# Invitation for Bid No. 2023-099

# SCADA Master Plan Implementation Telemetry System & RTU Replacement

## ADDENDUM No. 002

## ISSUE DATE: June 21, 2023

Responding Offerors on this project are hereby notified that this Addendum shall be made a part of the above named IFB document.

The following items add to, modify, and/or clarify the IFB documents and shall have the full force and effect of the original Documents. This Addendum shall be acknowledged by the Offeror in the IFB document.

This Addendum provides responses to questions received from interested offerors through email submissions.

## I. ATTACHMENTS

1. Specification 40 61 93A - I-O LIST
2. Specification 40 61 93B - RTU I-O REFERENCE LIST

## II. CLARIFICATIONS

Ad 2-1. Question 1: Specification section 01 57 33 – 2 1.2 specifies contractors shall be at least equal to those provided by owner. Owner has a guard on duty at the Government Center. Will the contractor need to provide a guard during the work on this site. Is the owner expecting a guard to be used at any other site during the duration of the project?

Answer 2-1: It is not the expectation of the owner that the contractor provides security personnel for remote sites during the execution of the work.

Ad 2-2. Question 2: Specification section 07 61 13 – 1 1.2B specifies installing roof contractor shall have a minimum of seven years of experience in installing seam metal roof systems. Additional specifications require two projects of similar scope and complexity in past two years. Is the owner opposed to modifying these requirements to allow approved contractors who do not meet these requirements? Area subcontractors cannot meet this requirement.

Answer 2-2: This project does not consist of a significant roofing scope. Please clarify what qualification cannot be met, it seems odd that a typical roofing contractor would not be able to meet the 7 year experience requirement and provide two projects completed in the last two years.

Ad 2-3. Can the owner confirm which sites have bypass connections and the size of the bypass connections?

Answer 2-3: Details for each of the sites requiring temporary bypass or pump and haul:

SPS12 - STEVEN MILLS STATION 2 – Bypass connection above ground within 20’ of the well.
SPS13 - FOREST PARK – Bypass connection above grade, roughly 25’ from the well. Depth is 28.9’, can be surcharged for 4 hours under normal conditions prior to an SSO and the level can be raised up to 15’ below grade.
SPS15 – HELMSVILLE – Bypass connection above grade, roughly 25’ from the well. Depth is 25.6’, can be surcharge for approximately 1.5 hours under normal conditions prior to an SSO and the level raised up to 10’ below grade
SPS26 - MEADOWS 1 – Does not have a bypass connection
SPS27 - MEADOWS 2 – Does not have a bypass connection

SPS40 - FUNDERBURK ROAD – Has a 6” connection within 10’ of well. Well has a total depth of 15’ and could surcharge for approximately 1.5 hours.
SPS46 – SANDALWOOD – Does not have a bypass connection that I am aware of.
SPS65 - DRAYTON HALL – Has a 4” connection in a vault within 10’ of the well. Well has a total depth of 15’ and could surcharge for approximately 2 hours.
SPS75 – MILLBRIDGE – Depth is 45.1’, can be surcharged for 3 hours under normal conditions prior to an SSO and the level can be raised up to 25’ below grade.

Ad 2-4. Can any more information be provided on existing discharge locations for all bypass locations?
Answer 2-4: See response Ad 2-3.

Ad 2-5a. Can any more information be provided on existing bypass suction locations? If bypassing locations are wetwells or manholes – how deep are these structures?

Answer 2-5a: See response Ad 2-3.

Ad 2-5b. How much can the structure be surcharged for suction?

Answer 2-5b: See response Ad 2-3.

Ad 2-5c. What is the distance between suction locations and discharge locations?

Answer 2-5c: See response Ad 2-3.

Ad 2-6. Pump Station SPS13 – Forest Park please confirm if there is a bypass connection. Please confirm force main is 8” to handle the anticipated 1111 GPM.

Answer 2-6: Forest Park PS has an 8-inch bypass connection and the force main is a minimum of 8-inches

Ad 2-7. Pump Station SPS75 – Millbridge please confirm if there is a bypass connection. Please confirm force main is 6” to handle the anticipated 700 GPM.

Answer 2-7: Millbridge PS has a bypass connection. Wet well discharge piping is 8-inches with a 6-inch camlock bypass connection in a manhole. The force main is 12-inches in diameter.

Ad 2-8. Will the owner consider allowing cost relief in addition to schedule relief for force majeure events?

Answer 2-8: Yes, cost and schedule relief will be considered for force majeure events.

Ad 2-9. Addendum question 6-1 from initial bid asks if the owner will provide a cap to the liquidated damages. Specifications and answer 6-1 do not mention a cap. Will the owner consider adding a liquidated damages cap?

Answer 2-9: No, the owner will not cap liquidated damages. Liquidated damage values have been modified for this advertisement.

Ad 2-10. Specification section 01 71 33 part 3.2A-1 requests temporary barricades, warning lights and signs at all work areas in accordance with requirements of owners. Can the owner provide information on which work sites are considered places where temporary barriers, warning lights and signs are needed?

Answer 2-10: All sites where work is not performed within an existing fence, and site where the fence is being replaced.

Ad 2-11. Specification section 01 57 05 -2 Part 3.1 A states noise threshold levels shall comply with local ordinances and not interfere with work of the owner. Additional noise monitoring and muffling devices may be needed to meet engineer and owner allowable noise levels. Can the owner provide more information on owner allowable noise levels? Will typical construction noise breach this level?

Answer 2-11: The owner does not have additional requirements beyond the local ordinance. Comply with local ordinances where work is being performed.

Ad 2-12. Specifications section 32 31 13 – Part 2 2.1 states that all Components of the fence and gates shall be coated and galvanized. Project plans (Sheets: SPS26, SPS38, SPS40) describe the fencing and gates to be color coated black. Will the fence be galvanized, or will it be coated in color black?

Answer 2-12: The fence shall be coated black as indicated in the drawings. See "III. ADDITIONS/DELETIONS" section, bullet 1 of this document for specification modifications.

Ad 2-13. The readvertised project has a slightly increased budget but minimum scope adjustment. In the event the bids submitted to the owner come in again substantially higher than the proposed budget, what will be the future of this project?

Answer 2-13: This question is not impactful to developing a fee for this advertisement. Reference Specification Division 00 for bidding procedure and award.

Ad 2-14. Is it acceptable to count second tier DBE participation towards the project's overall DBE goal?

Answer 2-14: No. North Carolina Minority HUB certification applies to this project.

Ad 2-15. 40 61 13 - 1.3.B, page 553, Do pre-Approved system integrators need to provide documentation validating their qualifications?

Answer 2-15: No, pre-approved systems integrators do not need to provide this content.

Ad 2-16. 41 61 13 - 1.5.B.3, page 555, The specification asks that the System Integrator inspect UCW equipment to be able to fully integrate the old equipment into the new system. It goes on to note that the SI should furnish and supply all miscellaneous items, appurtenances, and devices necessary for the installation. As those devices are unknown, will the SI be able to issue a change order to UCW for the cost of these items as they are identified?

Answer 2-16: This referenced language is standard for projects of this type. As per the referenced specification, cost should be included in the original bid. Change orders are reserved for significant changes in the Work (unforeseen conditions) or variations from the Contract Drawings, as well as owner directed changes.

Ad 2-17. Multiple Specs, Multiple Pages, The specification makes multiple reference to instrumentation and infers that providing instrumentation may be required, but the specification appears to have no instrumentation schedule or clear requirement of what instrumentation should be provided. Please clarify if new process instrumentation is to be supplied under this contract, and where the details can be found.

Answer 2-17: A 'New Level Instrument Panel' is required at some of the Water Tower sites. Refer to "Sheet Key Notes" on the 2nd Y-sheet (WT#-Y-5-002) for each of the water tower sites to determine which sites require a new level instrument panel.

Ad 2-18. 40 66 00 - 2.3, page 736, The specification for Ethernet Switches requests that the switch be powered with 120VAC, but also states that dual-redundant power supplies are required. Please clarify if Switches should be AC powered and have dual 120VAC circuits, or DC powered and use redundant 24VDC power supplies.

Answer 2-18: The standard RTU design, as denoted in the UCW SCADA & PCS STANDARDS AND CONVENTIONS MANUAL VOLUME 6, consists of a DC UPS and redundant 24V DC power supplies. Therefore, the cellular modem, Ethernet switch, OIT, firewall, and DPN3 are all intended to be DC powered.

Ad 2-19. 40 63 83 2.2.M, page 723, The RTU section of the specification notes that no umnanged switches are permitted in the design. It goes on to note that lightly managed switches can be use and specifically identifies the AB 2500 as an example. But section 40 66 00 2.3 (page 736) notes that panel mounted switches need to support two (2) backbone ports for fiber optic cable, which the AB 2500 does not support. Please confirm that the AB 2500 will be accepted for use in the RTU panels.

Answer 2-19: RTU installations do not consist of fiber optic; the AB 2500 switch is sufficient.

Ad 2-20. Appendix A Site List, page 827, Line 32 shows SPS-38 Old Hickory however this site is not in the I/O List. Does this site have I/O?

Answer 2-20: Yes, this site has I/O. See "III. ADDITIONS/DELETIONS" item 2 & 3 of this document for specification modifications.

Ad 2-21. Appendix A Site List, page 828, Line 35 shows SPS-41 Hunley Creek however this site is not in the I/O List. Does this site have I/O?

Answer 2-21: Yes, this site has I/O. See "III. ADDITIONS/DELETIONS" item 2 and 3 of this document for specification modifications.

Ad 2-22. 40 66 00, page 735, Sims Rd. 2 is shown as a critical site however the drawing GEN-G-0-005 states to relocate an existing RTU to this location. Please confirm the existing RTU contain dual radio, dual sim modem and does NOT require modifications?

Answer 2-22: Sims Rd 2 RTU is not monitored by the Union County SCADA system, nor is it intended to be. Sims Rd 2 RTU will not be upgraded or changed under this project, only relocated to the new equipment structure. Sims Rd 2 RTU receives a level signal from a level instrument panel that is shared with the Sims Rd 1 RTU.

Ad 2-23. 40 61 43, page 589, Category IC3 SPD states they are to be provided for several conditions. Does this requirement apply to NEW INSTRUMENTS only? If this requirement applies to existing instrumentation then please provide and instrument schedule with the required information.

Answer 2-23: Category IC3 SPD are panel mounted and shall be supplied in the new RTU. Not all I/O points in the RTU are required to have SPDs; see "Part 3 - Execution" of specification 40 61 43.

Ad 2-24. 40 61 43, page 589, Category IC4 SPD states they are to be provided for several conditions. Does this requirement apply to NEW INSTRUMENTS only? If this requirement applies to existing instrumentation then please provide and instrument schedule with the required information.

Answer 2-24: Category IC4 SPD are field mounted and are only required for new field instruments. See "Part 3 - Execution" of specification 40 61 43.

Ad 2-25. 40 61 43, page 590, Category IC6 SPD states they are to be provided for several conditions. Does this requirement apply to NEW INSTRUMENTS only? If this requirement applies to exisitng instrumentation then please provide and instrument schedule with the required information.

Answer 2-25: Category IC6 SPD are field mounted and are only required for new field instruments. See "Part 3 - Execution" of specification 40 61 43.

Ad 2-26. Advertisement for Bids, Page 1 , Will the county please consider extending the closing date for proposal responses? As stated, the addendum with the Q&A will be issued on Friday

6/22. Proposals are due on Tuesday 6/27. As the answers provided by the county will have a significant impact on the content of the proposal, we believe an extension is necessary to ensure that all offerors have the opportunity to submit a responsive, high quality proposal.

Answer 2-26: No extension will be provided.

Ad 2-27. Advertisement for Bids, Page 1 , Will the County please provide the Questions and Answers from the first time this RFP was released in November of 2022?

Answer 2-27: Modifications from the previous advertisement to this advertisement have been highlighted and distributed as Addendum 1.

