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Implementation of Domestic Waste Water Quality Standards in the Real Estate Gresik Area –East Java
(Based Environment Minister Republic Indonesia, Number 112/2003).

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Abstract:- This study includes observations on the waste management system in the real estate area of southern Gresik, then sampling to test the water quality standards in laboratory waste Environmental Health Technique Bureau Surabaya, both questionnaires and interviews with the developers to conduct Focus Group Discussion with government, real estate developers and residents. Domestic sewage in the housing / real estate is mostly done using the direct method of wastewater discharged directly into the river or temporarily housed in local temporary disposal site. The results of laboratory tests on domestic wastewater generated housing average domestic wastewater is around the threshold set by Ministerial Decree Environment No. 112 of 2003 but exceeded the detection limit pollution. So it is still a potential source of contamination that could exceed the upper threshold value corresponding MOE decree. This could happen due to the potential for the development of housing for more habitable. The majority of the developers are not aware of the Environment Decree no. 112 of 2003. So that the disposal and management of industrial waste water is not in accordance with the prescribed rules.

Keywords:- Domestic waste pollution, Environment Decree No.112 of 2003, The developer.

I. INTRODUCTION

Urban population growth is a challenge for the government and society because of increased demand for employment, public facilities, housing, food supply, and so on. Usually distinguished two factors related to urbanization, the pull factors that attract residents to the city and the driving factors that encourage people to leave the village. Urbanization is usually associated with the growth of urban slums and urban corridors occur is the growth of informal settlements and settlement growth medium (Agung, Tuhu R, 2007). Current development in the housing sector is growing, because it is a major societal needs. Housing must be eligible for health both in terms of buildings, drainage, provision of clean water, domestic waste management that can lead to disease and kitchen smoke (Keman, 2005), ventilation for smoke development.

According to WHO, the house is a physical structure or building for shelter, where the environment is useful for physical and spiritual health and social circumstances for both family and individual health (WHO Commission Regarding the Health and Environment, 2001) . Thus it can be said that a healthy home is building a shelter and rest as well as a means of guiding families that fosters a healthy life physically, mentally and socially, so that the whole family can work productively. Therefore the existence of housing healthy, safe, harmonious, orderly is necessary for function and usability can be met with good home (Keman, 2005). Settlements also need to have infrastructure neighborhoods. Residential environment infrastructure is the basis of the completeness of the physical environment that allows neighborhoods to function properly. The main infrastructure including road networks, sewerage networks and waste bins, rainwater drainage network, clean water supply network, electricity, telephone, gas, and so on. Primary network environment infrastructure is the main network that connects the residential areas or between residential areas with other areas. Secondary network infrastructure network environment is the primary branch of the network that serves the needs of the units in the residential environment.

In addition to environmental infrastructures, things to consider are the health of the housing. Health housing and residential environment is the physical, chemical, and biological in the home, in the home environment and housing, thus allowing the occupants to get optimal health. Terms housing health and environmental health of the settlement are the technical provisions that must be met in order to protect the occupants and the people who live in the housing of the hazards or health problems. Health requirements that include residential housing and residential environmental requirements as well as requirements of the house itself, is indispensable for the development of a very large effect of housing on health improvement of each individual, family and communities (Andiese ,2011).

With the increasing development of housing and settlements without us knowing cause environmental problems such as water pollution by domestic waste stream resulting from the housing and settlement activities. In MOE Decree No. 112 of 2003 Article 1 states definition of domestic waste water is waste water that comes

from the business and or settlement activities (real estate), home dining (restaurant), office, commercial, apartments and dormitories. That, can be seen that most Surabaya River pollution caused by waste water generated from domestic activities such as the water used to wash settlements, used water baths, water used to cook, and so forth. The increasing number of people with all their activities will increase the amount of waste liquid resulting (Suwari*et al*, 2011).

In general, liquid waste discharged into the soil, rivers, lakes, and sea. If the amount of waste water discharged exceeds nature's ability to receive or contain it, there will be damage environment.

According Salmin (2005) Water pollution is the addition of elements or organisms into the water, so that the utilization can be disrupted. Water pollution can cause economic and social losses, due to interference by the presence of toxic substances or organic materials excess charge.

The content of the water used to wash detergent also be a factor in the pollution of river water. Detergent water pollutants classified as difficult to unravel (Melliawati, 2009; Nusanthary and Deissy 2012).

