# **PROJECT CLOSURE REPORT**

# Documentation and Implementation of W.R.T VZ.TPR.9404 - Verizon Technical Purchasing Requirements (TPR/CSR)

**AT** 

**PPC Technologies India Pvt. Ltd, Kochi** 



Release: 00

Date : 21-05-2024



Date: 21st May. 2024

#### **Acknowledgement:**

Dear All,

It is my pleasure to formally submit this Operational Excellence Model QMS Robustness project report which was executed by Omnex for PPC Kochi . Omnex with our 30 years of experience in the industry, had devised this approach in consultation with your continual improvement team, to help you in executing the projects in a systematic and structured manner. This 10 month project engagement comprised of training, consulting and implementation on various improvement techniques

In today's challenging Environment, it is extremely crucial that we all work towards upgrading the manufacturing base not only to face the challenges, but also to have Best-in Class practices implemented which will catapult PPC as a front runner in the fiercely competitive world market. I am sure the knowledge imparted to your team will sharpen their abilities towards handling situation in more effective manner.

We at Omnex are very happy to be a part of your improvement initiative. Most importantly, learning is effective only when practiced. I am sure that each of the team member involved in this assignment will take time to revisit these concepts; implement in every way they can and strive to make the most coveted Safety System Company in the industry.

All the best for your continual Improvement journey...

Sincerely,

Arun Kumar,

Director and Vice President - APAC Operations,

Omnex Inc.

OMNEX | "Driving Worldwide Business Excellence" since 1986

Americas | Asia | Europe



## 1 Report History

#### 1.1 Revision History

Revision date	Author	Version	Summary of Changes	Changes marked
03-03-23	Arun Thomas	00	Initial Release	Nil

#### 1.2 Approvals

This document requires the following approvals:

Name	Title	Date of Issue	Version
Arun Kumar	Director & VP Asia & Pacific Operations	03-03-23	00



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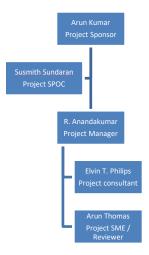
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#### 2 Project Synopsis

Training, consulting and implementation of QMS Robustness by alignment of Corporate Procedures, CSR, and management systems with local processes

#### 2.1 PPC Project organization structure (Omnex)



Key Accounts Manager: Susmith – Business Development

#### 3 Project Closure Report Summary

3.1 **Project Objectives:** Documentation and Implementation of W.R.T VZ.TPR.9404 - Verizon Technical Purchasing Requirements (TPR/CSR

#### 3.2 Project Closure Synopsis

#### **PPC Kochi:**

facility to qualify for sale to the world's largest fiber-to-the-home (FTTH) and wireless providers. The 70,000 square-foot Kochi manufacturing plant welcomes more than 350 employees in engineering, testing, operations and administrative roles, and produces key products offered in PPC's solutions suite, including fiber connectivity, delivery and management solutions.





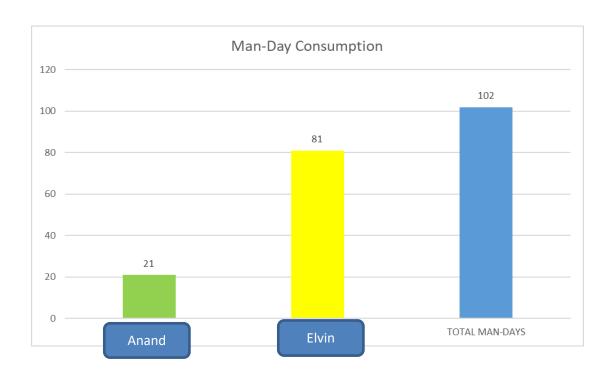


## 4 Project milestones Plan vs Actual

Phase	Milestones	Initial Planned date	Actual Completion date
Phase 0	Project Kick off	23-03-23	23.03.23
Phase 1	Discovery Analysis	30-04-23	30-04-23
Phase 2	Create Awareness	31-05-23	31-05-23
Phase 3	Improvisation &  Documentation	29-07-23	29-07-23
Phase 4	Pre assessment	10-09-23	10-09-23
Phase 5	Review & Close project	30-10-23	30-01-24

