

# THE REGULATORY CONTROL OF THE DECOMMISSIONING OF PHOSPHORIC ACID PURIFICATION FACILITY, PT PETROKIMIA GRESIK

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## Abstract

Because of economical reason, the operation of Phosphoric Acid Purification Facility-PT Petrokimia Gresik was stopped on 12 August 1989. In June 2000 BAPETEN (Indonesian Nuclear Energy Regulatory Agency) recommended that PT. Petrokimia Gresik apply for decommissioning permit to BAPETEN as soon as possible. BAPETEN had issued the dismantling permit on 2 April 2008. Some criterias had to be met by the company during the decommissioning.

During the decommissioning, BAPETEN had conducted 7 inspections at the facility started on 7 April 2008 and ended on 15 August 2008.

On 14 April 2009 BAPETEN officially declared that all the inspection findings were closed and on 25 July 2009 BAPETEN issued a Statement Approval of the Site Clearance from BAPETEN regulatory control.

## 1. INTRODUCTION

Phosphoric Acid Purification Facility-PT Petrokimia Gresik was operated in April-July 1989. Because of economical reason, the facility operation was then stopped on 12 August 1989. In June 2000 BAPETEN conducted an inspection at the facility and recommended that PT. Petrokimia Gresik apply for decommissioning permit to BAPETEN as soon as possible. Decommissioning activities covered the draining of solution or solid powder of remaining process on the equipment, decontamination of site location and equipment wall, dismantling of equipment, decontamination of equipment after dismantling, decontamination of concrete floor and wall, and radioactive waste management. Some criterias had to be met by the facility during the decommissioning. The clearance level was 1 Bq/g, 1000 Bq/l for the liquid, surface contamination limit was 1 Bq/cm<sup>2</sup>, the dose rate at 50 cm from the surface was 0,5 uSv/hour based on BAPETEN Regulation Letter No. 1459A/P 101/PIBN/2008. Limit values for toxic matter are pH 6-9, COD 100 ppm and BOD 50 ppm (Gov.Regulation of East Jawa No. 45 year of 2002).

## 2.METHODS

PT. Petrokimia Gresik had been given a permit for decommissioning its facility by BAPETEN. The company submitted the report to BAPETEN to comply with all the requirements to ensure that no radioactivity exceeding the clearance level and no contamination exceeding the limits set by BAPETEN. The results of decommissioning process were evaluated by BAPETEN to make a decision that the decommissioning had been performed well to protect the public and the environment.

## 3.RESULTS

After receiving the application from PT. Petrokimia Gresik for dismantling its facility, BAPETEN had issued the dismantling permit on 2 April 2008.

The decommissioning resulted in contaminated materials and equipments

The radioactive waste was sent to Radioactive Waste Technology Center-BATAN. The non contaminated material and equipment can be reused for reprocessing. Some of non contaminated sludge and all of non contaminated filtrate water which comply to its limit values were released to the effluent release drain system of the plant.

During the decommissioning, BAPETEN had conducted 7 inspections at the facility started on 7 April 2008 and ended on 15 August 2008.

In August 2008, BAPETEN performed inspections and observed some findings. The facility performed several treatments and corrections to comply with the requirements and limits set by BAPETEN.

On 14 April 2009 BAPETEN officially declared that all the inspection findings were closed and on 25 July 2009 BAPETEN issued a Statement Approval of the Site Clearance from BAPETEN regulatory control.

## 4.CONCLUSIONS

The results of decommissioning process were evaluated by BAPETEN to make a decision that the decommissioning had been performed well to protect the public and the environment. The results showed that the radioactivity levels and contamination levels did not exceed the clearance levels and limits. BAPETEN declared that all findings were closed and issued a Statement Approval of the Site Clearance from BAPETEN

regulatory control

#### REFERENCES

- [1]. SALIMIN, Z., ZAID, A., Dekomisioning Fasilitas Pemurnian Asam Fosfat Petrokimia Gresik, PTLR-BATAN (2009)
- [2]. MIRAWATY, GUNANDJAR, Imobilisasi Limbah Sludge Radioaktif dari Dekomisioning Fasilitas Pemurnian Asam Fosfat dengan Matrix Campuran Bitumen dan Pasir, PTLR-BATAN (2011)
- [3]. DARYOKO, M., Strategi Dekomisioning Fasilitas Pemurnian Asam Fosfat Petrokimia Gresik, PTLR-BATAN (2009)
- [4]. BAPETEN, Laporan Keselamatan Nuklir 2009 (2010)
- [5]. BAPETEN, Inspeksi Pelaksanaan Dekomisioning Pabrik Pemurnian Asam Fosfat (PAF) PT. Petrokimia Gresik, (2010)

### **Country or International Organization**

INDONESIA

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