



Human Machine Interface

Upgrades and Design

If you have a system, REW can control it



OVERVIEW UNIT1 UNIT2 STEAM1 STEAM2 BOP **TURBINE** 14:28:01 SYSTEM
Wednesday, June 02, 2004

TURBINE OPERATING MODES

INLET PRESSURE	SETPOINT	165
KW LOAD		441

TOTAL MWH 343.2530

CONDENSATE TO RECEIVER 149
CONDENSER OUTLET TEMPERATURE

PC801C ACC TOP LOUVRES

COND. TEMP. DEG F.	M	CASCADE	A
0-250	140	140	140

PC801D ACC SIDE LOUVRES

COND. TEMP. DEG F.	M	CASCADE	A
0-250	140	140	140

LEAD FAN SELECT

#1	#2
ACC #1 FAN	ACC #2 FAN
FWD RUN	FWD RUN
REV RUN	REV RUN
AUTO	AUTO

TRENDS

SC801A #1 ACC VFD

PSI	M	CASCADE	A
0-1500	1000	1000	1000

SC801B #2 ACC VFD

PSI	M	CASCADE	A
0-1500	1000	1000	1000

Alarms Total Alarms Present: 1 Unacknowledged Alarms: 0 Acknowledge All Alarms

OVERVIEW UNITS **UNIT2** BLS SYSTEMS FEED/LOADS STRAIGHT BOP TURBINE

UNIT2

ENGINE RATE	1100
ENGINE PRESS	2.0233
FLAME RATE	1100
FLAME SWELL	0.0000
STRING COUNT	1100
CYCLE PROGRESS	0.0000
ROOM TEMP	1100
R.O.C.	-11.66
DRAFT	-0.30
EXHAUST TEMP	1177

RAM FEEDER

ENGINE RATE	1100
ENGINE PRESS	2.0233
FLAME RATE	1100
FLAME SWELL	0.0000
STRING COUNT	1100
CYCLE PROGRESS	0.0000

SPINNING OUTPUT

ENGINE RATE	1100
ENGINE PRESS	2.0233
FLAME RATE	1100
FLAME SWELL	0.0000
STRING COUNT	1100
CYCLE PROGRESS	0.0000

14:25:00 Wednesday, June 02, 2004

Alarms Total Alarms Present: 1 Unacknowledged Alarms: 0 Acknowledge All Alarms

OPERATING MODES

Normal
Left
Right
Manual

POSITION

TRAVEL POSN (FEET)	TRAVEL ADVANCE	SLW APRLE	SWOON (HEIGHT FEET)
2027	5.5	69	23.7

BUCKET WHEEL LOAD (%)

BUCKET WHEEL LOAD (%)	SLW Speed
0	Stopped

AFSA FEEDER

Feeder Speed	AFSA FEEDER RATE (T/M)	TONS/H
0	0	0

CONTROLS

MANUAL/AUTO STATUS BLEW HOIST

Manual Start Stop Auto Start Stop Left Right Up Down

Forward Reverse Travel STOP Travel to 1500 Travel to Midpoint Travel to 300

BOTTOM ASH SYSTEM OVERVIEW

ALARMS

STOPPED
E-STOP TRIPPED

Dumper HMI Screens

INTERLOCKS & PERMISSIVES

11:20:05 2 / 10 / 05

DUMPER PERMISSIVES FOR GREEN LIGHT (LOCO LIGHT)

READY	DUMPER IN RUN	READY	DUMPER SEATED	READY	SOUTH DOOR UP
STOPPED	CLAMPS AT MAX	STOPPED	BLOCKING RETRACTED	STOPPED	WHEEL LOCKS RELEASED
STOPPED	CLAMPS AT NORMAL	STOPPED	ARM UP	READY	TRUCK LOCKS RELEASED

DUMPER PERMISSIVE TO INDEXER

READY	DUMPER IN RUN	READY	DUMPER SEATED	READY	DUMPER SEATED
STOPPED	CLAMP PHOTOEYES	STOPPED	INDEX CHECK		
STOPPED	CLAMPS AT NORMAL	STOPPED	DPTP 033011		

