STRATEGIC PETROLEUM RESERVE PROJECT PROPOSAL

(M&O CONTRACTOR FORM)

SITE(S) AFFECTED: SJ	
CONTRACTOR CHANGE NO.: 74010	REV:
☒ ENGINEERING CHANGE:	
☐ OTHER: (ADMIN/NON-ENGR. CHNG)	
ECP NO.:	

SECTION 1 - SUMMARY INFORMATION

TITLE: REDSTICK CONNECTION AT BAYOU CHOCTAW

SPONSOR: M. THOMPSON (Shell)
ORG:.SHELL
PHONE: 504/241-1937

RECOMMENDED RANK: 07

FUNDING/SCHEDULE IMPACT

SOURCE	TOTAL ESTIMATED COST				SCHEDULING
☐ SPR BLI _____	FY	____	____	____	☐ NO IMPACT
☐ CONTRACTOR BASELINE	DESIGN	____	____	____	☐ NEW SCHEDULE REQ'D.
☐ O&M	CONSTRUCTION/ IMPLEMENTATION	____	____	____	☐ SCHEDULE CHANGE REQ'D.
☐ LE					☐ MILESTONE _____
☐ MM	TOTAL:	____	____	____	☐ CMCR NO. _____
☐ OTHER _____					
☐ BCR					

AUTHORITY

☐ PCCB ☐ CLASS I
☐ ECC ☐ CLASS II
☐ CONTRACTOR

FINAL DISPOSITION

☐ APPROVE
☐ CONDITIONAL APPROVAL
☐ DISAPPROVE
☐ CANCEL

SECTION II - DYNMcDERMOTT REVIEW AND APPROVAL (CLASS II)

REVIEWERS (NAME/ORG.)	CONCURRENCE YES	CONCURRENCE NO	COMMENTS:
SITE MANAGER	☐	☐	
SITE ENGINEER	☐	☐	
-	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	

	DATE	DISPOSITION	COMMENTS
TRB CHAIRMAN		☐ CONCUR ☐ APPROVE ☐ DISAPP. ☐ CANCEL	
O&M PROJECTS COORDINATOR: Tony Garner	8/24/98	☒ CONCUR ☐ APPROVE ☐ DISAPP. ☐ CANCEL	

TRBSUM2.DOT

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STRATEGIC PETROLEUM RESERVE PROJECT PROPOSAL

(M&O CONTRACTOR FORM)

SITE(S) AFFECTED: SJ	
CONTRACTOR CHANGE NO: 74010	REV
☒ ENGINEERING CHANGE	
☐ OTHER (ADMIN/NON ENGR CHNG)	
ECP NO:	

SECTION I - SUMMARY INFORMATION

TITLE: REDSTICK CONNECTION AT BAYOU CHOCTAW

SPONSOR: M. THOMPSON (Shell)
ORG: SHELL
PHONE: 504/241-1937

FUNDING/SCHEDULE IMPACT				RECOMMENDED RANK:
SOURCE	TOTAL ESTIMATED COST			SCHEDULING
☐ SPR BLI _____	FY	____	____	☐ NO IMPACT
☐ CONTRACTOR BASELINE				☐ NEW SCHEDULE REQ'D.
☐ O&M	DESIGN	____	____	☐ SCHEDULE CHANGE REQ'D.
☐ LE	CONSTRUCTION/ IMPLEMENTATION	____	____	☐ MILESTONE _____
☐ MM				☐ CMCR NO. _____
☐ OTHER _____	TOTAL	____	____	
☐ BCR				

AUTHORITY

☐ PCCB ☐ CLASS I
☐ ECC ☐ CLASS II
☐ CONTRACTOR

FINAL DISPOSITION

☐ APPROVE
☐ CONDITIONAL APPROVAL
☐ DISAPPROVE
☐ CANCEL

SECTION II - DYNMcDERMOTT REVIEW AND APPROVAL (CLASS II)

REVIEWERS (NAME/ORG)	CONCURRENCE YES	NO	COMMENTS
SITE MANAGER	☒	☐	
SITE ENGINEER	☒	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	
	☐	☐	

TRB CHAIRMAN	DATE	DISPOSITION	COMMENTS
		☐ CONCUR ☐ APPROVE ☐ DISAPP. ☐ CANCEL	
O&M PROJECTS COORDINATOR	**DATE**	**DISPOSITION**	
		☐ CONCUR ☐ APPROVE ☐ DISAPP. ☐ CANCEL	

