Detailed Report for Pressure Pipe: P-2

Scenario Summary	
Scenario	Improvement of Las Jaguitas Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Pipe Characteristics			
Material	Ductile Iron	Hazen- Williams C	110.0
Diameter	450.0 mm	Minor Loss Coefficient	0.00
Check Valve?	false	Length	250.00 m
From Node	J-1	To Node	J-2

Elevations			
From Elevation	145.00 m	To Elevation	140.00 m

Initial Status	
Initial Status	Open

Calculated Results Summary

Time (hr)	Control Status	Discharge (m³/day)	Velocity (m/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Calculated Friction Headloss (m)	Calculated Minor Headloss (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
0.00	Open	5,177	0.38	176.34	176.22	0.12	0.00	0.12	0.47
1.00	Open	5,177	0.38	176.78	176.66	0.12	0.00	0.12	0.47
2.00	Open	5,421	0.39	177.11	176.98	0.13	0.00	0.13	0.51
3.00	Open	6,151	0.45	177.20	177.04	0.16	0.00	0.16	0.65
4.00	Open	10,354	0.75	174.98	174.56	0.42	0.00	0.42	1.70
5.00	Open	17,358	1.26	168.36	167.25	1.11	0.00	1.11	4.42
6.00	Open	20,647	1.50	163.89	162.37	1.52	0.00	1.52	6.10
7.00	Open	20,403	1.48	163.69	162.20	1.49	0.00	1.49	5.97
8.00	Open	19,855	1.44	163.90	162.48	1.42	0.00	1.42	5.67
9.00	Open	19,002	1.38	164.51	163.20	1.31	0.00	1.31	5.23
10.00	Open	17,480	1.27	165.94	164.81	1.12	0.00	1.12	4.48
11.00	Open	15,531	1.13	167.78	166.88	0.90	0.00	0.90	3.60
12.00	Open	14,739	1.07	168.39	167.58	0.82	0.00	0.82	3.27
13.00	Open	15,104	1.10	167.86	167.00	0.85	0.00	0.85	3.42
14.00	Open	14,495	1.05	168.29	167.50	0.79	0.00	0.79	3.17
15.00	Open	13,460	0.98	169.15	168.46	0.69	0.00	0.69	2.76
16.00	Open	13,034	0.95	169.47	168.82	0.65	0.00	0.65	2.60
17.00	Open	11,511	0.84	170.74	170.22	0.52	0.00	0.52	2.07
18.00	Open	9,684	0.70	172.18	171.80	0.38	0.00	0.38	1.50
19.00	Open	9,014	0.66	172.80	172.47	0.33	0.00	0.33	1.31
20.00	Open	8,588	0.62	173.28	172.97	0.30	0.00	0.30	1.20
21.00	Open	7,918	0.58	173.92	173.66	0.26	0.00	0.26	1.03
22.00	Open	6,700	0.49	174.86	174.67	0.19	0.00	0.19	0.76
23.00	Open	5,542	0.40	175.76	175.63	0.13	0.00	0.13	0.53
24.00	Open	5,177	0.38	176.34	176.22	0.12	0.00	0.12	0.47

Detailed Report for Pressure Pipe: P-3

Scenario Summary	
Scenario	Improvement of Las Jaguitas Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Pipe Characteristics			
Material	Ductile Iron	Hazen-Williams C	110.0
Diameter	300.0 mm	Minor Loss Coefficient	0.00
Check Valve?	false	Length	900.00 m
From Node	J-2	To Node	J-3

Elevations			
From Elevation	140.00 m	To Elevation	140.00 m

Initial Status	
Initial Status	Open

Calculated Results Summary

Time (hr)	Control Status	Discharge (m³/day)	Velocity (m/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Calculated Friction Headloss (m)	Calculated Minor Headloss (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
0.00	Open	2,071	0.34	176.22	175.66	0.56	0.00	0.56	0.62
1.00	Open	2,071	0.34	176.66	176.10	0.56	0.00	0.56	0.62
2.00	Open	2,168	0.35	176.98	176.38	0.61	0.00	0.61	0.68
3.00	Open	2,460	0.40	177.04	176.27	0.77	0.00	0.77	0.86
4.00	Open	4,141	0.68	174.56	172.54	2.02	0.00	2.02	2.24
5.00	Open	6,943	1.14	167.25	162.00	5.26	0.00	5.26	5.84
6.00	Open	8,258	1.35	162.37	155.12	7.25	0.00	7.25	8.05
7.00	Open	8,161	1.34	162.20	155.11	7.09	0.00	7.09	7.88
8.00	Open	7,941	1.30	162.48	155.74	6.74	0.00	6.74	7.49
9.00	Open	7,600	1.24	163.20	156.99	6.21	0.00	6.21	6.91
10.00	Open	6,991	1.14	164.81	159.49	5.32	0.00	5.32	5.92
11.00	Open	6,212	1.02	166.88	162.60	4.28	0.00	4.28	4.75
12.00	Open	5,895	0.97	167.58	163.69	3.88	0.00	3.88	4.31
13.00	Open	6,041	0.99	167.00	162.94	4.06	0.00	4.06	4.51
14.00	Open	5,798	0.95	167.50	163.74	3.76	0.00	3.76	4.18
15.00	Open	5,384	0.88	168.46	165.18	3.28	0.00	3.28	3.65
16.00	Open	5,213	0.85	168.82	165.73	3.09	0.00	3.09	3.44
17.00	Open	4,604	0.75	170.22	167.76	2.46	0.00	2.46	2.73
18.00	Open	3,873	0.63	171.80	170.02	1.78	0.00	1.78	1.98
19.00	Open	3,605	0.59	172.47	170.91	1.56	0.00	1.56	1.74
20.00	Open	3,435	0.56	172.97	171.55	1.43	0.00	1.43	1.59
21.00	Open	3,167	0.52	173.66	172.43	1.23	0.00	1.23	1.36
22.00	Open	2,680	0.44	174.67	173.77	0.90	0.00	0.90	1.00
23.00	Open	2,217	0.36	175.63	175.00	0.63	0.00	0.63	0.70
24.00	Open	2,071	0.34	176.22	175.66	0.56	0.00	0.56	0.62

