Appendix F

ARARs ANALYSIS

F.1 Introduction

This section identifies requirements associated with other environmental laws and regulations that may potentially be ARARs to the evaluation of possible remedial alternatives for the PGOU FS. Potential ARARs for the PGOU were identified based on the results of the ARARs evaluation presented in the WGOU RI/FS (EMSI et al., 2000) and EPA and RWQCB comments on the WGOU RI/FS (USEPA, 2001). A complete evaluation of ARARs will be provided in the final PGOU FS report, as Aerojet is in the process of updating the values contained in the tables at the end of this section. The ARARs analysis presented in the final FS report will respond to the Agencies' comment on the PGOU Work Plan regarding formatting. Final selection of ARARs applicable or relevant and appropriate to the PGOU remedy will be made by EPA as part of the Proposed Plan and Record of Decision for the PGOU.

Section 121(d) of the Comprehensive Environmental Restoration, Compensation, and Liability Act of 1980 (CERCLA), 42 U.S.C. Section 9621, states that remedial actions on CERCLA sites must attain (or justify the waiver of) any federal or more stringent State environmental standards, requirements, criteria, or limitations that are determined to be ARARs. Applicable requirements are those cleanup standards, criteria, or limitations promulgated under federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstance at a CERCLA site. A requirement is applicable if the jurisdictional prerequisites of the environmental standard show a direct correspondence when objectively compared with the conditions at the site.

If a requirement is not legally applicable, the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or State law that, while not applicable, address problems or situations sufficiently similar to the circumstances of the proposed response action and are well-suited to the conditions of the site. The criteria for determining relevance and appropriateness are listed in Title 40, Code of Federal Regulations (CFR), Title 40 of the Code of Federal Regulations (C.F.R.), 40 C.F.R. Section 300.400(g)(2).

The PGOU RI/FS is focused solely on groundwater contamination at and beyond the boundary of the Aerojet Site that is not addressed by the WGOU, Area 41 Soil and Groundwater OU, or the remedial program for the IRCTS. The PGOU does not include investigation of potential or actual source areas and internal groundwater control on property within the Aerojet Site, or an evaluation of potential remedial alternatives for these on-site areas. Source areas and onsite groundwater will be addressed as part of future OU RI/FS efforts. Consequently, this ARARs evaluation does not identify or evaluate potential ARARs for source areas.

ARARs are concerned only with substantive, not administrative, requirements of a statute or regulation. The substantive portions of the regulation are those requirements that pertain directly to actions or conditions in the environment. Examples of substantive requirements include quantitative health- or risk-based restrictions upon exposure to types of hazardous substances (e.g., maximum contaminant levels [MCLs]). Administrative requirements are the mechanisms that facilitate implementation of the substantive requirements. Administrative requirements include issuance of permits, documentation, reporting, recordkeeping, and enforcement. Thus, in determining the extent to which onsite CERCLA response actions must comply with environmental laws, a distinction should be made between substantive requirements, which may be ARARs, and administrative requirements, which are not.

Furthermore, the ARARs provision in CERCLA applies to onsite actions. "Onsite" is defined as the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for the implementation of the response action 40 C.F.R. § 300.5. Onsite includes the groundwater plumes to be remediated. According to CERCLA Section 121(e), a remedial response action that takes place entirely onsite may proceed without obtaining permits. This permit exemption applies to all administrative requirements, as well as to permits. Offsite actions must comply with the substantive as well as the administrative requirements of all applicable regulations.

Pursuant to EPA guidance, ARARs generally are classified into three categories: chemical-specific, location-specific, and action-specific requirements. These classification categories were developed to help identify ARARs, some of which do not fall precisely into one group or another. These categories of ARARs are defined below:

- Chemical-Specific ARARs include those laws and requirements that regulate the release to the environment of materials possessing certain chemical or physical characteristics or containing specified chemical compounds. These requirements generally set numerical health- or risk-based concentration limits or discharge limitations for specific hazardous substances. If, in a specific situation, a chemical is subject to more than one discharge or exposure limit, the more stringent of the requirements should generally be applied.

  Several regulations contain numeric limits for which consideration as potential ARARs would only be triggered by particular actions. For example, consideration of the surface water WQOs would only be triggered by a remedial action that included discharge of treated water to surface water. Numerical limits associated with potential ARARs or TBCs related to discharge of treated groundwater to surface water are discussed further under potential action-specific ARARs. Similarly, consideration of numeric limits promulgated under the Clean Air Act or State air quality regulations would only be considered if the treatment process to be employed result in emissions of regulated substances. Consequently, numeric limits established for surface water, air emissions, hazardous waste management and other regulations that would only be potential ARARs if the selected remedy includes a particular action(s) or results in a generation or discharge that is covered by these regulations,

are discussed further as part of the evaluation of potential action-specific requirements.

- Location-specific ARARs are those requirements that relate to the geographical or physical position of the site, rather than the nature of the contaminants or the proposed site remedial actions. These requirements may limit the placement of remedial action, and may impose additional constraints on the cleanup action. Location-specific ARARs differ from chemical-specific or action-specific ARARs in that they are not closely related to the chemicals of concern or the specific remedial alternative under consideration. To the extent that the remedial action will affect sensitive ecosystems and habitats, historical resources, streams, flood plains, or wetlands, EPA requires that the potential remedial alternatives comply with the location-specific requirements.

- Action-Specific ARARs are requirements that define acceptable handling, treatment, and disposal procedures for hazardous substances. These ARARs generally set performance, design, or other similar action-specific controls or restrictions on particular kinds of activities related to management of hazardous substances or pollutants. These requirements are triggered by the particular remedial activities that are selected to accomplish a remedy. Because a remedial site usually involves several alternative actions, very different action-specific requirements can apply.

An agency guidance or criteria may not meet the definition of ARAR as defined above, but still may be useful in determining whether to take action at a site or to what degree action is necessary. This can be particularly true when there are no ARARs for a site, action, or contaminant (e.g., contaminants that do not have MCLs). Such agency guidance or criteria that are not promulgated regulations are called to-be-considered (TBC) criteria. TBC criteria are nonpromulgated advisories or guidance issued by federal or State government that are not legally binding, but that may provide useful information or recommended procedures for remedial action. Although TBCs do not have the status of ARARs, they are typically considered when developing the required level of cleanup for protection of health or the environment. The critical difference between a TBC and an ARAR is that one is not required to comply with or meet a TBC when deciding on a remedial action.