#### 4.1 Phase wise Detailed Report

#### 4.1.1 Project Man days – Consultant wise

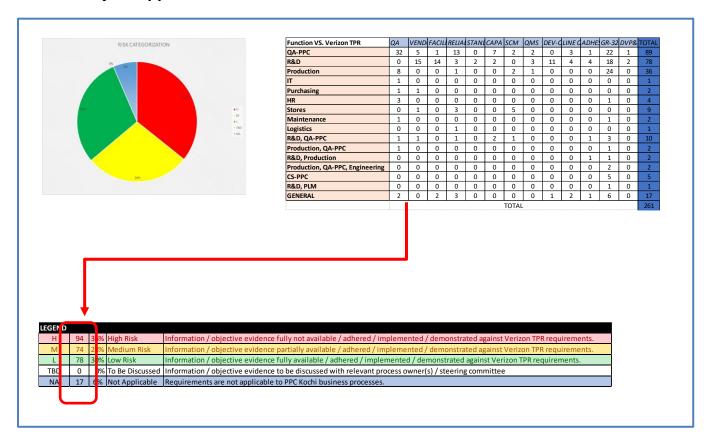




#### 4.1.2 Phase wise Activities

Month	Phase	Planned man days	Actual man days completed	Deliverables	Responsibility
23.03.23	0	1	1	Project Kick off	Anandakumar Elvin
30.04.23	1	3	3	Discovery Analysis	Anandakumar Elvin
31.05.23	2	15	15	Create Awareness	Anandakumar
2907.23	3	65	72	Document Improvisation	Anandakumar Elvin
10.09.23	4	12	10	Pre-Assessment	Anandakumar Elvin
30.01.24	5	6	6	Project closure	Anandakumar Elvin

#### **5** Project Approaches:





#### PLAN: Phase -1( Gap assessment):

During planing phase of the project initial gap assesment completed in Autoliv business process with respect to ISO/IATF/CSR requirements .Based on the assessment report find out key strengths & opportunity of improvements which helped Autoliv QMS project kicked off of on 27 Nov'2017 participated by Autoliv steering committee and process owners parallely prepared work breakdown sheet for the further phases including the timeline which got client approval.

	QA			STANDARD	S	DEVIC	E QUALIFY	- POD		DVP&R	
CATEGORY	#	%	CATEGORY	#	%	CATEGORY	#	%	CATEGORY	#	%
Н	14	27%	Н	1	50%	Н	1	8%	Н	1	33%
M	22	43%	M	1	50%	M	3	25%	M	0	0%
L	13	25%	L	0	0%	L	7	58%	L	2	67%
TBD	0	0%	TBD	0	0%	TBD	0	0%	TBD	0	0%
NA	2	4%	NA	0	0%	NA	1	8%	NA	0	0%
								,			
	DOR - FAC			CAPA	0.4		NE QUALIT				
CATEGORY	#	%	CATEGORY		%	CATEGORY	#	%			
Н	8	33%	H	6	55%	Н	0	0%			
M	8	33%	M	4	36%	M	4	33%			
L	8	33%	L	1	9%	TDD	3	25%			
TBD	0	0%	TBD	0	0%	TBD	0	0%			
NA	0	0%	NA	0	0%	NA	2	17%			
IN-HO	OUSE - FAC	CILITY		SCM		ADHESIV	ES MANA	GEMENT			
CATEGORY	#	%	CATEGORY	#	%	CATEGORY	#	%			
Н	3	18%	Н	3	30%	Н	1	13%			
M	2	12%	M	4	40%	Μ	3	38%			
L	10	59%	L	3	30%	L	3	38%			
TBD	0	0%	TBD	0	0%	TBD	0	0%			
NA	2	12%	NA	0	0%	NA	1	13%			
REL	IABILITY T			QMS			GR-326				
CATEGORY	#	%	CATEGORY	#	%	CATEGORY	#	%			
Н	13	52%	Н	1	17%	Н	42	350%			
M	5	20%	M	1	17%	M	17	142%			
L	4	16%	L	4	67%	L	20	167%			
TBD	0	0%	TBD	0	0%	TBD	0	0%			
NA	3	12%	NA	0	0%	NA	6	50%	-		

FUNCTION	TOTAL CLAUSES	CLOSED	% CLOSURE
QA-PPC	119	82	69%
R&D	76	69	91%
Production	29	23	79%
IT	1	1	100%
SCM	12	10	83%
HR	6	5	83%
Maintenance	1	1	100%
CS-PPC	4	3	75%
NA	15	15	100%
TOTAL	263	209	



