



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

July 3, 1996

Mr. Stephen Chao
Naval Facilities Engineering Command
Engineering Field Activity, West
900 Commodore Way, Bldg. 101
San Bruno, CA. 94066-2402

Re: *Draft Final Operable Unit 1 Record of Decision*, dated June 7, 1996

Dear Mr. Chao,

The U.S. Environmental Protection Agency (EPA) has received the subject document and associated responses to comments. As specified in the Federal Facility Agreement (FFA) §9.9, the period between the draft final and the final submittal of a primary document is considered an informal dispute period. If the regulatory agencies have any remaining issues that must be addressed, the document should not be finalized. These outstanding issues are covered in the following comments. Most comments request clarification of ARARs issues. We suggest that in order to speed up the process of finalizing this ROD, that the Navy provide red-lined strikeout versions of the change pages along with responses to these comments, as was done for OU5's ROD. If you have any questions, please call me at 415-744-2385.

Sincerely,

A handwritten signature in cursive script that reads "Michael D. Gill".

Michael D. Gill
Remedial Project Manager
Federal Facilities Cleanup Office

Attachment: Mather ROD ARARs Tables 2.42, 2.43 (17 pages)

cc (w/o att) : Michael Bessette (RWQCB)
C. Joseph Chou (DTSC)
Ken Eichstaedt (URS)
Sandy Olliges (NASA)
Peter Strauss (MHB)
Mike Young (PRC) (Fax w/att)

COMMENTS

Draft Final Operable Unit 1 Record of Decision, dated June 7, 1996

GENERAL COMMENTS

1. The Building 191 language that we agreed to in the groundwater ROD cannot apply directly to this ROD because the landfill cover cannot be disturbed irrespective of a land use change. For example, a future landowner could not flood the property to create a wetland because it would cause landfill leachate to migrate. Language regarding future conveyances should be included in respective parts of the ROD, as was done for OU5.
2. More detail is necessary to show that State hazardous waste landfill regulations (Title 14 CCR) are more stringent than federal regulations (RCRA Subtitle D).
3. Add to the ARARs Section: "ARARs apply to on-site response actions; response actions which take place off-site must comply with all laws, administrative and substantive."

SPECIFIC COMMENTS

4. Section 1.0, page 2, bullet 3. How will the Navy dispose of the leachate that is collected in the collection trench? ARARs may differ depending upon the disposal option. Will the leachate be hauled off-site? Since ARARs only apply to on-site actions, the act of trucking leachate off-site will not trigger ARARs. However, as indicated above, off-site actions will have to comply with both the substantive and the administrative provisions of the applicable regulations. In addition, if the leachate is stored on-site for longer than 90 days, it could trigger RCRA storage requirements.
5. Section 1.0, page 2, para 1. This section is a little confusing. It appears that the Navy is proposing a containment ROD with a contingency and if leachate migrates to the northern border of the landfill, it will activate a contingency measure which is the groundwater collection trench. Is it then correct to say that, neither leachate nor groundwater cleanup is a component of this remedy?

You state: "The remedy, however, does not include active leachate extraction or active groundwater remediation *at this time*." You may want to rephrase to read: "This remedy does not include active leachate extraction or active groundwater remediation." Addressing possible landfill groundwater contamination in this ROD through a ROD amendment would seem appropriate.

6. Section 2.2, page 9, Descriptions of OU1. The ROD states that this OU (OU1) addresses groundwater contamination. This statement is inconsistent with statements

made on page 2 where it is stated that "active groundwater remediations is not a part of this remedy."

7. Section 2.5.1, page 14, para 1. The Navy does a good job laying the foundation for using MSWLF closure requirements; the amount of hazardous waste in the landfill is de minimis in comparison with solid waste.
8. Section 2.7.2.1, page 22. The ROD states: "Institutional controls would be implemented as part of Alternative 2 to protect human health. Access to the sites would be restricted by fences with posted signs. Sites 1 and 2 are currently fenced in with a locked gate. Both landfills are on government property and are not accessible by the general public." Given that NASA will probably not own the property in perpetuity, how will these restrictions be enforced when the property is transferred? (i.e., preventing access to the site, ensuring the integrity of the fences, etc.). In addition, how will the Navy ensure the cap is not interfered with? Please provide the institutional control mechanism that will be used.
9. Section 2.7.2.3, page 24, para 2. As indicated in earlier comments, taking a corrective action circumvents the CERCLA remedy selection process because you are adding a remedial component to the existing remedy that has not gone through public comment, has not had ARARs identified, etc. To clarify the ROD language, we suggest the following change to solve this problem: "Should the Navy determine that evaluation monitoring and/or corrective action is necessary, an ESD or a ROD amendment will be required prior to the commencement of these activities."
10. Section 2.9, page 36, para 1. The ROD states that the Navy will "include a biotic barrier and possibly a drainage layer". Explain what factors you will consider in determining whether to include a drainage layer.
11. Table 3, page 46, Coastal Zone. Is the California Coastal Act stricter than its federal counterpart? If it is not, then it is not an ARAR.
12. Table 3, page 46, 14 CCR 17760-17779, Cap requirements. The ROD indicates that in comparing the closure requirements found in 14 CCR and Subtitle D, the Navy has determined the requirements in 14 CCR are stricter. Given that conclusion, explain in summary what the requirements are for the landfill cap design and closure. The reader must be able to understand what the requirements are by reading the ROD. They should not have to refer to the CCR. To illustrate, we have included as an attachment a copy of an ARAR chart relating to a landfill cap from a Mather AFB ROD. It includes both Title 14 CCR and RCRA Subtitle D sections, some which will not apply to Moffett Sites 1 and 2. We suggest it be used to compare the stringency of each section.
13. Table 3, page 46, 23 CCR 2581. Again, provide in detail an explanation of what the state requirements are for waste management units and explain the additional cap

requirements.

