



Toase-eh Park Sanati Gohar Ofogh Petrochemical Co.

**CONCEPTUAL, BASIC and DETAIL DESIGN
ENGINEERING OF STYRENE PARK OFFSITE**



Farnikan
Engineered Solutions

Document Title: PROGRESS REPORT NO.05

Rev.: R0

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STYRENE PARK OFFSITE

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PROGRESS REPORT NO.05

00	16-Dec-24	IFA	S.Baitar	H.Zahiri	H.Zahiri
00	9-Nov-24	IFA	S.Baitar	H.Zahiri	H.Zahiri
00	26-Oct-24	IFA	S.Baitar	H.Zahiri	H.Zahiri
00	1-Oct-24	IFA	S.Baitar	H.Zahiri	H.Zahiri
00	14-Sep-24	IFA	S.Baitar	H.Zahiri	H.Zahiri
Rev.	Issued Date	DESCRIPTION	PREPARED	CHECKED	APPROVED



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WBS Level	WBS ID	WBS Level Description	Weight Factor	Weight Value	Cumulative		
					Plan	Actual	Variance
1	1	Shell & Tube Heat exchanger		100.00	52%	43.0%	-9%
2	1.1	Engineering	100%	10.00	92%	73%	-19%
3	1.1.1	Vendor Print Index & Schedule (VPIS)	3%	0.30	100%	100%	
3	1.1.2	Sub-Vendor List (SVL)	5%	0.50	100%	100%	
3	1.1.3	Final vendor Data Book Index	3%	0.30			
3	1.1.4	Final vendor Data Book	5%	0.50			
3	1.1.5	HSE Plan	4%	0.40	100%	100%	
3	1.1.6	WBS for Shell & Tube Heat Exchangers	5%	0.50	100%	100%	
3	1.1.7	Time Schedule for Shell & Tube Heat Exchangers	7%	0.70	100%	90%	-10%
3	1.1.8	Monthly Progress Report for Shell & Tube Heat Exchangers	5%	0.50	100%	100%	
3	1.1.9	As Built Drawing	13%	1.30	100%		-100%
3	1.1.10	Inspection & Test Plan (ITP)	5%	0.50	100%	100%	
3	1.1.11	Welding Document (WPS & PQR)	8%	0.80	100%	100%	
3	1.1.12	Welding & NDT Map	7%	0.70	100%	100%	
3	1.1.13	NDT Operator Qualification	7%	0.70	100%	100%	
3	1.1.14	Welder Performance Qualification	5%	0.50	100%	100%	
3	1.1.15	NDT Procedure (RT, UT, PT, MT)	6%	0.60	100%	100%	