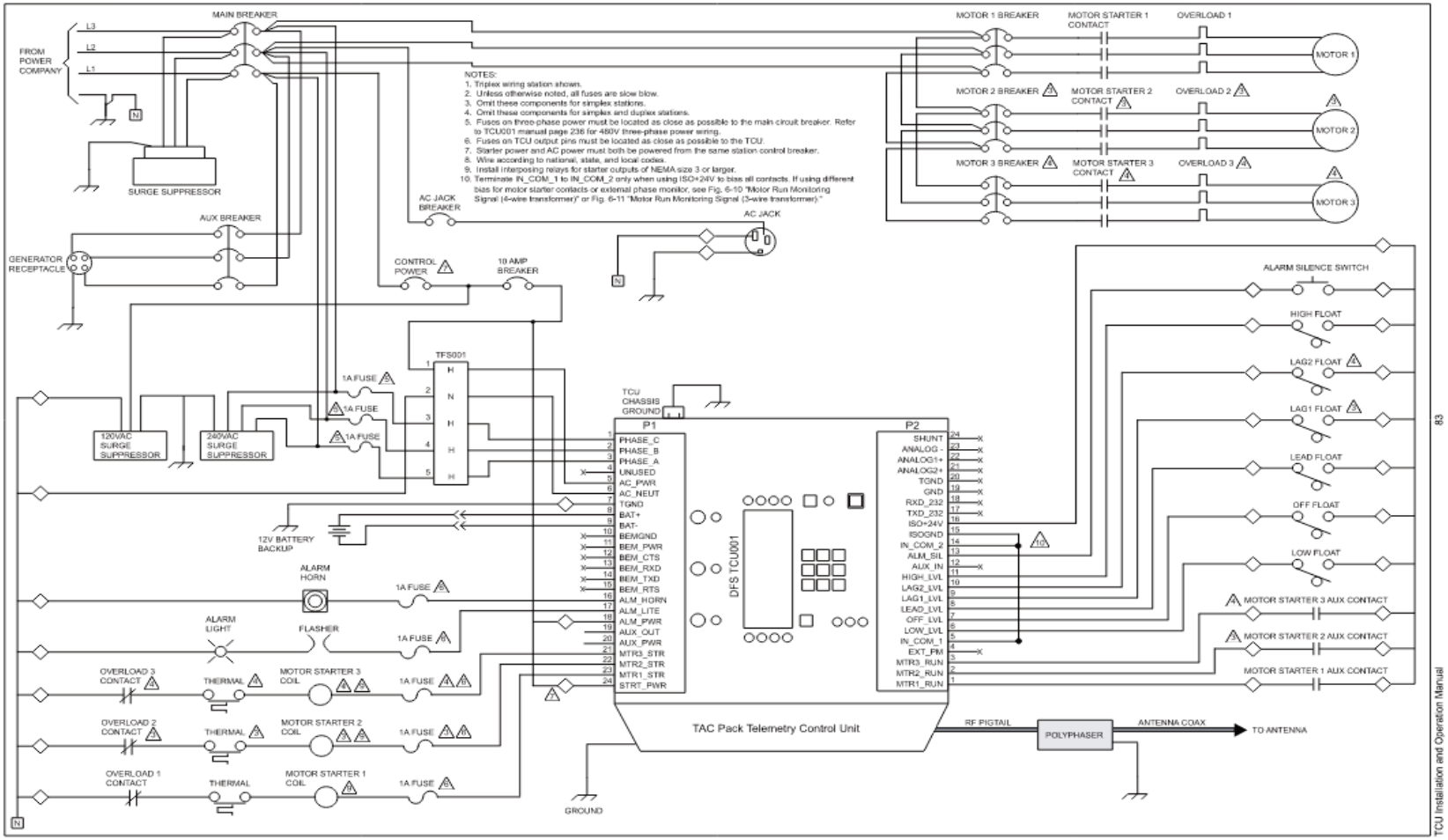
## III. ADDITIONS/DELETIONS

1. Revisions to Spec 32 31 13 – CHAIN LINK FENCE AND GATES
    a. Add 1.2.A.1.j “A641, Standard Specification for Zinc Coated (Galvanized) Carbon Steel Wire”
    b. Add 1.2.A.1.k “F668, Standard Specification for Polyvinyl Chloride (PVC) and Other Organic Polymer Coated Steel Chain Link Fence Fabric”
    c. Change 2.1.A.1.a from “ASTM A392 zinc-coated steel: Coated before weaving, 2.0 OZ/SQFT” to “PVC coated steel: ASTM F668, Class 2B, color black”
    d. Add 2.1.C.2 “Fusion bonded vinyl coating 10-14 MILS thick; color to match fabric”
    e. Add 2.1.D.2 “Fusion bonded vinyl coating 10-14 MILS thick; color to match fabric”
    f. Add 2.1.E.2 “Fusion bonded vinyl coating 10-14 MILS thick; color to match fabric”
    g. Change 2.1.F.1.a from “ASTM A824, galvanized steel, Class 3” to “Vinyl coated galvanized steel, ASTM A641, Class 3, color black”
    h. Add 2.1.G.2 “Fusion bonded vinyl coating 10-14 MILS thick; color to match fabric”
2. Replace Specification 40 61 93A I-O LIST, in its entirety, with the attached.
    a. The original I/O list has been appended to include an I/O sheet for SPS-38 Old Hickory and SPS-41 Hunley Creek, pages 74 and 75 respectively.
3. Replace Specification 40 61 93A RTU I-O REFERENCE LIST, in its entirety, with the attached.
    a. The original I/O reference list has been modified to include an I/O column for SPS-38 Old Hickory and SPS-41 Hunley Creek on page 4.

Respectfully submitted,
**HDR Engineering, Inc. of the Carolinas**

Billy Fox
Project Manager

# DFS OEM SCHEMATIC, EXAMPLE OF TCU001 INSTALLATION



# UNION COUNTY INSTALLED DFS TCU001 LIFT STATION (SPS) TYPICAL TERMINATIONS

| TB # / F# | IO DESCRIPTION | DFS WIRE COLOR | DFS PIN# |
|---|---|---|---|
| TB23 | AUXILIARY INPUT | WHITE W/ YELLOW | P2-12 |
| TB22 | ALARM SILENCE | WHITE W/PINK | P2-13 |
| TB21 | HIGH LEVEL | GREY W/ BROWN | P2-11 |
| TB20 | LAG 2 LEVEL | GREY W/ PURPLE | P2-10 |
| TB19 | LAG 1 LEVEL | GREY W/ BLUE | P2-9 |
| TB18 | LEAD LEVEL | GREY W/ MAROON | P2-8 |
| TB17 | OFF LEVEL | GREY W/ PINK | P2-7 |
| TB16 | LOW LEVEL | GREY W/ORANGE-BROWN | P2-6 |
| TB15 | MOTOR 1 RUN | PURPLE | P2-1 |
| TB14 | MOTOR 2 RUN | BROWN | P2-2 |
| TB13 | MOTOR 3 RUN | YELLOW | P2-3 |
| TB12 | EXT. PHASE MONITOR | ORANGE | P2-4 |
| TB11 | ISOLATED GROUND | BLUE | P2-15 |
| TB10 | ISOLATED +24V | WHITE W/ RED | P2-16 |
| TB9 | INPUT COMMON 2 | GREY W/YELLOW | P2-14 |
| TB8 | INPUT COMMON 1 | WHITE | P2-5 |
| TB7 | ALARM POWER | BLACK | P1-18 |
| TB6 | STARTER POWER | BLACK W/ BROWN | P1-24 |
| F9 | ALARM HORN | BLACK W/ YELLOW | P1-16 |
| F8 | ALARM LIGHT | BLACK W/ PINK | P1-17 |
| F7 | MOTOR 3 STARTER | BLACK W/ WHITE | P1-21 |
| F6 | MOTOR 2 STARTER | BLACK W/ MAROON | P1-22 |
| F5 | MOTOR 1 STARTER | BLACK W/ PURPLE | P1-23 |

## Top Connector 1: P1

| PIN# | Name | Description | Electrical Rating |
|---|---|---|---|
| P1-1 | PHASE_C | Phase C of the three-phase power monitor | 120-240 VAC, 60 Hz, 100 mA, 3-phase |
| P1-2 | PHASE_B | Phase B of the three-phase power monitor | 120-240 VAC, 60 Hz, 100 mA, 3-phase |
| P1-3 | PHASE_A | Phase A of the three-phase power monitor | 120-240 VAC, 60 Hz, 100 mA, 3-phase |
| P1-4 | UNUSED | DO NOT CONNECT | |
| P1-5 | AC_PWR | TCU's AC power | 120 VAC, 60 Hz, 0.5 A |
| P1-6 | AC_NEUT | TCU's AC power neutral | 120 VAC, 60 Hz, 0.5A |
| P1-7 | TGND | Safety ground | Ground |
| P1-8 | BAT+ | Backup battery positive terminal | <24 V / Not Rated |
| P1-9 | BAT- | Backup battery negative terminal | <24 V/ Not Rated |
| P1-10 | BEMGND | Isolated ground (wire to BEM001, pin 12) | <24 V/ Not Rated |
| P1-11 | BEM_PWR | Isolated power (wire to BEM001, pin 10) | <24 V/ Not Rated |
| P1-12 | BEM_CTS | Isolated clear to send (wire to BEM001, pin 6) | <24 V/ Not Rated |
| P1-13 | BEM_RXD | Isolated receive data (wire to BEM001, pin 4) | <24 V/ Not Rated |
| P1-14 | BEM_TXD | Isolated transmit data (wire to BEM001, pin 2) | <24 V/ Not Rated |
| P1-15 | BEM_RTS | Isolated request to send (wire to BEM001, pin 8) | <24 V/ Not Rated |
| P1-16 | ALM_HORN | Load side of alarm horn relay (NO) | 120 VAC, 60 Hz, 0.5A, Tungsten, 0-24 VDC, 1A |
| P1-17 | ALM_LITE | Load side of alarm light relay (NC) | 120 VAC, 60 Hz, 0.5 A, Tungsten, 0-24 VDC, 1 A |
| P1-18 | ALM_PWR | Line side of alarm relays | 120 VAC, 60 Hz, 1 A, 0-24 VDC, 2 A, Source |
| P1-19 | AUX_OUT | Load side of auxiliary relay | 120-240 VAC, 60 Hz, 1 A, Pilot Duty |
| P1-20 | AUX_PWR | Line side of auxiliary relay | 120-240 VAC, 60 Hz, 1 A, Source |
| P1-21 | MTR3_STR | Load side of motor starter 3 relay | 120-240 VAC, 60 Hz, 1 A, Pilot Duty |
| P1-22 | MTR2_STR | Load side of motor starter 2 relay | 120-240 VAC, 60 Hz, 1 A, Pilot Duty |
| P1-23 | MTR1_STR | Load side of motor starter 1 relay | 120-240 VAC, 60 Hz, 1 A, Pilot Duty |
| P1-24 | STRT_PWR | Line side of motor starter relays | 120-240 VAC, 60 Hz, 3 A, Source |

## Bottom Connector 1: P2

| PIN# | Name | Description | Electrical Rating |
|---|---|---|---|
| P2-1 | MTR1_RUN | Motor 1 run digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-2 | MTR2_RUN | Motor 2 run digital monitor input | 10-30 VAC/ VDC @ 10 mA |
| P2-3 | MTR3_RUN | Motor 3 run digital monitor input | 10-30 VAC/ VDC @ 10 mA |
| P2-4 | EXT_PM | External phase monitor digital monitor input | 10-30 VAC/ VDC @ 10 mA |
| P2-5 | IN_COM_1 | Common return for motor run and external phase monitor input | 10-30 VAC/ VDC @ 40 mA RTN |
| P2-6 | LOW_LVL | Low Level digital monitor input | 10-30 VAC/ VDC @ 10 mA |
| P2-7 | OFF_LVL | Off Level digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-8 | LEAD_LVL | Lead Level digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-9 | LAG1_LVL | Lag1 Level digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-10 | LAG2_LVL | Lag2 Level digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-11 | HIGH_LVL | High Level digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-12 | AUX_IN | Auxiliary digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-13 | ALM_SIL | Alarm Silence Switch digital monitor input | 10-30 VAC/VDC @ 10 mA |
| P2-14 | IN_COM_2 | Common return for input level, aux inputs, and alarm silence switch | 10-30 VAC/VDC @ 80 mA RTN |
| P2-15 | ISOGND | Internally supplied 24 VDC bias source return | <24 V/ Not Rated |
| P2-16 | ISO+24V | Internally supplied 24 VDC bias source voltage | <24 V/ Not Rated |
| P2-17 | TXD_232 | RS-232 transmit data to external device | <24 V/ Not Rated |
| P2-18 | RXD_232 | RS-232 receive data from external device | <24 V/ Not Rated |
| P2-19 | GND | RS-232 ground | <24 V/ Not Rated |
| P2-20 | TGND | Shield for analog monitor signals | Ground |
| P2-21 | ANALOG2+ (C2) | 4-20 mA+ signal from transducer; - signal at pin P2-23 | <24 V/ Not Rated |
| P2-22 | ANALOG1+ (C1) | 0-5 VDC or 4-20 mA+ signal from transducer; - signal at pin P2-23; jump pin P2-24 to P2-23 for a 4-20 mA C1 signal | <24 V/ Not Rated |
| P2-23 | ANALOG- | - signal return for both analog inputs C1 and C2 at P2-22 and P2-21 | <24 V/ Not Rated |
| P2-24 | SHUNT | 250 Ω shunt resistor; jump to P2-23 with 4-20 mA signal for C1 at P2-22 only | <24 V/ Not Rated |

## Bottom Connector 2: P4

| PIN# | Name | Description | Electrical Rating |
|---|---|---|---|
| P4-1 | Unused | Reserved for future use; do not connect | <24 V/ Not Rated |
| P4-2 | Unused | Reserved for future use; do not connect | <24 V/ Not Rated |
| P4-3 | RS485_B | RS-485 serial interface B | <24 V/ Not Rated |
| P4-4 | RS485_A | RS-485 serial interface A | <24 V/ Not Rated |
| P4-5 | EX_SHIELD | Cable shield for RS-485 or RS-232 cable | Ground |
| P4-6 | EX_GND_RAD | RS-232 ground | <24 V/ Not Rated |
| P4-7 | RTS_RAD | RS-232 Request to send | <24 V/ Not Rated |
| P4-8 | EX_TXD_RAD | RS-232 transmit data to external device | <24 V/ Not Rated |
| P4-9 | EX_RXD_RAD | RS-232 receive data from external device | <24 V/ Not Rated |
| P4-10 | CTS_RAD | RS-232 clear to send | <24 V/ Not Rated |
| P4-11 | | Unused | Not Connected |
| P4-12 | | Unused | Not Connected |
| P4-13 | | Unused | Not Connected |
| P4-14 | | Unused | Not Connected |

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# PLC I/O List
## WWTP5 Tallwood

