



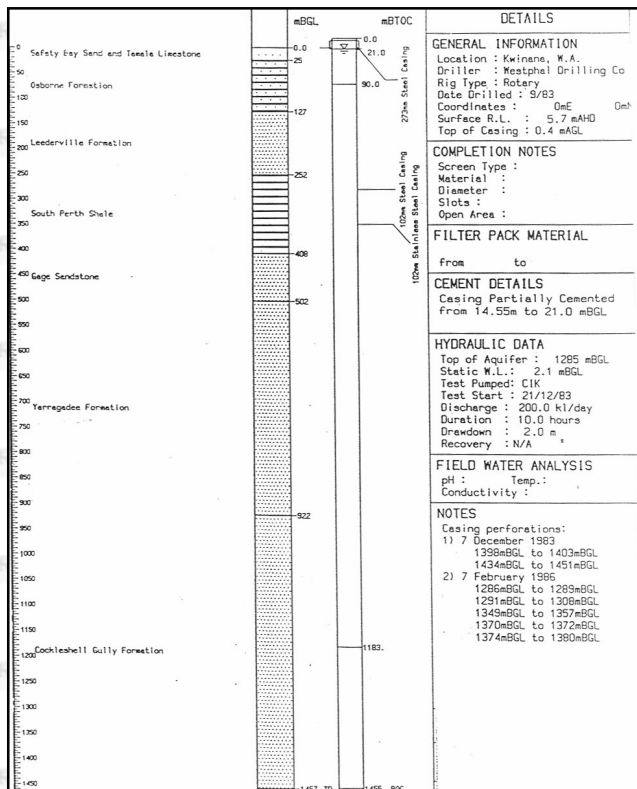
PROJECTS
HYDROGEOLOGY

Hydro14

AGROCHEMICAL MANUFACTURER, KWINANA, WA
Review of deep waste injection operation

An agrochemical manufacturing site has been in operation in Kwinana since the 1960's. Former waste disposal practices involved the disposal of waste oils, intermediates and wash down from reaction vessels into shallow unlined pits, which resulted in the contamination of unconfined groundwater by diesel, toluene and organo-chlorine pesticides.

Following a review of waste disposal options, a license was granted in 1984 for the disposal of process effluent by deep waste injection (DWI) to the Cockleshell Gully Formation. A deep cased bore was constructed to a depth of 1457mBGL, and perforated over the designated injection horizon.



A review was undertaken to assess the historical DWI operations, in line with more stringent requirements in the USA and proposed changes restricting or preventing similar operations within Western Australia. The hydrogeology of the receiving environment was reviewed: saline groundwater is confined by thick overlying Cadda Formation. No significant mineral resources were identified. The area is relatively stable seismically. Re-modelling of solute movement under an increased injection rate was undertaken, which indicated that the waste would be contained within the injection horizon for the foreseeable future. It was concluded that the DWI operation was being operated within applicable regulatory requirements.

Recommendations were made for a program of integrity testing in line with proposed US underground injection control (UIC) guidelines.

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