

June 8, 2001

FILED³

JUN 11 2001

VIA FEDERAL EXPRESS

Mr. Dale Hardy Roberts
Secretary/Chief Regulatory Law Judge
Missouri Public Service Commission
200 Madison Street, Suite 100
Jefferson City, MO 65101

Missouri Public
Service Commission

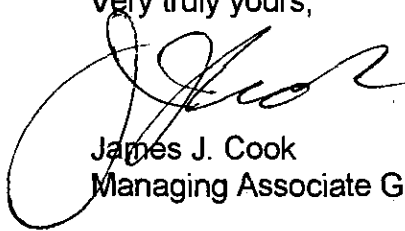
Re: MPSC Case No. ES-2001-359

Dear Mr. Roberts:

Enclosed for filing on behalf of Union Electric Company, d/b/a AmerenUE, in the above matter, please find an original and eight (8) copies of its **Response to Recommendations of Staff's Incident Report and Response Concerning Protective Order and Motion for Protective Order.**

Kindly acknowledge receipt of this filing by stamping a copy of the enclosed letter and returning it to me in the enclosed self-addressed envelope.

Very truly yours,



James J. Cook
Managing Associate General Counsel

JJC/mlh
Enclosures

cc: Jim Ketter (MPSC)

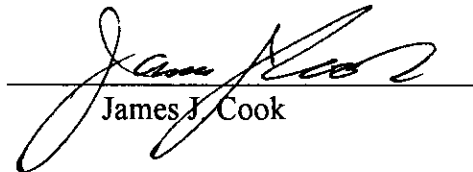


CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing document was served on the following parties of record via U.S. First-Class Mail on this 8th day of June, 2001:

General Counsel
Missouri Public Service Commission
P. O. Box 360
Jefferson City, MO 65102

Office of the Public Counsel
P. O. Box 7800
Jefferson City, MO 65102


James J. Cook

FILED³

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

JUN 11 2001

Missouri Public
Service Commission

In the Matter of Union Electric Company,
d/b/a AmerenUE regarding an incident at
the Venice Power Plant in Venice, Illinois
on August 10, 2000.

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Case No. ES-2001-359

RESPONSE TO
RECOMMENDATIONS OF
STAFF'S INCIDENT REPORT
AND RESPONSE CONCERNING PROTECTIVE ORDER

RESPONSE TO STAFF'S INCIDENT REPORT

COMES NOW Union Electric Company d/b/a AmerenUE ("the Company") and hereby submits its Response to Recommendations of Staff's Incident Report in the above styled case.

The Staff's report was filed with the Commission on April 25, 2001. Thereafter, on June 1, 2001, the Commission issued its Order Directing Filings and Granting Protective Order. In that Order, the Commission directed the Company to file its response to the incident report no later than June 11, 2001.

Attached hereto, please find a document entitled "Report to the Public Service Commission of the State of Missouri – AmerenUE – Case No. ES-2001-359 – Venice Plant Turbine #1 Fire – Venice, Illinois – August 10, 2000." This document, including various attachments, was prepared by Mr. John W. Scott, Venice Plant Manager. Said document is the Company's response to the staff's filing.

The attachments to the Company's report include several large drawings. One complete set of these attachments is being filed with this response. A complete set of the

attachments has also been sent to the Commission Staff and the Office of Public Counsel.
The Company can supply additional copies if requested.

RESPONSE CONCERNING PROTECTIVE ORDER

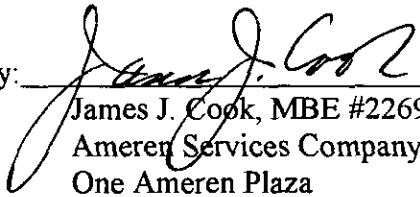
In its filing with the Commission, the Staff requested that the Commission issue a protective order to protect certain information provided by the Company. In the Company's May 7, 2001 filing it also indicated that it would request that certain information be treated confidentially, but the Company did not, at that time, indicate the reasons for that request. The Company appreciates the cooperation of the Staff in treating certain information confidentially, as requested by the Company, in anticipation of a protective order.