INDEXER AUTO START

READY	DUMPER EMERGENCY STOP	READY	TRUCK LOCKS	READY	STALL TIMER
READY	INDEXER EMERGENCY STOP	READY	ARM ON COUPLER	READY	MOODLE FAULT
READY	INDEXER IN AUTO	READY	AUTO STOP PB	STOPPED	TRUCKS SET
READY	DUMPER UNTRAIN				

Screen Selection: Main Monitor, Main Menu, Permissives & Interlocks, Car Dumper, Locs Engine Not Clear to Enter



Color Key
 = Permissive to Run
 = Prevents Operation

CAR DUMPER DUST COLLECTOR & DAMPERS

11:23:48 7/10/05

START DUST COLLECTION SYSTEM (READY)
STOP DUST COLLECTION SYSTEM (STOPPED)
NORMAL DUST COLLECTOR PURGE STOP
CENTER TOWER FILTER IN AUTO

CLEANING CYCLE DEMAND SETPOINTS
 START SETPOINT: 5.0
 STOP SETPOINT: 2.5

DIFFERENTIAL: 3.6 WC(HIGH) + 8.0 WC
CONVEYING BLOWER: 1.0 PSI(HIGH) + 4.0 PSI
CLEANING BLOWER: 0.5 PSI(HIGH) + 10.0 PSI

EXHAUST FAN DAMPERS

#1 DAMPER STATE	BUTTON STATE	OPENCLOSE	#2 DAMPER STATE	BUTTON STATE	OPENCLOSE
OPEN	AUTO	AUTO	OPEN	AUTO	AUTO

HOOD DAMPERS

FEEDER BELTS	CONV 1 LOADER	CONV 1 TAIL
BUTTON STATE: AUTO	BUTTON STATE: AUTO	BUTTON STATE: AUTO
DAMPER STATE: CLOSED	DAMPER STATE: OPEN	DAMPER STATE: OPEN
OPENCLOSE: AUTO	OPENCLOSE: AUTO	OPENCLOSE: AUTO

FILTER: 50%
 CONVERTING BLOWER, ROTARY FEEDER, TO AGGLOMERATION SYSTEM DUST TANK

HOOD DAMPERS: FEEDER BELTS, CONV 1 LOADER, CONV 1 TAIL
 FEEDER DAMPERS: #1, #2
 FAN INLET DAMPERS: EXHAUST FAN #2, EXHAUST FAN #1

