STRATEGIC PETROLEUM RESERVE

ENGINEERING CHANGE PROPOSAL
SUMMARY SHEET
CLASS I CHANGE

ECP NUMBER	TITLE
SJ-M/O-4620	Sugarland to Capline Origination Expansion

BUDGET SOURCE

- ☐ SPR BLI _____
- ☐ CONTRACTOR BASELINE
- ☐ AUD
- ☒ OTHER: Lease Contractor

AUTHORITY

☒ PCCB ☐ ECC

SCHEDULE

☐ YES
MILESTONE NUMBER _____
CMCR NUMBER

☒ NO

TOTAL ESTIMATED COST OF CHANGE

	FY 02	FY 03
DESIGN		
CONSTRUCTION		
TOTAL	$300,000	

PCCB/ECC SIGNATURES	DISPOSITION: CONCUR	DISPOSITION: NON CONCUR	DISPOSITION: DATE	COMMENTS CONDITIONS/LIMITATIONS
				PROVISION MUST BE PROVIDED TO ISOLATE PORTION ON DOE PROPERTY/SM
DOE SENIOR SITE OFFICIAL	X		10/15	
APM TECHNICAL ASSURANCE	X		11/13/01	
APM SYSTEMS AND PROJECTS	✓		11/9/01	
APM MAINTENANCE AND OPERATIONS	✓		11/8/01	
DEPUTY PROJECT MANAGER				
DOE CMO				
PROJECT MANAGER				
DEPUTY ASSISTANT SECRETARY - SPR				

PCCB/ECC ACTION

☑ FULL APPROVAL ☐ CONDITIONAL/LIMITED APPROVAL ☐ DISAPPROVAL

ECPFM (4)

STRATEGIC PETROLEUM RESERVE

WR #

ENGINEERING CHANGE PROPOSAL

ECP NUMBER	ECP TITLE	
SJ-M/O-4620	**Sugarland to Capline Origination Expansion**	PAGE 1 OF 1

CONTRACTOR CHANGE NO./REV.	INITIATED BY	DATE	SUBMITTED BY	DATE
	Kevin Forrest	**4/16/01**	**Jeff Barab**	**10/15/2001**
PRIORITY	ORG./CONTRACTOR	PHONE NO.	ORG./CONTRACTOR	PHONE NO.
	Equilon Pipeline	**7132417296**	**Equilon Pipeline**	**7132410765**

PRIORITY

- ☐ EMERGENCY
- ☒ URGENT
- ☐ ROUTINE

VALUE ENGINEERING	DRAWDOWN CRITICAL	ROM ESTIMATE
☐ VEP (MANDATORY)	☐ YES	**$ 300,000**
☐ VECP (VOLUNTARY)	☐ NO	

DESCRIPTION:

PROBLEM / EXISTING CONFIGURATION

Capline has approved the use of DRA that will change its scheduled nameplate flow rate from 1.140 to 1.240 MMBPD. This correlates to a design crude maximum flow rate approaching 1,311 MBPD or approximately 55 MBPH. For the Capline system to reach this maximum daily throughput, all origination points must be able to deliver at this higher flow rate.

Currently, Sugarland is connected to Capline's mainline via a 30-inch pipeline approximately one mile long. The origination pumps at Sugarland are three parallel 1,500 HP booster pumps that can deliver a rate of 46-48 MBPH, depending on crude oil type.

PROPOSED SOLUTION / ENHANCEMENT

INSTALL NEW 36-INCH TRANSFER PIPE FROM SUGARLAND TO CAPLINE MAINLINE PUMPS:

Note: Since Equilon's new expansion project adjacent to Sugarland Terminal includes building a new 36-inch transfer line to the Capline mainline pumps, this project scope only includes incremental pipe and valves.

·Construct approximately 800 feet of 36-inch pipe to cross Sugarland tank farm to reach Equilon's new 36-inch transfer line
·Tie into Sugarland pump discharge header with 36-inch valve and check valve
·Tie into the new 36-inch transfer line without valve
SEE ATTACHED DRAWINGS FOR MORE DETAIL

REASON / JUSTIFICATION

The purpose of this proposal is to expand Sugarland's crude oil origination flow rate capability to meet the new Capline rates of approximately 55 MBPH. Customers today have an advantaged ability at Sugarland Terminal to originate into Capline's mainline without going through Capline storage. This is due to perserving the quality of the crude by avoiding unnecessary tank bottoms. The commercial advantages that Sugarland offers will be hindered if it cannot originate to the Capline Mainline at the required rates.