F.2 ARARs Analysis Process

ARARs and TBCs are identified at various points throughout the Superfund process. These criteria are identified on a site-specific basis. Therefore, as additional information is developed about the site, including special features of the site location, the specific chemicals at the site, and the actions that are being considered as remedies, more ARARs will progressively be identified, and the list of potential ARARs further refined. Potential ARARs are usually identified in the FS, and the final list of ARARs that the remedy must meet is established in the ROD.

F.3 Waivers

CERCLA Section 121 provides that, under certain circumstances, an otherwise applicable or relevant and appropriate requirement may be waived. These waivers apply only to the attainment of the ARAR. Other statutory requirements, such as that remedies be protective of human health and the environment, cannot be waived. The waivers provided by CERCLA Section 121(d)(4) are listed below:

- Interim Remedy--The remedial action selected is only part of a total remedial action that will attain such a level or standard of control when completed.

- Greater Risk to Human Health or the Environment--Compliance with the requirement at the site will result in greater risk to human health and the environment than alternative options.

- Technical Impracticability--Compliance with the requirement is technically impracticable from an engineering perspective.

- Equivalent Standard of Performance--The remedial action selected will attain a standard of performance that is equivalent to that required under the otherwise applicable standard, requirement, criteria, or limitation through use of another method or approach.

- Inconsistent Application of State Requirements--With respect to a State standard, requirement, criterion, or limitation, the State has not consistently applied (or demonstrated the intention to consistently apply) the standard, requirement, criterion, or limitation in similar circumstances at other remedial actions.

- Fund Balancing--In the case of a remedial action to be undertaken solely under Section 104 using the Fund, selection of a remedial action that attains the level or standard of control in the requirement will not provide a balance between the need for protection of public health and welfare and the environment at the site under consideration, and the availability of amounts from the Fund to respond to other sites that present or may present a threat to public health or welfare or the environment, taking into consideration the relative immediacy of such threats.

F.4 Potential Chemical-Specific ARARs

A description of the potential chemical-specific ARARs and how they are applied to the alternatives is provided below. Table F-1 presents a summary of potential chemical-specific ARARs. Preliminary numerical limits associated with potential ARARs or TBCs for chemical occurrences in groundwater are summarized on Table F-2. Aerojet is in the process of revising this table and will provide revised numerical limits in the final FS report.

F.4.1 Safe Drinking Water Act

The Safe Drinking Water Act (SDWA) establishes national primary drinking water standards, MCLs, to protect the quality of water in public water systems. MCLs are enforceable standards and represent the maximum concentrations of contaminants permissible in a water system delivered to the public. Because MCLs are enforced at the point where water is delivered to the public, MCLs are rarely applicable to cleanup of groundwater at Superfund sites (55 Federal Register 8750). However, MCLs are generally relevant and appropriate when determining acceptable exposure limits for groundwater that is a current or potential source of drinking water [40 CFR 300.430(e)(2)(i) (B)]. The National Contingency Plan (NCP) states that maximum contaminant level goals (MCLGs) that are set at levels above zero should also be considered to be relevant and appropriate requirements for groundwater that is a potential source of drinking water [40 CFR 300.430 (e)(2)(i)(B)]. The list of potential contaminants of concern and their MCLs and the MCLGs is presented in Table F-2.

California drinking water standards, under the Safe Drinking Water Act, establish primary MCLs for contaminants that cannot be exceeded in public water systems. The California drinking water MCLs are, in some cases, more stringent than the national MCLs and, in other cases, less stringent than the national standards. Thus, the more stringent limit would be determined on a chemical-by-chemical basis. As with the national drinking water standards, the California MCLs are not applicable to cleanup of groundwater, but may be relevant and appropriate if they are more stringent than the federal MCLs.

F.4.2 Management of Treatment Residuals

Treatment of water or air can generate material that must be managed before its disposal or regeneration. If the material generated is a solid waste that meets the definition of a hazardous waste, substantive requirements of the Resource Conservation and Recovery Act and Title 22 of the California Code of Regulations, Division 4.5., Chapter 11 for the management of hazardous wastes may be ARARs.

F.4.3 NPDES Program

New discharges of treated groundwater to the American River, Buffalo Creek, Alder Creek, Morrison Creek, or the Folsom South Canal must comply with the substantive portions of the National Pollutant Discharge Elimination System (NPDES) permit program. These requirements will most likely include monitoring of discharges and meeting discharge requirements that have previously been issued for the existing Aerojet ARGET treatment facilities by the Regional Water Quality Control Board. These requirements for NDMA, perchlorate, and VOCs that were established for the ARGET facility under the NPDES program are listed in Table F-3. There are also specific requirements for inorganic constituents and other parameters in the existing discharge

requirements. Aerojet is in the process of revising Table F-3 to comply with the current ARGET NPDES permit requirements.

F.4.4 State Water Resources Control Board Resolutions 68-16 and 92-49

These resolutions also have been evaluated as potential ARARs. They do not set a zero-discharge standard, but rather express the State's policy that existing water quality must be maintained where it is reasonable to do so. Resolution 92-49 allows for the establishment of groundwater containment zones where it would be unreasonable to remediate groundwater contamination to the State's water quality objectives. The policy expressed in Resolutions 68-16 and 92-49, as well as the Central Valley Regional Water Quality Control Board's Water Quality Control Plan (Basin Plan) (see Section F.4.5, below) further allow the use of mixing zones when determining whether water quality is being maintained in the receiving water. In addition, Resolution 92-49 prescribes administrative policies and procedures for Regional Water Quality Control Boards to follow in overseeing the investigation and cleanup of pollutants in groundwater.

F.4.5 Water Quality Control Plan (Basin Plan)

The California Water Code, as supported by the Federal Clean Water Act, requires Regional Water Quality Control Boards to prepare and periodically update Water Quality Control Plans, also known as Basin Plans. The Basin Plan for the Sacramento and San Joaquin River Basins, dated September 1, 1998, designates beneficial uses for waters, and contains narrative water quality objectives (WQOs) to protect those beneficial uses. The Basin Plan also contains policies and procedures intended to protect beneficial uses, which potentially may contain substantive requirements that could be potential ARARs for the PGOU FS.