MAIN MONITOR SCREEN

11:24:32 2/10/05

INDEXER CURRENT: 1000 900 800 700 600 500 400 300 200 100 0

CAR COUNT: UP, DOWN, CLEAR, 32

INDEXER STATUS: HIGH COAL ON GRID

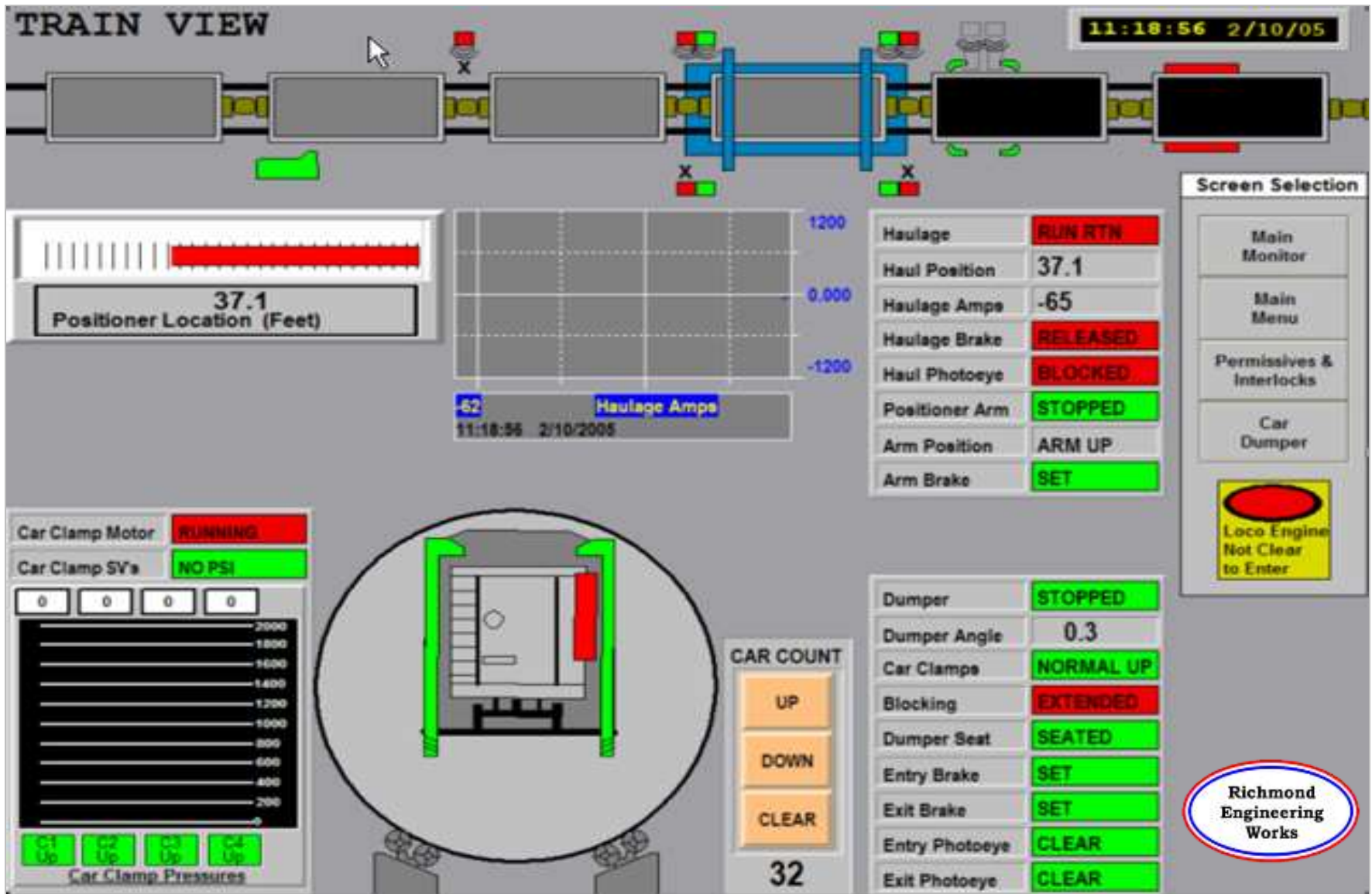
FEEDER SPEED ADJUST

NORTH SETPOINT	SOUTH SETPOINT
NORTH % INCREASE: 50%	SOUTH % INCREASE: 60%
NORTH SPEED: 100	SOUTH SPEED: 100
NORTH % DECREASE: 25	SOUTH % DECREASE: 25

