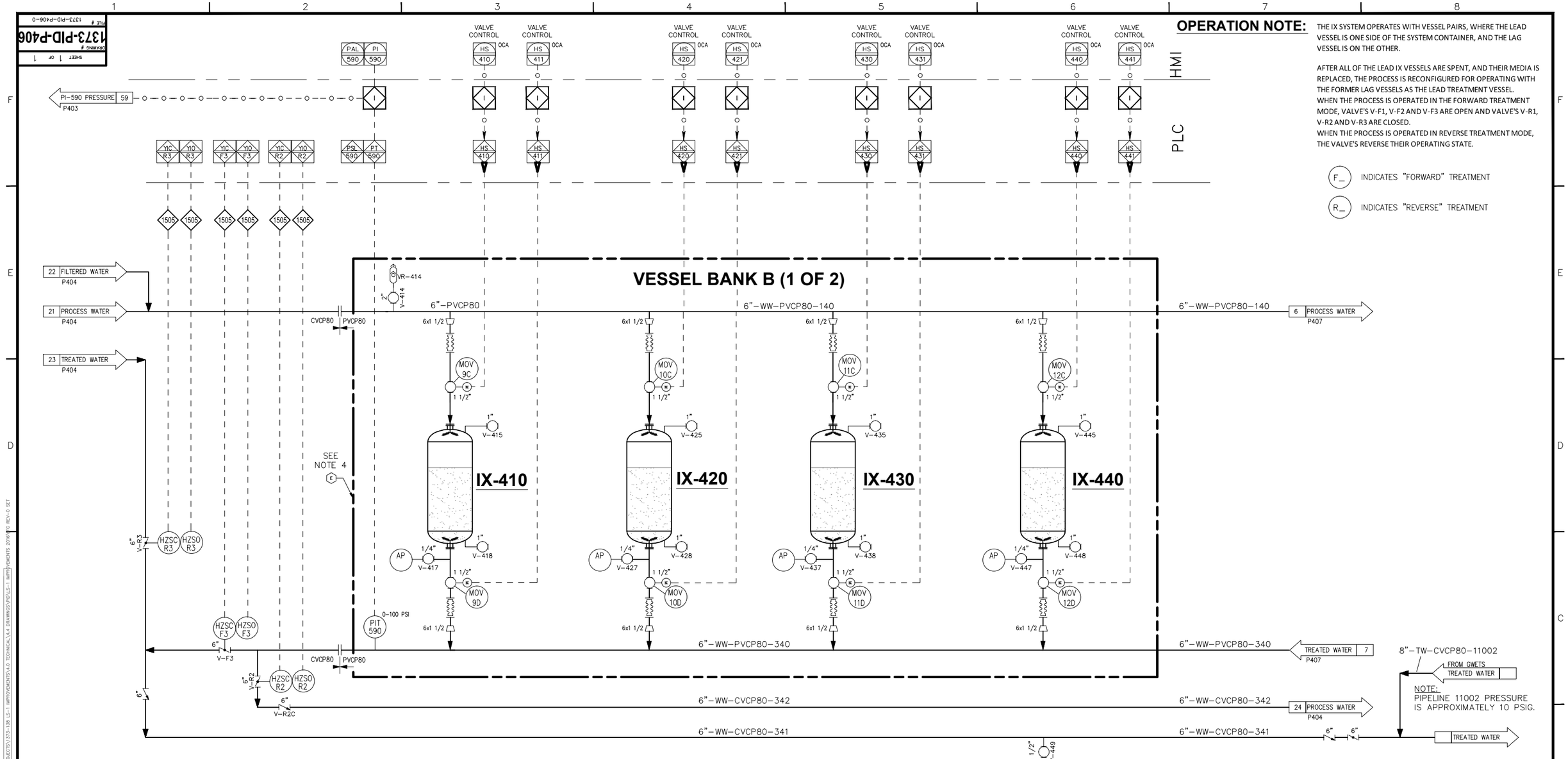

OPERATION NOTE:

THE IX SYSTEM OPERATES WITH VESSEL PAIRS, WHERE THE LEAD VESSEL IS ONE SIDE OF THE SYSTEM CONTAINER, AND THE LAG VESSEL IS ON THE OTHER.

AFTER ALL OF THE LEAD IX VESSELS ARE SPENT, AND THEIR MEDIA IS REPLACED, THE PROCESS IS RECONFIGURED FOR OPERATING WITH THE FORMER LAG VESSELS AS THE LEAD TREATMENT VESSEL.
WHEN THE PROCESS IS OPERATED IN THE FORWARD TREATMENT MODE, VALVE'S V-F1, V-F2 AND V-F3 ARE OPEN AND VALVE'S V-R1, V-R2 AND V-R3 ARE CLOSED.
WHEN THE PROCESS IS OPERATED IN REVERSE TREATMENT MODE, THE VALVE'S REVERSE THEIR OPERATING STATE.

(F_) INDICATES "FORWARD" TREATMENT

(R_) INDICATES "REVERSE" TREATMENT

GENERAL NOTES:

1. PLC CONTROL LOGIC PROVIDES CONTROL INTERLOCK FOR PROPER SEQUENCING OF VALVES.
2. PLC LOGIC SHUTS DOWN THE SYSTEM WHEN ANY ONE OR MORE OF THE FOLLOWING CONDITIONS EXIST:
   - HIGH IX VESSEL PRESSURE DIFFERENTIAL
   - HIGH WASTE SUMP LEVEL
3. REFERENCE ETI LEGEND DRAWING, PID-LA & PID-LB FOR SYMBOLS.
4. EQUIPMENT SUPPLIED BY ENVIROGEN TECHNOLOGIES, INC. IS MARKED WITH THE SYMBOL (E) ALL DI PIPING BY OTHERS.

IX-410, 420 ,430, 440
ION EXCHANGE VESSELS

MODEL: ETI SimPACK
DIMENSIONS: 36"ø X 57"H
RESIN CAPACITY: 25 CU FT
MATERIAL: POLYETHYLENE/FRP

REV	DATE	DESCRIPTION OF REVISION	REVISED BY	CHECKED BY
2	08-18-16	ISSUED FOR CONSTRUCTION	DL	MD
1	07-19-16	ISSUED FOR NDEP REVIEW	DL	DW

THIS IS A COMPUTER GENERATED DRAWING AND ONLY EDITS CONSISTENT WITH ENVIROGEN'S ORIGINAL CAD FORMAT SHALL BE CONSIDERED VALID COPIES.

U.S. PATENTS 6,878,286, 7,041,223 7,309,436 AND PATENTS PENDING.

ENVIROGEN TECHNOLOGIES
84A TWIN RIVERS DRIVE
EAST WINDSOR, NJ 08520
A Lifecycle Performance Company

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APPROVED BY:

NERT
HENDERSON, NV

PIPING AND INSTRUMENTATION DIAGRAM
PERCHLORATE TREATMENT SYSTEM

DRAWING SCALE	N/A
DESIGNED BY/DATE	AWS 12-09-10
DRAWN BY/DATE	AJN 12-09-10
CHECKED BY/DATE	AWS 12-09-10
SHEET SIZE	D
REVISION	0
SHEET	1 OF 1
DRAWING #	1373-PID-P406
FILE #	1373-PID-P406-0

LAST EDITED: 8/18/16 BY: DLEECH NETWORK PATH: G:\ENGRING\1373-101 TRONOX SERVICES\R.O SUB PROJECTS\1373-108 LS-1 IMPROVEMENTS\4.0 TECHNICAL\4.4 DRAWINGS\PID\LS-1 IMPROVEMENTS 2016\PC REV-0 SET