TRBSUM2.DOT

STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL

SUMMARY SHEET
CLASS I CHANGE

ECP NUMBER	TITLE
SJ-M/O-4609	REDSTICK CONNECTION at Bayou Choctaw

BUDGET SOURCE

- ☐ SPR BLI _____
- ☐ CONTRACTOR BASELINE
- ☐ BCR
- ☒ OTHER Equilon Lease

AUTHORITY

☐ PCCB ☐ ECC

SCHEDULE

☐ YES

MILESTONE NUMBER _____

CMCR NUMBER _____

☒ NO

TOTAL ESTIMATED COST OF CHANGE

	FY 98	FY	FY
DESIGN			
CONSTRUCTION / M&O			
TOTAL	$400,000		

PCCB / ECC SIGNATURES	DISPOSITION: CONCUR	DISPOSITION: NON CONCUR	DISPOSITION: DATE	COMMENTS CONDITIONS / LIMITATIONS
DOE SENIOR SITE OFFICIAL				
APM TECHNICAL ASSURANCE	✓		8/24/98	
APM SYSTEMS AND PROJECTS	✓		8/24/98	
APM MAINTENANCE AND OPERATIONS	✓		8/24/98	
DEPUTY PROJECT MANAGER				
DOE CMO				
PROJECT MANAGER				
DEPUTY ASSISTANT SECRETARY-SPR				

PCCB / ECC ACTION

☑ FULL APPROVAL ☐ CONDITIONAL / LIMITED APPROVAL ☐ DISAPPROVAL

D-882

STRATEGIC PETROLEUM RESERVE

WR #

ENGINEERING CHANGE PROPOSAL

ECP NUMBER	ECP TITLE	PAGE 1 OF
SJ-M/O-4609	Redstick Connection at Bayou Choctaw	

CONTRACTOR CHANGE NO./REV.	INITIATED BY	DATE	SUBMITTED BY	DATE
	M. L. Thompson	7/22/1998	M. L. Thompson	7/22/98
	ORG./CONTRACTOR	PHONE NO.	ORG./CONTRACTOR	PHONE NO.
	Equilon Pipeline Co.	241-1937		

PRIORITY

- ☐ EMERGENCY
- ☐ URGENT
- ☒ ROUTINE

VALUE ENGINEERING	DRAWDOWN CRITICAL	ROM ESTIMATE
☐ VEP (MANDATORY)	☐ YES	$ 400,000
☐ VECP (VOLUNTARY)	☐ NO	

DESCRIPTION:

PROBLEM / EXISTING CONFIGURATION Equilon Pipeline Company needs to connect the 24" Redstick Extension pipline to the 36" Redstick (Bayou Choctaw) line within the DOE's Bayou Choctaw Facility. Modifications to the Sugarland Terminal for the operation of the Redstick line will be covered under a separate ECP.

PROPOSED SOLUTION / ENHANCEMENT Equilon will install a new 24" pipeline with 30" scraper trap parallel to the existing 36" pipeline. The line will come above ground between the property line fence and the "tight wire" fence. The line will be routed through the tightwire fence and run above ground on existing supports. The fence will be modified as needed to retain its integrity. The existing cable tray running between the 36" line and the fence will be moved approximately 6' to the north. It will be placed on new supports adjacent the the fence. The new 24" line will tie into the 36" line as shown on the drawings. The 36" line will be isolated from Bayou Choctaw site piping by spectacle blinds. All drain lines will be isolated from the DOE sump and routed to a new catch pan.

A 10' by 10' electical equipment enclosure will be placed on site as shown on the drawings. Power (480V, 3 phase) will be obtained from the DOE substation or MCC. Equilon will estimate electrical usage and pay DOE accordingly.

REASON / JUSTIFICATION This connection is required to commercialize the Redstick pipeline.

