

**REMEDIAL INVESTIGATION AND FEASIBILITY STUDY
FINAL WORK PLAN
EXTERIOR INDUSTRIAL WASTE DITCH
NAVAL REACTORS FACILITY
IDAHO FALLS, IDAHO**

APPENDIX G

**PRELIMINARY ASSESSMENT AND APPLICABLE OR RELEVANT
AND APPROPRIATE REQUIREMENTS**

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1.0 Introduction

Applicable or Relevant and Appropriate Requirements (ARARs) are restrictions or regulations that must be satisfied during site remediation. Therefore, ARARs play an important role in determining which remedial alternatives, if any, may be applied to a site. Early identification of ARARs is important for the Remedial Investigation (RI) scoping process because specific data is often needed to design or select remedial alternatives. The Remedial Investigation/Feasibility Study (RI/FS) process is of an iterative nature; therefore, ARARs identification and screening continues throughout the process as a better understanding of site conditions, site contaminants, and remedial action alternatives is gained. Disposition of investigation-derived wastes, the nature of which is unknown prior to investigation, also mandates evolution of ARARs.

Applicable requirements are federal or state requirements that are invoked to specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) site. Relevant and appropriate requirements are federal or state laws that, while not applicable to a hazardous substance, pollutant or 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.

Three types of ARARs exist: location-specific, action-specific, and chemical-specific. Federal and state location-specific ARARs are presented and discussed in Section 2.0. Action-specific ARARs are outlined and reviewed in Section 3.0. Section 4.0 delineates and recapitulates chemical-specific ARARs. The ARARs discussed in this appendix are preliminary ARARs. As further information is gained about the IWD, some of the preliminary ARARs may be deleted due to lack of relevance, and additional ARARs may be identified.

In addition to the legally binding requirements established by ARARs, many state and federal programs have developed criteria, advisories, guidance, and proposed standards that are not legally binding. These items are known as "to be considered" (TBC). Federal and state TBCs are discussed in Section 5.0.

The assessment of the preliminary ARARs presented in this appendix was based on the existing data associated with the IWD as presented in Section 2 of the Work Plan. Contaminants of concern are discussed in Section 3.2 of the Work Plan, along with the Preliminary Remedial Action Objectives (PRAO). Both the PRAOs and the ARARs will be further evaluated and refined through the course of the RI/FS process.

2.0 Location-Specific ARARs

Location-specific ARARs are restrictions placed on hazardous substance concentrations or the conduct of activities because they occur in specific locations. Special location examples include the 100-year floodplain, archaeologically or historically significant areas, sensitive ecosystems, and seismic activity areas. Table G-1 identifies the location-specific ARARs relevant to the IWD.

Table G-1. Location-specific ARARs for the IWD

<u>Statute</u>	<u>Regulation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Clean Air Act	40 CFR Part 52, "Prevention of Significant Deterioration"	X	--
Archeological Resources Protection Act	36 CFR Part 7, "Protection of Archeological Resources"	X	--
	36 CFR Part 296, "Protection of Archeological Resources; Uniform Regulations"	X	--
Preservation of American Antiquities Act	43 CFR Part 3	X	--
Archeological and Historic Preservation Act	Executive Order 11543, "Protection and Enhancement of the Cultural Environment"	X	--

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

3.0 Action-Specific ARARs

Action-specific ARARs are usually technology or activity-based requirements on action taken at a site. Action-specific ARARs generally do not guide remedial action alternative development, but they do indicate how the selected remedy must be implemented. The most significant federal requirements potentially applicable or relevant and appropriate to cleanup activities at IWD stem from the Resource Conservation and Recovery Act (RCRA) and the Occupational Safety and Health Act (OSHA). Action-specific ARARs are dependent upon the possible remedial options considered for the IWD. Table G-2 identifies potential action-specific ARARs that will be considered for the IWD. This list will be refined, and applicability will be determined as the remedial selection process proceeds. Categorization of the potential action-specific ARARs in Table G-2 has not been finalized at this time because they are dependent on the remedial action selected as a result of the RI/FS process. After the possible remedial options have been developed into alternatives for analysis, the action-specific ARARs in Table G-2 will be finalized.

