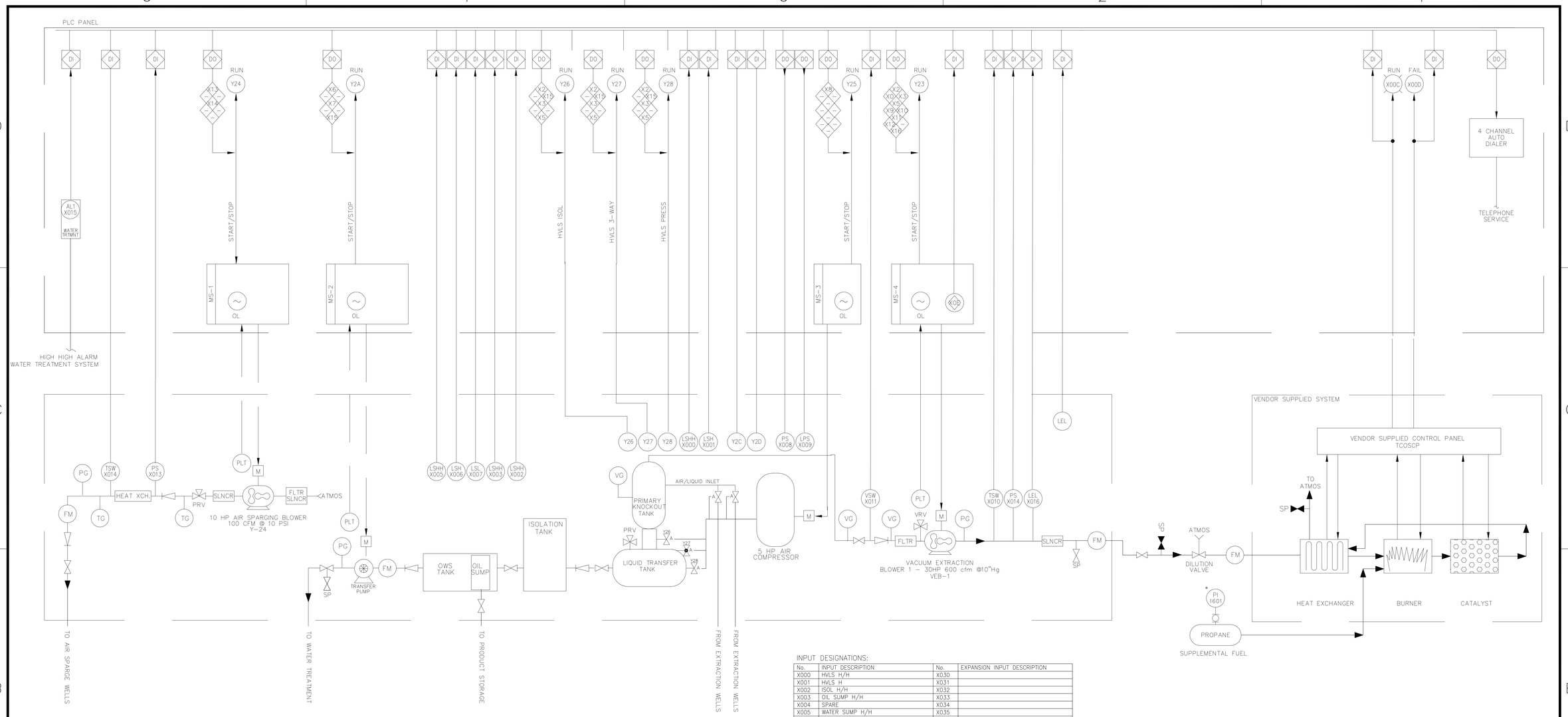


NOTES

1. REFER TO IO LIST FOR DESIGNATIONS
2. OWNER DEFINED ALARMS DURING CONSTRUCTION. CONTRACTOR PROGRAMED PLC AND AUTODIALER ACCORDINGLY.
3. ALL ALARMS ARE INDIVIDUALLY DISPLAYED ON THE CONTROL PANEL
4. GENERAL CONTROL FUNCTIONS ARE VIA THE PROGRAMMABLE LOGIC CONTROLLER. PROTECTIVE INTERLOCKS FOR CRITICAL EQUIPMENT ARE VIA HARD WIRED RELAYS