CI'S AFFECTED

TECHNICAL ANALYSIS/RECOMMENDATION

IMPLEMENTATION METHOD

- ☐ SUBCONTRACT
- ☐ M&O LABOR (LOE)
- ☐ COMBINATION

ENGINEERING	DATE	FOE SSR	DATE	
Michael L Thompson	7/23/98	Suresh Devak	8/6/98	☒ CONCUR ☐ NONCONCUR

D-655

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Defusco, Louis

From: Thongpreda, Manas
Sent: Monday, August 24, 1998 08:54
To: Defusco, Louis
Subject: FW: Response to Redstick and Sugarland ECP's

From: Thompson ML (Michael) at MSXSOPC [SMTP:MT078588@MSXSOPC.shell.com]
Sent: Friday, August 21, 1998 12:30 PM
To: 'Decuir, Joe'; 'Landry, Scott'; 'Jim Quern'; 'Sevak, Suresh'; 'Thongpreda, Manas'
Cc: 'Sigur,Patricia'
Subject: Response to Redstick and Sugarland ECP's

I received comments from several of you about Equilon's ECPs for the Redstick Connection at Bayou Choctaw and the Sugarland Terminal Debottlenecking. I appreciate the comments and will try to respond to them here. Hopefully this will help make Monday's meeting go smoothly.

Redstick Connection at Bayou Choctaw

1. Our tentative schedule shows that we will begin work at Bayou Choctaw in mid to late October. One of our first activities will be to relocate the cable tray. If this timing conflicts with TIC's schedule to run the cable, let me know and we can work through this.
2. I see no problem with installing a 3" vacuum truck connection on the bottom of the 26" line between BC20-B and 20-KE1/KE2 valves. The question is who will pay for the work. I would suggest that DOE supply the valve and fittings and Equilon will pay to weld the assembly on the line.
3. I anticipate that the spec. blinds will be rolled in response to a request from DOE to move oil out of or into Bayou Choctaw. Therefore, I think this would be a DM function.
4. If this was purely an Equilon facility, we would not have foam deluge over the new pig trap. However, I understand your concern to make the new equipment match the existing. We do not object to having the deluge piping, but again, it is an issue of who will pay to extend the installation of deluge piping.
5. Equilon plans to install a jib crane to handle pigs. It will be located between the two traps. It was inadvertently left off the drawings.
6. We are still working on the location for the MCC. It is our understanding that the pit may contain hydrocarbons under certain circumstances. If that is the case, the building will need to be located at least 5 feet above the pit to get it into an unclassified area. While this is feasible, it is not very desirable. The electrical engineer for the project will be available the first week in September for a site visit. I propose that the decision on the exact location for the building be put off until he and I can visit the site again.
7. As stated in the ECP all trap drains will be disconnected from DOE's sump and routed to a new catch pan and pump to be installed by Equilon. The planned operation will be to pump the oil out of the trap and back into the pipeline before opening the trap door and retrieving the pig. The will minimize the required size of the catch pan.
8. I do not know exactly what you mean by an "SPR level of housekeeping", but it is Equilon's intention and policy to maintain all our locations in a neat and orderly fashion. I think if you visit any of our existing locations you will find that our level of housekeeping is equal to that of the SPR sites.
9. Piping Plan drawing SD-49360 shows insulating gaskets at both kicker lines and the B valve jump-over.

SUGARLAND TERMINAL DEBOTTLENECKING

1. Under ECP#74005 submitted and approved in September, 1997 the water discharge system at Sugarland was modified so that the 20" Effluent line was no longer needed. The retention pond drains to the ditch on the west side of the property and the Sanitary Waste System Lift Stations were disconnected from the 20" effluent line and discharge to the ditch on the south side of the property.
2. The 20" Water Effluent line will be disconnected from the fire water system on the dock. If the fire water system must be flushed, changes will be made so that it can be flushed to the bature.
3. It is true that when pumped in series with one of the booster pumps (SJT1-5) the Accelerated Fill Pumps (SJT-6/7/8) can overpressure the Redstick line at deadhead (no flow). However, normal operation will result in a maximum pressure at Sugarland of 320 psi. The control valve on the discharge side of pumps SJT-6/7/8 will be used to ensure line pressure does not exceed MAOP.

I hope this addresses your concerns.

Thanks,

Defusco, Louis

From: Thongpreda, Manas
Sent: Thursday, August 20, 1998 14:20
To: Sigur, Patricia; Quern, James; Sevak, Suresh; Tuminello, Brian
Cc: Rickner, Darryl; Hewitt, Timothy; Gump, Robert; LaBarre, Floyd; Gallavan, Charles; Landry, Scott; DeCuir, Joseph; Defusco, Louis
Subject: ECP for Sugarland Terminal Debottlenecking and BC Redstick connection

These ECPS were reviewed and commended by C. Gallavan; F. LaBarre; S. Landry; J. DeCuir and M. Thongpreda.

