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WATER AND SANITATION AGENCY (FDA) FAISALABAD

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NOTIFICATION

SEWERAGE AND DRAINAGE FAISALABAD REGULATIONS – 2015

In exercise of the powers conferred under Section 44 of the Punjab Development of Cities Act, 1976, the Governing Body of Faisalabad Development Authority, Faisalabad in its 91st meeting held on 21/05/2015 is pleased to frame the regulations namely Faisalabad Development Authority (Water and Sanitation Agency) Faisalabad – Sewerage and Drainage Faisalabad Regulations, 2015.

SEWERAGE AND DRAINAGE FAISALABAD REGULATIONS – 2015

PART – I

DEFINITIONS

1. Short Title-

These regulations shall be called the Faisalabad Development Authority (Water and Sanitation Agency) Sewerage and Drainage Regulations 2015.

2. Commencement –

These Regulations shall come into force in Faisalabad at once.

3. Definition –

In the regulation unless there is anything contrary to the Subject to Context:-

“**Agency**” means the Water and Sanitation Agency established under Punjab Development of Cities Act 1976. WASA is the brief name of the Water and Sanitation Agency.

“**Drains**” means any drain, channel, gutter or pipes intended to collect, convey or dispose drain water, storm water, seepage water or waste liquid (not being waste liquid, discharged into water borne sanitary installation) and shall include fittings and apparatus such as lavatory basin, bath or sink, the water liquids of which are discharged into any such drain, channel or pipes together with the pipes, connection, traps, gullies all other parts thereof.

“**Drain Installation**” means any drain, channel, gutter or pipes intended to collect, convey or dispose of rain water, storm water, seepage water or waste liquids.

“**Engineer**” means an Engineer; an employee of the Water and Sanitation Agency of the Faisalabad Development Authority for the purpose of enforcement of these regulations and shall include any officer or official deputed by the Engineer to act for him.

“**Regulations**” means the Faisalabad Development Authority (Water and Sanitation Agency) Sewerage and Drainage Regulations 2015.

“**Sewer**” means any conduit or pipe provided for the conveyance of the semi-solid or liquid waste of a community otherwise known as sewerage, such as conduit or pipe being the property of or vested with the Agency.

“**Sullage or Sullage Water**” is the same as sewage for the purposes of these regulations except that sewage is called sullage when it flows open at atmosphere.

“**User**” means any person, institution, organization or concerned who in agreement with the Agency shall be entitled to use the facilities of the sewerage and drainage system in accordance with the terms of such agreement.

“**Water Main**” means a water pipe or conduit carrying water for public use which is owned and operated by the Agency.

“**Water-borne Sanitary Installation**” shall mean—

- (i) Any urinal, latrine, water closet, apparatus, slop sink reinstallation or other similar fitting, the semi-solid or liquid filth which is intended to be discharged by a flush of water and shall include all manholes, traps, gullies, soil pipe,

waste pipes, ventilation pipes and drain water borne sanitary installation to a public sewer, or to septic tanks or other treatment or disposal works into such drains may lawfully empty.

- (ii) Any septic tanks, absorption pit, or other treatment, disposal works, if provided in the premises or intended to deal with or dispose of the liquid and or semi-solid filth from the said water borne sanitary installation.
- (iii) Any apparatus such as a lavatory basin, bath or sink the waste liquid which is discharged or intended to be discharged into the pipe or drains of any water-borne sanitary installation together with the pipes, connections, traps, gullies, drains and all other parts thereof.
- (iv) Any and every addition to, partial construction, reconstruction or installation of a building or any other premises as defined above.

“Effluent” means waste water discharged from point sources which enters a body of water or upon land, or waste water arising as a byproduct of any use.

“Private Housing Scheme” means a private housing scheme approved by the FDA/TMA.

“Sewage” means any liquid discharges containing human excreta, animal or vegetable matters in suspension or solution derived from domestic activities and being generated from household, commercial, institutional, industrial premises and surface runoff including liquid discharges from water closets, basins, sinks, bathrooms and other sanitary appliances but excluding prohibited effluent.

“Sewerage” or **“Sewerage System”** means a system of collection of waste water from an area including its houses, institutions, industries and public places; the pumping, treatment and disposal of such waste water, effluent, sludge, and other and products.

PART – II

APPLICATION AND GENERAL PROVISIONS

4. Existing Installations –

Any water borne sanitary or drainage installation transferred to the Agency under the Act and lawfully exist on the date on which these regulations come into force shall be deemed to be made under these regulations and be subject to all the provisions herein contained for all purposes.

