
COX

Research and Technology, Inc.

DUPLEX PUMP
CONTROL PANEL
DORAN
UNDERDRAIN MANHOLE SUMP PUMPS

Cox Research and Technology, Inc.
14697 S. Harrells Ferry Road
Baton Rouge, LA. 70816
(225) 756-3271 Fax (225) 755-1030

CP-2172


VOLTAGE	<u>277/480V</u>	(480V, 277/480V, 240V, 120/240V, 208V, 120/208V)
PHASE/HZ	<u>3/60</u>	
NO. MOTORS	<u>2</u>	
HP	<u>1</u>	
FLA	<u>2.1 (EST)</u>	
TYPE OF PUMP	<u>Submersible</u>	(Self-Priming, Submersible)
MANUFACTURER	<u>ABS</u>	
CATALOG NUMBER	<u>EF10D-2</u>	
CONTROL VOLTAGE	<u>120V</u>	(120V, Other)
ENCLOSURE	<u>NEMA 4X</u>	(NEMA 1, NEMA 3R, NEMA 4, NEMA 4X)
ENCLOSURE MATERIAL	<u>Stainless Steel</u>	(Painted Steel, Stainless Steel, Fiberglass)
CONTROL SENSOR	<u>Floats</u>	(Floats, Bubbler, Other)
CAPACITORS	<u>No</u>	(Yes, No)
CAPACITOR WIRING FIGURE	<u>N/A</u>	
THERM. & SEAL FAIL WIRING FIGURE	<u> </u>	

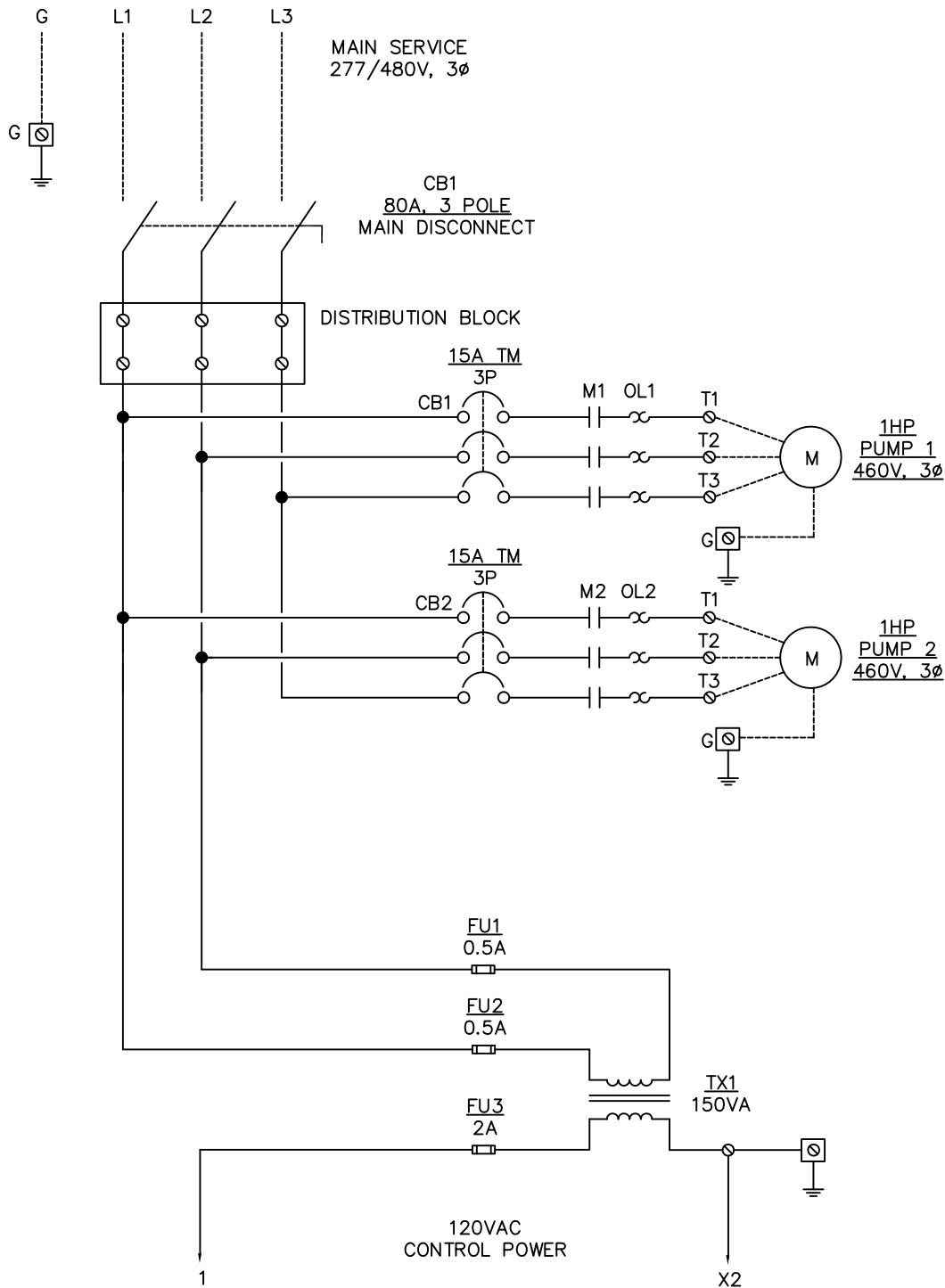
OPTIONS:

