

2000 Rocky Flats Cleanup Agreement Annual Review January 2001

1.0 BACKGROUND

The Rocky Flats Cleanup Agreement (RFCA or Agreement) was signed by the Department of Energy (DOE), the Environmental Protection Agency (EPA) and the Colorado Department of Public Health and Environment (CDPHE) on July 19, 1996. The signatories are referred to as the RFCA Parties. The RFCA Parties have committed to review the agreement to determine if any revisions are necessary. RFCA paragraph 5 states:

The Parties shall conduct an annual review of all applicable new and revised statutes and regulations and written policy and guidance to determine if an amendment pursuant to Part 19 (Amendment of Agreement) is necessary.

This report is a summary of the 2000 RFCA Annual review process and conclusions. Based on the review of the environmental statutes and associated regulations, written policy, and guidance, no amendment to RFCA is required at this time. However, changes in the environmental regulations will be incorporated, as modifications, into RFCA Appendix 3, Implementation Guidance Document (IGD), Master List of Potential Applicable or Relevant and Appropriate Requirements (ARARs) (IGD Appendix K).

1.1 What the Parties reviewed this year

The 2000 Regulatory/Radionuclide Soil Action Level Annual Review covers the period from July 1, 1999 through June 30, 2000. The following environmental laws and associated regulations, written policy, and guidance were reviewed:

- Comprehensive Environmental Response, Compensation, and Liability Act;
- Resource Conservation and Recovery Act/Colorado Hazardous Waste Act;
- Toxic Substances Control Act;
- Clean Water Act;
- National Environmental Policy Act;
- Endangered Species Act; and
- Radiation Related Document Review (See Section 6.0).

In addition to the above environmental laws and the radionuclide soil action levels, the Action Levels and Standards Framework for Surface Water, Groundwater, and Soils (ALF), the Preliminary Programmatic Remediation Goals (PPRGs); and the IGD were reviewed. Summaries of these reviews are described below. Finally, the Defense Authorization Acts and Appropriation Acts for FY00 were also reviewed.

ADMIN RECORD



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1.2 Other RFCA-required Reviews Completed in FY00

The Integrated Monitoring Plan (IMP) was reviewed for FY01. An IMP Working Group consisted of members from DOE and its contractors, EPA, CDPHE, and local communities. The final FY01 IMP was completed in December 2000.

DOE reviews and updates, as required, the Environmental Restoration Ranking (RFCA paragraph 79); Historical Release Report (RFCA paragraph 119(l)); the summary level baseline (RFCA paragraph 141); the Administrative Record (RFCA paragraph 284); and the Industrial Area Characterization and Remediation Strategy on an annual basis. These reviews were completed by September 28, 2000.

The original Integrated Water Management Plan (IWMP) required an annual review; the Rocky Flats Water Working Group will evaluate the need for the IWMP.

For more information on any of the above documents, contact either a RFCA Project Coordinator or an Agency community relations representative.

1.3 Public Participation

In a letter dated June 30, 2000, the stakeholders were invited to submit any new information relevant to the RFCA or soil action levels for this review. Written comments were accepted by the agencies through July 30, 2000. No comments were received.

2.0 ENVIRONMENTAL STATUTES

As stated above, major environmental laws, regulations, written policy, and guidance were reviewed. If there was a change to an environmental law, regulation, written policy or guidance, the Site (DOE and Kaiser-Hill, LLC) reviewed whether the change had been implemented and whether the change impacted RFCA. The following discussion describes key changes to environmental laws, regulation, written policy or guidance. No other changes were identified as impacting, or potentially impacting, RFETS or RFCA.

2.1 Comprehensive Environmental Response, Compensation, and Liability Act

EPA issued several new policies and guidance documents that may be used at Comprehensive Environmental Response Compensation and Liability Act (CERCLA) sites. Attachment 1 is a partial list of EPA's new policy and guidance documents that were issued since July 1, 1999 that may be relevant to RFETS.

EPA modified 40 CFR part 372, effective January 1, 2000 (64 Federal Register (FR) 58665). EPA lowered the reporting thresholds for certain persistent bioaccumulative toxic (PBT) chemicals that are subject to reporting under section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) and section 6007 of the Pollution Prevention Act of 1990. EPA also added a category of dioxin and dioxin-like

compounds to the EPCRA section 313 list of toxic chemicals and established a 0.1 gram reporting threshold for the category.

2.2 Resource Conservation and Recovery Act/Colorado Hazardous Waste Act

EPA modified 40 CFR 273 (64 FR 36465). The State of Colorado adopted the modification into the implementing regulations of the Colorado Hazardous Waste Act (CHWA) (6 CCR 1007-3 Part 273). The final rule added hazardous waste lamps to the existing universal waste rule, i.e., subsections were added to sections 273.13 and 273.33. New section 273.13(d) includes lamp handling requirements for small quantity handlers of universal waste and new section 273.33(d) provides lamp handling requirements for large quantity handlers of universal waste lamps. These modifications will be added to RFCA Appendix 3, IGD, Appendix K, Master List of Potential ARARs.

2.3 Clean Water Act

EPA promulgated regulations under the Clean Water Act, but the majority was not applicable to RFETS activities. One new rule, effective February 7, 2000, expanded the existing NPDES storm water program to address storm water discharges from construction sites that disturb one to five acres. (64 FR 68721) (Plus, other systems which are not applicable to RFETS.) This rule would only apply to RFETS if DOE had a construction site that disturbed one to five acres.

In State matters, the Colorado Water Quality Control Commission (WQCC) held a triennial review of the Basic Standards and Methodology on July 10 and 11, 2000. No new regulations were adopted at the hearing that impact RFETS. The WQCC held a triennial review of water quality classifications, standards, and designation for multiple segments in the South Platte River Basin, Laramie River Basin, Republican River Basin and the Smokey Hill River Basin on November 7 and 8, 2000. (RFETS is located within the South Platte River Basin.) The WQCC decided to delete the narrative temporary modifications for americium and plutonium in Segment 5 of Walnut Creek that were effective June 30, 1999. The original reason for adopting those modifications was to expedite 401 certification of the National Pollutant Discharge Elimination System (NPDES) permit. Since DOE has chosen not to reconfigure the outfall and that proposed reconfiguration formed part of the basis for the americium and plutonium temporary modifications, these modifications are no longer needed on that basis. The WQCC classified Big Dry Creek Segment 4a as Recreation Class 1a with the 200/100 ml fecal coliform and 126/100 ml E. Coli standards based on the policy reflected in the Basic Standards and Methodologies for Surface Water without a factual determination that there are existing Class 1 uses on the segment. The WQCC determined that Big Dry Creek Segments 4b and 5 retained their Recreation Class 2 classification with 2,000/100ml fecal coliform and 630/100 ml E. coli standard because use attainability analyses demonstrate that a Recreation Class 1a or 1b use is unattainable. No other new regulations were adopted which impact RFETS.

2.4 Clean Air Act

EPA continued to promulgate regulations under the existing Act, but the majority was not applicable to RFETS activities. Where new regulations were applicable there were no new compliance requirements. Effective July 1, 2000, the State of Colorado passed a law requiring federal land management agencies to submit land management plans or equivalent planning documents to the Colorado Air Quality Control Commission by July 1, 2000. If a plan was not submitted by the above date by an agency, then that agency would not be issued open burning permits by CDPHE in the future. DOE submitted its land management plan by July 1, 2000.

