



COMPARATIVE EVALUATION OF IMPACT INDUCED IN ENVIRONMENT BY A REFINERY

Brindusa Robu^{1*}, Victor Petruc², Matei Macoveanu¹

¹*Technical University of Iasi, Faculty of Chemical Engineering, Department of Environmental Engineering and Management, 71 A D. Mangeron Blvd., 700050, Iasi, Romania*

²*“Virgil Madgearu” High School, 70 Saint Andrei Street, Iasi, Romania*

Abstract

A comparative evaluation of environmental impact procedure using the *global pollution index method*, as was proposed by Rojanschi (1991), improved by Popa et al. (2005), in order to get the final results in a very facile way, was performed. Also, the environmental impact was assessed applying a new integrated method designed as a soft *SAB*. The comparative evaluation was performed considering a case study of a refinery, where the main emissions are in air and surface water. The final results obtained by both methods show that the air is seriously affected by the CO and SO₂ emissions from activities related to the refinery. Also, the quality of surface water, where the pretreated wastewaters are discharged is affected. The impact induced in environment is great, mainly caused by emissions of CO and SO₂ and the associated risk is catastrophic, which imposes actions for remediation and control of air emissions.

Keywords: environment, impact assessment, refinery, global pollution index, new integrated method

* Author to whom all correspondence should be addressed: Phone/Fax:0040-232-271759; e-mail: brobu@ch.tuiasi.ro