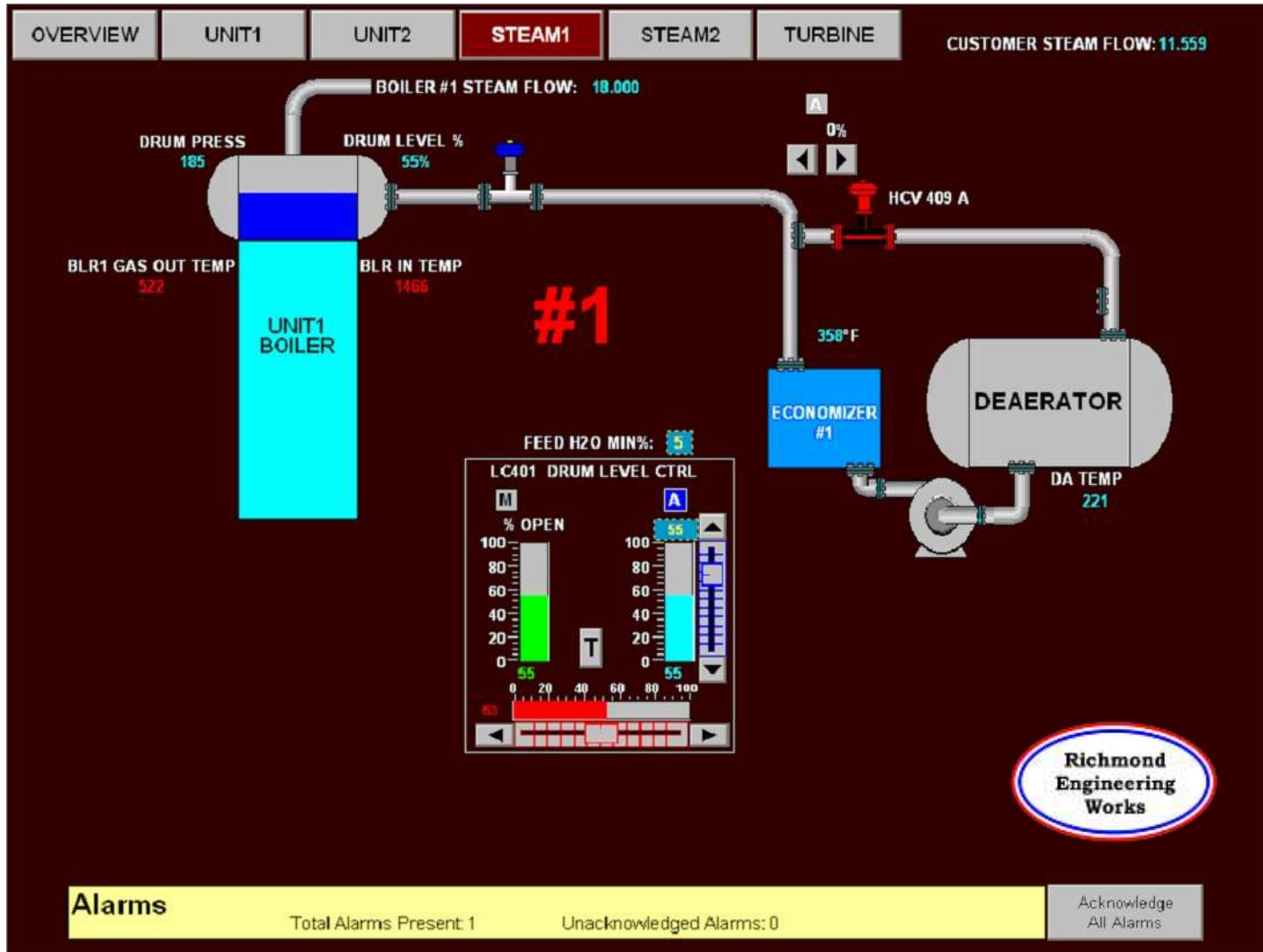
WARNING: INCREASING CAR SPEED OFF, TRANSVERSE WATER SPRAY OFF, TO DUMPER'S CAR W/VE TEST, HIGH COAL ON GRID, 888000 GALLONS W/AT COMPLETE, 12000, DUMPER IN AUTO, 2878 1/4"