F.4.7 State Department of Health Services Policy Guidance for Direct Domestic Use of Extremely Impaired Sources

The State Department of Health Services (DHS) has issued a policy which contains guidelines for DHS to use in identifying circumstances in which it may be reasonable to use a treated source of water for domestic use. Given the nature and content of the policy, it appears it would constitute a TBC, rather than a potential ARAR. In any event, DHS must approve any proposal to use treated water for domestic use.

F.5 Potential Location-Specific ARARs

Potential location-specific ARARs and TBC criteria for the PGOU FS are summarized in Table F-4. Location-specific ARARs differ from chemical-specific or action-specific ARARs in that they are not closely related to the waste characteristics of the study area or to the specific remedial alternative under consideration. Location-specific ARARs are concerned with the area in which the site is located. To the extent that the remedial

action will affect historical resources, streams, flood plains, or wetlands, EPA requires that the potential remedial alternatives comply with the location-specific requirements.

F.6 Potential Action-Specific ARARs

The federal and State potential action-specific ARARs for the alternatives discussed in the PGOU FS are summarized in Table F-5.

Table F-1: Summary of Potential Chemical Specific Requirements

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Safe Drinking Water Act (40 CFR 141)	42 USC Section 300(f) et. seq	Establishes national drinking water standards in the form of Maximum Contaminant Levels (MCLs) and Maximum Contaminant Level Goals (MCLGs) (see Table F-2).	Applicable – at the point groundwater is delivered to a drinking water distribution system. Relevant and Appropriate – for in-situ groundwater that is or has a potential to be used for drinking water.	Applicable to water systems serving over 25 persons. Relevant and appropriate for smaller systems. Establishes MCLs that apply to many of the site-related chemicals (see also Table F-2). All MCLs (organic, inorganic, etc.) are potentially applicable if the selected remedial action includes reinjection of treated water or discharge of treated water to surface water.
California Safe Drinking Water Act (California Health & Safety Code Section 4010 et. seq.)	Title 22 CCR Chapter 15, Section 64400 et seq.	Establishes California primary and secondary MCLs (see Table F-2). State MCLs or Secondary MCLs that are more stringent than federal MCLs, or that are not addressed by federal MCLs are potential applicable or relevant and appropriate requirements.	This act is legally applicable for an aquifer and associated distribution and pre-treatment system that is currently defined as "public water system". If it is only a potential "Public water system", then the act is relevant and appropriate.	It is a Aerojet's opinion that this requirement is only applicable to public water systems at the point groundwater is delivered to a drinking water distribution system. Aerjet believes this requirements is relevant and appropriate for in-situ groundwater that is or has a potential to be used for drinking water.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13240, 13241, 13242, 13243)	Water Quality Control Plan (Basin Plan) for the RWQCB, Central Valley Region (CVR) adopted in accordance with Sections 13240 and 13050	Establishes water quality objectives, including narrative and numerical standards that protect the beneficial uses and water quality objectives of surface and ground waters in the region. Describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies and provide comprehensive water quality planning.	Applicable to groundwater remedial actions and discharge to surface water Groundwater uses and WQOs are applicable requirements for development of ground-water cleanup levels and remedial actions.	Specific applicable portions of the Basin Plan include beneficial uses of affected water bodies and water quality objectives to protect those uses. Any activity, including, but not limited to, the discharge of contaminated soils or waters or in-situ treatment or containment of contaminated soils or waters, must not result in actual water quality exceeding water quality objectives. Specific portions of the Basin Plan that are potentially applicable include:

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Sections 13240, 13241, 13242, 13243) (cont.)	RWQCB CVR Basin Plan (cont.)	Defines beneficial uses for surface water and groundwater in the basin. Establishes water quality objectives, including narrative and numeric standards, to protect the beneficial uses and water quality objectives (WQOs) of surface and ground waters in the region. Describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies. Establishes water quality objectives, including narrative and numeric standards, to protect the beneficial uses and water quality objectives (WQOs) of surface and ground waters in the region. Describes implementation plans and other control measures designed to ensure compliance with statewide plans and policies. See Table F-2 for water quality objectives	These are also potential applicable if the selected remedial action includes reinjection of treated water. Surface water uses and WQOs are potentially applicable requirements if the selected remedial action includes discharge of treated water to surface water. Basin Plan policies and procedures for establishment of cleanup levels are also applicable	• Beneficial uses of waters in the basin including: *Ground water:* – municipal and domestic supply (MUN), – agricultural supply (AGR), – industrial service supply (IND), and – industrial process supply (PRO). *Surface water:* – MUN, AGR, IND, – Recreation (REC), and – Freshwater habitat (WARM) and (COLD), Wildlife habitat (WILD), Migration of aquatic organisms (MIGR), and Spawning (SPWN). • Water quality objectives to protect these uses including: *Ground water:* – Numerical standards for bacteria, chemical constituents (MCLs), and radioactivity – Narrative standards for tastes and odors and toxicity *Surface water:* – Numerical limits for bacteria, chemical constituents, dissolved oxygen, pH, radioactivity, salinity, temperature and turbidity. – Narrative standards for biostimulatory substances, color, floating material, oil and grease, sediment, settleable material, suspended material, tastes and odor, and toxicity. Basin Plan also requires that any activity, including, but not limited to, the discharge of contaminated soils or waters or in-situ treatment or containment of contaminated soils or waters, must not result in actual water quality exceeding water quality objectives.

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240)	State Water Resources Control Board Resolution No. 88-63 "Sources of Drinking Water Policy" (contained in the CVR Basin Plan)	Specifies that, with certain exceptions, all ground and surface waters must have the beneficial use of municipal or domestic water supply.	Applicable to determination of beneficial uses for waters that may be affected by discharges of wastes. While it is the State's position that this is an ARAR, since this resolution is only a policy and not a promulgated standard, it is Aerojet's opinion that this Resolution is a "To Be Considered" (TBC) criteria and not an ARAR.	This policy is used by the Regional Water Board in determining beneficial uses for waters. The beneficial uses established in the Basin Plan are based on this policy. The beneficial uses in the Basin Plan represent a site-specific determination and therefore are more appropriate than this general policy. This policy also establishes the basis for exceptions to the general designation of beneficial uses.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13263, 13304)	State Water Resources Control Board Resolution No. 68-16 "Statement of Policy With Respect to Maintenance of High Quality of Waters in California " ("Anti-degradation Implementation Policy") (contained in the CVR Basin Plan).	Requires that quality of high quality surface and ground waters be maintained to the maximum extent possible. ***Degradation of waters will be allowed only if :*** – It is consistent with the maximum benefit to the people of the state, – It does not unreasonably affect present and anticipated beneficial uses, and – It does not result in water quality less than that prescribed in RWQCB and SWRCB policies. If degradation is allowed, the discharge must meet best practicable treatment or control, which must prevent pollution or nuisance and result in the highest water quality consistent with maximum benefit to the people of the state.	Potentially applicable if the selected remedial action includes disposal of wastes into waters of the State	Applicable to discharge of treated water to surface water or groundwater (reinjection) as this policy requires waste discharges to meet best practical treatment or control standards, and result in the highest water quality possible that is consistent with the maximum benefit to the people of the state.