#### Phase -2(Create Awareness):

## 3. Training Evidences

Awareness on QMS (ISO 9001, TL 9000)



PPAP, SPC, MSA Awareness **SPC Handholding Session** 

















L. Awareness training - ISO 9001:2015, TL 9000, Verizon VZ.TPR.9404 - Complete 2. Awareness training - PMP, NPD, FMEA, MSA, SPC - Completed 3. Awareness training - Root Cause Analysis (Problem Solving) - Completed 5. Awareness training - Vendor Management and Control - Completed 5. Awareness training - Requirement Flow down Linkage - Completed 5. Handholding Session - Statistical Process Control - Completed

#### Phase - 3 (Document Improvisation):

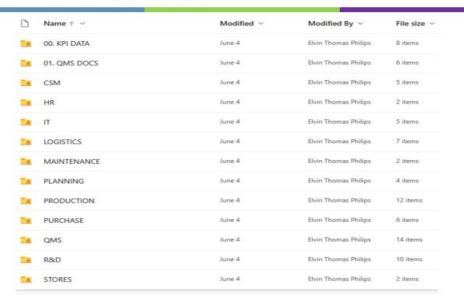
All business process KPI has been redifeined based on above modification released 'TO BE MAP' and score card sheet with prposed tangiable benefits (Processing time, Lead time)

# 4.Formats created

			<b>%</b>	
X⊞	<b>S</b>	<b>2</b>		C:\G_Drive\04.
Microsoft Excel Worksheet	Microsoft Excel 37-2003 Workshee	Microsoft Excel 17-2003 Workshee	C:\G_Drive\04. :X India\00. PROJE	EX India\00. PROJE
Gantt Chart	PPAP Package	SPC Sample	Design Records	ECN Documents
***	X	X.	X	X.
C:\G_Drive\04. :X India\00. PROJE	Microsoft Excel Worksheet	Microsoft Excel Worksheet	Microsoft Excel Worksheet	Microsoft Excel Worksheet
Customer Approval Sample	PFMEA Format	Dimensional Report	Initial Process Capability	Bias Study
<b>X</b>	XIII	<b>X</b>	×	
Microsoft Excel 37-2003 Worksheet	Microsoft Excel 37-2003 Worksheet	Microsoft Excel 17-2003 Workshee	Microsoft Excel Worksheet	
MSA - Gage Repeatability & Reproducibility	Stability Study	Linearity Study	Escalation Matrix	Feasibility Study



#### 4.1 Evidence Repository



## 4.1 Closed Points - Evidences

(R&D)



**Gantt Chart** Critical Parts List -(CPA, CTP & TPA) Qualification Records Tracker

Qualification Records

UNCTION	TASK	STATUS	DUE	REMARKS
	Collect sample from CPA	OPEN	05- May-23	
	Product dimensional report	OPEN	05- May-23	
	Dimensional Verification	CLOSED		To be reviewed by PM during review meeting
	Reliability Test Sample	OPEN	05- May-23	
	Lessons Learned from Production of Prototype	OPEN	05- May-23	
	Gantt Chart for Overall Project to Qualify PPC Kochi Facility	RE- ASSIGNED		To be reviewed by PM during review meeting. Re- Assigned to Production.
	I Gentt Chart to be made, I for for each product family (TPA, CPA, CTPA)	IN- PROGRESS	05- May-23	
	Gantt Chart - TPA	CLOSED		To be reviewed by PM during review meeting
	Gantt Chart - CPA	CLOSED		To be reviewed by PM during review meeting
R&D	Gantt Chart - CTPA	CLOSED		To be reviewed by PM during review meeting
	MAJOR TASK: Complete documentation completion for Qualification Reports for ALL 141 critical parts	IN- PROGRESS	05- May-23	Parts list being reviewed with inputs from PPC Top Management
	DFMEA's for Verizon Products	CLOSED		Data not available
	DVP&R - Design Verification Plan	CLOSED		Data not available
	Verizon Products - Technical Specifications	IN- PROGRESS	05- May-23	
		IN-	05-	