3	1.1.16	Hydrostatic Test Procedure	7%	0.70	100%	100%	
3	1.1.17	Surface Preparation & Painting Procedure	5%	0.50	100%		-100%
2	1.2	Procurement	100%	40.00	93%	89%	-3%
3	1.2.1	Plate	23%	9.20	97%	91%	-6%
4	1.2.1.1	PO placement	25%	2.30	100%	100%	
4	1.2.1.2	Fabrication	65%	5.98	100%	100%	
4	1.2.1.3	Shipping	7%	0.64	100%	15%	-85%
4	1.2.1.4	Custom clearance	3%	0.28			
3	1.2.2	Head	20%	8.00	97%	91%	-6%
4	1.2.2.1	PO placement	25%	2.00	100%	100%	
4	1.2.2.2	Fabrication	65%	5.20	100%	100%	
4	1.2.2.3	Shipping	7%	0.56	100%	15%	-85%
4	1.2.2.4	Custom clearance	3%	0.24			
3	1.2.3	U-Tube	19%	7.60	97%	91%	-6%
4	1.2.3.1	PO placement	25%	1.90	100%	100%	
4	1.2.3.2	Fabrication	65%	4.94	100%	100%	
4	1.2.3.3	Shipping	7%	0.53	100%	15%	-85%
4	1.2.3.4	Custom clearance	3%	0.23			
3	1.2.4	Tube sheet	7%	2.80	90%	91%	1%
4	1.2.4.1	PO placement	25%	0.70	100%	100%	
4	1.2.4.2	Fabrication	65%	1.82	100%	100%	
4	1.2.4.3	Shipping	7%	0.20		15%	15%
4	1.2.4.4	Custom clearance	3%	0.08			
3	1.2.5	Baffle	5%	2.00	90%	91%	1%
4	1.2.5.1	PO placement	25%	0.50	100%	100%	
4	1.2.5.2	Fabrication	65%	1.30	100%	100%	
4	1.2.5.3	Shipping	7%	0.14		15%	15%
4	1.2.5.4	Custom clearance	3%	0.06			
3	1.2.6	Elbow	2%	0.80	90%	91%	1%
4	1.2.6.1	PO placement	25%	0.20	100%	100%	
4	1.2.6.2	Fabrication	65%	0.52	100%	100%	
4	1.2.6.3	Shipping	7%	0.06		15%	15%
4	1.2.6.4	Custom clearance	3%	0.02			
3	1.2.7	Pipe	9%	3.60	90%	91%	1%
4	1.2.7.1	PO placement	25%	0.90	100%	100%	
4	1.2.7.2	Fabrication	65%	2.34	100%	100%	
4	1.2.7.3	Shipping	7%	0.25		15%	15%
4	1.2.7.4	Custom clearance	3%	0.11			
3	1.2.8	Flange	7%	2.80	90%	91%	1%
4	1.2.8.1	PO placement	25%	0.70	100%	100%	
4	1.2.8.2	Fabrication	65%	1.82	100%	100%	
4	1.2.8.3	Shipping	7%	0.20		15%	15%
4	1.2.8.4	Custom clearance	3%	0.08			
3	1.2.9	Spacer	3%	1.20	77%	91%	14%



