Process Flow Diagram

**L.O. STILL**

**Process Flow Diagram (PFD) (Sample)**

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**PFD Symbology - Vessels**
Mechanical Flow Diagram (aka) Piping and Instrumentation Diagram (P&ID)

Line Identification

Line size
Material specification
Number of line
Unit number

Insulation type
Tracing
Quantity & size of tracers

11 - 4A6” – Ih ST (2-3/8”)

Insulation:
Insulation Installation:

Typical details for insulated sub-in or tee

Typical details for insulated ell

FLUOR.

Insulation Chart:

<table>
<thead>
<tr>
<th>Pipe Size</th>
<th>Isolation Thickneses</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1&quot;</td>
</tr>
<tr>
<td>3&quot;</td>
<td>1 1/2&quot;</td>
</tr>
<tr>
<td>4&quot;</td>
<td>2&quot;</td>
</tr>
</tbody>
</table>

Personnel Protection:

FLUOR.
Insulation Details:

Typical details at support for piping with shoes:

Typical details at support for piping without shoes:

Commodity Flow
Upstream & Downstream:

LINE LIST SAMPLE
Mechanical Flow Diagram Symbols:

**Pump Drivers**

- **Electric Motor**
- **Steam Turbine**

**FLUOR.**

Process vs Mechanical Flow Diagrams (Pumps)

**PROCESS FLOW DIAGRAM**

- CENTRIFUGAL
- IN-LINE
- VERTICAL CAN

**SYSTEMS & MECHANICAL FLOW DIAGRAMS**

**FLUOR.**

Process vs Mechanical Flow Diagrams (Pumps, cont.)

**PROCESS FLOW DIAGRAM**

- ROTARY
- RECIPROCATING

**SYSTEMS & MECHANICAL FLOW DIAGRAMS**

**FLUOR.**
Utility Flow Diagrams

NOTES:

GENERAL:
1. SEE DRAWINGS 00-SD-0002 THRU 00-SD-0006 FOR STANDARD SYMBOLS AND NOMENCLATURE.
2. LOCATED AT UNIT BATTERY LIMITS.
3. LINE SIZES ARE PRELIMINARY.

EO/EG UNIT  UTILITIES UNIT

WASTE WATER TREATMENT MAIN FLARE ETHYLENE UNIT UTILITIES UNIT

BUILDING AREA ETHYLENE UNIT C2/C3 STORAGE C2=/C3=FLARE METERING LCO S TANKAGE GLYCOL STORAGE COOLING WATER / SEAWATER UNIT LAO UNIT

VCM UNIT PVC UNIT PE UNIT TRUCK LOADING REV DATE PIP PROCESS CTRL SYS EICS PROJ

REFERENCE DRAWING TITLE

B 80-SD-3008
80-SD-3008.igr
C. HOLLOWELL
06/27/01

INSTRUMENT AIR / PLANT AIR INTERCONNECTING PIPING / PIPE RACKS UTILITIES AND OFFSITES PIPING AND INSTRUMENT DIAGRAM

ISSUED FOR IN-HOUSE REVIEW

B

ISSUED FOR IN-HOUSE REVIEW

A

2. ALL INSTRUMENT NUMBERS AND PIPING SPECIALTY IT EMS ON THIS P&ID ARE PREFIXED BY WBS NUMBER “80” UNLESS OTHERWISE NOTED.
Questions??