

PERCHLORATE, SOURCE, AND DISTRIBUTION IN GROUNDWATER AT MMR

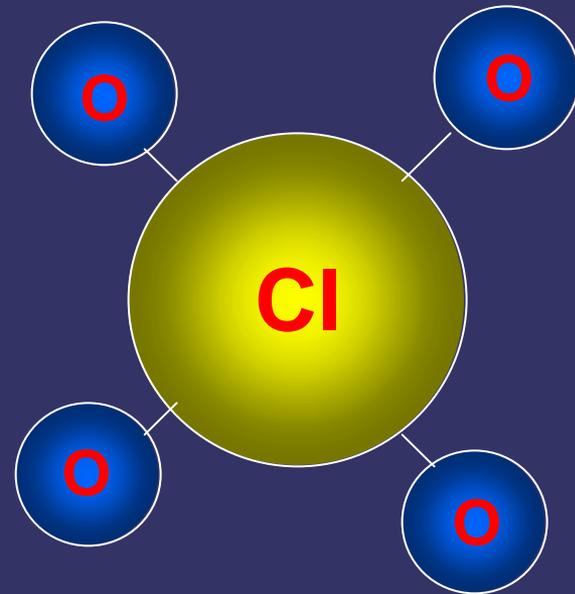


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What is Perchlorate ?

- anion: ClO_4^-
- Ammonium perchlorate is in solid propellant for rockets and missiles



Health/Ecological Concerns

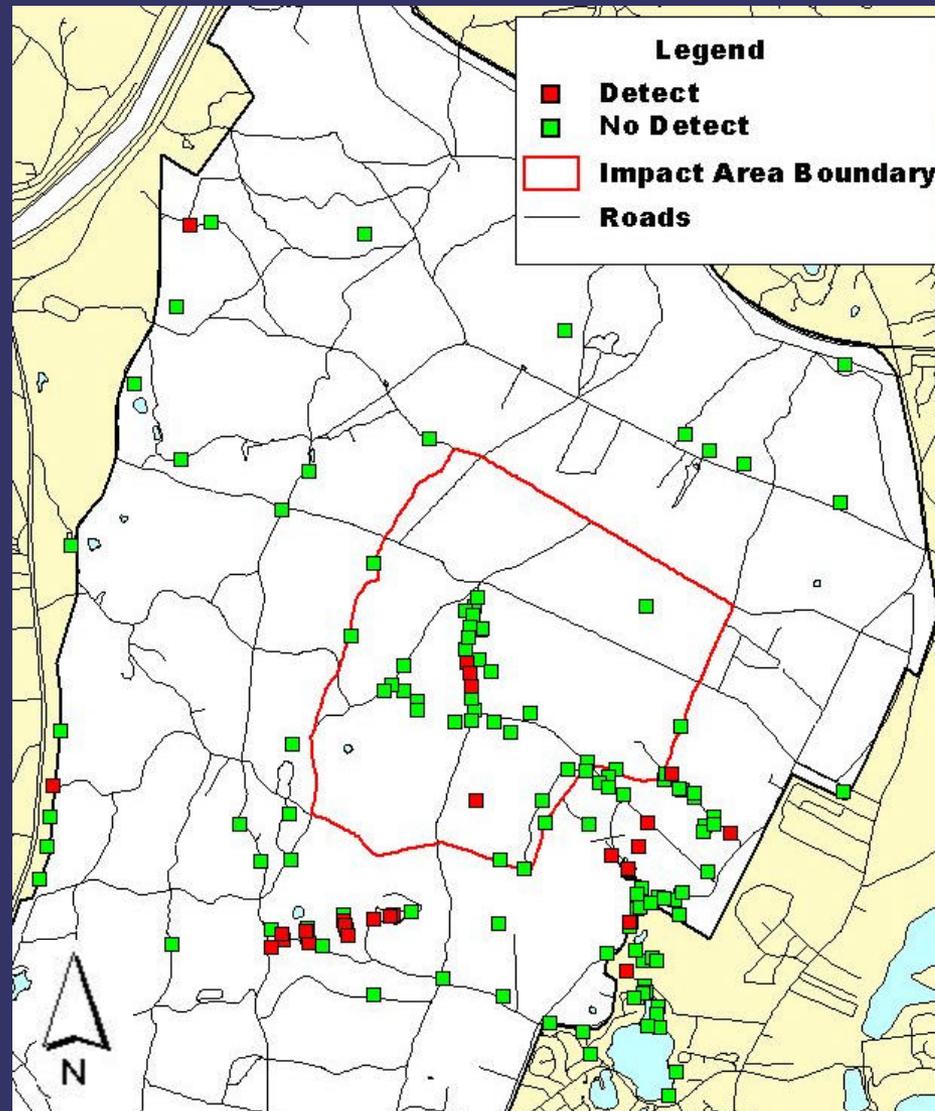
- Soluble - Mobile – Persistent – Clean-up Challenge
- Human Health - No exposures
 - If exposed - disrupts normal thyroid function and uptake of iodine
- Ecological Risks – No exposures
 - Little information available on ecological effects

Where Is It ?

Groundwater – with explosives

- Demo Area 1 (< 300 parts per billion (ppb))
- Central Impact Area (< 5 ppb)
- Southeast Corner of Ranges [Defense Contractor R&D Ranges] (< 65 ppb)
- One Well Off-Post (< 10 ppb)

Location of Perchlorate In Groundwater at MMR



Where Did It Come From ?

- Primary source = Disposal of rocket motors and propellants
- Other potential sources...

Summary

- Perchlorate levels are a concern
- At MMR, often found in groundwater with explosives
- Requires unconventional clean-up technologies