SEAL FAIL LIGHTS	<u> </u>	(Submersible Only)
SEAL FAIL RELAYS	<u> </u>	(Submersible Only)
SEAL FAIL PUMP SHUTDOWN	<u> </u>	(Submersible Only)
HT PUMP SHUTDOWN	<u>X</u>	(Self-Primer, Submersible)
ALARM HORN	<u> </u>	
ALARM LIGHT	<u>X</u>	
LIGHT PANEL MTD	<u>X</u>	
LIGHT REMOTE MTD	<u> </u>	
LIGHT FLASHER	<u> </u>	
LIGHTNING ARRESTER	<u> </u>	
ELAPSED TIME METER	<u> </u>	
PHASE MONITOR	<u> </u>	
NEMA RATED STARTERS	<u> </u>	
GROUND FAULT RECPT.	<u> </u>	
GREEN RUN LIGHTS VS. RED	<u> </u>	
POLE, BOX, SEAL	<u> </u>	
INTRINSICALLY SAFE RELAYS	<u> </u>	
HIGH TEMP. LOCKOUT, MANUAL RESET	<u> </u>	
ECONOMY VERSION	<u> </u>	

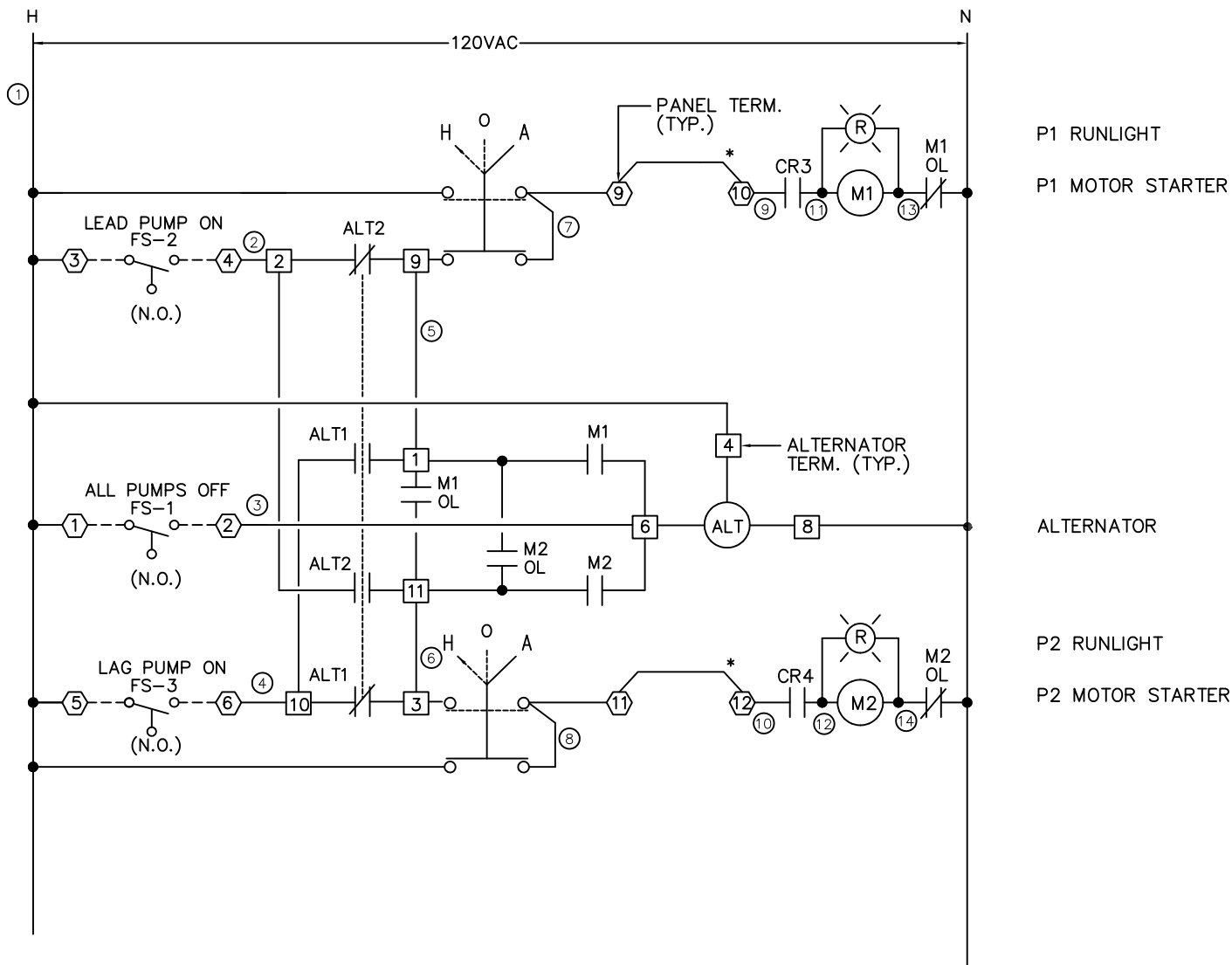
SOLD TO: CF ENGINEERED EQUIPMENT - DALLAS, TX
TAG : DORAN
UNDERDRAIN MANHOLE SUMP PUMPS

