632757

INSTRUMENTATION IDENTIFICATION SYMBOLS

	FIRST-LETTER (4)		SUCCEEDING-LETTERS (3)		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS (5.19)		ALARM		
B	BURNER, COMBUSTION		USER'S CHOICE (1)	USER'S CHOICE (1)	USER'S CHOICE (1)
C	CONDUCTIVITY			CONTROL (13)	CLOSE (16)
D	DENSITY OR SPG	DIFFERENTIAL (4)			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRACTION)(4)			
G	USER'S CHOICE (1)		GLASS, VIEWING DEVICE (9)		
H	HAND				(7.15.16) HIGH
I	CURRENT (ELECTRICAL)		INDICATE (10)		
J	POWER	SCAN (7)			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE (4.21)			
L	LEVEL		LIGHT (11)		LOW (7.15.16)
M	MOISTURE	MOMENTARY (4)			MIDDLE, INTER-MEDIATE (7.15)
N	USER'S CHOICE (1)		USER'S CHOICE (1)	USER'S CHOICE (1)	USER'S CHOICE (1)
O	USER'S CHOICE (1)		ORIFICE, RESTRICTION		OPEN (16)
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	INTEGRATE TOTALIZE (4)			
R	RADIATION (22)		RECORD (17)		
S	SPEED, FREQUENCY	SAFETY (6)		SWITCH (13)	
T	TEMPERATURE			TRANSMIT (18)	
U	MULTIVARIABLE (6)		MULTIFUNCTION (12)	MULTIFUNCTION (12)	MULTIFUNCTION (12)
V	VISCOSITY			VALVE, DAMPER, LOUVER (13)	
W	WEIGHT, FORCE		WELL		
X	VIBRATION (19)	X AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE (20)	Y AXIS		RELAY, COMPUTE, CONVERT (13.14.15)	
Z	POSITION/DIMENSION	Z AXIS		DRIVER, ACTUATOR, UNCLASSIFIED FINAL CONTROL ELEMENT	

NUMBERS IN PARENTHESES REFER TO EXPLANATORY NOTES BELOW

NOTES

1. A "USER'S CHOICE" LETTER IS INTENDED TO COVER UNLISTED MEANINGS THAT WILL BE USED REPETITIVELY IN A PARTICULAR PROJECT IF USED. THE LETTER MAY HAVE ONE MEANING AS A FIRST-LETTER AND ANOTHER MEANING AS A SUCCEEDING-LETTER. THE MEANINGS NEED TO BE DEFINED ONLY ONCE IN A LEGEND, OR OTHER PLACE, FOR THAT PROJECT. FOR EXAMPLE, THE LETTER N MAY BE DEFINED AS "MODULUS OF ELASTICITY" AS A FIRST-LETTER AND "OSCILLOSCOPE" AS A SUCCEEDING-LETTER.
2. TEXT LOCATIONS AROUND AN INSTRUMENT BALLOON:

   J1-J2 / J3-J4/6

   J-1: ISA CODE (INSTRUMENT FUNCTIONAL IDENTIFIER)
   J-2: AREA DESIGNATION NUMBER
   J-3: TEAM MEMBER
   J-4: SEQUENTIAL NUMBER FOR TEAM MEMBER
   J-5: ALPHA IDENTIFIER FOR REDUNDANT/STANDY EQUIPMENT
3. THE GRAMMATICAL FORM OF THE SUCCEEDING-LETTER MEANINGS MAY BE MODIFIED AS REQUIRED. FOR EXAMPLE, "INDICATE" MAY BE APPLIED AS "INDICATOR" OR "INDICATING", TRANSMIT" AS "TRANSMITTER" OR "TRANSMITTING," ETC.
4. ANY FIRST-LETTER, IF USED IN COMBINATION WITH MODIFYING LETTERS D (DIFFERENTIAL), F (RATIO), M (MOMENTARY), K (TIME RATE OF CHANGE), Q (INTEGRATE OR TOTALIZE), OR ANY COMBINATION OF THESE IS INTENDED TO REPRESENT A NEW AND SEPARATE MEASURED VARIABLE, AND THE COMBINATION IS TREATED AS A FIRST-LETTER ENTITY. THUS, INSTRUMENTS TDI AND TI INDICATE TWO DIFFERENT VARIABLES, NAMELY, DIFFERENTIAL-TEMPERATURE AND TEMPERATURE MODIFYING LETTERS ARE USED WHEN APPLICABLE.

