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Identifying and Considering ARARs at Federal Facility Cleanups

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Remediation and Reuse Focus Group
Federal Facilities Research Center

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ASTSWMO is an organization supporting the environmental agencies of the States and Territories. ASTSWMO's mission is to enhance and promote effective State and Territorial programs and to affect relevant national policies for waste and materials management, environmentally sustainable practices, and environmental restoration. The mission of the Remediation and Reuse Focus Group is to identify and investigate issues arising from the remediation, reuse, and long-term management of federal facilities. This includes researching and developing resource documents, issue papers, and other tools on the implementation of alternative or innovative remediation policies and strategies; site closeout and transfer; reuse and redevelopment of federal facilities; and long-term stewardship.

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TABLE OF CONTENTS

I. INTRODUCTION 1
Background 2
II. CERCLA REMOVAL ACTIONS (NCP §300.415) 3
Interpreting "Extent Practicable" 4
Identification of State ARARs for Removal Actions 5
State Concerns at Removal Actions 5
Examples of State ARARs Applied to Removal Actions 6
Best Practices and Recommendations 8
III. CERCLA REMEDIAL ACTIONS (NCP §300.430) 9
Table 1: CERCLA Remedial Action ARARs Steps 10
Figure 1: CERCLA Remedial Action ARARs Flow Chart 13
Interim Remedial Actions 14
No Action Record of Decision 15
State Concerns at Remedial Actions 17
IV. ARAR WAIVERS 19
V. DISPUTE RESOLUTION 20
VI. CONCLUSIONS AND RECOMMENDATIONS 23
APPENDIX A: RESOURCES A-1

I. INTRODUCTION

In September 2021, ASTSWMO's Federal Facilities Subcommittee asked its membership, which includes the 50 States, five Territories, and the District of Columbia (States) to identify current challenges to completing cleanups at federal facility sites. The main challenge identified was the process of identification of and federal agency acceptance of States' Applicable or Relevant and Appropriate Requirements (ARARs) in Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanups. In January 2022, ASTSWMO conducted a roundtable with the membership, which further discussed concerns States are having with ARARs at federal facilities. Twenty-nine States identified ARARs as a concern in preparation of the roundtable.

To address our members' concerns, the ASTSWMO Remediation & Reuse Focus Group (RRFG) developed this paper to assess the inclusion of State ARARs at CERCLA cleanups by federal agencies who manage cleanups under the authority of Executive Order (E.O.) 12580. The regulatory requirements regarding inclusion of State and federal ARARs are detailed in the National Oil and Hazardous Substance Pollution Contingency Plan (NCP), which was revised to include CERCLA (Superfund program) and the Superfund Amendments and Reauthorization Act (SARA). In addition to reviewing statutory requirements, ASTSWMO reviewed available regulatory policies, guidance, decision documents, and studies from EPA, other federal agencies, and other sources. These resources are compiled in Appendix A.

ASTSWMO will use the following terms and definitions in this paper:

- **Federal Facility**: a property, installation, or facility currently or formerly owned by, or constructed or manufactured for the purpose of leasing to, the federal government.
- **Federal Agency:** any federal government executive branch agency. This does not include the U.S. Environmental Protection Agency (EPA).
- **Applicable requirements** are cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal or State environmental laws or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance found at a CERCLA site.
- **Relevant and appropriate requirements** are cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal or State environmental laws or facility siting laws that, while not ''applicable'' to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

Background

Federal agencies identified as responsible parties are liable for addressing contamination at federal facilities by conducting assessments, investigations, and remediation of properties they currently or formerly owned, operated, or controlled. According to E.O. 12580, federal agencies are the lead agency at these federal facilities. At National Priority List (NPL) sites, the EPA is the lead regulator. In most cases State regulators are included in a Federal Facilities Agreement (FFA) and support the EPA at NPL sites. Because many federal facilities are not on the NPL, States are often the lead regulatory agency responsible for overseeing the federal agency and enforcing compliance with federal and State regulations at these sites. EPA and State agencies are regulators but are also known as support agencies for federal facilities.

The process of identifying, determining, and accepting or rejecting State(s) laws and regulations as ARARs in CERCLA cleanups by the federal agencies is complicated. CERCLA §121(d)(2)(A) provides that any State promulgated standard, requirement criteria, or limitation that is identified in a timely manner and that is more stringent than any federal standard, requirement, criteria, or limitation may be considered applicable or relevant and appropriate. States identify ARARs on a site-specific basis when a State environmental law or regulation is "applicable" or "relevant and appropriate". The inclusion of ARARs in site documents, particularly decision documents, is critical because the ARARs define a threshold that must be met to assure CERCLA cleanups protect human health and the environment.

As a site progresses through the CERCLA process, the technical and legal staff for the agencies should identify potential ARARs as early as possible and work collaboratively to resolve disputes. The federal agency should request the State identify ARARs for review and incorporation into the decision document in a timely manner. States must provide a citation for each ARAR submitted to the federal agency that identifies only the substantive requirements of the environmental law or regulation. It is not appropriate to refer to an entire statute or chapter of regulations. While only the substantive requirements are included as ARARs, federal agencies must comply with laws and regulations to the same extent as non-federal entities when conducting CERCLA cleanups.[1,2]

In addition to ARARs, other State or federal advisories, guidance, and criteria that are not promulgated or legally binding but may be useful in developing CERCLA remedies or interpreting State laws may be classified as "To-be-Considered" materials (TBCs). Examples of TBCs may include a State's reference doses, additive effects, and guidance documents, or proposed regulations that States develop and release regarding contaminants of emerging concern (CEC), which takes significant time to promulgate. TBCs are not considered ARARs but should be evaluated along with ARARs because they provide supplemental information that

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[1] Substantive requirements are those requirements that pertain directly to actions or conditions in the environment. Administrative requirements are those mechanisms that facilitate the implementation of the substantive requirements of a statute or regulation (https://clu-in.org/conf/tio/FFAcademy11_120722/).

[2] On March 1, 2023, EPA released a memorandum and guidance, *Documenting Applicable, or Relevant and Appropriate Requirements in Comprehensive Environmental Response, Compensation, and Liability Act Response Action Decisions*, which includes recommendations and template for documenting ARARs.

may be necessary to evaluate whether the remedy protects human health and the environment.

Applying TBCs addresses future concerns as any new State regulations promulgated after the decision document must be evaluated as part of a five-year review (FYR) to determine if the selected remedy remains protective. For sites that achieve Unrestricted Use/Unrestricted Exposure (UU/UE) and a new cleanup standard (e.g., CEC) is issued, federal agencies may have to go back and reassess the protectiveness of the remedy. For example, after EPA revised polyfluoroalkyl substances (PFAS) health advisory and screening levels and several States developed PFAS regulations, federal facilities were required to conduct a new Preliminary Assessment/Site Inspection (PA/SI) for PFAS at sites with known or potential contamination.

The NCP requires that the administrative record for a site contain documents that form the basis for the selection of a response action, which include remedial and removal actions. Federal agencies comply with this requirement by releasing decision documents identified as Record of Decision (ROD), Interim ROD, No Action ROD, and Removal Action Memorandum, which must include ARARs established for any selected response action. A subsequent decision document is necessary when an Interim ROD or Removal Action Memorandum is issued, as these documents have a focused objective and typically occur during the remedial investigation (RI).

