

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

Item	Tender Section	Page	Chapter	Bidders Request for Clarification	Clarification Provided by Transnet				
Queries received on 17 Sept 2024									
1	Activity Schedule								
1.1	Activity Schedule (Ref: H373204-0000-300-076-0001 (0))	ALL	ALL	Are we allowed to add comments to the pricing schedule. For example, show the resources that have been included in an activity for the Employer to get a better understanding of the pricing methodology.	<p>Refer to Part 2: Pricing Data, Section C2.2: Activity Schedule: Which states <i>‘The Contractor may add additional activities, update, add or amend this Activity Schedule; based on revised activities, different project resources, total manhour estimates and different project execution strategies, taking into consideration previous experience and their view of the project.’</i></p> <p>You may add comments to the pricing schedule. Please note that this is an Option A - Activity based contract. Prices are the lump sums for each of the activities on the Activity Schedule – any comments provide are purely for information purposes.</p>				
1.2	Activity Schedule (Ref: H373204-0000-300-076-0001 (0))	Sht Ph1	Sht ‘Ph1 Activity Schedule’	Are Rows 16 and Rows 18 (Monthly Quality Management Report) duplicated?	Row 18 is a duplication of row 16. Please delete row 18.				
1.3	Activity Schedule (Ref: H373204-0000-300-076-0001 (0))	Sht Ph1	Sht ‘Summary’	Summary Page: Total Sum is doesn’t include B65.	Please update the Total Sum in cell B3 to include cells B65-B68 .				
1.4	Activity Schedule (Ref: H373204-0000-300-076-0001 (0))	Sht Ph2	Sht ‘Ph2 Activity Schedule’	2.09 - Software Design/MCC PCS/ CMS software design... -> No line has been provided for actual engineering effort? All items are "documentation" related.	<p>Pricing for the following activities listed in the Works Information should be included in the Activity Schedule – Ph2 spreadsheet as follows:</p> <table><tr><td>Works Information, Section 4.2.3.8.2: Software Development – Avtur Stations</td><td>Activity Schedule Ph2, Section 2.0 ‘Avtur Station Software Backups’ (89). For clarity, change description ‘Avtur Station source code and binaries’.</td></tr><tr><td>Works Information, Section 4.2.3.8.4: Software Development – Multiproduct Stations</td><td>Activity Schedule Ph2, Section 2.0 ‘Station Software Backups’ (row 1 For clarity, change description to</td></tr></table>	Works Information, Section 4.2.3.8.2: Software Development – Avtur Stations	Activity Schedule Ph2, Section 2.0 ‘Avtur Station Software Backups’ (89). For clarity, change description ‘Avtur Station source code and binaries’.	Works Information, Section 4.2.3.8.4: Software Development – Multiproduct Stations	Activity Schedule Ph2, Section 2.0 ‘Station Software Backups’ (row 1 For clarity, change description to
Works Information, Section 4.2.3.8.2: Software Development – Avtur Stations	Activity Schedule Ph2, Section 2.0 ‘Avtur Station Software Backups’ (89). For clarity, change description ‘Avtur Station source code and binaries’.								
Works Information, Section 4.2.3.8.4: Software Development – Multiproduct Stations	Activity Schedule Ph2, Section 2.0 ‘Station Software Backups’ (row 1 For clarity, change description to								