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13263, 13304)	RWQCB, CVR Basin Plan (cont.) "Antidegradation Policy"	Defines the RWQCB policy with respect to implementation of the SWB Antidegradation Policy contained in SWB Resolution 68-16. Requires that high quality surface and ground waters be maintained to the maximum extent possible. Degradation of waters will be allowed (or allowed to remain) only if it is consistent with the maximum benefit to the people of the state, does not unreasonably affect present and anticipated beneficial uses, and does not result in water quality less than that prescribed in RWQCB and SWRCB policies	Potentially applicable for disposal of wastes into waters of the State	Applies to discharges of waste to waters, including discharges to soil that may affect surface or ground waters. In-situ cleanup levels for contaminated ground waters must be set at background level, unless allowing continued degradation is consistent with the maximum benefit of the people of the state. If degradation of waters is allowed, or allowed to remain, the discharge must meet best practical treatment or control standards which must prevent pollution or nuisance, and result in the highest water quality possible that is consistent with the maximum benefit to the people of the state. In no case may water quality objectives be exceeded.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13240, 13241, 13242, 13243)	RWQCB, CVR Basin Plan, (cont.) "Policy for Application of Water Quality Objectives"	This policy requires achievement of water quality objectives at all points within a surface water or groundwater resource for which beneficial uses have been designated rather than just at the points of use. This policy also explains how the Regional Water Board applies numeric and narrative water quality objectives to ensure the reasonable protection of beneficial uses of water. This policy also explains how the Regional Water Board applies Resolution No. 68-16 to promote the maintenance of existing high-quality waters.	WQOs are applicable for development of ground-water cleanup levels and remedial actions. Also potential TBCs if the selected remedial action includes reinjection of treated water. Surface water WQOs are applicable if the selected remedial action includes discharge of treated water to surface water	This policy requires maintenance of background water quality to comply with the antidegradation policy. This policy requires WQOs to be the least stringent limits to be imposed on water quality and indicates that background represents the most stringent limits to be imposed on ambient water quality. The Basin Plan includes both numeric and narrative water quality objectives. This policy explains how the RWQCB evaluates compliance with the narrative WQOs through use of other standards, criteria, advisories, etc. as presented in *"A Compilation of Water Quality Goals"*. This policy also presents a methodology for assessing compliance with the narrative WQO for toxicity. NOTE: As the *"Compilation of Water Quality Goals"* is only a guidance document and not a promulgated standard, it is Aerojet's opinion that this compilation is a "To Be Considered" criteria and not an ARAR.

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13304, 13240, 13241, 13242, 13243)	RWQCB, CVR Basin Plan, "Policy for Investigation and Cleanup of Contaminated Sites."	This policy establishes and describes the RWQCB required procedures for investigation and remediation of contaminated sites. This policy also includes implementation actions for setting groundwater and soil cleanup standards. .	Applicable to groundwater remedial actions. While it is the State's position that this policy is an ARAR, it does not contain numeric standards but only presents procedures for identification of cleanup levels. As CERCLA establishes procedures for identification of cleanup levels at NPL sites, it is Aerojet's opinion that this is a TBC criteria, not an ARAR.	Cleanup standards for water should be equal to background concentrations unless such levels are technically and economically infeasible to achieve. In such cases, cleanup standards should not exceed applicable water quality objectives.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13140, 13240, 13260, 13263, 13267, 13300, 13304, 13307)	RWQCB, CVR Basin Plan (cont.) State Water Resources Control Board Resolution No. 92-49 (As amended April 21, 1994 and October 2, 1996) "Policies and Procedures for Investigation and Cleanup and Abatement of Discharges Under Water Code Section 13304" Also Title 23 CCR Chapter 22, Section 2907	Establishes requirements for investigation and cleanup and abatement of discharges. Among other requirements, dischargers must clean up and abate the effects of discharges in a manner that promotes the attainment of either background water quality, or the best water quality that is reasonable if background water quality cannot be restored. Requires the application of Title 23, CCR, Section 2550.4 requirements to groundwater cleanups. This policy does not contain numeric standards but does present procedures for identification of cleanup levels.	Applicable requirement for groundwater remedial actions. While it is the State's position that this policy is an ARAR, it does not contain numeric standards but only presents procedures for identification of cleanup levels. As CERCLA establishes procedures for identification of cleanup levels at NPL sites, it is Aerojet's opinion that this policy is a TBC criteria, not an ARAR.	These policies and procedures require cleanup of a discharge and abatement of effects of past, current or possible discharges of waste that creates or threatens to create a condition of pollution or nuisance. These policies and procedures establish procedures for investigation, evaluation of cleanup and abatement alternatives, implementation of cleanup and abatement actions including conformance with Resolution No. 68-16. These policies and procedures require cleanup and abatement that promotes attainment of either background water quality, or the best water quality which is reasonable (but not greater than that prescribed in the Water Quality Control Plans and Policies adopted by the State and Regional Water Boards) if background levels cannot be restored. Note: These policies and procedures also address designation and implementation of containment zones, which are discussed in Table F-5 under potential action-specific requirements.