Defining ARARs at federal facilities can result in contentious situations between the State, EPA, and the federal agency when ARARs are not accepted by the federal agency. This is further complicated by the CERCLA process, which identifies different processes for including ARARs in the various types of CERCLA required documents. The following sections present when and how State ARARs are included in the process of developing each of these decision documents by highlighting regulations, identifying challenges, and, when necessary, administrative actions that can be applied.

II. CERCLA REMOVAL ACTIONS (NCP §300.415)

A removal action under CERCLA is generally defined as a short-term response designed to stabilize or clean up an uncontrolled hazardous waste site that poses an immediate threat to human health or the environment. NCP §300.525(e) requires EPA to consult with States on all NPL removal actions to be conducted in that State. At non-NPL sites, the lead agency will discuss removal actions directly with the State.

Removal actions include:

- emergency responses to accidental releases of hazardous substances (action is required within hours),
- time-critical removal actions (TCRA) (required within 6 months), and
- non-time critical removal actions (NTCRA) (planning period of more than 6 months is available).

All potentially responsible parties (PRPs), including lead federal agencies at federal facilities, are required to issue a Removal Action Memorandum for all removal actions. Removal Action Memorandums document ARARs at the site, but the timing in which Memorandums are issued will vary depending on whether the removal action is an emergency response, TCRA or NTCRA. During a removal action, ARARs are required to be attained to the extent practicable.

Interpreting "Extent Practicable"

In general, compliance with most federal and State ARARs will be practicable during removal actions, which will help to achieve the long-term goal for the site. However, in some situations as noted in the NCP, identifying and/or complying with ARARs will not be practicable during a removal action or the criteria for a waiver of the ARAR will be satisfied (see Section IV). Under such circumstances, compliance with the ARAR is not required.

The NCP identifies two factors that should be considered in determining whether identifying and complying with ARARs is practicable: (1) the urgency of the situation, and (2) the scope of the removal action to be taken.

Urgency of the Situation:

During most removal actions, sufficient time exists for OSCs to identify ARARs and plan response actions that comply with them. For example, in most cases, OSCs can acquire drums, tanks, and overpacks, and construct storage facilities that meet ARARs (e.g., basic Resource Conservation and Recovery Act (RCRA) storage requirements) before RCRA hazardous waste is removed from leaky tanks or soil is excavated and stored. In cases where the degree of threat warrants a truly immediate response to protect public health and environment from an imminent threat, full compliance with ARARs could cause On-Scene Coordinators (OSCs) to delay a response, compromising the protection of public health and the environment. In such urgent cases, compliance with ARARs may not be practicable.

Scope of the Removal Action:

Actions required by ARARs often will be within the scope of the designed removal action. For example, when a removal action calls for treatment of aqueous material from an on-site sludge pit and discharge of the treatment effluent to an on-site stream, compliance with substantive National Pollutant Discharge Elimination System (NPDES) discharge limits would be within the scope of the designed action and, therefore, would be practicable. Similarly, when a removal action calls for the on-site incineration of waste, compliance with incinerator operation and performance standards under RCRA and other applicable regulations are necessary and likely practicable. However, in some cases, compliance with ARARs is outside the scope of the removal action because the ARAR requires a degree of cleanup that would be inappropriate or inconsistent with the limited scope and purpose of the removal action, e.g., site stabilization and mitigation of near-term threats or removal of leaky drums without addressing the contaminated soil.

Identification of State ARARs for Removal Actions

EPA and federal agencies should notify States verbally and in writing as soon as a removal action is contemplated, or an emergency response is initiated to provide States with the opportunity to identify and provide State ARARs in a timely manner. Because of the short duration between the proposal for a removal and the actual removal, States have limited time to identify ARARs. For example, emergency responses and TCRAs may not provide significant opportunities for States to provide ARARs as they typically occur quickly and are intended to remove an immediate threat.

On the other hand, during NTCRAs, sufficient time should be available to determine ARARs based upon a reasonable understanding of site characteristics. Preparing the engineering evaluation/cost analysis (EE/CA) should allow consideration of ARARs in the development of the response action. NTCRA conducted after an EE/CA must attain ARARs of federal and State environmental and public health laws to the extent practicable as this will meet the requirement to efficiently correspond with performance of long-term remedial actions. This requirement, along with NCP section NCP §300.415(b)(1), which permits a removal action to eliminate the release or threat of a release, provides the authority to the lead agency to incorporate ARARs when defining the objectives for a removal action as ARARs are a threshold requirement for remedial actions that must be evaluated as part of the Feasibility Study.

NCP §300.415(b)(4)(i) requires an EE/CA to identify objectives for removal actions and to analyze alternatives with regards to cost, effectiveness, and implementability. The protectiveness of alternatives developed in an EE/CA can be assessed in terms of protection of human health and the environment and compliance with ARARs. The Action Memorandum provides general information and site background, potential threats to the public health and the environment posed by the site, including expected changes if no action is taken or if the action is delayed, enforcement activities related to the site, and estimated EE/CA costs.

Regardless of the type of removal action, EPA and federal agencies should also consult with States often throughout the CERCLA removal process. All removal actions should be consistent with any long-term remedial action at the site and the removal action completion report should identify if ARARs were obtained or not obtained, to the extent practicable.

State Concerns at Removal Actions

ASTSWMO members have reported that federal agencies may give preference to conducting removal actions and do not follow up with subsequent remedial actions. While removal actions may be an effective means of reducing the immediate risks and should attain ARARs to the extent practicable, they cannot be the final action. Conducting removal actions to the exclusion of subsequent remedial actions raises several concerns including:

- Removal actions may allow for less State involvement;
- Removal actions may leave some waste in place.

- Ecological risk assessments are often not conducted for removal actions;
- Removal actions do not trigger FYRs under CERCLA; and
- Removal actions are only required to comply with ARARs to the extent practicable.

Federal agencies dictate the scope of a removal action and determine what ARARs are to be attained, which can complicate the inclusion of State ARARs.

States understand that compliance with State ARARs (e.g., soil cleanup criteria) may not be achieved during a source removal action (e.g., focused excavation that only removes grossly contaminated soil within a dry well), but ARARs should be evaluated to determine if they can easily be achieved or to what practicable extent they can be achieved during the removal action. This would be supported by federal regulations as this action would contribute to the future remedial action or potential no further action determination. For example, the US Navy indicates that "[o]pportunities to improve performance and to evaluate green and sustainable remediation practices shall be considered and implemented throughout all phases of remediation regardless of the regulatory framework under which cleanup may occur." This is further supported by the US Navy's Environmental Restoration Program Manual which indicates that "[e]conomic considerations also may impact the extent of the action that is taken. In some cases, expanding the scope of the removal action may allow the action to be the final remedy" and "[t]he removal action should be compatible with future remedial actions and should strive to meet ARARs." Because the end goal is to achieve a comprehensive remedy, these statements imply that State ARARs are acceptable removal action objectives and permit the US Navy to use technical judgment to define cleanup objectives for the removal action that best fit the site and comply with the NCP.