SHIP TO: CF ENGINEERED EQUIPMENT - DALLAS, TX

	Drawing Title						
	PANEL DESCRIPTION						
DATE 10/07/05		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	DRAWN BY C. RACHAL	ECN	DATE
	Project Title	<div style="text-align: center;">  Research and Technology, Inc. </div>			P.O. Box 77808 Baton Rouge, LA 70809		PURCHASE ORDER NUMBER
	DUPLEX PUMP CONTROL PANEL				Ph. (225)756-3271 Fax (225)755-1030		DRAWING NUMBER CP-2172
							SHEET NUMBER 1

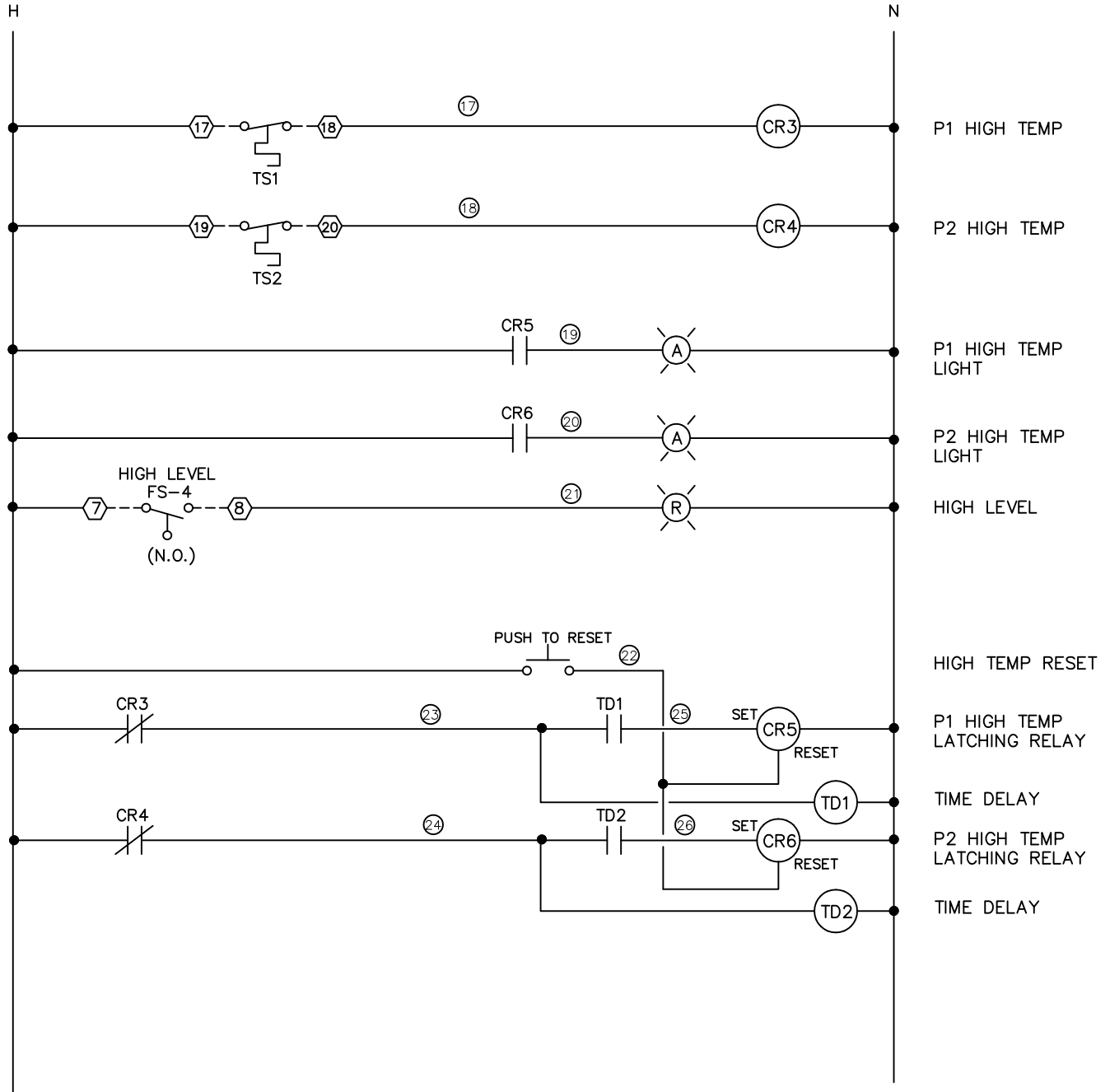


	Drawing Title							
	POWER DIAGRAM							
DATE		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY	
10/07/05		S/N	Sales Engineer C.C.	Application Engineer R.C.	BY C. RACHAL	APPROVED		
	Project Title				PURCHASE ORDER NUMBER			
	DUPLEX PUMP CONTROL PANEL	<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		DRAWING NUMBER CP-2172	
					SHEET NUMBER			2