5. Application for Installation-

- (a) No person shall carry out any water borne sanitary or drainage installation work or make, cause or permit any private connection pipe or sewer to connect directly or indirectly in any new or existing building or in any Agency sewer without first obtaining written permission of the Agency.

- (b) Application for a new connection shall be submitted on the form specially designed which can be obtained from any sub division office of the Water and Sanitation Agency on payment of the prescribed fee.
- (c) A new sewer or drainage connection will only be allowed on the request of or with the approval of the owner of the property. If ownership lies with any Trust, the connection will be made only with the permission of the Trust. Provided that a tenant or such other person occupying the premises or a part of the premises not owned by them may apply for a domestic supply of water with the approval of the owner but such connection will always be sanctioned in name of the owner. Upon transfer of legal ownership the property, the responsibility lies with the new owner to intimate WASA in order to change the billing name of the consumer.
- (d) Sewer or drainage connection will not be sanctioned if ownership of property is disputed.

6. False or Incorrect Description in the Application

In case the entries made in the application or documents attached with it are found false or incorrect at a later stage, WASA has the right to disconnect the sewerage or drainage connection without any notice and confiscate the security amount deposited by the consumer. If there are any further dues payables by the consumer, he will have to clear the same in any case. The facility of sewerage or drainage shall resume only after submission of correct information / description of particulars in accordance with these regulations.

7. Deposit of Plans –

The user shall deposit with the application request two copies of as-built plans and sections clearly and indelibly drawn on a durable material to a scale of not less than one inch to eight feet (which shall be clearly marked on each drawing) which shall show thereon every floor of the building in connection with which such water borne sanitary installation, or drainage installation is to be used. The position, form level and arrangements of the several parts of such buildings shall be shown including the roof and the size, position and type of every drain, manhole, gully, soil pipe, waste pipe, and ventilation pipe of every drain passing under such building.

The type and position of every bath, water closet, slop sink, latrine, urinal, lavatory basin and trap in connection therewith and the position, type and dimensions of every septic tank, absorption pit or other disposal or treatment work proposed to be installed in connection with the foregoing shall be shown.

Also the plans shall show the positions, type of construction and size of all water tanks, reservoirs intended to be used in connection with the building. The position of all windows and other openings into the building shall be shown together with the position of all chimneys belonging to the building with a distance of 30 feet from the open end of a soil pipe or ventilating pipe.

8. Connection Requirements –

The connection may not be given unless following conditions are fulfilled:

- (a) Adequate sewerage or drainage facilities are provided to the satisfaction of the Engineer.
- (b) A written consent of the owner giving his Computerized National Identity Card (CNIC) number issued by the Government of Pakistan is provided.
- (c) The prescribed charges including but not limited to inspection fee, connection fee, security deposit and advance rate or any other fees imposed by Agency have been deposited.
- (d) The deposit as per clause (c) shall be in accordance with the scale which may from time to time be fixed by the Agency.
- (e) For house of 15 marlas or more construction of septic tank is mandatory. Each house having total plot area 15 marlas or more should have a septic tank in its premises. The waste water from the house will first enter the septic tank and then from septic tank it will enter the Agency's sewer (WASA sewer).
- (f) Waste water treatment plant is mandatory for industries releasing toxic effluent in WASA sewers/drains.

9. Inspection of Premises -

Presentation of the new connection application shall be deemed to authorize the Engineer to enter the premises after reasonable notice and to examine or test the applicants pipes, fitting, gullies, manholes, septic tanks, absorption pit or other disposal or treatment work etc. with which connection is to be made and also for inspection and testing any apparatus belonging to the Agency on the applicants premises.

10. Approval of Application –

The Engineer shall, within ten days of the deposit of the notice and such plans and sections as may be required, inform in writing the person who gives such notice as to whether such plans and sections are approved or not.

11. Alteration of Applications –

The Engineer may direct such person to make any alterations or improvements which appear to be necessary or desirable and the person shall alter the plans and sections accordingly.

12. Approval to be Cancelled –

If the work described in the application is not commenced within one year from the date of notice of approval of such plans, the approval shall be deemed to be cancelled.