Examples of State ARARs Applied to Removal Actions

Joint Base Cape Cod

On October 2, 2020, the Massachusetts Department of Environmental Protection (MassDEP) promulgated final regulations in 310 Code of Massachusetts Regulations [CMR] 22.00 establishing a Massachusetts Maximum Contaminant Level (MMCL) for drinking water for the sum of six PFAS at a level of 20 parts per trillion (ppt). In response to PFAS contamination that had been released into soil and groundwater at Joint Base Cape Cod (JBCC) due to historic uses of aqueous film-forming foam (AFFF), a letter was drafted by MassDEP to the Air Force Civil Engineer Center (AFCEC) on October 28, 2020, requesting the implementation of the sum of six PFAS MMCL as an ARAR during the RI phase for the Installation Restoration Program (IRP) groundwater response actions occurring at JBCC. In September 2021, the United States Air Force (USAF) agreed to conduct a NTCRA in response to identified exceedances of the sum of six PFAS MMCL in utilized drinking water sources within the Ashumet Valley JBCC groundwater plume area.

The JBCC decisions appear to have influenced the Department of Defense (DoD) removal action procedures as DoD released a memorandum, dated December 22, 2021, "DoD Guidance on

Using State Per- and Polyfluoroalkyl Substances Drinking Water Standards" ("DoD PFAS Guidance"), which states:

> DoD may initiate a removal action where DoD is responsible for a confirmed release with perfluorooctane sulfonic acid (PFOS)/perfluorooctanoic acid (PFOA) concentrations above the EPA Lifetime Health Advisory (LHA) levels in drinking water (i.e., groundwater currently used for drinking water). Removal actions may extend to drinking water wells that are currently below the EPA PFOS/PFOA LHA levels when site specific hydrogeological conditions are expected to result in an exceedance of that level without a removal action.

The DoD PFAS Guidance also states that, "…a state drinking water standard may qualify as an "Applicable or Relevant and Appropriate Requirement" (ARAR) for remedial action in accordance with CERCLA § 121(d)(2)(A)." The Guidance claims that

> [w]hile DoD is not required to attain ARARs as part of a removal action, the National Oil and Hazardous Substances Pollution Contingency Plan at Section 300.415(j) of Title 40, Code of Federal Regulations (CFR) identifies that EPA Superfund-financed removal actions shall, to the extent practicable considering the exigencies of the situation, attain ARARs. DoD is adopting this approach for its DoD-funded removal actions which it believes is consistent with existing National Defense Authorization Act provisions. As a matter of policy, once initiation of a removal action is triggered as set out above, and DoD as the lead agency identifies a properly promulgated, consistently implemented state PFAS drinking water standard as an ARAR for the specific removal action, DoD may use the state PFAS drinking water standard when determining the cleanup level to be attained at the completion of the removal action.

As a result, the USAF identified the existence of an imminent and substantial risk to public health or welfare at JBCC, particularly Ashumet Valley, due to the presence of PFOS/PFOA above the EPA LHA in drinking water and at locations with current sum of six PFAS MMCL exceedances that are anticipated to result in future EPA LHA exceedances at municipal and residential wells used to supply drinking water from the same aquifer at JBCC. Removal actions include municipal water connection, Granular Activated Carbon (GAC) wellhead treatment, and Ion Exchange (IX) wellhead treatment.

Brookhaven National Laboratory

Another example of State ARARs being considered for a removal action at a federal facility is the Department of Energy (DOE) TCRA Action Memo to install groundwater treatment systems to address PFAS from two source areas on the Brookhaven National Laboratory (BNL) site in New York. A major ARAR governing the BNL site is the classification of the groundwater at and down gradient of the site as a "sole source aquifer" containing a source of drinking water as defined by New York State. The New York drinking water standards for PFOS at 10 ppt and PFOA at 10 ppt (promulgated in August 2020) were selected as the cleanup goals. A State Pollutant Discharge Elimination System (SPDES) equivalency permit was issued for the systems.

Plattsburgh Air Force Base

Plattsburgh Air Force Base (PAFB) in New York presents an example of DoD reviewing and applying State PFAS ARARs before and after the issuance of DoD PFAS Guidance. The DoD indicated that State ARARs would be accepted as part of the FS if determined to be an ARAR, but not during a removal action. The DoD conducted a removal action at private potable wells that contained PFOS and PFOA above EPA's LHA but declined to provide the same removal action to other properties where State ARARs were exceeded at concentrations below the LHA. In these types of situations, the DoD fails to appropriately assess and contribute to the efficient performance of any future remedial action to the extent practicable as required by NCP §300.415(d). The State performed a separate removal action that installed a point of entry treatment (POET) system for each remaining impacted private well, which was similar to DoD's removal action, and intended to recover costs from the federal agency. This resulted in multiple discussions between the State and DoD, which redirected resources from site remediation activities. Based on the DoD PFAS Guidance, the DoD is currently preparing an EE/CA regarding the inclusion of the New York POET systems with the PAFB POET systems.

PAFB removal action followed the DoD PFAS Guidance, which indicates that DoD will, to the extent practicable considering the exigencies of the situation, attain State ARARs as required for EPA Superfund fund-financed removal actions. This is a movement in the right direction, but DoD must comply with the NCP §300.415(d) requirement to contribute to the efficient performance of any future remedial action to the extent practicable. DoD removal actions must also protect public health, animals, food chain and sensitive ecosystems from site pollutants. NCP §300.415(b)(2)(i and ii), does not identify chemicals (e.g., PFOS/PFOA, lead, or 1,4-dioxane) or media (e.g., drinking water, surface soil, or soil vapor) as limited by the DoD PFAS Guidance. Even with the urgency and scope of the removal action, the inclusion of State ARARs is consistent with CERCLA and NCP requirements to support future remedial action(s) to the extent practicable.

Federal facilities should provide early notification to States of an impending removal action and should consult with States often in the CERCLA removal process. All removal actions should be consistent with any long-term remedial action at the site. The removal action completion report should identify if ARARs were obtained or not obtained, to the extent practicable.

Best Practices and Recommendations

To help eliminate potential problems during removal actions:

- Lead and support agencies should identify potential ARARs triggered by site characteristics during the removal site evaluation phase;
- Lead agencies should contact States as early as possible to identify State ARARs, particularly when there is the potential for public exposure and risk to human health and the environment;

- Lead agencies should identify additional ARARs as potential supplemental actions are developed; and
- Where site conditions or circumstances preclude efforts to identify and attain ARARs, these conditions should be documented.

A good example of federal agency policy to comply with ARARs during removal actions can be found in the 1995 DOE memo "Policy on Decommissioning Department of Energy Facilities Under CERCLA," where it states that "EPA and DOE intend to work with authorized States to coordinate RCRA and CERCLA authorities to the maximum extent practicable in order to prevent unnecessary duplication or delay in decommissioning projects subject to both authorities…" and "[d]ecommissioning activities should comply with relevant and appropriate standards to the extent practicable, as provided by the NCP, and as necessary to contribute to the efficient performance of any long term remedial action."

III. CERCLA REMEDIAL ACTIONS (NCP §300.430)

Remedial actions are those actions that implement a permanent remedy instead of, or in addition to, a removal action. Remedial actions are usually determined necessary after the completion of a PA/SI that indicates further investigation is needed. Under the NCP, the initial list of ARARS is provided during the RI scoping phase of the remedial action process.

The use of ARARs during the SI scoping phase is encouraged, but not required. For instance, if the State has ARARs for screening levels, acceptable drinking water levels, or soil standards, it will be important for detection limits (DLs) established during the SI to be below those screening levels or standards. Otherwise, locations with contaminant levels above the standards but below DLs will be left out of subsequent investigations.

