LAST SAVED: 9/3/2005 9:37 AM L: \work\75000\75360\02a-CAD\GFI\XREFS\75360-TBLOCK (D).c x x x | x x x \a_{\a_{\a}} (Rea) () HEAT EXCHANGER, U-TUBE TYPE BLOWER OR CENTRIFUGAL FAN DIFFUSER HEADER ADJUSTABLE SPEED DRIVE (MECH) ADJUSTABLE SPEED CONTROLLER (ELEC) HEAT EXCHANGER, STRAIGHT TUBE TYPE HEAT EXCHANGER, PLATE TYPE GRINDER GENERATOR RIGHT ANGLE GEAR FLOW METER INLET AIR EJECTOR, PNEUMATIC COMPRESSOR, PISTON COMPRESSOR, ROTARY SCREW SLIDING VANE COMPRESSOR BAR SCREEN, MECHANICA HEAT EXCHANGER, SPIRAL TYPE BURNER, WASTE GAS INLINE SLUDGE SCREEN X (<u>x</u> **∅** 8- \otimes **>->-** $-\Box$ ₽ MELESCOPIC GATE VALVE ULTRA STOP LOG BASKET SCREEN SLIDE GATE (NORMALLY OPEN) SLIDE GATE (NORMALLY CLOSED) PUMP, LINE SHAFT PUMP, PUMP, PROGRESSIVE CANTY PUMP, METERING PUMP, PUMP, DIAPHRAGM PUMP, PROPELLER PUMP, CENTRIFUGAL LEVEL CONTROL MIXER, INLINE STATIC MIXER, HORIZONTAL SURFACE VERTICAL **GEAR** SUBMERSIBLE ROTARY LOBE GATE OPERATED NOTES:

