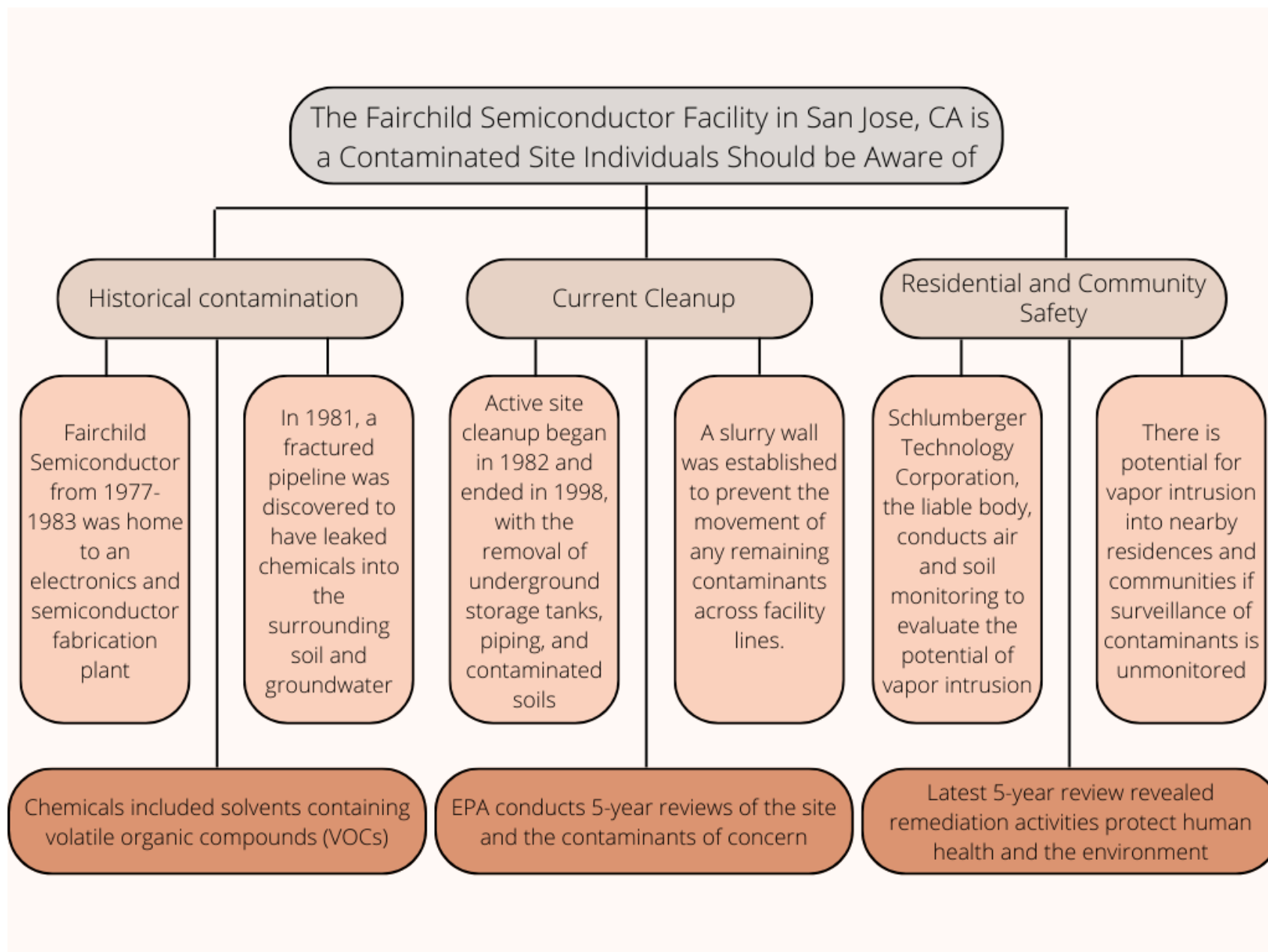


The group should submit a summary of the results of their **quantitative risk analysis** and the conclusions that can be drawn from the information (i.e., are these risks “acceptable”). A statement of public health actions that could be taken to address the potential risks (if any) should also be provided. Students should prepare a **message map** (see risk communication lecture for more information if needed) that includes key messages that you think should be presented to the community.

EPA Risk Calculator : [https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl\\_search](https://epa-prgs.ornl.gov/cgi-bin/chemicals/csl_search)

Exposure Scenario	Media	Concentration (µg/L)	Total? Cancer Risk	Cancer Risk Acceptability	Non-Cancer Risk	Non-Cancer Risk Acceptability
Default (Adult Resident)	Tap Water	1,1-DCA: 1700 1,2-DCA: 6.1 1,1-DCE: 5400 cisc-1,2-DCE: 43 1,4-Dioxane: 1300 Isopropanol: 1000 TCE: 6 Vinyl Chloride: 8.1	$4 \times 10^{-3}$	Unacceptable Risk	$5 \times 10^1$	Unacceptable Risk
Default (Child Resident)	Tap Water	1,1-DCA: 1700 1,2-DCA: 6.1 1,1-DCE: 5400 cisc-1,2-DCE: 43 1,4-Dioxane: 1300 Isopropanol: 1000 TCE: 6 Vinyl Chloride: 8.1	$4 \times 10^{-3}$	Unacceptable Risk	$5 \times 10^1$	Unacceptable Risk
Indoor Worker - ED: 25 years - EF: 250 days/year - ET: 8 hours	Soil	1,1-DCA: 1700 1,2-DCA: 6.1 1,1-DCE: 5400 cisc-1,2-DCE: 43 1,4-Dioxane: 1300 Isopropanol: 1000 TCE: 6 Vinyl Chloride: 8.1	TR = $1 \times 10^{-6}$	Acceptable Risk	THI = $1 \times 10^{-1}$	Acceptable Risk
Outdoor Worker - ED: 25 years - EF: 225 days/year - ET: 8 hours	Soil	1,1-DCA: 1700 1,2-DCA: 6.1 1,1-DCE: 5400 cisc-1,2-DCE: 43 1,4-Dioxane: 1300 Isopropanol: 1000 TCE: 6 Vinyl Chloride: 8.1	$2 \times 10^{-4}$	Unacceptable Risk	6	Unacceptable Risk

Message Map:



- Main Message: Contaminated site at Fairchild Semiconductor Facility in San Jose, CA
  - Key Message 1: Historical contamination
    - Supporting Fact 1: A fractured pipeline was discovered in 1981.
    - Supporting Fact 2: Multiple chemicals were leaked out into the soil and groundwater
    - Supporting Fact 3: These chemicals are considered solvents and volatile organic compounds (VOCs), which can easily be emitted into the surrounding atmosphere.
  - Key Message 2: Current Cleanup Efforts in place
    - Supporting Fact 1: Active site cleanup began in 1982 and ended in 1998, with the removal of underground storage tanks, piping, and contaminated soils.
    - Supporting Fact 2: A slurry wall was established to prevent the movement of any remaining contaminants across facility lines.
    - Supporting Fact 3: EPA conducts 5-year reviews of the site and the contaminants of concern.
  - Key Message 3: Residential and community safety
    - Supporting Fact 1: EPA's last 5-year review revealed that the remediation activities protects human health and the environment.
    - Supporting Fact 2: There is potential for vapor intrusion into nearby residences and communities if surveillance of contaminants is unmonitored.
    - Supporting Fact 3: Schlumberger Technology Corporation, the liable body, conducts air and soil monitoring to evaluate the potential of vapor intrusion.