In a separate pleading, the Company will ask that certain information continue to be treated confidentially.

WHEREFORE, Union Electric Company requests that the Commission accept this pleading and the accompanying report, as the Company's response to the Staff's incident report.

Dated June 8, 2001

Respectfully submitted,
Union Electric Company
d/b/a AmerenUE

By: 
James J. Cook, MBE #22697
Ameren Services Company
One Ameren Plaza
1901 Chouteau Avenue
P. O. Box 66149 (MC1310)
St. Louis, MO 63166-6149
314-554-2237
314-554-4014 (fax)
jjcook@ameren.com

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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Missouri Public
Service Commission

In the Matter of Union Electric Company,
d/b/a AmerenUE regarding an incident at
the Venice Power Plant in Venice, Illinois
on August 10, 2000.

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Case No. ES-2001-359

MOTION FOR PROTECTIVE ORDER

COMES NOW Union Electric Company d/b/a AmerenUE ("the Company") and
hereby submits its Motion for Protective Order in the above styled case.

On June 1, 2001, the Missouri Public Service Commission issued its Order
Directing Filings and Granting Protective Order. In that Order, the Commission directed
the Company to supplement its previously filed notice by filing a motion for protective
order that complies with the Commission's rule and states the reasons why the
Commission should not consider rescinding the protective order that it issued on June 1,
2001. This pleading is in response to that directive.

1. At the request of the Company, the Commission Staff treated certain
information confidentially. The Staff's incident report includes some of that information
and said information was filed pursuant to the standard protective order of this
Commission.

2. That information falls into two categories: (1) information related to the
findings of the investigation into the cause or causes of the fire, and (2) the anticipated
expenditures for the restoration of the plant.

3. The Company requests that the information in the second category – the
anticipated cost of the restoration of the plant be treated confidentially. In support of that

request, the Company maintains that said information is Proprietary, in that it is confidential financial and business information. The public release of this information would harm the Company in that such information would be helpful to other providers of generation services, with whom the Company competes. That information would allow other providers of generation services to have vital information that would give them unwarranted insight into the Company's costs and give them an undue advantage in bidding against the Company for the sale of generation services.

4. To the Company's knowledge, none of the cost information can be found in any format in any other public document. The information at issue appears only on page 8 of the HC version of the Electric Incident Report, dated April 25, 2001.

5. The Company had also asked for confidential treatment of certain information related to the findings of the Company's internal investigation into the causes of the incident. That information was treated confidentially by the Staff and appears in several locations in their report.

6. After careful consideration, the Company has determined not to seek continued confidential treatment of that information. The Company believes that it was appropriate to treat that information confidentially while the Company continued its investigation, and while the Staff conducted its investigation. Premature public release of possible causes, which might later be found to be inaccurate, would not have been in the best interest of the Company, the Commission or the public. However, now that the investigation is complete, the Company sees no reason to continue to treat that information confidentially.

7. Accordingly, the Company does not object to the removal of confidential treatment to this information, as included in the Staff's report, and in the Company's response.

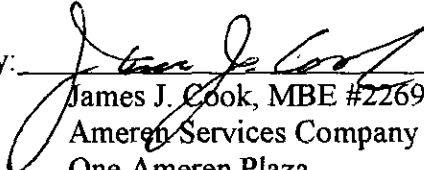
8. The Company stresses, however, that the financial information for which it continues to seek confidential treatment, should be so treated.

WHEREFORE, for the reasons stated above, AmerenUE respectfully requests that the Commission keep its Protective Order in effect for the limited purpose of protecting the confidential financial information contained in the Staff's Incident Report, previously filed in this matter.