13. Unlawful Commencement of Work –

Any person who without first obtaining the consent of the Engineer in writing commences any such work before the plans and section have been approved shall be liable to a penalty under these regulations. The Engineer on behalf of the Agency may discontinue the use of or demolish or otherwise remove any obstruction, private connection pipe drain or sewer.

14. Plans on Site –

When the plans and sections have been approved, one copy thereof shall be returned to the applicant and one copy shall be retained by the Engineer. The applicant's copy of the plans shall be kept at the site of the work at all times when the work is in progress and shall be available for the inspection by the Engineer.

15. Emergency Alteration –

Any person who is about to carry out a minor alteration to a water borne sanitary installation which must be carried out at once, shall, in lieu of depositing the plans, sections and particulars referred to in the foregoing regulations, forthwith send to the Engineer a notice in writing of any such proposed alteration. He shall within fourteen days of the commencement of such alteration, make the deposit required by the regulations.

16. Non Domestic Sewerage and Drainage Services –

- 1) A request for the grant of a sewerage and drainage service for non-domestic purposes shall be made in the same manner as for a domestic service.
- 2) A non-domestic sewerage and drainage service shall include a service for but not limited to;
 - (i) Any trade, manufacture, or business
 - (ii) Construction and building purposes
 - (iii) Washing vehicles
 - (iv) Swimming pools
 - (v) Any environmental and mechanical purposes

17. Discontinuity of Sewerage and Drainage Services-

The Engineer reserves the right to discontinue sewerage and drainage service due to including but not limited to;

- (a) Any ongoing emergency or planned repair / improvement works
- (b) Increase in discharge in excess of the rated discharge of industry
- (c) Rain emergency
- (d) Environmental and health hazard
- (e) Financial default

**PART – III
INSTALLATION AND MAINTENANCE OF
WATER BORNE SANITARY SERVICES**

18. Maintenance of Sanitary Installation and Drainage Installations –

The owner or the occupier of any premises connected to an Agency sewer or drain shall at all times maintain in a clean and sanitary condition and in a proper state of repair and in good working order and conditions the whole of the water borne sanitary installation and drainage installation relating to the said premises. Failure to do shall be an offence under these regulations.

19. Altered or Defective Installation –

If any such water borne sanitary or drainage installation in the opinion of the Engineer:-

- (a) is constructed, altered, added to or used contrary to these regulations;
- (b) is or becomes of bad or defective quality of construction or is choked or obstructed or is placed or situated in a position contrary to these regulations;
- (c) is required to be removed, extended, cleaned, repaired or disconnected from the sewer or drains of the Agency;
- (d) is causing damage to the property of the owner, of a neighbor, subjecting property or infrastructure of any kind to deterioration from the said installation;

the owner or occupier of the premises to which the installation belongs, shall upon service on him of notice in writing signed by the Engineer, reconstruct, renew, remove, alter, extend, clear, repair, clear the obstruction or disconnect same from the sewer or drain of the Agency within the time specified in such notice.

20. Notice to Connect the Sewer or Drain –

The owner of property may be required to execute any work with such material within such time and in such manners as may be directed by the Engineer to connect the water borne sanitary or drainage installation of the said premises to sewer or drain of the Agency. Failure to comply with these requirements shall be an offence under these regulations.

21. Level of Lowest Storey –

Every owner who create a new building shall construct the lowest storey of such building at such level or make arrangements as will allow the construction of a drain sufficient for the effectual drainage of the building and the provision of the requisite connection with any sewer to which such drain may lawfully empty at a point in the upper half of such sewer, or with any other means of drainage with which such drain may lawfully connect.

22. Connection to Sewer –

Every owner or occupier who carries out water borne sanitary installation work for any new or existing building or in any other premises shall connect by means of a drain or drains with an Agency's sewer of adequate size for the full discharge of the said water borne sanitary installation.

23. Connection to Septic Tanks –

Where Agency sewers do not exist, the water borne sanitary installation may be connected to a septic tank or other means of disposal of semi-solid and liquid waste after first obtaining the approval of the Engineer. The internal main sewer shall be connected to the approved disposal facilities to be provided on the said premises and the owner shall be responsible for the disposal of the solid and liquid waste on the premises of the said building without nuisance or danger of health / environment.

The effluent from the septic tank may be disposed of by sub-soil irrigation through open pipes laid under land belonging to the said premises or into suitably lined absorption pits providing that no domestic water supply is taken from the sub-soil water.