CI'S AFFECTED

TECHNCIAL ANALYSIS/RECOMMENDATION

IMPLEMENTATION METHOD

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

ENGINEERING	DATE	DOE SSR	DATE
Kevin Forrest	**4/17/01**		☐ CONCUR ☐ NONCONCUR

D-655

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RECEIVED OCT 17 2001

STRATEGIC PETROLEUM RESERVE
ENGINEERING CHANGE PROPOSAL
CONFIGURATION CHANGE AFFECTED REPORT

WR #

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

ECP NO.	CONRACTOR CHANGE NO.	REV.	CHANGE CLASSIFICATION
SJ-M/O-4620			☒ CLASS I ☐ CLASS II PAGE 2 OF

FUNCTIONS AFFECTED

YES/NO	ITEM
YES	LEVEL I ☒ LEVEL II ☐ CRITERIA
NO	PERFORMANCE CRITERIA
NO	RAM
NO	INTERFACE CHARCTERISTICS
NO	I/O POINTS
NO	DOE LEVEL I, II, III SCHEDULES
NO	GUARANTEES/DELIVERABLES
NO	SAFETY/ENV/FP (CIRCLE ONE)
NO	SECURITY REQUIREMENTS
~~NO~~ YES	OPCS SOFTWARE
NO	OPCS HARDWARE
NO	OPCS FIRMWARE
NO	SETPOINTS/RANGES
NO	DIP SWITCH SETTINGS/JUMPERS
NO	MASTER CI LIST
NO	WELLHEAD CONFIGURATION
NO	SPARES/ROVISIONING REQUIREMENTS
NO	GOVERNMENT FURNISHED EQUIPMENT
NO	ENERGY USAGE
~~NO~~ YES	OPERATIONS MODESL
YES	OTHER

DOCUMENTS AFFECTED

YES/NO	ITEMS
	PIPING
YES	101 - PROCESS FLOW DIAGRAMS
YES	102 - MECHANICAL FLOW DIAGRAMS
YES	103 - PIPING AND INSTRUMENTATION DIAGRAMS (P&ID'S)
NO	104 - UTILITY FLOW DIAGRAMS
YES	105 - GENERAL PIPING PLANS
NO	106 - AREA PLANS (MECHANICAL EQUIPMENT LOCATION)
NO	122 - WELL HEAD DRAWINGS
YES	130 - VALVE LIST
NO	135 - LINE LIST
NO	140 - PSV LIST
NO	150 - STANDARDS
	CIVIL/STRUCTURAL
YES	201 - PLOT PLANS
NO	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	302 - ONE LINE DIAGRAMS
NO	303 - SCHEMATIC DIAGRAMS
NO	304 - POWER PLAND AND DETAILS
NO	305 - LIGHTING PLAND AND DETAILS
NO	307 - SUBSTATION PLANS AND DETAILS
NO	308 - WIRING DIAGRAMS
NO	310 - GROUNDING
NO	311 - CONDUIT & CABLE SCHEDULES (INCLUDING INST.)
NO	313 - MCC/SWITHC GEAR EVALUATION & SCHEDULE

DOCUMENTS AFFECTED

YES/NO	ITEM
	ELECTRICAL (cont'd)
NO	315 - CATHODIC PROTECTION
NO	350 - STANDARDS
	INSTRUMENTATION
NO	401 - BLOCK DIAGRAM
~~NO~~ YES	402 - LOOP DIAGRAMS
NO	403 - INSTRUMENT PLANS
~~NO~~ YES	404 - INSTRUMENT WIRING DIAGRAM
NO	409 - INSTRUMENT INDEX
NO	450 - STANDARDS
	MAPPING
NO	501 - ALIGNMENT SHEETS
NO	509 - PIPELINE DRWGS (MAINLINE VALVES, DRIPS, SCRAPER, TRAPS, ETC.)
NO	550 - STANDARDS
	ARCHITECTUAL
NO	720 - ELEVATIONS AND FLOOR PLANS
NO	750 - STANDARDS
	DOCUMENTATION
NO	900 - RESERVED
NO	901 - TECHNICAL/PERFORMANCE/DESIGN CRITERIA
NO	910 - DESIGN DESCRIPTION/BASIS
NO	911 - PROCESS SET POINT DOCUMENTS
YES	912 - EQUIPMENT LIST
YES	913 - MOV LIST
NO	915 - ELECTRICAL SAFETY
NO	920 - I/O DOCUMENT
YES	930 - OPERATIONS MANUALS
NO	930 - MAINTENANCE MANUALS
NO	950 - STANDARD SPECIFICATIONS
NO	970 - TASK SPECIFICATIONS
~~NO~~ YES	990 - CONFIGURATION MANAGEMENT REPORTS/I.B.M.

