

Introduction - Revision Record

Version	Date	Section / Subsection & Description of Revisions	Revisions By
November, 2004	November 4, 2004	Acknowledgment – Updated Revision Record – Added Table of Contents – Added Section 1 Scope of PAIDS – Added Section 2 Document Revision Control – Added	Earth Tech
Version 2.0	April 1 st , 2007	Removed all references to “Group” and “Section”. Changed all “RMOP” references to “Region of Peel”. Section 1 – Updated Section 2 – Updated Section 3 – PAIDS Compliance – Added Section 4 – Requests for Exception - Added Appendix 2 – PAIDS Compliance Form - Added Appendix 3 – PAIDS Request for Exception Approval Form – Added	Earth Tech
Version 3.0	June, 2008	Section 2 – PAIDS Deliverables Summary – Added Appendix 4 – PAIDS Submittals - Added	Earth Tech



Acknowledgement

This document, Process Automation and Instrumentation Design Standards (PAIDS), is one within a series of the Region Design Standards and Guidelines belonging to the Region of Peel. The manual herein is complemented by the following related documents:

1. ETPS Design and Technical Specifications Manual
2. ETPS Project Delivery Guidelines
3. ETPS Design Criteria and Development Procedures Manual
4. ETPS Material Specifications and Standard Drawings Manual
5. Project Implementation Procedures Manual (PIPM)

The contribution of the following parties to the development of the standards is acknowledged: Earth Tech Canada Inc., Regional Municipality of Peel and Ontario Clean Water Agency.



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1 - Scope of PAIDS

The following table outlines the topics covered by PAIDS:

Section	Major Sub-Sections	Covering
A – Design Reference and Tagging	1 – Introduction 2 – Design Reference Standard 3 – Tagging for PLC-Based Facilities	<ul style="list-style-type: none"> ▶ definitions ▶ acronyms ▶ statutory regulations and requirements ▶ permits and approvals ▶ software licensing ▶ tagging structures for devices, PLCs, SCADA, management database
B - SCADA	1 – SCADA Workstations 2 – SCADA Manual	<ul style="list-style-type: none"> ▶ description of baseline SCADA application ▶ applications settings ▶ communication settings ▶ screen design ▶ graphics and linking ▶ SCADA manual development including standard format and table of contents
C - Controller	1 – Controller Hardware 2 – Controller Programming	<ul style="list-style-type: none"> ▶ specifications for Allen-Bradley Logix programmable controllers including ControlLogix, CompactLogix, FlexLogix ▶ general programming guidelines ▶ Logix5000 project setup ▶ data types ▶ baseline project routines, tasks and programs
D – Information Technology	1 – Operations Sites 2 - Networking and Data Communications 3 – Reporting	<ul style="list-style-type: none"> ▶ system integration approach ▶ network equipment ▶ servers ▶ ethernet and non-ethernet systems ▶ security ▶ design drawings
E - Instrumentation & Control Design	1 – P&IDs 2 – Instrumentation Standards 3 – Controller Panels and Installation 4 – Engineering Drawing System	<ul style="list-style-type: none"> ▶ P&ID layout and drawing standards ▶ field signals ▶ instrumentation design philosophy ▶ instrumentation specification and preferred manufacturers list ▶ instrumentation installation ▶ controller hardware including panels, wiring and cable requirements



Section	Major Sub-Sections	Covering
F - Processes	1 – Control Narratives 2 – Equipment 3 – Water Treatment Plant 4 – Potable Water Pumping Station 5 – Reservoir 6 – Booster Pumping Station 7 – Wastewater Treatment Plant 8 – Wastewater Pumping Station 9 – Other Peel Facilities	<ul style="list-style-type: none"> ▶ control narrative requirements including template ▶ standard equipment I/O ▶ requirements for typical processes found in various Peel facilities
G - Implementation	1 – Testing and Commissioning 2 – Training	<ul style="list-style-type: none"> ▶ instrumentation calibration ▶ control loop testing ▶ site verification ▶ software testing ▶ training requirements

The following table provides a general overview of specific items that have been updated in version 3.0 of PAIDs and relates them back to their respective sections as described in the table above.