The amount of organic matter in the water will lead to decreased levels of dissolved oxygen in the water, so many aquatic organisms die from lack of oxygen 15th addition to the effects of heavy metals contained (Pb, Zn, Hg, Cd, Cn) is also present in water pollution . And also contains pathogenic bacteria and viruses that exist in human feces. Water contamination by viruses, pathogenic bacteria, and other parasites or by chemical substances may occur in raw water sources. In some developing countries, including Indonesia, rivers, lakes, ponds, seas are often used for some daily necessities, such as bathing, washing clothes, washing utensils and food, even for the disposal of excreta, so that the water becomes heavily polluted by virus , pathogenic bacteria and other parasitic microorganisms.

Provision of clean water and sanitation and the environment is not qualified to be a risk factor for diarrheal disease (number four cause of death) in addition to the worm that causes the disease decreased work productivity. In addition, the incidence of the disease is transmitted by a vector-borne disease dengue fever, malaria, plague and yellow fever are still high (Notoatmojo, 2007 ; Meliawati, 2009).

Judging from the geographical location Gresik regency is one of the areas directly adjacent to the city of Surabaya as center of economic zone in the region of East Java. Therefore, when talking about the development of the Surabaya area can not be avoided to not involve Gresik district as one of the buffer area of Surabaya.

Gresik regency to be a very strategic area of economic development given its geographical location. Economic development can not be separated from the development of the industrial area. Large industries require employees in large quantities. And one of the basic needs of employees is the availability of housing or shelter. In fact this is already happening in Gresik regency, so it can be ascertained with the development of residential areas, there will be domestic waste contamination in the housing. Therefore, domestic wastewater treatment should be done properly and correctly.

From the initial observation data, which is taken from observations and interviews that 70% settlements (real estate) in Gresik regency which was built by the developers (developers) do not have wastewater treatment facilities in accordance with the Decree of the Environment? Average settlements (real estate) in Gresik regency just pick the WWTP facilities such as sewers or ditches that hold water only temporarily and running it directly into water bodies or times not to use a closed system WWTP as written in article 8 of the Ministerial Decree no. 112 of 2003.

If the drain can not be closed then occur seepage of wastewater into the ground so it can contaminate water sources such as well water. Although wastewater filtered into the ground by a layer of soil but not necessarily indicate if the water is free from bacterial contamination (Andiese , 2011; Suryadi, 2012). The developers (developers) and Gresik regency government must realize this paradigm. Developers (developers) and the Government into a society that will be responsible for this. A large number of settlements built without a WWTP facility resulted in domestic wastewater is not treated prior to safe wastewater quality standards, this phenomenon becomes a major factor in water pollution in rivers and Gresik regency times. Regulations issued by the government is to provide the general public and welfare environment, therefore the developers (developers) have to comply with all the regulations that have been enacted in a residential building (real estate). This study aimed to evaluate the implementation of the Environment Decree number 112 of 2003 on Domestic Wastewater Quality Standard in Real Estate Gresik- East Java region.

II. METHODS

The design of this study was to determine levels of observational pH, BOD, TSS and oil and grease in the domestic waste on real estate in the district of Gresik. The population in this research that settlement which became the subject population in Gresik regency to be taken and tested waste water(Agnesa,2013; Anonymous , 2013). Settlement that is chosen is the maximum type 45 was chosen because many districts Gresik residential areas (real estate) and in 2011 the district of Gresik has prepared 10,000 ha of land for residential areas, especially Gresik is an area that passed south of the river to time Surabaya used as a source of water company

Surabaya citizens. Preparing land for development of residential areas is listed in Gresik Regency Regulation No. 8 of 2011 article 62.

III. RESULTS AND DISCUSSION

In observation Pages Settlements (real estate) in 20 settlements were sampled wastewater showed:

1) There is no human or animal feces in all ditch or trench sample taken all settlements.
2) 95% animal enclosures are not placed in front of a residential yard.
3) There are still wild animals that exist around settlements such as birds, cats, chickens and goats. Presentations are animals in settlements are 25%. The existence of these wild animals feared discard any impurities that contaminate water sewers or the environment around settlements (MOE Decree no. 112 of 2003 on Domestic Waste).
4) 75% of the 20 page settlement settlements sampled showed that settlements yard clean of garbage, yard neat and tidy. While 25% of the settlement page 20 settlements still dirty that there are piles of garbage or junk.
5) 65% there is a puddle of dirty water on the road or residential yard. And the remaining 35% there are still puddles of dirty water because of rain and because of uneven road surfaces.
6) 6. from the observations show that there are piles of garbage in the settlement in the form of piles of unused junk. With a percentage of 20% shows less well managed by the garbage problem.
7) 95% contained trash on every home in all settlements.
8) 95% of all settlements which are not sampled around settlements18 former incinerator.