24. Disposal of Discharge –

The owner or occupier of premises shall not cause the discharge from any water borne sanitary installation, absorption pit or septic tank to pass into any surface drain, storm water channel, storm water drain, irrigation water channel, cesspool, unlined absorption pit or over the surface of any or otherwise in any manner not in accordance with these regulation.

25. Inlet and Outlet of Baths and Trough –

(a) Every inlet to a bath, wash-basin, sink or similar application shall be separated from and unconnected with any outlet there-form.

(b) Every outlet from emptying a bath (other than a shower bath), wash-basin, sink or similar appliances shall be provided with a readily accessible watertight plug or with some other no less effective device for closing the outlet: Provided that this paragraph shall not apply to:

(i) Any appliance required by law to be fitted with an unplugged outlet:
or

(ii) Any appliance to which water is delivered exclusively by a fitting or fittings so designed and arranged as to be incapable of delivering water to that appliance or in the case of washing trough any unit thereof at a rate exceeding 5 pints per minute.

(c) Every fitting for delivering water to a washing trough shall be so designed and arranged as to be capable of discharging water to one unit of the trough without simultaneously discharging it to other units.

Note- In this regulation

“**Washing Trough**” means a wash basin, trough or sink measuring internally 4 feet or more over its longest or widest part.

“**Unit**” in relation to such a trough means 2 feet of the length of the trough, or in the case of a circular or oval trough.

26. Discharge Level –

- (a) Every tap or fitting (other than the flushing pipes of a flushing cistern) which discharge water into a bath, wash basin, sink or similar appliance shall be so fitted that it cannot discharge less than ½ inch above the lowest part of the top edge of an appliance. Except that a fitting to which a loose pipe is or may be attached may discharge at a lower level providing that there are effective means of preventing syphonage of water back through every pipe conveying water to the fitting.
- (b) Any fitting may be so installed that it can discharge lower than the above level, if every pipe conveying water to that fitting:-
 - (i) draws water only from a storage cisterns, cylinder or tank having a vent open to the atmosphere and;
 - (ii) is connected to the cistern, cylinder not less than 1 inch above the lowest part of the top edge of the appliance; and
 - (iii) does not convey water to any draw off tap or fitting (other than a draining tap) which discharges water lower than the last mentioned level.

27. Flushing Cisterns to Closets and Urinals –

Every water closet pan and every urinal shall be provided with a flushing cistern or some other efficient flushing apparatus. The cistern or apparatus shall be separate and distinct from any cistern or an apparatus used for drinking purpose. It shall be constructed, fitted and placed to admit the supply of water so that there is no direct connection between any water service pipe upon the premises other than that connecting with flushing cistern or apparatus. Except with the approval of the Engineer, the cistern shall be placed as to provide a head of at least 5 feet measure from the bottom of the cistern to the point where the flush pipe enters the water closet.

Every flushing cistern shall be provided with a suitable ball cock fixed on the supply pipe and on overflow warning pipe which will discharge into the open air in a conspicuous position where the discharge of water may be readily seen.

28. Pipes to Water Closet Pans –

No pipe other than a flushing pipe leading only from flushing apparatus, shall be connected in such a way that it can deliver water to any water closet pan or urinal.

An overflow warning pipe may be arranged if necessary to discharge into the pan of a water closet or into a urinal but only if the water is discharged into the air not less than 6 inches above the top edge of the pan or urinal.

29. Capacity of Flushing Cisterns –

- 1) No flushing cistern or other flushing apparatus having a urinal shall be of such a design or be so arranged as to give a flush of more than 1 gallon per liter per 2 feet 3 inches width of slab (except with the upward variation permitted by one or other of the British Standards specified in paragraph (2) of this regulation).

- 2) Every such flushing cistern shall comply with British Standard 1876:1990 "Automatic Flushing Cisterns for Urinal", or with British Standard 1125:1987 "W.C. Flushing Cisterns (including dual flush cisterns and flush pipes)".

30. Automatic Flushing Apparatus –

Except with the written permission of the Engineer, user shall not construct or fix any self-acting or automatic flushing apparatus. In those cases where sanction is accorded for automatic flushing, he shall submit for the approval of the Engineer detailed specification and drawings to show the size of the apparatus, the material of which it is to be made and method and frequency of its operation, and shall modify the apparatus as may be required by the Engineer.

31. Size of Flushing Pipe –

The pipe and union connecting the flushing cistern of a water closet or latrine with the basin, trough or other receptacle shall have an internal diameter of not less than 1¼ inches and shall be fixed virtually as near as possible.

