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SUMMARY

I. Title

" A study for odor management plans near the Jeongja Dong area in Suwon city "

II. Objectives and Necessity

The Jeongja housing development complex located in the northern Suwon city consists of around 30,000 households in a large scale apartment complex including 18,000 households near the Chechen Area. Since the apartment complex had been constructed near the existing chemistry and medical and drug manufacturing factories, many public nuisances caused by malodorous smell were appealed by residents. For example, A total of 76 public nuisances against malodorous problems was recorded only in the year of 2005.

The problem seems to be caused by local geological conditions where the residential area was constructed near the existing odor emitting facilities and also by insufficient control and management programs to fight offensive odor emitted from manufacturing equipments.

Thus, the objective of the study is to intensively identify the odor causing chemical species to deal with public nuisances, to prepare substantial management plans, and finally to attain pleasant air environment inside the study area.

III. Study Contents and Scopes

The study will focus on identifying and assessing odor causing chemical species (including regulated odor species designated by government) in order to prepare substantial malodorous counter-measures by intensive qualitative and quantitative analyses in the area of the Jeong Ja Dong, Suwon city.

The scope of the study will cover to investigate characteristics of major odor causing species and assessment of impact areas in the study area. Further the study will perform the evaluation of odor causing factors for each source in the factories and will suggest maximum achievable control techniques for the facilities.

IV. Study Results

The odorous matters have been sampled 2 times at the following sites; near boundary areas between residential area and factory (a1, a2, and b2), public nuisance areas (a3 and b3), and a background area (b1). The highest dilution multiple factor was 17.5 on an average at the site, b2; however, it was below the emission standard of 20. The resulting factor at the site, a1, was higher than the other sites, but the result did not exceed the emission standard

The elevated ammonia concentration was observed at the sites near boundary areas of the Sinmyoung apartment, where located on the downward direction from the factory. The levels (112.7 ppb during the 1st survey and 81.9 ppb during the 2nd survey) were 2 to 3 times higher than the other sites.

V. Future plans to use the results

- identifying major odor sources and assessing their impacts

- providing fundamental data bases for odor related research on the odor emitting sources

- increasing the control efficiency for major malodorous matters emitting from the similar facilities

- providing reduction plans from each odor source

- dealing with strong regulation to be proposed by government near future and

- dealing actively with odor relating public nuisances

- establishing systematic investigation method to solve malodorous problems

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