2.5 Atomic Energy Act

DOE established a final rule requiring a chronic beryllium disease prevention program to reduce the number of workers currently exposed to beryllium in the course of their work at DOE facilities managed by DOE or its contractors to minimize the levels of, and potential for, exposure to beryllium, and to establish medical surveillance requirements to ensure early detection of the disease. Sections of the rule related to determinations of beryllium contamination and releases to the public will be added to RFCA Appendix 3, IGD, Appendix K, Master List of Potential ARARs.

2.6 Summary

Based on the review of the environmental statutes and associated regulations, written policy, and guidance, no amendment to RFCA is required at this time. However, changes in the environmental regulations, written policies, and guidance have been incorporated into RFCA Appendix 3, IGD, Appendix K, Master List of Potential ARARs.

3.0 RFCA ATTACHMENT 5: ACTION LEVELS AND STANDARDS FRAMEWORK FOR SURFACE WATER, GROUND WATER AND SOILS

Potential changes that may impact standards or action levels in ALF were evaluated. Based on the outcomes of the two WQCC hearings in 2000, footnote b to Table 1, Surface Water Action Levels and Standards for radionuclides will need to be corrected. (Note that the new standards for fecal coliform and E. Coli in Segment 4a are not standards or action levels in ALF.) Historically, the RFCA Parties have reviewed the proposed PPRG changes to determine if any change to ALF is required. At this time the RFCA Parties have determined that it is appropriate to complete the PPRG update at the conclusion of the Radiological Soil Action Level (RSAL) review. See section 4.0. Also, because the RSAL review is still on-going, the RFCA Parties have determined that no changes to ALF regarding RSALS will be made at this time. See Section 6.0. Once the RSAL review is complete, the public will have an opportunity to comment on the all proposed changes to ALF as required in RFCA paragraph 117.

4.0 PRELIMINARY PROGRAMMATIC REMEDIATION GOALS

DOE developed risk-based PPRGs in 1995 to establish initial site-wide cleanup targets for contaminants for each environmental medium. The PPRGs are currently used in RFCA Attachment 5 as action levels for the following mediums:

- Groundwater Action Levels: PPRGs based on the residential groundwater ingestion scenario are used where no Maximum Contaminant Level (MCL) is available from EPA;
- Surface Soil Action Levels: For non-radionuclides, PPRGs are used as action levels for the appropriate RFCA land use, e.g., industrial use or open space use; and
- Subsurface Soil Action Levels: For non-radionuclides inorganics, PPRGs are used as action levels for the appropriate RFCA land use, e.g., industrial use or open space use.

Historically, the risk-based PPRGs have been calculated using a deterministic approach. During the RSAL review, the RFCA Parties determined to incorporate a probabilistic approach for some input parameters for the RSAL calculation. In addition, the RSAL review working group is re-evaluating land use scenarios, including what activities would take place under each land use scenario, e.g., how much time would a receptor spend on the land, would the receptor drink groundwater, etc. Once the RSAL review is complete the RFCA Parties will determine whether the probabilistic approach and land use assumptions should be incorporated into the PPRG calculations.

Consequently, the RFCA Parties have determined that it is appropriate to complete the PPRG update at the conclusion of the RSAL review.

5.0 RFCA APPENDIX 3: IMPLEMENTATION GUIDANCE DOCUMENT

As described in Section 2, there have been changes in some environmental laws that are potential ARARs for RFETS. At this time the only change the RFCA Parties are making to the IGD is an update to IGD Appendix K, Master List of Potential ARARs. See Attachment 2. The RFCA Parties have not reached a final decision on the 1997 Nuclear Regulatory Commission Rule, "Radiological Criteria for License Termination," (10 CFR 20, Subpart E) as a potential ARAR at RFETS. Once the RSAL review process is complete, IGD Appendix K will be updated, as necessary, to incorporate any potential ARARs from this rule.

6.0 RADIONUCLIDE SOIL ACTION LEVELS

In addition to the annual review prescribed in RFCA paragraph 5, the RFCA Parties committed to conducting an annual review of the RSALs. Questions to be addressed on an annual basis include:

1. Is there new scientific information available that would impact the interim action levels?
2. Has a national soil action level been promulgated within the year? If yes, the Parties commit to revisit the Rocky Flats interim action levels.
3. How were the interim action levels applied to the site over the course of the year?
4. Have the remedies been effective?

(See, Responsiveness Summary for Soil Action Levels released on November 6, 1996.)

In 1999, the RFCA Parties made no changes to the RSALs due to anticipated new information from the Actinide Migration Evaluation (AME) Team and the Rocky Flats Soil Action Level Oversight Panel (RFSALOP) review of the RSALs. The RFSALOP released a final report in March 2000. The RFCA Parties are continuing the 2000/2001 RSAL annual review at this time including a review of the information from the AME Team and the RFSALOP. A report is anticipated for public comment during the Summer of 2001. RSAL Working Group meetings are open to the public; in addition, RSAL Working Group updates are provided to the RFCA Stakeholder Focus Group. For more information on the RSAL review process or the RFCA Stakeholder Focus Group, contact either a RFCA Project Coordinator or an Agency community relations representative.

ATTACHMENT 1

New CERCLA Guidance and Policies

Attachment 1

New CERCLA Guidance and Policies

- A Guide to Preparing Superfund Proposed Plans, Records of Decisions, and Other Remedy Selection Decision Documents; OSWER Directive 9200.1-23P; July 30, 1999.

This guidance updates and clarifies EPA's expectations for the content and procedures for developing decision documents in the Superfund remedy selection process.

- Cancer Risk Coefficients for Environmental Exposure to Radionuclides; Federal Guidance Report No. 13; September 1999.

This report provides numerical factors for use in estimating the risk of cancer from low-level exposure to radionuclides.

- Comprehensive Five-Year Review Guidance; OSWER Directive 9355.7-03B-P; Draft October 1999.

EPA issued this guidance to establish procedures for conducting five-year reviews; facilitate consistency of five-year reviews across the ten EPA regions; clarify current policy; and to delineate roles and responsibilities of various entities in conducting or supporting five-year reviews.

- Ecological Risk Assessment and Risk Management Principles for Superfund Sites; OSWER Directive 9285.7-28P; October 7, 1999.

EPA issued this guidance to help Superfund risk managers make ecological risk management decisions that are based on sound science, consistent across Regions, and present a characterization of site risks that is transparent to the public.

- Radiation Risk Assessment at CERCLA Sites: Q & A; OSWER Directive 9200.4-31P; December 1999.

EPA issued this guidance to answer several common questions about radiation risk assessments at CERCLA sites.

- Closeout Procedures for National Priorities List Sites; OSWER Directive 9320.2-09A-P; January 2000.

EPA developed this guidance to:

- Describe the process for accomplishing remedial action completion, construction completions, and site deletion for final National Priorities sites;
- Combine several fact sheets, memoranda, and the "Close Out Procedures for National Priorities List Sites" of August 1995 into comprehensive guidance;
- Address the process for partial deletion of sites; and
- Provide the recommended format and content for close out documents.

- Interim Final Guidance on Institutional Controls and Contaminated Property Transfer at Federal Facilities; January 2000.

