



Naval Air Station Jacksonville

Installation Restoration Program

NAS Jacksonville Administrative Record
Document Index Number

32212-000

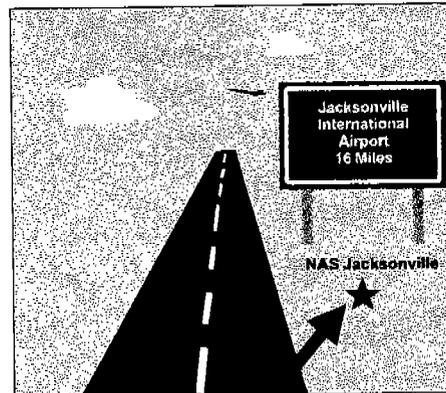
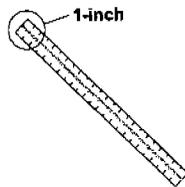
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How Are Benzene and Vinyl Chloride Measured?

In Parts Per Million

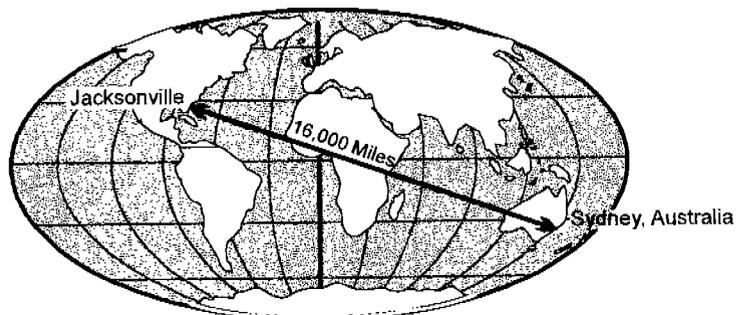
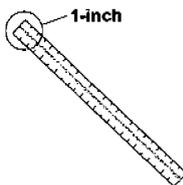


1 inch in 16 miles



In Parts Per Billion

1 inch in 16,000 miles



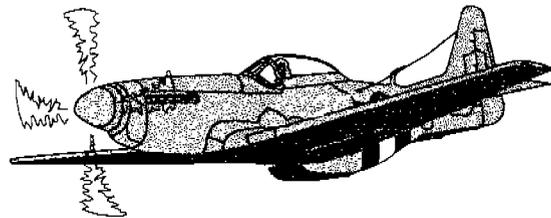


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Description and History of the Site

- South Antenna Field Firefighting Training Area
- Located at the southern end of Naval Air Station (NAS) Jacksonville:
 - aircraft decommissioning
 - aircraft towed to site
 - fuel and fluids drained into a pit
 - aircraft towed to base salvage facility
 - firefighter training
 - fuel ignited in controlled burn
 - mock aircraft sometimes used
 - training crews put out fire
 - current use
 - vacant land



Investigation Stages

- ✓ site identified in 1995 through records search, interviews, and site walkover
- ✓ soil sampling conducted in 1996
- ✓ designated Potential Source of Contamination (PSC 51) in 1996
- ✓ groundwater, surface water, and sediment sampling from April through October 1997



Groundwater sampling



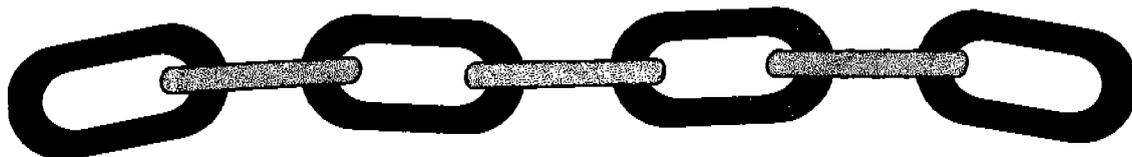
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Exposure and Health Effects

Exposure

Three things must be present for humans to be exposed to environmental contaminants:



Contamination
(soil, sediment,
and water)

+

Receptor
(humans, plants,
and animals)

+

Contact
(eating/drinking,
breathing, skin
contact)

=

Exposure

Health Effects

If there is exposure, potential health effects depend on two factors:

- how much of the contaminant you are exposed to
- how long you are exposed to it



EPA

The U.S. Environmental Protection Agency (USEPA) has estimated adverse health effects risks of environmental contaminants to establish exposure limits. Limits have been set for each potential exposure route (eating/drinking, breathing, skin contact). Drinking water limits for benzene and vinyl chloride are presented on the safe drinking water standards exhibit.