Detailed Report for Pressure Pipe: P-4

Scenario Summary	
Scenario	Improvement of Las Jaguitas Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Pipe Characteristics			
Material	PVC	Hazen-Williams C	110.0
Diameter	250.0 mm	Minor Loss Coefficient	0.00
Check Valve?	false	Length	1,100.00 m
From Node	J-2	To Node	J-4

Elevations			
From Elevation	140.00 m	To Elevation	125.00 m

Initial Status	
Initial Status	Open

Calculated Results Summary

Time (hr)	Control Status	Discharge (m³/day)	Velocity (m/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Calculated Friction Headloss (m)	Calculated Minor Headloss (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
0.00	Open	1,553	0.37	176.22	175.24	0.98	0.00	0.98	0.89
1.00	Open	1,553	0.37	176.66	175.68	0.97	0.00	0.97	0.89
2.00	Open	1,626	0.38	176.98	175.92	1.06	0.00	1.06	0.97
3.00	Open	1,845	0.44	177.04	175.70	1.34	0.00	1.34	1.22
4.00	Open	3,106	0.73	174.56	171.04	3.52	0.00	3.52	3.20
5.00	Open	5,207	1.23	167.25	158.09	9.16	0.00	9.16	8.33
6.00	Open	6,194	1.46	162.37	149.73	12.64	0.00	12.64	11.49
7.00	Open	6,120	1.44	162.20	149.83	12.36	0.00	12.36	11.24
8.00	Open	5,956	1.40	162.48	150.72	11.75	0.00	11.75	10.69
9.00	Open	5,700	1.34	163.20	152.37	10.84	0.00	10.84	9.85
10.00	Open	5,243	1.24	164.81	155.53	9.28	0.00	9.28	8.44
11.00	Open	4,659	1.10	166.88	159.42	7.46	0.00	7.46	6.78
12.00	Open	4,421	1.04	167.58	160.81	6.77	0.00	6.77	6.15
13.00	Open	4,531	1.07	167.00	159.92	7.08	0.00	7.08	6.44
14.00	Open	4,348	1.03	167.50	160.94	6.56	0.00	6.56	5.97
15.00	Open	4,038	0.95	168.46	162.74	5.72	0.00	5.72	5.20
16.00	Open	3,910	0.92	168.82	163.43	5.39	0.00	5.39	4.90
17.00	Open	3,453	0.81	170.22	165.94	4.28	0.00	4.28	3.89
18.00	Open	2,905	0.68	171.80	168.69	3.11	0.00	3.11	2.83
19.00	Open	2,704	0.64	172.47	169.75	2.72	0.00	2.72	2.48
20.00	Open	2,576	0.61	172.97	170.49	2.49	0.00	2.49	2.26
21.00	Open	2,375	0.56	173.66	171.52	2.14	0.00	2.14	1.95
22.00	Open	2,010	0.47	174.67	173.10	1.57	0.00	1.57	1.43
23.00	Open	1,663	0.39	175.63	174.52	1.11	0.00	1.11	1.01
24.00	Open	1,553	0.37	176.22	175.24	0.97	0.00	0.97	0.89

Detailed Report for Tank: Las Jaguitas Tank

Scenario Summary	
Scenario	Improvement of Las Jaguitas Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Geometric Summary			
X	4,487.18 m	Elevation	175.00 m
Y	3,021.14 m	Zone	Zone

Demand Summary

Type	Base Flow (m³/day)	Pattern
Demand	0	Fixed

Operating Range Summary			
Maximum Elevation	180.00 m	Maximum Level	5.00 m
Initial HGL	177.50 m	Initial Level	2.50 m
Minimum Elevation	175.00 m	Minimum Level	0.00 m
Base Elevation	175.00 m		

Storage			
Section Type	Constant Area	Circular Tank Shape?	true
Diameter	31.92 m	Average Area	800.0 m²
Inactive Volume	0.00 m³	Total Active Volume	4,000.00 m³