This document provides guidance to EPA on the exercise of EPA's discretion under CERCLA section 120(h)(3)(A), (B), or (C) when EPA is called upon to evaluate institutional controls as part of a remedial action.

ATTACHMENT 2

**RFCA Appendix 3
Implementation Guidance Documents
Appendix K: Master List of Potential ARARs**

Requirement	Citation	Type	Comment
ATOMIC ENERGY ACT (AEA) [42 USC 2200 et. seq.]			
CHRONIC BERYLLIUM DISEASE PREVENTION PROGRAM <ul style="list-style-type: none"> • Definitions • Release criteria • Waste disposal • Warning labels 	10 CFR 850 .3 .31 .32 .38 (b-c)	A	Establishes a program to reduce the number of workers currently exposed to beryllium in the course of their work at DOE facilities. The cited sections are followed in relation to determinations of beryllium contamination and release to the public.
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
NATIONAL AMBIENT AIR QUALITY STANDARDS <ul style="list-style-type: none"> • Sulfur Dioxide • Particulate Matter (PM10 & PM2.5) • Carbon Monoxide • Ozone • Nitrogen Dioxide • Lead 	5 CCR 1001-14 [40 CFR 50]	C	National Ambient Air Quality Standards (NAAQS) define levels of air quality which are deemed necessary, with an adequate margin of safety, to protect the public health. The standards are the basis for air quality regulations that are designed to improve and protect air quality. The Denver metro area exceeds the standard for particulate matter and carbon monoxide (i.e. non-attainment for those pollutants). Ambient air quality standards are not effluent discharge limitations; they are used in conjunction with air dispersion modeling to establish emission limits that are protective of air quality. Air Quality Management personnel will review projects for Prevention of Significant Deterioration and Non-attainment Area permitting requirements, and perform modeling, if requested by CDPHE, to demonstrate compliance with the NAAQS.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

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Requirement	Citation	Type	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
<p>COLORADO AIR QUALITY CONTROL COMMISSION (CAQCC) REGULATIONS</p> <ul style="list-style-type: none"> • Emission Control Regulations for Particulates, Smokes, Carbon Monoxide, and Sulfur Oxides <ul style="list-style-type: none"> - Smoke and Opacity - Fugitive Particulate Emissions <ul style="list-style-type: none"> - Construction Activities - Storage and Handling of Material - Haul Roads - Haul Trucks - Demolition Activities - Sandblasting Operations • Odor Emissions • Air Pollutant Emission Notices (APEN), Construction Permits and Fees, Operating Permits, and Including the Prevention of Significant Deterioration <ul style="list-style-type: none"> - APEN Requirements 	<p>5 CCR 1001 [40 CFR 52, Subpart G]</p> <p>CAQCC Reg. No. 1 [5 CCR 1001-3]</p> <p>Section II.A.1</p> <p>Section III.D III.D.2(b) III.D.2(c) III.D.2(e) III.D.2(f) III.D.2(h) III.D.2(j)</p> <p>CAQCC Reg. No. 2 [5 CCR 1001-4]</p> <p>CAQCC Reg. No. 3 [5 CCR 1001-5]</p> <p>Part A, Section II</p>	<p>C</p> <p>A</p> <p>C</p> <p>C</p>	<p>Air pollutant emissions from stationary sources shall not exceed 20% opacity (emissions from fuel-fired pumps, generators, and compressors, process vents/stacks, etc.).</p> <p>Every activity shall employ control measures and operating procedures that are technologically feasible and economically reasonable which reduce, prevent, and control fugitive particulate emissions (control plans, use of control equipment, watering, etc.).</p> <p>Regulation No. 2 prohibits odorous air contaminants from any single source to be emitted in detectable odors which are measured in excess of the air standards.</p> <p>An APEN shall be filed with the CDPHE prior to construction, modification or alteration of, or allowing emissions of air pollutants from any activity. Certain activities are exempted from APEN requirements per specific exemptions listed in the regulation.</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
<ul style="list-style-type: none"> - Construction Permits, Including Regulations for the Prevention of Significant Deterioration (PSD) - Construction Permits - Non-attainment Area Requirements - Prevention of Significant Deterioration Requirements 	<p>Part B</p> <p>Part B, Section III</p> <p>Section IV.D.2</p> <p>Section IV.D.3</p>	<p>C</p> <p>A, C, L</p> <p>A, C, L</p>	<p>Construction permits are not required for CERCLA activities, however, substantive requirements that would normally be associated with construction permits will apply. Also, fuel-fired equipment (generators, compressors, etc.) associated with these activities may require permitting.</p> <p>Even though CERCLA activities are exempt from construction permit requirements, non-attainment area requirements may apply if emissions of certain pollutants exceed certain threshold limits. The requirements include emissions reductions or offsets, and strict emission control requirements.</p> <p>Even though CERCLA activities are exempt from construction permit requirements, PSD requirements may apply if emissions of certain pollutants exceed certain threshold limits. The requirements include strict emission control requirements, source impact modeling, and pre-construction and post-construction monitoring.</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
<ul style="list-style-type: none"> - Part A, Subpart C, National Emission Standard for Beryllium (CAQCC regulation incorporates CFR by reference) - Part B, The Control of Asbestos - Part C, Lead 	<p>40 CFR Part 61, Subpart C</p> <p>Section II</p> <p>Section III</p> <p>Section III.B.1.a.(i)</p> <p>Section I</p>	<p></p> <p>C</p> <p>C</p> <p>C</p> <p>C</p> <p>C</p>	<p>apply to any D&D project that includes size reduction of beryllium containing materials.</p> <p>This requirement will apply if the project includes asbestos abatement. Compliance requires that asbestos inspectors, asbestos abatement workers, and asbestos abatement project managers are certified in accordance with the regulation.</p> <p>This section details project requirements including notification, permitting, and asbestos abatement work practices.</p> <p>A written notice of the intent to conduct demolition (regardless of whether asbestos is involved) or asbestos abatement must be submitted to the CDPHE, Air Pollution Control Division at least 10 working days before commencing demolition or an abatement project (form supplied by the CDPHE). This notification should be submitted within the decision document or as a modification to the approved decision document.</p> <p>This requirement applies if the project produces lead emissions (glovebox size reduction, etc.). Compliance requires utilizing a suitable dispersion model to ensure that emissions of lead will not result in an ambient lead concentration that exceeds 1.5 micrograms per cubic meter averaged over a one-month period.</p> <p>This requirement applies if any refrigeration system or appliance that contains a regulated ozone-depleting compound (ODC) is disassembled or discarded. Compliance requirements include having registered and certified technicians recover all regulated ODCs in an</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
<ul style="list-style-type: none"> Control of Emissions of Ozone-Depleting Compounds 	CAQCC Reg. No. 15 [5 CCR 1001-19]		approved vessel, by an approved method, prior to disassembly or disposal.
NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS <ul style="list-style-type: none"> National Emission Standards for Emissions of Radionuclides Other Than Radon From Department of Energy Facilities <ul style="list-style-type: none"> - Standard Emission Monitoring and Test Procedures 	40 CFR 61, Subpart H 61.92 61.93	C, L C, A	<p>This section establishes a radionuclide emission standard equal to those emissions that yield an effective dose equivalent (EDE) of 10 mrem/year to any member of the public. The Site complies by using stack effluent discharge data and empirically estimated fugitive emissions in the dose model CAP88-PC for calculating the EDE to the most impacted member of the public to ensure that it does not exceed 10 mrem/year. Also, the perimeter samplers in the Radioactive Ambient Air Monitoring Program sampler network are utilized to verify compliance with the standard.</p> <p>This section establishes emission monitoring and testing protocols required to measure radionuclide emissions and calculate EDEs. This section also requires that radionuclide emissions measurements (stack monitoring) be made at all release points which have a potential to discharge radionuclides into the air which could cause an EDE to the most impacted member of the public in</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
CLEAN AIR ACT (CAA) [42 USC 7401 et. seq.]			
<p>- Compliance and Reporting</p>	<p>61.96</p>	<p>C, L</p>	<p>excess of 1% of the standard (0.1 millirem/year).</p> <p>This section requires the Site to perform radionuclide air emission assessments of all new and modified sources. For sources that exceed the 0.1 mrem/year EDE threshold (controlled), the appropriate applications for approval must be submitted to the EPA and the CDPHE. Additional substantive requirements may apply if the activity requires approval.</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
<p>FEDERAL WATER POLLUTION CONTROL ACT (aka Clean Water Act (CWA)) [33 USC 1251 et. seq.] WATER QUALITY CRITERIA – GOLD BOOK</p>	<p>33 USC 1314 (CWA Section 304)</p>	<p>C</p>	<p>The "Gold Book" presents guidelines with respect to water quality criteria for toxic pollutants. Criteria are published for aquatic and human health. The water quality criteria are not promulgated standards; however, they are established guidelines used for developing NPDES permits and may be considered potentially relevant and appropriate. WQC should not be used as effluent limits, rather discharge limits should be established either through the NPDES or UIC permitting process.</p> <p>Although water criteria are non-promulgated and non-enforceable standards, Section 121(d)(2)(B)(I) of CERCLA as implemented by the NCP (40 CFR 300.430(e)(2)(I)(E)) specifies that WQC established under Sections 303 and 304 of the CWA shall be attained where relevant and appropriate under the circumstances of the release. The designated or potential use of the surface or groundwater, the environmental media affected, the purpose for which the WQC were developed, and the latest information are to be considered in determining the relevance and appropriateness of the WQC to the response action. Therefore, the need to comply with WQC as a relevant and appropriate requirement needs to be determined on a case-by-case basis using the factors listed above.</p>
<p>COLORADO BASIC STANDARDS AND METHODOLOGIES FOR SURFACE WATER</p>	<p>5 CCR 1002-31</p>	<p>C</p>	<p>Refer to RFCA Attachment 5 for surface water action levels and standards.</p>