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

						'Multiproduct Station source code and binaries'.	
1.5	Activity Schedule (Ref: H373204-0000-300-076-0001 (0))	Sht Ph2	Sht 'Ph2 Activity Schedule'	Price Schedule (2.07) refers to costing for Design Documentation (update/redline) -> Please clarify?	Refer to Part C3.2 <i>Works</i> Information, Phase 2 Contractor Responsibilities Section 4.2.3.7.4 (vii): <i>'The Contractor redlines and returns all design documentation should any approved changes be required to the panel design'.</i>		
2	P&G's	-	-	No allowance in the price schedule allows for P&G's, do we include P&G pricing into the priced activities (example: Travel to and from sites, accommodation in Durban etc)?	Refer to Part 2: Pricing Data, Section C2.2: Activity Schedule: Which states <i>'The tendered total of the prices includes for all direct and indirect costs, overheads, profits, risks, liabilities and obligations relative to the Contract, including price adjustments for inflation.'</i> P&G prices should be included into the priced activities.		
3	Escalation	-	-	Contract data makes no mention of annual escalation for rates or for product price increases over the duration of the project?	Refer to Part 2: Pricing Data, Section C2.2: Activity Schedule: Which states <i>'The tendered total of the prices includes for all direct and indirect costs, overheads, profits, risks, liabilities and obligations relative to the Contract, including price adjustments for inflation.'</i> Escalation (price adjustments for inflation) should be included into the priced activities.		
4	Technical Adjudication	-	-				
4.1	T2.2-06 Evaluation Schedule – Presentation & Interview	-	-	Presentation: How much time will we be allocated to do the presentations to the Employer?	A period of three (3) hours per bidder will be allocated to the Interview & Presentation part of the assessment, and should include a presentation by the Contractors and well as time for Q&A.		
4.2	T2.2-06 Evaluation Schedule – Presentation & Interview	-	-	Does the presentation include a Question and Answer session for the Employer to engage the Contractor on their offer?	Yes. Questions will be included in the invitation to all bidders who have passed through the preceding RFP Adjudication gates, to allow the bidder to properly prepare. Bidders will also be given the opportunity to address any questions they may have to Transnet during the interview.		

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

5	Technical Queries				
5.1	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	45, 46, 48	Sections 4.1.3.8 (b), 4.1.3.8 (h), 4.2.1.2	E&I Installation Works	
5.1.1				Will the orders for installation works be placed as separate contracts or through the Contractor?	<p>Refer to Part C3.2 <i>Works Information</i>, Phase 1 Contractor Responsibilities, Section 4.1.3.8 (b): The MAC <i>‘develops detailed E&I Installation Scopes of Work and Bills of Quantity for all Inland Stations, MCC, and SCC, which will be used to appoint the Installation sub-contractor’</i>.</p> <p>Phase 1 Contractor Responsibilities, Section 4.1.3.8 (h): The Mac <i>‘Prepares tender documentation, goes to market, completes tender adjudication and appoints an E&I Contractor to perform the E&I Installation Works in EXE Phase 2. Involves the Employer in all aspects of the tender document preparation and tender adjudication and award activities’</i>.</p> <p>Phase 2 Contractor Responsibilities, Section 4.2.1.2, Sub-section d(i): <i>‘The MAC appoints the E&I Installation Contractor’</i>.</p> <p>The responsibility for completion of all E&I Installation Works at the various sites remains the responsibility of the MAC. To complete the work identified, it is anticipated that the MAC will appoint an E&I Installation Contractor on a sub-contract basis, to complete these Works on his behalf. To do this, it is anticipated that the MAC will prepare detailed Scopes of Work, Bills of Quantity and tender documentation, and will complete all procurement activities, including the approach to market, tender adjudication, contract award and placement of orders on the successful E&I Contractor.</p>

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

					As the MAC is responsible for appointing the E&I Installation Contractor, procurement processes followed should comply with internal MAC procurement processes.
5.1.2				Does the execution schedule include installation and commissioning?	Refer to Part C3.2 <i>Works Information</i> , Phase 1 Contractor Responsibilities, Section 4.1.3.2 (d): The MAC ' <i>develops a Project Programme for the entire Works in accordance with the requirements of this Works Information and the Contract</i> '. This should include all installation and commissioning activities detailed in the <i>Works Information</i> .
5.1.3				Installation RFP specifics? Is each site an independent RFP?	Refer to Item 5.1.1 above. To be determined by the MAC.
5.1.4				Will standard Transnet procurement rules apply to procurement of the services? ie advertisement in newspapers on etenders portal etc.	No. Refer to Item 5.1.1 above.
5.1.5				Do we invite tenderers to submit a RFI along with technical experience etc? This would be to eliminate bidders that don't have the required experience and reduce the number to 3 manageable bidders.	Refer to Item 5.1.1 above. To be determined by the MAC.
5.1.6				Two folder bids (ie Technical evaluation first, then commercial evaluation)?	Refer to Item 5.1.1 above. To be determined by the MAC.
5.1.7				Minimum number of reviewers to make independent qualifications for bid?	Refer to Item 5.1.1 above. To be determined by the MAC.
5.1.8				Site Assessments incl/excl Potential bidders (makes quoting easier)?	Refer to Item 5.1.1 above. To be determined by the MAC.
5.1.9				Will document templates be provided for Installation RFP's or does the Contractor have to create these?	Refer to Item 5.1.1 above. To be determined by the MAC.
5.2	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	99,100	App B	SOW - Pg99-100 -> Table unclear, please issue native excel spreadsheet.	Appendix B: Inland Station Design Basis was made available on the Tender Portal as a separate document. Doc Ref: H373204-0000-270-610-0001 – Inland Station Design Basis. To be issued again as part of this response.