Screen Selection: Main Monitor, Main Menu, Permissives & Interlocks, Car Dumper

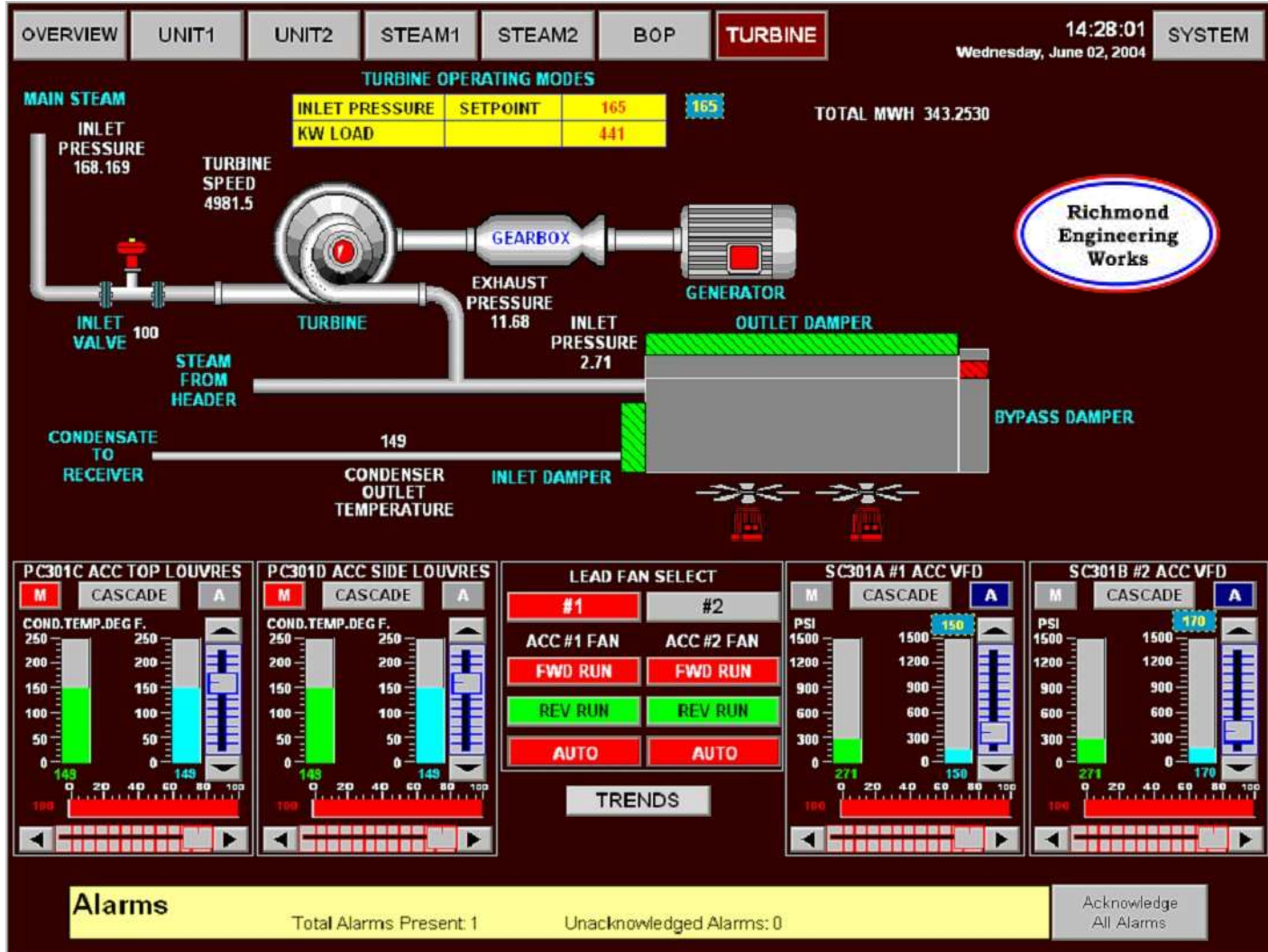
Dumper Train View Screen