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
FEDERAL WATER POLLUTION CONTROL ACT (aka Clean Water Act (CWA)) [33 USC 1251 et. seq.]			
COLORADO BASIC STANDARDS FOR GROUNDWATER	5 CCR 1002-41	C	Refer to RFCA Attachment 5 for ground water action levels.
TOXIC POLLUTANT EFFLUENT STANDARDS <ul style="list-style-type: none"> • Toxic Pollutants • Compliance 	40 CFR 129.4 40 CFR 129.5	C	If the permitted point is used, then the NPDES permit discharge standards would be met.
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM REGULATIONS <ul style="list-style-type: none"> • Designation of Hazardous Substances • Determination of Reportable Quantities for Hazardous Substances • Applicability of Best Management Practices • Best Management Practices Programs 	40 CFR 116 40 CFR 117 40 CFR 125.102 40 CFR 125.104	A	These subparts are applicable to storage and use of products that contain toxic and hazardous pollutants above reportable quantity limitations, at a facility covered by an NPDES permit. In decision documents, identify and protect all connections to the sanitary collection system.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
FEDERAL WATER POLLUTION CONTROL ACT (aka Clean Water Act (CWA)) [33 USC 1251 et. seq.]			
DISCHARGES OF DREDGED OR FILL MATERIAL INTO WATERS OF THE UNITED STATES <ul style="list-style-type: none"> • Discharges Requiring Permits 	33 USC 1344 33 CFR 323.3	A/L	
DOE COMPLIANCE WITH FLOODPLAIN/WETLANDS ENVIRONMENTAL REVIEW REQUIREMENTS <ul style="list-style-type: none"> • Floodplain/Wetlands Determination • Floodplain/Wetlands Assessment • Applicant Responsibilities 	10 CFR 1022 .11 .12 .13	A/L	
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS			
ENDANGERED SPECIES ACT (ESA) [16 USC 1531 et seq.]			
EARLY CONSULTATION	50 CFR 402.11	A/L	Identify and minimize early in the planning stage of an action, any potential conflicts between the action and federally listed species.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS			
BIOLOGICAL ASSESSMENT <ul style="list-style-type: none"> • Purpose • Preparation Requirements • Request for Information • Director's Response <ul style="list-style-type: none"> - No Listed Species or Critical Habitat Present - Listed Species or Critical Habitat Present • Verification of Current Accuracy of Species List • Contents • Identical/Similar to Previous Action • Permit Requirements • Completion Time • Submission of Biological Assessment • Use of Biological Assessment 	50 CFR 402.12	A/L	This is the process DOE needs to follow to evaluate the potential effects of the action on listed and proposed species and designated and proposed critical habitat and determine whether any such species or habitat are likely to be adversely affected by the action and is used in determining whether formal consultation or a conference is necessary.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS			
INTERAGENCY COOPERATION <ul style="list-style-type: none"> • Informal Consultation • Formal Consultation 	50 CFR 402 .13 .14	A/L	This is an optional process that includes all discussions, correspondence, etc. between the USFWS and the DOE. It is designed to assist in determining whether formal consultation or a conference is required. If during this step it is determined by the DOE with the written concurrence of the USFWS that the action is not likely to adversely affect listed species or critical habitat, the consultation process is terminated and no further action is necessary. DOE shall review its actions at the earliest possible time to determine whether any action may affect listed species or critical habitat.
MIGRATORY BIRD TREATY [16 USC 701-715]			
TAKING, POSSESSION, TRANSPORTATION, SALE, PURCHASE, BARTER, EXPORTATION, AND IMPORTATION OF WILDLIFE AND PLANTS	50 CFR 10	A/L	Principally focuses on the taking and possession of birds protected under this regulation. Enforcement is predicated on location of the project and time of the year. Current list of protected birds is kept with the Ecology group.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
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NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS

COLORADO NONGAME, ENDANGERED, OR THREATENED SPECIES CONSERVATION ACT [CRS 33-1-115, 33-2-101 to 33-2-107]

<ul style="list-style-type: none"> • Compliance with the Colorado Nongame Wildlife including Endangered Species 	CRS 33-2-104 CRS 33-2-105	A/L	It is unlawful for any person to take, possess, transport, export, process, sell or offer for sale, or ship and for any common contract carrier to knowingly transport or receive for shipment any species or subspecies of wildlife appearing on the list of wildlife indigenous to the State of Colorado determined to be endangered within the state. (The list is continually updated by the Ecology group)
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FISH AND WILDLIFE COORDINATION ACT [16 USC 661 et seq.]