REVISION DESCRIPTION	MAIN SECTION(S) AFFECTED	PROPOSED ACTION / COMMENTS	COMPLETION STATUS
<u>RTU Tagging</u> -In the North Peel system the AlarmWorx server utilizes the Bristol basenames. This requires that the basenames be unique. PAIDS relies on the extension and attribute fragments to provide more detailed information for the tag if required. The RTU tagging does not allow for this. If the basenames are not unique then the tag descriptions shown in AlarmWorx will be the same.	A	-The AlarmWorx server is not documented in PAIDS. Need Region direction as to whether there should be a complete section for this server and how to integrate alarms. -CC advised (e-mail 06/03) to include AlarmWorx manual as a reference appendix to Bristol RTU applications and place some text in RTU based systems that the SI is responsible for providing/configuring testing alarms in compliance with Alarmworx software. - Peel will manage the Alarmworx application version and work with the SI for implementation.	Done
<u>North Peel Descriptors</u> -Add WWTP and WTP in addition to PPS and SPS to account for growth of NPeel systems from conventional pumping stations to actual treatment of water and wastewater.	A	-Region to mark-up descriptors that are not correct	Done
<u>Definition of Non-Device Related Tags</u>	A	-Describe a solution using placeholders and provide examples.	Done



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-Need to clarify how to derive non-device tags such as calculations.			
<u>Tagging Flow-Chart</u> -Need to come up with a graphical representation of how a tag is derived from P&ID to programming PLC, SCADA, Management DB. -Provide examples for each device type, say pump, valve, analog input, etc.	A	-Create a flow chart for tag derivation	Done
<u>Consultant vs. Integrator Terminology</u> -Need to distinguish between the designers (consultants) and their integrators and use the term "Consultant" consistently	A	-Add in definition/explanation per response to e-mail	Done
<u>Trending</u> -Define trend points on 'Delta' (based on deadbands) -Need to emphasize approach of one screen and scripting to populate the trends and pens and tags	B	-Add a section for trending to 1.6.5.2. -Check baseline app to see what trend is included. -No trends in current baseline app. -Region to provide details as to trending requirements for inclusion in PAIDS.	Done
<u>SCADA Manual</u> -Include loops and P&IDs -Identify sections that need to be submitted during the design phase then included in final as-built SCADA manual	B	-Add columns for project phases and check marks for when deliverables are to be provided.	Done
<u>WW "reference tags"</u> -To be deleted or reviewed in PAIDS, unless justification formally submitted to Peel for approval. -Shouldn't be using reference tags to avoid increasing tag limits unless approved by Peel; add a statement to this effect	B	-Add section with comment per revision description.	Done
<u>WW 'LGH' files</u> -At remote station needs to be configured to store 400 days. -Currently set at 180, search and replace in PAIDS	B	-Update graphic and baseline app.	Done
<u>Link to O&M Information</u> -Consider a method on SCADA to include a link to an external app like Internet Explorer or PDF or DWG viewer with each equipment	B	-Would need to incorporate into baseline app and update all figures	N/A



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pop-up (to eventually link equipment specific O&M information.)			
<u>Computer-Manual SCADA Symbol Colour</u> - PAIDS written standards say yellow, Discrete Motor symbol in Baseline SCADA App is white. All other symbols are yellow in this mode.	B	-This was updated in Version 2.0 of PAIDS. No action required.	Done (Version 2.0)
<u>Display Acknowledgment Issue</u> -The “Retain ACK Comment as Alarm Comment” setting in conjunction with an alarm acknowledgment button script present in the baseline applications alarm screen automatically sets all alarm comments to “Display Acknowledgment” after the alarm has occurred and been acknowledged. Each subsequent time the alarm occurs the comment will remain as “Display Acknowledgment”. Though the tags follow a clear standard, and are present on the screen above their respective equipment, this has been a constant complaint from operations as they are unable to relate the alarm tag to a logical meaning.	B	-Look at baseline app and modify if required -Update figure in doc to show Retain ACK unchecked.	Done
<u>Lack of Appropriate Trend Scales</u> -The standard specifies that scaling should not be used in the InTouch application, however the Min/Max EU values are used within the PAIDS standard trend review screen. Without including values for min/max EU/RAW, appropriate scales are not provided to the trend review page. Note that including min/max EU/RAW identical to that of the controller does	B	-Clarify text in section to allow use of min/max EU/Raw values.	Done