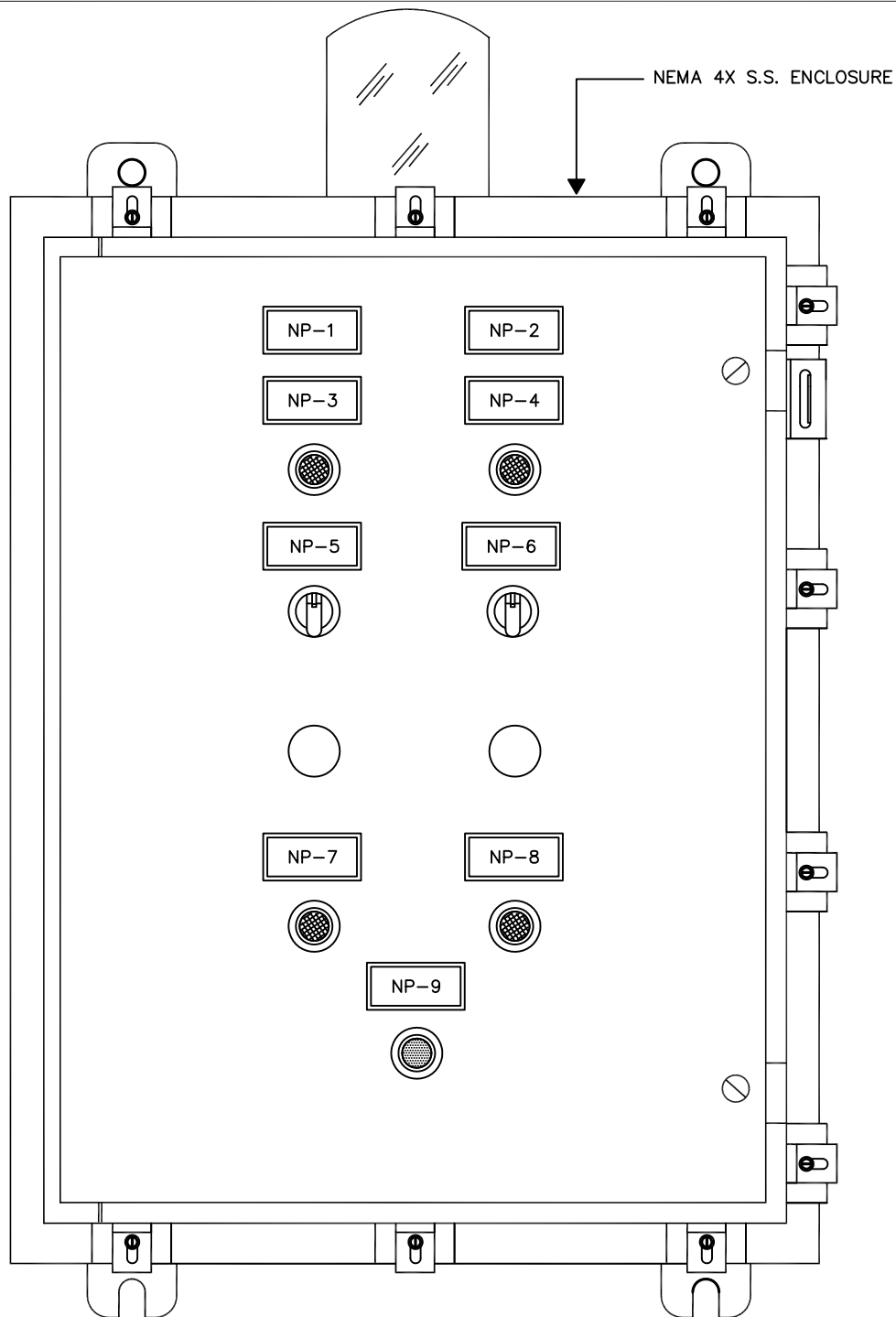


* REMOVE JUMPERS AND INSTALL LOCKOUT DEVICES IF REQUIRED

	Drawing Title CONTROL DIAGRAM									
DATE 10/07/05			REFERENCE DRAWING		NO.	REVISION-LOCATION		ECN	DATE	BY
			S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN BY C. RACHAL		APPROVED BY		
	Project Title		<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		PURCHASE ORDER NUMBER		
	DUPLEX PUMP CONTROL PANEL							DRAWING NUMBER CP-2172		
								SHEET NUMBER		
								3		



	Drawing Title							
	CONTROL DIAGRAM							
DATE		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY	
10/07/05		S/N	Sales Engineer C.C.	Application Engineer R.C.	BY C. RACHAL	APPROVED		
	Project Title				P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER		
	DUPLEX PUMP CONTROL PANEL	<div>COX</div> <div>Research and Technology, Inc.</div>			Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2172		
						SHEET NUMBER 4		



VIEW OF SWING OUT PANEL

NAMEPLATE SCHEDULE

NP-1	PUMP 1
NP-2	PUMP 2
NP-3	RUN
NP-4	RUN
NP-5	H-O-A
NP-6	H-O-A
NP-7	HIGH TEMP
NP-8	HIGH TEMP
NP-9	PUSH TO RESET

NOTE:
SEWER GASSES WILL DESTROY COMPONENTS IN PANEL.
PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE
PANEL TO PREVENT ENTRY OF GASSES.

	Drawing Title <	