   FOR EXAMPLE:

   FQR - FLOW TOTALIZER RECORDER
   PDT - PRESSURE DIFFERENTIAL TRANSMITTER
   PDC - PRESSURE DIFFERENTIAL CONTROLLER
   WFIC - WEIGHT RATIO INDICATING CONTROLLER
   WFY - WEIGHT RATIO RELAY
   WIR - WEIGHT INDICATING RECORDER
   WQT - WEIGHT INTEGRATING TRANSMITTER
   WQI - WEIGHT TOTALIZING INDICATOR
   WQC - WEIGHT TOTALIZING CONTROLLER
   WQY - WEIGHT TOTALIZING RELAY
   XAHH - ALARM HIGH HIGH
   XALL - ALARM LOW LOW
   YIA - EVENT INDICATING ALARM

   SPECIAL PROJ. CODE LETTERS

   ZSO-POSITION SWITCH = VALVE OPEN
   ZSC-POSITION SWITCH = VALVE CLOSED
   ZO*-POSITION LIGHT = VALVE OPEN
   ZC*-POSITION LIGHT = VALVE CLOSED.

   *THESE ARE INDICATED ON THE PCS HMI SCREENS, THERE ARE NO LIGHTS.
5. FIRST-LETTER A (ANALYSIS) COVERS ALL ANALYSES NOT DESCRIBED BY A "USER'S CHOICE" LETTER. IT IS EXPECTED THAT THE TYPE OF ANALYSIS WILL BE DEFINED OUTSIDE A TAGGING BUBBLE.
6. USE OF FIRST-LETTER U FOR "MULTIVARIABLE" IN LIEU OF A COMBINATION OF FIRST-LETTERS IS OPTIONAL. IT IS RECOMMENDED THAT NONSPECIFIC VARIABLE DESIGNATORS SUCH AS U BE USED SPARINGLY.
7. THE USE OF MODIFYING TERMS "HIGH," "LOW," "MIDDLE," OR "INTERMEDIATE," AND "SCAN" IS OPTIONAL.
8. THE TERM "SAFETY" APPLIES TO EMERGENCY PROTECTIVE PRIMARY ELEMENTS AND EMEREGENCY PROTECTIVE FINAL CONTROL ELEMENTS ONLY. THUS, A SELF-ACTUATED VALVE THAT PREVENTS OPERATION OF A FLUID SYSTEM AT A HIGHER-THAN-DESIRED PRESSURED BY BLEEDING FLUID FROM THE SYSTEM IS A BACKPRESSURE-TYPE PCV EVEN IF THE VALVE IS NOT INTENDED TO BE USED NORMALLY. HOWEVER, THIS VALVE IS DESIGNATED AS A PSV IF IT IS INTENDED TO PROTECT AGAINST EMERGENCY CONDITIONS, I.E., CONDITIONS THAT ARE HAZARDOUS TO PERSONNEL AND/OR EQUIPMENT AND THAT ARE NOT EXPECTED TO ARISE NORMALLY.