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					Plan	Actual	Variance
4	1.2.9.1	PO placement	25%	0.30	100%	100%	
4	1.2.9.2	Fabrication	65%	0.78	80%	100%	20%
4	1.2.9.3	Shipping	7%	0.08		15%	15%
4	1.2.9.4	Custom clearance	3%	0.04			
3	1.2.10	Nut & bolt	2%	0.80	90%	91%	1%
4	1.2.10.1	PO placement	25%	0.20	100%	100%	
4	1.2.10.2	Fabrication	65%	0.52	100%	100%	
4	1.2.10.3	Shipping	7%	0.06		15%	15%
4	1.2.10.4	Custom clearance	3%	0.02			
3	1.2.11	Gasket	1%	0.40	90%	91%	1%
4	1.2.11.1	PO placement	25%	0.10	100%	100%	
4	1.2.11.2	Fabrication	65%	0.26	100%	100%	
4	1.2.11.3	Shipping	7%	0.03		15%	15%
4	1.2.11.4	Custom clearance	3%	0.01			
3	1.2.12	Paint	1%	0.40	23%		-23%
4	1.2.12.1	PO placement	25%	0.10	90%		-90%
4	1.2.12.2	Fabrication	65%	0.26			
4	1.2.12.3	Shipping	7%	0.03			
4	1.2.12.4	Custom clearance	3%	0.01			
3	1.2.13	Name plate	1%	0.40	23%		-23%
4	1.2.13.1	PO placement	25%	0.10	90%		-90%
4	1.2.13.2	Fabrication	65%	0.26			
4	1.2.13.3	Shipping	7%	0.03			
4	1.2.13.4	Custom clearance	3%	0.01			
2	1.3	Fabrication	100%	50.00	11%		-11%
3	1.3.1	RU-0001A-E-02	50%	25.00	15%		-15%
4	1.3.1.1	Prefabrication	40%	10.00	39%		-39%
5	1.3.1.1.1	Shell	35%	3.50	60%		-60%
6	1.3.1.1.1.1	Cutting	10%	0.35	100%		-100%
6	1.3.1.1.1.2	Beveling	10%	0.35	100%		-100%
6	1.3.1.1.1.3	Rolling	15%	0.53	100%		-100%
6	1.3.1.1.1.4	Assembly (LW)	25%	0.88	100%		-100%
6	1.3.1.1.1.5	Welding (LW)	35%	1.23			
6	1.3.1.1.1.6	Reroll	5%	0.18			
5	1.3.1.1.2	Channel	15%	1.50	60%		-60%
6	1.3.1.1.2.1	Cutting	10%	0.15	100%		-100%
6	1.3.1.1.2.2	Beveling	10%	0.15	100%		-100%
6	1.3.1.1.2.3	Rolling	15%	0.23	100%		-100%
6	1.3.1.1.2.4	Assembly (LW)	25%	0.38	100%		-100%
6	1.3.1.1.2.5	Welding (LW)	35%	0.53			
6	1.3.1.1.2.6	Reroll	5%	0.08			
5	1.3.1.1.3	Cone	20%	2.00	35%		-35%
6	1.3.1.1.3.1	Cutting	10%	0.20	100%		-100%
6	1.3.1.1.3.2	Beveling	10%	0.20	100%		-100%
6	1.3.1.1.3.3	Rolling	15%	0.30	100%		-100%
6	1.3.1.1.3.4	Assembly (LW)	25%	0.50			
6	1.3.1.1.3.5	Welding (LW)	35%	0.70			
6	1.3.1.1.3.6	Reroll	5%	0.10			
5	1.3.1.1.4	Saddle fabrication	10%	1.00			
6	1.3.1.1.4.1	Cutting	10%	0.10			
6	1.3.1.1.4.2	Beveling	10%	0.10			
6	1.3.1.1.4.3	Rolling	15%	0.15			
6	1.3.1.1.4.4	Assembly (LW)	25%	0.25			
6	1.3.1.1.4.5	Welding (LW)	35%	0.35			
6	1.3.1.1.4.6	Reroll	5%	0.05			
5	1.3.1.1.5	Nozzle fabrication (part 1)	8%	0.80	20%		-20%
6	1.3.1.1.5.1	Pipe cutting	15%	0.12	100%		-100%
6	1.3.1.1.5.2	Pipe beveling	15%	0.12	33%		-33%
6	1.3.1.1.5.3	Assembly pipe to flange	25%	0.20			
6	1.3.1.1.5.4	Welding pipe to flange	45%	0.36			
5	1.3.1.1.6	Nozzle fabrication (part 2)	12%	1.20			