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BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	C&I	I-242010ST4X	ENCLOSURE STAINLESS 4X
1a	1	C&I	CI-2420P	BACKPLATE
1b	1	C&I	CI-2420SP	DEAD FRONT
2	1	ABB	OT63E3	MAIN DISCONNECT
3	2	ABB	A16-30-10-84	MTR STR NEMA SIZE 0
4	2	ABB	TA25DU2.4	O.L. RELAY (1.7-2.4A)
5	2	ABB	S1N015TL	CB1, CB2
6	1	TIMEMARK	261DT120	ALTERNATING RELAY
7	2	ACI	JR22FR	RED PILOT LIGHT
8	2	ACI	JR22P3M20B	H-O-A SWITCH
9	1	ABB	T4150PSF-1	TRANSFORMER
10	1	AC/DC	BL5-R-120	ALARM LIGHT
11	2	ACI	JR22FY	AMBER PILOT LIGHT
12	2	MAGNECRAFT	W388AMLCPX-9	CR5,6 (LATCHING RELAY)
13	2	IDEC	RU2SA110	CR3,4
14	2	OMRON	H3YN2AC120	TIME DELAY 1,2
15	1	ACI	JR22AN11B	PUSH BUTTON
16	1	MARATHON	1323580	DISTRIBUTION BLOCK
17				
18				
19				
20				
21				
22				
23				
24				

	Drawing Title						
	<h3 style="margin: 0;">BILL OF MATERIALS</h3>						
DATE 10/07/05		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY
		S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN BY C. RACHAL	APPROVED BY	DATE
	Project Title	<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 150px;"> <h2 style="margin: 0;">COX</h2> <p style="margin: 0; font-size: small;">Research and Technology, Inc.</p> </div>			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		PURCHASE ORDER NUMBER DRAWING NUMBER CP-2172 SHEET NUMBER
	<h3 style="margin: 0;">DUPLEX PUMP CONTROL PANEL</h3>						