Dated June 8, 2001

Respectfully submitted,
Union Electric Company
d/b/a AmerenUE

By: _____


James J. Cook, MBE #22697
Ameren Services Company
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**Report to the Public Service Commission of the State of Missouri
AmerenUE
Case No. ES-2001-359
Venice Plant Turbine #1 Fire
Venice, Illinois
August 10, 2000**

FILED³
JUN 11 2001
Missouri Public
Service Commission

In response to the staff recommendations outlined in the incident report filed on April 25, 2001, the AmerenUE, Venice Plant, has taken action to address all listed items as outlined below. It is expected that Units #3 and #4 will return to full service by early June 2001.

Staff Recommendations and Response

1. AmerenUE review maintenance records and inspect hydraulic lines to identify repair welds on the hydraulic systems of units #3, #4, #5, and #6 at Venice.
2. AmerenUE perform a defect repair of previous welds completed to repair hydraulic leaks or replace portions of pipe on the units at Venice.
3. Report to Staff the completion of:

- a. Review of maintenance records and inspection of hydraulic lines;

Venice Plant has reviewed records of Units #3, #4, #5 and #6 to determine if other hydraulic lines had previously been repaired by welding.¹ In addition, the plant is contracting with a disinterested third party to perform a visual inspection of hydraulic lines that may have been subject to weld repairs and are not recorded in the unit's maintenance records. The lubrication and control system design for Units #3, #4 and #5 is much different than the design for Units #1 and #2. Units #3, #4, and #5 were built by General Electric and have guarded hydraulic systems. The high-pressure hydraulic lines are surrounded by an additional pipe, a "pipe inside of a pipe" arrangement that would return high-pressure oil from a ruptured line back to the turbine oil reservoir of the unit. Unit #6, a Westinghouse design, does not have a guarded system. All inspections will be completed by June 15, 2001. A follow-up report will be provided to the Staff when the work is complete.

- b. Weld repairs or pipe replaced;

All weld repairs or pipe replacements will be completed as required following the inspections outlined in (a.) above. A follow-up report will be provided to the Staff when work is complete.

¹ Maintenance records for Units #3, #4, #5 and #6 are attached. References to hydraulic line repairs are highlighted. The highlighted items will be inspected before any other inspections are conducted.

- c. Substation upgrades including transformer replacement/repair, breaker upgrades/replacement and replacement of the 13.8 kv bus between the generators and substations;

Transformers

The new Generator Step-up Transformers 3 and 4 were purchased to replace those transformers lost during the fire. Transformer 3 is on site and Transformer 4 is in transit. Transformer 3 has been mounted but will not be released for service until early in June.

The 138 kv to 69 kv Step Down Transformer #4, (now re-named to Transformer #7), was rewound and is mounted on a new pad to accommodate the Venice Plant substation design changes.² The transformer will not be placed in service until early June.

Two Auxiliary Power Transformers were purchased to supply station service loads to Venice Plant. One transformer is installed but not wired. The other transformer will not be delivered until the end of May. To date, auxiliary power is still being fed from Ameren's Hall Street Substation.

Breakers

The new Generator High Side Breakers for Units #3 and #4 were purchased to accommodate the redesign of the substation. These breakers are currently on-site and wired to the new substation outlets.

13.8kv Bus

The 13.8 kv buses between Generators 3 and 4 and the substation have been replaced. New potential transformers for relay protection of the bus are also installed. New switchgear has been installed to accommodate the new 13.8 kv bus configuration.

Note: All transformers, breakers and switchgear mentioned above would not be released for service until they have passed a rigorous testing protocol.

- d. D.C. System upgrades for backup reliability, including addition of battery chargers and re-routing of cables;

The D. C. Control and Charging Circuits have been completely redesigned.³ The system now includes a battery charger for both the "A" and "F" Board

² See the attached drawing 7801-Y-137395 titled "Plant Buses, Outgoing Feeders & Auxiliary Feeders", Venice 2 Plant

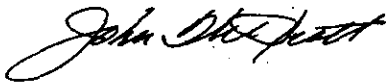
³ See the attached drawings 7831-X-154XXX, 125V DC System, Common Facilities.