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | RTU 9 | | | | | UV Intensity | (AI) | | $mW/cm^2$ | | | | | | | | | |
| 2 | RTU 9 | | | | | Effluent Flow | (AI) | LO=0, HI=600 | GPM | | | | | | | | | |
| 3 | RTU 9 | | | | | Influent Sampler | (AO) | | | | | | | | | | | |
| 4 | RTU 9 | | | | | Effluent Sampler | (AO) | | | | | | | | | | | |
| 5 | Existing Process PLC | | | | | Aerat Blwr 1 Fail | (DI) | | | | | | | | | | | |
| 6 | Existing Process PLC | | | | | Aerat Blwr 1 Hand | (DI) | | | | | | | | | | | |
| 7 | Existing Process PLC | | | | | Aerat Blwr 1 Run | (DI) | | | | | | | | | | | |
| 8 | Existing Process PLC | | | | | Aerat Blwr 1 Low Pressure | (DI) | | | | | | | | | | | |
| 9 | Existing Process PLC | | | | | Basin High Level | (DI) | | | | | | | | | | | |
| 10 | Existing Process PLC | | | | | Blower System Alarm | (DI) | | | | | | | | | | | |
| 11 | Existing Process PLC | | | | | Clarif 1 HiHi Over Torque | (DI) | | | | | | | | | | | |
| 12 | Existing Process PLC | | | | | Clarif 2 HiHi Over Torque | (DI) | | | | | | | | | | | |
| 13 | Existing Process PLC | | | | | Clarif 1 High Torque | (DI) | | | | | | | | | | | |
| 14 | Existing Process PLC | | | | | Clarif 2 High Torque | (DI) | | | | | | | | | | | |
| 15 | Existing Process PLC | | | | | Eq Basin Pump 1 Status | (DI) | | | | | | | | | | | |
| 16 | Existing Process PLC | | | | | Eq Basin Pump 1 Fail | (DI) | | | | | | | | | | | |
| 17 | Existing Process PLC | | | | | Eq Basin Pump 1 Run | (DI) | | | | | | | | | | | |
| 18 | Existing Process PLC | | | | | Eq Basin Pump 2 Auto | (DI) | | | | | | | | | | | |
| 19 | Existing Process PLC | | | | | Eq Basin Pump 2 Fail | (DI) | | | | | | | | | | | |
| 20 | Existing Process PLC | | | | | Eq Basin Pump 2 Status | (DI) | | | | | | | | | | | |
| 21 | Existing Process PLC | | | | | Eq Basin Pump High Level Float | (DI) | | | | | | | | | | | |
| 22 | Existing Process PLC | | | | | Eq Basin Pump Lag Pump On | (DI) | | | | | | | | | | | |
| 23 | Existing Process PLC | | | | | Eq Basin Pump Lead Pump On | (DI) | | | | | | | | | | | |
| 24 | Existing Process PLC | | | | | Eq Basin Pump All Pumps Off | (DI) | | | | | | | | | | | |
| 25 | Existing Process PLC | | | | | Eq Basin Pump Plant Inf Flow Switch | (DI) | | | | | | | | | | | |
| 26 | Existing Process PLC | | | | | Pump 1 Start Output | (DI) | | | | | | | | | | | |
| 27 | Existing Process PLC | | | | | Pump 2 Start Output | (DI) | | | | | | | | | | | |
| 28 | Existing Process PLC | | | | | Second Clar 1 Run | (DI) | | | | | | | | | | | |
| 29 | Existing Process PLC | | | | | Second. Clar 1 Fail | (DI) | | | | | | | | | | | |
| 30 | Existing Process PLC | | | | | Second. Clar 1 Hand | (DI) | | | | | | | | | | | |
| 31 | Existing Process PLC | | | | | Second. Clar 2 Run | (DI) | | | | | | | | | | | |
| 32 | Existing Process PLC | | | | | Second. Clar 2 Hand | (DI) | | | | | | | | | | | |
| 33 | Existing Process PLC | | | | | Second. Clar 2 Fail | (DI) | | | | | | | | | | | |
| 34 | Existing Process PLC | | | | | Select - Aeration | (DI) | | | | | | | | | | | |
| 35 | Existing Process PLC | | | | | Select Equal/Digest | (DI) | | | | | | | | | | | |
| 36 | Existing Process PLC | | | | | Stby Blwr Run | (DI) | | | | | | | | | | | |
| 37 | Existing Process PLC | | | | | Stdby Blwr Fail | (DI) | | | | | | | | | | | |
| 38 | Existing Process PLC | | | | | Stdby Blwr Hand | (DI) | | | | | | | | | | | |
| 39 | Existing Process PLC | | | | | Standy Blwr Low Pressure | (DI) | | | | | | | | | | | |
| 40 | Existing Process PLC | | | | | Aerat Blwr 2 Fail | (DI) | | | | | | | | | | | |
| 41 | Existing Process PLC | | | | | Aerat Blwr 2 Hand | (DI) | | | | | | | | | | | |
| 42 | Existing Process PLC | | | | | Aerat Blwr 2 Run | (DI) | | | | | | | | | | | |
| 43 | Existing Process PLC | | | | | Aerat Blwr 2 Low Pressure | (DI) | | | | | | | | | | | |
| 44 | Existing Process PLC | | | | | Eq Blwr Fail | (DI) | | | | | | | | | | | |
| 45 | Existing Process PLC | | | | | Eq Blwr Hand | (DI) | | | | | | | | | | | |
| 46 | Existing Process PLC | | | | | Eq Blwr Run | (DI) | | | | | | | | | | | |
| 47 | Existing Process PLC | | | | | Eq Blwr Low Pressure | (DI) | | | | | | | | | | | |
| 48 | Existing Process PLC | | | | | Digester Blwr Fail | (DI) | | | | | | | | | | | |
| 49 | Existing Process PLC | | | | | Digester Blwr Hand | (DI) | | | | | | | | | | | |
| 50 | Existing Process PLC | | | | | Digester Blwr Run | (DI) | | | | | | | | | | | |
| 51 | Existing Process PLC | | | | | Digester Blwr Low Pressure | (DI) | | | | | | | | | | | |
| 52 | Existing Process PLC | | | | | WAS Valve 1 Auto Mode | (DI) | | | | | | | | | | | |
| 53 | Existing Process PLC | | | | | WAS Valve 2 Auto Mode | (DI) | | | | | | | | | | | |
| 54 | Existing Process PLC | | | | | Aerat Blwr 1 High Temp | (DI) | | | | | | | | | | | |
| 55 | Existing Process PLC | | | | | Aerat Blwr 1 Filter Dirty | (DI) | | | | | | | | | | | |
| 56 | Existing Process PLC | | | | | Aerat Blwr 2 High Temp | (DI) | | | | | | | | | | | |
| 57 | Existing Process PLC | | | | | Aerat Blwr 2 Filter Dirty | (DI) | | | | | | | | | | | |
| 58 | Existing Process PLC | | | | | Eq Blwr High Temp | (DI) | | | | | | | | | | | |
| 59 | Existing Process PLC | | | | | Eq Blwr Filter Dirty | (DI) | | | | | | | | | | | |
| 60 | Existing Process PLC | | | | | Digester Blwr High Temp | (DI) | | | | | | | | | | | |
| 61 | Existing Process PLC | | | | | Digester Blwr Filter Dirty | (DI) | | | | | | | | | | | |
| 62 | Existing Process PLC | | | | | Standby Blwr High Temp | (DI) | | | | | | | | | | | |
| 63 | Existing Process PLC | | | | | Standy Blwr Filter Dirty | (DI) | | | | | | | | | | | |
| 64 | New | | | | | Rtu Intrusion Alarm | (DI) | | | | | | | | | | | |
| 65 | New | | | | | Ups Alarm | (DI) | | | | | | | | | | | |
| 66 | New | | | | | Rtu High Temperature | (DI) | | | | | | | | | | | |
| 67 | New | | | | | Rtu Low Temperature | (DI) | | | | | | | | | | | |
| 68 | New | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 69 | RTU 9 | | | | | Ats - Emergency | (DI) | | | | | | | | | | | |
| 70 | RTU 9 | | | | | Ats - Failed Transfer | (DI) | | | | | | | | | | | |
| 71 | RTU 9 | | | | | Ats - Utility Power Fail | (DI) | | | | | | | | | | | |
| 72 | RTU 9 | | | | | Backwash Pump In Auto | (DI) | | | | | | | | | | | |
| 73 | RTU 9 | | | | | Backwash Pump Fail | (DI) | | | | | | | | | | | |
| 74 | RTU 9 | | | | | Backwash Pump Run | (DI) | | | | | | | | | | | |
| 75 | RTU 9 | | | | | 24V Dc Supply Fault | (DI) | | | | | | | | | | | |
| 76 | RTU 9 | | | | | Filter Drive Auto | (DI) | | | | | | | | | | | |
| 77 | RTU 9 | | | | | Filter Drive Fail | (DI) | | | | | | | | | | | |
| 78 | RTU 9 | | | | | Filter Drive Run | (DI) | | | | | | | | | | | |
| 79 | RTU 9 | | | | | Filter Level Hihi | (DI) | | | | | | | | | | | |
| 80 | RTU 9 | | | | | Generator Failure | (DI) | | | | | | | | | | | |
| 81 | RTU 9 | | | | | Generator In Auto | (DI) | | | | | | | | | | | |
| 82 | RTU 9 | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 83 | RTU 9 | | | | | Raingauge | (DI) | | | | | | | | | | | |
| 84 | RTU 9 | | | | | Uv Common | (DI) | | | | | | | | | | | |
| 85 | Existing Process PLC | | | | | Eq Pump 1 Run | (DO) | | | | | | | | | | | |
| 86 | Existing Process PLC | | | | | Eq Pump 2 Run | (DO) | | | | | | | | | | | |
| 87 | Existing Process PLC | | | | | Aerat Blwr 1 Low Pressure Cutoff | (DO) | | | | | | | | | | | |
| 88 | Existing Process PLC | | | | | Aerat Blwr 2 Low Pressure Cutoff | (DO) | | | | | | | | | | | |
| 89 | Existing Process PLC | | | | | Eq Blwr Low Pressure Cutoff | (DO) | | | | | | | | | | | |
| 90 | Existing Process PLC | | | | | Digester Blwr Low Pressure Cutoff | (DO) | | | | | | | | | | | |
| 91 | Existing Process PLC | | | | | Standby Blwr Low Pressure Cutoff | (DO) | | | | | | | | | | | |
| 92 | Existing Process PLC | | | | | RAS/WAS Pump 1 Run | (DO) | | | | | | | | | | | |
| 93 | Existing Process PLC | | | | | RAS/WAS Pump 2 Run | (DO) | | | | | | | | | | | |
| 94 | Existing Process PLC | | | | | Scum Pump 1 Run | (DO) | | | | | | | | | | | |
| 95 | Existing Process PLC | | | | | Scum Pump 2 Run | (DO) | | | | | | | | | | | |
| 96 | Existing Process PLC | | | | | WAS Sludge 1 To Digester | (DO) | | | | | | | | | | | |
| 97 | Existing Process PLC | | | | | WAS Sludge 2 To Digester | (DO) | | | | | | | | | | | |
| 98 | Existing Process PLC | | | | | Blower System Alarm | (DO) | | | | | | | | | | | |

# PLC I/O List

## WWTP3 Grassy Branch

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=0.2 | MGD | | | | | | | | | |
| 2 | | | | | | Aer Basin Ammonia | (AI) | | mg/L | | | | | | | | | |
| 3 | | | | | | Aer Basin Diss Oxy | (AI) | | mg/L | | | | | | | | | |
| 4 | | | | | | Effluent pH | (AI) | | pH | | | | | | | | | |
| 5 | | | | | | Turbidity | (DI) | | | | | | | | | | | |
| 6 | | | | | | Influent Sampler | (DI) | | | | | | | | | | | |
| 7 | | | | | | Effluent Sampler | (DI) | | | | | | | | | | | |
| 8 | | | | | | Ac Power | (DI) | | | | | | | | | | | |
| 9 | | | | | | Bias Voltage | (DI) | | | | | | | | | | | |
| 10 | | | | | | Blower 1 Beltloss | (DI) | | | | | | | | | | | |
| 11 | | | | | | Blower 2 Beltloss | (DI) | | | | | | | | | | | |
| 12 | | | | | | Blower 3 Beltloss | (DI) | | | | | | | | | | | |
| 13 | | | | | | Clar 1 High Torque | (DI) | | | | | | | | | | | |
| 14 | | | | | | Clar 2 High Torque | (DI) | | | | | | | | | | | |
| 15 | | | | | | Filter Bypass | (DI) | | | | | | | | | | | |
| 16 | | | | | | Filter Mud Well High Level | (DI) | | | | | | | | | | | |
| 17 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 18 | | | | | | Main Blowr 1 Fail | (DI) | | | | | | | | | | | |
| 19 | | | | | | Main Blowr 1 In Hand | (DI) | | | | | | | | | | | |
| 20 | | | | | | Main Blowr 1 Status | (DI) | | | | | | | | | | | |
| 21 | | | | | | Main Blowr 2 Fail | (DI) | | | | | | | | | | | |
| 22 | | | | | | Main Blowr 2 In Hand | (DI) | | | | | | | | | | | |
| 23 | | | | | | Main Blowr 2 Status | (DI) | | | | | | | | | | | |
| 24 | | | | | | Main Blowr 3 Fail | (DI) | | | | | | | | | | | |
| 25 | | | | | | Main Blowr 3 In Hand | (DI) | | | | | | | | | | | |
| 26 | | | | | | Main Blowr 3 Status | (DI) | | | | | | | | | | | |
| 27 | | | | | | Plnt Ls High Level | (DI) | | | | | | | | | | | |
| 28 | | | | | | Plnt Ls Pmp 1 Seal Fail | (DI) | | | | | | | | | | | |
| 29 | | | | | | Plnt Ls Pmp 1 Fail | (DI) | | | | | | | | | | | |
| 30 | | | | | | Plnt Ls Pmp 1 In Aut | (DI) | | | | | | | | | | | |
| 31 | | | | | | Plnt Ls Pmp 1 In Han | (DI) | | | | | | | | | | | |
| 32 | | | | | | Plnt Ls Pmp 1 Status | (DI) | | | | | | | | | | | |
| 33 | | | | | | Plnt Ls Pmp 2 In Aut | (DI) | | | | | | | | | | | |
| 34 | | | | | | Plnt Ls Pmp 2 Status | (DI) | | | | | | | | | | | |
| 35 | | | | | | Plnt Ls Pmp 2 Seal Fail | (DI) | | | | | | | | | | | |
| 36 | | | | | | Plnt Ls Pmp 2 Fail | (DI) | | | | | | | | | | | |
| 37 | | | | | | Plnt Ls Pmp 2 In Han | (DI) | | | | | | | | | | | |
| 38 | | | | | | Raingauge | (DI) | | | | | | | | | | | |
| 39 | | | | | | Sb Blowr 1 Fail | (DI) | | | | | | | | | | | |
| 40 | | | | | | Sb Blowr 1 In Hand | (DI) | | | | | | | | | | | |
| 41 | | | | | | Sb Blowr 1 Status | (DI) | | | | | | | | | | | |
| 42 | | | | | | Sb Blowr 2 Fail | (DI) | | | | | | | | | | | |
| 43 | | | | | | Sb Blowr 2 In Hand | (DI) | | | | | | | | | | | |
| 44 | | | | | | Sb Blowr 2 Status | (DI) | | | | | | | | | | | |
| 45 | | | | | | Sb High Level | (DI) | | | | | | | | | | | |
| 46 | | | | | | Sb Pump 1 Fail | (DI) | | | | | | | | | | | |
| 47 | | | | | | Sb Pump 1 In Auto | (DI) | | | | | | | | | | | |
| 48 | | | | | | Sb Pump 1 Status | (DI) | | | | | | | | | | | |
| 49 | | | | | | Sb Pump 2 Fail | (DI) | | | | | | | | | | | |
| 50 | | | | | | Sb Pump 2 In Auto | (DI) | | | | | | | | | | | |
| 51 | | | | | | Sb Pump 2 Status | (DI) | | | | | | | | | | | |
| 52 | | | | | | Transfer Switch Normal | (DI) | | | | | | | | | | | |
| 53 | | | | | | Uv Alarm | (DI) | | | | | | | | | | | |
| 54 | | | | | | Rtu Intrusion Alarm | (DI) | | | | | | | | | | | |
| 55 | | | | | | Ups Alarm | (DI) | | | | | | | | | | | |
| 56 | | | | | | Rtu High Temperature | (DI) | | | | | | | | | | | |
| 57 | | | | | | Rtu Low Temperature | (DI) | | | | | | | | | | | |
| 58 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 59 | | | | | | Filters Bypassed | (DI) | | | | | | | | | | | |

