	42.00	127.00	385.00

MISCELLANEOUS ITEMS

61.	3/8" Wire Cable per foot			.23
62.	50' Elec. Cord for Sky Climber	5.50	17.00	52.00
63.	50' Air Hose for Sky Climber	3.25	9.75	29.50
64.	Boatswain Chair	1.25	4.00	12.00
65.	Stirrup	2.00	5.50	17.00
66.	Guard Rail	1.00	2.50	7.50
67.	Hooks	1.00	2.50	7.50
68.	Come Along	3.25	9.50	28.50
69.	Aluminum Beams	2.50	7.50	22.50
70.	Beam Clamps	1.50	4.00	12.00
71.	Fly Deck; per pair	5.00	15.00	46.00
72.	Sky Climber Work Basket	7.50	23.00	69.25
73.	Rotating Rigging Frame (merry-go-round)	38.50	117.00	355.00

TUBE SCAFFOLDING

81.	Tube Scaffolding per section	1.00	3.00	8.50
82.	Platform (each)	1.50	4.00	12.00
83.	Casters (each) 8" dia. heavy duty wheel/lock	1.00	1.75	4.75
84.	Handrail Set	1.00	2.75	8.50

K. GENERATORS, DRYERS, AIR MOVERS,  
HEATERS AND DEHUMIDIFIERS:

1.	115 Volt Generator	10,000 watt	47.00	142.00	430.00
2.	115 Volt Generator	5,000 watt	37.00	112.00	339.00
3.	115 Volt Generator	3,500 watt	30.00	90.00	272.00
4.	115 Volt Generator	2,500 watt	25.50	77.50	234.50
11.	Air Dryer	- 100 CFM-Refrigerant	39.00	117.00	355.00
12.	Air Dryer	- 600 CFM-Refrigerant	86.00	260.00	787.00
13.	Air Dryer	- 1200 CFM to 1500 CFM Refrigerant/Desiccant	131.50	398.00	1,205.00
14.	After Cooler-	1200 CFM to 1500 CFM Air Cooled	113.00	342.00	1,035.00
15.	After Cooler-	1200 CFM to 1500 CFM Hydro Cooled	62.50	189.00	572.00
21.	Air Movers	- 1500 CFM-Electric or air	10.00	30.00	92.00
22.	Air Movers	- 3000 CFM-Electric or air	16.50	50.00	151.50
23.	Air Movers	- 6000 CFM-Electric or air	20.50	62.00	188.00
24.	Air Movers	- 11000 CFM-Electric or air	32.00	97.50	295.00

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
30.	Heater to 50,000 BTU-Electric	18.00	55.00	166.00
36.	Heater to 1,300,000 BTU	130.00	393.50	1,193.00
37.	Heater to 2,000,000 BTU	151.00	457.00	1,384.00
38.	Controlled Air Supply Trailer-includes 2,000 CFM Compressor, 2,400 CFM Air Dryers, 2-NL100 Oil Separators and 1-700 Gal. Air Receiver	1,050.00	3,182.00	9,642.00
39.	9000 CFM Dehumidification Unit with Dust Collectors	998.00	3,023.00	9,161.00
40.	40,000 CFM Dust Collector System- Portable	847.00	2,566.00	7,776.00
41.	18,500 CFM Dust Collector System	393.00	1,190.00	3,300.00

M. TRAILERS:

1.	Storage Trailer	21.00	63.50	192.00
2.	Office Trailer	16.00	49.00	149.00
3.	Office/Storage Trailer	21.00	63.50	192.00
4.	Flat Bed Trailer	12.50	38.00	114.00
5.	Climate Controlled Storage	56.50	171.00	519.00

N. QUALITY ASSURANCE/QUALITY CONTROL EQUIPMENT:

1.	Dry Film Thickness Gauge	6.00	18.00	54.00
2.	Electronic Holiday Detector	5.50	16.50	50.00
3.	Humidity/Temperature Recorder	14.70	44.50	134.50
4.	Surface Profile Comparator	2.25	6.50	19.50
5.	Surface Thermometer	1.50	4.00	12.00
6.	Sling Psychrometer	1.50	4.00	12.00
7.	Moisture Meter	3.25	9.50	28.50
8.	Minmitector 150	12.50	38.00	115.00
9.	Tooke Gauge	3.75	11.00	34.00
10.	Amprobe Fastemp Thermometer	1.75	5.25	16.00
11.	Light Meter	5.00	15.00	45.00
12.	Needle Pressure Gauge	1.00	2.50	7.00
13.	Adhesion Tester	6.00	17.50	52.50
14.	Explosimeter	6.00	17.50	52.50
15.	Pocket Thermometer	2.00	5.50	16.50
16.	NBS Calibration Standard Shims	1.75	5.00	15.00
17.	Swedish Standards SS (VIS I)	1.00	2.00	6.00
18.	Wet Film Gauge	1.25	3.25	9.50
19.	Psychron	3.00	9.00	27.50

