Rajasthan State Industrial Development & Investment Corporation Ltd.,
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CIRCULAR

Sub.: Guidelines to be followed for maintenance of water supply network of Industrial Areas for prevention of contamination from wastewater/ industrial effluent.

Enclosed are the Guidelines to be followed for maintenance of water supply network (pipe lines) of Industrial Areas for prevention of contamination from wastewater/ industrial effluent. Same has been framed for proper water supply in RIICO Industrial Areas. All unit heads are enjoined to follow these guidelines and adhere to the time frame mentioned for each action.

Top priority be given to this Circular and any laxity in this regard will be viewed seriously.

(Archana Singh)
Executive Director

Encl.: As above

Guidelines to be followed for maintenance of water supply network of Industrial Areas for prevention of contamination from wastewater/ industrial effluent

(A) REPLACMENT OF PIPELINE PRONE TO CONTAMINATION (DETERIORATED/DAMAGED)

AC pressure pipe lines (ACPP) have been laid in water supply network in most of the Ind. Areas. It has been observed that deterioration of ACPP over the years have resulted in potential point of leakages in the water supply network. Unit shall make on-site assessment of condition of existing pipeline prone to the contamination by wastewater/ industrial effluent. Potential threat of pollutant entering the water supply network be detected and suitable plan for replacing the pipes with uPVC pipes may be proposed.

Unit shall replace the deteriorated ACP pipe lines with uPVC pipe without hampering the water supply. If substantial pipelines replacement is necessitated, strategy of phased manner be planned for minimal disturbance to water supply of the area.

Action: Faulty portions (stretches) of the pipeline should be replaced within 30 days of identification.

(B) CROSS CONNECTIONS

Contaminated water through cross connections of water supply lines with sewers and drains is a problem prevailing widely. Intermittent supply further aggravates the problem since, during non supply hours polluted water may reach the supply mains through leaking joints, thus polluting the supplies. In certain instances, when there are extremely high water demands, the pressures in the supply mains are likely to fall below atmospheric pressure, particularly when consumers start use of pumps with direct suction from supply mains. Regular survey has to be undertaken to identify potential areas likely to be affected by cross connections and back flow. All field staff should be constantly alert for situations where cross connections are likely to exist. After identifying the cross connections, remedial measures are taken up which include: providing horizontal and vertical separation between the water main and the sewer /drain. The detail is as follows:-

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(1) Horizontal Separation

A water main should be laid such that there is at least 1to 3 m separation, horizontally, from any existing or proposed drain or sewer line. If local conditions prevent this lateral separation, a water main may be laid closer to a storm or sanitary sewer, provided that the main is laid in a separate trench, or on an undisturbed earth shelf located on one side of the sewer at such an elevation that the bottom of the water main is at least 0.5 m above the top of the drain/sewer.

(2) Vertical Separation

In situations where water mains have to cross house sewer, storm drain, or sanitary sewer, it should be laid at such an elevation that the bottom of the water main is 0.5 m above the top of the drain or sewer with the joints as remote from the drain/sewer as possible. This vertical separation should be maintained for a distance of 1- 3 m on both sides measured normal to the sewer or drain it crosses.

(3) Unusual Conditions

Where conditions prevent the minimum vertical separation set forth above from being maintained, or when it is necessary for the water main to pass under a sewer or drain, the water main should be laid with flanged cast iron pipe, with rubber gasket joints for a length on either side of the crossing to satisfy the lateral separation of 3 m. A vertical separation of 0.5 m between the bottom of the water main and the top of the sewer should be maintained, with adequate support for the large sized sewer lines, to prevent them from settling on or breaking the water main. In making such crossings, it is preferable to have the sewer also of cast iron flanged pipe with rubber gasket joints and both the water and sewer mains pressure tested to assure water tightness before back filling.

Where a water main has already been laid and where a new drain/sewer is to be laid, the above aspects may also be taken into consideration and the water main may be realigned to the extent necessary, when it is not possible to lay the drain/sewer consistent with the above recommendations.

Action: **Cross connections pipeline should be shifted within 7 days of identification.**

(4) LEAKAGE THROUGH HOUSE CONNECTIONS

Apart from above, consumer shall be informed about providing a sleeve pipe to the consumer pipes crossing a drain, modifying the piping including changing corroded piping with non corrodible piping, providing double check/ non return valves at the consumer end etc. The field staff shall inform the Unit Head for non compliance by the consumer and action be initiated by Unit Head for remedial measures and compliance by the consumer

Action: Regular monitoring by Unit Head and field staff.

END

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