



STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	1 of 13	

1.0 OBJECTIVE:

To lay down a procedure for Operation and Maintenance of Fire Hydrant System.

2.0 SCOPE:

This SOP is applicable for Operation and Maintenance of Fire Hydrant System for its required periodic maintenance on the basis of check points for fire hydrant system as it is essential to ensure its perfect operational efficiency at

3.0 RESPONSIBILITY:

Officer / Executive - EHS

4.0 ACCOUNTABILITY:

Head – EHS

5.0 ABBREVIATION:

SOP	Standard Operating Procedure
No.	Number
QA	Quality Assurance
Ltd.	Limited
Kg	Kilogram
cm	Centimeter
min	Minuit
EHS	Environmental Health & Safety

6.0 PROCEDURE:

This procedure covers operation of fire hydrant and basic need of periodic inspection of water supply, pump water mains, control valves, hydrant / fixed monitors, hoses, nozzles, hose boxes and its keys.

6.1 Operation Procedure:

6.1.1 Open the hose box with its key.

6.1.2 Take out nozzle and hose pipe.

6.1.3 Spread the hose pipe by revolving its lug then fit the nozzle in the female coupling of the hose pipe in the hydrant post.

6.1.4 Open the valve of hydrant post and spray the water on the target.

6.1.5 6 kg/cm² pressure is maintained all the time in the pipe line. As soon as we open the valve fire hydrant post jockey pump will start.

6.1.6 When pressure goes down up to 4 Kg/cm² the main pump will start and when pressure goes down from 2.5 Kg/cm² diesel pump will start in case of power failure.



STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH
		Effective Date:	
Revision No.:		Revision Date:	
Supersede Revision No.:		Page No.:	2 of 13

6.1.7 After use hoses and nozzles should be properly dried before keeping it in its fixed place.

6.1.8 After completion of job, the pumps will be kept in auto mode again.

6.2 Inspection :

S.No.	Equipment	Type of Inspection	Frequency
1.	Water Reservoir	Visuals check of valve & levels	Daily
2.	Fire Water Supply	Water supplies – inspect valve	Daily
3.	Fire Pumps	Operational check Jockey Pump for 5 min.	Daily
		Operate the main pump for 30 min.	Fortnightly
		Flow Test of pumps at full capacity	Fortnightly
		Check the battery and diesel level in diesel pump on “Auto”	Daily
4.	Fire Water Mains	Test mains with pump delivering at its maximum pressure with all hydrant valves closed and thereafter, a running test with two or more hoses. This check the efficiency of the pump as well as tightness of the hydrant mains.	Monthly
5.	Control Valve		
6.		Check of cut – off valves and it’s oiling. Verify control valves are in the full open position. Turn all valves ½ turn of the wheel in the closing direction, and then reopen in the wide open position until the spring of the rod is felt. The valve is then turned ¼ turn in the closing direction.	Monthly
7.		Over handling of cut off valve to remove sludge and other foreign matter collected in the valve seating.	Annually
8.	Hydrants / Fixed Monitors	Examine systematically to ensure that valves and spring catchers are maintained in good condition and all parts polished. Does it’s Oiling and check the lugs, rubber washer, check the coupling and lugs for proper fittings. Open the hydraulic valve and check the flow. Keep spare washers for hydrant valve seats.	Monthly
		Oiling, greasing of the moving part of the monitor. Ensure that the monitor can be rotated in horizontal / vertical direction easily. Ensure that the locking mechanism on the monitor functions properly.	Monthly
		Flush the hydrants / monitors in turn periodically to remove any sediment in the hydrant line.	Quarterly