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<p>not create scaling in InTouch. In addition, failure to specify min/max EU/RAW units prevents use of the “deadband” attribute.</p>			
<p><u>WW Font Readability</u> -Complaints by operators that the “font” is too small -The font is defined as Arial Bold 12pt for the baseline SCADA application in resolution 1024x768, however is shown as System 10 pt for the 1280x1024 baseline application.</p>	B	<p>-Look at baseline app. -Make a distinction between edits to an existing app and creating a new app.</p>	Done
<p><u>Font Readability for Vision Impaired Staff Section</u> -PAIDS does not include accommodations for operations staff with vision impairments. At the Lakeview CAPEX facility an operations staff member has a vision impairment and requested that a virtual magnifying glass be included as his physical magnifying glass could not magnify LCD screens adequately. Options were evaluated (inclusive of Microsoft Windows’ build in accessibility tools) and an open-source solution was chosen. The application “Virtual Magnifying Glass” available on SourceForge was chosen. The application is standalone and executable via the tools menu, or hotkey. The tool presents a configurable magnifying glass that exists until the mouse is clicked. Note that the mouse click does not pass the click to InTouch, but instead only deactivates the magnifying glass application.</p>	B	<p>-Need Region direction as to whether this should be a change in PAIDS. -At minimum, can add a statement such that if a special need (such as vision impairment) must be considered, then accommodations can be made by contacting the Region. -Check licensing requirements and if no restrictions for use, add application to Wonderware baseline</p>	Included in text only. Done?



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<p><u>Lack of Sluice Gate Graphic</u> -CH received a number of complaints in regards to this issue.</p>	B	<p>-CH created a sluice-gate symbol, identical in all aspects to the standard valve with the exception of its shape. -Region needs to request symbol from CH to add to baseline, otherwise, ET can provide one from the Clarkson app.</p>	Done
<p><u>Terminal Services Tag Server Indirect Set/Reset Bug</u> -All indirect PAIDS InTouch pop-ups utilize indirect tags. For each command button, the discrete pushbutton function is used with the “set” attribute selected. The set attribute will energize the indirect tag, which will energize the called tag, which will energize a Boolean variable in the PLC. The corresponding module in the PLC will then process the command, and reset it. The reset command will then be read by InTouch. Using the Terminal Services TagServer architecture, the order and conditions in which a tag is reset prevent the command from being reset. The result is that for each execution of InTouch, the command may only be placed once.</p>	B	<p>-CH resolved this issue by using the “Direct” attribute, which will reset the command locally after it has been sent across all indirect InTouch Pop-ups. -Need Region direction as to whether this must be implemented as standard. If so, need to request pop-ups from CH to incorporate into PAIDS. -Region will investigate and advise.</p>	Done
<p><u>Terminal Services Tag Server VIEW TAGNAME Workaround</u> -Attempting to run InTouch TSE Sessions with Access Names mapped to VIEW/TAGNAME results in WindowViewer immediately crashing without explanation. The issue occurs as a result of a start-up check to prevent NetDDE communication loops. As the only method to create a TSE client session is to access servers IO via View/Tagname access names, a workaround was developed. The workaround involves using a start-up script which remaps a blank access name</p>	B	<p>-Need Region direction as to whether this must be implemented as standard. If so, the Region needs to request code/documentation from CH to incorporate into PAIDS. -Region will investigate and advise.</p>	Received info from CH; to be incorporated



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after the application has loaded, evading the start-up check.			
<u>Non-Standard WDF References</u> -Multiple indirect pop-ups present in the Peel Baseline SCADA Application reference scripting libraries not included with InTouch 9.5 or the Peel Baseline SCADA Application. As a result, certain functionality within the pop-ups was unavailable.	B	-Add list of scripting libraries that are used in the baseline.	Done
<u>Reserved/Reservoir</u> -The Peel Baseline SCADA Application specifies a process area labelled as “Reserved”. We have recently heard this to be a typo, and the process area should be labelled as “Reservoir”.	B	-Check baseline app and update if required.	Done
<u>Alarm Areas Definition</u> -PAIDS says that each facility should have an alarm area defined as P<facility code> which is a sub to \$System and that alarm areas should be defined for each process area within the facility (sometimes only one of course) as P<process area> which is a sub to the P<facility code> alarm area. This results in process areas that are only unique within a facility, not system wide, and WW doesn’t allow duplicate alarm area names even if they have different parents.	B	-Consider adding facility code to process area alarm areas as P<facility code><process area>. -Consider separating alarming from SCADA using a separate software package with its own alarm server similar to North Peel. -Replace with item #70 alarm group definition.	Done
<u>DASABCIP vs RSLinx OPC</u> -Review the use of DASABCIP rather than RSLinx OPC as DASABCIP also allows for OPC	B	-Check with Region as to value. -Use DASABCIP (per JL e-mail 5/26) -ET to revise all applicable sections and provide excerpts to JL for review.	Done