Table 1 identifies the CERCLA process from PA/SI to the ROD and timing within each CERCLA phase for identifying, considering, and selecting ARARs, and Figure 1 provides a flow chart highlighting specific coordination activities during each phase of the CERCLA process. Because many ARARs apply to multiple sites it may be beneficial for States to compile a list of potential ARARs that can be referred to during Steps 1 and 2, RI scoping and performance. Some States have compiled potential ARARs and posted them to a public website. Examples from Nebraska, New York, and Ohio are provided in Appendix A.

Table 1: CERCLA Remedial Action ARARs Steps

STEP	CERCLA Phase	ARARs	Notes
	Preliminary Assessment	ARARs not required.	
	Site Inspection	ARARs not required.	ARARs are not required but can be useful for determining investigation parameters such as detection limits and data quality objectives.
1	Remedial Investigation scoping	Scoping discussion as required by NCP - Initial List of ARARs drafted and issues resolved. Chemical and location specific ARARs are discussed between all parties as part of the RI Work Plan.	NCP §300.515(h)(2) - *The lead and support agencies shall discuss potential ARARs during the scoping of the RI/FS.* ARARs are used to define the nature and extent of contamination and perform a Baseline Risk Assessment (BRA). The application of State ARARs during the RI saves the federal agency, EPA, and the State significant time and resources as site figures are prepared during the RI, whereas the FS applies the information presented in the RI to evaluate remedial alternatives.
2	Remedial Investigation performed	At end of site characterization data collection, lead agency officially asks support agency for (chemical and location-specific prioritized) ARARs. Support agency has 30 days to respond.	NCP §300.515(h)(2) - *The lead agency shall request potential ARARs from the support agency no later than the time that the site characterization data is available. The support agency shall communicate in writing those potential ARARs to the lead agency within 30 working days of receipt of the lead agency request for these ARARs.* *In addition to applicable or relevant and appropriate requirements, the lead and support agencies may, as appropriate, identify other advisories, criteria, or guidance to be considered for a particular release (NCP §300.400 (g)(3)).*

STEP	CERCLA Phase	ARARs	Notes
3	Feasibility Study	At the early stages of FS and prior to the comparative analysis the lead and support agency must identify chemical, location and action specific ARARs. The support agency should also identify any other ARARs not already identified after the initial screening of alternatives and requested by the lead agency. Support agency has 30 days to respond.	NCP §300.515(d)(1) & §300.515(h)(2) and §300.430(e)(8). During preparation of the FS the lead agency must formally notify the support agency if the lead agency intends to waive ARARs or does not agree with support agency that a certain standard is an ARAR. The lead agency must respond to State comments on waivers from or disagreements about State ARARs.
4	Feasibility Study	Lead agency provides draft FS with list of ARARs. Support agency has 10-15 days to respond.	NCP §300.430(e)(9) Compliance with ARARs. The alternatives shall be assessed to determine whether they attain applicable or relevant and appropriate requirements under federal environmental laws and State environmental or facility siting laws or provide grounds for invoking one of the waivers under paragraph NCP §300.430 (f)(1)(ii)(C) of this section. NCP §300.515(d)(3) requires lead agency to formally notify support agency if lead agency intends to waive support agency ARARs or does not agree with support agency that a certain standard is an ARAR -should appear in transmittal letter and NCP §300.515(h)(3).
5	Final Feasibility Study	Lead agency releases Final FS	NCP §300.515(d)(4) requires lead agency to respond to State comments on waivers from or disagreements about State ARARs, which support the ARARs set for the site.
6	Proposed Plan	Lead agency provides Draft Proposed Plan (PP). Support agency has 10 days to respond.	NCP §300.515(d)(3) and (4) requires lead agency to formally notify support agency if lead agency intends to waive support agency ARARs or does not agree with support agency that a certain standard is an ARAR should appear in transmittal letter and in draft PP and NCP §300.515(h)(3).

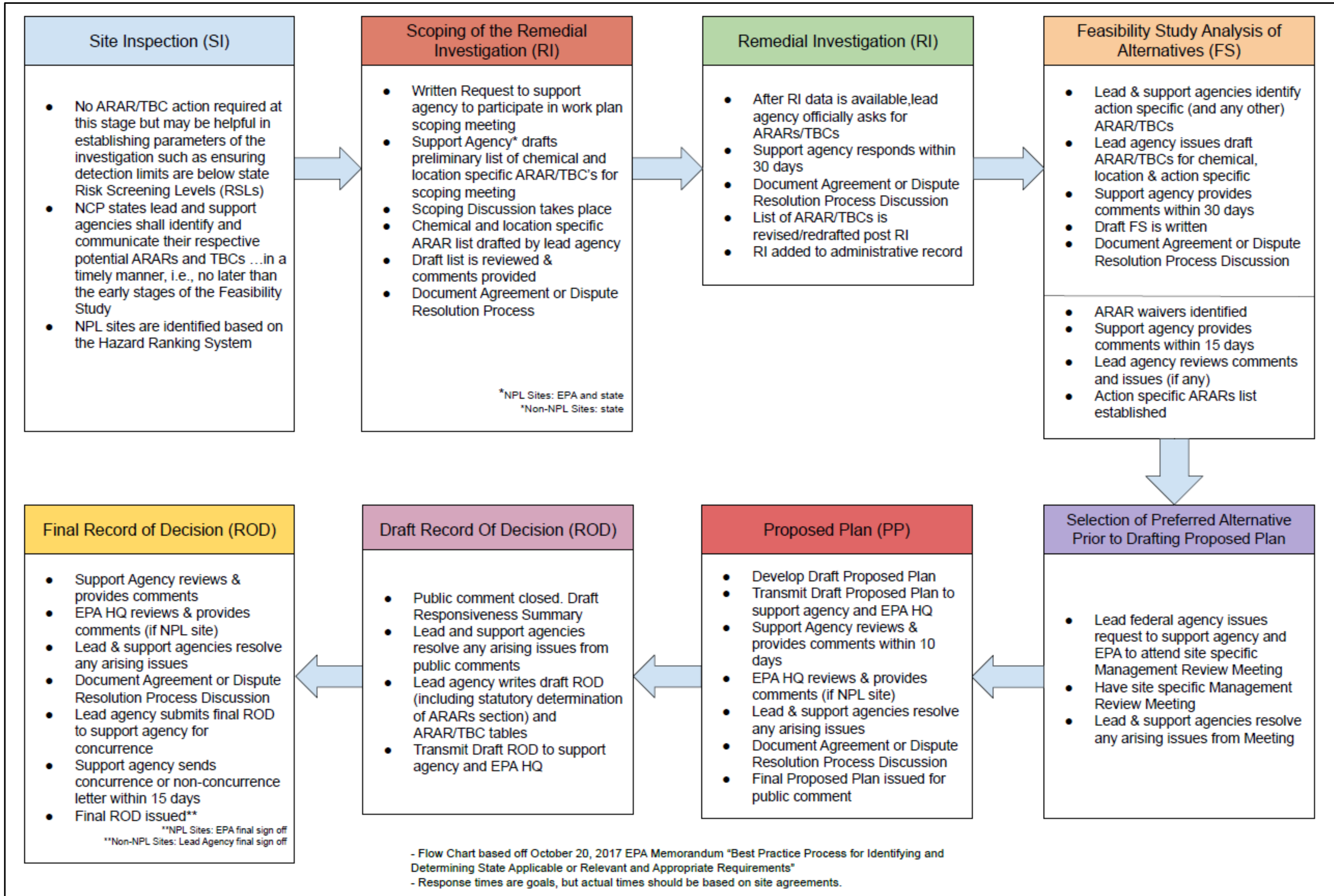
STEP	CERCLA Phase	ARARs	Notes
7	Proposed Plan	Lead agency issues PP for public comment with ARARs.	NCP §300.515(f)(3).
8	Record of Decision	Lead agency provides draft ROD (including statutory determination of ARARs section) and ARAR tables to support agency. Support agency has 10-15 days to respond.	NCP §300.515(h)(3).
9	Record of Decision	Lead agency submits final ROD to support agency for concurrence. Support agency has 10-15 days to concur or non-concur.	NCP §300.515(h)(3).
10	Record of Decision	Final ROD issued.	Includes final ARAR list for the remedy.