6.3 Detail list of hydrants post in **Annexure – I**.

6.4 Detail list of Hose Reels in **Annexure – II**.

6.5 To show Check Points for Hydrant System **Annexure – III**.



STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	3 of 13	

6.6 Record the Fortnight Checking Schedule of Fire Hydrant System in **Annexure – IV.**

6.7 Record the Daily Checking Report of Hydrant System in **Annexure –V.**

6.8 Record the Monthly Checking Report of Fire Hydrant Pump in **Annexure – VI.**

6.9 Record the Monthly Checking Report of Fire Hydrant System in **Annexure –VII.**

6.10 Record the Daily Checking Report of Fire Hydrant Pump in **Annexure – VIII.**

7.0 ANNEXURES:

ANNEXURE No.	TITLE OF ANNEXURE	FORMAT No.
Annexure- I	List of Hydrants Post	
Annexure-II	List of Hose Reels	
Annexure- III	Check Points for Hydrant System	
Annexure- IV	Fire Hydrant System Checking Schedule Fortnight	
Annexure- V	Daily Check Report – Hydrant System.	
Annexure- VI	Fire Hydrant Pump Monthly Checking Report Card	
Annexure- VII	Fire Hydrant System Monthly Checking Report Card	
Annexure-VIII	Fire Hydrant Pump Daily Checking Report Card	

8.0 DISTRIBUTION:

- Controlled Copy No. 01 EHS Department
- Master Copy Quality Assurance Departmental

9.0 REFERENCES:

Not Applicable

10.0 REVISION HISTORY:

CHANGE HISTORY LOG

Revision No.	Details of Changes	Reason for Change	Effective Date	Updated By
00	New SOP	Introduction of New SOP		



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	4 of 13	



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LIST OF HYDRANT POST

S.No.	Block	Area / Location	Type	ID No.
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	6 of 13	

ANNEXURE – III



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CHECK POINTS FOR HYDRANT SYSTEM

S.No.	Check Points	Frequency
1.	Condition of hose boxes and keys and its cleaning	Daily/Monthly
2.	Proper fitting of coupling and lugs.	Daily/Monthly
3.	Valve of hydrant post.	Daily/Monthly
4.	Location of nozzles in hose boxes.	Daily/Monthly
5.	No obstruction to access or visibility of the hydrant post.	Daily/Monthly
6.	Oiling and proper rolling of hoses.	Monthly
7.	Status of hose, i.e., puncture (leakage) in the hose.	Monthly
8.	Cleaning of nozzles and its boxes.	Monthly



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH
		Effective Date:	
Revision No.:		Revision Date:	
Supersede Revision No.:		Page No.:	7 of 13

ANNEXURE – IV



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

FIRE HYDRANT SYSTEM CHECKING SCHEDULE FORTNIGHT (20..... to 20.....)

S.No.	Location	Ok	Not Ok	Requirement	Responsibility	Date
1.	Near Temple					
2.	Opp. Guest House					
3.	Near ETP/STP					
4.	Near FO Tank					
5.	Near Scrap Yard					
6.	Near Back Gate (2) Inside					
7.	Near Emergency Exit No.-4					
8.	Near Emergency Exit No.-5					
9.	Near Chowk Corner					
10.	Near Gas Distribution Point					
11.	Near Transformer					
12.	Near Boiler					
13.	Near Diesel Tank (W/S)					
14.	Near Diesel Tank (E/S)					
15.	Near Dispensary					
16.	Opp. Three Piece					
17.	Near Back Gate (2)					
18.	Near HR Office					
19.	Near Main Gate Outside					
20.	Near Main Gate Outside					
21.	Back Gate Outside					
22.	Near Diesel Tank					
23.	Near Pre Treatment Water Plant					
24.	Near Fire Hydrant Pump Room					
25.	Near Water System (Block-W)					
26.	Opp. Receiving Bay (Block-P)					



PHARMA DEVILS

ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	SH	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	8 of 13	