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connectivity.			
<u>Instrumentation Calibration Certificates</u> -Add requirement to include in SCADA Manual	B		Done
<u>Alarm Architecture and Critical Alarming</u> -PAIDS needs to include requirements for definition of an alarming hierarchy such that if one device is in alarm the downstream device (cascading) alarms are suppressed. -The intention is to minimize the number of alarms being generated. -The Baseline Application does not currently have adequate accommodations for critical alarming. Alarming, and specifically critical alarming has been a serious issue of concern regarding the PAIDS standard.	B, C, D	-Perhaps consolidate alarming sections (which are currently spread out in docs) into one section including requirement for alarm hierarchy. -There is currently no section on Alarmworx. -Need Region direction on critical alarming. -Add text that the consultant must submit an alarming hierarchy to the Region during the design phase including identification of critical alarms.	
<u>Modbus Remote Rack Card Correction</u> -PAIDS specifies I/O and communications cards to be located on remote racks. In this section, the MVI-56-MCM modbus card is specified. This card is not capable of functioning on a remote rack, instead the MVI-56-MCMR card must be used.	C	-Update per revision description.	Done
<u>Produced/Consumed Avoidance</u> -In an effort to avoid network broadcast storms and prevent an unnecessary excess of multicast traffic, evaluate use of the Produced/Consumed communications protocol.	C	-Despite PAIDS, protocol doesn't seem to be have been used. Need Region direction on update to PAIDS. -Region advised to remove produced/consumed references and replace with standard messaging using message instruction.	Done



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<p><u>ControlNet Routine Count Optimizations</u> -PAIDS specifies an individual routine be created for each controller in which unicast communications occur. AB indicates the number of routines in a program is directly related to the ControlNet communications speed.</p>	C	-Revise wording and routine naming for having only one comms routine as opposed to one for each PLC.	Done
<p><u>UDT Layout Optimizations</u> -As per recommendation by AB, all UDT's should have their attributes ordered such that similar data types are grouped. Ordering data types in this manner optimizes both network and memory resources after compilation. Note that this does not modify the functionality or PAIDS and requires no modifications to be made to the accompanying logic.</p>	C	-Update order of attributes in UDTs by data type. -Region advised to disregard and leave UDTs as is.	Delete
<p><u>Device Alarming Functionality</u> -The current device modules cause a device to be defaulted into remote-manual control on certain alarms. This is not desirable under certain conditions where auto restart is a requirement. (i.e, devices must be put back into auto mode by an operator before allowed to restart on alarm condition clearing.) A suggestion was made to include in the device routine the ability to toggle on and off the automatic drop to manual feature.</p>	C	-Verify and update the affected modules if applicable -This needs to be incorporated into all modules. The default setting should be "No automatic drop to manual".	Done
<p><u>Device_DM Local Remote Toggle on Command</u> -The logic in the Device_DM module specifies that during the start of an associated device, switching the device into local mode will have no effect on its start/stop operation. The module has</p>	C	-Region needs to request CH to provide code and documentation for incorporation into PAIDS -Instead of incorporating CH code as is, add YN bit to the front of the rung.	Done



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been modified such that the energize command only continues if the device is in the remote position. The logic now prevents execution of a start/stop command when the device is in local mode from completing.			
<u>Device_DM Safety Alarm Feedback</u> -The Device_DM module does not address e-stop and vibration alarms, as these alarms were of importance both for the safety of the staff, and the safety of the equipment, a module was created to accommodate these alarms.	C	-Region needs to request CH to provide code and documentation for incorporation into PAIDS -Add E-stop as one of the standard alarms to the modified Device_DM routine (add note to wiring section to make sure that where available, all e-stop wiring is brought back to the PLC.)	Done
<u>Device_DV Failure to Reset Alarm Timers</u> -The logic present in the Device_DV module allows a circumstance in which the alarm timers may hold an accumulated value after an alarm is reset. To prevent false positives from a pre-loaded accumulator logic was added to reset all timers on alarm acknowledgement.	C	-Region needs to request CH to provide code and documentation for incorporation into PAIDS -Although not specifically required, add this in as is.	Done
Table listed as North Peel sites is incorrect as the Bristol South Peel Remotes are listed here also.	C	-Can't locate this table?	Still can't find.
<u>UDTs</u> -Consider reducing the user defined tables (UDTs) to be only 480 bytes to allow for UDT optimization.	C	-This would be a major change. Check with Region as to value.	Delete
<u>Periodic vs Continuous Tasks</u> -Clarify whether the Region prefers to use periodic tasks or continuous tasks as we understand the Region is currently reviewing the preferred configuration	C	-Region to advise. -Use a continuous task with a system overhead slice of 50% (per JL e-mail 5/26)	Done