   THE DESIGNATION PSV APPLIES TO ALL VALVES INTENDED TO PROTECT AGAINST EMERGENCY PRESSURE CONDITIONS REGARDLESS OF WHETHER THE VALVE CONSTRUCTION AND MODE OF OPERATION PLACE THEM IN THE CATEGORY OF THE SAFETY VALVE, RELIEF VALVE, OR SAFETY RELIEF VALVE. A RUPTURE DISC IS DESIGNATED PSE.
9. THE PASSIVE FUNCTION G APPLIES TO INSTRUMENTS OR DEVICES THAT PROVIDE AN UNCALIBRATED VIEW, SUCH AS SIGHT GLASSES AND TELEVISION MONITORS.
10. "INDICATE" NORMALLY APPLIES TO THE READOUT-ANALOG OR DIGITAL-OF AN ACTUAL MEASUREMENT. IN THE CASE OF A MANUAL LOADER, IT MAY BE USED FOR THE DIAL OR SETTING INDICATION, I.E., FOR THE VALUE OF THE INITIATING VARIABLE.
11. A PILOT LIGHT THAT IS PART OF AN INSTRUMENT LOOP SHOULD BE DESIGNATED BY A FIRST-LETTER FOLLOWED BY THE SUCCEEDING-LETTER L FOR EXAMPLE. A PILOT LIGHT THAT INDICATES AN EXPIRED TIME PERIOD SHOULD BE TAGGED KQL. IF IT IS DESIRED TO TAG A PILOT LIGHT THAT IS NOT PART OF AN INSTRUMENT LOOP, THE LIGHT IS DESIGNATED IN THE SAME WAY. FOR EXAMPLE, A RUNNING LIGHT FOR AN ELECTRIC MOTOR MAY BE TAGGED EL. ASSUMING VOLTAGE TO BE THE APPROPRIATE MEASURE VARIABLE, OR YL, ASSUMING THE OPERATING STATUS IS BEING MONITORED.
12. USE OF A SUCCEEDING-LETTER U FOR "MULTIFUNCTION" INSTEAD OF A COMBINATION OF OTHER FUNCTIONAL LETTERS IS OPTIONAL. THIS NONSPECIFIC FUNCTION DESIGNATOR SHOULD BE USED SPARINGLY.
13. A DEVICE THAT CONNECTS, DISCONNECTS, OR TRANSFERS ONE OR MORE CIRCUITS MAY BE EITHER A SWITCH, A RELAY, AN ON-OFF CONTROLLER, OR A CONTROL VALVE, DEPENDING ON THE APPLICATION.

   IF THE DEVICE MANIPULATES A FLUID PROCESS STREAM AND IS NOT A HAND-ACTUATED ON-OFF BLOCK VALVE, IT IS DESIGNATED AS A CONTROL VALVE. IT IS INCORRECT TO USE THE SUCCEEDING-LETTERS CV FOR ANYTHING OTHER THAN A SELF-ACTUATED CONTROL VALVE. FOR ALL APPLICATIONS OTHER THAN FLUID PROCESS STREAMS, THE DEVICE IS DESIGNATED AS FOLLOWS:

   A SWITCH, IF IT IS ACTUATED BY HAND.

   A SWITCH OR AN ON-OFF CONTROLLER, IF IT IS AUTOMATIC AND IS THE FIRST SUCH DEVICE IN A LOOP. THE TERM "SWITCH" IS GENERALLY USED IF THE DEVICE IS USED FOR ALARM, PILOT LIGHT, SELECTION, INTERLOCK, OR SAFETY.

   THE TERM "CONTROLLER" IS GENERALLY USED IF THE DEVICE IS USED FOR NORMAL OPERATING CONTROL.

