

Interactive comment on "Oil/gas pre-treatment plants and air quality hazards: PM₁ measurements in Agri Valley (southern Italy)" *by* S. Trippetta et al.

Anonymous Referee #1

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In this manuscript : "Oil/gas pre-treatment plants and air quality hazards: PM1 measurements in Agri Valley southern Italy) authored by S. Trippetta, R. Caggiano, and S. Sabia the air quality of the Agri Valley is examined. Air quality studies in this area are of special importance due to the presence of a large oil/gas pretreatment plant. From this point of view, this manuscript addresses important issues. This work contains data on the PM1 content of the air, as well as quantitative data on the metal content of the PM1 particles. PM1 particles are very small in size, and, consequently, the more penetrating (and thus hazardous) in the respiratory system. The results of the metal content analysis were introduced to Principal Component Analysis and the origin source of each metal was proposed. The samples were carefully collected and the processing and the analysis were carried out using standard methods. The results of the PCA were

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well rationalized and the conclusions are reasonable. The manuscript is well written and the figures and tables are of acceptable quality. In general, this is a complete work which, to my opinion, can be published in Natural Hazards and Earth System Sciences Journal.

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