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					Plan	Actual	Variance
6	1.3.1.1.6.1	Pipe cutting	5%	0.06			
6	1.3.1.1.6.2	Pipe beveling	5%	0.06			
6	1.3.1.1.6.3	Assembly pipe to flange	15%	0.18			
6	1.3.1.1.6.4	Welding pipe to flange	35%	0.42			
6	1.3.1.1.6.5	Assembly elbow to pipe	10%	0.12			
6	1.3.1.1.6.6	Welding elbow to pipe	30%	0.36			
4	1.3.1.2	Final assembly	50%	12.50			
5	1.3.1.2.1	Shell	40%	5.00			
6	1.3.1.2.1.1	Assembly shell segments (CW)	12%	0.60			
6	1.3.1.2.1.2	Welding shell segments (CW)	27%	1.35			
6	1.3.1.2.1.3	Opening for nozzle assembly	5%	0.25			
6	1.3.1.2.1.4	Nozzle assembly to shell	5%	0.25			
6	1.3.1.2.1.5	Nozzle welding to shell	10%	0.50			
6	1.3.1.2.1.6	Assembly head to shell	3%	0.15			
6	1.3.1.2.1.7	Welding head to shell	7%	0.35			
6	1.3.1.2.1.8	Assembly cone to shell	3%	0.15			
6	1.3.1.2.1.9	Welding cone to shell	7%	0.35			
6	1.3.1.2.1.10	Assembly segment shell to cone	3%	0.15			
6	1.3.1.2.1.11	Welding segment shell to cone	8%	0.40			
6	1.3.1.2.1.12	Assembly body flange to shell	3%	0.15			
6	1.3.1.2.1.13	Welding body flange to shell	7%	0.35			
5	1.3.1.2.2	Channel	15%	1.88			
6	1.3.1.2.2.1	Assembly head to channel	10%	0.19			
6	1.3.1.2.2.2	Welding head to channel	20%	0.38			
6	1.3.1.2.2.3	Assembly body flange to channel	10%	0.19			
6	1.3.1.2.2.4	Welding body flange to channel	20%	0.38			
6	1.3.1.2.2.5	Opening for nozzle assembly	10%	0.19			
6	1.3.1.2.2.6	Assembly nozzle to channel	10%	0.19			
6	1.3.1.2.2.7	Welding nozzle to channel	20%	0.38			
5	1.3.1.2.3	Bundle structure	45%	5.63			
6	1.3.1.2.3.1	Assembly bundle structure	15%	0.84			
6	1.3.1.2.3.2	Insert tube to bundle structure	10%	0.56			
6	1.3.1.2.3.3	Tube to tube sheet welding	30%	1.69			
6	1.3.1.2.3.4	Expanding	5%	0.28			
6	1.3.1.2.3.5	Insert bundle to shell	2%	0.11			
6	1.3.1.2.3.6	Assembly tube sheet to shell	5%	0.28			
6	1.3.1.2.3.7	Welding tube sheet to shell	10%	0.56			
6	1.3.1.2.3.8	Assembly saddle to shell	5%	0.28			
6	1.3.1.2.3.9	Welding saddle to shell	10%	0.56			
6	1.3.1.2.3.10	Assembly external part to shell& channel	2%	0.11			
6	1.3.1.2.3.11	Welding external part to shell& channel	4%	0.23			
6	1.3.1.2.3.12	Final NDT	2%	0.11			
4	1.3.1.3	Test	5%	1.25			
5	1.3.1.3.1	Hydrostatic Test	100%	1.25			
4	1.3.1.4	Sandblast & paint	5%	1.25			
5	1.3.1.4.1	Sandblast	50%	0.63			
5	1.3.1.4.2	Painting	50%	0.63			
3	1.3.2	RU-0001A-E-02	50%	25.00	7%		-7%
4	1.3.2.1	Prefabrication	40%	10.00	18%		-18%
5	1.3.2.1.1	Shell	35%	3.50	35%		-35%
6	1.3.2.1.1.1	Cutting	10%	0.35	100%		-100%
6	1.3.2.1.1.2	Beveling	10%	0.35	100%		-100%
6	1.3.2.1.1.3	Rolling	15%	0.53	100%		-100%
6	1.3.2.1.1.4	Assembly (LW)	25%	0.88			
6	1.3.2.1.1.5	Welding (LW)	35%	1.23			
6	1.3.2.1.1.6	Reroll	5%	0.18			
5	1.3.2.1.2	Channel	15%	1.50	35%		-35%
6	1.3.2.1.2.1	Cutting	10%	0.15	100%		-100%
6	1.3.2.1.2.2	Beveling	10%	0.15	100%		-100%
6	1.3.2.1.2.3	Rolling	15%	0.23	100%		-100%
6	1.3.2.1.2.4	Assembly (LW)	25%	0.38			