   A RELAY, IF IT IS AUTOMATIC AND IS NOT THE FIRST SUCH DEVICE IN A LOOP, I.E. IT IS ACTUATED BY A SWITCH OR AN ON-OFF CONTROLLER.
14. IT IS EXPECTED THAT THE FUNCTIONS ASSOCIATED WITH THE USE OF SUCCEEDING-LETTER Y WILL BE DEFINED OUTSIDE A BUBBLE ON A DIAGRAM WHEN FURTHER DEFINITION IS CONSIDERED NECESSARY. THIS DEFINITION NEED NOT BE MADE WHEN THE FUNCTION IS SELF-EVIDENT, AS FOR A SOLENOID VALVE IN A FLUID SIGNAL LINE.
15. THE MODIFYING TERMS "HIGH" AND "LOW," AND "MIDDLE" OR "INTERMEDIATE" CORRESPOND TO VALUES OF THE MEASURED VARIABLE, NOT TO VALUES OF THE SIGNAL, UNLESS OTHERWISE NOTED. FOR EXAMPLE, A HIGH-LEVEL ALARM DERIVED FROM A REVERSE-ACTING LEVEL TRANSMITTER SIGNAL SHOULD BE AN LAH, EVEN THOUGH THE ALARM IS ACTUATED WHEN THE SIGNAL FALLS TO ALLOW VALUE. THE TERMS MAY BE USED IN COMBINATIONS AS APPROPRIATE. (SEE SECTION 6.9A. OF ISA 5.1-84)
16. THE TERMS "HIGH" AND "LOW," SHOULD NOT BE APPLIED TO POSITIONS OF VALVES AND OTHER OPEN-CLOSE DEVICES. "OPEN" AND "CLOSE" SHOULD BE USED INSTEAD.
17. THE WORD "RECORD" APPLIES TO ANY FORM OF PERMANENT STORAGE OF INFORMATION THAT PERMITS RETRIEVAL BY ANY MEANS.
18. FOR USE OF THE TERM "TRANSMITTER" VERSUS "CONVERTER," SEE THE DEFINITIONS IN SECTION 3 OF ISA 5.1-84.
19. FIRST-LETTER X "VIBRATION OR MECHANICAL ANALYSIS," IS INTENDED TO PERFORM THE DUTIES IN MACHINERY MONITORING THAT THE LETTER A PERFORMS IN MORE GENERAL ANALYSES. EXCEPT FOR VIBRATION, IT IS EXPECTED THAT THE VARIABLE OF INTEREST WILL BE DEFINED OUTSIDE THE TAGGING BUBBLE.
20. FIRST-LETTER Y IS INTENDED FOR USE WHEN THE CONTROL OR MONITORING RESPONSES ARE EVENT-DRIVEN AS OPPOSED TO TIME- OR TIME SCHEDULE-DRIVEN. THE LETTER Y, IN THIS POSITION, CAN ALSO SIGNIFY PRESENCE OR STATE.
21. MODIFYING-LETTER K, IN COMBINATION WITH A FIRST-LETTER SUCH AS I, T, OR W, SIGNIFIES A TIME RATE OF CHANGE OF THE MEASURED OR INITIATING VARIABLE. THE VARIABLE WKIC, FOR INSTANCE, MAY REPRESENT A RATE-OF-WEIGHT-LOSS CONTROLLER.
22. SEE NOTE 2 FOR TABLE 1, ZONE 7H.
23. THIS INSTRUMENT IDENTIFICATION SYSTEM IS BASED ON "INSTRUMENT SOCIETY OF AMERICA" (ISA) INSTRUMENTATION SYMBOLS AND IDENTIFICATION STANDARD S5.1-84.
24. USE THIS DRAWING IN CONJUNCTION WITH THE FOLLOWING "LEGEND AND SYMBOLS" DRAWINGS:

    632756 SYMBOLS AND NOMENCLATURE SHEET 1
    632757 SYMBOLS AND NOMENCLATURE SHEET 2

GENERAL NOTES:

1. INTEC INSTRUMENTATION SYMBOLOGY SHALL BE BASED ON ISA STANDARD 51-84 WITH TABLES 1, II AND III ON THIS DRAWING REPLACING TABLE 1, SECTION 6.2 AND SECTION 6.3 OF THAT STANDARD. FOR ADDITIONAL NOTES AND EXAMPLE SYMBOL LAYOUTS SEE ISA STANDARD 5.1-84.
2. SEE DRAWING 056361 FOR PIPING, VALVE AND ACTUATOR SYMBOLS. FOR GUIDELINES IN MAKING LOOP DIAGRAMS SEE DRAWINGS 093630 THRU 093634.
3. A COMPLETE INSTRUMENT IDENTIFICATION NUMBER FOR INTEC IS CONSTRUCTED AS FOLLOWS:
   EXAMPLE SYMBOL LAYOUTS SEE ISA STANDARD 5.1-84.

