

## ***Interactive comment on “Status of organochlorine pesticides in the drinking water well-field located in the Delhi region of the flood plains of river Yamuna” by P. K. Mutiyar et al.***

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Reviewer, Major Points: 1) Authors can provide the relation between the amount of use and the concentration of the investigated pesticides.

# The total pesticides consumption in Delhi area was 100 MT 1990 which reduced to 53 MT in 2005. The total pesticides consumption in Delhi area is continuously decreasing due to conversion of agricultural land to residential and industrial land. Accordingly, the pesticides residues reported in the water samples are decreasing. (Directorate of Plant Protection and Quarantine, Faridabad (2007)) <http://www.ncipm.org.in/asps/DisplayPesticides.asp>. (Accessed on 18th March, 2008).

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Same has been incorporated in the modified manuscript.

2) Relating to the description in page 93 line 1-9 and page 95 line 13-19, the authors suggest the reason of higher concentration of the pesticides in Ranney region. Please combine the description in one paragraph with specific information. Is there effect of different depth between borewell and Ranney well on the concentration of the pesticides?

# The average depth of the Ranney wells (N=5) was 25.56 m while the average depth of the borewells (N=80) was 44.07 m. At higher depths, concentration of pesticides is expected lower.

3) Authors described the Ranney wells are shallower than borewells. Please provide the depth of Ranney and borewell to interpret the importance of depth.

# Please refer comment 2.

4) Regarding Table 4 and related description in results and discussion (page 91-92), provide the range of values with the average value in Table 4. # Table 4 represents the physico-chemical parameters of ground water. Same has been incorporated in the modified manuscript.

5) Page 95, line 22-23, please indicate that there was no difference in 'total pesticide concentration'. But this is somewhat confusing the effect of recharge of the aquifer during monsoon. # Page 95, line 22-23 states "During monsoon high flood levels results in recharge of the well-field. But, there is no statistical difference between pre-monsoon and post-monsoon periods." As the student's t-test was carried out for pre-monsoon and post-monsoon samples taking all the samples as independent variables and result revealed that there was no significant difference in total pesticide concentration in both the season ( $P > 0.05$ ).

Minor Points:

1) Page 92, line 19. 'Tables 4 and 5 show levels of OCPs detected' should be Tables 5

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and 6. # Incorporated in the revised manuscript.

2) Page 92, line 20. TW-7 should be TW-6. # Incorporated in the revised manuscript.

3) Please check the MDL unit in Table 2. # Unit is ng l-1 for the method used. It is GC-ECD, not for GC-MS.

4) Please show the location of 21 bore-wells and 5 Ranney wells. It is confusing because more than 26 points are shown in Fig 1. In connection with this, in page 92, line 14-15, it is difficult to find the location of well (TW-1 to TW-21 and RW-1 to RW-5) in Fig 1. # We will show the location of 5 Ranney wells with different symbols. There are more than 26 points showed in Fig 1 because the well-field have around 80 borewells and all the borewells were monitored for water quality. We divided the well field in grids just to reduce the total no of samples and took 26 samples from all the grids. Same has been incorporated in the revised manuscript.

5) In the extraction of pesticides residues part, what kind of prefilter was used? # It was a 0.45  $\mu$ m glass-fiber filter.

6) Use BW and RW in Table 4 in full name. # Same has been incorporated in the modified manuscript.

7) Check the sentence page 96, line 1-2. # The sentence is incomplete as "is required" is missing. Same has been incorporated in the modified manuscript.

8) Please mention that the graphs indicate the total pesticides concentration in Fig 6 and Fig 7 # Same has been incorporated in the modified manuscript.

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Interactive comment on Drink. Water Eng. Sci. Discuss., 4, 85, 2011.