Documents Roll out - Level 1,2,3,4



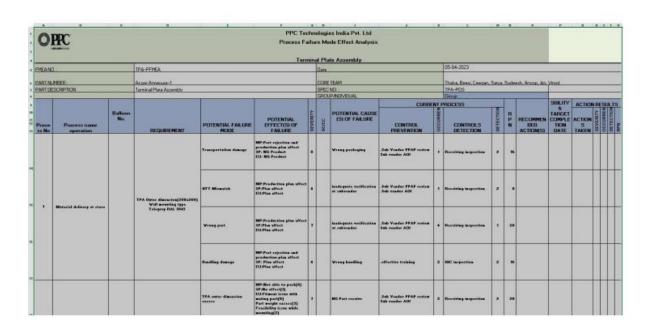
## 4.1b TPA - PFD

(R&D)

DDC		chnologies India Pvt. Ltd			Doc No	TPA-PFD VI	
	P	ROCESS FLOW CHART Terminal Plate Assembly			Date Page No	02-05-2023	
A BELDEN DRAND	PROCESSIFLO			TPAF	200/0010		
Customer:	Verizo	n e	Patnere		Terminal Plate Assembly	201000	
Specification	TPA-PI	5	PFMEA no.		TPA-PFMEA		
Prepared by:	Sayvid Muhamm		Approved by:		Beevi Mohammadali		
		Terminal Plate Assem	bly		(i		
	Princess name operation	Inclining source of Variation SC/	CC Product Characteristics	Baltoon: No.	Process Chi	racteristics .	
	Material delivery at store	Transportation damage QTY Warnatch Part manatch Handling damage			SAP GRN RFO Temperature control		
<	IQC Material Quantifine	NS Part Handling damage	TPA Duter dimension 2894/289 Walmounting type Tale Gray RAL 7045 15mm CRCA Child Part Dimensions as per part drawing in masterist IENG 4-060	ABGJ,T		÷	
	Material storage in store	Part Identification mismatch		Y	Proper handling and storage Temperature		
	Material issue from store M	CITY mismatch Part Mismatch	-				
	Speel winding M	Length calculation error     Datie damage     Uneven cable winding     Cable printerror	Product length, Red tape at end of cable slack	NH	•±		

## 4.2c TPA - PFMEA

(R&D)







## 4.2 Closed Points - Evidences

(QMS)



Microsoft Word Document PPC Organization Chart



Microsoft Word Document Key Responsibilities and Authorities -QSM



Microsoft Word Document Verizon Project Team Chart



Worksheet QMS - Customer Complaints Tracker



Microsoft Word C:\G\_Drive\04. 7 - 2003 Documer :X India\00. PROJE PPC Quality Policy Certifications





Document

CAPA Procedure

X: Microsoft Excel 77-2003 Workshee Supplier Score Card



:X India\00. PROJE QMS Documents



Microsoft Excel Worksheet



Worksheet

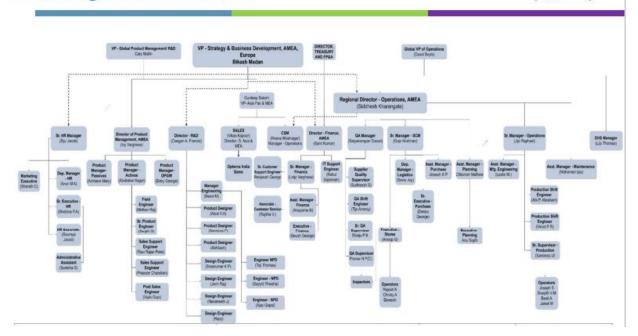
Supplier Audit Plan Process Interaction





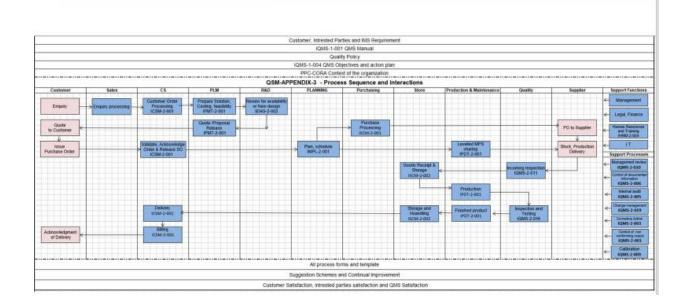
# 4.2a Organization Chart

(QMS)