# PLC I/O List

## WWTP6 Olde Sycamore

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=0.15 | MGD | | | | | | | | | |
| 2 | | | | | | Turbidity | (AI) | LO=0, HI=10 | NTU | | | | | | | | | |
| 3 | | | | | | Influent Sampler | (AO) | | | | | | | | | | | |
| 4 | | | | | | Effluent Sampler | (AO) | | | | | | | | | | | |
| 5 | | | | | | Ac Power | (DI) | | | | | | | | | | | |
| 6 | | | | | | Bias Voltage | (DI) | | | | | | | | | | | |
| 7 | | | | | | Blower 1 Beltloss | (DI) | | | | | | | | | | | |
| 8 | | | | | | Blower 2 Beltloss | (DI) | | | | | | | | | | | |
| 9 | | | | | | Blower 3 Beltloss | (DI) | | | | | | | | | | | |
| 10 | | | | | | Clar 1 High Torque | (DI) | | | | | | | | | | | |
| 11 | | | | | | Filter Mud Well High Level | (DI) | | | | | | | | | | | |
| 12 | | | | | | Main Blowr 1 Fail | (DI) | | | | | | | | | | | |
| 13 | | | | | | Main Blowr 1 In Hand | (DI) | | | | | | | | | | | |
| 14 | | | | | | Main Blowr 1 Status | (DI) | | | | | | | | | | | |
| 15 | | | | | | Main Blowr 2 Fail | (DI) | | | | | | | | | | | |
| 16 | | | | | | Main Blowr 2 In Hand | (DI) | | | | | | | | | | | |
| 17 | | | | | | Main Blowr 2 Status | (DI) | | | | | | | | | | | |
| 18 | | | | | | Main Blowr 3 Fail | (DI) | | | | | | | | | | | |
| 19 | | | | | | Main Blowr 3 In Hand | (DI) | | | | | | | | | | | |
| 20 | | | | | | Main Blowr 3 Status | (DI) | | | | | | | | | | | |
| 21 | | | | | | Plnt Ls High Level | (DI) | | | | | | | | | | | |
| 22 | | | | | | Plnt Ls Pmp 1 Seal Fail | (DI) | | | | | | | | | | | |
| 23 | | | | | | Plnt Ls Pmp 1 Status | (DI) | | | | | | | | | | | |
| 24 | | | | | | Plnt Ls Pmp 2 Status | (DI) | | | | | | | | | | | |
| 25 | | | | | | Plnt Ls Pmp 2 Seal Fail | (DI) | | | | | | | | | | | |
| 26 | | | | | | Raingauge | (DI) | | | | | | | | | | | |
| 27 | | | | | | Sb Blowr 1 Fail | (DI) | | | | | | | | | | | |
| 28 | | | | | | Sb Blowr 1 In Hand | (DI) | | | | | | | | | | | |
| 29 | | | | | | Sb Blowr 1 Status | (DI) | | | | | | | | | | | |
| 30 | | | | | | Sb Blowr 2 Fail | (DI) | | | | | | | | | | | |
| 31 | | | | | | Sb Blowr 2 In Hand | (DI) | | | | | | | | | | | |
| 32 | | | | | | Sb Blowr 2 Status | (DI) | | | | | | | | | | | |
| 33 | | | | | | Sb High Level | (DI) | | | | | | | | | | | |
| 34 | | | | | | Sb Pump 1 Fail | (DI) | | | | | | | | | | | |
| 35 | | | | | | Sb Pump 1 In Auto | (DI) | | | | | | | | | | | |
| 36 | | | | | | Sb Pump 1 Status | (DI) | | | | | | | | | | | |
| 37 | | | | | | Sb Pump 2 Fail | (DI) | | | | | | | | | | | |
| 38 | | | | | | Sb Pump 2 In Auto | (DI) | | | | | | | | | | | |
| 39 | | | | | | Sb Pump 2 Status | (DI) | | | | | | | | | | | |
| 40 | | | | | | Transfer Switch Normal | (DI) | | | | | | | | | | | |
| 41 | | | | | | Uv Alarm | (DI) | | | | | | | | | | | |
| 42 | | | | | | Rtu Intrusion Alarm | (DI) | | | | | | | | | | | |
| 43 | | | | | | Ups Alarm | (DI) | | | | | | | | | | | |
| 44 | | | | | | Rtu High Temperature | (DI) | | | | | | | | | | | |
| 45 | | | | | | Rtu Low Temperature | (DI) | | | | | | | | | | | |
| 46 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |

# PLC I/O List

## WWTP1 CrookedCreek RTU1

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | RTU1 | | | | Influent Flow | (AI) | | | | | | | | | | | |
| 2 | | RTU1 | | | | Effluent Flow | (AI) | | | | | | | | | | | |
| 3 | | RTU1 | | | | Ras Flow | (AI) | | | | | | | | | | | |
| 4 | | RTU1 | | | | Was Flow | (AI) | | | | | | | | | | | |
| 5 | | RTU1 | | | | Ac Power | (DI) | | | | | | | | | | | |
| 6 | | RTU1 | | | | Bias Voltage | (DI) | | | | | | | | | | | |
| 7 | | RTU1 | | | | Sludge Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | RTU1 | | | | Sludge Pump 1 Auto | (DI) | | | | | | | | | | | |
| 9 | | RTU1 | | | | Sludge Pump 1 Overload | (DI) | | | | | | | | | | | |
| 10 | | RTU1 | | | | Sludge Pump 1 High Temp | (DI) | | | | | | | | | | | |
| 11 | | RTU1 | | | | Sludge Pump 1 Psh | (DI) | | | | | | | | | | | |
| 12 | | RTU1 | | | | Sludge Pump 1 Psl | (DI) | | | | | | | | | | | |
| 13 | | RTU1 | | | | Sludge Pump 2 Running | (DI) | | | | | | | | | | | |
| 14 | | RTU1 | | | | Sludge Pump 2 Auto | (DI) | | | | | | | | | | | |
| 15 | | RTU1 | | | | Sludge Pump 2 Overload | (DI) | | | | | | | | | | | |
| 16 | | RTU1 | | | | Sludge Pump 2 High Temp | (DI) | | | | | | | | | | | |
| 17 | | RTU1 | | | | Sludge Pump 2 Psh | (DI) | | | | | | | | | | | |
| 18 | | RTU1 | | | | Sludge Pump 2 Psl | (DI) | | | | | | | | | | | |
| 19 | | RTU1 | | | | Bw Pump 1 Status | (DI) | | | | | | | | | | | |
| 20 | | RTU1 | | | | Bw Pump 2 Status | (DI) | | | | | | | | | | | |
| 21 | | RTU1 | | | | Bw Pump 3 Status | (DI) | | | | | | | | | | | |
| 22 | | RTU1 | | | | Bw Pump 4 Status | (DI) | | | | | | | | | | | |
| 23 | | RTU1 | | | | Clarifer 1 Status | (DI) | | | | | | | | | | | |
| 24 | | RTU1 | | | | Clarifer 3 Status | (DI) | | | | | | | | | | | |
| 25 | | RTU1 | | | | Clarifer 4 Status | (DI) | | | | | | | | | | | |
| 26 | | RTU1 | | | | Clarifier 2 Status | (DI) | | | | | | | | | | | |
| 27 | | RTU1 | | | | Closdind | (DI) | | | | | | | | | | | |
| 28 | | RTU1 | | | | Eff Ps High Well | (DI) | | | | | | | | | | | |
| 29 | | RTU1 | | | | Eff Ps Pump 1 Fail | (DI) | | | | | | | | | | | |
| 30 | | RTU1 | | | | Eff Ps Pump 1 Status | (DI) | | | | | | | | | | | |
| 31 | | RTU1 | | | | Eff Ps Pump 2 Fail | (DI) | | | | | | | | | | | |
| 32 | | RTU1 | | | | Eff Ps Pump 2 Status | (DI) | | | | | | | | | | | |
| 33 | | RTU1 | | | | Eff Ps Pump 3 Fail | (DI) | | | | | | | | | | | |
| 34 | | RTU1 | | | | Eff Ps Pump 3 Status | (DI) | | | | | | | | | | | |
| 35 | | RTU1 | | | | Filter 1 High Level | (DI) | | | | | | | | | | | |
| 36 | | RTU1 | | | | Filter 1 Status | (DI) | | | | | | | | | | | |
| 37 | | RTU1 | | | | Filter 12 Alarm | (DI) | | | | | | | | | | | |
| 38 | | RTU1 | | | | Filter 12 Mudwell High Level | (DI) | | | | | | | | | | | |
| 39 | | RTU1 | | | | Filter 2 High Level | (DI) | | | | | | | | | | | |
| 40 | | RTU1 | | | | Filter 2 Status | (DI) | | | | | | | | | | | |
| 41 | | RTU1 | | | | Filter 3 High Level | (DI) | | | | | | | | | | | |
| 42 | | RTU1 | | | | Filter 3 Status | (DI) | | | | | | | | | | | |
| 43 | | RTU1 | | | | Filter 3456 Alarm | (DI) | | | | | | | | | | | |
| 44 | | RTU1 | | | | Filter 3456 Mudwell High Level | (DI) | | | | | | | | | | | |
| 45 | | RTU1 | | | | Filter 4 High Level | (DI) | | | | | | | | | | | |
| 46 | | RTU1 | | | | Filter 4 Status | (DI) | | | | | | | | | | | |
| 47 | | RTU1 | | | | Filter 5 High Level | (DI) | | | | | | | | | | | |
| 48 | | RTU1 | | | | Filter 5 Status | (DI) | | | | | | | | | | | |
| 49 | | RTU1 | | | | Filter 6 High Level | (DI) | | | | | | | | | | | |
| 50 | | RTU1 | | | | Filter 6 Status | (DI) | | | | | | | | | | | |
| 51 | | RTU1 | | | | Filter Air Psi Low Pressure | (DI) | | | | | | | | | | | |
| 52 | | RTU1 | | | | Openlnd | (DI) | | | | | | | | | | | |
| 53 | | RTU1 | | | | Rain Gauge | (DI) | | | | | | | | | | | |
| 54 | | RTU1 | | | | Sfbfault | (DI) | | | | | | | | | | | |
| 55 | | RTU1 | | | | Uv Alarm | (DI) | | | | | | | | | | | |
| 56 | | RTU1 | | | | Rtu Intrusion Alarm | (DI) | | | | | | | | | | | |
| 57 | | RTU1 | | | | Ups Alarm | (DI) | | | | | | | | | | | |
| 58 | | RTU1 | | | | Rtu High Temperature | (DI) | | | | | | | | | | | |
| 59 | | RTU1 | | | | Rtu Low Temperature | (DI) | | | | | | | | | | | |
| 60 | | RTU1 | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 61 | | RTU1 | | | | Sf Opencmd | (DO) | | | | | | | | | | | |
| 62 | | RTU1 | | | | Sf Closed Cmd | (DO) | | | | | | | | | | | |
| 63 | | RTU1 | | | | Filterisolate 36 | (DO) | | | | | | | | | | | |
| 64 | | RTU1 | | | | Filter Isolate 12 | (DO) | | | | | | | | | | | |

# PLC I/O List
## WWTP1 CrookedCreek RTU3

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | RTU3 | | | | OXIDATION DITCH NO. 1 FRONT ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 2 | | RTU3 | | | | OXIDATION DITCH NO. 1 MIDDLE ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 3 | | RTU3 | | | | OXIDATION DITCH NO. 1 BACK ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 4 | | RTU3 | | | | OXIDATION DITCH NO. 2 FRONT ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 5 | | RTU3 | | | | OXIDATION DITCH NO. 2 MIDDLE ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 6 | | RTU3 | | | | OXIDATION DITCH NO. 2 BACK ROTOR RUNNING | (DI) | | | | | | | | | | | |
| 7 | | RTU3 | | | | OXIDATION DITCHES GENERAL FAILURE | (DI) | | | | | | | | | | | |
| 8 | | RTU3 | | | | DIGESTER NO. 1 RUNNING | (DI) | | | | | | | | | | | |
| 9 | | RTU3 | | | | DIGESTER NO. 2 RUNNING | (DI) | | | | | | | | | | | |
| 10 | | RTU3 | | | | DIGESTER NO. 3 RUNNING | (DI) | | | | | | | | | | | |
| 11 | | RTU3 | | | | DIGESTER NO. 4 RUNNING | (DI) | | | | | | | | | | | |
| 12 | | RTU3 | | | | DIGESTER NO. 5 RUNNING | (DI) | | | | | | | | | | | |
| 13 | | RTU3 | | | | DIGESTER 1-2-3-4-5 HIGH LEVEL ALARM | (DI) | | | | | | | | | | | |
| 14 | | RTU3 | | | | GENERATOR READY | (DI) | | | | | | | | | | | |
| 15 | | RTU3 | | | | GENERATOR RUNNING | (DI) | | | | | | | | | | | |
| 16 | | RTU3 | | | | GENERATOR FAILURE | (DI) | | | | | | | | | | | |
| 17 | | RTU3 | | | | GENERATOR BATTERY TROUBLE | (DI) | | | | | | | | | | | |
| 18 | | RTU3 | | | | GENERATOR LOW COOLANT | (DI) | | | | | | | | | | | |
| 19 | | RTU3 | | | | GENERATOR FUEL TANK LEVEL LOW | (DI) | | | | | | | | | | | |
| 20 | | RTU3 | | | | GENERATOR FUEL TANK LEAK ALARM | (DI) | | | | | | | | | | | |
| 21 | | RTU3 | | | | UTILITY POWER AVAILABLE | (DI) | | | | | | | | | | | |
| 22 | | RTU3 | | | | ATS IN NORMAL POSITION | (DI) | | | | | | | | | | | |
| 23 | | RTU3 | | | | ATS IN EMERGENCY POSITION | (DI) | | | | | | | | | | | |
| 24 | | RTU3 | | | | ATS FAIL TO TRANSFER | (DI) | | | | | | | | | | | |
| 25 | | RTU3 | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 26 | | RTU3 | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 27 | | RTU3 | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 28 | | RTU3 | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 29 | | RTU3 | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 30 | | RTU3 | | | | RTU A/C Power Monitor Alarm | (DI) | | | | | | | | | | | |

# PLC I/O List
## SPS4 Highclere

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Gener. Low Fuel | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS73 MineralSprings

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS28 CommunityPark

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | | | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS19 Woodfern

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 9 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 10 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 15 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 16 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS26 MeadowsHome #1

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS27 MeadowsHome #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS70 WestElementary

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS66 Fieldstone

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS64 SunValleyPlace

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS29 Loxdale

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Rainfall Gauge | (AI) | | IN | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 17 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 18 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 19 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 21 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS74 Tarkhill

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=2000 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS75 Millbridge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=5000 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS20 PoplinRd

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=5000 | GPM | | | | | | | | | |
| 2 | | | | | | Wetwell Flow | (AI) | | | | | | | | | | | |
| 3 | | | | | | Wet Well Level | (AI) | LO=0, HI=22.5 | FT | | | | | | | | | |
| 4 | | | | | | Rainfall Gauge | (AI) | | IN | | | | | | | | | |
| 5 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 6 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 7 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 17 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 18 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 19 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 21 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS67 MarvinRidge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | | | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS45 CraneValley

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=23.3 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Gener. Low Fuel | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS11 AthertonEstates

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS85 Millbridge #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS30 NewUnionville

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=150 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS86 Woodlands

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=150 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS2 Stonebridge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS1 Parkwood

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS32 RoneBranch

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS65 DraytonHall

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS5 StevensMill #1

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS12 StevensMill #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS80 OldeSycamore #1

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS81 OldeSycamore #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS79 OldeSycamore #3

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS4 OldeSycamore #4

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS36 JacksonRidge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS31 MagnoilaRidge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS40 Funderburk

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS18 Suburban #3

| | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS17 Suburban #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS46 Sandalwood

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## WT2 Stallings

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=45 | FT | ALARM=17.000/45.000, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 5 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List

## WT3 NorthWest Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=40 | FT | ALARM=14.000/39.000, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 5 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List
## WT4 IndianTrail Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=30 | FT | ALARM=7.000/26.500, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 5 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List

## WT5 Marshville Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=35 | FT | ALARM=15.000/34.500, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 5 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List
## WT7 Austin Rd Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=30 | FT | ALARM=13.500/29.000, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 5 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List
## WT6 Sims Rd Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | 2Million Level | (AI) | LO=0, HI=50 | FT | | | | | | | | | |
| 2 | | | | | | 4Million Level | (AI) | LO=0, HI=50 | FT | | | | | | | | | |
| 3 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 5 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 6 | | | | | | Transfer Sw Gen | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 8 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 9 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |

# PLC I/O List

## WT8 Weddington Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=50 | FT | ALARM=20.000/45.500, CALL | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 4 | | | | | | FAA Light Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Overflow | (DI) | | | | | | | | | | | |
| 6 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 7 | | | | | | Valve Closed | (DI) | | | | | | | | | | | |
| 8 | | | | | | Valve Open | (DI) | | | | | | | | | | | |
| 9 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 10 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | Close Valve | (DO) | | | | | | | | | | | |