O. GENERAL TOOLS AND EQUIPMENT:

1.	Flood Light Stands - Conventional	8.00	24.00	73.00
2.	50' Electric Cord - Explosion Proof	3.00	6.00	16.00
3.	50' Electric Cord - Extension Cord	1.00	2.25	6.50



CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENTCONTRACTOR OWNED

		<u>PER DAY</u>	<u>PER WEEK</u>	<u>PER MONTH</u>
4.	Flexible Duct per 25' Section (8")	5.25	15.50	47.00
5.	Flexible Duct Per 25' Section (12")	7.75	23.50	71.00
6.	Flexible Duct per 20' Section (18")	9.25	27.75	84.00
7.	Portable Radios	7.25	22.00	66.50
9.	Vacuum Cleaner-Industrial Heavy Duty	20.00	60.50	183.00
10.	Heavy Duty Floor Vacuum w/power brush	47.50	144.00	436.00
11.	Communications - Base Station	15.25	45.75	138.75
12.	Gang Boxes	6.50	19.50	59.00
13.	Fuel Storage Tank	14.50	43.50	132.00
14.	Stencil Machine 1"	12.00	36.00	109.00
15.	Stencil Machine 4"	48.00	144.00	436.00

T. VEHICLES:

1.	Ranchero	37.00	111.00	333.00
2.	1/2 Ton Van	37.00	111.00	333.00
3.	1/2 Ton Pick-up	37.00	111.00	333.00
4.	3/4 Ton Pick-up	40.50	123.00	372.50
5.	3/4 Ton Pick-up 4WD	43.50	131.50	398.50
6.	1 Ton Pick-up	43.50	131.50	398.50
8.	1-1/2 Ton Stake	44.00	133.50	405.00
9.	2 Ton Van	38.00	115.50	349.00
10.	1-1/2 Ton Van	44.00	133.50	405.00
11.	2-1/2 Ton Stake	57.75	175.00	529.00
12.	Single Axle Tractor	72.25	219.00	664.00
13.	Twin Axle Tractor	80.00	242.50	734.50

CONSUMABLE EQUIPMENT ACCESSORIES:

The following accessories will be billed on a straight purchase basis at cost plus 10%.

DDSB

Brushes  
Gun Bodies  
Nozzles  
Innercomes  
Vacuum Manifold

SCAFFOLDING

3/4" Rope  
Plywood Sheets

ALUMINUM ADHESION DOLLIESWATERBLASTING

Lances  
Tips and Nozzles

POWER TOOLS

Chipping Chisels  
Brush Heads  
Needles  
Roto Peen Pads

CURRENT SCHEDULE OF REIMBURSABLE EQUIPMENT

CONTRACTOR OWNED

TERMS AND CONDITIONS OF RENTAL

TIME BASIS OF RATES:

Rental rates are based on normal work hours consisting of:

- 8 hours per day
- 40 hours per week
- 176 hours per month

The rate for hours in excess of the above will be 1/8, 1/40, or 1/176 of the daily, weekly or monthly rates, respectively.

EQUIPMENT OPERATION AND MAINTENANCE:

The leasee is responsible for all normal operating and maintenance costs, including fuel, lubricants, filters, etc.

REPAIR COSTS:

The leasee is responsible for all repair costs beyond "Normal Wear and Tear." "Normal Wear and Tear" is defined as that which would be expected to result from the use of the equipment under normal circumstances, provided the equipment is properly maintained and serviced.

RENTAL PERIOD:

The rental period starts when the equipment leaves the lessor's warehouse and stops upon return to such warehouse.

FREIGHT CHARGES:

All freight charges are to be borne by the leasee.