Table G-2. Action-specific ARARs for the IWD

<u>Statute</u>	<u>Regulation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Resource Conservation and Recovery Act	40 CFR Part 241, "Guidelines for Land Disposal of Solid Waste"	--	X*
	40 CFR Part 257, "Criteria for Classification of Solid Waste Disposal Facilities and Practices"	--	X*
	40 CFR Part 260, "Hazardous Waste Management Systems"	--	X*
	40 CFR Part 261, "Identifying Hazardous Waste"	--	X*
	40 CFR Part 262, "Standards Applicable to Generators of Hazardous Waste"	--	X*
	40 CFR Part 263, "Standards Applicable to Transporters of Hazardous Waste"	--	X*
	40 CFR Part 264, "Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities"	--	X*
	40 CFR Part 266, "Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Facilities"	--	X*
	40 CFR Part 267, "Interim Standards for Owners and Operators of New Hazardous Waste Land Disposal Facilities"	--	X*

* These requirements will become applicable for any hazardous waste generated during the RI/FS and remedial action process.

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

Table G-2. Continued

<u>Statute</u>	<u>Regulation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
	40 CFR Part 268, "Land Disposal Restrictions"	--	X*
Occupational Safety and Health Act	29 CFR Part 1910, "Occupational Safety and Health Standards"	--	X
	Subpart G, "Occupational Health and Environmental Control"	--	X
	Subpart I, "Personal Protective Equipment"	--	X
	Subpart N, "Material Handling and Storage"	--	X
	29 CFR Part 1910.120, "Hazardous Waste Standard"	--	X
	29 CFR Part 1926, "Health and Safety Standards for Construction"	--	X
Clean Air Act	40 CFR Part 50, "National Primary and Secondary Ambient Air Quality Standards"	X	--
	40 CFR Part 61, "National Emission Standards for Hazardous Air Pollutants"	X	--
	40 CFR Part 200, "Standards for Performance for New Stationary Sources"	X	--

* These requirements will become applicable for any hazardous waste generated during the RI/FS and remedial action process.

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

Table G-2. Continued

<u>Statute</u>	<u>Regulation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Atomic Energy Act	10 CFR Part 20, "Standards for Protection Against Radiation"	--	X
	10 CFR Part 60, "Technical Requirements for Land Disposal Facilities"	--	X
Comprehensive Environmental Response, Compensation, and Liability Act	40 CFR Part 300, "National Oil and Hazardous Substance Pollution Contingency Plan"	X	--
Migratory Bird Treaty Act	50 CFR Part 20, "Migratory Bird Protection"	X	--
Bald and Golden Eagle Protection Act	50 CFR Part 22, "Bald and Golden Eagle Protection Act"	X	--
Endangered Species Act	50 CFR Part 17, "Endangered and Threatened Wildlife and Plants"	X	--
	50 CFR Part 225, "Federal/State Cooperation in the Conservation of Endangered and Threatened Species"	X	--
	50 CFR Part 226, "Designated Critical Habitat"	X	--
	50 CFR Part 402, "Interagency Cooperation"	X	--

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

4.0 Potential Chemical-Specific ARARs

Chemical-specific ARARs are usually technology or risk based numerical limitations or methodologies that, when applied to site-specific conditions, result in the establishment of numerical values. The numerical values represent acceptable concentrations of a chemical that may be found in or released to the ambient environment. In general, chemical-specific ARARs address a single chemical or group of closely related chemicals. Section 3.2 of the Work Plan includes a discussion of PRAOs which are risk-based concentrations for the identified contaminants of concern. The PRAOs will be used in conjunction with chemical specific ARARs during the remedial action alternative evaluations. Federal chemical-specific ARARs are listed in Table G-3.