1. THIS DRAWING IS GENERAL IN NATURE. SOME SYMBOLS SHOWN HERE MAY NOT BE USED ON THE CONTRACT DRAWINGS.

2. SEE BRAWING G-1 FOR EQUIPMENT AND PIPE COMMODITY DESIGNATION SYSTEMS.

3. SEE DRAWING G-1 FOR INSTRUMENTATION SYMBOLS. 71-05-001 \$ Å **≈**⊲ **●** D 7 FLAP GATE REDUCER AIR VENT FLAME CHECK FLAME ARRESTER WITH THERMAL SHUTOFF VALVE INJECTOR CONDENSATE TANK SCREEN, ROTARY OVERFLOW UTILITY STATION (NUMBER, ANY, DESIGNATES TYPE) COOLING COIL PRESSURE REDUCING ASSEMBLY TRAP FLAME ARRESTER FIRE HYDRANT & VALVE HEATING COIL AIR FILTER (HVAC) FLEXIBLE CONNECTION SEE NOTE 5 BLIND FLANGE CAP OR PLUG QUICK CONNECTOR STEAM VENT RUPTURE DISK (PRESSURE RELIEF) RUPTURE DISK (VACUUM RELIEF) PIPELINE FILTER LIQUID SEPARATOR GAS DRIP TRAP SEDIMENT TRAP HARD PIPE UTILITY CONNECTION MISCELLANEOUS DEVICES ◈ \Diamond **⊗**≻ AND AND DESCRIPTIONS $\frac{1}{2}$ -FOOT VALVE SAMPLER DRAIN PULSATION DAMPENER AIR SEPARATOR PURGE OR FLUSHING CONNECTION CONTROL UNIT FIRE DAMPER BALANCING DAMPER MOTORIZED CONTROL DAMPER FLOW STRAIGHTENING VANES CALIBRATION STRAINER MANUAL AIR VENT TANK TANK, DOUBLE WALLED BACKDRAFT DAMPER AUTOMATIC AIR VENT RECEIVER OR PRESSURE VESSEL HERMOWELL CUIDE \overline{Z} ፟ \bigcirc I X FLOAT WILVE Ø \mathbb{Z} ¥ **∑**€ LOSS OF POWER (PNEUMATIC OR ELECTRICAL)
FO = FAIL
FC = FAIL TO INTERMEDIATE POSITION
BLANK = FAIL TO LAST POSITION SYMBOLS ARE ARRANGED ON DRAWINGS AND IN CATEGORIES FOR CONVENIENCE ONLY, SYMBOLS MAY BE USED ANY OF THE CONTRACT DRAWINGS.
REFER TO MECHANICAL DRAWINGS FOR SPECIFIC TYPE OF CONNECTOR. BUTTERFLY DAMPER VALVE GATE VALVE (NORMALLY CLOSED) PINCH VALVE PLUG VALVE (NORMALLY OPEN) THREE WAY VALVE
SOLENOID VALVE
GATE VALVE
(NORMALLY OPEN) א איז איז BALL VALVE (NORMALLY OPEN) PLUG VALVE (NORMALLY CLOSED) DIAPHRAGM VALVE CLOBE VALVE BUTTERFLY VALVE BALL VALVE (NORMALLY CLOSED) ANGLE VALVE XX/NN PNEUMATIC CYLINDER SIGNAL CONTINUATION ON SAME DRAWING X = 1,2,3, ETC. ACTUATOR PROCESS & SIGNAL NN/XX FLOW STREAM NO. NN EXISTING PIPING AND EQUIPMENT TO BE REMOVED ENCLOSURE BOUNDARY PRIMARY PROCESS FLOW VENDOR PACKAGE BOUNDARY SIGNAL NO. NN FROM SHEET NO. XX <u>Z</u> \triangle ₽Ģ PROCESS IDENTIFICATION VALVE OPERATORS **H** <u>√</u>ω ≱ DOUBLE LEAF CHECK VALVE BALL CHECK VALVE CHECK VALVE NEEDLE VALVE PUMP DISCHARGE VALVE (TRIPLE DUTY) DOUBLE CHECK VALVE BACKFLOW PREVENTER PRESSURE GAUGE SOLATION VALVE & SEAI THERMOSTATICALLY CIRCUIT BALANCING VALVE BALANCING COCK KNIFE GATE VALVE SAUGE OR ROOT VALVE SOLENOID DIAPHRAGM (PRESSURE BALANCED) VALVES FLOW STREAM TO OR FROM EQUIPMENT NOT SHOWN ON ON OTHER DRAWNGS ** NOTE: YYY = NOMINAL PIPE DIAMTER (mm XXX = COMMODITY OR FLOW STREAL \$ **→ ₩** IN-LINE, SPRING LOADED RELIEF V DIAPHRAGM (SPRING OPPOSED) PRESSURE RELIEF VACUUM RELIEF VALVE PRESSURE AND VACUUM RELIEF VALVE BACK PRESSURE REGULATING VALVE PRESSURE REGULATING VALVE (INTERNAL SENSING) PRESSURE REGULATING VALVE (EXTERNAL SENSING) PA - PROCESS AIR
PA - PROCESS AIR
PE - PRIMARY EFFLENT
POLY - POLYMER
RAS - RETURN ACTIVATED SLUDGE
RCL - RECYCLED DAF WATER
RS - RAW SEINGE
SOR - SOREDWINGS
SE - SCONDARY EFFLUENT
SL - SLAMPLE LINE
SUB - SURMATIATT
TWAS - THICKENED WATSE ACTIVATED SLUDGE
WAS - MASTE ACTIVATED SLUDGE
WAS - MASTE ACTIVATED SLUDGE CA - COMPRESSED AIR
CL - SODIUM HPOCHORIE
DOW - DOMESTIC CALD WATER
DHW - DOMESTIC HOT WATER
DR - DEAIN
DRS - DEWATERED SLUDGE
EW - EFFLUENT WATER
FEW - FLYERED EFFLUENT WATER FL - FILTRATE

FP - FUSH PONT

HEW - HOT FILTERED EFFLUENT WATER

HL - HYDRATED LIME

MLO - MIXED LIQUOR

NMLO - NITRIFIED MIXED LIQUOR

O/F - OVERFLOW 100 - HEADWORKS
200 - SECONDARY TREATMENT
300 - TERLARY TREATMENT
400 - THICKENING & DEWATERING
500 - EFFLUENT WATER SYSTEM
600 - SERVICE AIR AC - AIR COLUMN AD - AIR DRYER T – TANK TRL – TRAILER STR - AUTOMATIC STRAINER SSCR - SCREW SCREEN SC - SECONDARY CLARIFIER PFT – PRIMARY FILTER TREATMENT P - PUMP LFS - LIME FEED SYSTEM FBD — FINE BUBBLE DIFFUSERS EXP - EXPANSION TANK DAF — DISSOLVED AIR FLOTATION UNIT COMP - COMPRESSOR CBD — COURSE BUBBLE DIFFUSERS CM — CLARIFIER MECHANISM BSCR - BASKET SCREEN BFP - BELT FILTER PRESS B - BLOWER WSCR - MANUAL SCREEN EQUIPMENT ABBREVIATIONS COMMODITY ABBREVIATIONS AREA LEGEND 75350-TBLOCK (D) WASTEWATER
TREATMENT PLANT
PHASE 1 75360 Design CITY OF IQALUIT Iqaluit Date 2005 03/07 IDENTIFICATION PERMIT NUMBER: P 005
The Association of Professional Engineers,
Geologists and Geophysicists of the NWT/NU P&ID SYMBOLS AND Signature_ **EarthTech** PERMIT TO PRACTICE EARTH TECH (CANADA) INC. трс 유 CITY of IQALUIT, Nunavut ISSUED FOR TENDER Description Tel. 780-488-6800 Fax. 780-488-2121 www.earthtech.ca 08.03.05 O Revision