Notes:

1. A State Memorandum of Agreement (SMOA) or FFA may extend the review periods noted. Also, if an additional review period is needed this should be discussed with federal agencies as they tend to be receptive if informed ahead of time.

2. This table is developed from a more detailed table in EPA's October 20, 2017, memo, "Best Practice Process for Identifying and Determining State Applicable or Relevant and Appropriate Requirements Status Pilot".

Figure 1: CERCLA Remedial Action ARARs Flow Chart



Interim Remedial Actions

Interim remedial actions may be needed prior to the implementation of the final remedy at a site on occasion to mitigate the continued migration of contaminants or to protect human health and the environment from actual or threatened releases of hazardous substances into the environment. In these cases, an Interim Record of Decision (IROD) will be published that details the protective actions selected for the site prior to the development of the final remedy. The IROD may apply to the entire site or a portion of the site. As IRODs generally result in contaminant levels remaining on-site at concentrations above UU/UE, statutory FYRs still apply. Common uses of an IROD include, but are not limited to, supplying clean drinking water to affected populations or mitigation of a primary source area. For more information on the benefits and uses of IRODs, see the 2017 Final ASTSWMO Interim ROD Paper.

The IROD should identify current issues at the site that are not being addressed and specify that the Final ROD will address these issues. For example, the IROD for the Community of Moose Creek and Eielson Air Force Base in Alaska addressed only alternative drinking water supply to the Moose Creek community but specified that the "identification of principal threat waste (PTW) and approaches to address any identified PTW will be addressed in the Final ROD." As such, the selected ARARs for the IROD were limited to drinking water protection and groundwater human health protection regulations and standards.

An IROD will identify performance criteria for the interim actions. It is common for an interim RI/FS to be completed if there is time, though States need to be aware that while interim RI/FSs they are not required to complete an IROD. However, to fulfill the administrative record requirements set out in the NCP, there must be documentation that supports the rationale for the action outlined in the IROD. States should ensure that this documentation identifies ARARs that are pertinent for the interim actions.

The federal agency will request State ARARs and the subsequent IROD will include the federal and State ARARs that were developed during the interim FS. For example, the *IROD: Interim Remedial Action for Installation-Wide Groundwater at Redstone Arsenal in Alabama* addressed concerns from Alabama regarding RODs being prepared for surface media remedies and deferring decisions on the groundwater remedies until a later date when groundwater sites were evaluated. The interim land use controls (LUCs) were to prohibit use of groundwater for drinking water purposes, control the use of groundwater for non-potable uses and to initiate formal coordination with local government agencies who may conduct activities on or off property involving potentially contaminated groundwater. The IROD also stated that the selected interim remedy action will meet all ARARs (maximum contaminant levels [MCLs]) specifically associated with this limited scope and, in combination with the final actions at the groundwater sites, will either achieve compliance with ARARs or a waiver will be requested.

An interim remedy waiver may be appropriate where an ARAR cannot be met as part of the interim remedy but will be attained by the final remedy (CERCLA §121(d)(4)(A) and NCP §300.430(f)(1)(ii)(C)(1)). For example, the selected remedy for Operable Unit (OU)-1 Hanscom Air Force Base in Massachusetts included the continued operation of the existing groundwater

collection and treatment system, institutional controls, and groundwater and surface water monitoring to contain the migration of groundwater contaminants and reduce the extent of the groundwater plume. Chemicals of concern (COC) concentrations in OU-1 groundwater exceeded federal drinking water standards, State drinking water standards and State groundwater risk characterization standards at many locations, resulting in an unacceptable risk to human health from groundwater ingestion. The IROD states that:

> …under Section 121(d)(4)(A) of CERCLA, the Regional Administrator concurs with the decision to waive attainment of the following ARARs within the groundwater plume on the basis that this action is an interim measure and will become part of a total remedial action that will meet or attain ARARs when it is completed: the federal Safe Drinking Water Act (SDWA) MCLs, the SDWA MCL Goals, the Massachusetts Drinking Water Standards, and the Massachusetts Contingency Plan (MCP) Method 1 GW-1 groundwater standards. Due to the nature of OU-1, full compliance with these requirements will not be attained in the existing groundwater contaminant plume in the short-term.

No Action Record of Decision

For CERCLA sites that do not require removal or remedial action, the federal agency will develop a No Action ROD after completing the RI. No Action RODs do not require ARARs in the final decision document, however, an evaluation of ARARs should be conducted as part of the Baseline Risk Assessment (BRA) and/or RI that is used to support the final decision. Failure to do so could result in a No Action decision that does not address all environmental hazards at the site.

There are three circumstances under which a lead agency may determine that no action is warranted. No action in these circumstances is described as "no treatment, engineering controls, or institutional controls" but may include monitoring only (however, monitored natural attenuation is not a "no action" decision). These are:

1. When the site or a specific problem or area of the site (i.e., an OU) poses no current or potential threat to human health or the environment;

2. When CERCLA does not provide the authority to take remedial action; or

3. When a previous response(s) has eliminated the need for further remedial response.

Under the second circumstance, a threat to human health and the environment may be present, but it does not fall under the authority of CERCLA (e.g., in the case of a petroleum hazard). In that circumstance, additional response action(s) may be required under other federal and/or State environmental regulations, which should then be addressed in a non-CERCLA decision document or order.

The first and third circumstances indicate that there is no threat, or no longer a threat, to human health or the environment at the site. However, even under these two circumstances,

the determination that there is no threat, or no longer a threat at the site does not necessarily mean that the site has achieved UU/UE conditions. This is because the BRA conducted either as part of the RI in the first circumstance, or at the conclusion of the response action in the third circumstance (e.g., in a confirmation sampling assessment), may be based on site-specific current and predicted future land use conditions that may not include a UU/UE scenario. It is important for States to agree with the BRA conclusions that form the basis of the No Action ROD. The regulator should evaluate whether the BRA can be relied upon for making the No Action decision if ARARs were not considered when conducting the response action or the RI, or if the BRA conclusions appear to contradict State ARARs.

It should not automatically be assumed that a UU/UE designation is appropriate if the BRA does not consider State ARARs for potential exposure to the most sensitive receptors. In this case, the State should not accept the conclusion of the RI or the request for a No Action ROD without further evaluation of potential future risks and/or a remedy that includes some form of future management or monitoring.

If the State agrees with the No Action ROD determination for these two circumstances, the No Action ROD should include a statement about whether FYRs are necessary when the site does not reach UU/UE. FYRs are not typically required as part of No Action RODs because it is presumed that UU/UE has been achieved and there is no need for future review of the remedy. A No Action decision may be obtained by simply requiring FYRs, which will provide for a reassessment of the protectiveness of the remedy every five years (i.e., "monitoring only"). FYRs address both unpredicted future site conditions or land use and future changes to ARARs (e.g., the identification of new CECs). Requiring a FYR may also be negotiated with the lead agency in place of a LUC requirement if deemed appropriate. If there is a potential for future ARARs that may apply to the site, as with CECs, then including a FYR in the No Action ROD may also be prudent.