# **4.2b Process Interaction Map**

(QMS)





# **4.2c Customer Complaints Tracker sheet**

(QMS)

DDC								Format No: Flev No:	IQMS-4-031 02
A BELDEN DRANG				Customer Complaints Regi	ster			Date:	02-01-2022
Complaint No.	Customer Details	Complaint Statement	Date received	ved Related product part numbers Corrective Action		Responsibility	Status	Closing date	CAR Status
00/00/23	Teems India	Patch panel were damaged	02-03-2023	2LISGY248FCME048E	Informed transporter through logistics team to handle the products with care, packaging has been improved internally to avoid transit damages.	Mr. Sheiju     Mr Sandeep Uleaz     Mr Toji Thomas.     Mr. Tijo Antony	Closed	08.03.2023	CAR need to be send to outlomer
0030323	ENTEL	1MAC ID in product label and written in the device to interest into. 2 DRTs are found without Power Switch 000 3.After CNT upgrade, the 246 and 56 LED's seen of glowing at the same time USBLED was glowing.	16-02-2023	CP25VWD-1A	1. MAIL. Orect in registed with NES as a systematic full proof central Implaimented b. Modified the routing with defined standardae process flow chart for defective intercept devices. Every NS device must be routed through MAIC check station, so it will reduce chances of minimatchips passar reason. All defective devices will not be received in reduce chances of minimatchips have first in will be purchased in TEC. MES (Punch in-Punch Dut) to correctly stack to device register areast.  2. a. Implemented MES on LOC dage and if any casmatic in sus is found during inapposition. LOC. Geodetic proprish the defect in MES and send of TEC for repair and after repair and its unu from some dage (LOC dage). b. Drillen repair in removed from the line and all defective device is punch in MES and prepair in TEC anty.	1 Nr Sudhessh 2 Nr Tip 3 Nr Sargh 4, Nr Prandy	Closed	Z3-02-2023	CARCIosed
0030323	Right Vision	Cable jacket printed 9857A2 but technically it is found 5657A2	02-03-2023	PSIA1A7SY00VIL	Need to implement action plan at supplier and detection method has to implement at PPC	1 Mr Sudheesh 2 Mr Tijo 3 Mr Tahe 4 Mr Pranav	open		
2022	2023 (4	P)				: 4			

# **4.2d Supplier Score Card**

		Su	pplier so	ore card -	Shye Cha	ng (Ning	bo) Prec	sion						
Supplier Name				Shye Char	ng (Ningbo) Pr	ecision				Vendor code		95592		
Metric	Target	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
Parts accepted	-	4655000	0	0	1115000	0	230000	0						6000000
Parts rejected	-	0	0	0	0	0	0	0						0
PPM	300	0			0		0							0
% \$ rejected	TBD	0.00	0.00	0.00	0.00	0.00	0.00	0.00						0.00
CoPQ value ( in INR )	TBD													0
Rework hours	TBD	0	0	0	0	0	0	0						0
PoU hit due to quality	TBD	0	0	0	0	0	0	0						0
PoU hit due to velocity	TBD	0	0	0	0	0	0	0						0
Quality PDI defects	TBD	(0+0+0)	(0+0+0)	(0+0+0)	(0+0+0)	(0+0+0)	(0+0+0)	(0+0+0)						(0+0+0)
(missed+found+new)	100	(0.0.0)	(0.0.0)	(0.0.0)	(0.0.0)	(0.0.0)	(0.0.0)	(0.0.0)						(0.0.0)
PPAP Effectiveness	95%	100%	100%	100%	100%	100%	100%	100%						100%
8D Effectiveness	90%	100%	100%	100%	100%	100%	100%	100%						100%
Field complaints	TBD	0	0	0	0	0	0	0						0
8D Closure rate	TBD	100%	100%	100%	100%	100%	100%	100%						100%
SSP	96%													
No. of past dues	TBD													0
No. of griefs	TBD													0
Velocity PDI defects (missed+found+new)	TBD	-	-	-	-	-	-	-						-