32. Traps and Gullies –

Every person who constructs water borne sanitary installation or any part thereof, in any existing or new building, or any other premises shall cause all gullies traps, gratings, covers and other appliance to be of a pattern, size and quality approved by the Engineer / conforming to standard BSEN 1253:2003. He shall cause every stoneware gully to be placed on a bed of cement concrete at least 4 inches thick and act so that the water level therein is at least 12 inches below and the grating at least one inch below the surrounding pavement. The pavement shall be sloped towards the gully for a pace equal to half of the width of the grating. Every gully trap shall be covered with iron grating provided with a hinged cover of approved design.

33. Drains to be Trapped –

Every person who constructed water borne sanitary installation or any part thereof for any existing or new building or in any other premises, shall provide in main drain or other drain of such building or premises which may immediately connect with sewer, septic tanks, or other disposal or treatment works, a suitable and efficient intercepting trap at such distance as may be practicable from the point at which the drain may be connected with the sewer, septic tank or other disposal works.

34. Drain Screen –

An open surface drain shall not be connected to the Agency sewer without a bar screen of approved design being provided at a suitable point. This may be carried out only up to the period when the storm water drainage is made completely separated from sewerage system and storm water drains use is limited to rain water only.

35. Access Manholes –

Every person who constructs water borne sanitary installation or a part thereof for any existing or new building or in any other premises shall provide access manhole at a suitable point on the premises as directed by the Engineer. The manhole shall be right up to the level of the adjoining ground surface or roadway and shall be fitted with a suitable iron or reinforced concrete cover and frame. If placed within a building it shall be fitted with an airtight cover and frame.

36. Size of Pipe --

All pipes used in water borne sanitary or drainage installation shall be capable of passing the maximum estimated flow and shall have internal diameter of not less than 4 inches. Providing that the internal diameter of the pipe connecting the access manhole to the Agency sewer shall have an internal diameter of not less than 6 inches. The slope of the pipe line shall be maintained such that the velocity of sewage is more than 2 ft. / sec.

37. Ventilation Pipe –

- (a) Every water closet shall have its soil pipe which connects to sewer, tanker, other disposal or treatment works properly and adequately ventilated. Multiple water closets connected with a common soil pipe may use a non-vent pipe.
- (b) The ventilation pipe of every such water closet shall be vented into the open air at a point above the highest water closet connected with such pipe.
- (c) The ventilating pipe shall have an internal diameter of not less than 2 inches and shall be connected with the arm of the soil pipe or trap at a point not less than 3 and not more than 12 inches from the highest part of the trap and on the side of the water seal, which is nearest to the soil pipe, the joint between the ventilating pipe and the arm of the soil pipe or trap shall be made in the direction of the flow.
- (d) Slop sinks, urinal and other sanitary fittings shall be vented in a manner approved by the Engineer.
- (e) Water seals shall be provided of adequate depth so that they cannot be broken under the maximum expected vacuum in the system.

38. Ventilation of Closet Area –

Every water closet room or area shall be provided with adequate means of constant ventilation by means of an air brick built into an external wall of such water closet, or by an air shaft or some other effective method of ventilation. The area of the means of constant ventilation shall be not less than 38 square inches.

39. Pump Directly Connected –

No user shall be permitted to install a pump either mechanically or manually operated on water borne sanitary installation which discharge into a sewer connection or direct to a sewer of the Agency. Any user violating this shall be liable to the penalty as per Clause No. 77.

40. Air Gaps –

All water borne sanitary installations shall be provided with sufficient air gaps above the level of their over flows so that any back flow into the drinking water supply system is avoided.

PART – IV

**SPECIFICATION FOR THE CONSTRUCTION OF
WATER BORNE SANITARY INSTALLATIONS**

41. Excavation Laying and Fixing –

- (a) The material from the excavation shall be so placed as to cause the least possible obstruction and inconvenience to the public.
- (b) Proper barriers and lights shall be maintained where necessary to guard against accidents during the progress of the work. On completion of refilling, the surface shall be restored as early as possible to the same condition as it was before the commencement of excavation unless the Engineer in writing otherwise requires. The formal approval for dismantling of pavement from concerned authority shall be obtained by the consumer.
- (c) Unless otherwise approved, any pipeline connecting water borne sanitary installation with an Agency's sewer shall be laid in a straight line between the premises and the sewer. Any changes in direction shall only occur within an access manhole constructed to accommodate the change.