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

5.3	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	99,100	App B	SOW vs Supply BOQ -> quantity of IO cards do not align with IO counts in SOW (pg99/100)	The I/O counts detailed in the Inland Design Basis document (Ref: H373204-0000-270-610-0001 and Work Information Appendix B) are based on the existing PCS installation. The IO card quantities listed in the Activity Schedule, Supply BOQ sheet (Ref: H373-0000-300-076-0001 r0) are based on I/O counts related to the new PCS to be provided. Differences relate to changes in I/O spares count, and changes to pipeline manifolds at the various stations in the interim period.
5.4	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	-	-	MV DOL Panel and VSD replacement typical requested for us to be able to quote these.	A Typical MV DOL Panel backplane was made available on the Tender Portal (Ref: E354086-00017-271-272-0006 Rev 3). Pricing should be based on this drawing.
5.5	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	49	5.1	Panel Supply (5.1) -> Please confirm that Employer provides approved engineering drawings (IFC) for all panels? Contractor is only responsible for procurement, manufacture, testing etc. (SOW pg 52).	Refer to Part C3.2 <i>Works Information</i> , Employer Responsibilities, Section 4.2.2 (b): The Employer ' <i>generates detail design drawings for PLC, Metering, Electrical LV (PCS Interface), Electrical MV (PCS Interface) and Server Panels for all Inland stations, MCC and SCC; for use by the Contractor when executing panel build/modification activities</i> '.
5.6	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	73	6.5	Our preferred HW Package is E-Plan, would that be accepted?	Refer to TPL Drawing Office Standard for General Drawings (Ref: TPL-TECH-DO-STD-004 rev 08), Section 5.14.3.1. The TPL standard for drawings is AutoCAD 2016 or later.
5.7	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	-	-	Will the architecture drawing "frames" be issued to the Contractor (including legend etc, SCADAArchDWG.pdf). What tool are these frames developed in (assume CAD)?	TPL A0, A1, A3 and A4 drawing templates will be issued on commencement of the contract. The templates/borders are in AutoCAD format.
5.8	MAC Works Information	51	4.2.3.3 (d)	Audit/Backup Tools -> Acronis -> There are many different options, does the Employer have more specific details on their requirements?	"Acronis Cyber Protect for Enterprise" or equivalent suitable for multi-site backup.

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

	(H373204-0000-270-248-0001 Rev 0B (6)).				
5.9	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	51	4.2.3.3 (d)	Acronis Backup has 3 year and 5 year subscription options, which should we offer?	5 year
5.10	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	51	4.2.3.3 (e)	Microsoft Extra ID is not an existing tool offered by Microsoft, please advise?	TPL has withdrawn the requirement to price the Microsoft Extra ID Audit Tool. Section 4.2.3.3 (e) in the Works Information and Section 2.11 (row 150) in the Ph2 Activity Schedule is accordingly modified to remove the MS Audit Tool requirement. A suitable Audit Tool will be investigated during Phase 1 Development Works.
Queries received on 23 Sept 2024					
6.1	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	-	-	We would like to request a copies of the following documents please: Crude Station PLC FDS Crude Station Configuration Sheets	Crude PLC FDS (ref: E354086-00000-271-078-003 Rev 02) was made available on the Tender Portal – will be issued again along with this response. CBK System Equipment Configuration Record (Ref: E354086-00017-271-060-0004 Rev 00) has been provided as a Typical, for information purposes.
Queries received on 24 Sept 2024					
7.1	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	114	Appendix D – Panel Works Design Basis	Unclear if barriers should be replaced as part of panel scope. In new panel design, but not in BoQ.	For the new Panels to be supplied: (PLC Panel at APT, Metering Panels at APT, RTR), barriers will need to be supplied as part of the Panel Supply. Pricing to be included in Activity Schedule 'Supply BOQ' Sheet, Item 5.1.1 PLC Panel Supply and Item 5.1.3 Metering Panel Supply. Where existing Panels are to be re-used (In Panel Replacement): Barriers will not need to be replaced unless they are found to be faulty. Faulty barrier replacement will be scoped and priced in Ph1 Development, as part of E&I Installation Works.

