STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL

SUMMARY SHEET

CLASS I CHANGE

ECP NUMBER	TITLE
SJ-M/O-4642	**Sugarland OMNI Flow Computer Installation**

BUDGET SOURCE

- [ ] SPR BLI _____
- [ ] CONTRACTOR BASELINE
- [ ] AUD
- [ ] OTHER: Lease Contractor

AUTHORITY

- [x] PCCB
- [ ] ECC

SCHEDULE

- [ ] YES
  MILESTONE NUMBER _____
  CMCR NUMBER
- [x] NO

TOTAL ESTIMATED COST OF CHANGE

	FY 00	FY 01
DESIGN	$5,845	
CONSTRUCTION	$11,690	
TOTAL	$17,535	

PCCB/ECC SIGNATURES	DISPOSITION: CONCUR	DISPOSITION: NON CONCUR	DISPOSITION: DATE	COMMENTS CONDITIONS/LIMITATIONS
APM MANAGEMENT AND ADMIN ~~DOE SENIOR SITE OFFICIAL~~	✓		3/17/04	
E.M. Kelly APM TECHNICAL ASSURANCE	✓		3/16/04	
APM SYSTEMS AND PROJECTS	✓		16 March 2004	Need Drugs marked up
APM MAINTENANCE AND OPERATIONS	✓		3/15/04	need Vendor Data
DEPUTY PROJECT MANAGER				Software for flow-meters -
DOE CMO				
PROJECT MANAGER				
DEPUTY ASSISTANT SECRETARY - SPR				

PCCB/ECC ACTION

- [x] FULL APPROVAL
- [ ] CONDITIONAL/LIMITED APPROVAL
- [ ] DISAPPROVAL

ECPFM (4)

STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL

ECP NUMBER	ECP TITLE	PAGE 1 OF 4
SJ-M/o-4642	**Sugarland OMNI Flow Computer Installation**	

CONTRACTOR CHANGE NO. / REV.	INITIATED BY	DATE	SUBMITTED BY	DATE
	Robert Smith	**1/22/03**	**Jill Derise**	**1/22/03**
PRIORITY	ORG / CONTRACTOR	PHONE NO.	ORG/CONTRACTOR	PHONE NO.
☐ EMERGENCY	**Shell Pipeline Company LP**	**(504) 728-7157**	**Shell Pipeline Company LP**	**(504) 728-7366**
☐ URGENT				
☒ ROUTINE				

VALUE ENGINEERING	DRAWDOWN CRITICAL	ROM ESTIMATE
☐ VEP (MANDATORY)	☐ YES	
☐ VECP (VOLUNTARY)	☒ NO	$ 17,535.

DESCRIPTION:

PROBLEM / EXISTING CONFIGURATION

This ECP is being submitted as documentation of work that was done at Sugarland in 2001. Existing Daniel Flow computers were obsolete and could not facilitate automation of measurement routines.

PROPOSED SOLUTION / ENHANCEMENT

Flow computers on the Bayou Choctaw and Weeks Island meter runs at Sugarland were upgraded with Omni Flow computers. This upgrade allows for networking more data to the Operator and Houston Control Center.

[Reference Shell AFE 149120]

REASON/JUSTIFICATION

Daniel Flow Computers did not meet the automation requirements. Additionally, in the event of a failure, replacement parts and service for Daniel Flow products were not readily available. The tubes were installed in 2001 at a capital cost of $17,535 and should be considered "unfunded liability" due to the permanent improvement to the facility.

CI'S AFFECTED

TECHNICAL ANALYSIS/RECOMMENDATION	IMPLEMENTATION METHOD
	☐ SUBCONTRACT
	☐ M&O LABOR (LOE)
	☐ COMBINATION

ENGINEERING	DATE	DOE SSR	DATE
			☐ CONCUR
			☐ NONCONCUR

STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL
SOFTWARE, HARDWARE, FIRMWARE CHANGE

CONTRACTOR CHANGE NUMBER	REVISION NUMBER	ECP NUMBER	
		SJ-M/O-4642	Page 3 of 4

SOFTWARE CHANGE ANALYSIS	HARDWARE/SOFTWARE AFFECTED
	(NOTE: REDLINE CI BOM)

DISPOSITION OF PARTS

☐ REWORK SITE COMPONENTS ONLY ☐ REWORK ALL SITE COMPONENTS ☐ COMPONENTS NOT AFFECTED

☐ OTHER (DESCRIBE)_____

COMPONENT COMPATIBILITY (LIST COMPONENTS SEPARATELY IF COMPATIBILITIES ARE DIFFERENT)

☐ INTERCHANGABLE ☐ DRAWDOWN COMPATIBLE ☐ NONCOMPATIBLE

OPCS SUPPORT ENGINEER	DATE	FUNCTIONAL MANAGER	DATE

IMPLEMENTATION/TEST COMMENTS

WITNESSED BY	DATE

TEST APPROVED BY	DATE	CHANGE RELEASE AUTHORITY	DATE

STRATEGIC PETROLEUM RESERVE
ENGINEERING CHANGE PROPOSAL
CONFIGURATION CHANGE AFFECTED REPORT

"TO BE COMPLETED BY TECHNICAL REVIEW PROCESS, ENGINEERING AND CONFIGURATION MANAGEMENT ORGANIZATION DEFINED PROCESS"