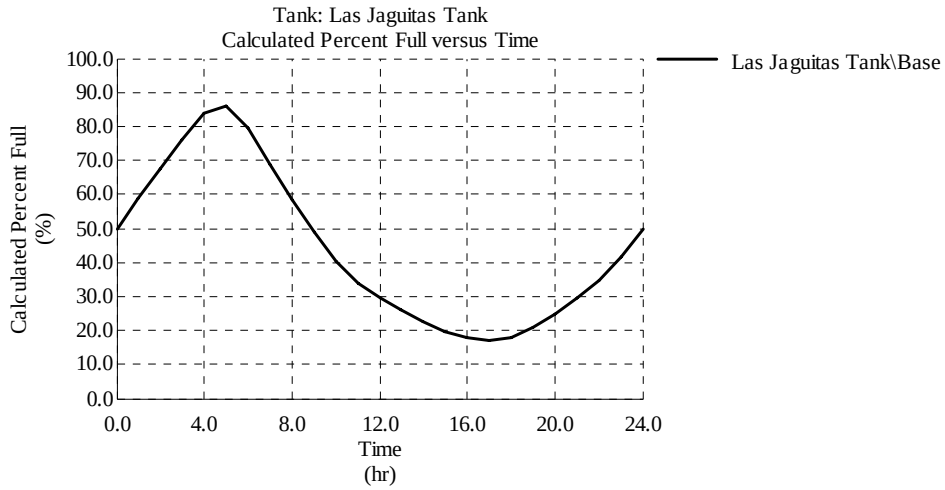
Calculated Results Summary

Time (hr)	Calculated Hydraulic Grade (m)	Calculated Level (m)	Pressure (m H2O)	Calculated Percent Full (%)	Calculated Volume (m³)	Inflow (m³/day)	Outflow (m³/day)	Current Status
0.00	177.50	2.50	2.495	50.0	2,000.00	8,442	-8,442	Filling
1.00	177.94	2.94	2.934	58.8	2,351.74	8,442	-8,442	Filling
2.00	178.38	3.38	3.373	67.6	2,703.46	8,148	-8,148	Filling
3.00	178.80	3.80	3.796	76.1	3,042.96	7,267	-7,267	Filling
4.00	179.18	4.18	4.174	83.6	3,345.76	2,202	-2,202	Filling
5.00	179.30	4.30	4.288	85.9	3,437.51	-6,239	6,239	Draining
6.00	178.97	3.97	3.964	79.4	3,177.54	10,203	10,203	Draining
7.00	178.44	3.44	3.434	68.8	2,752.40	-9,910	9,910	Draining
8.00	177.92	2.92	2.918	58.5	2,339.50	-9,249	9,249	Draining
9.00	177.44	2.44	2.438	48.9	1,954.13	-8,221	8,221	Draining
10.00	177.01	2.01	2.010	40.3	1,611.57	-6,386	6,386	Draining
11.00	176.68	1.68	1.678	33.6	1,345.47	-4,037	4,037	Draining
12.00	176.47	1.47	1.469	29.4	1,177.26	-3,083	3,083	Draining
13.00	176.31	1.31	1.308	26.2	1,048.79	-3,523	3,523	Draining
14.00	176.13	1.13	1.125	22.5	901.99	-2,789	2,789	Draining

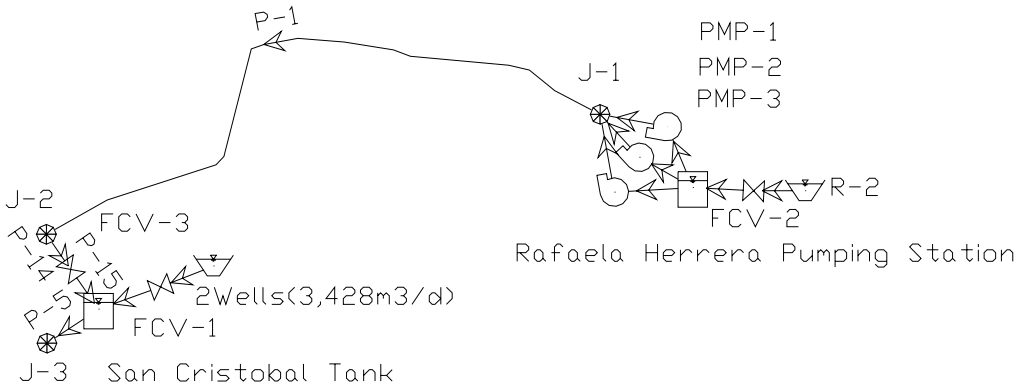
Detailed Report for Tank: Las Jaguitas Tank

Calculated Results Summary

Time (hr)	Calculated Hydraulic Grade (m)	Calculated Level (m)	Pressure (m H2O)	Calculated Percent Full (%)	Calculated Volume (m³)	Inflow (m³/day)	Outflow (m³/day)	Current Status
15.00	175.98	0.98	0.980	19.6	785.77	-1,542	1,542	Draining
16.00	175.90	0.90	0.900	18.0	721.53	-1,028	1,028	Draining
17.00	175.85	0.85	0.847	17.0	678.71	807	-807	Filling
18.00	175.89	0.89	0.889	17.8	712.35	3,010	-3,010	Filling
19.00	176.05	1.05	1.045	20.9	837.75	3,817	-3,817	Filling
20.00	176.25	1.25	1.243	24.9	996.81	4,331	-4,331	Filling
21.00	176.47	1.47	1.469	29.4	1,177.26	5,138	-5,138	Filling
22.00	176.74	1.74	1.736	34.8	1,391.35	6,606	-6,606	Filling
23.00	177.08	2.08	2.079	41.7	1,666.62	8,001	-8,001	Filling
24.00	177.50	2.50	2.495	50.0	2,000.00	8,442	-8,442	Filling



Scenario: Improvement of San Cristobal Area



Detailed Report for Pressure Pipe: P-1

Scenario Summary	
Scenario	Improvement of San Cristobal Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Pipe Characteristics			
Material	Ductile Iron	Hazen-Williams C	110.0
Diameter	450.0 mm	Minor Loss Coefficient	0.00
Check Valve?	false	Length	3,750.00 m
From Node	J-1	To Node	J-2

