

# INTERNATIONAL COMMITTEE ON CONTAMINATED LAND QUESTIONNAIRE ABOUT LEGAL FRAMEWORK FOR SOIL/SITE CONTAMINATION MANAGEMENT

**COUNTRY:** [United States](#). The responses are sourced from generally available public information and are not intended to be comprehensive.

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## **OVERALL CONTEXT**

1. Does your national policy have a specific definition of “contaminated site”, “contaminated soil”? If yes, please provide the definition.

EPA does not have a single policy which defines these terms at a national level. However, there are a number of federal, state and other programs in place that address contaminated soil and groundwater. There is a large amount of useful information about how EPA’s cleanup programs address contaminated sites and contaminated soil at the EPA website section on Basic Information about Cleanups at:

<http://www2.epa.gov/regulatory-information-topic/land-and-cleanup>

2. Is Groundwater included in this definition?

**Answer:** EPA does not have a single national policy with such a definition, but information about how EPA’s cleanup program address contaminated ground water can be found at the URL listed above and at the following web link:

<http://www2.epa.gov/cleanups/cleanup-laws-and-statutes>

3. Does your policy on contaminated sites/land/soil include other definitions (i.e. brownfield, sediment)?

EPA does not have a national policy which defines these terms in a single context, but information about how EPA’s cleanup programs address brownfields and contaminated sediment sites can be found at the web sites listed under question 1 & 2.

4. Which sources are you considering? Industrial operations? Transport? Urban contamination? Etc.

EPA’s land remediation programs address contamination that has been released into the environment from any number of sources, including abandoned and operating hazardous waste facilities, transportation-related vehicles and vessels, and other places.

## LEGAL FRAMEWOK

5. Does your country have legislation with respect to contaminated land management?

There are a number of federal laws in the United States which address hazardous waste management and remediation of contaminated land. For useful information about EPA's programs in this area, please refer to Cleanup Laws and Status at

<http://www2.epa.gov/cleanups/cleanup-laws-and-statutes>

- a. Whatever the situation is, please be precise if it's a specific or a common legislation, if integrated in a more general one (including prevention of emissions, soil protection, land planning, environment & health, etc.)

The United States does not have an umbrella organic environmental cleanup statute, but several federal laws address remediation of contaminated resources (including land, water, air, ground water), including CERCLA, RCRA, CWA, CAA, TSCA, FIFRA.

- b. If there is no legislation, please be precise how you tackle the problem.

Not applicable

- c. What are the main policy objectives?

Protect human health and the environment

- d. What are the foundational principles on which the national policy is based? (e.g., polluter pays, risk-based, fit-for-use, stand-still, transparency, ...).

Some of the key guiding principles include "polluter pays" for liability, "risk-based" approach for cleanup, science-based and transparent decisions, and meaningful opportunities for public participation.

6. What is the Chain of Liability for the management of contaminated land?

- a. Polluter? Land owner? Last operator? Occupier?

The CERCLA liability is comprehensive and complicated. Depending on the circumstances, all of the parties listed above potentially may be responsible for carrying out or paying for cleanup. Other statutes may define a different liability framework.

- b. Is there any difference between new and historic contamination?

Depending on the circumstances and the particular statute, the time when a release occurs may be relevant.

- c. Can a responsible party pass on the liability to a purchaser? (under statutory law? Contractually?).

Under CERCLA, liability cannot be contracted away, but private parties can agree amongst themselves how to divide up and pay for their respective legal liabilities.

- d. Do you separate the obligation to remediate soil pollution and the liability regarding the damage caused by soil pollution and the related remediation measures?

CERCLA addresses both liability for cleanup and for natural resource damages.

- e. Are you facing specific situations (e.g. privatization of the industrial activities, war impacted areas, ...) needing special programme?

Under the existing framework of federal environmental laws, a number of cleanup programs address a wide variety of circumstances, including current and former federal facilities and leaking underground storage tanks.

7. Are there any specifications at regional / local level?

Pursuant to most federal environmental statutes, EPA works with state, tribal, and local government environmental program partners to implement many aspects of the cleanup process. For information on delegated and authorized state programs, see the Waste and Cleanup section at:

<http://www.epa.gov/epahome/statelocal.htm#Waste>

For information on how EPA works with tribes, see:

<http://www.epa.gov/tribalportal/laws/index.htm>

8. Are there specifications for site closure?

Site closure procedures are specified under the major contaminated site cleanup programs. For example:

Under Superfund, there are procedures for accomplishing remedial action completion, construction completion, site completion, partial deletion and site deletion for National Priorities List sites. See;

[http://www.epa.gov/superfund/programs/npl\\_hrs/closeout/](http://www.epa.gov/superfund/programs/npl_hrs/closeout/) and  
[http://www.epa.gov/superfund/programs/npl\\_hrs/nploff.htm](http://www.epa.gov/superfund/programs/npl_hrs/nploff.htm)

In the underground storage tanks program, site closure is a milestone achieved when the remaining contamination in the soil, surface water, groundwater, or air meets a risk or cleanup threshold determined not to pose a threat to human health or the environment. See;

[http://www.epa.gov/oust/lust/site\\_closure.html](http://www.epa.gov/oust/lust/site_closure.html)

Under the Resource Conservation and Recovery Act, when a hazardous waste management unit stops receiving waste at the end of its active life, it must be cleaned up, closed, and monitored and maintained in accordance with the RCRA closure and post-closure care requirements. See:

<http://www.epa.gov/wastes/hazard/tsd/td/ldu/financial/hwclose.htm>

9. Is there any legal requirement to conduct investigation for potential contamination in the sale of the property?

CERCLA has provisions that apply to federal facilities prior to transfer of property to private parties. Also, EPA has issued regulations addressing “all appropriate inquiry” for purposes of some of CERCLA’s liability provisions. Private parties often carry out some kind of property investigation as part of the contract process when they buy and sell real estate. Such investigation protocols are sometimes defined by state laws and regulations, or by professional associations (e.g., ASTM International (formerly the American Society for Testing and Materials)).

10. Does your national policy have any kind of inventories/registers? If yes, please be precise regarding which sites are registered, how the data are collected and if the databases are public.

**CERCLIS:** Includes data on over 40,000 sites that have been investigated to determine the extent of pollution, and site information for over 1,600 sites that have been listed on the NPL, including active and inactive sites. Portions of the database are available to the public. See <http://www.epa.gov/superfund/sites/cursites/>

**RCRAInfo:** Allows tracking of many types of information about the regulated universe of RCRA hazardous waste handlers. RCRAInfo characterizes facility status, regulated activities, and compliance histories. The database is available to the public.

**UST Sites:** Summary inventory data are available to the public on the EPA web site. Site lists and detailed information are kept at the state level.

**State Databases:** some states, such as California and Oregon, maintain databases on state-led sites similar to data in CERCLIS. See <http://www.epa.gov/oust/states/statcon1.htm>

**Federal Facilities Docket:** CERCLA requires EPA to establish a Federal Agency Hazardous Waste Compliance Docket (Docket) which contains information reported to EPA by federal facilities that manage hazardous waste or from which hazardous substances, pollutants or contaminants have been or may be released. See <http://www.epa.gov/fedfac/documents/docket.htm>

11. What are the strong, weak points and the major bottlenecks with respect to the current regulations in your country?

EPA is constantly reviewing its regulations to ensure they are up-to-date, comprehensive, and effective without imposing unnecessary burdens on those affected.

## **TECHNICAL ISSUES RELATED TO THE LEGAL FRAMEWORK**

12. Are there site investigation requirements?

EPA has issued guidance on carrying out remedial investigations. See for example;

Under Superfund:

The Preliminary Assessment (PA) and Site Inspection (SI) are used by EPA to evaluate the potential for a release of hazardous substances from a site. See

<http://www.epa.gov/superfund/cleanup/pasi.htm>

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After a site is listed on the NPL, guidance establishes the process for a remedial investigation/feasibility study (RI/FS) performed at the site. See:

<http://www.epa.gov/superfund/cleanup/rifs.htm>

In Brownfields transactions, "All Appropriate Inquiries," or AAI, is a process of evaluating a property's environmental conditions and assessing the likelihood of any contamination.

<http://www.epa.gov/brownfields/aai/index.htm>

13. Are Risk Assessment & Management the main tools?

EPA has issued guidance on waste and cleanup risk assessment. See <http://www.epa.gov/oswer/riskassessment/>

As for risk management, EPA has issued a number of guidance documents specific to individual programs such as Superfund: See [http://www.epa.gov/oswer/riskassessment/superfund\\_management.htm](http://www.epa.gov/oswer/riskassessment/superfund_management.htm)

14. Are there specific technical approaches used?

- a. For Human Health (HH), Ecosystems, Groundwater (GW), Surface waters (SW), other targets (i.e. buildings, infrastructures, ...please be precise).

Overarching guidance for the conduct of site-specific risk assessment and selection of acceptable risk levels for human health, ecosystems, surface water and groundwater is provided at <http://www.epa.gov/oswer/riskassessment/>

- b. On a site by site specific approach, or by derivation of guideline values? If possible, please detail your answer.

EPA generally makes cleanup decisions on a site-by-site basis, but does use national standards and regulations as important benchmarks in that process. Certain programs (e.g., Superfund) rely on national default exposure assumptions and toxicity values.

- c. Do you take into consideration others sources of pollution in the risk assessment?

Depending on the circumstances, it may be appropriate to consider a wide range of sources when designing an appropriate cleanup approach.

15. If the national policy uses guideline values, please be precise in describing the following points:

EPA does not have a single policy which defines these terms at a national level. However, EPA has issued a number of program-specific guidance documents, or contaminant specific policy and guidances that programs apply when these are encountered.

For examples, please see

<http://www.epa.gov/superfund/policy/remedy/sfremedy/index.htm>

- a. Reasons for derivation of generic values  
There are no standard federal cleanup values established by US environmental programs. However, the EPA's Integrated Risk Information System (IRIS), process and database provide consistent toxicity assessments and values for use by EPA's national program offices in deriving such values on a site-specific basis.
- b. Objectives / levels of implementation (investigation, risk assessment, remediation)  
IRIS values are to be used for site-specific investigation, risk assessment and remediation.
- c. Priority substances  
The Superfund program has developed substance-specific guidances (e.g., dioxin, PCBs lead) to assist with these cleanups.
- d. Protocols of derivation (including acceptable risk levels used).  
Individual programs (e.g., Superfund) may develop guidance for the development of acceptable cleanup levels or risk goals.

16. What are the drivers for remediation?

The federal environmental statutes all require protection of human health and the environment.

- a. To what level is clean-up required? (i.e. acceptable risk, land use values, ...).  
  
Cleanup levels are determined on a case-by-case basis. The NCP, for example, uses a risk range and HI of 1 for this process and reasonably anticipated current and future land use exposure assumptions.
- b. Does your national policy use cost-benefits analysis for the choice of the remedial solution?  
  
No.

17. What are the main remediation strategies or treatment techniques used in your countries (including Natural Attenuation)?

- a. Distribution of techniques?  
  
EPA has issued a number of reports and guidance documents describing various treatment technologies that may be appropriate to use depending on the site-specific circumstances. See for example <http://clu.in.org/asr>
- b. Evolution in time?  
  
We are seeing several patterns and trends in the use of remediation technologies, including an increase in in-situ treatment, a decrease in pump and treat systems and an increase in remedial strategies using multiple technologies at a single site.
- c. Acceptance of innovative treatment techniques?  
  
Many technologies that were labelled as innovative during the 1990s are commonly employed today. More recent innovations have been focussed on improved

engineering, innovative applications of existing technologies and project management approaches.

18. Are you considering sustainability in the national approach?

Executive Order 13514 sets goals for sustainability. EPA has issued guidance on the use of green remediation. See:

<http://www.epa.gov/oswer/greenercleanups/>

If yes, how? In particular, how the three pillars of sustainability are considered and balanced.

Restoring, revitalizing and bringing economically productive new uses to contaminated lands such as Superfund sites are a vital part of cleaning up contaminated sites. Superfund communities are developing innovative ways to address social, economic and environmental priorities, pursuing opportunities that benefit people, the environment and the economic bottom line. For examples see:

<http://www.epa.gov/superfund/programs/recycle/pdf/sustainability-fact-sheet.pdf>

- a. If no, explain the reasons and the future challenges.

Not applicable

19. How does your country bridge the CLM approach with:

- a. Land planning programmes?

Cleanups are planned and conducted with considerable input from local communities. Local communities and property owners determine land use and EPA considers the current and reasonably anticipated future land use when it selects remedies that are protective of human health and the environment.

- b. Public health programmes (aggregation of impacts on surrounding populations)

EPA's cleanup programs are designed to ensure protection of human health, and the Agency works closely with ATSDR, state, tribal and local government health agencies to be certain current, accurate public health issues are fully addressed as part of the cleanup process.

## **FINANCIAL ISSUES**

20. What are the specific practices with respect to "Orphan sites"?

In general, the Superfund Trust Fund is available to finance cleanup of contaminated sites where viable responsible parties are not available to pay or carry out the cleanup. The cleanup process for orphan sites is the same as for non-orphan sites..

21. Do you have an idea of the annual budget allocated to Soil Contamination Management?

Budgets generally do not separate funds for soil contamination management from management of contamination in groundwater and other media. A commercial study estimates that the annual remediation market in the US. Is about \$8.0 billion, including private and public expenditures.

- a. How is it divided between public, private and others?

Annual federal expenditures for the three largest cleanup programs are approximately: federal Superfund program \$1.2 billion, Department of Energy (DOE) \$1.7 billion, and Department of Defense (DOD) \$1.8 billion. Data on approximately 15 other federal agencies are unavailable, but an order-of-magnitude estimate is \$0.1-0.3 billion. There are little aggregated data on remediation expenditures by states, localities, and private parties, which include the great majority of RCRA, UST, brownfield, and responsible party activities at Superfund sites. As a general estimate, these sectors are estimated at an order of magnitude of \$2.8.0-3.8 billion.

- b. What are the main financial / funding systems in place in your country? (E.g., Financial guarantees, insurance, public – private partnerships, special foundation, industrial consortium, enforcement, ...).

**Direct government budget allocations** by federal government and states. For example, Superfund sites for which there are no viable responsible parties are cleaned up using federal funds, most of which are from direct budget allocations from Congress. Federal facility cleanups are primarily the responsibility of DOD, DOE and approximately 15 other agencies. Within these programs there may be some sites that also have other responsible parties that contribute to the cleanups.

**Direct state and local government expenditures** include state Superfund programs, RCRA corrective action programs, underground storage tank (UST) programs, voluntary cleanup programs, and brownfield cleanup and redevelopment efforts.

**Superfund and state trust funds.** A small proportion of Superfund expenditures is from the Trust Fund, funds originally collected through a dedicated tax which ended in the mid-1990s and from cost recovery from responsible parties. Many states have trust funds that address sites that generally, but not always, have milder contamination problems than the typical Superfund site. There are also state trust funds dedicated to USTs.

**Enforcement activities** to compel responsible parties to reimburse US EPA for cleanup work the Agency has undertaken and to provide funds for ongoing and future cleanup actions.

**Other Funding Sources** include a number of programs and arrangements. A local, state, or private entity may contribute to a cleanup as a means of making land available for revitalization;

- c. Between the different steps of management (investigation, remediation, monitoring...)?

## **ORGANISATIONAL ISSUES**

22. How are stakeholders and in particular communities involved in the approach?



The Superfund program has a formal community engagement program, including procedural toolkits and training aids, and over 100 community involvement coordinators in EPA's 10 regions. The program also provides technical assistance grants to help communities address complex technical issues and grants for reuse assessments. The Brownfields program includes community involvement as a criterion in awarding grants.

23. Is there a specific approach for:

a. Brownfields?

EPA has a program dedicated to brownfields issues. It includes technical assistance, training, and grants to communities for site assessment, cleanup, job training, and planning. Cleanup approach and techniques are similar to other cleanup programs.

b. Megasites? No

c. Widespread pollutions? No

d. Reuse of excavated soils? (e.g., in relation to their quality)?

Depending on the circumstances, it may be appropriate to reuse excavated soils if they do not contain concentrations of contamination that pose a risk to human health or the environment.

24. Does your national policy include any accreditation system for consultants or service providers? If yes, please provide some details. No

25. Do you have any training / capacity building programme, any management accountability and performance measurement? Yes

EPA offers training to site managers and on-scene coordinators, and community involvement coordinators in all aspects of site management through on-site seminars, webinars, guidance documents, fact sheets, and regional and national conferences, and a web site dedicated to hazardous waste management, the largest repository of its kind in the world ([clu.in.org](http://clu.in.org)).

Program offices in EPA comply with federal system to measure performance based on program results. The Government Performance and Review Act (GPRA) procedures periodically track control of variables such as site-wide human exposures or contaminant migration in groundwater.

26. How is the necessary inter-governmental coordination for CLM organized? (e.g. with Health Protection Department, with the public site owners, with state or local public sector environmental organizations, with special interest advocacy groups)

EPA works with other federal departments, states, tribes, and local governments, often through interagency agreements. For example, at many sites, EPA oversees cleanup by other federal or state departments of their contaminated property in particular. EPA also works closely with its state, tribal and local government environmental program partners throughout the cleanup process for most other sites as well.

## **CRUCIAL DEVELOPMENTS IN THE FUTURE**

Are there any additional issues to be further developed in the following months/years whatever they are (Research and Development needs, organisational issues, ...)?

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Unofficially or officially, do you see any opportunities for collaboration in the coming months or years that may improve overall coordination among international organizations? (e.g., conferences, workshops, international (technical or policy) initiatives, growing alliances (e.g., in support of redevelopment /reuse of contaminated lands, etc.).

***REFERENCES***

Please give most important references (documents, website, projects, and case studies) that could be relevant for explaining your national approach