

**PHENOL GROUNDWATER CONTAMINANT TRANSPORT MODELING  
CASE STUDY: MADUKISMO SUGAR FACTORY, YOGYAKARTA SPECIAL  
PROVINCE, INDONESIA**

Thesis submitted to Gadjah Mada University in partial fulfillment of the requirements for  
the Degree of Master of Engineering

Study Program of Geological Engineering  
Department of Geological Engineering



By:

**NUON SARA**

**07/261399/PTK/4805**

**GRADUATE PROGRAM  
GEOLOGICAL ENGINEERING DEPARTMENT  
FACULTY OF ENGINEERING  
GADJAH MADA UNIVERSITY  
YOGYAKARTA  
INDONESIA  
2009**

**ꦒꦏ꧀ꦩꦢ**

---