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

7.2	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	-	-	It is understood that the Avtur stations (Coalbrook, Meyerton, Alrode and Airport) and pipelines are to be incorporated into the existing Crude Oil OASYS DNA 2018SP2. Is it correct to assume that the Crude and Avtur system will be separated from and kept on different software versions than the AES 202x system for the MultiProducts system? Are all Coastal Avtur pipelines to be part of the MultiProducts system?	<p>Refer to the Concept AVEVA Enterprise SCADA\OASyS Architecture provided (Ref: H373204-0000-270-256-0001 Rev 0).</p> <p>All Avtur stations (MTN, ALR-AV, APT-AV, APT-CAV) are to be incorporated onto the existing AVEVA OASyS Crude PCS system. A separate AVEVA AES PCS System is to be provided for all Inland Multi-product stations. It is correct to assume that the Crude and Avtur system will be separated from and kept on different software versions than the AES 202x system for the MultiProducts system.</p> <p>Coastal Avtur is currently being routed on the NMPP pipeline via JMP to ALR, and then from ALR to APT on the 12" MP pipeline. JMP has Siemens PCS7 PCS installed, ALR (MP) will have AVEVA AES PCS installed, and APT will have AVEVA OASyS PCS installed. Interfaces between these systems will need to be provided at the NOC for PLMS functionality, as part of the scope of this Inland Network Automation project.</p>
7.3	H373204-0099-270-242-0001 Migration Strategy.pdf	-	-	We are assuming that upgrading from the existing OASyS SCADA 2018 to AVEVA Enterprise SCADA 20XX is not included in this tender. Please confirm.	Yes. The existing AVEVA OASyS 2018 PCS currently serving the Crude Oil Pipeline is not to be upgraded to AVEVA Enterprise SCADA 20xx. The PCS will remain on OASyS 2018 and will serve both Crude and Avtur stations.
7.4	PCS Performance Requirements Specification E354086-00000-271-078-0014 02.pdf	-	-	We assume that the performance requirements for this tender pertain to AVEVA Enterprise SCADA 20XX and do not apply to the existing OASyS SCADA 2018, as we are not upgrading OASyS SCADA 2018. Please confirm.	<p>The PCS Performance Requirements Specification was developed specifically for the AVEVA OASYS 2018 system installed on Crude.</p> <p>Compliance to this specification will be required, both on the OASYS 2018 system once Avtur stations have been added, as well as for the new AVEVA Enterprise SCADA 20xx.</p>
7.5	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	12	1.2.1	Is it correct to assume that the PLMS for the Avtur, Coastal Avtur and MultiProducts segments is on the AES202x system?	<p>No.</p> <p>PLMS for the AVTUR segments will be on the AVEVA OASYS 2018 system.</p> <p>PLMS for the Multiproducts (including Coastal Avtur) will be on the AES202x system.</p>