FIT-SRB-216-0024

- SUFFIX PER ISA 5.1-84, PARA. 4.3.3.
- SEQUENTIAL NUMBER
- TEAM MEMBER FROM INTEC ENGINEERING
- AREA DESIGNATION FROM INTEC ENGINEERING. SEE DWG.0557H
- INSTRUMENT FUNCTION FROM TABLE

TEAM MEMBER LIST

TEAM MEMBER	DESCRIPTION
100	VESSELS, COLUMNS, FILTERS, SLUG CHUTES, SEPTIC TANKS, SPRAY COOLER, SEPARATORS, TANKS, THE DMR, AND THE CRR
200	PUMPS, BLOWERS, MOTORS, UNIT HEATERS, COMPRESSORS
300	HEAT EXCHANGERS, FURNACES, OVENS, HEATING COILS, MIXING CHAMBERS, PROCESS HEATERS, BOILERS, DRIERS, SUPERHEATERS
400	ROTATING, MECHANICAL EQUIPMENT, MOTORIZED ROLLUP DOORS, AGITATOR, AUGERS, GRINDERS
500	JETS, INJECTORS, EDUCTORS
600	AIRLIFTS
600	SAMPLERS, HOODS, GLOVE BOXES, CAVES, AIRLOCKS, TABLES, CABINETS, STRAINERS, BAGS, SPRAY BOOTHS, ACTS DRUM FILLING STATIONS
700	BURETTES, AIR HANDLING UNITS, PLENUMS, DAMPERS, AIR-COOLED CONDENSERS, WATER CHILLERS, FIRE SUPPRESSION SYSTEMS
800	FUNNELS, HOPPERS, YOKES, SOLIDS HANDLING HOPPERS, FEEDERS
900	SPECIAL MECHANICAL EQUIPMENT, CRANES, HOISTS, CASKS, NONMOTORIZED DOORS, CONTROL PANELS, SHIELDING BELL