DC Battery Charging Circuits and Control Buses. These circuits will also be backed up by a motor generator set. In addition, all of the DC circuits are now fused. The original design of the plant did not include fused DC circuits, which ultimately contributed to the loss of all buses during the fire.

e. Fire control upgrades;

A work order for the installation of a new fire protection system at Venice Plant is attached as a reference. A preliminary design drawing of the new fire protection system is not yet complete. It is expected that the new fire protection system will be installed by October 1, 2001. A report to the Staff will be provided when the system is in service.

Submitted by:

A handwritten signature in black ink, appearing to read "John W. Scott".

John W. Scott
Plant Manager
Venice Plant



Internal Memo

February 26, 2001

FILED³

JUN 11 2001

Route: C. D. Naslund
C. W. Mueller

Missouri Public
Service Commission

From: F. J. Pope

RE: **Work Order Approval for
Venice Fire Water Supply Project**

Attached for your review and approval is a work order for the installation of equipment and materials necessary for a new fire water supply system at the Venice Plant, as well as the replacement of the deteriorated underground fire water yard loop. The estimated cost for the total project is \$3,461,000, and includes engineering, construction management, and overheads. The overall project scope is summarized as follows:

- Install a new fire water storage tank, supplied with city water
- Install a new electric-driven main fire pump
- Install a new electric-driven jockey pump
- Install a new diesel-driven fire pump, along with diesel storage tank
- Erect a new building to house the pumps, including lights, heating, and ventilation
- Install fire pump controllers (provided with the pumps)
- Install instrumentation necessary for automatic starting of pumps
- Install a monitoring panel in the main plant to monitor fire pump starting, fire water header pressure, tank levels
- Install a new underground fire water yard loop for the plant
- Install new piping inside the existing plant to create an interior fire piping loop

This project is necessary not only for proper fire water supply for fire protection at the Venice plant, but is also necessary to accommodate the requirements of OSHA, which has issued comments stating that fire water supply at Venice Plant needs to be upgraded. A commitment has been made to OSHA to have the new fire water supply in service by October 2001.

This is a new item that was not originally included in the 2001 budget.

After review and approval, please return to Nicole White at mail code 450 for further routing.

JWM/

cc: J. W. Scott	F. J. Pope	J. W. Moore	Misc. Date (w/o)
V. A. Speck	M. O. Lobbig	P. R. Kaveler	

Generation Projects
WORK ORDER ROUTE SLIP

ROUTING

	<u>Initials</u>	<u>Date Received</u>	<u>Date Released</u>
Engineering Services - J. G. Jaegers (Pencil Copy)	<u>JGJ</u>	<u>1/30/01</u>	<u>1/31/01</u>
Engineering Services - N. White (Pencil Copy)	<u>NW</u>	<u>1/31/01</u>	<u>2/1/01</u>
EDTS Stenographic Services/IGT with Service Request	<u>-</u>	<u>-</u>	<u>-</u>
Project Engineer <u>J. W. Moore</u>	<u>JWM</u>	<u>2/1/01</u>	<u>2/2/01</u>
Supv. Engineer <u>M. O. Lobbig</u>	<u>MOL</u>	<u>2/21/01</u>	<u>2/21/01</u>
Department Manager - F. J. Pope ("Reg. By")	<u>FJP</u>		<u>2/26/01</u>
Engineering Services - J. L. Anderson (MC 450)			
Function Head - C. D. Naslund (MC 601) ("Appr. By")			
President - C. W. Mueller (MC 01) ("Auth. By")			
Engineering Services - N. White (MC 450)			

WORK ORDER APPLICATION REVIEW
2001 CONSTRUCTION BUDGET

PROJECT: Venice Plant Fire Water Supply
2001 BUDGET GROUP NO. E70 ITEM NEW ESTIM. TOTAL W.O. COST \$ 3,461,000.