42. Connection to Sewer –

Each property shall have a separate and distinct connection to the Agency's sewer provided that where the Engineer approves, more than one property may be connected through a common outlet pipe in such manners as the Engineer may determine. The consumer must ensure that due to connection activity, the normal operation of sewerage system is not affected. In case of any debris dropping into WASA sewer main holes / drains or other installation, it must be removed immediately by the consumer at his own expense.

43. Pipe Laying –

- (a) Every pipeline constructed in connection with water borne sanitary installation shall be laid to correct line and level and the barrel of each pipe shall be fully supported on compacted granular material or compact brick ballast on undisturbed ground. Where pipeline is to be laid on disturbed or backfilled ground, the ground shall be properly compacted to the satisfaction of the Engineer and then granular material or brick ballast shall be compacted before pipeline laying is undertaken. All pipeline sockets shall be laid against the direction of flow.

- (b) Every pipeline joint shall be made in accordance with accepted practice and to the approval of the Engineer. Every joint shall be water tight and on completion of the pipeline it shall be tested in accordance with the regulations and to the satisfaction of the Engineer.
- (c) Where a pipeline has less than 2 feet of cover between the top of the pipe and the ground surface, it shall be surrounded with 6 inches of concrete and to such further extent as the Engineer may require.

44. Pipeline Test –

When each length of pipeline between access points has been laid, the pipeline shall be tested to the satisfaction of the Engineer before the excavation is backfilled. Tests shall be carried out by subjecting the pipeline to a smoke test or a hydrostatic pressure test in accordance with the Engineer's requirements. Any faulty joints revealed by the test shall be made good and the pipeline retested to the satisfaction of the Engineer.

45. Back Filling of Excavation –

Backfilling of pipeline excavation shall be carried out by placing the excavated material around the pipe and carefully compacting so that the pipes are adequately supported and protected. Stones or other hard material shall be excluded from the backfill and only soft material shall be placed in contact with the pipes.

The excavation shall then be completely backfilled in layers of 6 inches, each layer being thoroughly compacted before the succeeding layer of backfill is applied. Backfill shall be carried out manually.

46. Notice of Completion –

Every person who carries out any water borne sanitary installation or drainage installation or any work in connection therewith for any existing or new building or in any other premises shall give the Engineer notice in writing stating the date and time at which such work will be ready for final inspection and where necessary, for final inspection with any existing sewer, or storm water or surface drain vested in the Agency. The notice shall be delivered to the Sub Divisional Office of the Agency at least two days before the date stated therein.

47. Inspection –

Every person who carries out any water borne sanitary installation or sewerage installation or any works in connection therewith for any existing or new buildings, or in other premises shall afford the Engineer free access to such installation of work in progress for the purpose of inspection. The Engineer shall see that the requirements of the regulation are applied but such inspection shall not relieve the person of his obligation to comply with the regulations. The Engineer shall point out to the user any faults in construction or quality of material and the user shall rectify such fault to the satisfaction of the Engineer.

PART – V
SPECIFICATION OF MATERIAL

48. Pipe Materials –

All pipes in water borne sanitary or drainage installation shall be of RCC conforming to ASTM C76:13 / ASTM C506:13 / ASTM C14:11, stoneware, cast iron, asbestos cement conforming to ASTM C428:05 / ASTM C663:08, PVC conforming to ASTM D2729:11 / ASTM D3034:08 / ASTM F679:08 or such other material as the Agency may from time to time approve.

49. Quality of Material –

- (a) All material, pipes, bends, junctions and fittings shall be of the quality of their respective kinds, free from defects and of the kind or standard approved from time to time by the Engineer.
- (b) (ii) Second hand material may be used only with the prior approval of the Engineer and on written request of the owner of the property, provided that such materials comply with the requirement of the regulation with regard to construction type, quality, soundness and efficiency.

50. Approved Material –

No person shall use any material in or for any work of water borne sanitary drainage installations which have not been approved, or which do not comply with the requirements of these regulations.

51. Pipe and Fittings –

Pipes and fittings used in water borne sanitary installation or drainage installation shall be regular in section, smooth, clean and free from obstruction to the water and shall comply with the requirements of the relevant British Standard and ASTM specification relevant to such pipes and fittings.

52. Jointing Material –

Jointing material used in connection with joints on cast iron with cement and PVC pipes shall comply with the pipe manufacturer's requirements.

