

VOLUNTARY POLLUTION PREVENTION AND THE ROLE OF COMMUNITY CHARACTERISTICS: AN EVALUATION OF THE EPA'S 33/50 PROGRAM

A proposal submitted to the
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ABSTRACT

Objectives: The aim of the project is to evaluate in detail the success of the 33/50 Program. The unique contribution would be to (1) examine the role of community characteristics such as race, income, education, and political action, in the participation decision of the firm, taking into account firm and industry specific control variables; (2) examine the Program's impact on the aggregate emissions of 33/50 chemicals as well as on a measure of emissions that incorporates the varying toxicity of these chemicals; (3) similarly evaluate the Program's impact on non-33/50 chemicals; (4) evaluate the Program's impact on total production related wastes, (5) provide policy recommendations relating to future program design, implications of such programs for environmental justice, and their role relative to legal mandates.

Approach: The project would focus on an extensive, empirical analysis of the 33/50 Program based on plant, firm, and zip code level data for all firms eligible to participate in the Program over its entire lifetime. The study would build upon and integrate two streams of literature – one that examines the determinants of participation in voluntary pollution prevention programs, and the other that explores the relationship between community characteristics and toxic emissions. The overall approach and structure of the project may be represented as follows. *Stage 1:* identify firm level characteristics that influence participation in 33/50 Program using data on all eligible

firms; *Stage 2*: validate relationship between community characteristics and toxic pollution for 33/50 chemicals using zip code level data; *Stage 3*: examine influence of community characteristics on firm participation in 33/50 Program after controlling for firm level factors; *Stage 4*: evaluate Program – impact of 33/50 Program on targeted chemicals and non-Program chemicals, accounting for the influence of community characteristics; *Stage 5*: policy recommendations. At each stage, the analysis would incorporate the differences in chemical toxicity based on the Threshold Limit Values published by the American Conference of Governmental Industrial Hygienists.

Expected Results: We expect to find that even after controlling for firm specific factors, community characteristics have a statistically significant influence in motivating firms to participate in voluntary pollution reduction programs such as 33/50. However, once neighborhood factors are accounted for, participation in the 33/50 Program is not as important in explaining the aggregate releases and transfers of the targeted chemicals. The same conclusion is likely to emerge in the analysis of the Program impact on non-33/50 chemicals. In addition, once we account for chemical toxicity, the impact of the 33/50 Program in improving environmental quality is likely to be even more diluted.