Elevations			
From Elevation	80.00 m	To Elevation	90.00 m

Initial Status	
Initial Status	Open

Calculated Results Summary

Time (hr)	Control Status	Discharge (m³/day)	Velocity (m/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Calculated Friction Headloss (m)	Calculated Minor Headloss (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
0.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
1.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
2.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
3.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
4.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
5.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
6.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
7.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
8.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
9.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
10.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
11.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
12.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
13.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
14.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
15.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
16.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
17.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
18.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
19.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
20.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
21.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
22.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
23.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07
24.00	Open	20,600	1.50	142.08	119.31	22.78	0.00	22.78	6.07

Detailed Report for Pump: PMP-1

Scenario Summary	
Scenario	Improvement of San Cristobal Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Geometric Summary			
X	3,823.91 m	Upstream Pipe	P-6
Y	1,117.38 m	Downstream Pipe	P-7
Elevation	80.00 m		

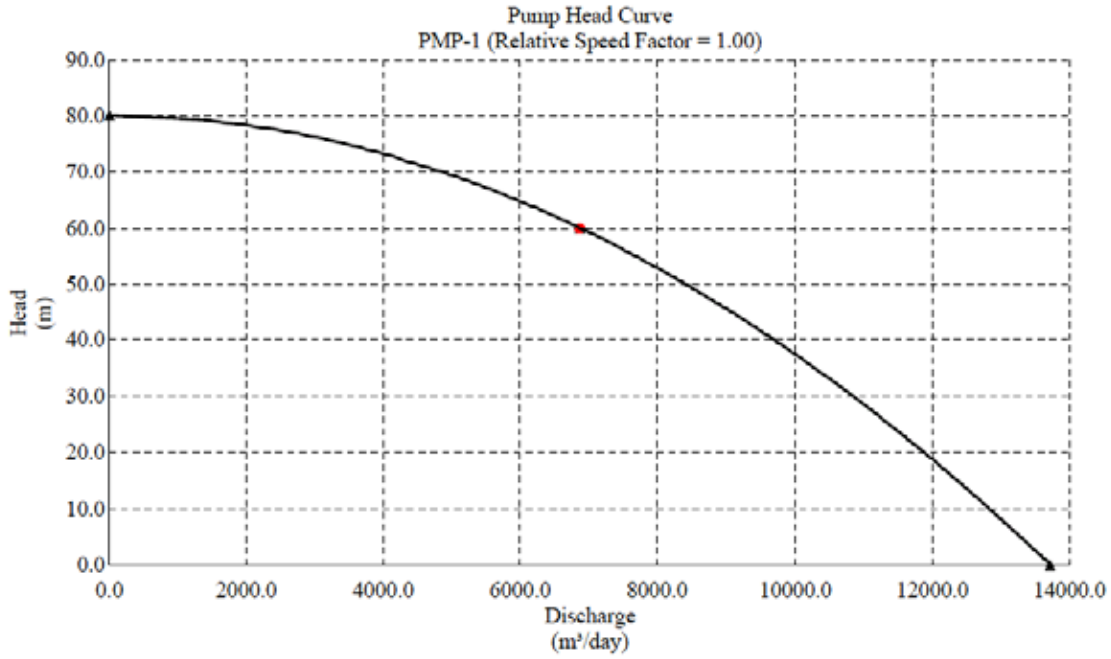
Pump Definition Summary	
Pump Definition	Rafaela Herrera

Initial Status			
Initial Pump Status	On	Initial Relative Speed Facto	1.00

Calculated Results Summary

Time (hr)	Control Status	Intake Pump Grade (m)	Discharge Pump Grade (m)	Discharge (m³/day)	Pump Head (m)	Relative Speed	Calculated Water Power (kW)
0.00	On	82.29	142.29	6,867	50.00	1.00	46.68
1.00	On	82.29	142.29	6,867	50.00	1.00	46.68
2.00	On	82.29	142.29	6,867	50.00	1.00	46.68
3.00	On	82.29	142.29	6,867	50.00	1.00	46.68
4.00	On	82.29	142.29	6,867	50.00	1.00	46.68
5.00	On	82.29	142.29	6,867	50.00	1.00	46.68
6.00	On	82.29	142.29	6,867	50.00	1.00	46.68
7.00	On	82.29	142.29	6,867	50.00	1.00	46.68
8.00	On	82.29	142.29	6,867	50.00	1.00	46.68
9.00	On	82.29	142.29	6,867	50.00	1.00	46.68
10.00	On	82.29	142.29	6,867	50.00	1.00	46.68
11.00	On	82.29	142.29	6,867	50.00	1.00	46.68
12.00	On	82.29	142.29	6,867	50.00	1.00	46.68
13.00	On	82.29	142.29	6,867	50.00	1.00	46.68
14.00	On	82.29	142.29	6,867	50.00	1.00	46.68
15.00	On	82.29	142.29	6,867	50.00	1.00	46.68
16.00	On	82.29	142.29	6,867	50.00	1.00	46.68
17.00	On	82.29	142.29	6,867	50.00	1.00	46.68
18.00	On	82.29	142.29	6,867	50.00	1.00	46.68
19.00	On	82.29	142.29	6,867	50.00	1.00	46.68
20.00	On	82.29	142.29	6,867	50.00	1.00	46.68
21.00	On	82.29	142.29	6,867	50.00	1.00	46.68
22.00	On	82.29	142.29	6,867	50.00	1.00	46.68
23.00	On	82.29	142.29	6,867	50.00	1.00	46.68
24.00	On	82.29	142.29	6,867	50.00	1.00	46.68