Wastewater shelter

From the time of sampling observations concerning the waste water storage at 20 residential waste water samples taken showed that:

1) From the observations show that the settlement does not provide 85% of domestic waste water reservoirs. Only waste flowed into the ditch or trench. While the remaining 15% to provide temporary shelter domestic sewage waste treatment but not only temporary shelter in the form of vacant land that is located a few meters away from the settlement.
2) From the observations show that 70% of the homes in the region south of Gresik not use closed waste treatment system as listed in the Environment Decree no. 112/ 2003 The remaining 30% using a closed processing system but not completely closed. Part channels covered only the front of settlement only. As for the sewer that is not in front of the settlement remains left open.
3) 75% of domestic waste water smells. So it is very disturbing.
4) From observations showed 20% residential waste due to residual detergent and foaming soap is wasted along with the water.

Of the 20 residential wastewater samples taken 75% of the houses close to open sewers, streams or vacant land used as landfills and wastewater. So with this kind of waste pollution conditions occur that cause bad odor, bacterial and viral diseases contained in the waste can contaminate source of Water the surrounding environment settlements (The Law of the Republic of Indonesia no. 1 of 2011 on Housing and residential area.

At the time of sampling observations regarding the source of water used in the 20 residential waste water samples taken showed:

Table 1.1 Sources of Water Quality Standards and Standards In Residential Environment Study Area in 2013

	pH	BOD (mg/l)	TSS (mg/l)	Oil and grease (mg/l)
Quality Standards	6 – 9	100	100	10
1.	8,3	35,33	4	0,9
2.	8,2	24,72	24	2,3
3.	8,5	13,59	14	2,5
4.	7,9	21,69	1	2,7
5.	7,8	91,25	8	2,3
6.	7,9	10,85	1	2,5
7.	7,5	100,27	135	2,7
8.	7,4	11,32	9	2,7
9.	7,8	11,47	11	2,5
10.	6,8	55,5	45	5,8
11.	7,8	33,39	34	2,3
12.	7,7	25,82	25	1,7
13.	8,3	69,17	67	< 0,5
14.	7,7	35,35	26	0,9
15.	7,6	41,3	28	2,8
16.	7,8	37,35	20	2,6
17.	7,8	25,42	23	0,9
18.	7,6	12,48	13	<0,5
19.	7,7	11,98	13	< 0,5
20.	7,7	32,45	63	2,3

1. The entire housing or residential use of water taps. All sources of water in the housing or settlements away from the septic tank. So that the water source is not contaminated by impurities originating from septic tanks.The entire source water used away from the gutter, because their own sewer and channel sources available water from the water source is also available on its own. Unless a leak in the drain causing water pollution at the source.
2. All the water sources used in residential odorless. So we can be sure there are no leaks in the sewage.

Result Data Processing Questionnaire Sheet To The Developer Interview (Ansoriand Sri Iswati, 2009).

Interview questionnaire given to the developers who have housing / settlements that exist in the region South Gresik. Interviews and questionnaires carried out on 20 of the 20 housing developers / settlements that have taken samples for testing waste water quality standard. The whole settlement has landfills. In each some distance from the house provided shelter like garbage. 85% of the developers stated no sewage treatment process. So just garbage dumped in landfills while / end. 5% states throw garbage into the hole and then burned. While the remaining 10% stating manage waste into kompos.70% of developers stated only wastewater flowed directly into the river. While 30% claimed to provide temporary shelter in a residential area is empty / settlements. 100% said liquid waste in the form of human waste in the tank / septic tank.80% of developers are not aware of the number and contents of Decree 112 of 2003 on domestic wastewater (Kahpi, 2012; Research Report "Malang Government Efforts in Law Enforcement of the Act No. 23 of 1997 on Environment Management (2009).

IV. CONCLUSION

It was concluded that the implementation of the Environment Decree No.112 of 2003 on Domestic Wastewater Quality Standard in Real Estate Gresik regency, East Java has not implementation well. Because of the lack of communal sewage treatment system in the region of Gresik. Domestic waste water quality standards in the real estate area of Gresik 80% is not exceeded the quality standard in the MOE Decree No. 112 2003 quality standard value is above the detection limit but below the maximum threshold value. domestic waste or household waste on the environment. Including the dangers of environmental pollution can cause health problems to cause a disease.

Suggest that the local government in making additional regulations to supplement MOE Decree No. 112 of 2003, The existence of cooperation between government, developers and occupants of housing in protecting the environment. As an alternative solution could be developed communal sewage treatment system or integrated WWTP for housing.

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