

# FIELD PRACTICAL WORK REPORT

P.T. UNILEVER INDONESIA, Tbk.

PERSONAL WASH FACTORY

SURABAYA

JUNE 26<sup>th</sup> 2006 – AUGUST 28<sup>th</sup> 2006



No. INDIK	1579/13
TGL TERIMA	8-9-2013
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2006

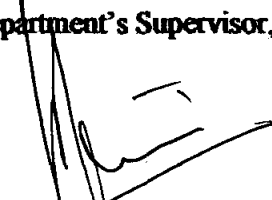
**LEGALIZATION SHEET****FIELD PRACTICAL WORK REPORT****P.T. UNILEVER INDONESIA, Tbk****PERSONAL WASH FACTORY SURABAYA****JUNE 26<sup>th</sup> 2006 – AUGUST 28<sup>th</sup> 2006****Compiled by:**

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**LEGALIZATION SHEET**

**FIELD PRACTICAL WORK REPORT**

**P.T. UNILEVER INDONESIA, Tbk.**

**PERSONAL WASH FACTORY SURABAYA**

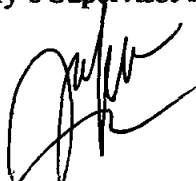
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## PREFACE

The authors would like to say thanks to God which has blessed the authors in conducting this field practical work in P.T. Unilever Indonesia, Tbk. Surabaya at Personal Wash Factory. This field practical work is one of the requirements to get "Bachelor of Engineering" in Chemical Engineering Department, Faculty of Engineering, Widya Mandala Catholic University Surabaya.

The authors recognize that this successful of field practical work is supported, so the authors would like to say thanks to:

1. Mudjijati, Prof., Ir., Ph.D. as our department's supervisor of this field practical work;
2. Tjatur Arijanto and Eko Wiharto Setiawan, S.T. as our factory's supervisors of this practical work;
3. Suryadi Ismadji, Ir., M.T., Ph.D. as the Head of Chemical Engineering Department, Faculty of Engineering, Widya Mandala Catholic University Surabaya;
4. Alexander Ricky Tjahyono, Ir. as the Quality Department Manager of P.T. Unilever Indonesia, Tbk. Surabaya;
5. Agus Swandono, as the member of Human Resource Department (HRD) of P.T. Unilever Indonesia, Tbk., Surabaya;
6. Sulton, Yanwar, Hadi, and Iwan as the members of staff in Quality Department at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;

7. Margus as the supervisor of Processing Department at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;
8. Ciswoyo, Djumadi, Soetoyo, and Arif as the members of staff in Crude Glycerin Unit at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;
9. Sirin as the supervisor of Technical Department at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;
10. Roy, Eko Budi, Suparmin, Didik, and Budi Siswoyo as the members of staff in Waste Water Treatment Plant (WWTP) Unit at P.T. Unilever Indonesia, Tbk., Surabaya;
11. Ridwan as the member of staff in Lye Treatment Unit at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;
12. Suparlan as the member of staff in Continuous Soap Making (CSM) Unit at Personal Wash Factory, P.T. Unilever Indonesia, Tbk., Surabaya;
13. The others, who cannot be mentioned one by one, who helped us since the start of the field practical work till the report making.

The authors realize that this report is still not perfect. Therefore, the authors will accept critics and recommendations which will then renovate this report. At last, the authors hope that this report will be useful for all the readers who need some information in this report.

Surabaya, Decemeber 8<sup>th</sup> 2006

The authors

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## ABSTRACT

Unilever was established in Indonesia on 5 December 1933. One year later, on 15 December 1934, a soap factory named Lever's Zeepfabrieken N.V. was built. In October 1936 a margarine factory with Blue Band brand was built at the same location and named Van Den Bergh's Fabrieken N.V.. On November 1941, Unilever took over G. Dralle cosmetic company in Surabaya and named Maatschappij Exploitate der Colibri Fabrieken N.V. The Elida Gibbs cosmetic factory in 1982 and Toilet Soap factory in 1990 in Rungkut Surabaya, and also Walls ice cream factory in Cikarang in 1992 was established. The Elida Gibbs and Toilet Soap factory are now known as Personal Care (PC) and Personal Wash (PW) factory, which are located on Jalan Rungkut Industri IV / 5-11, Surabaya 60291. The head office of P.T. Unilever Indonesia is located on Graha Unilever, Jalan Jendral Gatot Subroto Kav. 15, Jakarta Selatan 12930.

P.T. Unilever Indonesia started to expand its work by producing daily need products, such as toothpaste, toilet soap, and cosmetic products. These are products and its trade label which produced by P.T. Unilever Indonesia factories. There are three factories which is owned by P.T. Unilever Indonesia. They are Cikarang Factory, Bekasi (Food and Non-soap Detergent Division), Kecap Cap Bango Factory, Subang, Jawa Barat, and Rungkut Factory, Surabaya (Personal Wash and Personal Care Division).

There are two main steps of production process in Personal Wash Factory Surabaya of P.T. Unilever Indonesia, Tbk. The first step is processing unit and the second one is finishing unit. Processing unit consists of Continuous Soap Making (CSM) unit, lye treatment unit, and crude glycerin unit and finishing unit consists of drying unit and packing line unit. First, the raw materials (soap and oils) are reacted in Continuous Soap Making (CSM) unit to produce soap and glycerol. The soap and glycerol is also separated in this unit. The glycerol which is separated is then treated in lye treatment unit and then in crude glycerin unit and the soap is treated in finishing unit (drying unit and packing line unit).

The utility unit in P.T. Unilever Indonesia Tbk., Personal Wash Factory, Surabaya consists of electricity, steam, water, compressed air, and cooling media supply. The necessity of electricity in Personal Wash Factory, P.T. Unilever Indonesia Tbk., Surabaya is supplied from PLN, the steam demand is supplied by boiler unit which consists of three fire tube boilers. All water which is used in P.T. Unilever Indonesia, Tbk. Surabaya is supplied by PDAM. The compressed air in Personal Wash Factory is supplied by 5 compressor units and the cooling media supply is done by refrigeration machines which use refrigerant to obtain the condition needed.

The Personal Wash Factory at P.T. Unilever Indonesia has Waste Water Treatment Plant (WWTP) unit that process the waste water until certain quality and then retreated in P.T. SIER Waste Treatment Unit. But now, waste water that has been treated not flowed to P.T. SIER anymore, but retreated in the new WWTP, so the water can be reused in the process. The process occurs in Waste Water Treatment Plant (WWTP) unit are coagulation, flocculation, filtration, equalization, aeration, and reverse osmosis. The water which is produced from Waste Water Treatment Plant (WWTP) unit can be used for boiler feed water.