

# ATSDR Brownfield and Land Reuse Site Tool<sup>®</sup>

## Environmental Health

### What is the ATSDR Brownfield and Land Reuse Site Tool<sup>®</sup>?

This tool is a rapid site screening and multiple chemical exposure dose calculating tool that allows users to assess sites by past/future use, institutional controls, sensitive populations, and suspected or confirmed contamination.

### Why was the Brownfield and Land Reuse Site Tool<sup>®</sup> Developed?

A survey of local health departments indicated a need for a system to:

- Provide inventory of sites.
- Store records for public inquiry of sites.
- Respond to inquiries.
- Catalogue institutional controls, health concerns, violations, spills, contaminants, and emergency response events related to the property.
- Provide a "How To" guide to conduct a site visit.
- Evaluate exposures by defining exposed populations and sub-groups, multiple exposure pathways, user specific ingestion rates for population groups or use defaults.
- Calculate doses using ranges of exposure parameters, 95% Upper Confidence Limits, geometric mean, and other statistical parameters.
- Test the data for Normal/Log Normal distributions. Import and process laboratory data (10,000 data points per minute throughout).
- Verify calibrations.
- Troubleshoot analytical problems.
- Set up quality-assurance or quality-control programs.
- Conduct research and development.



### What entities are using the ATSDR BF and LR Site Tool<sup>®</sup>?

- Health Departments (from local to state level)
- Development Community
- Regulatory Agencies
- Planners
- Environmental Health Professionals

## ATSDR Brownfields/Land Re-use Site Tool<sup>®</sup>

**Evaluation Draft Brownfields/Land-Reuse Site Tool - Data Entry Form**

Close Save Scenario Name: 3D-chemical ID:

Info Type Data Involvement Future Use Proximity Chems Concerns Hazards Exposures Attach Log Site Visit

Site Name: 3D-CHEMICAL  
 Site Address: 123 CHEMICAL LANE  
 Site City: COTTAGE Site State: MINNESOTA Site Zip: 55018

Site Latitude (LAT): 44.84000 Size of Site:   
 Site Longitude (LONG): -92.8816666 Units:   
 Site Contact Name: Joseph Kellman  
 Site Contact Email: jkellman@statemn.gov  
 Site Contact Phone: 123-555-7890  
 Site Contact Email: jkellman@statemn.gov

Institutional Controls (description): Cap on-site lead contamination  
 Start Date: 2/25/2000  
 End Date:   
 Stewardship: City of Cottage

Catalogue of Violations:   
 Catalogue of Spills:   
 Catalogue of Emergency Response(s):

**Evaluation Draft Brownfields/Land-Reuse Site Tool**

Import and Process Data Cancel

Start Here Soil Dermal Soil gen params

**A = Total Soil Adhered (mg) = Exposed Skin Area x Soil Adherence Conc:**

☐ Head ☐ Torso ☒ Arms ☒ Hands ☒ Legs ☒ Feet

**A = Exposed Skin Area:** 1.12E+04 x **Soil Adherence Concentration** 0.07  
**A =** 7.81E+02

**Total Surface Area (SA) (cm2):** 19400

**Head (% of total SA)** 7.30%  
**Torso (% of total SA)** 35.21%  
**Arms (% of total SA)** 14.11%  
**Hands (% of total SA)** 5.20%  
**Legs (% of total SA)** 31.25%  
**Feet (% of total SA)** 6.93%

**Evaluation Draft Brownfields/Land-Reuse Site Tool**

Import and Process Data Cancel

Start Here Fish

**Intake Rate of Contaminated Fish:**

☒ **Calculate Rate Based on Amount of Fish Per Day Consumed Over Time**  
 8 g/day for 45 days/year over 10 years

☐ **Calculate Rate Based on Amount of Fish Per Week Consumed Over Time**  
 mg/day for 0 meals/week and 0 weeks/year for 1 years

☐ **Use Standard Intake Rate:**  
 1 years

**Soil-Results based on the 95% UCL of the Log transformed values.**

bw: 5.00E+01 IR: 2.00E+02 A: 1.39E+03 BF: 1.00E+00 SA: 6.93E+03  
 AF: 1.00E-01 EF: 1.23E-01 ED\_ys: 5.00E+00 limbs: hands,legs,feet.

Chemical	CASN	Units	CV name	CV value	>CV	N	#ND	# non ND>CV	UCL_log	Ing Dose	DermalDose	IngestCa	DermCa
<b>Actual data are above a CV value.</b>													
Arsenic	007440-38-2	ppm	Soil CREG	5E-01	Y	16	0	16	9.5E+00	3.8E-05	3.3E-06	4.1E-06	3.5E-07
acute MRL: 5.E-03 int MRL: n/a chr MRL: 3.E-04													
W-Stat=9.e-1 p-value=9.4e-2 These data are Log- normally distributed.													
Benzo(a)anthracene	000056-55-3	ppm	PRG ResSoil	1E-01	Y	16	14	2	3.1E-01	1.2E-06	1.1E-07		
acute MRL: n/a int MRL: n/a chr MRL: n/a													
W-Stat=8.3e-1 p-value=6.8e-3 * p-value is < 0.05, These data are not Log-normally distributed.													

### To learn more about the ATSDR Site Tool:

To learn more contact Laurel Berman, at (312) 886-7476, Leann Bing, at (404)-562- 1784, or Gary Perlman at (617) 918-1492 or e-mail us at [atsdr.landreuse@cdc.gov](mailto:atsdr.landreuse@cdc.gov)