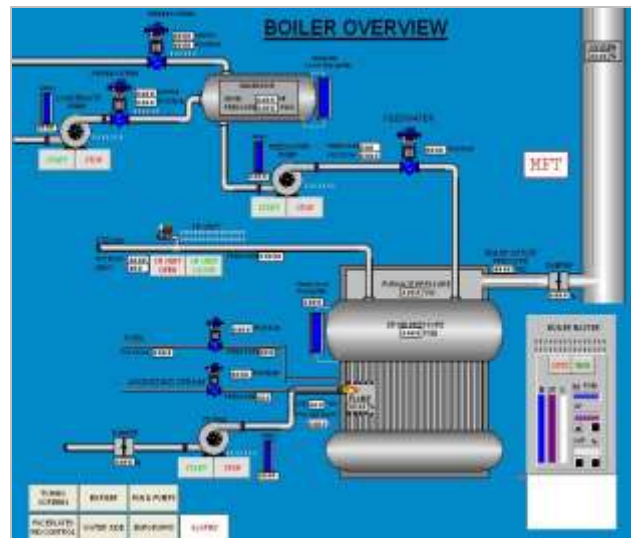
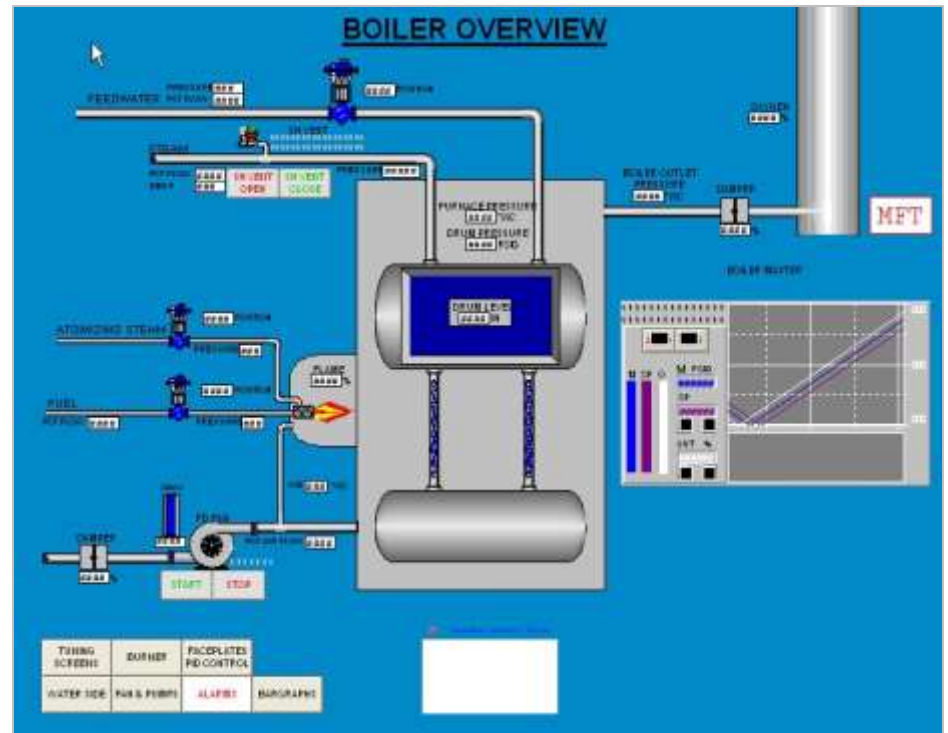
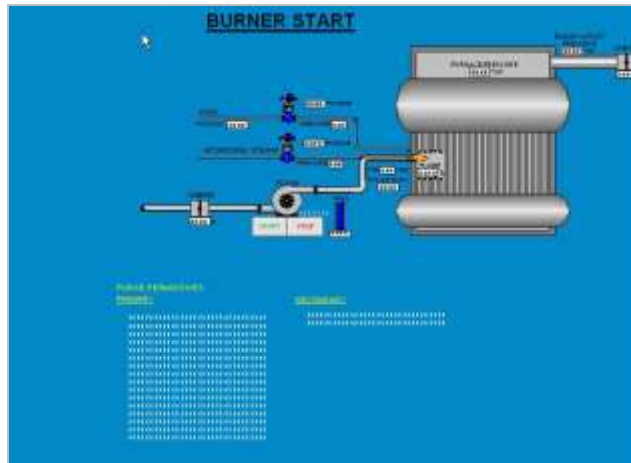
Steam Overview Screen for an Incinerator