Contractor-owned vehicles used for delivery will be charged as follows:

1. Pick-up Truck.....Daily Rental Plus \$.45 per mile.
2. Stake Truck.....Daily Rental Plus \$.55 per mile.
3. Tractor.....Daily Rental Plus \$.83 per mile.

TEXAS UTILITIES GENERATING COMPANY  
A DIVISION OF TEXAS UTILITIES ELECTRIC CO.

100,000.00

ORIGINAL ORDER INCLUDING AMENDMENTS BY PREVIOUS SUPPLEMENTS

0.00

ADDITION BY THIS SUPPLEMENT

0.00

DEDUCTION BY THIS SUPPLEMENT

100,000.00

AMENDED TOTAL

PURCHASE ORDER SUPPLEMENT

Texas Utilities Generating Co.  
P.O. Box 1002, Glen Rose, Texas 76043

SUPPLEMENT NUMBER

1

TO

P. O. NO. CPF 16245

DATE

ACCOUNT NO.

6/25/84

1-2-9230-940000-108

SHIPMENT PROMISED BY

NOT APPLICABLE

ORIGINAL NOTIFICATION  
X

CONFIRMATION

T  
O

OLIVER B. CANNON AND SON, INC.  
9001 AIRPORT BLVD., SUITE 801  
HOUSTON, TEXAS 77061

NO CHANGES IN OR CANCELLATIONS OF PURCHASE ORDERS WILL BE RECOGNIZED UNLESS AUTHORIZED BY THIS SUPPLEMENT FORM ISSUED ONLY BY THE PURCHASING DEPARTMENT.

R 31414

VENDOR WILL SIGN AND RETURN CARBON COPY OF THIS SUPPLEMENT THE PURCHASING DEPARTMENT HAS MADE THE FOLLOWING CHANGES IN THE ABOVE NUMBERED PURCHASE ORDER

ITEM NO.	QUANTITY WANTED	U/I	DESCRIPTION	NET UNIT PRICE	TOTAL ITEM PRICE
1	1	LOT	<p>THIS SUPPLEMENT NO. 1 IS ISSUED TO AUTHORIZE PAYMENT OF ADDITIONAL TRAVEL EXPENSES PER O. B. BANNON'S INVOICE NO. B-04002 DATED 4/1/84, NO. B-04002 DATED 4/30/84 AND NO. B-01001 DATED 1/31/84 AND C. R. GRAVES, TUGCO AND J. J. NORRIS, O. B. CANNON AGREEMENT OF 5/31/84.</p> <p><u>NOTE:</u></p> <p>ADDITIONAL RELATED EXPENSES WHICH MAY BE INCURRED BY O. B. CANNON PERSONNEL ATTENDING HEARINGS AND GIVING TESTIMONY AS DIRECTED BY TUGCO MANAGEMENT WILL BE REIMBURSED UNDER THE SCOPE OF THIS PURCHASE ORDER AT ACTUAL COST INCURRED.</p> <p>PAYMENT AUTHORIZED BY THIS SUPPLEMENT NO. 1 AS FOLLOWS:</p> <p>50% OF ACTUAL EXPENSES (PER ABOVE INVOICES)</p> <p>TOTAL THIS SUPPLEMENT NO. 1</p> <p>THE ABOVE PRICE IS FIRM AND NOT SUBJECT TO ESCALATION.</p>	\$7,800.33/LT	\$7,800.33

Except as herein amended, this Supplement carries forth and preserves all Terms and Conditions of the original Purchase Order and previous Supplements.

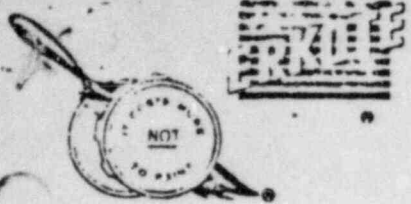
ASUN FOR CHANGE TO AUTHORIZE PAYMENT OF ADDITIONAL TRAVEL EXPENSES

CHANGED BY B. THOMPSON/ph (817) 897-4881 EXT 184  
REQUISITIONER B. THOMPSON/JTM (817) 897-4881 EXT 184

TEXAS UTILITIES GENERATING COMPANY

*F. D. P. [Signature]*  
PURCHASING AGENT

VENDOR' COPY



# OLIVER B. CANNON & SON, INC.

*Industrial Painting Specialists* ATTACHMENT B

9001 AIRPORT BLVD. · SUITE 801 · HOUSTON TEXAS 77061  
PHONE 713 947-9670

*Corrosion  
Control Services.*

July 15, 1983

*File  
H-8301*

REPLY TO:  
P.O. BOX 166 · SOUTH HOUSTON, TX 77587

C8301:001

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

Attention: Mr. J. T. Merritt, Jr., P.E.  
Engineering & Construction Manager

Reference: Texas Utilities Generating Company  
Comanche Peak Steam Electric Station  
1981-83 - 2300 MW Installation  
Gibbs & Hill Project No. 2323  
05277 Protective Coatings  
Specification No. 2323-AS-31