TYPICAL INSTRUMENTATION SYMBOLS

- DIAPHRAGM
- PISTON
- MOTOR
- PNEUMATIC
- HYDRAULIC
- SOLENOID
- ELECTRO-HYDRAULIC
- HANDJACK OR HANDWHEEL
- DIAPHRAGM WITH POSITIONER
- SELF CONTAINED PRESSURE REGULATOR
- SELF CONTAINED BACK PRESSURE REGULATOR
- FLOW CONTROL VALVE
- VACUUM/PRESSURE RELIEF VALVE (TYPICAL)
- PRESSURE RELIEF VALVE
- VACUUM RELIEF VALVE
- RUPTURE DISC
- J1-J2 / J3-J4 — LOCALLY MOUNTED INSTRUMENT
- J1-J2 / J3-J4 — CONTROL ROOM MOUNTED INSTRUMENT
- J1-J2 / J3-J4 — LOCAL PANEL MOUNTED INSTRUMENT COMPUTER SHARED DISPLAY AND CONTROL
- J1-J2 / J3-J4 — SHARED DISPLAY/SHARED CONTROL
- J1-J2 / J3-J4 — DCS FUNCTION NOT ACCESSIBLE TO OPERATOR
- I / J3-J4 — HARDWIRED LOGIC
- I / J3-J4 — DIGITAL LOGIC CONTROLS INTEGRAL TO THE DCS
- FIRE I — DIGITAL LOGIC CONTROLS INTEGRAL TO THE DCS
- RSS I — DIGITAL LOGIC CONTROLS INTEGRAL TO THE DCS
- FG-J2 / J3-J4 — FLOW GLASS
- M — FLOW METER VC = V-CONE, M = MAGNETIC, S = SONIC, C = CORIOLIS, TH = THERMAL
- POSITIVE DISPLACEMENT METER OR TURBINE METER
- FE-J2 / J3-J4 — FLOW ORIFICE
- FO-J2 / J3-J4 — FLOW RESTRICTION ORIFICE
- XY-XX / XX-XX I/P — CURRENT TO PRESSURE TRANSDUCER
- XY-XX / XX-XX I/I — CURRENT TO CURRENT TRANSDUCER
- VORTEX SHEDDING FLOW METER
- FLOW ORIFICE (WELDED)
- VACUUM BREAKER
- FI-J2 / J3-J4 — VARIABLE AREA FLOW INDICATOR (ROTAMETER)
- LIT-J2 / J3-J4 — LEVEL INDICATING TRANSMITTER (CONTACT)
- LIT-J2 / J3-J4 — LEVEL INDICATING TRANSMITTER, RADAR, RF, ULTRASONIC (NON-CONTACT)
- DIAPHRAGM SEAL
- FLOW NOZZLE OR VCONE
- STRAIGHTENING VANES
- ANNULAR TYPE AVERAGING FLOW ELEMENT
- J1-J2 / J3-J4 / X — PILOT LIGHT OR BEACON X = COLOR CODE (SEE COLOR CODE TABLE)
- IA 000 — INSTRUMENT AIR PURGE PANEL SEQUENCE NUMBER AND LOCATION
- TP XX — TIE POINT
- ESD — HARDWIRED EMERGENCY STOP LOGIC
- N P — INSTRUMENT NITROGEN PURGE (NOTE 1)
- N2 — SOLIDS VALVE NITROGEN PURGE (NUMBER FROM VALVE BEING PURGED) (NOTE 1)
- N2 TTT-NNNP — LINE PURGE W/O METERING (NOTE 1)
- N2 TTT-NNNP M — LINE PURGE W/ METERING (NOTE 1)
- N2 TTT-NNNP MS — LINE PURGE W/ METERING AND PULSE (NOTE 1)

AREA

SRA = STEAM REFORMER AUTOCLAVE (HOLD)
SRB = STEAM REFORMER BULK CHEMICAL AREA
SRC = STEAM REFORMER CELL
SRE = STEAM REFORMER EXTERNAL AREAS
SRH = STEAM REFORMER HVAC
SRS = STEAM REFORMER STORAGE
NCC = NWCF

INSTRUMENT ABBREVIATIONS

CAB	ELECTRONICS CABINET	O/C	OPEN/CLOSE
CCTV	CLOSED CIRCUIT TV	OWS	OPERATOR WORKSTATION
CEMS	CONTINUOUS EMMISSIONS MONITORING SYSTEM		
COMM	COMMUNICATION	PCU	PROCESS CONTROL UNIT
CP	CONTROL PANEL	PE	PHOTO ELECTRIC (SENSOR)
CPU	CENTRAL PROCESSING UNIT (COMPUTER)	PF	FIRE PANEL
DCS	DISTRIBUTED CONTROL SYSTEM	POS	POSITION
DMS	DATA MANAGEMENT SYSTEM	PTR	PRINTER
DRV	DISK DRIVE	RMS	RADIOLOGICAL MONITORING SYSTEM
EO	ENERGIZE TO OPEN	SA	STACK SAMPLER
ES	ELECTRICAL SUPPLY	SD	SHUTDOWN
ESD	EMERGENCY STOP DEVICE	SP	SET POINT
EWS	ENGINEERING WORKSTATION	ST/SP	START/STOP
FC	FAIL CLOSED	TCJ	TV CAMERA CONTROL JUNCTION BOX
FL	FAIL LAST	TCK	TV CAMERA CONTROL KEYBOARD
FO	FAIL OPEN	TVC	TELEVISION CAMERA
F/R	FORWARD REVERSE	TVM	TELEVISION VIDEO MATRIX
		VAC	VACUUM
HOA	HAND/OFF/AUTO	VCR	VIDEO CASSETTE RECORDER
IR	INFRARED (SENSOR)		
LOR	LOCAL/OFF/REMOTE		