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					Plan	Actual	Variance
6	1.3.2.1.2.5	Welding (LW)	35%	0.53			
6	1.3.2.1.2.6	Reroll	5%	0.08			
5	1.3.2.1.3	Cone	20%	2.00			
6	1.3.2.1.3.1	Cutting	10%	0.20			
6	1.3.2.1.3.2	Beveling	10%	0.20			
6	1.3.2.1.3.3	Rolling	15%	0.30			
6	1.3.2.1.3.4	Assembly (LW)	25%	0.50			
6	1.3.2.1.3.5	Welding (LW)	35%	0.70			
6	1.3.2.1.3.6	Reroll	5%	0.10			
5	1.3.2.1.4	Saddle fabrication	10%	1.00			
6	1.3.2.1.4.1	Cutting	10%	0.10			
6	1.3.2.1.4.2	Beveling	10%	0.10			
6	1.3.2.1.4.3	Rolling	15%	0.15			
6	1.3.2.1.4.4	Assembly (LW)	25%	0.25			
6	1.3.2.1.4.5	Welding (LW)	35%	0.35			
6	1.3.2.1.4.6	Reroll	5%	0.05			
5	1.3.2.1.5	Nozzle fabrication (part 1)	8%	0.80			
6	1.3.2.1.5.1	Pipe cutting	15%	0.12			
6	1.3.2.1.5.2	Pipe beveling	15%	0.12			
6	1.3.2.1.5.3	Assembly pipe to flange	25%	0.20			
6	1.3.2.1.5.4	Welding pipe to flange	45%	0.36			
5	1.3.2.1.6	Nozzle fabrication (part 2)	12%	1.20			
6	1.3.2.1.6.1	Pipe cutting	5%	0.06			
6	1.3.2.1.6.2	Pipe beveling	5%	0.06			
6	1.3.2.1.6.3	Assembly pipe to flange	15%	0.18			
6	1.3.2.1.6.4	Welding pipe to flange	35%	0.42			
6	1.3.2.1.6.5	Assembly elbow to pipe	10%	0.12			
6	1.3.2.1.6.6	Welding elbow to pipe	30%	0.36			
4	1.3.2.2	Final assembly	50%	12.50			
5	1.3.2.2.1	Shell	40%	5.00			
6	1.3.2.2.1.1	Assembly shell segments (CW)	12%	0.60			
6	1.3.2.2.1.2	Welding shell segments (CW)	27%	1.35			
6	1.3.2.2.1.3	Opening for nozzle assembly	5%	0.25			
6	1.3.2.2.1.4	Nozzle assembly to shell	5%	0.25			
6	1.3.2.2.1.5	Nozzle welding to shell	10%	0.50			
6	1.3.2.2.1.6	Assembly head to shell	3%	0.15			
6	1.3.2.2.1.7	Welding head to shell	7%	0.35			
6	1.3.2.2.1.8	Assembly cone to shell	3%	0.15			
6	1.3.2.2.1.9	Welding cone to shell	7%	0.35			
6	1.3.2.2.1.10	Assembly segment shell to cone	3%	0.15			
6	1.3.2.2.1.11	Welding segment shell to cone	8%	0.40			
6	1.3.2.2.1.12	Assembly body flange to shell	3%	0.15			
6	1.3.2.2.1.13	Welding body flange to shell	7%	0.35			
5	1.3.2.2.2	Channel	15%	1.88			
6	1.3.2.2.2.1	Assembly head to channel	10%	0.19			
6	1.3.2.2.2.2	Welding head to channel	20%	0.38			
6	1.3.2.2.2.3	Assembly body flange to channel	10%	0.19			
6	1.3.2.2.2.4	Welding body flange to channel	20%	0.38			
6	1.3.2.2.2.5	Opening for nozzle assembly	10%	0.19			
6	1.3.2.2.2.6	Assembly nozzle to channel	10%	0.19			
6	1.3.2.2.2.7	Welding nozzle to channel	20%	0.38			
5	1.3.2.2.3	Bundle structure	45%	5.63			
6	1.3.2.2.3.1	Assembly bundle structure	15%	0.84			
6	1.3.2.2.3.2	Insert tube to bundle structure	10%	0.56			
6	1.3.2.2.3.3	Tube to tube sheet welding	30%	1.69			
6	1.3.2.2.3.4	Expanding	5%	0.28			
6	1.3.2.2.3.5	Insert bundle to shell	2%	0.11			
6	1.3.2.2.3.6	Assembly tube sheet to shell	5%	0.28			
6	1.3.2.2.3.7	Welding tube sheet to shell	10%	0.56			
6	1.3.2.2.3.8	Assembly saddle to shell	5%	0.28			

