| K-103 | A-108 | K-101 | A-111 | H-101 | H-108 | H-103 | H-104 | X-108 | H-107 | H-106 | K-106 | X-115 | X-118 | H-109 | Y-123 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| KILN COOLING AIR FAN | KILN COMBUSTION AIR FAN SILENCER | KILN COMBUSTION AIR FAN | KILN COOLING AIR FAN SILENCER | ROTARY KILN | AFTERBURNER CHAMBER | KILN DRIVE | KILN BRAKE | EMERGENCY RELIEF VENT | REFRACTORY | KILN GUIDANCE SYSTEM | SEAL AIR FAN | SECONDARY COMBUSTION DAMPER | SECONDARY COMBUSTION DAMPER | HOT DUCT | DIESEL DRIVE |

WEATHER CAP AND SCREEN
ATMOSPHERE
SILENCER A-111
K-103
EMER. POWER
NOTE: K-103 COOLING AIR FAN IS USED AS REQUIRED
20"-D-1007
SS 3243 LOCATED AT KILN
VFD (A&B) NOTE 1
AUTO HAND
SS 1007 HOA
101-2
BRAKE H-104
DIESEL Y-123
H-103
TO KILN GIRTH GEAR
2"
TO SPRAY DRYER D-034-PI-201 QUENCH TOWER INLET
BLASTER CONNECTIONS (TYP.)
2 SPARE PORTS (TYP)
H-108 INFRARED
TEST PORT A.D.C.D.E. TYPICAL
H-107
14"-D-1008
CCTV-1
PURGE AIR
INSTR. AIR
12"-D-1015
DESLAGGER VENT D-034-PI-110
DAMPER
2 OF 3 VOTE
TT 1009 A,B,C
TY 1009
TAL 1009
TAH 1009
TAHH 1009
TI 1009
TAL 1005
TAH 1005
TAHH 1005
TI 1005
ZAO 1017
ZSC 1017
CABLE
SV 1008
UPS
PC 1008
PB 1008 OPEN CLOSE
F.O.
AS
DE
X-108
19
AI 1010
AAL 1010 OXY
AS 1010 OXY
AT 1010 A,B OXY
AE 1010 A,B OXY
AE 1010 C,D OXY
HMI
TE 1009 A,B,C
TW 1009
TE 1005 C
TT 1005 C
TI 1005 C
TE 1005 A
TT 1005 A
TI 1005 A
TE 1005 B
TT 1005 B
TI 1005 B
HIC 1021
FI 1015
A/S 30 PSI
HY 1021 I/P
HV 1021
FIT 1015 ANNUBAR
X-115
PIT 1012B
PIT 1012A
HIC 1020
HY 1020 I/P
HV 1020
6"-D-1006
X-118
30"-D-1004
H-101
H-107
14"-D-1009
TEST PORT
24"
TT 1023
HIC 1018
HY 1023 I/P
HV 1023
PAL 1018
PIC 1023
PY 1018 I/P A/S 30 PSI
PV 1018
48"-D-1001
COMBUSTION D-034-PI-410 AIR PLENUM
SILENCER A-108
K-101
P.O.
VARIABLE INLET VANES
EMER. POWER
SS 1835
PB 1001 START STOP
44"-D-1002
36"
36"-D-1005
VO-80
PT 1018
PI 1019
ZSHH 1016 A
ZSH 1016 A
ZSH 1016 B
ZSHH 1016 B
ZAHH 1016
SV 1013
PI 1019
LG 1014
LSL 1014
KILN GUIDANCE SYSTEM H-106 "F"
EMER. POWER
START PB 3012 STOP
SS 3012
CONTINUED ON DWG. D-034-PI-110 DESLAGGER
TYP 3 CONNECTIONS
VO-80
PIT 1006 A,B,C
PY 1006
PIC 1006
TO ID FAN D-034-PI-212 K-201 (VFD)
PAL 1006
PAH 1006
PAHH 1006
WEATHER CAP AND SCREEN
K-106
START PB 2174 STOP
NOTE: K-106 FAN AND INSTRUMENTATION NOT REQUIRED BY RCRA PERMIT
US 0001 UTILITY POWER FAILURE
US 0002 GENERATOR POWER FAILURE
PB 0004 EMERGENCY STOP PUSH BUTTON
30"-D-1003
FRONTWALL D-034-PI-105 COMBUSTION AIR

NOTE 1. ONLY ONE VFD AT A TIME IS USABLE. ALL SIGNALS ARE SWITCHABLE WITH THE VFD.

REGISTERED PROFESSIONAL ENGINEER
No. 7207431-2202
JOHN WILLIAM CALDWELL
09/27/19
STATE OF UTAH

## INTERLOCK DESCRIPTION

M MASTER INTERLOCK SYSTEM
101-1 KILN GUIDANCE CONTROL – REVERSES DIRECTION, STOPS GUIDANCE DRIVE ON HH.
101-2 WHEN VFD IS ENERGIZED, H-104 BRAKE IS RELEASED. BRAKE ENGAGES WHEN KILN STOPS.
101-3 RESTART SEQUENCE ON EMERGENCY DIESEL GENERATOR.

## REVISIONS

| NO | DESCRIPTION | DATE | BY | CHK | | ENG MGR |
|---|---|---|---|---|---|---|
| 15 | ADDED FLOP GATE VENT LINE | 06-13-02 | LC | | | CHW |
| 16 | ADDED THIRD INFRARED | 11-02-06 | KL | | | |
| 17 | UPDATES PER 2016 KILN PHA | 12-12-16 | MM | TL | | |
| 18 | REMOVED DWG REFRENCE | 01-26-17 | MM | TL | | |
| 19 | VFD TO K-101, AE-1010 | 02-26-19 | JWR | JH | | JWR |

## REVISIONS

| NO | DESCRIPTION | DATE | BY | CHK | | ENG MGR |
|---|---|---|---|---|---|---|
| 10 | ADDED ANNUBAR AND REMOVED ORIFICE PLATE | 02-02-98 | CRM | | | |
| 11 | TO CORRECT DRAFTING ERRORS | 04-06-98 | CRM | | | |
| 12 | ADDED DESLAGGER VENT LINE | 07-01-98 | CRM | | | |
| 13 | MOVED PIT 1006A,B,C | 12-15-98 | CRM | | | |
| 14 | RELOCATED DESLAGGER VENT LINE | 10-28-99 | GVC | | | |

## APPROVALS

| | BY | DATE |
|---|---|---|
| DRAWN | CRM | 03-19-97 |
| CHECKED | | |
| ELEC | | |
| MECH | | |
| STRUCT | | |
| PROJECT ENG | | |
| ENGINEERING MGR | | |
| AS BUILT | | |

REGISTERED PROFESSIONAL ENGINEER
DATE:_____

CleanHarbors
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TITLE
UTAH ENVIRONMENTAL SERVICE CENTER
INCINERATION PLANT FOR INDUSTRIAL WASTES
P&ID SLAGGING ROTARY KILN SYSTEM

| FOR | CAD NO. |
|---|---|
| TOOELE SITE | IH766Y |
| SCALE / JOB NO | SAFETY-KLEEN DWG NO / REV |
| | D-034-PI-101 / 19 |