PILOT LIGHT DESIGNATIONS

R	RED	UNSAFE	EMERGENCY, DANGER, HIGH PRIORITY ALARM, CLOSED/OFF/STOPPED (INACTIVE) CLOSED/ON/FLOWING (ELECTRICAL POWER DISTRIBUTION[1])
Y	YELLOW	CAUTION	HAZARD SECOND PRIORITY ALARM ABNORMAL STATE
G	GREEN	SAFE	SAFE, SATISFACTORY, OPEN/ON/FLOWING (ACTIVE) OPEN/OFF/STOPPED (ELECTRICAL POWER DISTRIBUTION[1])
LB	LIGHT BLUE (CYAN)	STATIC AND SIGNIFICANT	EQUIPMENT IN SERVICE MAJOR LABELS
DB	DARK BLUE	NON ESSENTIAL	EQUIPMENT IN STANDBY
M	MAGENTA	RADIATION	RADIATION ALARM/CAUTION
W	WHITE	DYNAMIC DATA	MEASUREMENT AND STATE INFORMATION SYSTEM MESSAGES TREND ACTIVE SEQUENCE STEP

1. THE ASSOCIATED COLOR MEANINGS ARE FOR ELECTRICAL POWER DISTRIBUTION SYSTEM DISPLAYS ONLY.

REV	DATE	DESCRIPTION	By/Chk'd
0	10/12/06	ISSUED FOR DESIGN FREEZE	MK/SA

NOTES

1. SEE NITROGEN TYPICALS ON DWG. 632758.

REFERENCE DRAWINGS

DRAWING NO.	DRAWING TITLE

IDAHO CLEANUP PROJECT
INTEGRATED WASTE TREATMENT UNIT

PIPING & INSTRUMENT DIAGRAM SYMBOLS AND NOMENCLATURE SHEET 2

Washington Group International
7800 E. Union Ave. - Denver, CO 80237 - (303) 843-2000

REVISION APPROVAL RECORD				REV 0	
DISCIPLINE	BY	DATE	DISCIPLINE	BY	DATE
ARCH.	—	—	MECHANICAL		10/12/06
CIVIL	—	—	NUCLEAR		—
ELECTRICAL		10/13/06	PIPING		10/12/06
ENVIRON.	—	—	PROCESS		10/12/06
GEN. ARRANG.		10/12/06	QA / QC		10-12-06
HVAC		10/12/06	STRUCTURAL		10-12-06
I & C		10/12/06	REMOTE HDL.	—	—
			SYS. ENG.		10-12-06

DRAWING STATUS				
ISSUED	REV	DATE	LDE	PEM
PRELIMINARY	G	09/22/06	RLH	NDA
APPROVED FOR CONSTRUCTION	0	10/12/06	RLH	

NOT APPROVED FOR CONSTRUCTION UNLESS SIGNED & DATED. DESTROY ALL PRINTS BEARING EARLIER DATE &/OR REV.NO.

PROFESSIONAL ENGINEER REGISTERED 7720 10/13/06 STATE OF IDAHO THOMAS WILLIAM NELSON

SCALE: NONE	PLOT DATE 10/05/06	PROJECT NO. 28339	
DRAWN: GRW	DATE 05/03/03	WBS: P.1.04.03.01	
DESIGNED: MK	DATE 10/12/06	SYSTEM:	QUALITY LEVEL: 4
CHECKED: SA	DATE 10/12/06	DRAWING NUMBER 632757	REV 0
VERIFIED:	DATE 10-12-06		
APPROVED:	DATE		
CAD FILE NAME: 632757.pid		INDEX CODE NUMBER: AREA 200, TYPE 1696, EL 24, ORIG 503	SHEET P-8

SIZE E — FOR DRAWING INDEX SEE DRAWING NO. 200-1696-24-923-623756

$WG1$DESIGN_FILE_PATH_AND_NAME_EXTENSION$
$WG1$PLOT_DATE_AND_TIME$

INCHES / CENTIMETERS