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Sections 13000, 13304, 13240, 13241, 13242, 13243)	RWQCB, CVR Basin Plan, "Policy for Investigation and Cleanup of Contaminated Sites."	This policy establishes and describes the RWQCB required procedures for investigation and remediation of contaminated sites. This policy also describes the RWQCB requirements for setting cleanup levels for groundwater and soil contamination.	Applicable to groundwater remedial actions. While it is the State's position that this policy is an ARAR, it does not contain numeric standards but only presents procedures for identification of cleanup levels. As CERCLA establishes procedures for identification of cleanup levels at NPL sites, it is Aerojet's opinion that this is a TBC, not an ARAR.	This policy requires establishment of cleanup levels for groundwater based on: – Background concentrations – Water quality objectives – Concentrations that do not pose a significant risk to human health or the environment – Technologic and economic feasibility of attaining background. ***This policy requires achievement of background levels when feasible. Otherwise, this policy requires achievement of water quality objectives and risk-based levels that do not pose a significant risk to human health or the environment.*** This policy also requires compliance with groundwater cleanup levels throughout the pollutant plume.
Porter-Cologne Water Quality Control Act (California Water Code Sections 13140-13147, 13172, 13260, 13263, 13267, 13304).	Title 27, CCR, Section 20400 Title 23, CCR, Section 2550.4	Concentration limits must be established for groundwater, surface water, and the unsaturated zone. Limits must be based on background, equal to background, or for corrective actions, may be greater than background, not to exceed the lower of the applicable water quality objective or the concentration technologically or economically achievable. This regulation presents procedures for identifying concentration limits for cleanup and abatement of discharges from facilities that treat, store or dispose of hazardous waste at Class I waste management units. SWB Resolution 92-49 also requires use of these regulations for development of cleanup levels other than background.	Potentially Applicable for identification of ground water cleanup levels. As this regulation does not contain numeric standards, it is not a chemical-specific ARAR but may be an action-specific ARAR.	This regulation requires cleanup to background concentration levels, or a concentration limit greater than background if – It is technologically and economically infeasible to achieve background, and – The constituent will not pose a substantial present or potential hazard to human health or the environment as long as the concentration limit greater than background is exceeded. ***This regulation lists the various factors to be considered in setting a concentration limit greater than background. This regulation also requires concentration limits that are greater than background to be set at the lowest levels that are economically and technologically achievable.***

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Staff Report to the RWQCB - CVR	"A Compilation of Water Quality Goals"	Provides guidance on selecting numeric values to implement narrative water quality objectives contained in the Basin Plan.	While it is the State's position that this is an ARAR, as an individual document, it is Aerojet's opinion that this information is a TBC criteria.	This document is not a promulgated regulation and therefore in itself is not an ARAR but may be a TBC. This document should be considered in selecting appropriate numeric values to implement the narrative WQOs in the Basin Plan. The numeric values contained in the staff report may be ARARs or TBCs depending on the source of the values.
	National Pollutant Elimination Discharge System (NPDES Permit)	These regulations set forth the requirements for discharge to surface water and the Establishment of numeric limits and monitoring requirements for such discharges.	Applicable – if the selected remedial action includes discharge of treated water to surface water.	Discharge of treated groundwater to surface water may require obtaining a new NPDES permit or revision of Aerojet's existing NPDES permit. The NPDES permit will specify the numeric standards required to be met in water that is to be discharged to surface water as well as the monitoring requirements for such a discharge.
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)	Title 22 CCR Chapter 3 Section 12000 et seq.	These regulations identify chemicals known to cause cancer or reproductive toxicity. This act prohibits discharge or release of significant amounts of the identified chemicals. Significant amounts are generally defined as levels that pose no significant risk of cancer. For drinking water, significant levels are defined as California MCLs, drinking water action levels when MCLs don't exist, or discharge limits allowed by a Basin Plan or waste discharge permit.	The numeric limits and notification requirements are potentially relevant and appropriate if the selected remedial action includes use of treated groundwater as drinking water supply. The numeric limits and prohibition on discharge of significant amounts of these chemicals are applicable to discharge or reinjection of treated water.	These regulations make it illegal to expose persons to significant amounts of chemicals known to cause cancer or reproductive toxicity without prior notification, or to discharge significant amounts of these chemicals to sources of drinking water. The numeric limits and notification requirements are applicable to the water suppliers at the point that groundwater is delivered to a water system for public consumption. The numeric limits and prohibition on discharge of significant amounts of these chemicals are applicable to discharge of treated water to surface water or reinjection of treated groundwater. The numeric limits and notification requirements are applicable to remedial actions, if any, that include use of treated water for municipal or domestic supply.

Source or Authority	Requirement, Standard, or Criterion	Description	Preliminary ARAR Determination	Comments
Clean Water Act Section 304(a)(1)	National Ambient Water Quality Criteria	Establishes water quality criteria, which are non-enforceable guidance developed under CWA §304 and are used by the State, in conjunction with designated use for a stream segment, to establish water quality standards under CWA §303.	Neither applicable nor relevant and appropriate for groundwater. Potentially relevant but likely not appropriate for discharge of treated water to surface water.	These criteria are published by EPA to protect human health and welfare and freshwater and marine aquatic life from pollutants in surface waters and therefore are not applicable to groundwater. Ambient water quality criteria are based on consumption of drinking water and aquatic organisms (primarily fish) and consumption of fish alone and therefore are not relevant to groundwater in the PGOU. Although potentially relevant, ambient water quality criteria are not appropriate requirements as the RWQCB has adopted numeric standards for the surface waters in the area which represent site-specific water quality standards which are more appropriate requirements.
EPA Superfund guidance	US EPA Region 9 Preliminary Remediation Goals (PRGs)	EPA has developed preliminary remediation goals that are risk-based levels that are used to screen sites that may require additional investigation or possible remediation. PRGs are also used to screen lists of site-related chemicals to identify potential chemicals of concern.	To Be Considered	EPA Region 9 PRGs are guidance levels, not promulgated standards, and therefore are not an ARAR; however, the PRGs may be TBCs for identification of potential groundwater cleanup levels.
California Health & Safety Code Section 116455	California Department of Health Services (DHS) Drinking Water Notification (formerly Action) Levels	DHS has established drinking water notification (formerly) action levels based mainly on health effects but in some cases based on organoleptic (taste and odor-based) values for chemicals w/o MCLs.	To Be Considered	Notification levels (NLs) are advisory to water suppliers and therefore would not be ARARs. They are potential TBCs for identifying potential groundwater cleanup levels. Of particular interest in this matter are the NLs for perchlorate and NDMA.
Calderon-Sher Safe Drinking Water Act of 1996	California Public Health Goals (PHGs) developed by The California Environmental Protection Agency, Office of Environmental Health Hazard Assessment (OEHHA).	***OEHHA has adopted PHGs for chemicals in drinking water.*** PHGs are levels of drinking water contaminants at which adverse health effects are not expected to occur from a lifetime of exposure.	To Be Considered	PHGs are non-enforceable risk-based goals and therefore are not ARARs but are TBCs for identifying potential groundwater cleanup levels.