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

7.6	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	60	5.3.2	Is a sensitivity analysis required at tendering stage or at project stage?	<p>Compliance with the performance specifications contained in the Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0]) Sections 5.3, 6.3, 7.3 and 8.3 is required. It is the Tenderers choice as to whether he conducts a sensitivity analysis prior to tender submission to confirm compliance.</p> <p>A sensitivity analysis will be required to be performed in Ph1 Development phase as part of detail design.</p>
7.7	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	13	1.2.1	Please clarify why the AVTUR system is on OASyS 2018 and Coastal AVTUR on AES202x?	Avtur is a dedicated pipeline and Coastal Avtur is currently transported via multi-product pipelines from the coast to APT via JMP (NMPP), and ALR(16"). These pipelines and the facilities/manifolds within the respective stations are used for multi-products (including coastal avtur) and are controlled using PCS7 PCS at JMP, AES202x at ALR and OASYS 2018 at APT.
7.8	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	24	3.2	Table 3-1 mentions that Coalbrook Station is on OASyS 2018 (Avtur). Table 3-2 states that Coalbrook is on AES202x (Crude Oil & AVTUR & Multi-Products). Could you please explain in more detail?Is the Coalbrook Crude system to be upgraded to AES202x?	<p>The reference to Coalbrook in Table 3-2 Inland Stations on the AES202x software is incorrect, and should be deleted. Coalbrook is currently and will remain on OASYS 2018 software.</p> <p>Please note that in section 3.4 Table 3-4 Segment 3, 'PCS Systems' should indicate 'PCS7 (JMP) and OASyS (CBK)' and not AES202x (JMP). Note that because this is a multiproduct line, the PLMS will be installed on AES202x.</p>
7.9	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	13	1.2.1	The statement is made that the Multi-Products (MP) and Coastal AVTUR systems will be on AES202x; this conflicts with table 3-1, page 24, chapter Inland Stations which states that the Airport (APT) AVTUR and Coastal AVTUR systems will be on OASyS 2018. Please clarify?Table 3-2, page 24, chapter 3.2 Inland Stations also mentions that the Coalbrook station (Crude Oil & AVTUR & Multi-Products) will be on AES202x which seems to conflict with the requirement that AVTUR stations will be on OASyS 2018. Please clarify?APT	<p>Refer to clarification in Item above.</p> <p>The statement in Section 1.2.1 indicates the following:</p> <ul style="list-style-type: none"> that full PLMS functionality will be required to be provided on all stations that have AES202x installed i.e. all Inland Multiproduct stations (which includes those where coastal avtur is transported i.e. ALR). that only LDS functionality will need to be provided on stations that have OASYS 2018 installed i.e. Avtur stations (of which APT is one)

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

				Avtur and APT Coastal Avtur is on 2018. ALR Coastal Avtur is on 202x. LDS for the same segment cannot be incorporated on two different systems (2018 and 202x). Please clarify?.	Table 3-2 has an error in it – Coalbrook should be removed from the Table (see Item 7.8 above). Flow, pressure and temperature related to the coastal avtur manifold located at APT will need to be interfaced from OASYS2018 to AES 202x, at the NOC for the PLMS line segment ALR – APT-CAV, because this PLMS segment is installed on AES202x. Tenderers are to confirm how this will be done and are required to price for this work in their respective offers.
7.10	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	27	3.4	To confirm: the PLMS (LDS) software for all Inland stations (including the AVTUR and Coastal AVTUR pipelines) is running on the new AES 202x system. And the existing Crude System PLMS/LDS stays as is without any adaptations or extension. Please confirm.	No. PLMS for the AVTUR segments will be on the AVEVA OASYS 2018 system (Refer to Table 3-5 in the PLMS URS). PLMS for the Multiproducts (including Coastal Avtur) will be on the AES202x system (Refer to Table 3-4 in the PLMS URS).
7.11	E354086-00000-271-078-0014 02.pdf	ALL	ALL	Performance requirements seems extreme for a 2018 system. The document is dated from 2018. Requirements include 90.000 points (45000 analogs, 45000 digitals), all set for historical collection.600 alarms per hours, 1500 events per hour, 1000 groups of responsibility.	The PCS Performance Requirements Specification was developed specifically for the AVEVA OASYS 2018 system installed on Crude. Compliance to this specification will be required, both on the OASYS 2018 system once Avtur stations have been added, as well as for the new AVEVA Enterprise SCADA 20xx.
7.12	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	50	4.1	Table 4-1: Existing Systems states that the AV pipeline running from CBK through MTN, ALR to APT is currently on SimSuite\PIM on OASyS 2018. Our understanding is that the Avtur lines have not been included in PIM on OASyS and is currently running under Atmos. Please confirm.	Yes, your understanding is correct. The Avtur pipeline currently runs on AtmosPipe, and will be changed over to SimSuite PIM (OASYS 2018) as part of the Inland Network Automation project scope.
7.13	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	50	4.2	Specification states that the LDS for the Avtur line is to be integrated into OASyS 2018, this seems to conflict with table 3-4, chapter 3.4, page 27. Please clarify.	Please refer to the clarifications 7.2, 7.3, 7.5 above.