REMARKS: _____

<u>Budgets</u>	<u>2001 Budget Cash Flow, \$000</u>						<u>Cash Flow Per This Application, \$000</u>					
	<u>Prior</u>	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>	<u>Prior</u>	<u>01</u>	<u>02</u>	<u>03</u>	<u>04</u>	<u>05</u>
Const.	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Maint.	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____
Removals	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____	_____

Reviewed By _____

REPORT NO 301

AMEREN/UE

REPORT DATE: 02/01/01

SPECIFIC PROJECT

PROJECT NO 11931

SUPERSEDES WO

DEPT ID

LEAD RMC 09M GENERATION PRJTS-UEC

FPI NUMBER

FMC 82B VENICE-OPERATIONS

MULTIPLE FMC - N

DATE AUTHORIZED ___/___/___

BUDGET GRP - E70

YEAR - 2001

AMOUNT -

SALES TAX EXEMPT - Y

WHEELING -

ENVIRONMENTAL - N

SYSTEM -

LOCATION - VP00

VENICE PLANT FIRE WATER SUPPLY

AUTHORIZATION FOR ENGINEERING, CONSULTING, DRAFTING, SUPERVISION, MATERIAL, AND LABOR TO INSTALL NEW FIRE WATER SUPPLY EQUIPMENT AND REPLACE THE UNDERGROUND FIRE WATER LOOP AT THE VENICE POWER PLANT. THE SCOPE OF WORK INCLUDES TIE-IN OF THE NEW FIRE WATER SUPPLY AND THE UNDERGROUND FIRE WATER LOOP TO THE EXISTING POWER PLANT FIRE PROTECTION PIPING, AND ALLOWS FOR INTERIOR FIRE PIPING ADDITIONS TO MAKE AN INTERIOR FIRE PIPING LOOP. NEW ITEMS INCLUDE A NEW FIRE WATER STORAGE TANK, A NEW ELECTRIC-DRIVEN MAIN FIRE PUMP, A NEW DIESEL-DRIVEN FIRE PUMP, A PRESSURE-MAINTENANCE JOCKEY PUMP, A NEW BUILDING FOR HOUSING THE FIRE PUMPS, AND NEW UNDERGROUND FIRE WATER PIPING.

THIS PROJECT IS NECESSARY NOT ONLY FOR PROPER FIRE WATER SUPPLY FOR FIRE PROTECTION AT THE VENICE PLANT, BUT IS ALSO NECESSARY TO ACCOMMODATE THE REQUIREMENTS OF OSHA, WHICH HAS ISSUED COMMENTS STATING THAT FIRE WATER SUPPLY AT VENICE PLANT NEEDS TO BE UPGRADED.

THIS IS A NEW ITEM THAT WAS NOT ORIGINALLY INCLUDED IN THE 2001 BUDGET. WE HAVE REPORTED TO OSHA THAT NEW FIRE WATER SUPPLY FACILITIES WILL BE COMPLETED BY OCTOBER 2001.

DATES: BEGIN CONSTRUCTION 05/01/01

SCHEDULED COMPLETION 10/01/01

EXPENDITURES:

CAPITAL

3,461,000

RETIREMENTS

1-

EXPENSE

SALVAGE

REMOVALS

*** SEE PAGE 2 FOR ACCOUNTING BREAKDOWN ***

TOTAL

3,461,000

ORIGINATOR - MOORE, JW

TELEPHONE - 42343

REQUESTED BY

PLANT & REGULATORY ACCTG

BUDGET DATA CORRECT

APPROVED BY

ACCOUNTING CORRECT

AUTHORIZED BY

C Naslund

C W Mueller

AMEREN/UE

SPECIFIC PROJECT

PROJECT NO 11931

*** ACCOUNTING INFORMATION ***

COST CAT.	ACCOUNT U BD MAJ MIN T	NO	AUTHORIZED AMOUNT	ACCOUNT NO U BD MAJ MIN T	AUTHORIZED AMOUNT
CAPITAL					
	1 57 316 001 0		2,851,000	1 57 374 011 0	230,000
	1 57 374	0	170,000	1 57 377	0
	1 57 374 001 0		80,000	1 57 378	0
	1 57 374 002 0		60,000	1 57 379	0
	1 57 374 003 0		20,000		
TOTAL CAPITAL					3,461,000
EXPENSE					
	1 21 232 001				
TOTAL EXPENSE					0
PROJECT TOTAL (CAP, REM, EXP)					3,461,000
RETIREMENT					
	1 57 316 001 3		1-		
TOTAL RETIREMENT					1-