<ul style="list-style-type: none"> • Purpose • Impounding, Diverting, or Controlling of Waters • Impoundment or Diversion of Waters • Rules and Regulations • Effects of Sewage and Industrial Waters • Authorization of Appropriations • Penalties • Definitions 	16 USC 661 16 USC 662 16 USC 663 16 USC 664 16 USC 665 16 USC 666 16 USC 666(a) 16 USC 666(b)	A/L	
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A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS			
NATIONAL HISTORIC PRESERVATION ACT (NHPA) [16 USC 470 et. seq.]			
IDENTIFYING HISTORIC PROPERTIES • Assessing Information Needs • Locating Historic Properties • Evaluating Historical Significance • When No Historic Properties Are Found • Historic Property Found	36 CFR 800.4	L	Obligations are met through the Programmatic Agreement among the DOE, Colorado State Historic Preservation Officer and the Advisory Council on Historic Preservation regarding Historic Properties at RFETS, July 17, 1997.
ASSESSING EFFECTS OF THE ACTIVITY ON THE PROPERTY	36 CFR 800.5	L	
DOCUMENTATION REQUIREMENTS	36 CFR 800.8	L	
CRITERIA OF EFFECT AND ADVERSE EFFECT	36 CFR 800.9	L	
PROTECTING NATIONAL HISTORIC LANDMARKS	36 CFR 800.10	L	
HISTORIC PROPERTIES DISCOVERED DURING IMPLEMENTATION	36 CFR 800.11	L	
EMERGENCY UNDERTAKINGS	36 CFR 800.12	L	
PRESERVATION OF AMERICAN ANTIQUITIES	43 CFR 3	L	
PROTECTION OF ARCHEOLOGICAL RESOURCES	43 CFR 7	L	

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
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NATIONAL RESOURCE AND WILDLIFE PROTECTION LAWS

ARCHEOLOGICAL RESOURCES PROTECTION [16 USC 470, CHAPTER 1B]

**PROTECTION OF ARCHEOLOGICAL RESOURCES:
 UNIFORM REGULATIONS**

36 CFR 296

L

- Purpose .1
- Authority .2
- Definitions .3
- Prohibited Acts .4
- Permit Requirements and Exceptions .5
- Application for Permits and Information Collection .6
- Notification to Indian Tribes of Possible Harm to, or Destruction of, Sites on Public Lands Having Religious or Cultural Importance .7
- Relationship to Section 106 of the National Historic Preservation Act .12
- Custody of Archeological Resources .13
- Determination of Archeological or Commercial Value and Cost of Restoration and Repair .14
- Assessment of Civil Penalties .15
- Civil Penalty Amounts .16
- Other Penalties and Rewards .17
- Confidentiality of Archeological Resource Information .18
- Report 36 CFR 296 .19

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
NATURAL RESOURCE AND WILDLIFE PROTECTION LAWS			
ARCHEOLOGICAL AND HISTORICAL PRESERVATION ACT (AHPA) [16 USC 469a-1]			
Notification and Request for Preservation of Data Survey of Sites; Preservation of Data; Compensation	16 USC 469a-1(a) 16 USC 469a-1(b)	L	Differs from NHPA in that it encompasses a broader scope of resources than those listed on the National Register and requires only preservation of the data (including analysis and publication).
SAFE DRINKING WATER ACT (SDWA) [42 USC 300f et. seq.]			
COLORADO PRIMARY DRINKING WATER REGULATIONS	5 CCR 1003-1,	C	Refer to RFCA Attachment 5 for surface water action levels and standards and groundwater action levels.
MAXIMUM CONTAMINANT LEVEL GOALS	40 CFR 141	C	Refer to RFCA Attachment 5 for surface water action levels and standards and groundwater action levels.

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Requirement	Citation	Type	Comment
SOLID WASTE DISPOSAL ACT (aka: Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: HAZARDOUS WASTE MANAGEMENT [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]			
<p>The State of Colorado is authorized to administer portions of the hazardous waste management program (e.g., RCRA) to regulate the generation, treatment, storage, and disposal of hazardous waste within Colorado. As such, the Colorado regulations that are more stringent than the federal counterparts would be applicable to the management of hazardous waste. These regulations may also be relevant and appropriate in situations where a remediation waste is "sufficiently similar" to a RCRA-listed waste (e.g., waste which was generated and disposed of prior to the effective date of regulation) or when the proposed remedial action is similar to a RCRA-regulated activity and would be appropriate to ensure that the activity is protective of human health and the environment. Although the Colorado hazardous waste management regulations are similar to the federal requirements, both the federal and state regulatory citations are provided for reference purposes and to denote that both federal and state requirements were considered in establishing the identifying the ARAR requirement adopted for the remediation of the RFETS. Only substantive portions of the regulations are required under CERCLA actions for onsite activities. The State has not verified that these are the only substantive standards. The final determination is predicated upon an analysis for a specific action.</p>			
SOLID WASTE DISPOSAL SITES AND FACILITIES <ul style="list-style-type: none"> • Definitions 	6 CCR 1007-2 Section 1.2	A	"Recyclable materials" means any type of discarded or waste material that is not regulated under Section 25-8-205(1)(e), C.R.S., and can be reused, remanufactured, reclaimed, or recycled
IDENTIFICATION AND LISTING OF HAZARDOUS WASTES	6 CCR 1007-3, 261 [40 CFR 261]	A	

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

**SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]**

Requirement	Citation	Type	Comment	BMP
GENERATOR STANDARDS				
• Hazardous waste determinations	6 CCR 1007-3 Part 262 (40 CFR Part 262) .11	A/C	Persons who generate solid wastes are required to determine if the wastes are hazardous according to 6 CCR 1007-3 Parts 261, 267, 279 [40 CFR Parts 261, 266, and 279]	
• Hazardous waste accumulation areas	.34 (a)(1)(i),(ii),(iv, excluding A & B); (a)(3); (a)(4); (c)(1)	A	Persons who accumulate hazardous waste in containers or tanks must manage the waste in a manner that protects human health and the environment.	262.40-.43
GENERAL FACILITY STANDARDS				
• Waste Analysis	6 CCR 1007-3 Part 264, Subpart B [40 CFR Part 264, Subpart B] .13 (a)	A	The owner/operator of a facility that stores, treats, or disposes of waste must verify the waste has been characterized adequately.	264.13(b)
• Security	.14	A/L	The owner/operator of a facility must prevent unauthorized access.	
• General Inspection Requirements	.15 (a), (c)	A/L	The owner/operator of a facility must inspect for malfunctions, deteriorations, and releases, and must remedy deficiencies.	264.15 (d)

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> Personnel Training Requirements 	.16 (a), (b), (c)	A/C	Personnel must be trained.	264.16(d), (e) 264.17(c)
<ul style="list-style-type: none"> General Requirements for Ignitable, Reactive or Incompatible Wastes 	.17 (a), (b)	A/C	Wastes will be managed to prevent accidental ignition or reaction of ignitable or reactive waste, or the mixing of incompatible waste.	264.18
PREPAREDNESS AND PREVENTION	6 CCR 1007-3 Part 264, Subpart C [40 CFR 264, Subpart C]			
<ul style="list-style-type: none"> Design and Operation of a Facility 	.31	A/C	Design facilities to minimize the potential for fire, explosion or release of hazardous waste.	
<ul style="list-style-type: none"> Required Equipment 	.32	A/C	Facilities must be equipped with specified equipment to mitigate incidents, should they occur.	
<ul style="list-style-type: none"> Testing and Maintenance of Equipment 	.33	A/C	Equipment must be maintained.	
	.34	A/L	Employees must have access to emergency communications when	