Detailed Report for Pump: PMP-1



Detailed Report for Tank: San Cristobal Tank

Scenario Summary	
Scenario	Improvement of San Cristobal Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Geometric Summary			
X	882.11 m	Elevation	100.00 m
Y	174.99 m	Zone	Zone

Demand Summary

Type	Base Flow (m³/day)	Pattern
Demand	0	Fixed

Operating Range Summary			
Maximum Elevation	105.10 m	Maximum Level	6.00 m
Initial HGL	102.10 m	Initial Level	3.00 m
Minimum Elevation	99.10 m	Minimum Level	0.00 m
Base Elevation	99.10 m		

Storage			
Section Type	Constant Area	Circular Tank Shape?	true
Diameter	63.37 m	Average Area	3,154.2 m²
Inactive Volume	0.00 m³	Total Active Volume	18,925.00 m³

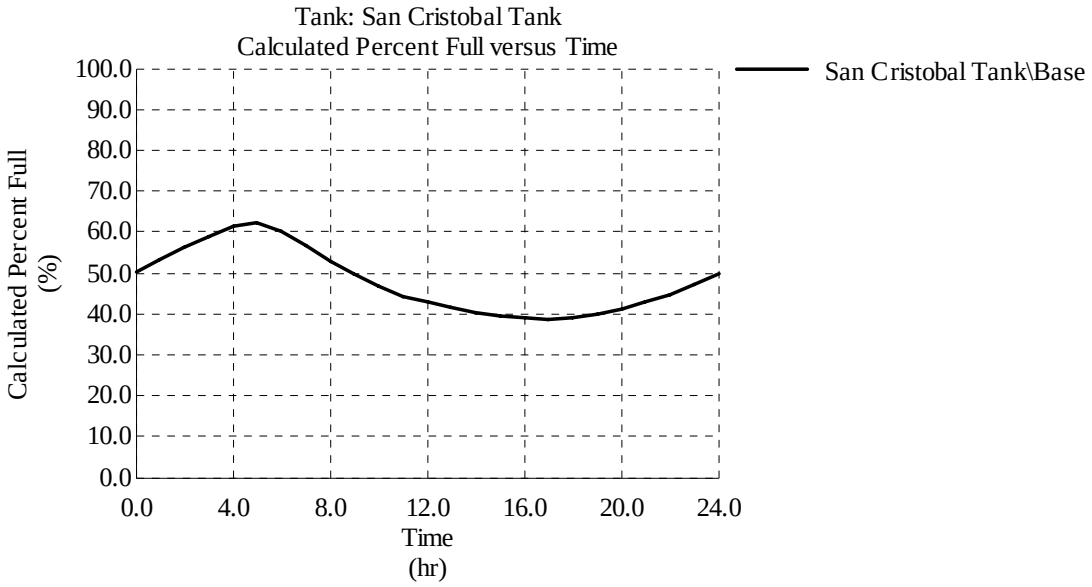
Calculated Results Summary

Time (hr)	Calculated Hydraulic Grade (m)	Calculated Level (m)	Pressure (kPa)	Calculated Percent Full (%)	Calculated Volume (m³)	Inflow (m³/day)	Outflow (m³/day)	Current Status
0.00	102.10	3.00	29.36	50.0	9,462.50	13,816	13,816	Filling
1.00	102.28	3.18	31.15	53.0	0,038.14	13,816	13,816	Filling
2.00	102.47	3.37	32.93	56.1	0,613.81	13,335	13,335	Filling
3.00	102.64	3.54	34.66	59.0	1,169.43	11,893	11,893	Filling
4.00	102.80	3.70	36.19	61.6	1,664.97	3,603	-3,603	Filling
5.00	102.85	3.75	36.66	62.4	1,815.13	10,213	10,213	Draining
6.00	102.71	3.61	35.34	60.2	1,389.57	16,701	16,701	Draining
7.00	102.49	3.39	33.18	56.5	0,693.70	16,221	16,221	Draining
8.00	102.28	3.18	31.08	52.9	0,017.84	15,139	15,139	Draining
9.00	102.08	2.98	29.13	49.6	9,387.04	13,457	13,457	Draining
10.00	101.90	2.80	27.39	46.6	8,826.31	10,454	10,454	Draining
11.00	101.76	2.66	26.04	44.3	8,390.74	-6,609	6,609	Draining
12.00	101.67	2.57	25.18	42.9	8,115.36	-5,047	5,047	Draining
13.00	101.61	2.51	24.53	41.8	7,905.08	-5,768	5,768	Draining
14.00	101.53	2.43	23.78	40.5	7,664.74	-4,567	4,567	Draining

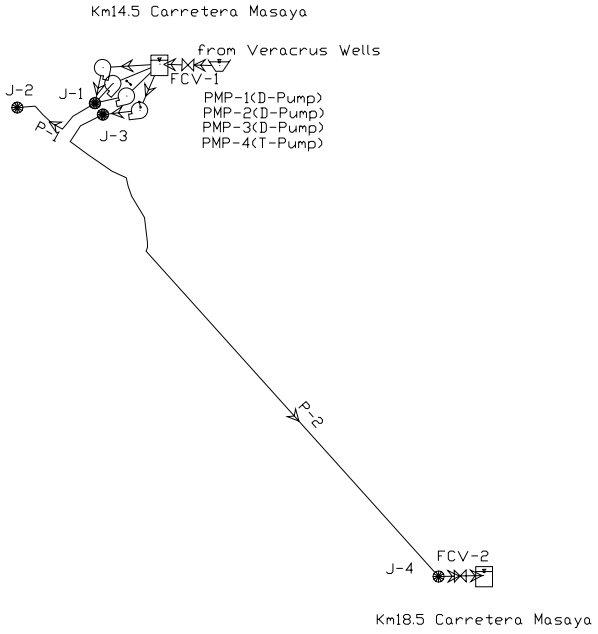
Detailed Report for Tank: San Cristobal Tank