There are potential challenges when the State environmental regulations, if ARARs, are not considered when making the "No Action" decision or if the "No Action" decisions are based on incomplete or flawed BRAs. Generally, compliance with ARARs is not required for No Action decisions. However, this statement is not *entirely* accurate. No Action RODs generally do not include a FS wherein ARARs that apply to the remedy are typically finalized. The logic is that ARARs apply to the remedy, and if there is no remedy then there are no ARARs. However, because an RI is required and ARARs are preliminarily identified during RI scoping (Table 1) ARARs should also be included in the evaluation of the data that supports the No Action ROD alternative. At this step in the CERCLA process, it cannot be assumed that a No Action remedy will be selected, so all potential ARARs must still be evaluated. If a No Action remedy is not consistent with potential ARARs, then it should not be selected, and other actions should be considered. When a previous response action occurs prior to the RI that results in the elimination of environmental risk at the facility, then it is possible that a RI will not occur. In that case, consideration of ARARs should have been a part of the evaluation of the response action. For example, compliance with ARARs is required for a removal action to the extent practicable. If compliance with ARARs was not achieved during the removal action or the scope of removal action was limited, this should be considered when evaluating protectiveness of the response and whether a No Action ROD is appropriate.

The State may also request that known potential future ARARs be considered in the RI and BRA. For example, New York has identified PFAS and 1,4 dioxane as CECs. Currently, federal agencies are evaluating PFAS nationally, but 1,4 dioxane has not achieved the same level of recognition. It would be prudent for federal agencies to sample for 1,4 dioxane during the RI at facilities where it may be present so that its presence or absence can be considered in preparing the BRA and in evaluating the appropriateness of a No Action ROD. This could prevent the need for future re-investigation of the facility in response to future promulgation of 1,4 dioxane clean-up requirements. At a minimum, in this situation, the State should require that FYRs be conducted at the site to assess the applicability of future chemical-specific ARARs for 1,4 dioxane.

In some cases, a site may be investigated in the PA/SI step of the CERCLA process and a decision may be made by the federal agency that no further action is necessary based on finding no evidence of a hazard at the site. This scenario is ***not*** an example of a No Action ROD because no RI or response action has been performed. A No Action ROD requires that an RI or previous response action, inclusive of an adequate BRA, be conducted. Some States have voiced concerns about sites potentially being "closed" following a PA/SI without sufficient investigation or consideration of ARARs. For example, Army National Guard is currently evaluating their properties for potential PFAS contamination, but they are only evaluating the SI findings against EPA drinking water criteria for three PFAS constituents even though several States have more stringent standards that are inclusive of a wider range of PFAS chemicals and receptors. In these cases, the State regulators have concerns that the site may be closed following the PA/SI without considering State ARARs. States recommend that State ARARs be included as part of the PA/SI evaluation, or the site should proceed to an RI where State ARARs will be included and evaluated. This is further complicated as EPA releases revised/new PFAS risk screening levels, which will result in re-evaluating decisions at sites.

States provide State ARARs during the RI as required by the NCP, but State ARARs are not formally accepted by the lead agency until the FS, when they are used as part of the evaluation of alternatives. A No Action ROD based on a BRA utilizing EPA risk screening levels may put a State in an awkward position because the State ARARs were provided, which could identify an issue that will not be addressed. If this situation occurs, the State must evaluate the risks and determine if the site should be included in a State environmental clean-up program as a non-NPL site. This may result in a State-led investigation and subsequent legal action against the federal agency to recover costs and require cleanup. As indicated previously, States recommend that the BRA utilize State ARARs, that all responsible parties must follow, to better understand risks from the site.

State Concerns at Remedial Actions

State concerns with the identification and consideration of State ARARs vary and arise during many phases of the CERCLA remedial action process. If the lead agency preparing a FS and ROD did not include the State ARARs stating that their inclusion would delay the release of the ROD, the State should not agree with the ROD to facilitate the project moving forward. Federal agency funding can take years to obtain, which will delay implementing the selected remedy. The rush to complete the ROD without State ARARs will likely cause future issues and delays.

Other challenges occur when, during the FS and ROD processes, the agency declares that the State identified ARARs are not applicable and only considered procedural requirements. For example, some DoD installations have rejected the Colorado environmental covenant statute as an ARAR asserting that the statutory provisions are procedural only. However, other DoD installations recognize the statute as an ARAR and have issued environmental covenants. Colorado's position remains that while the statute outlines a process for creating the environmental covenant, the outcome of the process is substantive and the statute is an ARAR.

Promulgated standards that are not identified in a timely manner need not be included in the ROD and therefore, may not be considered by the responsible party. Regulations promulgated following issuance of the ROD may be considered during the FYR if response actions were not cleaned up to UU/UE. If the State is unable to identify ARARs "in a timely manner" every effort should be made to communicate with the federal agency to request an extension and the ARARs should be identified as quickly as possible. RODs that don't include State ARARs may result in remedies that do not meet State cleanup standards.

It is also worth considering whether a State will agree to a remedy when the result of the cleanup action will meet the State standard even if the standard is not listed as an ARAR. For instance, while the remediation goal stated in the ROD for a soil excavation may be above the State standard, if the contamination has a distinct boundary the excavation may result in the removal to a non-detect level. The State needs to decide if it is willing to move forward with a final ROD that does not include the State standard as an ARAR if the response action will eliminate unacceptable risk. The State may decide that this is an unacceptable precedent or can identify this condition in the response letter.

Note that the lead agency may (and often does) disagree with a State's list of ARARs. In Region 1, a federal agency stated, "[s]imply because a law or regulation must be complied with doesn't make it an ARAR..." This is true insofar as State ARARs must be more stringent than federal regulations and have a nexus to the response action. However, when presented with a list of State ARARs, the federal agency rejected many because they did not establish "a requirement that is a CERCLA cleanup standard or standard of control that specifically addresses a CERCLA hazardous substance, pollutant, or contaminant." The NCP does not restrict ARARs to standards that specifically address a CERCLA hazardous substance, pollutant or contaminant. Rather, as indicated above, relevant and appropriate requirements include

> ... those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

States with non-promulgated cleanup standards (TBCs, not ARARs) may have difficulty getting the federal agency to comply with the standards that are more stringent than federal

standards. Federal agencies do not need to comply with TBCs even if they are widely applied at State-led sites. It can be a challenge to persuade federal agencies to acknowledge certain TBCs as useful for implementing the remedy. Therefore, it is critical to have open communication between the State and federal agencies.

Despite the challenges discussed above, the federal agency can also be amenable to observing State TBCs, even though they are not promulgated. The US Navy has also demonstrated flexibility by achieving the State TBCs in cleanup actions without argument. Note that the US Navy has also refused to acknowledge TBCs in remedial action documents. Often, these differences in approach can vary from office to office (e.g., active installation vs Base Realignment and Closure [BRAC] site) and even from remedial project manager (RPM) to RPM.

It should be recognized that prior to any hazardous substance listing for PFAS, the DoD has investigated PFOS and PFOA as pollutants and contaminants since at least 2016. This has allowed the DoD to conduct response actions for PFAS in a much timelier manner than other responsible parties. The DoD has included the EPA's 2016 LHA for PFOS and PFOA as a TBC to conduct cleanup for drinking water.