Table F-2: Summary of Preliminary Potential Chemical-Specific ARARs and TBCs for Chemicals of Concern in Groundwater (cont.)

Chemical of Concern	IRIS RfD as drinking water levels[f,g]	IRIS $1x10^{-6}$ incremental cancer risk[f]	Cal/EPA cancer potency factors as drinking water levels[f,h]	EPA DWHAs or SNARLs – non-carcinogenic[f,i]	EPA DWHAs or SNARLs – carcinogenic[f,i]	NAS SNARLs non-carcinogenic[f]	NAS SNARLs carcinogenic[f,i]	Taste & odor thresh-olds[f]
Carbon tetrachloride	4.9	0.3	0.23	200[j]	0.3	200[k]	4.5	520
Chloroform	70	-	1.1	70[j]	-	-	0.26 / 5.6	2,400
1,1-Dichloroethane	-	-	6.1	-	-	-	-	-
1,2-Dichloroethane	-	0.4	0.74	7[j]	0.4	-	0.71	7,000
1,1-Dichloroethene	35	-	-	100	0.06	100	-	1,500
1,2-Dichloroethene (cis)	-	-	-	70	-	-	-	-
1,2-Dichloroethene (trans)	140	-	-	100	-	-	-	260
1,4-Dioxane	-	3	1.3	400[j]	3	-	-	230,000
Nitrate [d]	11,000	-	-	10,000[j]	-	-	-	-
Nitrite [d]	700	-	-	1,000[j]	-	-	-	-
Total Nitrate and Nitrite	-	-	-	-	-	-	-	-
NDMA	-	0.0007	0.0022	-	-	-	-	-
Perchlorate	0.2	-	-	20 – 40	-	-	-	-
Tetrachloroethene	70	-	0.065	10	-	-	3.6	170
1,1,2-Trichloroethane	2.8	0.6	0.49	3	0.6	-	-	-
Trichloroethene	-	-	2.7	-	3	-	1.5	310
Freon-113	210,000	-	-	-	-	-	-	>300,000
Vinyl chloride	21	0.48 / 0.24	0.13	3,000[j]	0.02	-	1.1	3,400
Benzene	28	-	-	200	-	-	-	170
Bromodichloromethane [c]	140	-	-	6,000	-	-	-	-
Methylene chloride	420	-	-	2,000	-	5,000	-	9,100
Diesel	56 to 140	-	-	100	-	-	-	100
Kerosene	-	-	-	100	-	-	-	100
Aluminum	-	-	-	-	-	5,000	-	-
Chromium	-	-	-	-	-	1,000	-	-
Hexavalent chromium	21	-	-	-	-	-	-	-
Iron	-	-	-	-	-	-	-	-
Manganese	980	-	-	-	-	-	-	-
Silver	35	-	-	100	-	-	-	-
Vanadium	63	-	-	-	-	-	-	-
Zinc	2,100	-	-	2,000	-	-	-	-

Table F-2: Summary of Preliminary Potential Chemical-Specific ARARs and TBCs for Chemicals of Concern in Groundwater (cont.)

Notes: All values are in units of ug/L. - = not available.
[a] Converted to concentration based on 2 liters per day consumption.
[b] Lower of the integrated cancer risk (1×10^{-6}) and chronic hazard quotient (HQ = 1) for tap water.
[c] For total trihalomethanes (sum of bromoform, bromodichloromethane, chloroform, and dibromochloromethane).
[d] Expressed as N.
[e] Expressed as NO_3.
[f] Obtained from a Compilation of Water Quality Goals, Marshack, 2003 and 2004.
[g] Assumes 70 kg body weight, 2 liters/day water consumption, and 20% relative source contribution from drinking water.
[h] Assumes 70 kg body weight and 2 liters/day water consumption.
[i] One-in-a-Million Incremental Cancer Risk.
[j] 10-day exposure where noted, all others are lifetime exposures.
[k] 7-day exposure where noted, all others are lifetime exposures.

MCL – Maximum Contaminant Level
MCLG – Maximum Contaminant Level Goal
PHG – Public Health Goal
DHS – Department of Health Services
PRG – Preliminary Remediation Goal
NDMA – N-Nitrosodimethylamine
IRIS – Integrated Risk Information System
RfD – Reference dose
DWHA – Drinking Water Health Advisory
SNARL – Suggested No Adverse Risk Level
NAS – National Academy of Sciences

Table F-3: Discharge Limitations for American River Study Area and GET E/F Interim Groundwater Extraction and Treatment System

Effluent Limitations (ARSA Facility)

Constituents	Units	Daily Maximum	Monthly Average
Total Copper	ug/L	17	11
Total Lead	ug/L	15	2.5
Total Zinc	ug/L	110	100
Volatile Organics	ug/L	0.5	
1,2-DCA	ug/L	0.5	0.38
Perchlorate	ug/L	18	10
1,4-dioxane	ug/L	10	3

Effluent Limitations (GET E/F)

Constituents	Units	Daily Maximum	Monthly Average
Total Copper	ug/L	17	11
Total Lead	ug/L	15	2.5
Total Zinc	ug/L	110	100
Volatile Organics	ug/L	0.5	
1,2-DCA	ug/L	0.5	0.38
Perchlorate	ug/L	8	4
1,4-dioxane	ug/L	10	3
NDMA	ug/L	0.005	0.002
Acetaldehyde	ug/L	5	
Formaldehyde	ug/L	50	

Source: CRWQCB-CVR, Order No. R5-2004-0027, NPDES No. CA0083861, 19 March 2004.