1) Sugarland Terminal Debottlenecking

- Is the 20" Water Effluent line not being used to transfer the water in the retention pond to the river ?.
- If the 20" Water Effluent line is used for oil service, consideration must be given for isolation of this line from the Fire Water loop on site and dock 1.
- The site Effluent Waste Water Lift Station also discharges into this 20" Water Effluent line which then delivers it to the river.

The acceleration pumps are capable of producing approximately 435 pis., which can easily overpis the Redstick line (approx, 325 psi) if not adequately addressed.

2) BC Redstick Connection

- We need to identify the potential impact to TICs work since the cable tray will be relocated closer to the taunt wire fence. We need to ensure that TICs installation of new cable to the tray is scheduled (and performed) after the relocation effort by Equilon. We also need to modify any documents or take whatever actions are required to ensure that this relocation is identified to minimize costs to the govt.
- The site would like to have a 3" low point drain installed on the 26" header (between the BC20-B and 20-KE1/KE2 valves) which will assist in evacuating the line in the future to remove the new spec blinds. (The 26" header will be evacuated of oil and excavated for installation and reconfiguration of components for this work and would provide the most cost effective and ideal opportunity to install a low point drain; plumbed above ground with a vacuum truck connection.)
- Who will be responsible for removal and reinstallation of the new spec blinds before and after each oil movement into and out of the BC Facility. Will this be a DM function? It needs to be documented so that there is no confusion or time delays for oil movement preparedness , especially for Drawdown.
- Should the DOE consider adding additional Foam Deluge Piping to provide adequate fire protection on the new pig trap? The new trap will be owned by Equilon, however, it will reside on government property and is physically connected to the adjacent oil piping (which is adequately covered by foam deluge).
- Does Equilon propose any pig handling equipment to be permanently installed? Verbal discussions on a previous visit indicated the possibility of a boom or jib crane? This is not indicated on the drawings.
- The new MCC is depicted to be installed in an area north of the concrete pit. This area is congested. What happened to the proposed installation above the pit?
- Are there any plans to modify the existing DOE pig trap drain piping at this time? It would appear to be more cost effective to reconfigure the piping to the new sump, while this ECP task is being performed; rather than returning later with another ECP.
- It is imperative that Equilon be tasked to maintain the new pig trap and piping area to the "SPR level of housekeeping". We envision problems in the future if this is not discussed and resolved early.
- The drawings indicated that only one kicker line had a cathodic protection (CP) isolation flange. It was not clear. There should be a CP isolation point on both kicker lines along with the B valve jump-over.

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
	74010		☐ CLASS I ☐ CLASS II PAGE 2 OF