Gentlemen:

Thank you for the time and courtesies extended to me during my visit to the jobsite on July 13, 1983. We are organizing our analysis of the Service Level One coating effort into the following categories:

- |                                      |                                |
|--------------------------------------|--------------------------------|
| 1-Production                         | 5-Quality Control              |
| 2-Work Procedures                    | 6-Management of Coating Effort |
| 3-Scheduling                         | 7-Future Maint. Considerations |
| 4-Training and Painter Qualification | 8-Specifications               |

Per the above breakdown, we will send you our recommendations and observations, individually as we perceive the need, rather than wait until we complete our analysis. Please promptly indicate your acceptance, rejection or "needs further study" so that we don't waste time on recommendations that can't be implemented for reasons we might not be aware.

I have reviewed the commercial terms with John Youngblood and confirm them on Exhibit A (attached). TUSI General Terms and Conditions are acceptable except for the Hold Harmless Clause. A limited Hold Harmless Clause is acceptable.

We will, of course, send you a weekly report, indicating manpower, work in process, etc.

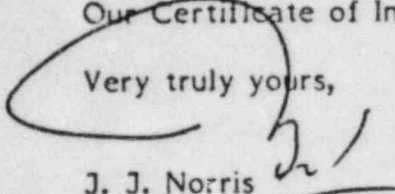
July 15, 1983

Texas Utilities Generating Company  
Comanche Peak Steam Electric Station

Page 2

Our Certificate of Insurance was mailed to Mr. Gentry's attention on July 14, 1983.

Very truly yours,

  
J. J. Norris  
Vice President

/d

cc: R. B. Roth  
A. P. McDonald  
T. F. Rogers

Attachment: Exhibit A

OLIVER B. CANNON, S... INC.

EXHIBIT A  
FEE SCHEDULE

A.	Management Personnel	\$500/day + reasonable expenses
B.	Line Personnel	\$400/day + reasonable expenses
C.	Technical Personnel	
	1. Site	\$350/day + reasonable expenses
	2. Office	\$250/day
D.	Clerical Personnel	Cost
E.	To A, B, C & D above add 16% for overhead	
F.	FIXED FEE thru 9/15/83 (Negotiable after 9/15/83)	\$63,000
G.	Test Equipment (if necessary)	Per OBC List XIII(attached)
H.	Terms:	Net 30

RECOMMENDATION INDEX

1. PRODUCTION
2. WORK PROCEDURES
3. SCHEDULING
4. TRAINING & PAINTER QUALIFICATION
5. QUALITY CONTROL
6. MANAGEMENT OF COATING EFFORT
7. FUTURE MAINTENANCE CONSIDERATIONS
8. SPECIFICATIONS

July 25, 1983





Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 1-001

SUBJECT: Production

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

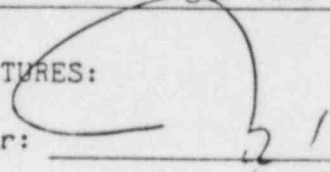
SAFETY RELATED DOCUMENT:        YES  NO

DESCRIPTION: As of 7/15/83 the painting crew was as follows:

Level 1 Helper - 49	Sandblast - 5
Level 2 Helper - 54	Foreman - 38
Level 3 Helper - 165	Gen. Foreman - 5
Painter (Brush) - 53	Operator - 2
Painter (Spray) - 69	Laborer - 4

8,564 Manhours for straight time and 2,984 Manhours for premium time

APPROVAL SIGNATURES:

Originator: 

OBC QC: N/A

TUSI Representative: \_\_\_\_\_

Date: 7/25/83

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt



Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 1-002

SUBJECT: Production

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

Hard Hat Identification: Most painters do not have numbers on hard hats.

I recommend that painters have numbers so that employees can be properly identified.