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]				
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]				
Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> • Access to Communications or Alarm System 			managing hazardous waste.	
<ul style="list-style-type: none"> • Required Aisle Space 	.35	A	Aisle space must be maintained to allow unobstructed access to emergency personnel and emergency equipment.	
<ul style="list-style-type: none"> • Arrangement with Local Authorities 	.37	A/L	The owner/operator must make arrangements with specified local emergency personnel.	
CONTINGENCY PLAN AND EMERGENCY PROCEDURES	6 CCR 1007-3 Part 264, Subpart D [40 CFR Part 264, Subpart D]			
<ul style="list-style-type: none"> • Purpose and Implementation 	.51 (b)	A/C	RFETS Emergency Response Plan incorporates the substantive requirements of the Contingency Plan in the Site's Part B Hazardous Waste Permit. Emergencies such as fire, explosion, or release of hazardous waste must be mitigated immediately.	
<ul style="list-style-type: none"> • Emergency Coordinator 	.55	A	A designated employee is responsible for coordinating emergency response actions.	
<ul style="list-style-type: none"> • Emergency Procedures 	.56 (a-i)	A		
MANIFEST SYSTEM, RECORDKEEPING, AND REPORTING	6 CCR 1007-3 Part 264, Subpart E [40 CFR Part 264, Subpart E]			
		A	Operating Record	264.73
		A	Recordkeeping	264.74

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
GROUND-WATER MONITORING	6 CCR 1007-3 Part 264, Subpart F [40 CFR Part 264, Subpart F]	A	The substantive portions of the groundwater monitoring ARARs for each CERCLA action will be incorporated into the Integrated Monitoring Plan (IMP)	
CLOSURE AND POST-CLOSURE	6 CCR 1007-3 Part 264, Subpart G [40 CFR Part 264, Subpart G]			
• Closure Performance Standards	.111	A	The owner/operator must close the facility in a manner that protects human health and the environment.	
• Disposal or Decontamination of Equipment, Structures, or Soils	.114	A/C	All hazardous wastes and residues of hazardous waste must be disposed or decontaminated.	
• Post-Closure Care and Use of Property	.117	A/C	Human health and the environment must be protected after closure is complete if hazardous waste remains at the facility.	
USE AND MANAGEMENT OF CONTAINERS	6 CCR 1007-3 Part 264, Subpart I [40 CFR Part 264, Subpart I]			
• Condition of Containers	.171	A	Containers must be maintained in good condition.	
• Compatibility of Waste in Containers	.172	A	Wastes must be compatible with containers.	

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**SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]**

Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> • Management of Containers 	.173	A	Containers must be closed except when adding or removing waste.	
<ul style="list-style-type: none"> • Inspections 	.174	A	Containers must be inspected weekly.	
<ul style="list-style-type: none"> • Containment <ul style="list-style-type: none"> o System Design and Operation o Ignitable and Reactive Wastes o Incompatible Wastes 	.175 .176 .177	A A A		
<ul style="list-style-type: none"> • Closure 	.178	A	Hazardous wastes and residues of hazardous waste must be removed or decontaminated from the unit and soils.	
<ul style="list-style-type: none"> • Air Emission Standards 	.179	A/C	Hazardous wastes must be managed in accordance with AA, BB, CC, as appropriate.	
TANK SYSTEMS	6 CCR 1007-3 Part 264, Subpart J [40 CFR Part 264, Subpart J]			
<ul style="list-style-type: none"> • Design and Installation of New Tank Systems or Components 	.192 (a-f)	A	Tank systems must be designed to maintain their integrity when storing or treating hazardous waste.	
<ul style="list-style-type: none"> • Containment and Detection of Releases 	.193 (a)(i)(1,2,3,5)	A	Secondary containment must be designed to contain and detect	

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> • General Operating Requirements • Inspections • Response to Leaks or Spills and Disposition of Leaking or Unfit-for-Use Tank Systems • Closure and Post-Closure Care • Special Requirements for Ignitable and Reactive Wastes • Special Requirements for Incompatible Waste • Air Emission Standards 	<p>.194 (a-c)</p> <p>.195 (b,c)</p> <p>.196 (a-c),(e)</p> <p>.197 (a,b)</p> <p>.198</p> <p>.199</p> <p>.200</p>	<p>A</p> <p>A</p> <p>A</p> <p>A</p> <p>A/C</p> <p>A/C</p> <p>A/C</p>	<p>any releases from the tank system.</p> <p>Tank systems must be maintained in good condition to prevent releases to the environment.</p> <p>Inspections are conducted to identify any tank system integrity concern.</p> <p>During closure, hazardous waste and hazardous waste residues must be removed from the tank system.</p> <p>Ignitable or reactive waste must be managed as specified in this section.</p> <p>Incompatible waste must not be introduced into a tank system unless 264.17(b) is complied with.</p> <p>All hazardous waste shall be managed in accordance with AA, BB, CC</p>	
<p>CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS</p>	<p>6 CCR 1007-3 Part 264, Subpart S [40 CFR Part 264,</p>			

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]				
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]				
Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> Temporary Units 	Subpart S] .553 (a-c)	A	Temporary units allow flexibility. Justification for alternative compliance must be included in the CERCLA/RFCA decision document	
MISCELLANEOUS UNITS	6 CCR 1007-3 Part 264, Subpart X [40 CFR Part 264, Subpart X]			
Environmental Performance Standards	.601	A	Miscellaneous units must be designed, constructed, operated and maintained in a manner that protects groundwater, surface water, wetlands, soils, and air.	
<ul style="list-style-type: none"> Monitoring, Analysis, Inspection, Response, Reporting, and Corrective Action 	.602	A	Miscellaneous units must be managed to ensure compliance with 264.15 (inspections), 264.33 (testing and monitoring), 264.101 (corrective action for releases).	
<ul style="list-style-type: none"> Post Closure Care 	.603	A	Miscellaneous units that are disposal units must meet Post Closure Care requirements.	
AIR EMISSION STANDARDS FOR PROCESS VENTS	6 CCR 1007-3 Part 264, Subpart AA [40 CFR Part 264, Subpart AA]			
<ul style="list-style-type: none"> Standards: Process Vents 	.1032	A	Air emission standards must be incorporated into the design of process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operations that manage hazardous wastes with organic concentrations equal to or greater than 10 ppm (by weight).	.1035
<ul style="list-style-type: none"> Standards: Closed-Vent Systems and Control Devices 	.1033	A		
<ul style="list-style-type: none"> Test Methods and Procedures 	.1034	A		

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
AIR EMISSION STANDARDS FOR EQUIPMENT LEAKS	6 CCR 1007-3 Part 264, Subpart BB [40 CFR Part 264, Subpart BB]			
<ul style="list-style-type: none"> • Standards: Pumps in Light Liquid Service 	.1052	A	Air emission standards for equipment leaks must be incorporated into the design of equipment that contains or contacts hazardous waste with organic concentrations equal to or greater than 10 ppm (by weight) according to these sections.	
<ul style="list-style-type: none"> • Standards: Compressors 	.1053	A		
<ul style="list-style-type: none"> • Standards: Pressure Relief Devices in Gas/Vapor Service 	.1054	A		
<ul style="list-style-type: none"> • Standards: Sampling Connecting Systems 	.1055	A		
<ul style="list-style-type: none"> • Standards: Open-Ended Valves or Lines 	.1056	A		
<ul style="list-style-type: none"> • Standards: Valves in Gas/Vapor or Light Liquid Service 	.1057	A		
<ul style="list-style-type: none"> • Standards: Pumps and Valves in Heavy Liquid Service, Flanges, and Other Connectors 	.1058	A		
<ul style="list-style-type: none"> • Standards: Delay of Repair 	.1059	A		
<ul style="list-style-type: none"> • Standards: Closed Vent Systems and 	.1060	A		