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

7.14	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	64	7.2	Specification states :‘Additional information to be displayed on ATMOS GUI, accessible from SCADA system’. Can you be more specific about this ATMOS GUI, for which pipeline (segments) is this requirement?	The additional information to be displayed on the ATMOS GUI is listed in bullets below the statement in Section 7.2 of the PLMS URS, and applies to all multiproduct segments running on AES202x.
7.15	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	64	7.2	What is meant by ‘Second Node’?	The term NODE refers to the start and end point of a segment. The second NODE refers to the end point of a segment.
7.16	Inland PLMS User Requirements Specification (Ref: H373204-PLMS-270-242-0001 [0])	41	3.13.1	Could you please provide a list of Inland Network locations (stations/pipeline segments) where the existing instrumentation (types) are installed?	This information will be provided in Phase 1 Development, to inform SPD development.
7.17	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)) Appendix D: Panel Works Design Basis (PLC, MET, SRV, LV, MV)	114	Appendix D – Panel Works Design Basis	Panel Contractor has requested Single Line Diagrams and/or Schematics to assist in the accuracy of estimating costing.	Where existing panels are to be re-used: This work will be completed during station changeover activities and <u>will be priced as part of E&I Installation activities in Phase 1 of the project.</u> Where new panels are to be supplied (APT PLC & MET, RTR – MET): General Arrangement drawings have been provided in the Tender documentation to assist in estimate costing. Single Line and schematics will be provided in Phase 1 Development.
7.18	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6))	55	4.2.3.9 (j)	Inland Station/MCC/SCC Installation, Changeover and Commissioning: Is there an existing means for interfacing to the Atmos system for the inland stations? Similar to the COP machine at NOC.	As indicated in Section 4.2.3.9, an OPC Bridge is available in the MCC for use – was used as an interface between Atmos and OASyS on the Crude Upgrade project. Note that this bridge is no longer running, but is available for use if required. Take note of the Works that need to be undertaken by the Contractor in this regard as detailed under Section 4.2.3.9 (j).

DESCRIPTION OF THE WORKS: FOR THE PROVISION OF DESIGN, ENGINEERING, SUPPLY, PROCUREMENT, FABRICATION, SOFTWARE DEVELOPMENT, TESTING, INSTALLATION, COMMISSIONING AND HANDOVER OF PROCESS CONTROL, INTEGRATED CUSTODY METERING AND PIPELINE MONITORING SYSTEMS TO ALL TRANSNET PIPELINES INLAND STATIONS, MASTER, AND SECONDARY CONTROL CENTRES – **MAIN AUTOMATION CONTRACT**

7.19	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	37	4.1.1 (vi)	PLMS functionalities: Leak Detection, Pig Tracking and Theft Detection (Pressure Loss Leak Detection). Note that Batch Tracking functionality is not required to be implemented. Please clarify.	Batch Tracking information is not required to be displayed on the any operator SCADA HMI, but is required to be developed on the PLMS System to support LDS, Pig Tracking, and Theft Detection functionality. Refer to the PLMS URS Sections 5, 6, 7, 8 for further details.
7.20	MAC Works Information (H373204-0000-270-248-0001 Rev 0B (6)).	45	4.1.3.7	Theft Detection (Compensated Volume Balance). This is in conflict with document page 24, chapter 2.2.4 which states Theft Detection (Pressure Loss Leak Detection). As well as page 34, 37 and 61 where also is stated that the Theft Detection is the Pressure Loss Leak Detection	The tenderer should recommend the best technology for theft detection, either Compensated Volume Balance, Pressure Loss Leak Detection or Other.
7.21	03. H354086-00000-270-078-0002 18. H373204-0000-270-248-0001	1 24	1.4 2.2.6 (c)	HMI Trainer Req - Excludes PLMS (). WI includes PLMS etc.Please confirm if PLMS is required in the Trainer System.	PLMS functionality is not required to be provided on the HMI Trainer, but simulation of PLMS alarms on the SCADA will be required for training purposes