APPROVAL SIGNATURES:

Originator: [Signature]

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 2-001

SUBJECT: Work Procedures

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT:        YES  NO

DESCRIPTION:

Painters are requiring 100% safeway type scaffolding in almost all situations.

Consistent with safety considerations, we recommend that more use be made of

spiders, sky climbers and similar devices when appropriate.


\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

APPROVAL SIGNATURES:

Originator:  21

Date: 7/25/83

OBC QC: \_\_\_\_\_

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 3-001

SUBJECT: Scheduling

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

There is a great amount of work to do in the Aux. Bldg. I recommend that the  
painting in the Aux. Bldg. be tied into the start-up schedule on a room-by-room  
basis with a specific amount of time allocated to each room.

APPROVAL SIGNATURES:

Originator: [Signature]

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 3-002

SUBJECT: Scheduling

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

At the present rate of progress the coating work inside the containment and the Aux. Bldg. will not be done by the time you expect to load fuel. I recommend that a detailed daily work plan and schedule for the remaining five (5) months be submitted by Brown & Root for TUGCO's approval for the remaining five (5) months.

APPROVAL SIGNATURES:

Originator: [Signature]

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 6-001

SUBJECT: Management of Coating Effort

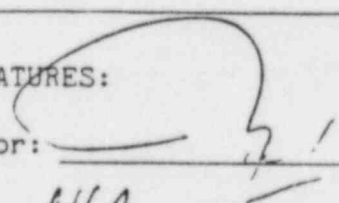
REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT:        YES  NO

DESCRIPTION:

Because of lack progress on the balance of plant, recommend that  
TUGCO Purchasing go out for bids on remaining work.

APPROVAL SIGNATURES:

Originator: 

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 6-002

SUBJECT: Management of Coating Effort

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

Project organization, ie; TUGCO Managers for each area places severe strains on  
Jr. Haley's ability to manage the painting program.

I recommend that the chain of command be revised so that Haley reports to one  
person.

APPROVAL SIGNATURES:

Originator: [Signature]

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt



Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 6-003

SUBJECT: Management of Coating Effort

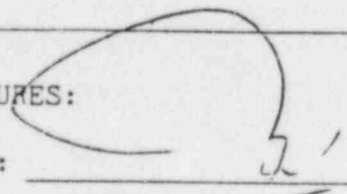
REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT:        YES  NO

DESCRIPTION:

Relations between painters and inspectors need to be improved. I recommend that  
joint meetings be held so that each discipline understands the problems of the  
other. Emphasize cooperation and not confrontation.

APPROVAL SIGNATURES:

Originator: 

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator \_\_\_\_\_

RECOMMENDATION NO.: 6-004

SUBJECT: Management of Coating Effort

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

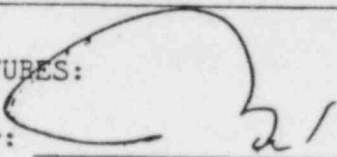
SAFETY RELATED DOCUMENT:        YES        NO

DESCRIPTION:

On the next business day, B&R should submit daily force reports indicating  
manpower by classification, disposition of forces, overtime and perceived problems.  
Based on Recommendation 3-002, report should indicate how many days behind or  
ahead of schedule for each item of work.

I consider this recommendation to be critical to the overall coating effort, as  
well as determining whether or not B&R can complete the coating work inside the  
containment and Aux. Bldg. prior to the loading of fuel.

APPROVAL SIGNATURES:

Originator: 

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 8-001

SUBJECT: Specifications

REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

On balance of plant, we recommend that the painting system be changed from phenolic epoxy top coat to a more conventional system such as a rust inhibiting barrier coat and a silicone alkyd top coat. A acrylic latex system should also be considered.

APPROVAL SIGNATURES:

Originator:  21

Date: 7/15/83

OBC QC: N/A

Date:

TUSI Representative:

Date:

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 8-002

SUBJECT: Specifications


REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT: YES  NO

DESCRIPTION:

Specification AS-31 needs to be rewritten so as to eliminate workaday procedural  
problems that are presently being encountered. While the use of a completely  
revised specification may be impractical for Unit 1 at this late date, it  
should make work proceed more smoothly in Unit 2.