# PLC I/O List

## WT10 Wingate Tank

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Tank Level | (AI) | LO=0, HI=40 | FT | | | | | | | | | |
| 2 | | | | | | DC Power Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 4 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 5 | | | | | | Valve Closed | (DI) | | | | | | | | | | | |
| 6 | | | | | | Valve Open | (DI) | | | | | | | | | | | |
| 7 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 8 | | | | | | UPS Fault | (DI) | | | | | | | | | | | |
| 9 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 11 | | | | | | Close Valve | (DO) | | | | | | | | | | | |

# PLC I/O List
## BPS4 Highway 75

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=300 | PSI | | | | | | | | | |
| 2 | | | | | | Discharge Flow | (AI) | LO=0, HI=2000 | GPM | | | | | | | | | |
| 3 | | | | | | Generator Fuel Tank Level | (AI) | LO=0, HI=100 | % | ALARM=20.000/100.000, CALL | | | | | | | | |
| 4 | | | | | | Level | (AI) | LO=0, HI=30 | FT | | | | | | | | | |
| 5 | | | | | | Suction Pressure | (AI) | LO=0, HI=150 | PSI | | | | | | | | | |
| 6 | | | | | | Engine-Gener Alarm | (DI) | | | | | | | | | | | |
| 7 | | | | | | Generator Fuel Low | (DI) | | | | | | | | | | | |
| 8 | | | | | | Generator Run Status | (DI) | | | | | | | | | | | |
| 9 | | | | | | High Tank Level | (DI) | | | | | | | | | | | |
| 10 | | | | | | Level Transducer | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pmp1 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pmp2 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pmp3 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 14 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 15 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 16 | | | | | | Pump 1 Stop | (DI) | | | | | | | | | | | |
| 17 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Stop | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump1 Check Valve St | (DI) | | | | | | | | | | | |
| 23 | | | | | | Pump1 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 24 | | | | | | Pump2 Check Valve St | (DI) | | | | | | | | | | | |
| 25 | | | | | | Pump2 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 26 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 27 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 28 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 29 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 30 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 31 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 32 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 33 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 34 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 35 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## BPS10 OliveBranch

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=200 | PSI | | | | | | | | | |
| 2 | | | | | | Flow Rate | (AI) | LO=0, HI=2083 | GPM | | | | | | | | | |
| 3 | | | | | | Northwest Level | (AI) | LO=0, HI=40 | FT | | | | | | | | | |
| 4 | | | | | | Suction Pressure | (AI) | LO=0, HI=100 | PSI | | | | | | | | | |
| 5 | | | | | | Generator Fuel Low | (DI) | | | | | | | | | | | |
| 6 | | | | | | Generator Run Status | (DI) | | | | | | | | | | | |
| 7 | | | | | | Gen Status Normal | (DI) | | | | | | | | | | | |
| 8 | | | | | | Generator Trouble | (DI) | | | | | | | | | | | |
| 9 | | | | | | High Tank Level | (DI) | | | | | | | | | | | |
| 10 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | Level Transducer | (DI) | | | | | | | | | | | |
| 12 | | | | | | Man Down | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pmp1 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 14 | | | | | | Pmp2 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 15 | | | | | | Pmp3 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 16 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Stop | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pump 2 Stop | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump1 Ck Val Closed | (DI) | | | | | | | | | | | |
| 23 | | | | | | Pump1 Ck Val Fail | (DI) | | | | | | | | | | | |
| 24 | | | | | | Pump1 Hi Dis PSI | (DI) | | | | | | | | | | | |
| 25 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 26 | | | | | | Pump2 Ck Val Closed | (DI) | | | | | | | | | | | |
| 27 | | | | | | Pump2 Ck Val Fail | (DI) | | | | | | | | | | | |
| 28 | | | | | | Pump2 Failure | (DI) | | | | | | | | | | | |
| 29 | | | | | | Pump2 Hi Dis PSI | (DI) | | | | | | | | | | | |
| 30 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 31 | | | | | | Pump1 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 32 | | | | | | Pump2 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 33 | | | | | | Surge Val Closed | (DI) | | | | | | | | | | | |
| 34 | | | | | | Surge Val Open | (DI) | | | | | | | | | | | |
| 35 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 36 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 37 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 38 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 39 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 40 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 41 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 42 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 43 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 44 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## BPS11 WatkinsRd

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=300 | PSI | | | | | | | | | |
| 2 | | | | | | Flow Rate | (AI) | LO=0, HI=20000 | GPM | | | | | | | | | |
| 3 | | | | | | Suction Pressure | (AI) | LO=0, HI=150 | PSI | | | | | | | | | |
| 4 | | | | | | Generator Fuel Low | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Run Status | (DI) | | | | | | | | | | | |
| 6 | | | | | | Generator Trouble | (DI) | | | | | | | | | | | |
| 7 | | | | | | High Tank Level | (DI) | | | | | | | | | | | |
| 8 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 9 | | | | | | Level Transducer | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pmp1 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pmp2 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pmp3 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 14 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 15 | | | | | | Pump 1 Stop | (DI) | | | | | | | | | | | |
| 16 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 17 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Stop | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump 3 Fault | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump 3 Running | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pump 3 Stop | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 23 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 24 | | | | | | Pump1 Check Valve St | (DI) | | | | | | | | | | | |
| 25 | | | | | | Pump1 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 26 | | | | | | Pump1 Motor Fail | (DI) | | | | | | | | | | | |
| 27 | | | | | | Pump2 Check Valve St | (DI) | | | | | | | | | | | |
| 28 | | | | | | Pump2 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 29 | | | | | | Pump2 Motor Fail | (DI) | | | | | | | | | | | |
| 30 | | | | | | Pump3 Check Valve St | (DI) | | | | | | | | | | | |
| 31 | | | | | | Pump3 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 32 | | | | | | Pump3 Motor Fail | (DI) | | | | | | | | | | | |
| 33 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 34 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 35 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 36 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 37 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 38 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 39 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 40 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 41 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 42 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |
| 43 | | | | | | Starter 3 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## WT1_BPS12 NewStallings

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=150 | PSI | | | | | | | | | |
| 2 | | | | | | Flow Rate | (AI) | LO=0, HI=10000 | GPM | | | | | | | | | |
| 3 | | | | | | Suction Pressure | (AI) | LO=0, HI=150 | PSI | | | | | | | | | |
| 4 | | | | | | Generator Fuel Low | (DI) | | | | | | | | | | | |
| 5 | | | | | | Gen Status Normal | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Tank Level | (DI) | | | | | | | | | | | |
| 7 | | | | | | Level Transducer | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pmp1 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pmp2 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pmp3 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pump 1 Stop | (DI) | | | | | | | | | | | |
| 14 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 15 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 16 | | | | | | Pump 2 Stop | (DI) | | | | | | | | | | | |
| 17 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 18 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump1 Check Valve St | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump1 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pump2 Check Valve St | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump2 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 23 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 24 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 25 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 26 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 27 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 28 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 29 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 30 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 31 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 32 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## BPS13 HWY 74E

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=200 | PSI | | | | | | | | | |
| 2 | | | | | | Anson Cnty Flow | (AI) | LO=0, HI=5556 | GPM | | | | | | | | | |
| 3 | | | | | | Conductivity | (AI) | LO=0.1, HI=2000 | MICROS/CM | | | | | | | | | |
| 4 | | | | | | Free Chlorine | (AI) | LO=0, HI=5 | PPM | | | | | | | | | |
| 5 | | | | | | Level | (AI) | LO=0, HI=35 | FT | | | | | | | | | |
| 6 | | | | | | pH | (AI) | LO=0, HI=14 | pH | | | | | | | | | |
| 7 | | | | | | Suction Pressure | (AI) | LO=0, HI=150 | PSI | | | | | | | | | |
| 8 | | | | | | Sample PSI | (AI) | LO=0, HI=100 | PSI | | | | | | | | | |
| 9 | | | | | | Total Chlorine | (AI) | LO=0, HI=5 | PPM | | | | | | | | | |
| 10 | | | | | | Turbidity | (AI) | LO=0, HI=3 | NTU | ALARM=0.55 | | | | | | | | |
| 11 | | | | | | Engine-Gener Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | Generator Fuel Low | (DI) | | | | | | | | | | | |
| 13 | | | | | | Generator Run Status | (DI) | | | | | | | | | | | |
| 14 | | | | | | Gen Status Normal | (DI) | | | | | | | | | | | |
| 15 | | | | | | High Tank Level | (DI) | | | | | | | | | | | |
| 16 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Level Transducer | (DI) | | | | | | | | | | | |
| 18 | | | | | | Man Down | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pmp1 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pmp2 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pmp3 Chk Val OPEN | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 23 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 24 | | | | | | Pump 1 Stop | (DI) | | | | | | | | | | | |
| 25 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 26 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 27 | | | | | | Pump 2 Stop | (DI) | | | | | | | | | | | |
| 28 | | | | | | Pump1 Ck Val Closed | (DI) | | | | | | | | | | | |
| 29 | | | | | | Pump1 Ck Val Fail | (DI) | | | | | | | | | | | |
| 30 | | | | | | Pump1 Hi Dis PSI | (DI) | | | | | | | | | | | |
| 31 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 32 | | | | | | Pump2 Ck Val Closed | (DI) | | | | | | | | | | | |
| 33 | | | | | | Pump2 Ck Val Fail | (DI) | | | | | | | | | | | |
| 34 | | | | | | Pump2 Failure | (DI) | | | | | | | | | | | |
| 35 | | | | | | Pump2 Hi Dis PSI | (DI) | | | | | | | | | | | |
| 36 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 37 | | | | | | Pump3 Ck Val Closed | (DI) | | | | | | | | | | | |
| 38 | | | | | | Pump3 Failure | (DI) | | | | | | | | | | | |
| 39 | | | | | | Pump3 Hi Dis PSI | (DI) | | | | | | | | | | | |
| 40 | | | | | | Pump3 In Remote | (DI) | | | | | | | | | | | |
| 41 | | | | | | Pump1 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 42 | | | | | | Pump2 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 43 | | | | | | Pump3 Low Suc Alarm | (DI) | | | | | | | | | | | |
| 44 | | | | | | Surge Val Closed | (DI) | | | | | | | | | | | |
| 45 | | | | | | Surge Val Open | (DI) | | | | | | | | | | | |
| 46 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 47 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 48 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 49 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 50 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 51 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 52 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 53 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 54 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 55 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## BPS14 880Zone

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Discharge Pressure | (AI) | LO=0, HI=200 | PSI | | | | | | | | | |
| 2 | | | | | | Generator Fuel Tank Level | (AI) | LO=0, HI=100 | % | ALARM=50.000, CALL | | | | | | | | |
| 3 | | | | | | Average Voltage | (AI) | LO=0, HI=600 | V | | | | | | | | | |
| 4 | | | | | | Suction Pressure | (AI) | LO=0, HI=100 | PSI | | | | | | | | | |
| 5 | | | | | | Engine-Gener Alarm | (DI) | | | | | | | | | | | |
| 6 | | | | | | Generator Run Status | (DI) | | | | | | | | | | | |
| 7 | | | | | | Building Intrusion Alarm | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Fault | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Fault | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 3 Fault | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pump 3 Running | (DI) | | | | | | | | | | | |
| 14 | | | | | | Pump1 In Remote | (DI) | | | | | | | | | | | |
| 15 | | | | | | Pump2 In Remote | (DI) | | | | | | | | | | | |
| 16 | | | | | | Suction Low Pressure | (DI) | | | | | | | | | | | |
| 17 | | | | | | Utility Power | (DI) | | | | | | | | | | | |
| 18 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 19 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 20 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 21 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 22 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 23 | | | | | | Starter 1 Run Command | (DO) | | | | | | | | | | | |
| 24 | | | | | | Starter 2 Run Command | (DO) | | | | | | | | | | | |
| 25 | | | | | | Starter 3 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS48 Eastside #1

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Phase 1 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 2 | | | | | | Phase 2 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 3 | | | | | | Phase 3 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 4 | | | | | | Phase V1 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 5 | | | | | | Phase V2 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 6 | | | | | | Phase V3 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 7 | | | | | | Combustible Gas | (AI) | LO=0, HI=100 | LEL | | | | | | | | | |
| 8 | | | | | | Flow | (AI) | LO=0, HI=100 | % | | | | | | | | | |
| 9 | | | | | | Wetwell Level | (AI) | LO=0, HI=30 | FT | | | | | | | | | |
| 10 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 11 | | | | | | ATS- Utility Power | (DI) | | | | | | | | | | | |
| 12 | | | | | | Combustible Gas | (DI) | | | | | | | | | | | |
| 13 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 14 | | | | | | Drywell Flood | (DI) | | | | | | | | | | | |
| 15 | | | | | | Exhaust Fan Flow | (DI) | | | | | | | | | | | |
| 16 | | | | | | Gen Running | (DI) | | | | | | | | | | | |
| 17 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 18 | | | | | | High Well Level | (DI) | | | | | | | | | | | |
| 19 | | | | | | HOA 1 Hand | (DI) | | | | | | | | | | | |
| 20 | | | | | | HOA 1 Off | (DI) | | | | | | | | | | | |
| 21 | | | | | | HOA 1 Auto | (DI) | | | | | | | | | | | |
| 22 | | | | | | HOA 2 Hand | (DI) | | | | | | | | | | | |
| 23 | | | | | | HOA 2 Off | (DI) | | | | | | | | | | | |
| 24 | | | | | | HOA 2 Auto | (DI) | | | | | | | | | | | |
| 25 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 26 | | | | | | P1 Check Valve Alm | (DI) | | | | | | | | | | | |
| 27 | | | | | | P1 Cooling Water Fail | (DI) | | | | | | | | | | | |
| 28 | | | | | | P1 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 29 | | | | | | P1 Mtr Overload | (DI) | | | | | | | | | | | |
| 30 | | | | | | P1 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 31 | | | | | | P2 Check Valve Alm | (DI) | | | | | | | | | | | |
| 32 | | | | | | P2 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 33 | | | | | | P2 Mtr Overload | (DI) | | | | | | | | | | | |
| 34 | | | | | | P2 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 35 | | | | | | Phase Monitor Bypass | (DI) | | | | | | | | | | | |
| 36 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 37 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 38 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 39 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 40 | | | | | | Sta On Gen Power | (DI) | | | | | | | | | | | |
| 41 | | | | | | Supply Fan Flow | (DI) | | | | | | | | | | | |
| 42 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 43 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 44 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 45 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 46 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 47 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 48 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 49 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 50 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS25 Eastside #2

