

WARWICK FARM PRINTING PROJECT

PRINTING PROCESS CHANGE REVIEW

INDEPENDENT PRINT MEDIA GROUP PTY LTD

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1. INTRODUCTION

1.1. Background

Independent Print Media Group (IPMG) has obtained project approval for the development of a printing facility at Warwick Farm, New South Wales (NSW), under Part 3A of the Environmental Planning and Assessment Act, 1979 (EP&A Act).

IPMG are now investigating the impact of changing the printing process from *Rotogravure* to *Heat Set Web Offset* (HSWO), and have engaged Sherpa Consulting Pty Ltd (Sherpa) to review the change of printing process in terms of hazards to life and evaluate any potential changes in the risk assessment carried out during the Preliminary Hazard Analysis (PHA) Ref (1).

2. REVIEW

2.1. Preliminary Hazard Analysis

IPMG engaged Sherpa to undertake the PHA for the Warwick Farm printing facility Ref (1), and the key findings were as follows:

- from the hazard identification work, potential offsite impacts were identified for:
 - Toluene leak from the 145m³ storage vessels, pipework and pumps, decanting tank and leak during road tanker loading/unloading leading to pool/bund fires, if ignited.
 - Bulk paper storage fire due to arson, forklift truck fault, electrical fault, lightning and unauthorised smoking.
- from the risk assessment, it was found that:
 - the 50×10^{-6} per year (50 chances in a million per year) individual fatality risk criterion (maximum fatality risk criterion at site boundary) was not reached as the maximum frequency of events with potential impacts outside the site boundary was found to be 16×10^{-6} per year (16 chances in a million per year).
 - There were no events with potential to affect residential, active open space, commercial and sensitive land uses. Therefore, the development complies with the HIPAP 4 individual fatality criteria for all land uses Ref (2).
 - DoP guidelines suggest an injury risk criterion of 50×10^{-6} per year (50 chances in a million per year) for a heat radiation level of 4.7 kWm⁻² at locations zoned as residential. No events were identified along the site boundary which could affect residential areas therefore the proposed development complies with the injury risk criteria.
 - Overall, the proposed facility meets all NSW DoP quantitative risk criteria for land use planning and the offsite risk is therefore found to be low and acceptable.

2.2. Impact of the Change to Offset Printing

Information on the HSWO printing process was obtained by Sherpa from work previously carried out for IPMG. IPMG have confirmed that their proposed printing process would be very similar to that reviewed in this work.

After reviewing the two processes, it was found that the HSWO printing process does not require storage of toluene (a Dangerous Goods (DG) Class 3 Flammable Substance), which is the main risk contributor for the *Rotogravure* process. Rather than toluene, a similar quantity of ink (not classified as a DG Class 3), and a much smaller quantity (less than 5 m³) of DG Class 3 substances would be stored.

Therefore, although quantities of DG in the original assessment were sufficient to trigger the SEPP 33 threshold necessitating a PHA; the revised process involves smaller quantities and the SEPP33 thresholds are no longer exceeded.

Rather than direct substitution of the two processes, it is also possible that IPMG may initially use the Rotogravure process and then move to the HSWO process. In this case, the storage of hazardous materials and hence the risk profile, would never exceed the quantity outlined in the approved project.

3. CONCLUSION

The findings of the Warwick Farm printing facility PHA based on the *Rotogravure* printing process are considered to be valid, albeit conservative, if the process is changed to either the HSWO printing process, or include a mixture of HSWO and Rotogravure machines based on the reduced storage quantity of DG required.

APPENDIX A. REFERENCES

1. **Sherpa Consulting Pty Ltd.** *PRELIMINARY HAZARD ANALYSIS - Warwick Farm Printing Project*. October 2008. J20307-001 Revision 0.
2. **PlanningNSW.** *Hazardous Industry Planning Advisory Paper No. 4 -- Risk Criteria For Landuse Planning*. 2002.