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<p><u>Standard tagging for duty pumps/devices</u> -Should be addressed in more detail within PAIDS. -There is no tagging for duty pointers and duty logic or otherwise for duty pumps. -Also tagging for start and stop setpoints could be included in the document. The Region has level setpoints (LC), Analyzer Setpoints (AC), Flow Setpoints (FC) etc. It would be helpful to have additional information and direction with respect to using the setpoint tagging with multiple pumps having different setpoints for start/stop control.</p>	C	<p>-This would be defined as part of the standard device modules. -Region to provide device modules and documentation for PAIDS.</p>	Incomplete
<p><u>PLC program for data history arrays/matrix</u> -Needs to be defined -Define data to be collected e.g. min/max and duration, 31 60 days.</p>	C	<p>-Check current baseline to see if this was added to Device_AI. - Yes this was added by JL. -Otherwise, need Region direction on whether a device module is required to collect the data, or whether the requirement should just be noted in PAIDS. -May be impacted by Eramosa's current work on data logging and retrieval.</p>	Done
<p><u>Device blocks</u> -Needed for PID Control, specifically: Flow Pacing/Closed Loop Control/Compound Loop Control -Needed for Duty Rotation -Needed for Sequence Control</p>	C	<p>-Region to obtain code (which has been tested and proven in operation) as well as any available documentation for inclusion in PAIDS. -Region still to provide.</p>	
<p><u>Motor Control</u> -Does PAIDS ask for # of Starts on a motor? Check entire section -Also check for VFDs ramp-up and ramp down</p>	C	<p>-Yes, # of starts is part of both the Device_DM and Device_AM modules, although there is no standard alarming on high number of starts. -Doesn't appear to be ramp up/down controls for VFDs, will need to double check PID block. No rate of change alarms configured. -Add operator inputs to popup for Ramp-Up and Ramp-Down times; security protected (supervisor and above). Limit</p>	



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		%output in code based on times.	
<u>Temp inhibit bit tags in PLC</u> -Standardize the use of temporary bits for testing and make statement regarding removal of these bits post-testing.	C	-Add bullet for use of temporary variables.	Done
<u>Communication Philosophy</u> -Check prioritization of comms. -Define timing of reads/writes based on priority	C	-Add to section per revision description.	Done
<u>Average Calculation Module</u> -Has been modified by CH2M (floating point to integer) and will be provided for inclusion in PAIDS	C	-Region needs to request CH to provide code and documentation for incorporation into PAIDS. -Need to discuss putting some text in as to how to use these modules. Apparently there have been some issues by there use and not a specific problem with the modules. -The average calc module is based on the standard Totalizer block in RSLogix. Region will provide some definition of how it is to be used.	Done
<u>Remote I/O Over Ethernet Prohibited</u> -Make statement that there is to be no remote I/O over Ethernet. ControlNet to be used.	C		Done
<u>Clock Synchronization between PLC and SCADA</u> -Need to add/expand section.	C	-Section was ok as is. No need to change.	Done
<u>Diesel Backup Scenario</u> -Define a Power up routine, define in Control Narrative and PLC. -Tie in PLC Start Up routine on Power loss (as opposed to	C, F	-Add text to sections. -JL to send requirements for inclusion in PAIDS.	Done