APPROVAL SIGNATURES:

Originator: 

Date: 7/25/83

OBC QC: N/A

Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt

Date July 25, 1983

Originator J. Norris

RECOMMENDATION NO.: 8-003

SUBJECT: Specifications

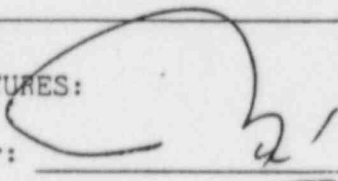
REFERENCE: Texas Utilities Generating Co./Comanche Peak Steam Electric Station

SAFETY RELATED DOCUMENT:  YES  NO

DESCRIPTION:

Recommend that the philosophy for service level 1 coatings be revised so that a limited percentage of the coating work can be used as is when the coating is obviously usable and acceptable, but cannot be applied exactly per the specifications.

APPROVAL SIGNATURES:

Originator: 

Date: 7/25/83

OBC QC: \_\_\_\_\_

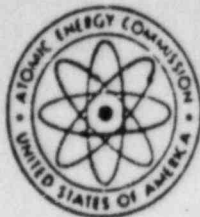
Date: \_\_\_\_\_

TUSI Representative: \_\_\_\_\_

Date: \_\_\_\_\_

Distribution:

- J. J. Norris
- J. J. Lipinsky
- R. A. Trallo
- R. B. Roth
- R. G. Posgay
- J. T. Merritt



# REGULATORY GUIDE

DIRECTORATE OF REGULATORY STANDARDS

## REGULATORY GUIDE 1.54

## QUALITY ASSURANCE REQUIREMENTS FOR PROTECTIVE COATINGS APPLIED TO WATER-COOLED NUCLEAR POWER PLANTS

### A. INTRODUCTION

Appendix B to 10 CFR Part 50, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," establishes overall quality assurance program requirements for the design, fabrication, construction, and operation of safety-related nuclear power plant structures, systems, and components. This guide describes an acceptable method of complying with the Commission's quality assurance requirements with regard to protective coatings applied to ferritic steels, aluminum, stainless steel, zinc-coated (galvanized) steel, concrete, or masonry surfaces of water-cooled nuclear power plants. The Advisory Committee on Reactor Safeguards has been consulted concerning this guide and has concurred in the regulatory position.

### B. DISCUSSION

Subcommittee N101.5.7 of the American National Standards Institute (ANSI) Standards Committee N101, Atomic Industry Facility Design, Construction, and Operation Criteria, under the sponsorship of the American Institute of Chemical Engineers, has developed a standard which includes quality assurance requirements for protective coatings applied to ferritic steels, aluminum, stainless steel, zinc-coated (galvanized) steel, concrete, or masonry surfaces of nuclear facilities. This standard was approved by the American National Standards Committee N101 and its Secretariat. It was subsequently approved and designated N101.4-1972 by the American National Standards Institute on November 28, 1972.

### C. REGULATORY POSITION

The requirements and guidelines included in ANSI N101.4-1972, "Quality Assurance for Protective

Coatings Applied to Nuclear Facilities,"<sup>1</sup> for protective coatings applied to ferritic steels, aluminum, stainless steel, zinc-coated (galvanized) steel, concrete, or masonry surfaces of water-cooled nuclear power plants are generally acceptable and provide an adequate basis for complying with the pertinent quality assurance requirements of Appendix B to 10 CFR Part 50 subject to the following:

1. ANSI N101.4-1972 should be used in conjunction with ANSI N45.2-1971, "Quality Assurance Program Requirements for Nuclear Power Plants."<sup>2</sup>
2. Subdivision 2.7 of ANSI N101.4-1972 states that when references are made to other standards, these references shall imply the most recent or current editions of the referenced standards. The specific applicability or acceptability of referenced standards will be covered separately in other regulatory guides, where appropriate.
3. Subdivision 1.1.2 of ANSI N101.4-1972 states that quality assurance, as covered by this standard, comprise all those planned and systematic actions necessary to provide specified documentation and adequate confidence that shop or field coating work for nuclear facilities will perform satisfactorily in service. This statement should not be interpreted as implying that the end product of quality assurance actions is the production of specified documentation. The term

<sup>1</sup>Copies may be obtained from the American Institute of Chemical Engineers, 345 East 47th Street, New York, N.Y. 10017.

<sup>2</sup>Copies may be obtained from the American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, N.Y. 10017.