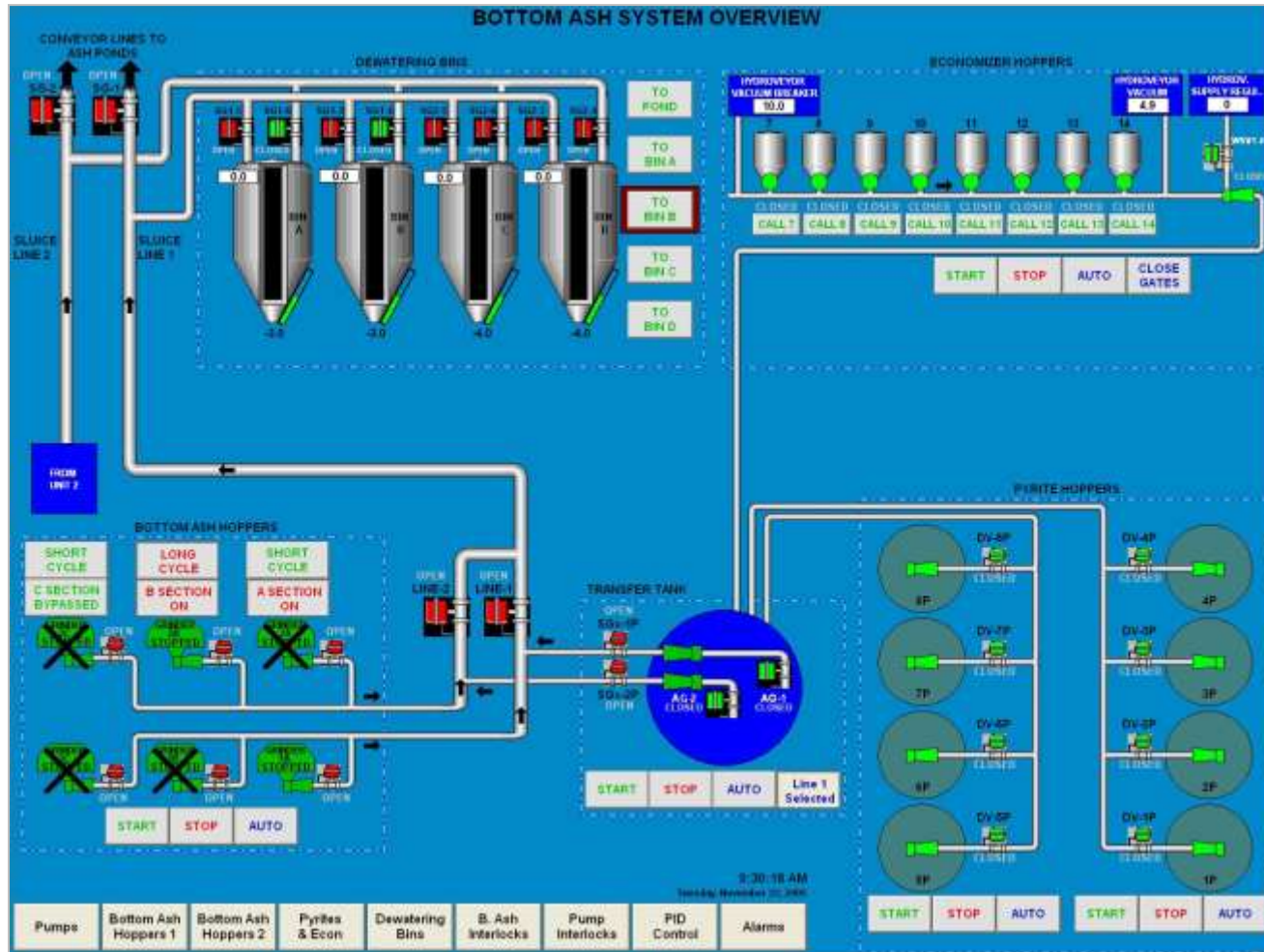
Turbine Screen



Aux Boiler HMI Screens



REW's Bottom Ash System Overview screen provides extensive useful information to the Operator



REW can simulate most HMI Programs in our shop for a Factory Acceptance Test



Monitors can be adapted into your existing consoles, or new ones designed.



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