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Phase 1 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 2 | | | | | | Phase 2 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 3 | | | | | | Phase 3 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 4 | | | | | | Phase V1 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 5 | | | | | | Phase V2 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 6 | | | | | | Phase V3 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 7 | | | | | | Combustible Gas | (AI) | LO=0, HI=100 | LEL | | | | | | | | | |
| 8 | | | | | | Flow | (AI) | LO=0, HI=2500 | GPM | | | | | | | | | |
| 9 | | | | | | Wetwell Level | (AI) | LO=0, HI=30 | FT | | | | | | | | | |
| 10 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 11 | | | | | | ATS- Utility Power | (DI) | | | | | | | | | | | |
| 12 | | | | | | Combustible Gas | (DI) | | | | | | | | | | | |
| 13 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 14 | | | | | | Drywell Flood | (DI) | | | | | | | | | | | |
| 15 | | | | | | Exhaust Fan Flow | (DI) | | | | | | | | | | | |
| 16 | | | | | | Gen Running | (DI) | | | | | | | | | | | |
| 17 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 18 | | | | | | High Well Level | (DI) | | | | | | | | | | | |
| 19 | | | | | | HOA 1 Hand | (DI) | | | | | | | | | | | |
| 20 | | | | | | HOA 1 Off | (DI) | | | | | | | | | | | |
| 21 | | | | | | HOA 1 Auto | (DI) | | | | | | | | | | | |
| 22 | | | | | | HOA 2 Hand | (DI) | | | | | | | | | | | |
| 23 | | | | | | HOA 2 Off | (DI) | | | | | | | | | | | |
| 24 | | | | | | HOA 2 Auto | (DI) | | | | | | | | | | | |
| 25 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 26 | | | | | | P1 Check Valve Alm | (DI) | | | | | | | | | | | |
| 27 | | | | | | P1 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 28 | | | | | | P1 Mtr Overload | (DI) | | | | | | | | | | | |
| 29 | | | | | | P1 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 30 | | | | | | P2 Check Valve Alm | (DI) | | | | | | | | | | | |
| 31 | | | | | | P2 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 32 | | | | | | P2 Mtr Overload | (DI) | | | | | | | | | | | |
| 33 | | | | | | P2 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 34 | | | | | | Phase Monitor Bypass | (DI) | | | | | | | | | | | |
| 35 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 36 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 37 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 38 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 39 | | | | | | Sta On Gen Power | (DI) | | | | | | | | | | | |
| 40 | | | | | | Supply Fan Flow | (DI) | | | | | | | | | | | |
| 41 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 42 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 43 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 44 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 45 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 46 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 47 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 48 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 49 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS47 Eastside #3

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Phase 1 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 2 | | | | | | Phase 2 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 3 | | | | | | Phase 3 Amps | (AI) RS485 | LO=0, HI=100 | | | | | | | | | | |
| 4 | | | | | | Phase V1 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 5 | | | | | | Phase V2 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 6 | | | | | | Phase V3 | (AI) RS485 | LO=0, HI=600 | V | | | | | | | | | |
| 7 | | | | | | Combustible Gas | (AI) | LO=0, HI=100 | LEL | | | | | | | | | |
| 8 | | | | | | Gen Fuel Level | (AI) | LO=0, HI=2000 | GAL | | | | | | | | | |
| 9 | | | | | | Primary Flow | (AI) | LO=0, HI=2700 | GPM | | | | | | | | | |
| 10 | | | | | | Secondary Flow | (AI) | LO=0, HI=2700 | GPM | | | | | | | | | |
| 11 | | | | | | Wetwell Level | (AI) | LO=0, HI=30 | FT | | | | | | | | | |
| 12 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 13 | | | | | | ATS- Utility Power | (DI) | | | | | | | | | | | |
| 14 | | | | | | Combustible Gas | (DI) | | | | | | | | | | | |
| 15 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 16 | | | | | | Drywell Flood | (DI) | | | | | | | | | | | |
| 17 | | | | | | Exhaust Fan Flow | (DI) | | | | | | | | | | | |
| 18 | | | | | | Gen Fuel High | (DI) | | | | | | | | | | | |
| 19 | | | | | | Gen Fuel Leak | (DI) | | | | | | | | | | | |
| 20 | | | | | | Gen Fuel Low | (DI) | | | | | | | | | | | |
| 21 | | | | | | Gen Running | (DI) | | | | | | | | | | | |
| 22 | | | | | | Gen Trouble | (DI) | | | | | | | | | | | |
| 23 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 24 | | | | | | High Well Level | (DI) | | | | | | | | | | | |
| 25 | | | | | | HOA 1 Hand | (DI) | | | | | | | | | | | |
| 26 | | | | | | HOA 1 Off | (DI) | | | | | | | | | | | |
| 27 | | | | | | HOA 1 Auto | (DI) | | | | | | | | | | | |
| 28 | | | | | | HOA 2 Hand | (DI) | | | | | | | | | | | |
| 29 | | | | | | HOA 2 Off | (DI) | | | | | | | | | | | |
| 30 | | | | | | HOA 2 Auto | (DI) | | | | | | | | | | | |
| 31 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 32 | | | | | | P1 Check Valve Alm | (DI) | | | | | | | | | | | |
| 33 | | | | | | P1 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 34 | | | | | | P1 Mtr Overload | (DI) | | | | | | | | | | | |
| 35 | | | | | | P1 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 36 | | | | | | P2 Check Valve Alm | (DI) | | | | | | | | | | | |
| 37 | | | | | | P2 Motor Hi Tmp | (DI) | | | | | | | | | | | |
| 38 | | | | | | P2 Mtr Overload | (DI) | | | | | | | | | | | |
| 39 | | | | | | P2 Seal Cav Leak | (DI) | | | | | | | | | | | |
| 40 | | | | | | Phase Monitor Bypass | (DI) | | | | | | | | | | | |
| 41 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 42 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 43 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 44 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 45 | | | | | | Sta On Gen Power | (DI) | | | | | | | | | | | |
| 46 | | | | | | Supply Fan Flow | (DI) | | | | | | | | | | | |
| 47 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 48 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 49 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 50 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 51 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 52 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 53 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 54 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 55 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS13 ForestParkLS

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Flow | (AI) | LO=0, HI=1110 | GPM | | | | | | | | | |
| 2 | | | | | | Wetwell Level | (AI) | LO=0, HI=23 | FT | | | | | | | | | |
| 3 | | | | | | P1 Speed Cmd | (AO) | LO=0, HI=100 | % | | | | | | | | | |
| 4 | | | | | | P2 Speed Cmd | (AO) | LO=0, HI=100 | % | | | | | | | | | |
| 5 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 6 | | | | | | Combustible Gas | (DI) | | | | | | | | | | | |
| 7 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 8 | | | | | | Gen Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Gen Trouble | (DI) | | | | | | | | | | | |
| 10 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 11 | | | | | | HOA 1 Hand | (DI) | | | | | | | | | | | |
| 12 | | | | | | HOA 1 Off | (DI) | | | | | | | | | | | |
| 13 | | | | | | HOA 1 Auto | (DI) | | | | | | | | | | | |
| 14 | | | | | | HOA 2 Hand | (DI) | | | | | | | | | | | |
| 15 | | | | | | HOA 2 Off | (DI) | | | | | | | | | | | |
| 16 | | | | | | HOA 2 Auto | (DI) | | | | | | | | | | | |
| 17 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 18 | | | | | | Phase Monitor Bypass | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 21 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 22 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 23 | | | | | | Sta On Gen Power | (DI) | | | | | | | | | | | |
| 24 | | | | | | VFD1 In Rem | (DI) | | | | | | | | | | | |
| 25 | | | | | | VFD2 In Rem | (DI) | | | | | | | | | | | |
| 26 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 27 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 28 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 29 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 30 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 31 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 32 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 33 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS78 TallwoodInfluent

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Combustible Gas | (AI) | | | | | | | | | | | |
| 2 | | | | | | Wetwell Level | (AI) | | | | | | | | | | | |
| 3 | | | | | | Pump 1 SPD Feedback | (AI) | | | | | | | | | | | |
| 4 | | | | | | Pump 2 SPD Feedback | (AI) | | | | | | | | | | | |
| 5 | | | | | | P1 Speed Cmd | (AO) | LO=0, HI=100 | % | | | | | | | | | |
| 6 | | | | | | P2 Speed Cmd | (AO) | LO=0, HI=100 | % | | | | | | | | | |
| 7 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 8 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 9 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 10 | | | | | | High Well Level | (DI) | | | | | | | | | | | |
| 11 | | | | | | HOA 1 Hand | (DI) | | | | | | | | | | | |
| 12 | | | | | | HOA 1 Off | (DI) | | | | | | | | | | | |
| 13 | | | | | | HOA 1 Auto | (DI) | | | | | | | | | | | |
| 14 | | | | | | HOA 2 Hand | (DI) | | | | | | | | | | | |
| 15 | | | | | | HOA 2 Off | (DI) | | | | | | | | | | | |
| 16 | | | | | | HOA 2 Auto | (DI) | | | | | | | | | | | |
| 17 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 18 | | | | | | Phase Monitor Bypass | (DI) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 21 | | | | | | VFD1 In Rem | (DI) | | | | | | | | | | | |
| 22 | | | | | | VFD1 Fail | (DI) | | | | | | | | | | | |
| 23 | | | | | | VFD2 In Rem | (DI) | | | | | | | | | | | |
| 24 | | | | | | VFD2 Fail | (DI) | | | | | | | | | | | |
| 25 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 26 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 27 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 28 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 29 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 30 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 31 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 32 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 33 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS16 GreenMeadows

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 1 or 2 Over Temp | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 17 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 18 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 19 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS83 FiveStones

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 4 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS39 OperationsCenter

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | | | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS76 JAARS

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS15 Helmsville

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=1500 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | Combustible Gas HiHi | (DI) | | | | | | | | | | | |
| 5 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 6 | | | | | | Gener. Low Fuel | (DI) | | | | | | | | | | | |
| 7 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 17 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 18 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 19 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 20 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 21 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 22 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS7 Weddington

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=200 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List

## SPS8 FallsAtWeddington

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=2000 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 6 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 16 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 17 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 18 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 20 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O List
## SPS43 PorterRidge

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 2 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 3 | | | | | | Generator Running | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 11 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 15 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 17 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 19 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O LIST
## SPS38 Old Hickory

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Wet Well Level | (AI) | LO=0, HI=15 | FT | | | | | | | | | |
| 2 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 3 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 4 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 5 | | | | | | Low Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 7 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 8 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 10 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 11 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 12 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 13 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 14 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 16 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 17 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 18 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

# PLC I/O LIST
# SPS41 HunleyCreek

| | | | | | | | | | | | | | ALARM LIMITS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ROW NUMBER | LOCATION NAME | RTU NAME | P&ID I/O TAG | SOFTWARE TAG | P&ID NUMBER | POINT DESCRIPTION | POINT TYPE | MIN. - MAX. RANGE | ENGINEERING UNITS | SETPOINT | DIGITAL ZERO (0) STATE | DIGITAL ONE (1) STATE | HIGH HIGH | HIGH | LOW | LOW LOW | ALARM PRIORITY | REMARKS |
| 1 | | | | | | Effluent Flow | (AI) | LO=0, HI=2000 | GPM | | | | | | | | | |
| 2 | | | | | | Wet Well Level | (AI) | LO=0, HI=23 | FT | ALARM=15, CALL | | | | | | | | |
| 3 | | | | | | Supply Power | (DI) | | | | | | | | | | | |
| 4 | | | | | | 24V DC Supply Fault | (DI) | | | | | | | | | | | |
| 5 | | | | | | High Float Input | (DI) | | | | | | | | | | | |
| 6 | | | | | | Lag Float Input | (DI) | | | | | | | | | | | |
| 7 | | | | | | Lead Float Input | (DI) | | | | | | | | | | | |
| 8 | | | | | | Off Float Input | (DI) | | | | | | | | | | | |
| 9 | | | | | | Pump 1 Running | (DI) | | | | | | | | | | | |
| 10 | | | | | | Pump 2 Running | (DI) | | | | | | | | | | | |
| 11 | | | | | | Pump 1 Failure | (DI) | | | | | | | | | | | |
| 12 | | | | | | Pump 2 Failure | (DI) | | | | | | | | | | | |
| 13 | | | | | | Pump 1 or 2 Seal Failure | (DI) | | | | | | | | | | | |
| 14 | | | | | | RTU Intrusion Alarm | (DI) | | | | | | | | | | | |
| 15 | | | | | | UPS Alarm | (DI) | | | | | | | | | | | |
| 16 | | | | | | RTU High Temperature | (DI) | | | | | | | | | | | |
| 17 | | | | | | RTU Low Temperature | (DI) | | | | | | | | | | | |
| 18 | | | | | | Phase Monitor Alarm | (DI) | | | | | | | | | | | |
| 19 | | | | | | Alarm Horn | (DO) | | | | | | | | | | | |
| 20 | | | | | | Alarm Light | (DO) | | | | | | | | | | | |
| 21 | | | | | | Pump 1 Run Command | (DO) | | | | | | | | | | | |
| 22 | | | | | | Pump 2 Run Command | (DO) | | | | | | | | | | | |

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# BOOSTER PUMP STATION (BPS)
# REFERENCE I/O LIST

| DFS RTU I/O | | Highway 75 (3) BPS4 | Olive Branch Pump Station (16) BPS10 | Watkins Road Pump Station (14) BPS11 | New Stallings Tank & Pump Station WT1 / BPS12 | 74 Pump Station (Hwy 74E) (2) BPS13 | 880 Zone Booster Station (17) BPS14 |
|---|---|---|---|---|---|---|---|
| (AI) RS485 | Phase 1 Amps | | | | | | (AI) RS485 |
| (AI) RS485 | Phase 2 Amps | | | | | | (AI) RS485 |
| (AI) RS485 | Phase 3 Amps | | | | | | (AI) RS485 |
| (AI) RS485 | Phase V1 | | | | | | (AI) RS485 |
| (AI) RS485 | Phase V2 | | | | | | (AI) RS485 |
| (AI) RS485 | Phase V3 | | | | | | (AI) RS485 |
| (AI) | Discharge Pressure | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) |
| (AI) | Flow Rate | | (AI) | (AI) | (AI) | | |
| (AI) | Discharge Flow | (AI) | | | | | |
| (AI) | Generator Fuel Tank Level | (AI) | | | | | (AI) |
| (AI) | Anson Cnty Flow | | | | | (AI) | |
| (AI) | Conductivity | | | | | (AI) | |
| (AI) | Free Chlorine | | | | | (AI) | |
| (AI) | pH | | | | | (AI) | |
| (AI) | Average Voltage | | | | | | (AI) |
| (AI) | Suction Pressure | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) |
| (AI) | Sample PSI | | | | | (AI) | |
| (AI) | Total Chlorine | | | | | (AI) | |
| (AI) | Turbidity | | | | | (AI) | |
| (DI) | Generator Trouble | (DI) | (DI) | (DI) | | (DI) | (DI) |
| (DI) | Generator Fuel Low | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Generator Run Status | (DI) | (DI) | (DI) | | (DI) | (DI) |
| (DI) | Gen Status Normal | | (DI) | | (DI) | (DI) | |
| (DI) | Gen High Tank Level | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Building Intrusion Alarm | | (DI) | (DI) | | (DI) | (DI) |
| (DI) | Man Down | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Running | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Running | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 3 Fault | | | (DI) | | | (DI) |
| (DI) | Pump 3 Running | | | (DI) | | | (DI) |
| (DI) | Pump 1 Chk Val OPEN | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump1 Ck Val Closed | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump1 Ck Val Fail | | (DI) | | | (DI) | |
| (DI) | Pump1 Hi Dis PSI | | (DI) | | | (DI) | |
| (DI) | Pump1 In Remote | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Chk Val OPEN | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump2 Ck Val Closed | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump2 Ck Val Fail | | (DI) | | | (DI) | |
| (DI) | Pump2 Failure | | (DI) | | | (DI) | |
| (DI) | Pump2 Hi Dis PSI | | (DI) | | | (DI) | |
| (DI) | Pump2 In Remote | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 3 Chk Val OPEN | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump2 In Remote | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 3 Chk Val OPEN | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump3 Ck Val Closed | | | (DI) | | (DI) | |
| (DI) | Pump3 Failure | | | | | (DI) | |
| (DI) | Pump3 Hi Dis PSI | | | | | (DI) | |
| (DI) | Pump3 In Remote | | | | | (DI) | |
| (DI) | Pump1 Low Suc Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump1 Motor Fail | | | (DI) | | | |
| (DI) | Pump2 Low Suc Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump2 Motor Fail | | | (DI) | | | |
| (DI) | Pump3 Low Suc Alarm | | | (DI) | | (DI) | |
| (DI) | Pump3 Motor Fail | | | (DI) | | | |
| (DI) | Suction Low Pressure | | | | | | (DI) |
| (DI) | Surge Val Closed | | (DI) | | | (DI) | |
| (DI) | Surge Val Open | | (DI) | | | (DI) | |
| (DI) | Utility Power | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DO) | Alarm Horn | (DO) | (DO) | (DO) | (DO) | (DO) | |
| (DO) | Alarm Light | (DO) | (DO) | (DO) | (DO) | (DO) | |
| (DO) | Starter 1 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Starter 2 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Starter 3 Run Command | | | (DO) | | | (DO) |