### USAEC REGULATORY GUIDES

Regulatory Guides are issued to describe and make available to the public methods acceptable to the AEC Regulatory staff of implementing specific parts of the Commission's regulations, to delineate techniques used by the staff in evaluating specific problems or postulated accidents, or to provide guidance to applicants. Regulatory Guides are not substitutes for regulations and compliance with them is not required. Methods and solutions different from those set out in the guides will be acceptable if they provide a basis for the findings requisite to the issuance or continuance of a permit or license by the Commission.

Published guides will be revised periodically, as appropriate, to accommodate comments and to reflect new information or experience.

Copies of published guides may be obtained by request indicating the division desired to the U.S. Atomic Energy Commission, Washington, D.C. 20545. Attention: Director of Regulatory Standards. Comments and suggestions for improvements in these guides are encouraged and should be sent to the Secretary of the Commission, U.S. Atomic Energy Commission, Washington, D.C. 20545. Attention: Chief, Public Proceedings Staff.

The guides are issued in the following ten broad divisions:

- |                                   |                        |
|-----------------------------------|------------------------|
| 1. Power Reactors                 | 8. Products            |
| 2. Research and Test Reactors     | 7. Transportation      |
| 3. Fuels and Materials Facilities | 8. Occupational Health |
| 4. Environmental and Siting       | 9. Antitrust Review    |
| 5. Materials and Plant Protection | 10. General            |

"quality assurance" as used in ANSI N101.4-1972 should be considered to comprise all those planned and systematic actions necessary to provide adequate confidence that shop or field coating work for nuclear facilities will perform satisfactorily in service. In this connection it is emphasized that records and documents listed in Subdivisions 7.4 through 7.8, and included in the standard, are suggested forms only. Alternate documentation consistent with the requirements of Appendix B to 10 CFR Part 50 is also considered acceptable.

4. Sections 3 and 4 of ANSI N101.4-1972 delineate quality assurance requirements for coating materials and surface preparation of substrates. Coatings and cleaning

materials used with stainless steel should not be compounded from or treated with chemical compounds containing elements that could contribute to corrosion, intergranular cracking, or stress corrosion cracking. Examples of such chemical compounds are those containing chlorides, fluorides, lead, zinc, copper, sulfur, or mercury where such elements are leachable or where they could be released by breakdown of the chemical compounds under expected environmental conditions (e.g., by radiation). This limitation is not intended to prohibit the use of trichlorotrifluoroethane which meets the requirements of Military Specification MIL-C-81302b for cleaning or degreasing of austenitic stainless steel provided adequate removal is assured prior to painting.







## DEPARTMENTAL CORRESPONDENCE

DATE October 31, 1983SUBJECT TUSI IOM 10/27/83 and J. T. Merritt Letter of 10/28/83TO R. B. RothFROM J. J. Norris

Bob, confirming our telecon of 10/30/83 I have a quipped copy of Mr. Chapman's 10/27/83 memo to John Merritt regarding Joe Lipinsky's trip report of 8/28/83.

I never dreamt that Joe's report would be communicated to anyone outside of our organization or I would have taken issue with it. Reasonable people differ in their perceptions of problems. I saw the problems at Comanche Peak differently than Joe did. As you know, over the years we have had problems from time to time with the objectivity of FQCI'S. The ones involved in documenting the coating effort at nuclear installations tend to get involved in engineering decisions as a group and in my opinion, therein lies the lion's share of the problem.

Using Mr. Chapman's numbering system the following are my observations at Comanche Peak:

1. I believe Joe met with some line type FQCI'S and garnered his impressions from those inspectors. Joe, of course, did not audit so his comments are at best second hand information. I'm not saying the allegations are true or false, but it is my impression subject to an audit that there is alot of "sour grapes" conversations taking place among the line inspection personnel. I sensed a way of thinking amongst the inspection personnel that indicated, at least to me, that they had no loyalty to their supervisors. For example; in the QA/QC machinery to document problems and provide a means for rectifying same there exists at Comanche Peak an NCR and another document that does not stop work, but allows remedial work on an on-going item of work. It was my understanding that Mr. Tolson simply asked the inspector or inspectors to quit issuing NCR'S and issue the other document instead. That was a reasonable request in my opinion and in no way compromised quality or integrity.