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
<p>Control Devices</p> <ul style="list-style-type: none"> • Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Percentage of Valves Allowed to Leak • Alternative Standards for Valves in Gas/Vapor Service or in Light Liquid Service: Skip Period Leak Detection and Repair • Test Methods and Procedures 	<p>.1061</p> <p>.1062</p> <p>.1063</p>	<p>A</p> <p>A</p> <p>A</p>		<p>.106</p>
<p>AIR EMISSION STANDARDS FOR TANKS, SURFACE IMPOUNDMENTS, AND CONTAINERS</p> <ul style="list-style-type: none"> • Standards: General • Waste Determination Procedures • Standards: Tanks • Standards: Surface Impoundments 	<p>6 CCR 1007-3 Part 264, Subpart CC [40 CFR Part 264, Subpart CC]</p> <p>.1082</p> <p>.1083</p> <p>.1084</p> <p>.1085</p>	<p>A</p> <p>A</p> <p>A</p> <p>A</p>	<p>Air emission standards must be incorporated into the design of tanks, surface impoundments, and container facilities that store or treat hazardous waste with organic concentrations equal to or greater than 10 ppm (by weight).</p>	

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.] SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]				
Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> Standards: Containers Standards: Closed-Vent Systems and Control Devices Inspection and Monitoring Requirements 	.1086 .1087 .1088	A A A		.1089
CONTAINMENT BUILDINGS <ul style="list-style-type: none"> Design and Operating Standards Closure and Post-Closure Care 	6 CCR 1007-3 Part 264, Subpart DD [40 CFR Part 264, Subpart DD] .1101(a); (b); (c)(1, 3 (excluding i-iii), and 4); (d); (e) .1102	A A	Containment buildings must be designed and operated to prevent releases to the environment.	
LAND DISPOSAL RESTRICTIONS <ul style="list-style-type: none"> Dilution Prohibited as a Substitute for Treatment LDR Determination (Determination if Hazardous Waste Meets the LDR Treatment Standards) 	6 CCR 1007-3 Part 268 [40 CFR Part 268] .3 .7	A A	LDR determinations must be completed for hazardous wastes generated. Land disposal restrictions apply primarily to the off-site disposal actions proposed as part of the remedial activity.	

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
• Special Rules for Wastes that Exhibit a Characteristic	.9 (a-c)	A		
MANAGEMENT OF UNIVERSAL WASTE	6 CCR 1007-3 Part 273 [40 CFR Part 273]			Subpart B Subpart C
• Prohibitions	.11, .31	A	A handler of universal waste is prohibited from disposing, diluting, or treating universal waste, except during responses to releases.	
• Waste Management	.13, .33	A		
• Labeling and Marking	.14, .34	A	Universal waste and the associated accumulation areas must be labeled and marked as defined in this section.	
• Employee Training	.16, .36	A	Employees must be trained about waste management requirements and on emergency procedures according to their responsibilities.	
• Response to Releases	.17, .37	A	Universal waste handlers must contain releases of universal wastes, and must manage the resulting waste, as appropriate, in accordance with the hazardous waste regulations.	

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SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6901 et. seq.]
SUBTITLE C: Hazardous Waste Management [Colorado Hazardous Waste Act (CRS § § 25-15-101 to -217)]

Requirement	Citation	Type	Comment	BMP
STANDARDS FOR THE MANAGEMENT OF USED OIL	6 CCR 1007-3 Part 279 [40 CFR Part 279]			
• Used Oil Specifications	.11	A	Used oil burned for energy recovery must meet the specifications of this section	
• Prohibitions	.12	A	Used oil must not be stored in surface impoundments, be used as a dust suppressant, or be burned in unapproved units	
• Hazardous Waste Mixing	.21	A	Used oil must be characterized and managed in accordance with 269.10 and this section.	
• Used Oil Storage	.22	A	Used oil must be managed in containers or tanks in a manner that protects human health and the environment. Releases must be cleaned up and steps must be taken to prevent re-occurrence.	
• On-Site Burning in Space Heaters	.23	A	Used oil may be used as fuel for space heaters if the gases are vented to ambient air, and the maximum capacity of the space heater is not more than 0.5 million Btu per hour.	
SOIL REMEDIATION POLICY DOCUMENT				
• Colorado Soil Remediation Objectives Policy Document	Published by CDPHE in December, 1997	TBC	Cost effective, site-specific risk-based approach to establishing soil remediation objectives. Would be considered in manner compatible with ALF and RFCA Attachment 10.	

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6991 et. seq.]				
SUBTITLE I: Underground Storage Tanks [Colorado Revised Statutes (CRS § § 20.5-101 to -407)]				
Requirement	Citation	Type	Comment	BMP
UNDERGROUND STORAGE TANKS	7 CCR 1101-14 [40 CFR Part 280]			
• Performance Standards for New USTs	3.20; [.20]	A	USTs must be designed, maintained, and operated to prevent releases from the tank systems to the environment.	
• General Operating Requirements	4.30-4.33; [.30-.33]	A		
• Release Detection	5.40-5.44; [.40-.44]	A	Releases that impact soils or groundwater will be identified as a PAC, will be added to the ER Ranking List, and will be incorporated into the integrated Site remediation program.	
• Clean-Up of Spills and Overfills	6.53; [.53]	A	Coordination efforts within CDPHE and the Department of Labor & Employment, Oil Inspection Section will be accomplished through communication with the LRA.	
• Initial Response to Spills and Overfills	7.61(b),(c); [.61(b),(c)]	A		
• Initial Abatement Measures	7.62(a); [.62(a)]	A		
• Initial Site Characterization	7.63(a); [.63(a)]	A		
• Free Product Removal	7.64(a),(b),(c); [.64(a),(b),(c)]	A		
• Investigations for Soil and Groundwater Clean-Up	7.65(a); [.65(a)]	A		
• Temporary Closure	8.70(a),(b); [.70(a),(b)]	A		
	8.71(b),(c); [.71(b),(c)]	A		

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

SOLID WASTE DISPOSAL ACT (aka Resource Conservation and Recovery Act) [42 USC § 6991 et. seq.]
SUBTITLE I: Underground Storage Tanks [Colorado Revised Statutes (CRS § § 20.5-101 to -407)]

Requirement	Citation	Type	Comment	BMP
<ul style="list-style-type: none"> • Permanent Closure and Changes-in-Service 	8.72; [.72]	A		
<ul style="list-style-type: none"> • Assessing the Site at Closure or Change-in-Service 	8.73; [.73]	A		
<ul style="list-style-type: none"> • Applicability to Previously Closed UST Systems 				8.74

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Colorado Revised Statutes (CRS) Title 8 Article 20 Parts 7 and 2; Title 18 Article 25 Part 1