Calculated Results Summary

Time (hr)	Calculated Hydraulic Grade (m)	Calculated Level (m)	Pressure (kPa)	Calculated Percent Full (%)	Calculated Volume (m³)	Inflow (m³/day)	Outflow (m³/day)	Current Status
15.00	101.47	2.37	23.19	39.5	7,474.47	-2,524	2,524	Draining
16.00	101.44	2.34	22.87	38.9	7,369.29	-1,683	1,683	Draining
17.00	101.41	2.31	22.65	38.6	7,299.17	1,321	-1,321	Filling
18.00	101.43	2.33	22.82	38.9	7,354.21	4,925	-4,925	Filling
19.00	101.50	2.40	23.46	39.9	7,559.41	6,247	-6,247	Filling
20.00	101.58	2.48	24.26	41.3	7,819.68	7,088	-7,088	Filling
21.00	101.67	2.57	25.18	42.9	8,115.01	8,409	-8,409	Filling
22.00	101.78	2.68	26.27	44.7	8,465.38	10,812	10,812	Filling
23.00	101.93	2.83	27.66	47.1	8,915.88	13,095	13,095	Filling
24.00	102.10	3.00	29.36	50.0	9,461.51	13,816	13,816	Filling



Scenario: Improvement of Nindiri Area



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Project Engineer: JICA Study Team
WaterCAD v6.5 [6.5120j]
Page 1 of 1

Detailed Report for Pressure Pipe: P-1

Scenario Summary	
Scenario	Improvement of Nindiri Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Pipe Characteristics			
Material	Ductile Iron	Hazen- Williams C	110.0
Diameter	350.0 mm	Minor Loss Coefficient	0.00
Check Valve?	false	Length	600.00 m
From Node	J-1	To Node	J-2

Elevations			
From Elevation	201.00 m	To Elevation	220.00 m

Initial Status	
Initial Status	Open

Calculated Results Summary

Time (hr)	Control Status	Discharge (m³/day)	Velocity (m/s)	Upstream Structure Hydraulic Grade (m)	Downstream Structure Hydraulic Grade (m)	Calculated Friction Headloss (m)	Calculated Minor Headloss (m)	Pressure Pipe Headloss (m)	Headloss Gradient (m/km)
0.00	Open	2,678	0.32	327.08	326.79	0.28	0.00	0.28	0.47
1.00	Open	2,678	0.32	327.64	327.35	0.28	0.00	0.28	0.47
2.00	Open	2,804	0.34	326.26	325.95	0.31	0.00	0.31	0.51
3.00	Open	3,183	0.38	320.46	320.07	0.39	0.00	0.39	0.65
4.00	Open	5,357	0.64	329.21	328.19	1.02	0.00	1.02	1.70
5.00	Open	8,980	1.08	292.99	290.33	2.66	0.00	2.66	4.44
6.00	Open	10,682	1.29	313.53	309.86	3.67	0.00	3.67	6.12
7.00	Open	10,556	1.27	313.69	310.10	3.59	0.00	3.59	5.99
8.00	Open	10,272	1.24	314.87	311.46	3.42	0.00	3.42	5.69
9.00	Open	9,831	1.18	317.02	313.87	3.15	0.00	3.15	5.25
10.00	Open	9,043	1.09	321.10	318.41	2.70	0.00	2.70	4.50
11.00	Open	8,035	0.97	300.93	298.76	2.17	0.00	2.17	3.61
12.00	Open	7,625	0.92	305.16	303.19	1.97	0.00	1.97	3.28
13.00	Open	7,814	0.94	302.91	300.85	2.06	0.00	2.06	3.43
14.00	Open	7,499	0.90	306.05	304.15	1.91	0.00	1.91	3.18
15.00	Open	6,964	0.84	311.29	309.63	1.66	0.00	1.66	2.77
16.00	Open	6,743	0.81	313.31	311.74	1.57	0.00	1.57	2.61
17.00	Open	5,955	0.72	320.24	319.00	1.24	0.00	1.24	2.07
18.00	Open	5,010	0.60	327.55	326.65	0.90	0.00	0.90	1.51
19.00	Open	4,663	0.56	330.10	329.30	0.79	0.00	0.79	1.32
20.00	Open	4,443	0.53	290.30	289.58	0.72	0.00	0.72	1.21
21.00	Open	4,096	0.49	298.88	298.25	0.62	0.00	0.62	1.04
22.00	Open	3,466	0.42	312.56	312.10	0.46	0.00	0.46	0.76
23.00	Open	2,867	0.34	323.61	323.29	0.32	0.00	0.32	0.54
24.00	Open	2,678	0.32	327.08	326.79	0.28	0.00	0.28	0.47

Detailed Report for Pump: PMP-1(D-Pump)

Scenario Summary	
Scenario	Improvement of Nindiri Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Geometric Summary			
X	926.35 m	Upstream Pipe	P-3
Y	4,017.56 m	Downstream Pipe	P-4
Elevation	201.00 m		