53. Cement Mortar –

Cement mortar unless otherwise ordered by the Engineer shall be, by volume or by weight, of one part of ordinary port land / sulphate resisting cement and two parts of clean sharp sand and thoroughly mixed with an approved portion of clean water.

54. Cement –

Cement used in any water borne sanitary installation or drainage installation be ordinary port land cement / sulphate resisting of approved brand and shall be submitted for test if so required by the Engineer. No cement or concrete shall be used which has been mixed longer than one hour. Appropriate admixtures approved by the Engineer depending upon the circumstances shall be used.

55. Concrete –

Concrete unless otherwise ordered by the Engineer shall consist by volume or by weight of one part Portland cement, two parts clean sharp sand and four parts approved hard gravel not exceeding 1½ inch nominal gauge and shall be thoroughly and homogeneously mixed with clean water to such an extent as may be ordered or approved by the Engineer. In special circumstances if required by Engineer, sulphate resisting cement (SR) and / or chemical admixtures shall be used.

PART – VI

STORM WATER DRAINAGE AND SULLAGE WATER

56. Sullage Water –

No person shall connect his sullage water with any storm drain or discharge it on open land. Failure to comply with this requirement shall be an offence under regulations.

57. Encroachments –

No Person shall cover or encroach upon any storm drain or sewer or on the land adjoining them belonging to the Agency. If any encroachment obstructs cleaning operations it shall be removed and the encroacher shall not have any claim for compensation in respect thereof.

With the permission of the Agency, a person may cover a storm drain at his own cost, but a request shall be submitted to the Agency in advance of the work being carried out and the work shall be subject to such conditions and requirements as the Agency may impose.

58. Theft of Sullage Water –

Use of Sullage water for irrigation without paying revenue to Agency, shall be theft of public property. Moreover, sewage cannot be used for growing vegetables.

59. Blockage of Storm Water Drains –

Dumping of rubbish, waste material or any other items into storm drains is strictly prohibited.

60. Interference with Treatment Plants –

The Agency reserves the right to sell sewage for use of irrigation as per its own discretion. People who have entered into agreement with the Agency to obtain effluent from a sewage treatment plant of the Agency shall not interfere into the running of the Plant in any manner.

**PART – VII
PROTECTIVE MEASURES**

61. Inspection of Material and Works –

- (a) All materials, pipes, fittings and apparatus shall be approved by the Engineer and where required by him shall be submitted to the Agency for verification and test.
- (b) No person shall cover up or conceal from view or put into use any water and sanitary installation work or drainage work until it has been inspected and approved by the Engineer.
- (c) Every person and his employees carrying out or engaged on or in connection with water borne sanitary or drainage work shall afford every reasonable facility and information to enable the Engineer to make his inspection. The Engineer shall ensure the inspection of material and works within two days after receiving the inspection request.

62. Unauthorized Connection –

If any unauthorized connection is discovered, the owner shall, on being served with a notice in writing by the Engineer, have the connection regularized by paying the prescribed fee and penalty subject to the connection complying with the requirements of these regulations. Otherwise the connection shall be removed by the Agency at the cost and risk of the owner.

63. Damage to Sewer or Drain –

Any person who damages a sewer or storm water drain of the Agency shall be guilty of an offence under these regulations and besides criminal liability, shall be liable to pay the cost of repair to the Agency.

64. Interference with Duties –

Any person who obstructs or hinders an official of the Agency in performance of his duties shall be guilty of an offence under these regulations.

**PART – VIII
INDUSTRIAL WASTES**

65. Discharge of Industrial Wastes –

Industrial wastes that are likely to affect the normal quality of sewage or adversely affect the sewers shall not be discharged into the Agency's sewers. Industrial liquid waste shall conform to the criteria set by NEQS (National Environmental Quality Standard) and EPA (Environmental Protection Agency) Pakistan. All the industrial effluent shall be treated by the consumer by making his own arrangements.

66. Quality of Sewage –

The normal quality of sewage shall be considered to have been affected if any of the following qualities exceed the limits notified in the National Environmental Quality Standard (NEQS).

- (i) PH (Hydrogen Ion Concentration).
- (ii) Total Dissolved Solids.
- (iii) Total Suspended Solids.
- (iv) Biochemical Oxygen Demand. (BOD & COD)
- (v) Temperature.
- (vi) Color.
- (vii) Coliform Organisms and other bacteria.
- (viii) Toxic Contents.