FUNCTIONS AFFECTED		DOCUMENTS AFFECTED	
YES/NO	ITEM	YES/NO	ITEM
NO	LEVEL I ☐ LEVEL II ☐ CRITERIA		ELECTRICAL (cont'd)
NO	PERFORMANCE CRITERIA	NO	315 - CATHODIC PROTECTION
NO	RAM	NO	350 - STANDARDS
NO	INTERFACE CHARACTERISTICS		INSTRUMENTATION
~~NO~~ yes	I/O POINTS	NO	401 - BLOCK DIAGRAM
NO	DOE LEVEL I, II, III SCHEDULES	~~NO~~ yes	402 - LOOP DIAGRAMS
NO	GUARANTEES/DELIVERABLES	~~NO~~ yes	403 - INSTRUMENT PLANS AND DETAILS
NO	SAFETY/ENV/FP (CIRCLE ONE)	NO	404 - INSTRUMENT WIRING DIAGRAM
NO	SECURITY REQUIREMENTS	~~NO~~ yes	409 - INSTRUMENT INDEX
~~NO~~ yes	OPCS SOFTWARE	NO	450 - STANDARDS
NO	OPCS HARDWARE		MAPPING
NO	OPCS FIRMWARE	NO	501 - ALIGNMENT SHEETS
~~NO~~ yes	SETPOINTS/RANGES	NO	509 - PIPELINE DRWGS (MAINLINE VALVES, DRIPS, SCRAPER, TRAPS, ETC.)
NO	DIP SWITCH SETTINGS/JUMPERS	NO	550 - STANDARDS
NO	MASTER CI LIST		ARCHITECTURAL
NO	WELLHEAD CONFIGURATION	NO	720 - ELEVATIONS AND FLOOR PLANS
~~NO~~ yes	SPARES/PROVISIONING REQUIREMENTS	NO	750 - STANDARDS
NO	GOVERNMENT FURNISHED EQUIPMENT		DOCUMENTATION
NO	ENERGY USAGE	NO	900 - RESERVED
~~NO~~ yes	OPERATIONS MODELS	NO	901 - TECHNICAL/PERFORMANCE/DESIGN CRITERIA
NO	OTHER	~~NO~~ yes	910 - DESIGN DESCRIPTION/BASIS
	DOCUMENTS AFFECTED	~~NO~~ yes	911 - PROCESS SET POINT DOCUMENTS
	ITEMS	~~NO~~ yes	912 - EQUIPMENT LIST
	PIPING	~~NO~~ yes	913 - MOV LIST
~~NO~~ yes	101 - PROCESS FLOW DIAGRAMS	NO	915 - ELECTRICAL SAFETY
NO	102 - MECHANICAL FLOW DIAGRAMS	~~NO~~ yes	920 - I/O DOCUMENT
~~NO~~ yes	103 - PIPING AND INSTRUMENTATION DIAGRAMS (P&ID'S)	~~NO~~ yes	930 - OPERATIONS MANUALS
NO	104 - UTILITY FLOW DIAGRAMS	~~NO~~ yes	930 - MAINTENANCE MANUALS
NO	105 - GENERAL PIPING PLANS	NO	950 - STANDARD SPECIFICATIONS
NO	106 - AREA PLANS (MECHANICAL EQUIPMENT LOCATION)	NO	970 - TASK SPECIFICATIONS
NO	122 - WELL HEAD DRAWINGS	~~NO~~ yes	990 - CONFIGURATION MANAGEMENT REPORTS/I.B.O.M.
NO	123 – WELL COMPLETION CONFIGURATION DRAWINGS		
~~NO~~ yes	130 - VALVE LIST		
~~NO~~ yes	135 - LINE LIST		
~~NO~~ yes	140 - PSV LIST		
NO	150 - STANDARDS		
	CIVIL/STRUCTURAL		
~~NO~~ yes	201 - PLOT PLANS		
~~NO~~ yes	202 - SITE WORK: GRADING (ROUGH & FINISH) DRAIN FENCING		
NO	210 - FOUNDATIONS: LOCATION PLANS		
NO	216 - MINES (WEEKS ISLAND ONLY)		
NO	250 - STANDARDS		
	ELECTRICAL		
NO	301 - AREA CLASSIFICATION		
~~NO~~ yes	302 - ONE LINE DIAGRAMS		
NO	303 - SCHEMATIC DIAGRAMS		
~~NO~~ yes	304 - POWER PLANS AND DETAILS		
NO	305 - LIGHTING PLANS AND DETAILS		
NO	307 - SUBSTATION PLANS AND DETAILS		
NO	308 - WIRING DIAGRAMS		
NO	310 - GROUNDING		
~~NO~~ yes	311 - CONDUIT & CABLE SCHEDULES (INCLUDING INST.)		
~~NO~~ yes	313 - MCC/SWITCH GEAR ELEVATION & SCHEDULE		

COMMENTS:

ENGINEERING DATE

CONFIGURATION MANAGEMENT DATE

M Lyell 8/19/98:
EH 8-19-98

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STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL

SOFTWARE, HARDWARE, FIRMWARE CHANGE

CONTRACTOR CHANGE NUMBER	REVISION NUMBER	ECP NUMBER	PAGE
74010			3 OF

SOFTWARE CHANGE ANALYSIS	HARDWARE/SOFTWARE AFFECTED
	(NOTE: REDLINE CI BOM) CI #'s 4-1.10.3.1

DISPOSITION OF PARTS

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

☐ OTHER (DESCRIBE)

COMPONENT COMPATIBILITY (LIST COMPONENTS SEPARATELY IF COMPATIBILITY'S ARE DIFFERENT)

☐ INTERCHANGEABLE ☐ DRAWDOWN COMPATIBLE ☐ NONCOMPATIBLE

OPCS SUPPORT ENGINEER	DATE	FUNCTIONAL MANAGER	DATE

IMPLEMENTATION / TEST COMMENTS

WITNESSED BY			DATE

TEST APPROVED BY	DATE	CHANGE RELEASE AUTHORITY	DATE

D-658

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