WORK ORDER ESTIMATE

DEPARTMENT: Generation Projects
DIVISION: Mechanical Design

WORK ORDER NO.:
JOB LOCATION: Venice

DATE: 01/30/01
ESTIMATED BY: JWM

ACCOUNT NO.					DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL ITEM COST	MATERIAL	LABOR
DIV	MAJ	MIN	WR	BUD							
57	316	001			CONSTRUCTION COSTS						
					FIRE PUMP BUILDING / TREATED WATER STORAGE						
					Site Preparation						
					Site Investigation	lot			\$ 25,000	\$ 6,000	\$ 19,000
					Site Work	lot			\$ 50,000	\$ 12,000	\$ 38,000
					Construction Facilities	lot			\$ 10,000	\$ 5,000	\$ 5,000
					Fire Pump Building						
					Foundation & Pump Pedestals	lot			\$ 40,000	\$ 15,000	\$ 25,000
					Building, 30x50, insulated, partitioned	lot			\$ 100,000	\$ 70,000	\$ 30,000
					Enclosure for suction piping	lot			\$ 60,000	\$ 25,000	\$ 35,000
					HVAC	lot			\$ 10,000	\$ 5,000	\$ 5,000
					Lighting	lot			\$ 5,000	\$ 2,500	\$ 2,500
					Fire Protection	lot			\$ 5,000	\$ 2,000	\$ 3,000
					Treated Water Storage Tank						
					Foundation	lot			\$ 80,000	\$ 35,000	\$ 45,000
					Tank, 250,000 gal.	ea	1	\$ 200,000	\$ 200,000	\$ 130,000	\$ 70,000
					Painting	lot			\$ 40,000	\$ 15,000	\$ 25,000
					Water Supply						
					Tie-in to Existing Plant/Municipal System	lot			\$ 20,000	\$ 7,000	\$ 13,000
					Paving, Landscaping & Cleanup						
					Paving	lot			\$ 70,000	\$ 20,000	\$ 50,000
					Finish Site Work	lot			\$ 20,000	\$ 5,000	\$ 15,000
					Final Site Cleanup	lot			\$ 5,000	\$ 1,000	\$ 4,000
					FIRE PUMPS AND ASSOCIATED EQUIPMENT						
					Electric Driven Fire Pump						
					Pump and Motor, FM/UL approved	ea	1	\$ 70,000	\$ 70,000	\$ 50,000	\$ 20,000
					Fire Pump Controller	ea	1		included	\$ -	\$ -
					Piping, Fittings, & Valves	lot			\$ 10,000	\$ 7,000	\$ 3,000