67. Hazardous Waste –

No person is allowed to discharge into Agency sewer any prohibited effluent containing

- a) any noxious, volatile or inflammable substance or any other matter likely to damage or impair the functioning of any Agency's sewer or Agency's sewage treatment plant or to interfere with the free flow of its contents or to affect prejudicially the treatment or disposal of its contents.
- b) any effluent, matter or substance from a garbage grinder.

68. Pretreatment of Industrial Waste

Agency must order a manufacturer to treat his industrial waste at his premises to the criteria set by NEQS (National Environmental Quality Standard) and EPA (Environmental Protection Agency) Pakistan before he is allowed to discharge it into the Agency sewer. The decision of the Agency, in this respect, shall be final and binding on the manufacturer.

69. Discharge to River—

No manufacturers shall discharge his waste into a river / drain if the same is likely to adversely affect the normal quality of river water and its self-purification capacity to the extent that aquatic life is endangered and the recreation or any other use of river water is adversely affected.

70. Discharge into Sub-Soil –

No manufacturer/consumer shall be authorized to dispose off any waste into the sub-soil. He is also required to ensure non-occurrence of waste water seepage through his network into sub-soil. Any manufacturer violating this clause shall be liable to a penalty and conviction.

71. Details of Waste –

- (a) Every manufacturer shall submit to the Agency, the analysis of any industrial waste that is likely to be discharged into the Agency's sewer. The Agency may also require the manufacturer to submit details of any proposed discharge of waste into the Agency's sewer before an industry is set up.
- (b) The details supplied by the manufacturer shall indicate the quality, volume and maximum rate of flow of industrial waste proposed to be discharged into the Agency's sewer and shall also indicate the date by which the industrial waste is likely to commence discharging.

72. Power to Take Samples

The Agency shall be entitled to enter at any time the consumer's premises with a connection to the Agency's sewer, and take a sample of industrial waste for examination purpose and if its results are considerably different from those registered by him or exceed the National Environmental Quality Standards for Municipal and Liquid Industrial Effluent, the Engineer may require its improvement to the satisfaction of the Engineer, or otherwise disconnect the line.

73. Industrial Water Agreement –

The manufacturer may enter into an agreement with the Agency for the conveyance, treatment and disposal of industrial waste at Agency's plant provided that:-

- (a) The Agency's order regarding treatment of waste at the consumer's premises have been fully complied with.
- (b) The manufacturer agrees to pay any expenses arising from the conveyance of his industrial waste through the Agency's sewer and treatment and disposal of such wastes at the Agency's plant; and
- (c) The industrial waste does not contain any toxic or radio-active substance that are really to be hazardous to workmen in charge of the maintenance of sewer and the sewage treatment plant of the Agency.

**PART – IX
ADDITIONAL INSTRUCTIONS**

74. Defective Work –

All pipes and fitting which on inspection or test are found to be defective shall be removed and replaced by sound, approved pipes and fittings and all leaking or defective joints shall be made watertight and good by the user.

75. Disused Services –

Where any water borne sanitary or drainage installations connected with the Agency's sewer is abandoned or fall into disuse, the owner shall remove or disconnect it and shall seal it at the point of disconnection with the sewer to the satisfaction of the Engineer.

76. Penalties –

Any person contravening any of these regulations shall be liable, on primary conviction, to a fine not exceeding a sum of Rs. 5,000/- (Rupees five thousand) to Rs. 100,000/- (One hundred thousand rupees) in respect of each offence in addition to cost of destruction and in the case of continuing offence, to a further fine not exceeding Rs. 100/- for each day during which the offence continues after conviction thereof.

77. Tampering of sewerage system or part of the system

A person who tampers with any pipe, channel, conduit or structure, sewer, manhole, chamber, fixture and equipment, including any valve or any part of a sewerage system commits an offence and shall, on conviction, be liable to a fine not exceeding Rs. 25,000/- (Twenty five thousand rupees) or to imprisonment for a term not exceeding six months or to both.

78. Illegal sewer connection

If any illegal sewer connection is found it will be regularized by imposing penalty equal to one year bill.

79. Illegal Re-connection

If any illegal sewer re-connection is found it will be fined upto Rs.10,000/- (Ten thousand rupees) or one month imprisonment or both.

**For and on behalf of
Faisalabad Development Authority**



**MANAGING DIRECTOR
WATER AND SANITATION AGENCY
(FDA) FAISALABAD**