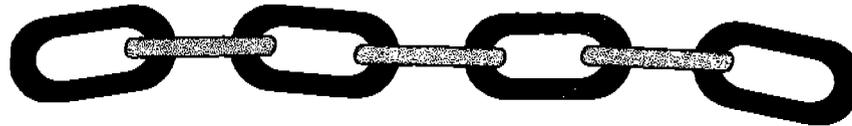


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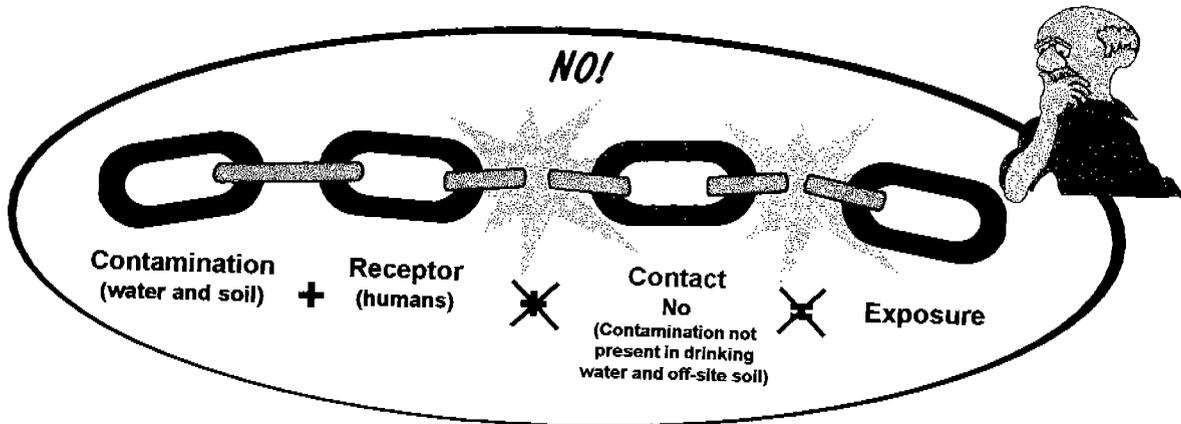
Site-Specific Exposure and Health Effects

Remember



Contamination (water and soil) + Receptor (humans) + Contact (eating/drinking) = Exposure

Now, do these conditions exist at the site?



What Does This Mean?

No potential health effects identified because

- ✓ contaminants found in the surface aquifer only,
- ✓ no contamination in off-site soil,
- ✓ no contamination in the deeper aquifer that supplies drinking water, and
- ✓ the exposure "chain" is not complete.



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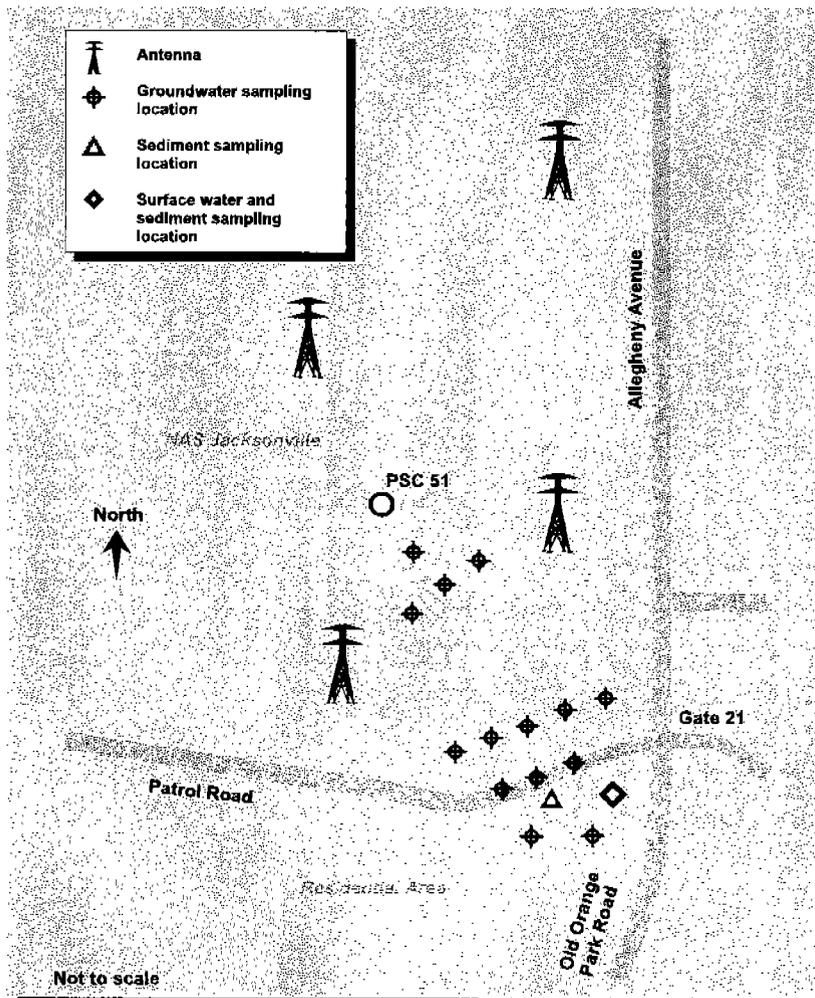
Water Sampling

Groundwater investigations will

- ✓ assess general groundwater quality,
- ✓ determine site hydrology,
- ✓ evaluate groundwater flow direction, and
- ✓ gather information on contaminants.

