



Plant Name: 127700000 Feed Gas & Purge Gas System
Process: CO2 Capture
Revision: 1.0
Date: 10/15/2014
Author: [Name]
Checked: [Name]
Approved: [Name]

Design Basis:
Feed Gas: 100,000 gpm
CO2 Content: 15.0 wt-%
Purge Gas: 10,000 gpm
CO2 Content: 15.0 wt-%
Operating Pressure: 100 psia
Operating Temperature: 100 F

Equipment List:
WFOC: Wet Flue Gas Oxidizer
R-101: Reboiler
C-101: Condenser
S-101: Separator
C-201 to C-204: Compressors
S-201: Storage Vessel
P-101 to P-108: Pumps
CV-101 to CV-108: Control Valves

Material Balance:
Feed Gas: 100,000 gpm
CO2 Product: 15,000 gpm
Lean Gas: 85,000 gpm
Purge Gas: 10,000 gpm
CO2 Product: 15,000 gpm

Energy Balance:
Reboiler Duty: 10,000,000 BTU/hr
Condenser Duty: 10,000,000 BTU/hr
Compressor Power: 1,000,000 HP

Instrument	Tag No.	Description	Location
Pressure	PI-101	Feed Gas Pressure	WFOC
Temperature	TI-101	WFOC Reboiler Temp	WFOC
Flow	FI-101	Feed Gas Flow	WFOC
Level	LI-101	Separator Level	S-101
Pressure	PI-201	CO2 Product Pressure	S-201
Temperature	TI-201	CO2 Product Temp	S-201
Flow	FI-201	CO2 Product Flow	S-201
Pressure	PI-301	Lean Gas Pressure	WFOC
Temperature	TI-301	WFOC Condenser Temp	WFOC
Flow	FI-301	Lean Gas Flow	WFOC
Pressure	PI-401	Purge Gas Pressure	P-101
Temperature	TI-401	Purge Gas Temp	P-101
Flow	FI-401	Purge Gas Flow	P-101