# WATER TOWER (WT)
# REFERENCE I/O LIST

| | DFS RTU I/O | Stallings Tank (12) WT2 | Northwest Tank (10) WT3 | Indian Trail Tank (8) WT4 | Marshville Tank (Hwy 74 East) WT5 | Austin Rd Tank (6) WT7 | Sims Rd Tank (11) WT6 | Weddington Tank (18) WT8 | Wingate Tank (19) WT10 | New Stallings Tank & Pump Station WT1 / BPS12 |
|---|---|---|---|---|---|---|---|---|---|---|
| (AI) | 2Million Level | | | | | | (AI) | | | SITE LISTED IN BPS SECTION |
| (AI) | 4Million Level | | | | | | (AI) | | | |
| (AI) | Tank Level | (AI) | (AI) | (AI) | (AI) | (AI) | | (AI) | (AI) | |
| (DI) | Building Intrusion Alarm | | | | | | | (DI) | (DI) | |
| (DI) | FAA Light Fault | | | | | | | | (DI) | |
| (DI) | Overflow | | | | | | | | (DI) | |
| (DI) | Generator Running | | | | | | (DI) | | | |
| (DI) | Utility Power | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Transfer Sw Gen | | | | | | (DI) | | | |
| (DI) | Valve Closed | | | | | | | (DI) | (DI) | |
| (DI) | Valve Open | | | | | | | (DI) | (DI) | |
| (DI) [NEW] | DC Power Supply Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) [NEW] | UPS Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DO) | Close Valve | | | | | | | (DO) | (DO) | |

# SEWAGE PUMP STATION (SPS)
# REFERENCE I/O LIST

| | DFS RTU I/O | Green Meadows SPS-16 | Five Stones Church SPS-83 | Operations Center SPS-39 | JAARS LS (105) SPS-76 | Helmsville LS (153) SPS-15 | Weddington Pres. LS (149) SPS-7 | Falls At Weddington (150) SPS-8 | Oldenburg (155) SPS-86 | New Unionville Sc (157) SPS-30 | Millbridge II LS (156) SPS-85 | Atherton Estates LS (151) SPS-11 | Crane Valley LS (115) SPS-45 | Marvin Ridge LS (135) SPS-67 | Poplin Road LS (108) SPS-20 | Millbridge LS (113) SPS-75 | Tarkhill LS (114) SPS-74 | Drayton Hall LS (102) SPS-65 | Loxdale LS (106) SPS-29 | Parkwood Sch. LS (107) SPS-1 | Rone Branch LS (112) SPS-32 | Sun Valley Place (124) SPS-64 | Fieldstone LS (138) SPS-66 | West Elementary LS (139) SPS-70 | Stonebridge LS (133) SPS-2 | Meadow Home 1 LS (136) SPS-26 | Meadow Home 2 LS (137) SPS-27 | Porter Ridge LS (132) SPS-43 | Sandalwood LS (127) SPS-46 | Suburban #2 LS (129) SPS-17 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (AI) | Effluent Flow | | | | | (AI) | (AI) | (AI) | (AI) | (AI) | | | | (AI) | (AI) | (AI) | (AI) | | | | | | | | | | | | | |
| (AI) | Wetwell Flow | | | | | | | | | | | | | | (AI) | | | | | | | | | | | | | | | |
| (AI) | Wet Well Level | | | (AI) | | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) | | | | | (AI) | (AI) | (AI) | | (AI) | (AI) | | | |
| (DI) | Rainfall Gauge | | | | | | | | | | | | | | (DI) | | | | (DI) | | | | | | | | | | | |
| (DI) | Supply Power | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Combustible Gas HiHi | | | | | (DI) | | | | | | | | | | | | | | | | | | | | | | | | |
| (DI) | Gener. Low Fuel | | | | | (DI) | | | | | | | (DI) | | | | | | | | | | | | | | | | | |
| (DI) | Generator Running | | | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | | (DI) | | |
| (DI) | High Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Lag Float Input | (DI) | (DI) | (DI) | (DI) | | | | | | | | | | | | | (DI) | (DI) | (DI) | (DI) | | | | (DI) | | | (DI) | (DI) | (DI) |
| (DI) | Lead Float Input | (DI) | (DI) | (DI) | (DI) | | | | | | | | | | | | | (DI) | (DI) | (DI) | (DI) | | | | (DI) | | | (DI) | (DI) | (DI) |
| (DI) | Low Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | (DI) | (DI) | | (DI) | |
| (DI) | Off Float Input | (DI) | (DI) | (DI) | (DI) | | | | | | | | | | | | | (DI) | (DI) | (DI) | (DI) | | | | (DI) | | | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Running | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Running | | | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Failure | (DI) | (DI) | (DI) | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | (DI) | (DI) | | | | | (DI) | (DI) | (DI) | | (DI) | (DI) | | | |
| (DI) | Pump 2 Failure | (DI) | (DI) | (DI) | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | (DI) | (DI) | | | | | (DI) | (DI) | (DI) | | (DI) | (DI) | | | |
| (DI) | Pump 1 or 2 Seal Failure | (DI) | | | (DI) | | | | | | | | | | (DI) | | | (DI) | (DI) | (DI) | (DI) | | | | (DI) | | | (DI) | (DI) | (DI) |
| (DI) | Pump 1 or 2 Over Temp | (DI) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DO) | Alarm Horn | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Alarm Light | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Pump 1 Run Command | | | | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Pump 2 Run Command | | | | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |

# SEWAGE PUMP STATION (SPS)
# REFERENCE I/O LIST

| | | Suburban #3 LS (130) SPS-18 | Funderburk LS (140) SPS-40 | Magnolia Ridge LS (142) SPS-31 | Stevens Mill 1 LS (117) SPS-5 | Stevens Mill 2 LS (118) SPS-12 | Olde Sycamore 1 LS (120) SPS-80 | Olde Sycamore 2 LS (121) SPS-81 | Olde Sycamore 3 LS (122) SPS-79 | Olde Sycamore 4 LS (123) SPS-4 | Jackson Ridge LS (131) SPS-36 | Woodfern LS (144) SPS-19 | Community Park LS (145) SPS-28 | Mineral Springs LS (146) SPS-73 | Highclere LS (148) SPS-4 | Old Hickory (143) SPS-38 | Hunley Creek LS (119) SPS-41 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| DFS RTU I/O | | | | | | | | | | | | | | | | | |
| (AI) | Effluent Flow | | | | | | | | | | | | (AI) | | | | (AI) |
| (AI) | Wetwell Flow | | | | | | | | | | | | | | | | |
| (AI) | Wet Well Level | | | | | | | | | | | (AI) | (AI) | (AI) | (AI) | (AI) | (AI) |
| (DI) | Rainfall Gauge | | | | | | | | | | | | | | | | |
| (DI) | Supply Power | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Combustible Gas HiHi | | | | | | | | | | | | | | | | |
| (DI) | Gener. Low Fuel | | | | | | | | | | | | | | (DI) | | |
| (DI) | Generator Running | | | | | | | | | | | | | | | | |
| (DI) | High Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Lag Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | | | | | (DI) |
| (DI) | Lead Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | | | | | (DI) |
| (DI) | Low Float Input | | (DI) | (DI) | | | | | | | | (DI) | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Off Float Input | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | | | | | (DI) |
| (DI) | Pump 1 Running | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Running | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Failure | | | | | | | | | | | | | | | (DI) | (DI) |
| (DI) | Pump 2 Failure | | | | | | | | | | | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 or 2 Seal Failure | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | | (DI) | (DI) | (DI) | | (DI) |
| (DI) | Pump 1 or 2 Over Temp | | | | | | | | | | | | | | | | |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DO) | Alarm Horn | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Alarm Light | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Pump 1 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Pump 2 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) | (DO) |

# SEWAGE PUMP STATION (SPS) [ADVANCED CONTOL]
# REFERENCE I/O LIST

| | DFS RTU I/O | Pump Station #1 (109) SPS-48 | Pump Station #2 (110) SPS-25 | Pump Station #3 (111) SPS-47 | Forest Park LS (103) SPS-13 | Tallwood Influent SPS-78 (RTU10) |
|---|---|---|---|---|---|---|
| (AI) RS485 | Phase 1 Amps | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) RS485 | Phase 2 Amps | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) RS485 | Phase 3 Amps | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) RS485 | Phase V1 | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) RS485 | Phase V2 | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) RS485 | Phase V3 | (AI) RS485 | (AI) RS485 | (AI) RS485 | | |
| (AI) | Combustible Gas | (AI) | (AI) | (AI) | | (AI) |
| (AI) | Gen Fuel Level | | | (AI) | | |
| (AI) | Flow | (AI) | (AI) | | (AI) | |
| (AI) | Primary Flow | | | (AI) | | |
| (AI) | Secondary Flow | | | (AI) | | |
| (AI) | Wetwell Level | (AI) | (AI) | (AI) | (AI) | (AI) |
| (AI) | Pump 1 SPD Feedback | | | | | (AI) |
| (AI) | Pump 2 SPD Feedback | | | | | (AI) |
| (AO) | P1 Speed Cmd | | | | (AO) | (AO) |
| (AO) | P2 Speed Cmd | | | | (AO) | (AO) |
| (DI) | Supply Power | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | ATS- Utility Power | (DI) | (DI) | (DI) | | |
| (DI) | Combustible Gas | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Drywell Flood | (DI) | (DI) | (DI) | | |
| (DI) | Exhaust Fan Flow | (DI) | (DI) | (DI) | | |
| (DI) | Gen Fuel High | | | (DI) | | |
| (DI) | Gen Fuel Leak | | | (DI) | | |
| (DI) | Gen Fuel Low | | | (DI) | | |
| (DI) | Gen Running | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Gen Trouble | | | (DI) | (DI) | |
| (DI) | High Float Input | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | High Well Level | (DI) | (DI) | (DI) | | (DI) |
| (DI) | Low Float Input | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | HOA 1 Hand | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | HOA 1 Auto | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | HOA 2 Hand | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | HOA 2 Auto | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | P1 Check Valve Alm | (DI) | (DI) | (DI) | | |
| (DI) | P1 Cooling Water Fail | (DI) | | | | |
| (DI) | P1 Motor Hi Tmp | (DI) | (DI) | (DI) | | |
| (DI) | P1 Mtr Overload | (DI) | (DI) | (DI) | | |
| (DI) | P1 Seal Cav Leak | (DI) | (DI) | (DI) | | |
| (DI) | P2 Check Valve Alm | (DI) | (DI) | (DI) | | |
| (DI) | P2 Motor Hi Tmp | (DI) | (DI) | (DI) | | |
| (DI) | P2 Mtr Overload | (DI) | (DI) | (DI) | | |
| (DI) | P2 Seal Cav Leak | (DI) | (DI) | (DI) | | |
| (DI) | Phase Monitor Bypass | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 1 Running | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump 1 Failure | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Pump 2 Running | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Pump 2 Failure | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) | Sta On Gen Power | (DI) | (DI) | (DI) | (DI) | |
| (DI) | Supply Fan Flow | (DI) | (DI) | (DI) | | |
| (DI) | VFD1 In Rem | | | | (DI) | (DI) |
| (DI) | VFD1 Fail | | | | | (DI) |
| (DI) | VFD2 In Rem | | | | (DI) | (DI) |
| (DI) | VFD2 Fail | | | | | (DI) |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | (DI) | (DI) | (DI) | (DI) |
| (DO) | Alarm Horn | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Alarm Light | (DO) | (DO) | (DO) | | (DO) |
| (DO) | Pump 1 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) |
| (DO) | Pump 2 Run Command | (DO) | (DO) | (DO) | (DO) | (DO) |

