United States
Environmental Protection
Agency

Office of Water (WH 550G)

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January 1992

EPA

Best Management Practices For Protecting Ground Water

For Electroplaters Using Shallow Industrial Waste Disposal Wells

(Class V Well BMP Fact Sheet Number 2D)

EPA recognizes that certain industrial waste disposal practices using drainage wells may pose unacceptable risks to Underground Sources of Drinking Water. These operations allow the discharge of various wastes to a drainage system neither designed for nor capable of treating them. Accordingly, BMPs for Industrial Disposal Wells focus on well closure and alternative disposal methods. We have also included BMPs for waste minimization to help facilities reduce waste disposal costs, regardless of the disposal method they use. In addition local, county, and State regulations may prohibit use of these wells. Note: these practices are recommendations only. For more information, contact the person named below.

The BMPs listed below apply to the electroplating industry. Fact Sheet Number 2 in this series lists BMPs that are applicable to Industrial Disposal Wells in general (including those used by electroplaters), particularly for closure and alternative disposal. In addition the Agency believes that wastes from Electroplaters pose significant risks to ground water when injected. Industrial Disposal Wells at these facilities will probably be closed.

Waste Minimization

- Use deionized water in place of tap water to facilitate recycling and minimize the generation of sludges
- Extend plating bath life and recover metals and additives through treatment
  - For example, use electrolytic dummying to remove excess copper
  - Other methods include high surface area electrowinning/ electrorefining, ion exchange, ion transfer, evaporators, and reverse osmosis
- Convert process baths to non-cyanide plating baths where technically feasible
- Substitute trisodium phosphate or ammonia for cyanide cleaners where technically feasible
- Replace hexavalent chromium solutions with trivalent chromium solutions where technically feasible
- Use sulfuric acid and hydrogen peroxide in place of chromic acid where technically feasible
- Withdraw parts from plating baths slowly to minimize "drag-out"

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