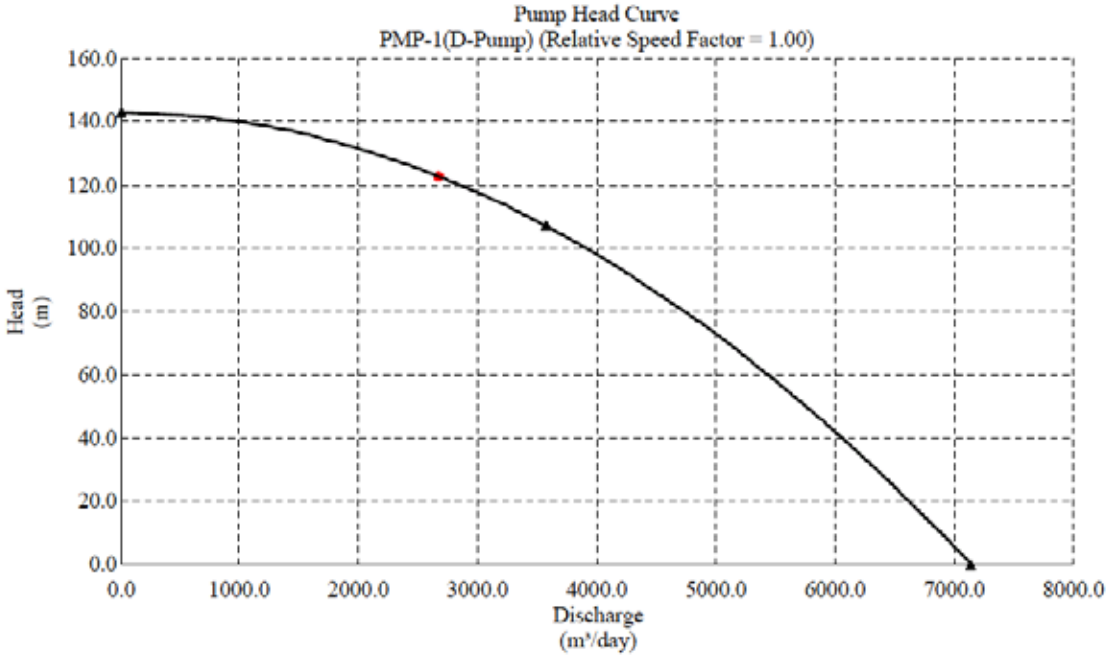
Pump Definition Summary	
Pump Definition	Distribution Pump

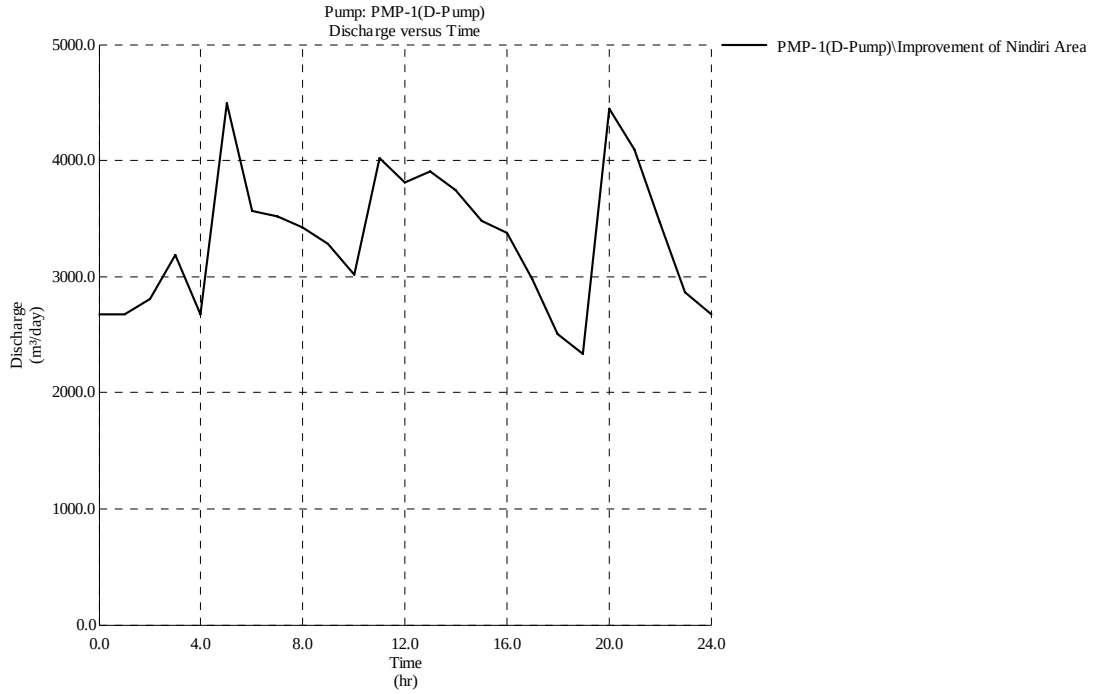
Initial Status			
Initial Pump Status	On	Initial Relative Speed Facto	1.00