2a. I interviewed the foreman in charge of the material storage warehouse in the company of Jr. Haley, Brown & Root Paint Superintendent. The "Q" portion of the warehouse was, if anything, a model for proper storage of material. There are temperature records, limited access, expiration dates on all containers, neat and orderly and with a reasonable inventory. I did not formally audit but I would be very surprised if they got many gigs.

- 2b. As I recommended to TUSI I felt like the ratio of helpers to journeyman was too high. However, they were doing a tremendous amount of masking of unistrut and other items not requiring paint and previously painted surfaces that were not compatible with the current system.
- 2c. The coating program seems to be in compliance with ANSI requirements, but again I'd have to audit to be sure.
- 2d. I made a casual inspection of the Unit I and Unit II containments and the ABX Building. I saw evidence of destructive testing of the coating systems that far exceeds anything I have ever experienced. Seemingly every few square feet of the concrete coating system had evidence of destructive testing and film thicknesses recorded in Magic Marker. Additionally, the same statement can be made of a significant amount of structural steel. The coating on practically every stair stringer had been destroyed with a Tooke Gauge. If there were any concerns in this area it was that the obvious over-inspection could lead to failure by substrate or intercoat contamination from sweat, body oil, dirty hands, etc.
- 2e. I have no knowledge of any document deficiencies.
- 2f. In my opinion, a good part of the problem at Comanche Peak is the fact that inspectors are working long hours on a continuing basis. It's been my experience every time that when you get yourself into scheduling continuing overtime people get tired and irritable, i.e. "A morale problem". You and I both know how difficult it is to secure trained inspectors as they are simply not available at this time.
3. I think that Joe took Mr. Tolson out of context on the statement "That's not my concern". Perhaps Mr. Tolson was referring to the fact that the licensing of Unit I was not his area of responsibility.
4. I have no knowledge of the T.L. Miller subject.
5. Many have concerns for what we feel are good reasons, then so let the individual voice these concerns and address it objectively.
6. Regarding "only 34 out of 452 individuals are of any value as painters", as I stated previously, there was a large number of helper types on the payroll because of the intensive masking operation. It was my impression that a number of otherwise qualified painters had slowed down considerably because of real or imagined quality control restraints.
7. See paragraph 2f above.

8. Brown & Root was having trouble with moisture in the compressed air during QC checks of the air supply early in one or two of the shifts. It was a simple matter of upgrading the air drying components which I believe was taken care immediately.

9. I see no parallel between Comanche Peak and Zimmer. As I understand the Zimmer situation from Nucleonics Week and The Wall Street Journal there was a complete and total breakdown of 10 CFR 50, Appendix B requirements because local management was treating the project as most people would treat a fossil plant. That certainly is not the case at Comanche Peak.

10. I disagree entirely with the statement that "Comanche is doing inspections to the degree that they (Comanche Peak) are comfortable with or will tolerate". The coating effort, if anything, is over inspected. See paragraph 2d above.

11. I disagree with this statement.

12. My impression of Comanche Peak management differs from that of Joe Lipinsky's.

13. I have no knowledge of Comanche Peak management attempting to "squash" QC problems. My impression is that they want to do things correctly but they are becoming tired of having to reinvent the wheel every day on the coating effort.

14. I have no knowledge of the inspection staff's trying to leave the site "en masse"

15. Ditto.

16. The internal disagreement is self-explanatory per the responses above and below.

17. I did not perceive this hostility. I heard that TUSI/B&R has recently undergone an audit and has received a passing grade according to Tolson.

18. That's for Carholine to provide guidelines as CZ-11 their product.

19. Ditto.

20. I don't agree here. TUSI was of course alarmed that painting might end up on the project's critical path, indeed, become the critical path. They wanted advice on how best to get the painting effort on the right track, but certainly within the spirit and letter of the law.

21. I can't clarify the "rework contract" statement.

22. I would disagree because of the purported results of the testing effort. Additionally, I had not reviewed the adequacy or results of the retrofit program.

23. I only know that I received a copy of Joe's report, which I have not released from my office.

24. I did not communicate with anyone about the trip report, nor did I send a copy of the trip report to anyone. My secretary is the only other person in Houston that could possibly have seen the report and she says that she did not.

During my visits, consultations, site interfaces, etc. I would not describe the site activities, conversations and meetings as anything but a workaday attempt by TUSI to resolve perceived problems in the coating effort. To imply anything else is irresponsible. With fuel load approaching and the attendant pressures there is bound to be a nervous, somewhat cautious atmosphere.