Requirement	Citation	Type	Comment	BMP
PERFORMANCE STANDARDS FOR TANKS	7 CCR 1101-14 Part 3			
• Design and Construction of Tanks	AST.31.2	A	ASTs must be designed, maintained, and operated to prevent releases to the environment.	
• Location and Installation of Outside Aboveground Tanks	AST.31.3	A		
• Location and Installation of Aboveground Storage Tanks in Vaults	AST.31.4	A		
• Normal Venting for Aboveground Tanks	AST.31.5	A		
• Emergency Relief Venting for Fire Exposure for Aboveground Tanks	AST.31.6	A		
• Vent Piping for Aboveground Tanks	AST.31.7	A		
• Tank Openings other than Vents for Aboveground Tanks	AST.31.8	A		
• Installation of Tanks Inside of Buildings	AST.31.9	A		
• Standards for Piping, Valves, and Fittings	AST.32	A		

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

Colorado Revised Statutes (CRS) Title 8 Article 20 Parts 7 and 2; Title 18 Article 25 Part 1

Requirement	Citation	Type	Comment	BMP
OPERATING REQUIREMENTS	7 CCR 1101-14 Part 4			
• Collision Protection	AST.40	A		
• Spill and Overfill Control (excluding reporting requirements), Remote Impounding, Secondary Containment	AST.41 (excluding reporting part of AST.41.1(e))	A		
• Operation and Maintenance of Corrosion Protection	AST.42	A		
• Compatibility Requirements for all Tanks	AST.43	A		
• Static Protection for all Tanks	AST.44	A		
• Repairs Allowed (excluding requirement for approvals and inspections by State Oil Inspector)	AST.45 (excluding AST.45(b)(4))	A		
• Out-of-Service, Closure or Change-in-Service	AST.46(c)(1-5)	A		AST.46(a), (b), (c, 8-10), (b) Records and documentation

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Colorado Revised Statutes (CRS) Title 8 Article 20 Parts 7 and 2; Title 18 Article 25 Part 1

Requirement	Citation	Type	Comment	BMP
RELEASE DETECTION	7 CCR 1101-14 Part 5 AST.5	A		AST.52 Records of Inspections
RELEASE RESPONSE AND CORRECTIVE ACTION	7 CCR 1101-14 Part 7		Releases that impact soils or groundwater will be identified as a PAC, will be added to the ER Ranking List, and will be incorporated into the integrated Site remediation program.	
• Initial Response	AST.72(b), (c)	A		
• Initial Abatement Measures	AST.73	A	Coordination efforts within CDPHE and the Department of Labor & Employment, Oil Inspection Section will be accomplished through communication with the LRA.	
• Repair or Closure Required	AST.74	A		
OIL POLLUTION PREVENTION	7 CCR 1101-14 Part 11			
• Oil Pollution Prevention: Oil Pollution Prevention SPCC Plan Requirements	AST.112.7(c), (d), (e, 1-2, 4-5)	A	A SPCC plan would not be specifically required as an ARAR; however, the substantive requirements that are incorporated into and implemented as part of the SPCC plan would be required as an ARAR. (e.g., Prediction of the direction, rate and flow of a release from a tank system need not be included in a plan; however, it must be known by the facility and be available to emergency responders at the facility.)	

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

TOXIC SUBSTANCES CONTROL ACT (TSCA) [15 USC 2601 et seq.] Relating to PCBs			
PCB USE AUTHORIZATIONS	40 CFR 761.30	A	Lists authorized uses and use restrictions for PCBs
MARKING REQUIREMENTS	40 CFR 761.40 and .45	A	Labeling of PCBs and PCB storage Areas
DISPOSAL REQUIREMENTS		A	
<ul style="list-style-type: none"> • Applicability • Disposal Requirements • PCB Remediation Waste • PCB Bulk Product Waste • Disposal of R&D and Chemical Analyses wastes 	761.50 761.60 761.61 761.62 761.64		General PCB Disposal Requirements Disposal Requirements
STORAGE REQUIREMENTS FOR PCBs	40 CFR 761.65	A	
<ul style="list-style-type: none"> • Facility Criteria • Temporary Storage • Inspections • Container Specifications • PCB radioactive waste • Marking • Laboratory Sample Exemption from Manifesting 			
INCINERATION	40 CFR 761.70	A	These regulations would only be ARARs for the construction and operation of an onsite PCB incinerator, it is envisioned that this will not occur
<ul style="list-style-type: none"> • Liquid PCBs • Non-Liquid PCBs 			
HIGH EFFICIENCY BOILERS	40 CFR 761.71	A	These regulations would only be ARARs for onsite burning PCB mineral oil dielectric fluid in a boiler, it is envisioned that this will not occur
<ul style="list-style-type: none"> • Operating requirements 			
SCRAP METAL RECOVERY OVENS AND SMELTERS	40 CFR 761.72	A	These regulations would only be ARARs for onsite scrap metal recovery or smelting; it is envisioned that this will not occur
<ul style="list-style-type: none"> • Operating Requirements 			

A - Action-Specific ARAR; C - Chemical-Specific ARAR; L - Location-Specific ARAR; TBC - To Be Considered

CHEMICAL WASTE LANDFILLS <ul style="list-style-type: none"> • Design and Operating Requirements 	40 CFR 761.75	A	These regulations would only be ARARs for the construction and operation of an onsite PCB disposal cell; it is envisioned that this will not occur
TSCA COORDINATED APPROVAL	40 CFR 761.77	A	Institutionalizes EPA approval of PCB activities under TSCA when activities are being conducted under another waste management permit, or other decision document issued by EPA or pursuant to a State PCB waste management program
DECONTAMINATION STANDARDS AND PROCEDURES <ul style="list-style-type: none"> • Self-Implementing Decontamination • Measurement-Based Decontamination 	40 CFR 761.79	A	
PCB SPILL CLEANUP <ul style="list-style-type: none"> • Requirements for PCB Spill Cleanup 	40 CFR Subpart G	TBC	40 CFR 761 Subpart G is entitled PCB Spill Cleanup Policy and thus many of the sections, specifically for spills after May 4, 1987 are "To Be Considered"
Cleanup site characterization sampling for PCB remediation waste	40 CFR Subpart N	A	Characterization requirements for cleanup of PCB remediation waste
Sampling to verify completion of self-implementing cleanup and on-site disposal of bulk PCB remediation waste and porous surfaces	40 CFR Subpart O	A	Not ARAR unless conducting a self implementing cleanup of PCB remediation waste
Sampling non-porous surfaces for measurement-based use, reuse, and on-site or off-site disposal under 761.361(a)(6) and determination under 761.79(b)(3)	40 CFR Subpart P	A	
Self-implementing alternative dextraction and chemical analysis procedures for non-liquid PCB remediation waste samples	40 CFR Subpart Q	A	Applicable procedures when using alternatives to required analytical methodology
Sampling non-liquid, non-metal PCB bulk product waste for purposes of characterization for PCB disposal in accordance with 761.62,	40 CFR Subpart R	A	Characterization requirements for PCB bulk product waste and PCB remediation waste when characterization for disposal is required

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Appendix 3
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and sampling PCB remediation waste destined for off-site disposal, in accordance with 761.61			
Double wash/rinse method for decontaminating non-porous surfaces	40 CFR Subpart S	A	Referenced procedure from 761.79

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