| | |
|---|---|
| PG | PRESSURE GAUGE |
| VG | VACUUM GAUGE |
| PLT | HAND SWITCH |
| LSHH | LEVEL SWITCH HIGH HIGH |
| LSH | LEVEL SWITCH HIGH |
| LSL | LEVEL SWITCH LOW |
| TG | TEMPERATURE GAUGE |
| FM | FLOW METER |
| M | MOTOR |
| TSW | TEMP SWITCH |
| PS | PRESSURE SWITCH |
| VSW | VACUUM SWITCH |
| LEL | LOWER EXPLOSIVE LIMITS SENSOR |
| SP | SAMPLE PORT |
| | REGULATING VALVE |
| | CHECK VALVE |
| | PRESSURE/VACUUM RELIEF VAVLE |
| | 3-WAY VALVE |

INPUT DESIGNATIONS:

| No. | INPUT DESCRIPTION | No. | EXPANSION INPUT DESCRIPTION |
|---|---|---|---|
| X000 | HVLS H/H | X030 | |
| X001 | HVLS H | X031 | |
| X002 | ISOL H/H | X032 | |
| X003 | OIL SUMP H/H | X033 | |
| X004 | SPARE | X034 | |
| X005 | WATER SUMP H/H | X035 | |
| X006 | WATER SUMP H | X036 | |
| X007 | WATER SUMP LOW | X037 | |
| X008 | COMP PRESS SWITCH | X038 | |
| X009 | COMP LOW PRESS SWITCH | X039 | |
| X00A | ROOM THERMOSTAT | X03A | |
| X00B | RESET | X03B | |
| X00C | OXIDIZER RUN | X03C | |
| X00D | OXIDIZER FAIL | X03D | |
| X00E | *SPARE | X03E | |
| X00F | LOBE LEL | X03F | |
| X010 | LOBE TEMP | | |
| X011 | LOBE VAC | | |
| X012 | LOBE PRESSURE | | |
| X013 | LOBE #2 PRESSURE | | |
| X014 | LOBE #2 TEMP | | |
| X015 | LEL ALARM | | |
| X016 | WATER TREATMENT ALARM | | |
| X017 | HVLS DEMISTER H/H | | |

OUTPUT DESIGNATIONS:

| No. | OUTPUT DESCRIPTION | No. | EXPANSION INPUT DESCRIPTION |
|---|---|---|---|
| Y-20 | *SPARE | 0000 | |
| Y-21 | *SPARE | 00012 | |
| Y-22 | *SPARE | 00023 | |
| Y-23 | VAC PUMP | 00034 | |
| Y-24 | PRESSURE PUMP | 00045 | |
| Y-25 | COMP | 0005 | |
| Y-26 | HVLS ISOL | 0006 | |
| Y-27 | HVLS 3 WAY | 00078 | |
| Y-28 | HVLS PRESS | 00089 | |
| Y-29 | *SPARE | 00091 | |
| Y-2A | WATER TRANSFER PUMP | 000A | |
| Y-2B | DAMPER | 000B | |
| Y-2C | INLET LINE 1 | 000C | |
| Y-2D | INLET LINE 2 | 000D | |
| Y-2E | ALARM LIGHT | 000E | |
| Y-2F | SPARE | 000F | |

ANALOG INPUTS 4-20 Ma

| No. | DESCRIPTION | REFERENCE | INPUT/OUTPUT |
|---|---|---|---|
| 301 | | 4-20 Ma | INPUT |
| 302 | | 4-20 Ma | INPUT |
| 303 | | 4-20 Ma | INPUT |
| 304 | | 4-20 Ma | INPUT |
| 305 | | 4-20 Ma | INPUT |
| 306 | | 4-20 Ma | INPUT |

# FINAL AS-BUILT

US Army Corps of Engineers

U.S. ARMY ENGINEER DISTRICT, BALTIMORE
CORPS OF ENGINEERS
BALTIMORE, MARYLAND

SOURCE AREA REMEDIAL SYSTEM
GASOLINE ALLEY AREAS 3805 & 1995
FORT DRUM, NEW YORK

## AREA 1995 PIPING AND INSTRUMENTATION DIAGRAM

EA ENGINEERING, P.C.

| DRAWING NUMBER | PLATE |
|---|---|
| N/A | M-8 |

SCALE: AS NOTED | DATE: SEPT. 2004 | SHEET 8

FILE: Syracuse_fy/Syracuse/Working Projects\Fort Drum Projects\WARC\Design\drawings from lowton\final design drawings\M-8.dwg [Layout1]