Table F-4: Potential Location-Specific ARARs

Source or Authority	Requirement, Standard, or Criterion	Location	Description	Preliminary ARAR Determination	Comments
Porter-Cologne Water Quality Control Act (California Water Code Section 13000 et seq.)	California Water Code Section 13243	Areas of waste discharge	The RWQCB may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.	Applicable to groundwater remedial action.	Applies to groundwater remedial action.
22 CCR 66264.18(b)	22 CCR 66264.18(b)	Within 100-year flood plain	A RCRA facility located in a 100-year flood plain must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood.	Potentially applicable	Some locations considered for groundwater treatment facilities may be located in the 100-year flood plain. No new permanent building is proposed in the 100-year flood-plain zone. However, if a RCRA hazardous waste facility is located in a 100-year flood plain, it must be designed, constructed, operated, and maintained to prevent washout of any hazardous waste by a 100-year flood.
National Archaeological and Historical Preservation Act (16 USC Section 469)	36 CFR Part 65	Within area where action may cause irreparable harm, loss, or destruction of significant artifacts	Alteration of terrain that threatens significant scientific, prehistoric, historic, or archaeological data may require actions to recover and preserve artifacts.	Potentially applicable	The proposed remedial alternatives will not alter or destroy any known prehistoric or historic archeological features west of the Aerojet Sacramento facility site. Areas west of the Aerojet Sacramento facility are essentially completely developed. However, because there is always a possibility that buried historic or prehistoric remains could be discovered during construction, mitigation measures to protect the area would be required if such a discovery were uncovered.
National Historic Preservation Act Section 106 (16 USC Section 470 et seq)	36 CFR Part 800	Historic project owned or controlled by a federal agency	Property included in or eligible for the National Register of Historic Places may require action to preserve historic properties.	Potentially applicable	If historic properties are impacted during the implementation of the remedial action, these requirements may be applicable.

Table F-4: Potential Location-Specific ARARs (cont.)

Source or Authority	Requirement, Standard, or Criterion	Location	Description	Preliminary ARAR Determination	Comments
Substantive portions of the Endangered Species Act of 1973 (16 USC 1531 et seq.) Substantive portions of the California Endangered Species Act Substantive portions of the Native Plant Protection Act	50 CFR Part 200, 50 CFR Part 402 Substantive portions of the California Endangered Species Act Substantive portions of the Native Plant Protection Act	Critical habitat upon which endangered species or threatened species depend	Requires action to conserve endangered species or threatened species, including consultation with the Department of the Interior, Fish and Wildlife Service.	Potentially applicable	Two endangered floral species are known to occur within Sacramento County: the Sacramento Orcutt grass (Orcuttia Viscida) and the Boggs Lake hedge hyssop (Gratiola Heterosepala). Four endangered wildlife species are expected to occur within 25 miles of the Aerojet Sacramento facility: Bald Eagle, Peregrine Falcon, Giant Garter Snake, and the Valley Elderberry Longhorn Beetle. The Aerojet Sacramento facility may be a habitat for the Burrowing Owl, a species of concern in California. Consultations between Department of Toxic Substances Control (DTSC) and Department of Fish and Game will be conducted if such species are affected by remedial actions.
Fish and Game Commission Wetlands Policy (adopted 1987) included in Fish and Game Code Addenda	40 CFR Part 6 Appendix A	Wetlands	Actions must be taken to ensure that "no net loss" of wetlands acreage or habitat value occurs. Actions must be taken to restore and enhance California's wetland acreage and habitat value. Actions must be taken to avoid adverse effects, minimize potential harm, and preserve and enhance wetlands, to the extent possible.	TBC Potentially applicable	This policy is not a regulatory program and will be considered as a TBC criteria. These requirements would be applicable if groundwater treatment facilities or associated facilities were constructed in wetlands.
Fish and Wildlife Coordination Act (16 USC 661 et seq.)	40 CFR Part 6 §302	Areas affecting stream or river	Restrictions on diversion, channeling or other activity that modifies a stream or river and affects fish or wildlife.	Potentially applicable to any remedial action components that may be constructed in or along a creek or river	Requires action to protect fish or wildlife.

Table F-5: Preliminary Potential Action-Specific ARARs

Potential Requirement	Citation	Action	Description	Potential ARAR Determination	Comments
RCRA and State standards for identification and classification of hazardous wastes	40 CFR Part 261 and 22 CCR §66261	Generation of waste from operation of a groundwater treatment plant	Establishes procedures and numeric limits for identification of characteristic hazardous wastes, listed hazardous wastes, and State-only (non-RCRA) hazardous wastes.	Potentially applicable	These requirements are potentially applicable to management of waste materials generated as a result of construction of the selected remedial action or operation of a groundwater treatment plant.
RCRA Generator Standards – hazardous waste determination	40 CFR § 262.11 and 22 CCR §66262.11,		Requires waste generators to determine if wastes are hazardous wastes and establishes procedures for such determinations	Potentially applicable	These requirements are potentially applicable to management of waste materials generated as a result of construction of the remedial action or operation of a groundwater treatment plant.
RCRA Generator Standards – hazardous waste shipment	40 CFR § 262.30 – 33 and 22 CFR 66262.30 - 66262.33	Shipment of hazardous wastes for treatment or disposal offsite	Prior to transportation, containers should be packaged, labeled, marked, and placarded in accordance with RCRA and Dept of Transportation requirements.	Potentially applicable	These requirements are applicable if containers are used to contain hazardous waste to be sent for offsite treatment or disposal.
RCRA Generator Standards – hazardous waste accumulation	40 CFR § 262.34 and 22 CCR §66262.34		Specifies maximum amounts and maximum periods for accumulation of hazardous waste onsite under generator status	Potentially applicable	These requirements are potentially applicable to management of hazardous wastes generated as a result of construction of the remedial action and operation of any groundwater treatment plant.
Porter Cologne Water Quality Control Act (California Water Code Sections 13140-13147, 13172, 13260, 13263, 13267, 13304)	Title 27, CCR, Division 2, Subdivision 1(Section 20080 et seq.) Title 23, CCR, Division 3, Chapter 15 (Section 2510 et seq.).	Onsite disposal of hazardous and non-hazardous wastes	Establishes waste and siting classification systems and minimum waste management standards for discharges of waste to land for treatment, storage, and disposal. Engineered alternatives that are consistent with Title 27/Title 23 performance goals may be considered. Establishes corrective action requirements for responding to discharges to land, including spills and leaks and other unauthorized discharges.	Potentially Applicable	The Application of specific sections of Title 27/ Title 23 is discussed below. Provisions of Title 23 apply to hazardous waste and provisions of Title 27 apply to designated and nonhazardous solid waste.