# **7.1 Outcome of Previous Steering Committee**

#	DISCUSSION POINT	RESPONSIBILITY	STATUS
1	PPC Team ok with our Project approach and strategy	PPC & Omnex	23 <sup>rd</sup> March
2	We communicated every month 3 <sup>rd</sup> week Thursday project to be reviewed by the same team	PPC & OMNEX	23 <sup>rd</sup> March
3	If any road blocks in the project time line will be extended from original plan	PPC & OMNEX	23 <sup>rd</sup> March
4	In April, PTR has been postponed to October 2023 Due to machine non-availability	PPC	May 2023
5	Project to be extended due to delay, to be discussed with Omnex management	PPC	June 2023
6	Additional audits required by PPC Kochi team, to be discussed with Omnex management	PPC	June 2023

#### Phase – 4 to 5 (Pre assessment & Closure ):

QA	VEND	FACILI	RELIA	STANI	CAPA	SCM	QMS	DEV-C	LINE C	ADHES	GR-32	DVP&	TOTAL
32	5	1	13	0	7	2	2	0	3	1	22	1	89
0	15	14	3	2	2	0	3	11	4	4	18	2	78
8	0	0	1	0	0	2	1	0	0	0	24	0	36
1	0	0	0	0	0	0	0	0	0	0	0	0	1
1	1	0	0	0	0	0	0	0	0	0	0	0	2
3	0	0	0	0	0	0	0	0	0	0	1	0	4
0	1	0	3	0	0	5	0	0	0	0	0	0	9
1	0	0	0	0	0	0	0	0	0	0	1	0	2
0	0	0	1	0	0	0	0	0	0	0	0	0	1
1	1	0	1	0	2	1	0	0	0	1	3	0	10
1	0	0	0	0	0	0	0	0	0	0	1	0	2
0	0	0	0	0	0	0	0	0	0	1	1	0	2
0	0	0	0	0	0	0	0	0	0	0	2	0	2
0	0	0	0	0	0	0	0	0	0	0	5	0	5
0	0	0	0	0	0	0	0	0	0	0	1	0	1
2	0	2	3	0	0	0	0	1	2	1	6	0	17
TOTAL									261				



## **6** Project Closure Tasks

#### 6.1 Knowledge Transfer

- 1.VISIO software.
- 2. Risk based thinking
- 3. Requirements flow down linkages and Matrix.
- 4.TL9000 requirements
- 5.Documents roll out
- 6.Verizon CSR

#### Issue Management

Concern	Deliverable Affected	Risk Level	Autoliv Action Item	Omnex Action Item	Status
Conversion of workshop to soft version and documenting TO-BE Process Mapping may consume more efforts and impact the timeline.	1.3. Addressing requirements of standards      1.4. Mapping Corporate Policies and Procedures      1.5. Process documentation review and upgrade (Improvised)	М	Visio Software usage to be internally discussed and approved.	Its usage procedure and benefits to be demonstrated during the Management Review.  Upon approval, a workshop may be planned for the process	CLOSED
AS IS Mapping is completed, but not yet signed off by concerned process owners.  AS IS Mapping completed but yet to be entered in Visio Format	Process Documents)  1.3. Addressing requirements of standards  1.4. Mapping Corporate Policies and Procedures  1.5. Process documentation review and upgrade (Improvised Process Documents)	н	Process owners to complete the sign-off so as to initiate the Phase 2 activities of RBT and TO-BE Process Mapping	Provide resources to mitigate the risk and initiate Visio Format update in parallel	Open
Additional OMNEX resources added to complete tasks which are to be completed by Autoliv Team	1.5. Process documentation review and upgrade (Improvised Process Documents)	н	IMT to review the status internally with Autoliv Team to complete tasks assigned to them.	Provide inputs on addition of OMNEX resources in the IMT review and plan completion of WBS	CLOSED

#### 6.2 Lessons Learned

Lesson	Lesson	Suggested action based on Lessons	Process Impact
No	Description		(High, Medium, Low)
1.	Project progress review	Periodical on site project progress review must be performed by Client's Top Management to avoid difference of opinion.	High



#### 7 Conclusion

- All phases of project completed with hands-on for the team.
- Relevant CSR's are mapped to the process through TO BE Mapping
- Process documents linked to one single process map and deposited in repository
- Removed NVA's of each process line and reduced cycle time of the processes

Prepared By R. Anandakumar (Site Manager)

Reviewed By Arun Thomas

Approved by Arun Kumar, Director & Vice President - Global Operations

Client Name: PPC Kochi





-----End of Report-----