WORK ORDER ESTIMATE

DEPARTMENT: Generation Projects
 DIVISION: Mechanical Design

WORK ORDER NO.: _____
 JOB LOCATION: Venice

DATE: 01/30/01
 ESTIMATED BY: JWM

ACCOUNT NO.					DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL ITEM COST	MATERIAL	LABOR
DIV	MAJ	MIN	WR	BUD							
					Diesel Driven Fire Pump						
					Pump and Driver, FM/UL approved	ea	1	\$ 95,000	\$ 95,000	\$ 70,000	\$ 25,000
					Fire Pump Controller	ea	1		included	\$ -	\$ -
					Piping, Fittings, & Valves	lot			\$ 15,000	\$ 10,000	\$ 5,000
					Jockey Fire Pump						
					Pump and Motor, FM/UL approved	ea	1	\$ 10,000	\$ 10,000	\$ 8,000	\$ 2,000
					Fire Pump Controller	ea	1		included	\$ -	\$ -
					Piping, Fittings, & Valves	lot			\$ 5,000	\$ 3,000	\$ 2,000
					Electrical Equipment for Motor Driven Pumps						
					Motor Control Centers	lot			\$ 40,000	\$ 30,000	\$ 10,000
					Power Panels & Transformers	lot			\$ 35,000	\$ 25,000	\$ 10,000
					Essential AC Equipment	lot			\$ 20,000	\$ 15,000	\$ 5,000
					Monitoring Panels	lot			\$ 20,000	\$ 15,000	\$ 5,000
					Instrumentation	lot			\$ 35,000	\$ 25,000	\$ 10,000
					Power & Control Wiring, Raceways, etc.						
					Materials & Installation	lot			\$ 110,000	\$ 75,000	\$ 35,000
					Communications Equipment						
					Equipment & Installation	lot			\$ 12,000	\$ 5,000	\$ 7,000
					Diesel Storage Tank						
					Foundation	lot			\$ 7,000	\$ 2,000	\$ 5,000
					Tank	ea			\$ 25,000	\$ 10,000	\$ 15,000
					Painting	lot			\$ 5,000	\$ 2,000	\$ 3,000
					UNDERGROUND FIRE PIPING - YARD LOOP REPLACEMENT						
					Underground Piping (assumed 2500 ft of U/G pipe)						
					Trenching & Shoring, Bed Preparation	lot			\$ 450,000	\$ 75,000	\$ 375,000
					Piping, Valves, Fittings, & Installation	lot			\$ 350,000	\$ 250,000	\$ 100,000
					Backfill	lot			\$ 125,000	\$ 25,000	\$ 100,000
					Finish grading	lot			\$ 90,000	\$ 20,000	\$ 70,000
					Piping Tie-Ins						

WORK ORDER ESTIMATE

DEPARTMENT: Generation Projects
 DIVISION: Mechanical Design

WORK ORDER NO.: _____
 JOB LOCATION: Venice

DATE: 01/30/01
 ESTIMATED BY: JWM

ACCOUNT NO.					DESCRIPTION	UNIT	QTY	UNIT COST	TOTAL ITEM COST	MATERIAL	LABOR
DIV	MAJ	MIN	WR	BUD							
					Tie-in to new fire pumps	lot			\$ 15,000	\$ 5,000	\$ 10,000
					Tie-in to plant building fire protection	lot			\$ 25,000	\$ 10,000	\$ 15,000
					<u>PIPING MODIFICATIONS FOR INTERIOR FIRE LOOP</u>						
					Piping for Interior Loop (assumed 1000 ft. 10 in. pipe)						
					Piping, Valves, Fittings, & Installation	lot			\$ 125,000	\$ 50,000	\$ 75,000
					Painting	lot			\$ 30,000	\$ 10,000	\$ 20,000
					Piping Tie-Ins	lot			\$ 15,000	\$ 5,000	\$ 10,000
					ESTIMATED CONSTRUCTION COST SUBTOTAL				\$ 2,479,000		
					CONTINGENCY (15%)				\$ 372,000		
					Note: Larger contingency because of uncertainty of interferences encountered with excavation in yard						
					TOTAL ESTIMATED CONSTRUCTION COST				\$ 2,851,000		
57	374	011			ENGINEERING / CONSULTANT				\$ 230,000		
57	374	001			ENGINEERING / PROJECT MANAGEMENT				\$ 80,000		
57	374	003			DRAFTING / AS-BUILTS				\$ 20,000		
57	374	002			CONSTRUCTION MANAGEMENT				\$ 60,000		
57	374				INDIRECT OVERHEAD				\$ 170,000		
57	378				AFUDC				\$ 50,000		
					TOTAL PROJECT ESTIMATE				\$ 3,461,000		