ECP NO.	CONTRACTOR CHANGE NO	REV.	CHANGE CLASSIFICATION
SJ-M0-4642			☑ CLASS I ☐ CLASS II PAGE 4 OF 4

FUNCTIONS AFFECTED			DOCUMENTS AFFECTED		
Y	N	ITEM	Y	N	ITEM
		LEVEL 1 ☐ II ☒ III ☐ CRITERIA			ELECTRICAL
		PERFORMANCE CRITERIA			315 - CATHODIC PROTECTION
		RAM			350 - STANDARDS
		INTERFACE CHARACTERISTICS			INSTRUMENTATION
		I/O POINTS			401 - BLOCK DIAGRAM
		DOE LEVEL I, II, III SCHEDULES			402 - LOOP DIAGRAMS
		GUARANTEES/DELIVERABLES			403 - INSTRUMENT PLANS AND DETAILS
		SAFETY/ENV/FP (CIRCLE ONE)			404 - INSTRUMENT WIRING DIAGRAM
		SECURITY REQUIREMENTS			409 - INSTRUMENT INDEX
		OPCS SOFTWARE			450 - STANDARDS
		OPCS HARDWARE			MAPPING
		OPCS FIRMWARE			501 - ALIGNMENT SHEETS
		RANGES/ I/O POINTS			509 - PIPELINE DWGS (MAINLINE VALVES, DRIPS, SCRAPER, TRAPS
		DIP SWITCH SETTINGS/JUMPERS			550 - STANDARDS
		MASTER CI LIST			ARCHITECTURAL
		WELLHEAD CONFIGURATION			720 - ELEVATIONS AND FLOOR PLANS
		SPARES/PROVISIONING REQUIREMENTS			750 - STANDARDS
		OPERATIONS MANUALS			DOCUMENTATION
		MAINTENANCE MANUALS			900 - RESERVED
		GOVERNMENT FURNISHED EQUIPMENT			901 - TECHNICAL/PERFORMANCE/DESIGN CRITERIA
		ENERGY USAGE			910 - DESIGN DESCRIPTION/BASIS
		VALUE ENG. (COST SAVINGS)			911 - PROCESS SET POINT DOCUMENTS
		OPERATIONS MODELS			912 - EQUIPMENT LIST
		OTHER			913 - MOV LIST
DOCUMENTS AFFECTED					915 - ELECTRICAL SAFETY
Y	N	ITEMS			920 - I/O DOCUMENT
		PIPING			930 - OPERATION AND MAINTENANCE MANUALS
		101 - PROCESS FLOW DIAGRAMS			950 - STANDARD SPECIFICATIONS
		102 - MECHANICAL FLOW DIAGRAMS			970 - TASK SPECIFICATIONS
		103 - PIPING AND INSTRUMENTATION DIAGRAMS (P&ID'S)			990 - CONFIGURATION MANAGEMENT REPORTS 1.B.0.M
		104 - UTILITY FLOW DIAGRAMS			999 - RESERVED
		105 - GENERAL PIPING PLANS	COMMENTS:xn		
		106 - AREA PLANS (MECHANICAL EQUIPMENT LOCATION)			
		122 - WELLLHEAD DRAWINGS			
		130 - VALVE LIST			
		135 - LINE LIST			
		140 - PSV LIST			
		150 - STANDARDS			
		CIVIL/STRUCTURAL			
		201 - PLOT PLANS			
		202 - SITE WORK, GRADING (ROUGH & FINISH DRAINAGE FENCING			
		210 - FOUNDATIONS: LOCATION PLANS			
		216 - MINES (WEEKS ISLAND ONLY)			
		250 - STANDARDS			
		ELECTRICAL			
		301 - AREA CLASSIFICATION			
		302 - ONE LINE DIAGRAMS			
		303 - SCHEMATIC DIAGRAMS			
		304 - POWER PLANS AND DETAILS			
		305 - LIGHTING PLANS AND DETAILS			
		307 - SUBSTATION PLANS AND DETAILS			
		308 - WIRING DIAGRAMS			
		310 - GROUNDING			
		311 - CONDUIT & CABLE SCHEDULES (INCLUDING INSTRUMENTS)			
		313 - MCC/SWITCH GEAR EVALUATION & SCHEDULE			

Engineering	DATE	CONFIGURATION MANAGEMENT	DATE

ENGINEERING CHANGE PROPOSAL
LIFE CYCLE COST FORM

ECP NUMBER: SJ-M/o-4642	**ECP TITLE:** Omni Flow Computer Installation

EXECUTIVE SUMMARY:
This ECP is being submitted as documentation of work that was done at Sugarland in 2001. Existing Daniel Flow computers were obsolete and could not facilitate automation of measurement routines.

IMPLEMENTATION PLAN:
Flow computers on the Bayou Choctaw and Weeks Island meter runs at Sugarland were upgraded with Omni Flow computers.

IMPLEMENTATION COST:

DESIGN:	$5,845
CONSTRUCTION:	$11,690
TOTAL:	$17,535

LIFE CYCLE COST:
Not applicable. No foreseeable maintenance costs or upgrades to the Omni Flow Computers.

IMPACT SUMMARY:

LEVEL I, II, and III CRITERIA:	**CONTRACT COMPLETION DATES:**
CODES, REGULATIONS, PERMITS, ETC.:	**GOVERNMENT-FURNISHED EQUIPMENT:**
SAFETY, ENVIRONMENTAL, FIRE PROTECTION SYSTEMS, SECURITY:	**SCHEDULE:** Installed in 2001