Table F-5: Preliminary Potential Action-Specific ARARs (cont.)

Potential Requirement	Citation	Action	Description	Potential ARAR Determination	Comments
See above	Title 27, CCR, Section 20415 Title 23, CCR Section 2550.7	Onsite disposal of hazardous and non-hazardous wastes	Requires general soil, surface water and ground water monitoring	Potentially Applicable	Applies to areas at which waste has been discharged to land
See above	Title 27, CCR, Section 20425 Title 23, CCR Section 2550.9	Onsite disposal of hazardous and non-hazardous wastes	Requires an assessment of the nature and extent of the release. Including a determination of the spatial distribution and concentration of each constituent.	Potentially Applicable	Applies to areas at which monitoring results show statistically significant evidence of a release.
See above	Title 27, CCR, Section 20430 Title 23, CCR Section 2550.10	Onsite disposal of hazardous and non-hazardous wastes	Requires implementation of corrective action measures that ensure that cleanup levels are achieved throughout the zone affected by the release by removing the waste constituents or treating them in place. Source control may be required. Also requires monitoring to determine the effectiveness of the corrective actions.	Potentially Applicable	Applies to groundwater remedial actions
See above	Title 27, CCR, Section 21090	Onsite disposal of hazardous and non-hazardous wastes	Requires a final cover constructed in accordance with specific prescriptive standards to be maintained as long as wastes po9se a threat to water quality.	Potentially Applicable	Applies to wastes contained or left in place at the end of remedial actions that could affect water quality. Includes closure of landfills and other areas where wastes have been discharged to land. Relevant and appropriate for “closed, abandoned, or inactive” landfills and other areas where wastes have been discharged to land and water quality is threatened.

Table F-5: Preliminary Potential Action-Specific ARARs (cont.)

Potential Requirement	Citation	Action	Description	Potential ARAR Determination	Comments
Basin Plan – beneficial uses, WQOs and policies and procedures	SWB Resolution 68-16 (“Anti-degradation policy”)	Discharge to surface water and/or reinjection of groundwater	Requires maintenance of existing water quality that is better than that required by other policies.	Potentially applicable	Applies to discharges of waste to waters, including discharges to soil that may affect surface or ground waters. This requirement is potentially applicable if the selected remedial action includes reinjection of treated water or discharge of treated water to surface water. As this is a policy, it is Aerojet’s opinion that this is a potential TBC and not an ARAR
	SWB Resolution Nos. 68-16 and 92-49		Allow for the use of mixing zones as part of a determination of whether water quality is being maintained in the receiving water.	Potentially applicable	This requirement is potentially applicable if the selected remedial action includes reinjection of treated water or discharge of treated water to surface water.
	Wastewater Reuse Policy		Requires applicants for waste discharge requirements and discharge permits to evaluate land disposal as an alternative to discharge to surface waters.	Potentially applicable	Applies to groundwater extracted by groundwater treatment system. This requirement is a potential TBC if the selected remedial action includes reinjection of treated water or discharge of treated water to surface water. As CERCLA establishes procedures for identification and evaluation of remedial alternatives at NPL sites, it is Aerojet’s opinion that this is a potential TBC and not an ARAR.

Table F-5: Preliminary Potential Action-Specific ARARs (cont.)

Potential Requirement	Citation	Action	Description	Potential ARAR Determination	Comments
Porter Cologne Water Quality Control Act (California Water Code Section 13000 et. seq.)	California Water Code Section 13243	Discharge of waste	The RWQCB may specify certain conditions or areas where the discharge of waste, or certain types of waste, will not be permitted.	Potentially applicable	Applicable to groundwater remedial action
Porter Cologne Water Quality Control Act (California Water Code Section 13240, 13241, 13242, 13243)	RWQCB, CVR Basin Plan – "Wastewater Reuse Policy"	Dishcarge of waste to surface water	Requires evaluation of land disposal as an alternative to discharge to surface water.	Potentially applicable	This policy is a potentially applicable for remedial actions that include discharge of treated groundwater to surface water. This requirement is being addressed through consideration of the various remedial alternatives including potential groundwater reuse options as part the FS evaluation. As CERCLA establishes procedures for identification and evaluation of remedial alternatives at NPL sites, it is Aerojet's opinion that this is a potential TBC and not an ARAR
NPDES discharge requirements	40 CFR Parts 122 and 125 and 23 CCR 2235 et seq.		Establishes permit, treatment and monitoring requirements for discharges to surface water	Potentially applicable	This requirement is potentially applicable if the selected remedial action includes discharge of treated water to surface water.
NPDES stormwater requirements	40 CFR Parts 122.26 23 CCR 2235 et seq.	Stormwater management	Establishes permitting, monitoring, and pollutant control requirements for stormwater from industrial activities.	Potentially applicable	These requirements would be applicable if construction activities associated with the remedial action disturb an area of 5 acres.

Table F-5: Preliminary Potential Action-Specific ARARs (cont.)

Potential Requirement	Citation	Action	Description	Potential ARAR Determination	Comments
Containment Zone (CZ) requirements	SWB Resolution No. 92-49 and related Containment Zone Application Requirements	Groundwater containment	Defines requirements to support use of a containment zone and for delineation and implementation of a containment zone for groundwater contamination.	Potential TBC	The SWB Resolution is potential TBC if the selected remedial action includes physical or hydraulic containment of contaminated groundwater. The Containment Zone Application Requirements are a TBC.
Establishment of concentration limits for groundwater, surface water and the unsaturated zone	Title 23, CCR, Chapter 15, Section 2550.4.	Groundwater remediation	Concentration limits must be established for groundwater, surface water, and the unsaturated zone.	Potentially applicable	Must be based on background, equal to background, or for corrective actions, may be greater than background, not to exceed the lower of the applicable water quality objective or the concentration technologically or economically achievable. Specific factors must be considered in setting cleanup standards above background levels.
Criteria for domestic use of impacted groundwater	DHS Policy Guidance for Direct Domestic Use of Extremely Impaired Source	Use of treated groundwater for domestic use	Sets forth DHS policy for approval of use of treated groundwater for domestic use	TBC	This policy establishes criteria related to use of treated groundwater for domestic supply and is a TBC criteria for remedial actions that include wellhead treatment or other direct use of treated groundwater.