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general start-up routine, this should be specific to power loss)			
<u>UPS</u> -Is required for all loops including Vendor Packages -Create a UPS standard that is applicable to all systems, including Vendor Packages and make sure that it is specified in PAIDS that this must be provided	E	-Review current UPS spec and update as required. -Add section on UPS to 3.	Done
<u>OITs</u> -Make statement regarding serial or ControlNet only, not E-net	E	-Add section for OITs. (3.8 Local Operator Interface)	Done
<u>I&C Design Discrete Inputs</u> -Note that there MUST not be any wiring in series.	E	-Add to section per revision description.	Done
<u>Definition of Wiring for Failsafe Alarms</u> -Address contradictory statements, Section E, pg 28 “Unless specifically shown otherwise, wire all digital alarm contacts “normally open”, “close to trip” whereas elsewhere in the doc., PAIDS states to design alarms failsafe meaning normally closed with open to alarm.	E	-Check references and include requirement to wire all alarm contacts "failsafe". - 2.2.2 indicates fail-safe as well.	Done
<u>I/O List</u> -Provide a sample I/O list	F	-Include sample as appendix	Done
<u>Vendor package systems interface document and communication block table</u> -To be defined and included in PAIDS -Define sections of the document to be provided pre-tender, specifically for coordination of integrators as opposed to contractors.	G	-Add a new section "Vendor Package Integration Requirements" with appendix including document template.	Done



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<p><u>Panel FAT Plan</u> -Create section for Panel FATs and incorporate Panel FAT checklist</p>	G	-Add section for Panel FATs with associated checklist as appendix.	Done
<p><u>Software Submission Schedule</u> -Provide a continuous submission schedule for Software applications during development, FAT, SAT etc. Review each section related to software development (meaning not only Wonderware but PLC, InSQL etc...) and if missing, create a schedule of baseline submissions based on milestone completion points. Thus Peel should have a version history of each milestone through the development of a project. Keep in mind this must apply both to GreenField projects and more likely upgrades to existing. The latter is far more critical as they are in the editing process of an existing operating facility. -Rework the PAIDS submittals document into deliverables by phase and include in PAIDS</p>	G	-Add section with overall submission schedule by project phase for software. -Add section for general PAIDS submittals doc organized by phase. -Include Peel deliverables as well (CC e-mail April 17th)	Done, CC to provide extra info (e-mail from CC April 23, 2008)
<p><u>References to Contact with Peel</u> -Refer all references to contact with the Region throughout PAIDS to the SCADA Administrator (not Peel IT, or others)</p>	General	-Search and replace in all docs -Replace Peel IT with Peel SCADA Group (PSG)	In progress
<p><u>EEMAC vs. NEMA</u> -Replace the use of EEMAC to NEMA in all documents</p>	General	-Search and replace in all docs.	In progress



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<p><u>Examples Throughout PAIDS</u> -In the PAIDS standards the majority of examples identified are for the Clarkson WWTP. It would be of benefit to also include examples from other types of facilities, in particular remote stations (well, pump stations, reservoirs, elevated tanks, etc.)</p>	<p>General</p>	<p>-Will include where applicable.</p>	<p>In progress</p>
<p><u>Existing Bristol Sites</u> -The PAIDS standards do not fully address how to deal with the existing Bristol sites. This includes how to implement partial upgrades or minor modifications while still maintaining the existing RPU and SCADA screens. PAIDS also does not make any mention of the AlarmWorx server at the 10 Peel location and how to integrate changes into this server when changes are made in the field.</p>	<p>General</p>	<p>-This was not the original intention of PAIDS, Region to advise.</p>	<p>N/A</p>
<p><u>Individual Tag Polling</u> -The ControlLogix tagging that the HMI is polling are controller scope individual tags. The Allen-Bradley documentation indicates that this is the least efficient way to poll tags and a user should either implement UDTs or Arrays for polling data from a Logix based controller. Also now with the user defined add-on instructions it might be to the Region's benefit to update the existing base program to leverage this instead of using indirect addressed subroutines for device control as indirect routines are more difficult for troubleshooting. Consider updating the ControLogix standard to Version 16 to allow for the use of User Defined Function Blocks.</p>	<p>General</p>	<p>-Region to advise.</p>	<p>Delete</p>
<p><u>RTU vs PLC</u> -Ensure that RTU terminology only used when related to</p>	<p>General</p>	<p>-Search and replace as required in all sections.</p>	<p>Done</p>



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Bristol.			
<u>PAIDS.ca Receipt of Version</u> -Want to confirm that person has received PAIDS and what version they have received	Introduction	-Add reference to www.PAIDS.ca website and instructions for downloading. -Perhaps add a requirement to confirm via e-mail that have received copy and what version.	
<u>Items from JL Review List</u> -Alarm Groups -Redundant Alarm server providers -Redundant I/O servers -Maintenance Mode -Depicting alarms in the device pop-ups -PLC housekeeping	Various	-Provided quote for additional work (e-mail to CC June 3, 2008) -Quote submitted and approved (e-mail from CC June 3, 2008)	Done



2 - PAIDS Deliverables Summary

Appendix 4 – PAIDS Submittals summarizes the deliverables that are expected of the consultant, integrator, or contractor working on a project as described throughout PAIDS. Included in the summary is a reference to the associated section of PAIDS, along with a list of inputs that will be provided by the Region by project phase.