Calculated Results Summary

Time (hr)	Control Status	Intake Pump Grade (m)	Discharge Pump Grade (m)	Discharge (m³/day)	Pump Head (m)	Relative Speed	Calculated Water Power (kW)
0.00	On	!04.49	327.09	2,678	22.60	1.00	37.20
1.00	On	!05.05	327.65	2,678	22.60	1.00	37.20
2.00	On	!05.60	326.27	2,804	20.67	1.00	38.34
3.00	On	!06.14	320.48	3,183	14.34	1.00	41.23
4.00	On	!06.62	329.23	2,678	22.60	1.00	37.20
5.00	On	!06.75	293.03	4,490	86.28	1.00	43.89
6.00	On	!06.35	313.56	3,561	07.21	1.00	43.25
7.00	On	!05.67	313.71	3,519	08.04	1.00	43.07
8.00	On	!05.02	314.89	3,424	09.87	1.00	42.62
9.00	On	!04.41	317.04	3,277	12.63	1.00	41.82
10.00	On	!03.87	321.12	3,014	17.25	1.00	40.04
11.00	On	!03.44	300.96	4,018	97.52	1.00	44.39
12.00	On	!03.17	305.18	3,813	02.01	1.00	44.06
13.00	On	!02.97	302.93	3,907	99.97	1.00	44.25
14.00	On	!02.73	306.08	3,750	03.34	1.00	43.90
15.00	On	!02.55	311.31	3,482	08.76	1.00	42.90
16.00	On	!02.45	313.32	3,372	10.87	1.00	42.35
17.00	On	!02.39	320.25	2,978	17.87	1.00	39.76
18.00	On	!02.45	327.56	2,505	25.12	1.00	35.51
19.00	On	!02.65	330.11	2,332	27.46	1.00	33.67
20.00	On	!02.88	290.33	4,443	87.46	1.00	44.02
21.00	On	!03.17	298.90	4,096	95.73	1.00	44.43
22.00	On	!03.51	312.58	3,466	09.06	1.00	42.83
23.00	On	!03.96	323.63	2,867	19.67	1.00	38.88
24.00	On	!04.49	327.09	2,678	22.60	1.00	37.20

Detailed Report for Pump: PMP-1(D-Pump)





Detailed Report for Pump: PMP-2(D-Pump)

Scenario Summary	
Scenario	Improvement of Nindiri Area
Active Topology Alternative	Base-Active Topology
Physical Alternative	Base-Physical
Demand Alternative	Base-Demand
Initial Settings Alternative	Base-Initial Settings
Operational Alternative	Base-Operational
Age Alternative	Base-Age Alternative
Constituent Alternative	Base-Constituent
Trace Alternative	Base-Trace Alternative
Fire Flow Alternative	Base-Fire Flow
Capital Cost Alternative	Base-Capital Cost
Energy Cost Alternative	Base-Energy Cost
User Data Alternative	Base-User Data

Global Adjustments Summary			
	<None>	Roughness	<None>

Geometric Summary			
X	995.48 m	Upstream Pipe	P-5
Y	3,910.12 m	Downstream Pipe	P-6
Elevation	201.00 m		

Pump Definition Summary	
Pump Definition	Distribution Pump

Initial Status			
Initial Pump Status	Off	Initial Relative Speed Facto	1.00

Simple Controls

Controls
On at time from start 4.00
Off at time from start 20.0(

Calculated Results Summary

Time (hr)	Control Status	Intake Pump Grade (m)	Discharge Pump Grade (m)	Discharge (m³/day)	Pump Head (m)	Relative Speed	Calculated Water Power (kW)
0.00	Off	304.50	327.08	0	0.00	1.00	0.00
1.00	Off	305.06	327.64	0	0.00	1.00	0.00
2.00	Off	305.62	326.26	0	0.00	1.00	0.00
3.00	Off	306.16	320.46	0	0.00	1.00	0.00
4.00	On	306.62	329.23	2,678	22.60	1.00	37.20
5.00	On	306.75	293.03	4,490	86.28	1.00	43.89
6.00	On	306.35	313.56	3,561	07.21	1.00	43.25
7.00	On	305.67	313.71	3,519	08.04	1.00	43.07
8.00	On	305.02	314.89	3,424	09.87	1.00	42.62
9.00	On	304.41	317.04	3,277	12.63	1.00	41.82
10.00	On	303.87	321.12	3,014	17.25	1.00	40.04
11.00	On	303.44	300.96	4,018	97.52	1.00	44.39
12.00	On	303.17	305.18	3,813	02.01	1.00	44.06
13.00	On	302.97	302.93	3,907	99.97	1.00	44.25
14.00	On	302.73	306.08	3,750	03.34	1.00	43.90
15.00	On	302.55	311.31	3,482	08.76	1.00	42.90
16.00	On	302.45	313.32	3,372	10.87	1.00	42.35
17.00	On	302.39	320.25	2,978	17.87	1.00	39.76
18.00	On	302.45	327.56	2,505	25.12	1.00	35.51

Detailed Report for Pump: PMP-2(D-Pump)

Calculated Results Summary

Time (hr)	Control Status	Intake Pump Grade (m)	Discharge Pump Grade (m)	Discharge (m³/day)	Pump Head (m)	Relative Speed	Calculated Water Power (kW)
19.00	On	302.65	330.11	2,332	27.46	1.00	33.67
20.00	Off	302.91	290.30	0	0.00	0.00	0.00
21.00	Off	303.19	298.88	0	0.00	0.00	0.00
22.00	Off	303.53	312.56	0	0.00	0.00	0.00
23.00	Off	303.97	323.61	0	0.00	0.00	0.00
24.00	Off	304.50	327.08	0	0.00	0.00	0.00