Finally, it is important to ensure that ARARs that are agreed upon throughout the screening process from RI scoping to the FS make it to the PP and ROD without revision. In some States, agreements that were memorialized in the FS were changed in both the PP and ROD by the federal agency without consultation with the State.

IV. ARAR WAIVERS

ARAR waivers are applied in limited circumstances and should not be routinely used.[3] There are circumstances in which ARAR waivers may be appropriate during response actions. NCP §300.430(f)(1)(ii)(C) and EPA guidance identifies six ARAR waivers, described below, that can be invoked under certain circumstances for a removal action or a remedial action.

1. The alternative is an interim measure (e.g., removal action) and will become part of a total remedial action that will attain the applicable or relevant and appropriate federal or State requirement. For example, complying with the RCRA land disposal restriction storage prohibition at a non-NPL site may be inappropriate if the waste is drummed and overpacked, and future site actions will involve treatment of the waste that will comply with all land disposal restrictions;

2. Compliance with the requirement will result in greater risk to human health and the environment than other alternatives;

[3] In December 2022, an EPA Federal Facilities Training summarized that 38 ARAR waivers have been approved at federal facility sites from 1992 to 2020. Technical impracticability (16) and interim action (16) waivers were the most used types of waivers.

3. Compliance with the requirement is technically impracticable from an engineering perspective, such as when a State surface water discharge standard requires treatment of some wastewater contaminants to below non-detectable levels;

4. The alternative will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, or limitation through use of another method or approach. However, a technology-based standard may not be replaced by a risk-based analysis (55 Federal Register 8748);

5. An otherwise applicable or relevant and appropriate State requirement is not an ARAR and need not be attained when that requirement has not been applied consistently to hazardous waste sites or facilities throughout the State (CERCLA as well as non-CERCLA sites). For example, at a battery recycling site, EPA waived a State requirement for leachate testing and management of lead-contaminated waste when EPA determined that the State was not enforcing the same requirement at State cleanup sites; or

6. For Fund-financed response actions only, an alternative that attains the ARAR will not provide a balance between the need for protection of human health and the environment at the site and the availability of Fund monies to respond to other sites that may present a threat to human health and the environment. This is typically not applied to federal agencies.

As part of the detailed analysis within a PP, the federal agency must include a discussion regarding State acceptance that provides rationale for excluding State ARARs and application of ARAR waivers. The waiver decision will be approved if appropriate documentation is provided that clearly focuses the waiver, see EPA Overview of ARARs Focus on ARAR Waivers document dated October 1989 for additional information.

V. DISPUTE RESOLUTION

CERCLA §121(a)(4) states that State promulgated laws concerning response actions, including laws regarding enforcement, apply to federal facility actions if the State law is not more stringent for federal facilities than for private facilities. The requirements for compliance with ARARs apply to both NPL and non-NPL federal facility CERCLA cleanups. Specifically, if the CERCLA remedy does not address the contamination in accordance with other State laws, independent State action under those laws is not prohibited, so long as what is required under the State laws does not interfere with the CERCLA remedy. While States may bring independent enforcement actions, many States have agreements in place that require administrative actions, such as dispute resolution (DR), prior to bringing any claim.

Most States that are acting as the lead regulatory agency for cleanup of environmental contamination at DoD sites have entered into a Department of Defense and State Memorandum of Agreement (DSMOA) that defines the process for the reimbursement of State costs. When the DSMOA was initiated, the DoD emphasized the need for cooperation and communication for the success of the DSMOA Cooperative Agreement (CA) program.

Specifically, the *DoD Components' Cooperation with the States for CAs and Site Cleanups memorandum dated July 18, 1989*, stressed that "a cooperative effort with the states, to include mutual consideration of each other's comments and program objectives, is key to cost-effective and timely execution of the Defense Environmental Restoration Program." While cooperation and communication are the keys to a successful State and DoD partnership in CERCLA cleanups, there are times when the State and federal agencies may not agree, especially when dealing with the issue of State ARARs.

Accordingly, the CA includes provisions for DR as the process governing how the State and the DoD resolve disputes that arise at individual sites.[4] The DR process promotes resolving disputes at the lowest possible level of authority as expeditiously as possible, which means resolving the dispute at the RPM and the State agency coordinator (SAC) level. However, if the RPM and the SAC cannot reach agreement, the DR process provides for three elevated levels of review to resolve the dispute generally ending with the Governor and the Service Secretary. If the RPM and SAC cannot resolve the dispute, they should refer it to the supervisory level for resolution as soon as they are unsuccessful in their attempts for resolution to try and expedite the DR process.

For the DOE sites, most States enter into site specific Memorandum of Agreements (MOA) that detail the roles and responsibilities of the agencies. Generally, these agreements contain a provision for resolving interagency disputes like the dispute resolution process in the DSMOA, whereby disputes should be resolved at the lowest level with the project manager and then elevates to senior level officials and then referred on from there.

The DR process will vary depending on whether the site is listed on the NPL and what agencies are involved. For example, if the site is on the NPL, there may also be a FFA that outlines a DR process. For NPL sites, EPA may be the agency required to resolve a dispute that continues to get elevated. Like the MOA with DOE, some States have State MOAs with the EPA that outline a process for resolving disputes. It is encouraged to enter into similar agreements with other federal agencies, such as the Department of Interior and Department of Agriculture, as this will help resolve issues on a more consistent and timelier basis.

The DR process may be used to resolve ARAR disputes for both removal and remedial actions. However, if DR is unsuccessful, the State retains any enforcement authority it may have under State or federal law. Specifically, if DR fails and the State has exhausted the required administrative remedies under the DSMOA or other agreement, a State may seek other administrative or judicial remedies for claims covered by the DSMOA, or other agreement, to require compliance with State and federal law related to the CERCLA remedy.[5]

[4] The 2017 DSMOA CA Guide provides processes for formal and informal dispute resolution. If you do not have a Dispute Resolution Process, the NCP Preamble Subpart F (55 FR 8781) includes an example dispute resolution process during the RI/FS stage that encourages the prompt resolution of disputes at the project manager level.
[5] See letter dated August 25, 1993, from Deputy Under Secretary of Defense to Colorado Department of Health.

In addition, not all disputes for compliance are specific to an ARAR challenge. For example, some CERCLA remedies fail to address all environmental contamination at the site or fail to meet the State standards. Under these situations, States have independent authority to bring claims against federal agencies for failure to comply with State law.

For remedial actions, as the lead regulatory agency for environmental cleanup at federal facilities, if the federal agency fails to include the State identified ARARs in the ROD, the State can also refuse to concur with the ROD. The State's concurrence or non-concurrence with the recommended alternative must be included in the PP that is published for public comment. NCP §300.515 discusses the requirements for State involvement in the preparation and publication of the PP. See also *A Guide to Preparing Superfund Proposed Plans, Records of Decision, and Other Remedy Selection Decision Documents* at Section 3.3.9. State concurrence is not a pre-requisite to selecting the remedy, but it is a good idea to have documentation in the administrative record of the basis for the State's non-concurrence. The basis for non-concurrence can be a useful tool in bringing an independent action for compliance with State laws.