Table G-3. Federal chemical-specific ARARs for the IWD

<u>Statute</u>	<u>Regulation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Safe Drinking Water Act	40 CFR Part 141, National Primary Drinking Water Standards	X	--
	40 CFR Part 141, Maximum Contaminant Level Goals	X	--
	40 CFR Part 143, National Secondary Drinking Water Standards	X	--
Clean Air Act	40 CFR Part 61, National Emission Standards for Hazardous Air Pollutants	X	--
Emergency Planning and Community Right-to-Know Act of 1986	40 CFR 355, Emergency Planning and Notification under CERCLA	--	X

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

5.0 Advisories to be Considered

As discussed earlier, a category of advisories to be considered has also been developed to guide IWD remedial action activities. This category identifies criteria, advisories, guidance, or policies that do not meet the definition of ARARs but may assist in determining what is protective or what may be useful in developing or carrying out remedial action alternatives. Advisories to be considered for the IWD include:

- 1) Applicable EPA guidance documents
- 2) Applicable DOE orders
- 3) Applicable executive orders
- 4) New Clean Air Act amendments
- 5) New Federal Pollution Minimization Laws for Contaminated Groundwater at Superfund Site (Draft, October 1986)
- 6) Remedial action decisions at similar CERCLA sites
- 7) Proposed standards under the Safe Drinking Water Act
- 8) National Environmental Policy Act

Specific executive orders that will be considered are listed in Table G-4.

Table G-4. Executive orders to be considered

<u>Executive Order Number</u>	<u>Title</u>
11988	Floodplain Management
11989	Off-Road Vehicles on Public Lands
11990	Protection of Wetlands
11991 and 11514	Protection and Enhancement of Environmental Quality
11593	Protection and Enhancement of Cultural Environment
12088	Federal Compliance with Pollution Control Standards
12316	Response to Environmental Damage
12344	Naval Nuclear Propulsion Program
12580	Superfund Implementation

Note: Executive Order Number 12344 has been statutorily prescribed by Public Law 98-525, 42 USC Section 7158 note (1984)

6.0 State ARARs

The potential state ARARs are identified in Table G-5. This list of potential state ARARs is presented as it was provided in a letter from Mr. Dean Nygard, IDHW, to Mr. Jerry Lyle, DOE-ID, dated April 29, 1991. State ARARs are limited to any promulgated standard, requirement, criteria, or limitation under a state environmental or facility-siting law that is more stringent than any federal standard, requirement, criteria, or limitation, including each such state standard, requirement, criteria, or limitation contained in a program approved, authorized, or delegated by the Administrator. Idaho State Regulations are shown in Table G-5 as relevant and appropriate rather than applicable requirements pending further assessment per CERCLA guidance and Section 8-10 of the FFA/CO.

Table G-5. Potential State ARARs for the IWD.

<u>Potential State ARARs</u>	<u>Citation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Endangered Species	Idaho Code §36-201	--	X
Environmental Protection and Health Act (EPHA)	Idaho Code §39-101 through 119	--	X
Hazardous Waste Management Act (HWMA)	Idaho Code §39-4401 through 4432	--	X
Hazardous Waste Facility Siting Act	Idaho Code §39-5801 through 5820	--	X
Preservation of Historic Sites	Idaho Code §67-4601 through 4619 See also 67-4101 through 4130	--	X
Protection of Natural Resources	Idaho Code §67-5801 through 5804	--	X
Solid Waste Disposal Sites	Idaho Code §31-4401 through 4411	--	X
Waste Disposal and Injection Wells	Idaho Code §42-3901 through 3919	--	X
Idaho Solid Waste Management Regulations	IDHV Title 1, Chapter 6, §01.6001 et seq.	--	X
Toxic Substances	IDAPA §16.01.1011, 01	--	X

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

Table G.5. Continued

<u>Potential State ARARs</u>	<u>Citation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Air Pollution Permits to Construct and Operating Permits	IDAPA §16.01.1012	--	X
Portable Equipment	IDAPA §16.01.1013	--	X
Fugitive Dust	IDAPA §16.01.1251 to 12531	--	X
New Source Performance Standards	IDAPA §16.01.1951	--	X
Administrative Policy on Protection of Waters of the State	IDAPA §16.01.2050, 02	--	X
Antidegradation Policy	IDAPA §16.01.2051	--	X
Water Use Classifications	IDAPA §16.01.2100	--	X
General Water Use Designations	IDAPA §16.01.2102	--	X
General Water Quality Criteria	IDAPA §16.01.2200	--	X
Specific Water Quality Criteria for Use Classifications	IDAPA §16.01.2250	--	X
Water Quality Standards Specific Waters	IDAPA §16.01.2275 to 2299	--	X

