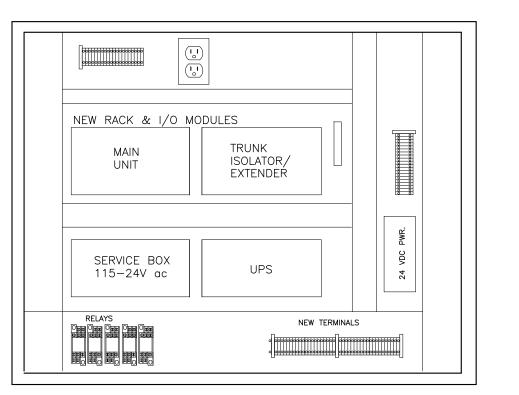
APPROVED BY

406mm INTAKE PUMPING STATION



PLC PANEL DOOR FRONT VIEW

PLC PANEL INTERIOR

## PANEL GENERAL ARRANGEMENT

SCALE: NOT TO SCALE <u>NOTES:</u>

- 1. PANEL SIZE SHALL BE 610mm(H) x 406mm(W) x 118mm(D) (MIN. SIZE).
- 2. PANEL SHALL BE 12 GAUGE STEEL, CSA TYPE 12 SINGLE DOOR, WALL MOUNTED ENCLOSURE WITH GRAY POLYESTER POWDER COATING INSIDE AND OUT STANDARD OF ACCEPTANCE: HOFFMAN A-24N16ALP.
- 3. CONTRACTOR TO PROVIDE DETAIL PANEL DRAWING WITH DIMENSIONS.
- 4. CONTRACTOR TO COORDINATE DETAILS, SIZE AND OPENINGS.
- 5. PROVIDE INPUT MODULES FOR ALARM MONITORING OF THE FOLLOWING (PROVIDE 30% FE SPARE I/O FOR FUTURE:
- RWP1; ON, OFF, ALARM/FAULT
- RWP2; ON, OFF, ALARM/FAULT
- HEAT TRACE #1; ALARM/FAULT
- HEAT TRACE #2; ALARM/FAULT - DIESEL GENERATOR; AUTO, ON, OFF, FAULT
- FUEL TANK; LOW ALARM
- ALL ALARMS (MAJOR & MINOR)

## ALARMS

MAJOR ALARM (DIAL OUT)

intake pump failure RWP 1 & 2 LOW BUILDING TEMP POWER OFF - STAND-BY GENERATOR FAIL VERY LOW FUEL HEAT TRACE LOW TEMP RWP 1 & 2

MINOR ALARM (LOCAL ANNUCIATOR ONLY)

HIGH BUILDING TEMP POWER OFF - STAND-BY GENERATOR ON LOW FUEL TEMP HIGH WASTE WATER TANK LEVEL HEAT TRACE GENERAL FAULT GENERATOR GENERAL FAULT

- 6. PROVIDE PLC TO ACCOMMODATE FOR THE ABOVE CAPTIONED INPUT. ACCEPTABLE PLC: CONTROL MICRO SYSTEM (SCADA PACK), SIEMENS(S7-200 SERIES) W10 (DATA PACK) PHOENIX. PROVIDE ALL NÈCESSARY ACCESSORIES ÀS INDICATED INCLUDING POWER SUPPLY, UPS AND MODEM MODULE FOR A COMPLETE SYSTEM.
- 7. PROVIDE A FOUR (4) CHANNEL AUTO DIALER TO DIAL OUT ON ANY MAJOR ALARM/FAULT. PROGRAM AS INSTRUCTIONS AT SITE.
- 8. PROVIDE ONE COPY AND LICENSE OF THE SYSTEM MANUFACTURER'S PROPRIETARY SCADA SOFTWARE AND INSTALL ON THE SCADA COMPUTER.
- 9. PROVIDE A DESKTOP SCADA COMPUTER INCLUDING:
- 19" LCD MONITOR
- 500 GB HARD DRIVE
- PROCESSOR AND MEMORY ACCORDING TO SCADA MANUFACTURER'S RECOMMENDATIONS (MIN; CORE II DUO 2QHZ CPU AND 1 GB MEMORY)
- DVD Z BURNER
- KEYBOARD AND OPTICAL MOUSE EXTERNAL US ROBOTICS MODEM
- 10/100 ETHERNET CARD
- OPERATING SYSTEM PER SCADA MANUFACTURER'S RECOMMENDATIONS.

10. SYSTEM TO BE SIMILAR TO CURRENTLY ADVERTISED COMPLETE SYSTEMS BY MAJOR MANUFACTURERS (DELL, HP, ETC.)

11. INSTALL SCADA SÒFTWARE AND TRAIN TWO PEOPLE AS INTRODUCED BY CLIENT.



|   | •        |                               |          |    | DESIGN     | REVIEWED BY |  |
|---|----------|-------------------------------|----------|----|------------|-------------|--|
|   |          |                               |          |    | SAI        | GS          |  |
| , |          |                               |          |    | DRAWN      | CHECKED BY  |  |
|   | <u> </u> | ASBUILT DRAWING               | 03/28/12 | GS | JPM        | GS          |  |
|   | 5        | RE-ISSUED FOR TENDER          | 01/05/10 | GS | OT IVI     |             |  |
|   | 4        | RE-ISSUED FOR TENDER          | 01/28/09 | GS | MARCH 2012 |             |  |
|   | 3        | ISSUED FOR TENDER             | 06/06/08 | GS |            |             |  |
|   | 2        | ISSUED FOR 100% CLIENT REVIEW | 04/30/08 | GS |            |             |  |
|   | 1        | ISSUED FOR CLIENT REVIEW      | 03/15/08 | GS | SCALE NT   | -S          |  |
|   | No.      | ISSUED FOR                    | DATE     | BY |            |             |  |

FIELD LOCATION

LOCATION

15A

PANEL#

SURGE PROTECTION

> 120 VAC UPS

| TALOYOAK WATER TREATMENT PLANT RECORD DRAWINGS<br>TALOYOAK, NUNAVUT | PROJECT NO. 07-8107-2000 |
|---|--------------------------|
|   | SHEET NO.                |
| INSTRUMENTATION AND CONTROL   | 405                      |

LOCAL CONTROL PANEL

PLC PROGRAMMER

RECEPTACLE

24 VDC POWER SUPPLY

+-

120VAC-EN PLC 120VAC NORMAL POWER FNABI

AUTO DIALER

COMMUNICATION

DIAL IN (MODEM)

PLC POWER SUPPLY MODULE

TELEPHONE INTERFACE

POWER ENABLE

PANEL#

RECEPTACLE

PANEL LIGHTING

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24VDC-EN PLC 24VDC NORMAL POWER FNARI REFER TO SPECIFICATIONS AND GENERAL NOTES: