



USER GUIDE:
Technical Impracticability (TI) Waiver Map Viewer

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Introduction

The TI Waiver Map Viewer displays the TI waiver zones associated with each TI waiver. The attribute table within the TI Waiver Map Viewer contains information about each waiver, including links to a TI waiver profile (pdf), which contain details about the site, operable unit, and the TI waiver decision.

Each row in the attribute table corresponds to a TI waiver map. Sites may have more than one row in the table if the site has more than one waiver, either for a different media (groundwater or surface water) or a different plume or operable unit (OU). Sites may also have more than one entry listed in the table if the TI waiver zone was modified. Note that the number of unique TI waivers/profiles does not match the number of maps, which correspond to rows in the table. This discrepancy occurs because modifications to a TI zone are incorporated into the existing TI profile while a new map is generated to show the updated zone, leading to an additional row in the table.

For sites with a modification that changes the boundary of the TI waiver zone, the updated map is indicated by “TI Zone Modification” in the TI Zone column with the original map indicated by “TI Zone Original.” Minor changes to a TI waiver zone that do not modify the TI waiver zone itself, such as revising the COCs or ARARs are indicated by “COC/ARAR Modification” in the TI Zone column. These “TI Zone” flags are color-coded on the maps, as shown in the legend. Original maps are shaded in blue, and modifications are shaded in green. TI waiver zones that have been rescinded/removed are listed as “TI Waiver Rescinded” and shaded in red. TI waiver zones with a minor modification are listed as “COC/ARAR Modification” and are shaded in orange. Unmodified TI waiver zones are listed as “TI Zone” and shaded in white with a yellow outline. When a map is selected, the associated TI zone will be outlined and shaded in aqua blue.

The “NAPL Part of TI Rationale” column indicates if nonaqueous phase liquid (NAPL) was included as part of the reason for the TI waiver as either dense nonaqueous phase liquid (DNAPL) or light nonaqueous phase liquid (LNAPL). Some waivers have both DNAPL and LNAPL indicated. A “No” in this column means NAPL was not an issue when determining the TI waiver.

The “COC Group” relates to the contaminants of concern (COCs) being waived by the TI decision. This list depends on the COCs for which ARARs are being waived and may or may not include all COCs for the specified medium (groundwater or surface water) in that OU.

Both the primary and secondary site types come directly from SEMS.

Navigation

The map has “click-and-drag” movement functionality and a zoom feature. Clicking on a row in the data table will automatically zoom to that selected map. If multiple rows are selected, the view will zoom to include all the selected maps.

Search and Filter Capability

To search for a singular parameter, enter the desired term or phrase into the search box, which will search all columns simultaneously for the specified term/phrase. Search results will display any rows that contain the search term. Filtering is available by clicking the four-circles icon in the upper right corner of the table and selecting Set Filter. The Filter widget allows the display of maps to be limited to only those that meet expression criteria as defined by the user. Multiple expressions can be set at once to further refine the search. The filter can be toggled on and off as needed. Options and notes for each data field are provided in the table below:

Data Field	Options/Notes for Searching and Filtering
EPA Region	“Region #” to search for a specific region
State	Search full state name
Site Name	Search official EPA site name
EPA ID	Search full EPA ID
Federal Facility	<ul style="list-style-type: none">Federal FacilityNon-federal Site
TI Profile Link	Link to a 1-2 page summary about the TI waiver (pdf) in SEMS
Decision Document FY	“FY XXXX” to search for a specific FY
Decision Document Type	<ul style="list-style-type: none">ESDRODROD Amendment
Operable Unit	Search the operable unit number, with a leading zero if less than 10. The OU number helps distinguish different waivers
Media	<ul style="list-style-type: none">GroundwaterSurface water
TI Zone	<ul style="list-style-type: none">COC/ARAR ModificationTI Waiver RescindedTI ZoneTI Zone OriginalTI Zone Modification
NAPL Part of TI Rationale	<ul style="list-style-type: none">DNAPLLNAPLNo <p>“NAPL” will search for all profiles that had either LNAPL or DNAPL as part of the rationale for the TI waiver</p>

Data Field	Options/Notes for Searching and Filtering
COC Group	<ul style="list-style-type: none"> • BTEX • Dioxins and furans • Halogenated SVOCs • Halogenated VOCs • Metals and metalloids • Nonhalogenated SVOCs • Nonhalogenated VOCs • Other Inorganics • Other Organics • PAHs • PCBs • Pesticides and herbicides
Site Type (primary)	<ul style="list-style-type: none"> • Manufacturing/Processing/Maintenance • Mining • Multiple • Other • Recycling • Waste Management
Site Type (secondary)	<ul style="list-style-type: none"> • Batteries/scrap metals/secondary smelting/precious metal recovery • Chemicals and allied products • Chemicals/chemical waste (e.g., solvent recovery) • Coal gasification • Co-disposal landfill (municipal and industrial) • Contaminated sediment site with no discernable source • Drums/tanks • Electronic/electrical equipment • Ground water plume site with no identifiable source • Illegal disposal/open dump • Industrial waste facility (non- generator) • Industrial waste landfill • Lumber and wood products/wood preserving/treatment • Metal fabrication/ finishing/coating and allied industries • Metals • Military/Other Ordinance • Mine tailings disposal • Multiple • Municipal solid waste landfill • Oil and gas refining • Ordnance production • Other • Plastics and rubber products • Primary metals/mineral processing • Product storage/distribution • Research, development, and

Data Field	Options/Notes for Searching and Filtering
	<ul style="list-style-type: none"> • testing facility • Spill or other one-time event • Transportation (e.g., railroad yards, airport, barge docking site) • Trucks/ships/trains/aircraft and related components • Unknown
Analysis Area (acres)	Area of TI zone (in acres) based on web map
Site Profile Link	Link to Superfund site profile page

Data Table

The attributes table is downloadable by clicking the four-circles icon in the upper right corner of the table and selecting Export. Users may choose between CSV, JSON, or GeoJSON files.

TI Profiles

TI profiles are developed for each TI waiver issued in a decision document and contain details about the site, operable unit, and the TI waiver decision. The following information is included in each TI profile:

- Site and Waiver Identification Information
 - EPA ID
 - OU number
 - Decision document type and date
 - Media with the TI waiver (groundwater or surface water)
 - TI modification type
- Site and Contaminant Details
 - Geology
 - TI zone description
 - Delineated source associated with TI zone
 - COCs waived
- TI Decision
- Rationale
- Selected Remedy
- References

These profiles are updated when modifications are made to the TI waiver. As noted above, the number of unique TI waivers/profiles does not match the number of maps, which correspond to rows in the table. This discrepancy occurs because modifications to a TI zone are incorporated into the existing TI profile while a new map is generated to show the updated zone, leading to an additional row in the table. For example, Hocomonco Pond has one TI waiver for groundwater but has two rows in the table because the groundwater TI zone was modified and therefore has two maps. However, both groundwater entries in the table are linked to the same waiver profile.