Brackmoor Foods
Pendle Road Plant · Maintenance

MAINTENANCE WORK ORDER
WO-2026-014872
Scan to open in the CMMS

TYPE	PRIORITY	STATUS	PLANNED START	DUE	COMPLETED
Corrective	2 · High	Completed	11/12/2026 06:30	11/12/2026 14:00	11/12/2026 12:05

01 ASSET AND REQUEST

ASSET TAG	**P-2104**	CRITICALITY	A · High
DESCRIPTION	CIP supply pump, Line 2 kettles	EQUIPMENT CLASS	Pump, centrifugal, sanitary
FUNCTIONAL LOCATION	PRP / Processing / Line 2 / CIP skid 2	MANUFACTURER, MODEL	Marvane Fluid Systems SC-50/32, 7.5 hp
SERIAL NUMBER	SC5032-118406	COST CENTER	3120 Line 2 Processing
REQUESTED BY	L. Moreau, Line 2 operator	REQUESTED ON	11/11/2026 22:15
PROBLEM REPORTED	Steady drip of hot CIP caustic at the mechanical seal of the supply pump, about 1 drop per second, seen on the operator round during the night shift. CIP duty switched to standby pump P-2105. No product contact.		

02 SAFETY AND ENERGY ISOLATION

LOCKOUT REQUIRED **Energy control procedure ECP-P2104 rev. C** · **Group lockout, lockbox LB-07**

Hazards Caustic solution 2% NaOH at up to 80 °C, residual line pressure, rotating equipment, 480 V motor

POINT	ENERGY SOURCE	ISOLATION DEVICE	METHOD	LOCK / TAG	VERIFIED
E1	Electrical, 480 V AC	MCC-2B, bucket 07 breaker	Open, lock and tag	L-0417	✓
C1	Chemical, hot caustic	Suction valve V-2104S	Close, lock with valve cover	L-0418	✓
C2	Chemical, hot caustic	Discharge valve V-2104P	Close, lock with valve cover	L-0419	✓
S1	Stored pressure and heat	Casing drain V-2104D	Open to drain, 0 bar at PI-2104	Tag T-0233	✓

Permits Line break: LB-2026-0388 Hot work: Not required Confined space: Not required

PPE Chemical splash goggles and face shield, neoprene gauntlet gloves, chemical apron, safety shoes, hearing protection, hairnet

03 TASK STEPS

STEP	INSTRUCTION	DONE
10	Confirm with the Line 2 supervisor that CIP runs on standby pump P-2105.	✓
20	Apply group lockout per ECP-P2104 at the four points above. Try the local start button, then return it to OFF.	✓
30	Drain the casing through V-2104D and confirm 0 bar at PI-2104 and a casing below 40 °C.	✓
40	Remove the coupling guard, the coupling element and the pump casing.	✓
50	Replace the cartridge seal and all EPDM O-rings. Inspect impeller, shaft sleeve and casing.	✓
60	Reassemble. Laser-align the shaft to within 0.05 mm offset.	✓
70	Release the lockout per ECP-P2104: tools removed, all workers clear, affected employees notified. Check rotation with the operator.	✓

STEP	INSTRUCTION	DONE
80	Run on water at 3 bar for 15 minutes: no leak at the seal, vibration below 4.5 mm/s.	✓
90	Hygiene clearance: tool and part count, area cleaned, QA release before CIP returns to service.	✓

04 LABOR BY CRAFT

CRAFT	TECHNICIAN	EST. HOURS	ACT. HOURS	RATE	COST
Millwright	D. Mensah	4.00	4.50	$68.00	$306.00
Millwright apprentice	J. Halloran	4.00	4.00	$41.50	$166.00
Electrician	R. Ibarra	1.00	0.75	$72.00	$54.00
Total		**9.00**	**9.25**		**$526.00**

05 SPARE PARTS ISSUED

PART NUMBER	DESCRIPTION	BIN	QUANTITY	UNIT COST	AMOUNT
30-1182-04	Cartridge mechanical seal 32 mm, SiC/SiC, EPDM	A-14-03	1 EA	$584.00	$584.00
30-1190-11	O-ring kit, EPDM, FDA 21 CFR 177.2600	B-02-07	1 KIT	$36.50	$36.50
30-1201-02	Casing gasket, PTFE	B-02-09	2 EA	$11.40	$22.80
41-0450-00	Coupling element, jaw type, size 28	C-05-01	1 EA	$48.90	$48.90
60-0012-07	Lubricant, NSF H1, 400 g cartridge	D-01-02	1 EA	$13.75	$13.75
Total					**$705.95**

06 COMPLETION AND FAILURE REPORT

WORK PERFORMED

Replaced the cartridge seal, casing O-rings and gasket, and the coupling element. Seal faces worn and scored, no damage to shaft sleeve or impeller. Alignment 0.03 mm offset after reassembly. Run test on water at 3 bar for 15 minutes: no leak, vibration 2.1 mm/s.

DETECTION METHOD	Casual observation (operator round)	**FAILURE MODE**	ELP · External leakage, process medium
FAILURE MECHANISM	2.4 · Wear	**FAILURE CAUSE**	3.4 · Expected wear and tear
MAINTENANCE ACTIVITY	Replace	**MAINTAINABLE ITEM**	Mechanical seal
EQUIPMENT DOWNTIME	11/12 06:40 to 12:15 · 5.58 h	**PRODUCTION LOSS**	0.00 h, standby pump on duty

07 COST AND SIGN-OFF

Labor	$526.00
Spare parts	$705.95
Work order total	**$1,231.95**

TECHNICIAN
D. Mensah
Signed 11/12/2026 12:05 in the CMMS

MAINTENANCE SUPERVISOR
K. Whitcombe
Signed 11/12/2026 12:40 in the CMMS

QA HYGIENE RELEASE
S. Patel
Signed 11/12/2026 12:15 in the CMMS