For NTRCAs, the DR process should also be used to resolve ARAR disputes. Unfortunately, for TCRAs, the DR process may not be the best approach, as the DR process usually results in significant delays and the federal agency will likely proceed without State concurrence. In this situation, the State should still follow the CERCLA process and timely identify all ARARs to the federal agency to be included in the decision document (EE/CA/AM/etc.). If the federal agency, as the lead agency, does not include the State's identified ARARs, the State should prepare a written statement that includes the ARARs and its concerns to be included in the decision document/administrative record. Additionally, because CERCLA requires federal agencies to comply with all State laws concerning removal and remedial actions, including enforcement, the State may take an independent enforcement action to require the

**Case Example:
Rocky Mountain Arsenal,
Colorado**

The Rocky Mountain Arsenal (RMA) contains a hazardous waste landfill, subject to RCRA. The hazardous waste landfill, while located on the RMA, is not a remedy component and is required to comply with State laws. The Army disputed Colorado's regulatory authority claiming that because the RMA became a Superfund Site, the State did not have RCRA authority.

The Tenth Circuit District Court disagreed, holding Colorado was not barred from issuing a RCRA compliance order because it was not a challenge to the Army's CERCLA response action, affirming that CERCLA works in conjunction with other environmental laws. United States. V. Colorado, 990 F.2d 1565 (10th Cir. 1993), cert. denied 114 S. Ct. 922 (1994) ("Given that RCRA clearly applies during the closure period of a regulated facility … the ARAR's provision cannot be the exclusive means of State involvement in the cleanup of a site subject to both RCRA and CERCLA authority").

More recently, the Supreme Court held that State courts have jurisdiction to hear State law claims relating to ongoing Superfund remedial actions, even if such claims constitute a "challenge" to [the] remedy. Atlantic Richfield Company v. Christian, 140 S. Ct. 1335 (2020) (CERCLA does not strip the Montana courts of jurisdiction over landowner's suit against a smelter owner for common law nuisance, trespass and strict liability because the claims arose under Montana law and not CERCLA).

federal agency comply with its State laws. While this action may not be timely, the State could take the necessary response actions to comply with the State laws and file a lawsuit for cost recovery (although, here, success is not guaranteed). Alternatively, because many removal actions result in additional remedial action, the State can work with the federal agency to ensure compliance with State ARARs during the remedial action.

VI. CONCLUSIONS AND RECOMMENDATIONS

The requirements for compliance with ARARs apply to both NPL and non-NPL federal facility CERCLA cleanups. State promulgated laws concerning removal and remedial actions apply to federal facility response actions if the State law is more stringent than federal law and is applied equally to federal facilities and private entities. While in most cases State ARARs are incorporated into federal agency decision documents, States have faced a variety of challenges related to ARARs throughout the CERCLA process in both removal and remedial actions.

States experience unique challenges when they are the lead regulatory authority or support agency for environmental cleanup under CERCLA at federal facilities. States will identify ARARs and TBCs that are applied to other regulated parties within State programs. Federal agencies are delegated lead agency authority under E. O. 12580 to conduct environmental cleanup at federal facilities, which creates an inherent conflict. As the lead agency, but also as the responsible party, the federal agency applies its interpretation of the applicability and relevance of regulations at federal facilities and determines which State laws and regulations become ARARs in their final decision documents. Like all responsible parties, federal agencies are required to meet the ARARs for the environmental remedy to be complete. Accordingly, it is essential that States timely identify ARARs early and revisit them often throughout the CERCLA process.

DOE, US Navy and EPA have documents that support the use of State ARARs along with federal ARARs (e.g., NPDES and RCRA) during removal actions when appropriate. These removal action documents generally reflect the State's interpretation of federal regulations and promote effective cleanups as site resources are directed at the problem.

For all removal actions, ARARs are expected to be met to the extent practicable. At times, federal agencies rely on this language either to not include ARARs in the decision document or as an excuse for not meeting ARARs. The removal completion report should identify compliance, or lack thereof, with identified ARARs. There is usually sufficient time for States to identify ARARs. However, depending on the urgency of the situation, the threat to public health and the environment may result in an immediate response, where the State cannot identify ARARs or compliance with ARARs may be impracticable. Specifically, for emergency removals and TCRAs, States may not be afforded enough time to identify ARARs for the removal action memorandum or other decision document. In situations where the State is unable to identify ARARs in a timely manner, States should still work with the federal agency to ensure the State laws and regulations are met during a removal action, if practicable. In such cases, the State should provide the federal agency with its State ARARs as soon as possible, even after the decision document is finalized, if necessary.

For NTCRAs, where the federal agency is developing an EE/CA, States have more time to provide the State ARARs to be considered in the removal action. For all removal actions, States should also consider whether the removal action will remove all contamination or leave waste behind for a remedial action. If the removal is not intended to clean up all of the environmental contamination, States should consider whether an ARAR waiver may be appropriate during the removal action and if a future action will result in compliance with the State ARARs.

For remedial actions, compliance with ARARs must be attained for the remedy to be complete, unless an ARAR waiver is granted. ARARs should be discussed with the federal agency early in the cleanup process. Table 1 details the stages of a remedial action and the timing for identification of State ARARs. The NCP requires the State and federal agency to initiate the discussion on the location and chemical specific ARARs as part of the RI/FS scoping, which helps to define the nature and extent of contamination as well as assist with the performance of the BRA. The application of State ARARs during the RI saves the federal agency, EPA, and the State significant time and resources as site figures are prepared during the RI, whereas the FS applies the information presented in the RI to evaluate remedial alternatives. The ARARs and TBCs identified in the FS will be applied to the selected remedy presented in the ROD and Interim ROD. The State regulator should ensure that the ARARs and details of the remedy are carried through to the final decision document.

The NCP does not require discussion or identification of ARARs during the SI or for No Action RODs. However, during the SI, ARARs may be a useful tool for determining the investigation parameters. Further, for No Action RODs, States should consider whether State laws and regulations were considered during the BRA. States recommend that the BRA utilize State ARARs to better understand risks from the site that all responsible parties must follow. At times, the RI relies solely on federal laws and regulations, which may not be as stringent as State laws, and may not be appropriate for a No Action ROD.

If agreement is not reached, States have a number of tools they can use to work towards consensus. For example, if a State does not agree with the ROD or the ROD does not include necessary State ARARs, the State may issue a non-concurrence letter, which is required to be included in the PP and the administrative record for the federal facility. The State may also initiate dispute resolution under their cooperative agreement, the NCP, an MOA, FFA or another governing document. For issues related to compliance with State laws that would not interfere with the CERCLA remedy, the State may initiate an enforcement action for compliance with its laws. Finally, for property being transferred out of federal ownership, a State may withhold approval of the property transfer when the federal agency has not addressed site contamination issues identified by the State.

Public display of State ARARs on a website clearly shows the application of State ARARs to other responsible parties, but also provides federal agencies an understanding of ARARs present within the State and allows the public to see that the State ARARs are being attained. Further, this will permit the federal agency to identify State ARARs from various State programs as information is available in one location. This resource can also be used by the State project

manager assigned to the site because they are likely the point of contact responsible for identifying State ARARs when requested by the federal agency. State project managers are familiar with site conditions and can use this resource to reach out to other State programs to verify ARARs that should be identified.

Many challenges that arise when identifying ARARs at federal facilities for remedial actions and removal actions can be resolved if a good working relationship exists between the State and the federal agency. When a positive working relationship exists, the federal agency may acknowledge the benefit of meeting State standards (such as avoiding dispute resolution), even if it requires additional resources. However, there are times when, regardless of the working relationship, the State and federal agency do not agree on ARARs.

APPENDIX A: RESOURCES

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