3 - Document Revision Control

The PAIDS Implementation Management (PIM) team has adopted a process that is based on the principle of continuous improvement. In order to request a revision and/or expansion to the PAIDS manual, the initiator must complete the PAIDS Revision Request Form in Appendix 1 and submit it to the PIM team. The PIM team will review revision request forms. Following approval, a revision to the relevant section(s) of the standards will be prepared and published.

An amendment or revision to the standards may be issued as a complete section, subsection or by individual page. For quick reference, a Revision Record is provided for the overall PAIDS manual. In addition, the first page of each section A to G of the PAIDS manual consists of a Revision Record for that section. Notes with respect to changes within the section are recorded on this page. In addition, each page of the standard contains a version number. This number will be updated to reflect new releases of the standards.

All holders of the manual are responsible for ensuring that their manual is maintained up to date. Old sections / pages should be removed and replaced by the revised sections / pages.



4 - PAIDS Compliance

Unless expressly stated by the Region of Peel, all provisions in the PAIDS standard are to be satisfied by any consultant, integrator, or contractor providing process and/or instrumentation design, construction, and/or implementation services to the Region of Peel.

At the start of any contract, a request must be made to the Region of Peel for the most current revision of the PAIDS standard to be applied throughout the contract. At the end of a contract, the party providing services to the Region of Peel is required to certify their compliance to all of the provisions in PAIDS by completing and submitting to the Region of Peel the PAIDS Compliance Form in Appendix 2. Sections of the form are to be completed as follows:

Part A: Compliance is to be completed by the party providing services. This section provides the declaration of compliance with PAIDS and must be signed by an authorized representative for the consultant, integrator, or contractor. Should any exceptions be taken from compliance to PAIDS, approved Request for Exception Approval Forms (refer to Section 4 and Appendix 3) must be attached.

Part B: Recommended Improvements is also to be completed by the party providing services. The consultant / integrator / contractor is encouraged to provide details with respect to improvements to be incorporated in the PAIDS standard. This may include clarifications, new sections, etc.

Part C: Receipt is to be completed by the Region of Peel contract manager. The contract manager is to acknowledge receipt of the form and to return a signed copy to the person named on the form. The contract manager will maintain the original form as part of the contract record.



5 - Requests for Exception

The Region of Peel recognizes that under certain circumstances it may be necessary to deviate from the prescribed conventions and guidelines outlined in PAIDS. In these cases, the consultant, integrator, or contractor is required to bring the deviation and associated impact of the deviation to the attention of the Region at the earliest possible phase in the contract.

The consultant, integrator, or contractor is required to obtain approval for the exception prior to deployment, and if requested by the Region, the initiator shall examine the feasibility of other possible approaches that do not require the proposed exception.

To obtain approval for an exception, the PAIDS Request for Exception Approval Form in Appendix 3 must be completed and submitted to the Region. This form is also to be used where it is expressly stated in PAIDS that the Region of Peel approval is required. Sections of the form are to be completed as follows:

Part A is to be completed by the initiator (consultant, integrator, or contractor). This section provides the contact information for the initiator, a description of the proposed exception, and an explanation of the exception's associated technical, budgetary and schedule impacts.

Parts B and C are to be completed by the Region of Peel project manager and SCADA administrator respectively. The project manager and SCADA administrator will review the request and return the form to the initiator indicating the approval status (Approved As Submitted, Approved With Modifications, or Not Approved). Signatures from both the project manager and SCADA administrator are required to approve all requests for exception. The initiator shall be responsible for incurring any costs associated with rework related to the deployment of non-approved exceptions.



Appendices

Appendix 1 – PAIDS Revision Request Form



Appendix 2 – PAIDS Compliance Form



Appendix 3 – PAIDS Request for Exception Approval Form



Appendix 4 – PAIDS Submittals