S.No.	Location	Ok	Not Ok	Requirement	Responsibility	Date
27.	Basement of QA & QC Recycling Area					
28.	LI Coding Room					
29.	Near Ground Floor Stair (LI-I)					
30.	Near First Floor Stair (LI-I)					
31.	Near Production Stair (LI-I)					
32.	Near Service Floor Area Stairs (LI-I)					
33.	Near Entry Admin					
34.	Near MCDP Admin Office					
35.	Service Floor (LI-III)					
36.	Service Floor (DPI-I)					
37.	Service Floor (DPI-I)					
38.	Top Floor Stair (DPI-II)					
39.	Service Floor (DPI-II)					
40.	Service Floor (DPI-II)					



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STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	9 of 13	

ANNEXURE – V



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

DAILY CHECK REPORT (FIRE HYDRANT SYSTEM)

Month:

Year:

S.No.	Date →		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
	ID No of Fire Hydrant System	Check Point																																
		i																																
		ii																																
		iii																																
		iv																																
		v																																
Checked By →																																		

Note: If Observation Complies mark ✓ in specified column.

If Observation does not comply mark ✗ in specified column.

Daily Area Checking Point of Fire Hydrant System:

- | | | |
|--|--|-----------------------------|
| i. Condition of hose boxes and its cleaning. | ii. Proper fitting of coupling and lugs | iii. Valve of hydrant post. |
| iv. Location of nozzles in hose boxes. | v. No obstruction to access or visibility of the hydrant post. | |



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	11 of 13	

S.No.	Check Points	Jan	Feb	Mar	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov.	Dec.
13.	Water level in fire water tank												
Remarks													
Signature of Inspecting officer													
Signature of Officer In charge													

Note: If Observation Complies mark ✓ in specified column.

If Observation does not comply mark ✗ in specified column.



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	12 of 13	

ANNEXURE – VII



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

FIRE HYDRANT SYSTEM MONTHLY CHECKING REPORT CARD

ID No.: _____ **Location:** _____ **Year:** _____
Schedule: Second Week of Every Month **Frequency:** Once in a Month

S.No.	Check Points	Jan	Feb	Mar	Apr.	May	Jun	July	Aug.	Sep.	Oct.	Nov.	Dec.
1.	Condition of hose boxes and keys and its cleaning												
2.	No obstruction to access or visibility of the hydrant post.												
3.	Valve of hydrant post.												
4.	Oiling and proper rolling of hoses.												
5.	Status of hose, i.e., puncture (leakage) in the hose.												
6.	Location of nozzles and boxes of nozzles.												
7.	Cleaning of nozzles and its boxes.												
8.	Proper fitting of coupling and lugs.												
Remarks													
Signature of inspecting officer													
Signature of officer In charge													

Note: If Observation Complies mark ✓ in specified column.
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ENVIRONMENT HEALTH SAFETY DEPARTMENT

STANDARD OPERATING PROCEDURE

TITLE: Operation and Maintenance of Fire Hydrant System

SOP No.:		Department:	EHS	
		Effective Date:		
Revision No.:		Revision Date:		
Supersede Revision No.:		Page No.:	13 of 13	

ANNEXURE – VIII



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ENVIRONMENT HEALTH SAFETY DEPARTMENT

FIRE HYDRANT PUMP DAILY CHECKING REPORT CARD

MONTH:

YEAR:

S.No.	Date →	ID No. of Fire Hydrant Pump	Check Point	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
			i																															
			ii																															
			iii																															
			iv																															
			v																															
			vi																															
			vii																															
			viii																															
			ix																															
			x																															
			xi																															
Checked By →																																		

Note: If Observation Complies mark ✓ in specified column.

If Observation does not comply mark ✗ in specified column.

Daily Area Checking Point of Fire Hydrant Pump System:

- | | | |
|--|--|---|
| i. Condition of in diesel tank and coolant. | ii. Battery charging and pump pressure is proper. | iii. Controller is in automatic. |
| iv. Key of diesel pump. | v. Water level in fire tank. | vi. Free Fire/ Combustible material. |
| viii. Suction valve is on | ix. Pump room is clean. | x. Discharge valve is open |
| | | xi. Available extinguisher. |