# GRASSY BRANCH AND OLD SYCAMORE WWTP
# REFERENCE I/O LIST

| DFS RTU I/O | | WWTP3 Grassy Branch RTU7 | WWTP6 Old Sycamore RTU6 |
|---|---|---|---|
| (AI) | EFFLUENT FLOW | (AI) | (AI) |
| (AI) | AER BASIN AMMONIA | (AI) | |
| (AI) | AER BASIN DISS OXY | (AI) | |
| (AI) | EFFLUENT PH | (AI) | |
| (AI) | TURBIDITY | (AI) | (AI) |
| (AO) | Influent Sampler | (AO) | (AO) |
| (AO) | Effluent Sampler | (AO) | (AO) |
| (DI) | AC POWER | (DI) | (DI) |
| (DI) | BLOWER 1 BELTLOSS | | (DI) |
| (DI) | BLOWER 2 BELTLOSS | | (DI) |
| (DI) | BLOWER 3 BELTLOSS | | (DI) |
| (DI) | CLAR 1 HIGH TORQUE | (DI) | (DI) |
| (DI) | CLAR 2 HIGH TORQUE | (DI) | |
| (DI) | FILTER BYPASS | (DI) | |
| (DI) | FILTER MUD WELL HIGH LEVEL | (DI) | (DI) |
| (DI) | GENERATOR RUNNING | (DI) | |
| (DI) | MAIN BLOWR 1 FAIL | (DI) | (DI) |
| (DI) | MAIN BLOWR 1 IN HAND | (DI) | (DI) |
| (DI) | MAIN BLOWR 1 STATUS | (DI) | (DI) |
| (DI) | MAIN BLOWR 2 FAIL | (DI) | (DI) |
| (DI) | MAIN BLOWR 2 IN HAND | (DI) | (DI) |
| (DI) | MAIN BLOWR 2 STATUS | (DI) | (DI) |
| (DI) | MAIN BLOWR 3 FAIL | | (DI) |
| (DI) | MAIN BLOWR 3 IN HAND | | (DI) |
| (DI) | MAIN BLOWR 3 STATUS | | (DI) |
| (DI) | PLNT LS HIGH LEVEL | (DI) | (DI) |
| (DI) | PLNT LS PMP 1 SEAL FAIL | | (DI) |
| (DI) | PLNT LS PMP 1 FAIL | (DI) | |
| (DI) | PLNT LS PMP 1 IN AUT | (DI) | |
| (DI) | PLNT LS PMP 1 IN HAN | (DI) | |
| (DI) | PLNT LS PMP 1 STATUS | (DI) | (DI) |
| (DI) | PLNT LS PMP 2 IN AUT | (DI) | |
| (DI) | PLNT LS PMP 2 STATUS | (DI) | (DI) |
| (DI) | PLNT LS PMP 2 SEAL FAIL | | (DI) |
| (DI) | PLNT LS PMP 2 FAIL | (DI) | |
| (DI) | PLNT LS PMP 2 IN HAN | (DI) | |
| (DI) | RAINGAUGE | (DI) | (DI) |
| (DI) | SB BLOWR 1 FAIL | (DI) | (DI) |
| (DI) | SB BLOWR 1 IN HAND | (DI) | (DI) |
| (DI) | SB BLOWR 1 STATUS | (DI) | (DI) |
| (DI) | SB BLOWR 2 FAIL | (DI) | (DI) |
| (DI) | SB BLOWR 2 IN HAND | (DI) | (DI) |
| (DI) | SB BLOWR 2 STATUS | (DI) | (DI) |
| (DI) | SB HIGH LEVEL | (DI) | (DI) |
| (DI) | SB PUMP 1 FAIL | | (DI) |
| (DI) | SB PUMP 1 IN AUTO | (DI) | (DI) |
| (DI) | SB PUMP 1 STATUS | (DI) | (DI) |
| (DI) | SB PUMP 2 FAIL | | (DI) |
| (DI) | SB PUMP 2 IN AUTO | (DI) | (DI) |
| (DI) | SB PUMP 2 STATUS | (DI) | (DI) |
| (DI) | TRANSFER SWITCH NORMAL | (DI) | (DI) |
| (DI) | UV ALARM | (DI) | (DI) |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | (DI) |
| (DO) | FILTERS BYPASSED | (DO) | |

# TALLWOOD WWTP
# REFERENCE I/O LIST

| DFS RTU I/O | | WWTP5 Tallwood Effluent RTU9 | Tallwood Influent SPS-78 |
|---|---|---|---|
| (AI) | UV INTENSITY | (AI) | SPS-78 (RTU10) GROUPED WITH SIMILAR LIFT STATIONS |
| (AI) | EFFLUENT FLOW | (AI) | |
| (AO) | Influent Sampler | (AO) | |
| (AO) | Effluent Sampler | (AO) | |
| (DI) | AERAT BLWR 1 FAIL | (DI) | |
| (DI) | AERAT BLWR 1 HAND | (DI) | |
| (DI) | AERAT BLWR 1 RUN | (DI) | |
| (DI) | AERAT BLWR 1 LOW PRESSURE | (DI) | |
| (DI) | AERAT BLWR 1 FILTER DIRTY | (DI) | |
| (DI) | AERAT BLWR 1 HIGH TEMP | (DI) | |
| (DI) | ATS - EMERGENCY | (DI) | |
| (DI) | ATS - FAILED TRANSFER | (DI) | |
| (DI) | ATS - UTILITY POWER FAIL | (DI) | |
| (DI) | BACKWASH PUMP IN AUTO | (DI) | |
| (DI) | BACKWASH PUMP FAIL | (DI) | |
| (DI) | BACKWASH PUMP RUN | (DI) | |
| (DI) | DIGESTER HIGH LEVEL | (DI) | |
| (DI) | BLOWER SYSTEM ALARM | (DI) | |
| (DI) | CLARIF 1 OVER TORQUE (HIHI) | (DI) | |
| (DI) | CLARIF 2 OVER TORQUE (HIHI) | (DI) | |
| (DI) | CLARIF 1 HIGH TORQUE | (DI) | |
| (DI) | CLARIF 2 HIGH TORQUE | (DI) | |
| (DI) | EQ BASIN PUMP 1 AUTO | (DI) | |
| (DI) | EQ BASIN PUMP 1 FAIL | (DI) | |
| (DI) | EQ BASIN PUMP 1 RUN | (DI) | |
| (DI) | EQ BASIN PUMP 2 AUTO | (DI) | |
| (DI) | EQ BASIN PUMP 2 FAIL | (DI) | |
| (DI) | EQ BASIN PUMP 2 RUN | (DI) | |
| (DI) | EQ BASIN HIGH LEVEL FLOAT | (DI) | |
| (DI) | EQ BASIN LAG PUMP ON | (DI) | |
| (DI) | EQ BASIN LEAD PUMP ON | (DI) | |
| (DI) | EQ BASIN ALL PUMPS OFF | (DI) | |
| (DI) | PLANT INFLUENT LINE FLOW SWITCH | (DI) | |
| (DI) | FILTER DRIVE AUTO | (DI) | |
| (DI) | FILTER DRIVE FAIL | (DI) | |
| (DI) | FILTER DRIVE RUN | (DI) | |
| (DI) | FILTER LEVEL HIHI | (DI) | |
| (DI) | GENERATOR FAILURE | (DI) | |
| (DI) | GENERATOR IN AUTO | (DI) | |
| (DI) | GENERATOR RUNNING | (DI) | |
| (DI) | RAINGAUGE | (DI) | |
| (DI) | SECOND CLAR 1 RUN | (DI) | |
| (DI) | SECOND. CLAR 1 FAIL | (DI) | |
| (DI) | SECOND. CLAR 1 HAND | (DI) | |
| (DI) | SECOND. CLAR 2 RUN | (DI) | |
| (DI) | SECOND. CLAR 2 HAND | (DI) | |
| (DI) | SECOND. CLAR 2 FAIL | (DI) | |
| (DI) | SELECT - AERATION | (DI) | |
| (DI) | SELECT EQUAL/DIGEST | (DI) | |
| (DI) | STBY BLWR RUN | (DI) | |
| (DI) | STDBY BLWR FAIL | (DI) | |
| (DI) | STDBY BLWR HAND | (DI) | |
| (DI) | STDBY BLWR LOW PRESSURE | (DI) | |
| (DI) | STDBY BLWR HIGH TEMP | (DI) | |
| (DI) | STDBY BLWR FILTER DIRTY | (DI) | |
| (DI) | UV COMMON | (DI) | |
| (DI) | AERAT BLWR 2 FAIL | (DI) | |
| (DI) | AERAT BLWR 2 HAND | (DI) | |
| (DI) | AERAT BLWR 2 RUN | (DI) | |
| (DI) | AERAT BLWR 2 LOW PRESSURE | (DI) | |
| (DI) | AERAT BLWR 2 LOW PRESSURE | (DI) | |
| (DI) | AERAT BLWR 2 FILTER DIRTY | (DI) | |
| (DI) | EQ BASIN BLWR FAIL | (DI) | |
| (DI) | EQ BASIN BLWR HAND | (DI) | |
| (DI) | EQ BASIN BLWR RUN | (DI) | |
| (DI) | EQ BASIN BLWR LOW PRESSURE | (DI) | |
| (DI) | EQ BASIN BLWR HIGH TEMP | (DI) | |
| (DI) | EQ BASIN BLWR FILTER DIRTY | (DI) | |
| (DI) | DIGESTER BLWR FAIL | (DI) | |
| (DI) | DIGESTER BLWR HAND | (DI) | |
| (DI) | DIGESTER BLWR RUN | (DI) | |
| (DI) | DIGESTER BLWR  LOW PRESSURE | (DI) | |
| (DI) | DIGESTER BLWR HIGH TEMP | (DI) | |
| (DI) | DIGESTER BLWR FILTER DIRTY | (DI) | |
| (DI) | WAS VALVE NO.1 AUTO | (DI) | |
| (DI) | WAS VALVE NO.2 AUTO | (DI) | |
| (DI) [NEW] | 24V DC Supply Fault | (DI) | |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) | |
| (DI) [NEW] | UPS Alarm | (DI) | |
| (DI) [NEW] | RTU High Temperature | (DI) | |
| (DI) [NEW] | RTU Low Temperature | (DI) | |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) | |
| (DO) | PUMP 1 START COMMAND | (DO) | |
| (DO) | PUMP 2 START COMMAND | (DO) | |
| (DO) | BLOWER SYSTEM ALARM | (DO) | |
| (DO) | AERATION BLOWER NO.1 LOW PRESSURE CUTOFF | (DO) | |
| (DO) | AERATION BLOWER NO.2 LOW PRESSURE CUTOFF | (DO) | |
| (DO) | EQ BLOWER LOW PRESSURE CUTOFF | (DO) | |
| (DO) | DIGESTER BLOWER LOW PRESSURE CUTOFF | (DO) | |
| (DO) | STDBY BLOWER LOW PRESSURE CUTOFF | (DO) | |
| (DO) | PUMP NO.1 RAS/WAS AIR LIFT | (DO) | |
| (DO) | PUMP NO.2 RAS/WAS AIR LIFT | (DO) | |
| (DO) | PUMP NO.1 FINAL CLARIFER SCUM AIR LIFT | (DO) | |
| (DO) | PUMP NO.2 FINAL CLARIFER SCUM AIR LIFT | (DO) | |
| (DO) | WAS NO.1 SLUDGE TO DIGESTER | (DO) | |
| (DO) | WAS NO.2 SLUDGE TO DIGESTER | (DO) | |

# CROOKED CREEK WWTP
# REFERENCE I/O LIST

| DFS RTU I/O | | WWTP1 Crooked Creek RTU1 |
|---|---|---|
| (AI) | INFLUENT FLOW | (AI) |
| (AI) | EFFLUENT FLOW | (AI) |
| (AI) | RAS FLOW | (AI) |
| (AI) | WAS FLOW | (AI) |
| (DI) | AC POWER | (DI) |
| (DI) | BW PUMP 1 STATUS | (DI) |
| (DI) | BW PUMP 2 STATUS | (DI) |
| (DI) | BW PUMP 3 STATUS | (DI) |
| (DI) | BW PUMP 4 STATUS | (DI) |
| (DI) | CLARIFER 1 STATUS | (DI) |
| (DI) | CLARIFER 3 STATUS | (DI) |
| (DI) | CLARIFER 3 STATUS | (DI) |
| (DI) | CLARIFER 4 STATUS | (DI) |
| (DI) | CLARIFIER 2 STATUS | (DI) |
| (DI) | CLOSDIND | (DI) |
| (DI) | EFF PS HIGH WELL | (DI) |
| (DI) | EFF PS PUMP 1 FAIL | (DI) |
| (DI) | EFF PS PUMP 1 STATUS | (DI) |
| (DI) | EFF PS PUMP 2 FAIL | (DI) |
| (DI) | EFF PS PUMP 2 STATUS | (DI) |
| (DI) | EFF PS PUMP 3 FAIL | (DI) |
| (DI) | EFF PS PUMP 3 STATUS | (DI) |
| (DI) | FILTER 1 HIGH LEVEL | (DI) |
| (DI) | FILTER 1 STATUS | (DI) |
| (DI) | FILTER 12 ALARM | (DI) |
| (DI) | FILTER 12 MUDWELL HIGH LEVEL | (DI) |
| (DI) | FILTER 2 HIGH LEVEL | (DI) |
| (DI) | FILTER 2 STATUS | (DI) |
| (DI) | FILTER 3 HIGH LEVEL | (DI) |
| (DI) | FILTER 3 STATUS | (DI) |
| (DI) | FILTER 3456 ALARM | (DI) |
| (DI) | FILTER 3456 MUDWELL HIGH LEVEL | (DI) |
| (DI) | FILTER 4 HIGH LEVEL | (DI) |
| (DI) | FILTER 4 STATUS | (DI) |
| (DI) | FILTER 5 HIGH LEVEL | (DI) |
| (DI) | FILTER 5 STATUS | (DI) |
| (DI) | FILTER 6 HIGH LEVEL | (DI) |
| (DI) | FILTER 6 STATUS | (DI) |
| (DI) | FILTER AIR PSI LOW PRESSURE | (DI) |
| (DI) | FILTER AIR PSI LOW PRESSURE | (DI) |
| (DI) | OPENLND | (DI) |
| (DI) | RAIN GAUGE | (DI) |
| (DI) | SFBFAULT | (DI) |
| (DI) | UV ALARM | (DI) |
| (DI) [NEW] | 24V DC Supply Fault | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) |
| (DO) | SF OPENCMD | (DO) |
| (DO) | SF CLOSED CMD | (DO) |
| (DO) | FILTERISOLATE 36 | (DO) |
| (DO) | FILTER ISOLATE 12 | (DO) |

# CROOKED CREEK WWTP
# REFERENCE I/O LIST

| | DFS RTU I/O | WWTP1 Crooked Creek RTU3 |
|---|---|---|
| (DI) | OXIDATION DITCH NO. 1 FRONT ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCH NO. 1 MIDDLE ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCH NO. 1 BACK ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCH NO. 2 FRONT ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCH NO. 2 MIDDLE ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCH NO. 2 BACK ROTOR RUNNING | (DI) |
| (DI) | OXIDATION DITCHES GENERAL FAILURE | (DI) |
| (DI) | DIGESTER NO. 1 RUNNING | (DI) |
| (DI) | DIGESTER NO. 2 RUNNING | (DI) |
| (DI) | DIGESTER NO. 3 RUNNING | (DI) |
| (DI) | DIGESTER NO. 4 RUNNING | (DI) |
| (DI) | DIGESTER NO. 5 RUNNING | (DI) |
| (DI) | DIGESTER 1-2-3-4-5 HIGH LEVEL ALARM | (DI) |
| (DI) | GENERATOR READY | (DI) |
| (DI) | GENERATOR RUNNING | (DI) |
| (DI) | GENERATOR FAILURE | (DI) |
| (DI) | GENERATOR BATTERY TROUBLE | (DI) |
| (DI) | GENERATOR LOW COOLANT | (DI) |
| (DI) | GENERATOR FUEL TANK LEVEL LOW | (DI) |
| (DI) | GENERATOR FUEL TANK LEAK ALARM | (DI) |
| (DI) | UTILITY POWER AVAILABLE | (DI) |
| (DI) | ATS IN NORMAL POSITION | (DI) |
| (DI) | ATS IN EMERGENCY POSITION | (DI) |
| (DI) | ATS FAIL TO TRANSFER | (DI) |
| (DI) [NEW] | 24V DC Supply Fault | (DI) |
| (DI) [NEW] | RTU Intrusion Alarm | (DI) |
| (DI) [NEW] | UPS Alarm | (DI) |
| (DI) [NEW] | RTU High Temperature | (DI) |
| (DI) [NEW] | RTU Low Temperature | (DI) |
| (DI) [NEW] | RTU A/C Power Monitor Alarm | (DI) |

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