Samples were taken by a Navy contractor.

Water Sampling Locations: April Through October 1997

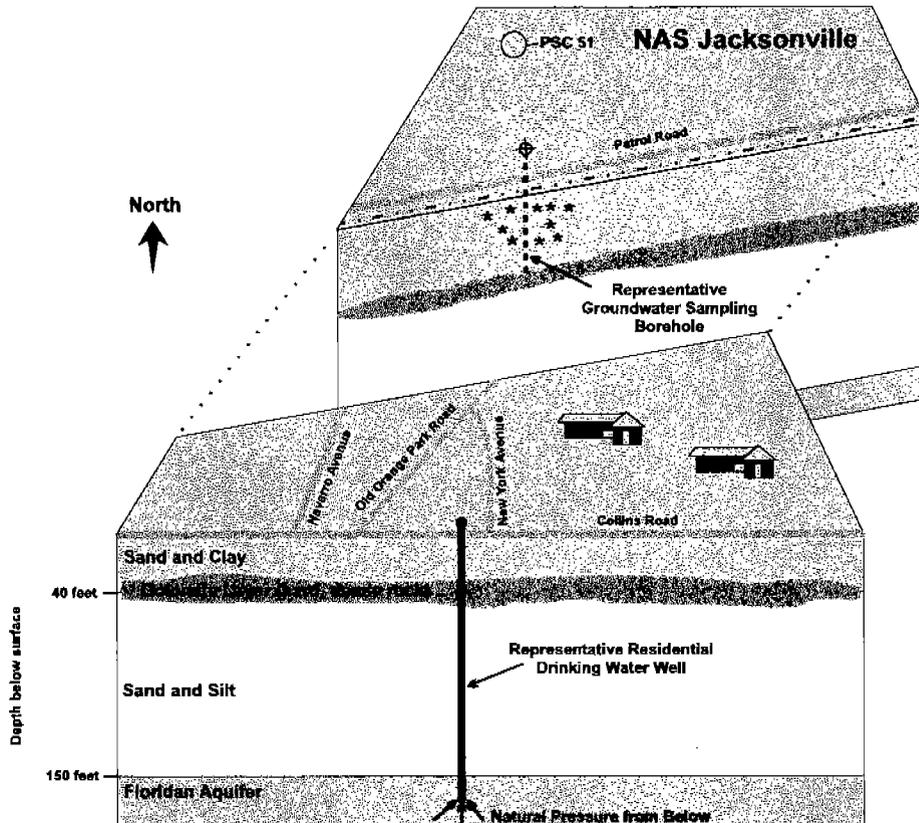




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Where We Think the Contamination Is



LEGEND

- * Elevated contaminant levels
benzene (to 48 ppb)
vinyl chloride (to 18 ppb)
- - - - - NAS Jacksonville Base Boundary
- NAS = Naval Air Station
- ppb = parts per billion

Findings to Date

- ✓ no contaminants in the drinking water
- ✓ contaminants above allowable levels in the surface groundwater up to the base fence line
- ✓ contaminants may extend south of the fence line
- ✓ further studies needed to identify extent of contamination



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Drinking Water Sampling and Safe Drinking Water Standards

Local public health officials have sampled the following drinking water wells in the residential area immediately south of PSC 51.

Residential Well Sampling Locations

Well Location	Month Sampled *
8406 Old Orange Park Road	July 1997
8430 Old Orange Park Road	July 1997
8440 Navarra Avenue	September 1997
8454 Navarra Avenue	July 1997
8448 Navarra Avenue	September 1997
8423 New York Avenue	July 1997
8448 New York Avenue	July 1997
8458 New York Avenue	February 1996
8436 New York Avenue	September 1997
8435 New York Avenue	September 1997
8466 New York Avenue	September 1997
8420 Plainfield Avenue	March 1997
8404 Seville Avenue	March 1997
8435 Seville Avenue	March 1997
3837 Collins Road	May 1995
8435 Malaga Avenue	April 1997

* samples taken by Duval County Public Health Unit

Sampling Results

Sampling results have shown that these wells meet all applicable safe drinking water standards, including USEPA standards for benzene and vinyl chloride.

USEPA Safe Drinking Water Standards	Sampling Results
Benzene (5 parts per billion)	None detected
Vinyl chloride (2 parts per billion)	None detected