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6	1.3.2.2.3.9	Welding saddle to shell	10%	0.56			
6	1.3.2.2.3.10	Assembly external part to shell& channel	2%	0.11			
6	1.3.2.2.3.11	Welding external part to shell& channel	4%	0.23			
6	1.3.2.2.3.12	Final NDT	2%	0.11			
4	1.3.2.3	Test	5%	1.25			
5	1.3.2.3.1	Hydrostatic Test	100%	1.25			
4	1.3.2.4	Sandblast & paint	5%	1.25			
5	1.3.2.4.1	Sandblast	50%	0.63			
5	1.3.2.4.2	Painting	50%	0.63			



This Period Highlights:

Material for tube, tube sheet, girth flange, baffle, plate, head, STD flange, fitting, SMS pipe, tie rod, gasket & nut & bolt have been delivered from Korea to Iran.

Forecasted activities for the next report period:

Overall Progress Table

Phase	Weight Factor	Cumulative up to Last Period		This Period		Cumulative up to End of This Period		
		Plan	Actual	Plan	Actual	Plan	Actual	Variance
Engineering	10.00%	92.00%	73.30%			92.00%	73.30%	-18.70%
Material Supply	40.00%	84.82%	86.93%	7.78%	2.30%	92.60%	89.23%	-3.37%
Manufacturing	50.00%			11.22%		11.22%		-11.22%
Total	100.00%	43.13%	42.10%	8.72%	0.92%	51.85%	43.02%	-8.83%



Toase-che Park Sanati Gohar Ofogh Petrochemical Co.

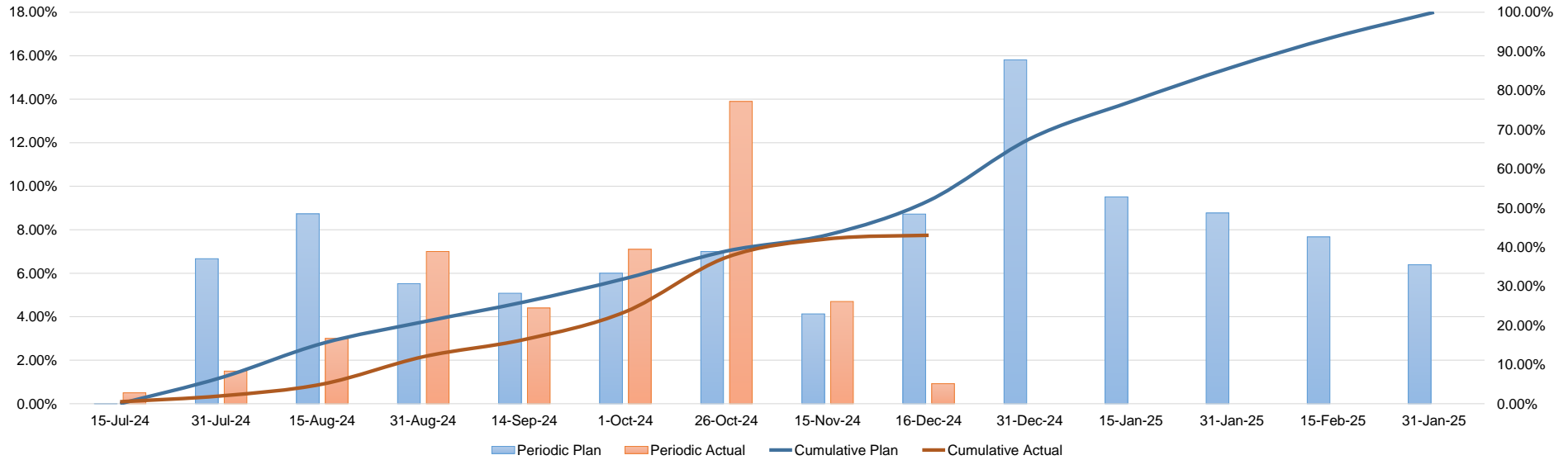
CONCEPTUAL, BASIC and DETAIL DESIGN ENGINEERING OF STYRENE PARK OFFSITE

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S-Curve



Interval	15-Jul-24	31-Jul-24	15-Aug-24	31-Aug-24	14-Sep-24	1-Oct-24	26-Oct-24	15-Nov-24	16-Dec-24	31-Dec-24	15-Jan-25	31-Jan-25	15-Feb-25	31-Jan-25
Cumulative Plan	0.00%	6.67%	15.40%	20.92%	26.00%	32.00%	39.00%	43.13%	51.85%	67.66%	77.17%	85.94%	93.61%	100.00%
Periodic Plan	0.00%	6.67%	8.73%	5.52%	5.08%	6.00%	7.00%	4.13%	8.72%	15.81%	9.51%	8.77%	7.67%	6.39%
Cumulative Actual	0.50%	2.00%	5.00%	12.00%	16.40%	23.50%	37.40%	42.10%	43.02%					
Periodic Actual	0.50%	1.50%	3.00%	7.00%	4.40%	7.10%	13.90%	4.70%	0.92%					



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Farnikan
Engineered Solutions

P.O. Number:

P.O. Description:

Raw Material / Fabrication Pictures