COMENTS:
Remote + locally operated valve (MOV)
-PMC

ENGINEERING DATE

CONFIGURATION MANAGEMENT DATE
Patrick M. Chaul 10/17/01

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STRATEGIC PETROLEUM RESERVE

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ENGINEERING CHANGE PROPOSAL

SOFTWARE, HARDWARE, FIRMWARE CHANGE

CONTRACTOR CHANGE NUMBER	REVISION NUMBER	ECP NUMBER	PAGE
		SJ-M/O-4620	3 OF

SOFTWARE CHANGE ANALYSIS	HARDWARE/SOFTWARE AFFECTED
	(NOTE: REDLINE CI BOM) DCS + Allen Bradley PLC

DISPOSITION OF PARTS

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

☐ OTHER (DESCRIBE)

COMPONENT COMPATIBILITY (LIST COMPONENTS SEPERATELY IF COMPATIBILITIES ARE DIFFERENT)

☐ INTERCHANGEABLE ☐ DRAWDOWN COMPATIBLE ☐ NONCOMPATIBLE

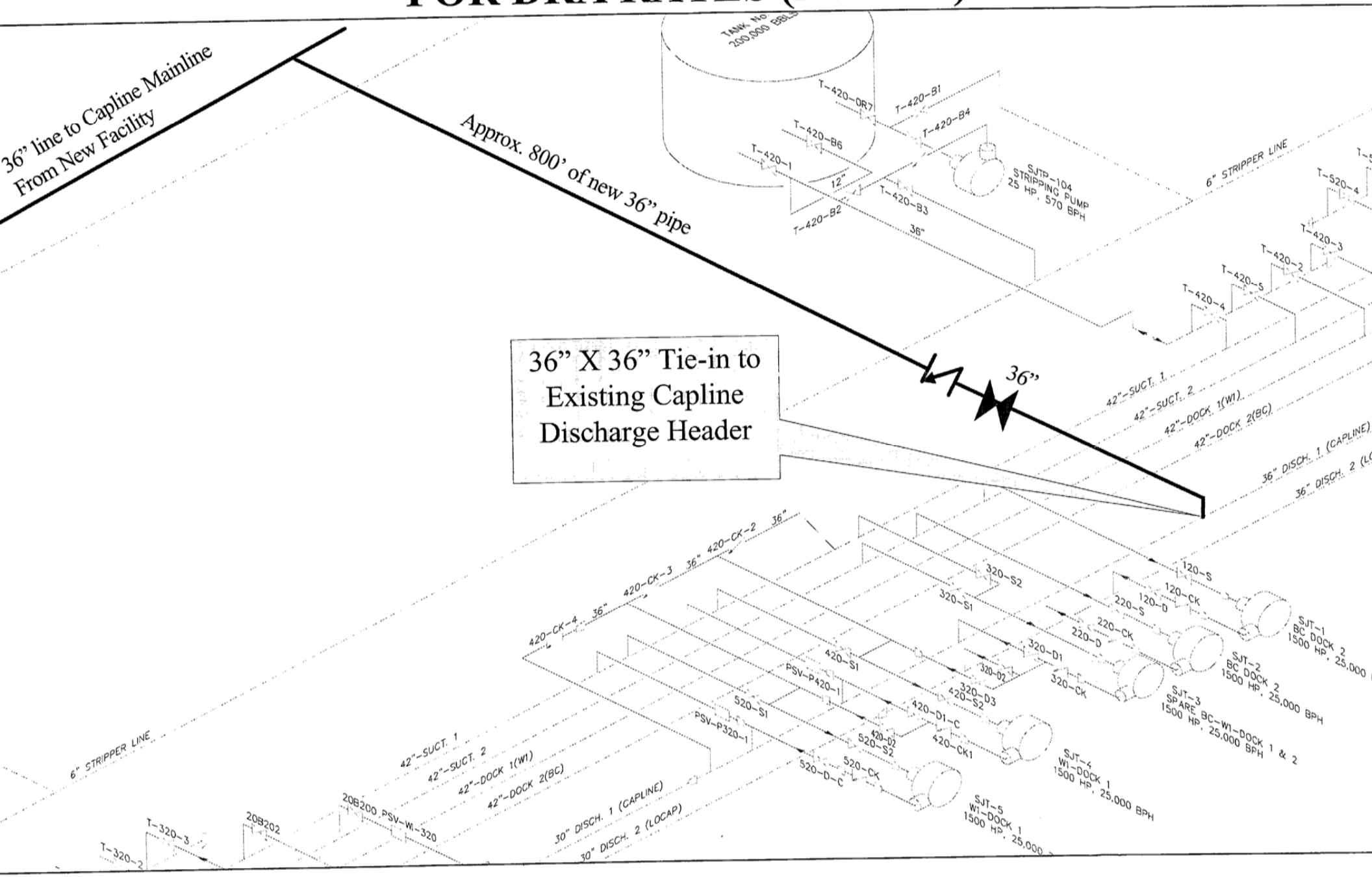
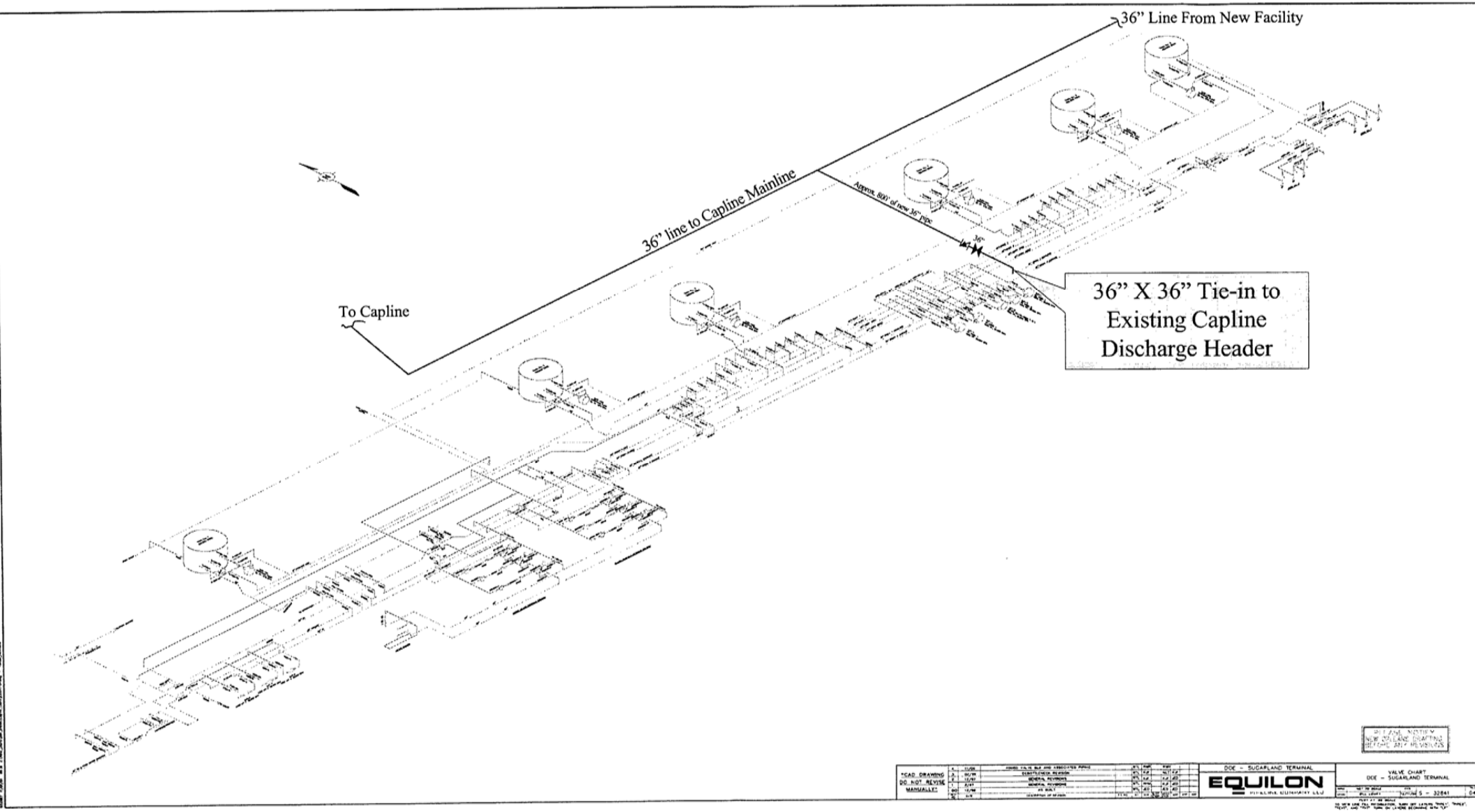
OPCS SUPPORT ENGINEER DATE FUNCTIONAL MANAGER DATE

IMPLEMENTATION / TEST COMMENTS

WITNESSED BY DATE

TEST APPROVED BY DATE CHANGE RELEASE AUTHORITY DATE

SUGARLAND TO CAPLINE 36" LINE FOR DRA RATES (Detailed)



SUGARLAND TO CAPLINE 36" LINE FOR DRA RATES (Overview)