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

Table G.5. Continued

<u>Potential State ARARs</u>	<u>Citation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Restriction on Discharge and on Activities which Affect Water Quality	IDAPA §16.01.2300	--	X
Short-Term Activity Exemption	IDAPA §16.01.2301	--	X
Maintenance of Water Quality Standards	IDAPA §16.01.2302	--	X
Non-sewage Waste Water Discharges	IDAPA §16.01.2440	--	X
Land Application of Waste Waters	IDAPA §16.01.2600	--	X
Hazardous Waste Management System: General	IDAPA §16.01.5004 (40 CFR Part 260)	--	X ^a
Identification and Listing of Hazardous Waste	IDAPA §16.01.5005 (40 CFR Part 261)	--	X ^a
Standards Applicable to Generators of Hazardous Waste	IDAPA §16.01.5006 (40 CFR Part 262)	--	X ^a

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

^a Those potential state ARARs could be considered relevant and appropriate; final categorization will depend upon the remedy selection.

Table G.5. Continued

<u>Potential State ARARs</u>	<u>Citation</u>	<u>Applicable</u>	<u>Relevant and Appropriate</u>
Standards for Owners and Operators of Hazardous Waste Treatment Storage and Disposal Facilities	IDAPA §16.01.5008 (40 CFR Part 264) --		X ^a
Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities	IDAPA §16.01.5010 (40 CFR Part 266) --		X ^a
Land Disposal Restrictions	IDAPA §16.01.5011 (40 CFR Part 268) --		X ^a
Hazardous Waste Permit Program	IDAPA §16.01.5012 (40 CFR Part 270) --		X ^a
Variance Applications for TSDs	IDAPA §16.01.5356	--	X ^a

Note: All categorizations in this table are tentative. Categorizations will be finalized upon selection of any remedial action.

^a Those potential state ARARs could be considered relevant and appropriate; final categorization will depend upon the remedy selection.

7.0 ARARs Waivers

CERCLA §121 provides that, under certain circumstances, an ARAR may be waived (EPA, 1988). The circumstances under which a waiver might be invoked, and criteria for invoking the waivers are discussed below.

- Interim measures. A waiver for interim measures may be applicable if the interim remedial action will be followed, within a reasonable period of time, by complete remedial measures that will attain ARARs. The interim measures waiver may also apply to a final site remedy that is divided into several small actions.
- Greater risk to health and the environment. This waiver may be invoked if a remedial action that meets an ARAR results in greater risks than an alternative option that does not meet that ARAR. Factors that may be considered in invoking this waiver are the magnitude of adverse impacts, duration of adverse impacts, and the reversibility of adverse impacts.
- Technical impracticability. This waiver may be invoked if a remedy is not feasible or reliable from an engineering perspective. The engineering feasibility criterion for invoking this waiver would apply when current engineering methods for constructing and maintaining an ARAR-mandated remedy cannot be reasonably implemented. A waiver is appropriate when the reliability of a remedy is questionable, either because of technical controls or because of inordinate maintenance costs.
- Equivalent standard of performance. This waiver may be used where ARARs stipulates use of a design or operating standard, but equivalent or better remedial results could be achieved using an alternative design or method of operation.
- Inconsistent application of state requirements. In the event of an inconsistent application of state requirements, an ARAR may be waived to prevent unjustified or unreasonable restrictions from being imposed on the remedial actions. This waiver may be used if state requirements have been developed and promulgated but never applied because of lack of applicability in past situations or if state standards have been variably applied or inconsistently enforced.

In all cases, statutory requirements, such as remedies being protective of human health and the environment, cannot be waived (EPA, 1988).

8.0 Summary

Three types of potential federal and state ARARs were identified for remediation of the IWD; chemical-specific, location-specific, and action-specific (EPA, 1988). The list of ARARs that may apply to the IWD and its remedial action will be considered and refined at several points in the remedy selection process. As more information is developed on the site, a more definitive list will be developed.

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