14. Section 2.11.2.2, page 50, para 1. Please elaborate on the statement: "In addition, the State of California Department of Fish and Game (DFG) requested that the impacted wetland acreage be addressed."
15. Section 2.11.2.2, page 50, para 4. The ROD states: "In accordance with the California DFG request, OU1 wetland areas will be redelineated using more stringent recognition criteria.". What does this statement mean? More stringent criteria in comparison to what? Is this DFG criteria triggered by a state ARAR? If so, identify the state ARAR. Has this state ARAR been compared with its federal counterpart?
16. Section 2.11.2.3, page 51, para 2. The ROD states that low concentrations of hazardous constituents in the leachate pose a minimal threat. Although it is okay to make this statement, it is more important for the ROD to stress that the Navy has chosen MSWLF closure requirements because the amount of hazardous waste in the landfill is very small in comparison with the solid waste in the landfill.
17. Section 2.11.2.3, page 52, para 1. The ROD indicates that the Navy have compared Title 14 CCR closure requirements with the requirements found in Subtitle D and that they are stricter than the federal counterpart. Are all of Title 14 provisions stricter? The provisions are numerous.
18. EPA Draft ROD Comment 20. The response to this comment was not in the Draft Final or change pages submitted. Please include it in the next response to comments.
19. EPA Draft ROD Comment 24. The response to this comment was not in the Draft Final or change pages submitted. Please include it in the next response to comments.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 Code of Federal Regulation (CFR) 258.10	Relevant and Appropriate (if definition of airport is met)	Airport Safety: Municipal Solid Waste Landfills (MSWLF) units that are located within 10,000 feet of the end of a runway used by turbojet aircraft must be designed and operated so that the unit does not pose a bird hazard to the aircraft	Applies to new, existing, or lateral expansion MSWLF. The operation at Site 4 does not fit the definitions of "New," "Existing," or "Lateral Expansion," thus the regulations that specifically apply to new, existing, or lateral expansion MSWLF are not applicable to Site 4. However airport safety is relevant and appropriate because the consolidation of wastes at Site 4 is sufficiently similar to MSWLF operations to cause a potential bird safety issue. Further Site 4 is approximately 4,000 feet northeast of the end of the runway.	3, 4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.12	Relevant and Appropriate	Wetlands: The construction of a new MSWLF or lateral expansion of an existing MSWLF will not cause or contribute to the degradation of a wetland as a result of erosion, stability, or migration of materials; cause or contribute to a violation of a water quality standard, violate the toxic effluent standard under the Clean Water Act, jeopardize the existence of endangered or threatened species or their habitats	This regulation is relevant and appropriate because there are three vernal pools west of Site 4.	4

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(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4, unless the requirement in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 15, and Title 14 California Code of Regulations, Division 7, Chapter 3 is more stringent, and in that event, the State requirement is the ARAR.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.20	Applicable	Procedures for Excluding the Receipt of Hazardous Waste: All MSWLF receiving waste after October 9, 1991 (herein referred to as "operating MSWLF") must have a program to exclude hazardous waste and Polychlorinated Biphenyls from disposal at the site. This program must include random inspections or another method to ensure incoming loads do not contain these wastes. This requirement is applicable to Site 4 because it will be receiving waste from landfill sites 5 and 6	The wastes from Sites 5 and 6 are not expected to contain hazardous wastes based on analysis of the sampling results and histories of these sites. However, the possibility of hazardous wastes being encountered in the excavated wastes can not be excluded.	4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.21	Applicable	Cover Material Requirements: To control disease vectors, fires, odors, blowing litter, and scavenging, all operating MSWLFs must be covered with six inches of earthen material (or equivalent) at the end of the day or more frequently if necessary	Wastes from Sites 5 and 6 are expected to be comparable to municipal wastes. Thus cover materials at Site 4, the site where consolidation will occur, would need to limit disease vectors, fires, odors, blowing litter and scavenging that are associated with uncontrolled municipal waste disposal.	4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.22	Applicable	Disease Vector Control: Rodents, flies, mosquitoes, and other animals that are capable of transmitting diseases to humans must be prevented or populations controlled at all MSWLF.	Consolidation of wastes at Site 4 might attract disease vectors unless they are controlled.	4

(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4, unless the requirement in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 15, and Title 14 California Code of Regulations, Division 7, Chapter 3 is more stringent, and in that event, the State requirement is the ARAR.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.23	Applicable	Explosive Gas Control: Monitoring and control of methane is required at all MSWLF. The concentration of methane must not exceed 25 % of the lower explosive limit (LEL) in facility structures and must be at or below the LEL at the facility property boundary.	Methane has been measured in the landfill gases generated at Site 4. The materials to be excavated from Sites 5 and 6 may also generate methane when consolidated at Site 4.	4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.24	Applicable	Air Criteria: Gas emissions from the landfill must not result in a violation of an air quality standard developed under a State Implementation Plan for the Federal Clean Air Act. Applies to all MSWLFs.		4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.25	Applicable	Access Requirements: Natural or artificial barriers must be used to prevent unauthorized vehicle traffic and illegal dumping and to control public access to all MSWLFs.	Site 4 is located in a portion of the Base that is near an area that has been designated for public access as a regional park.	4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.26	Applicable	Run-on/Run-Off Control Systems: A run-on and run-off system must be designed to handle the potential flow from a 24-hour, 25-year storm		4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.28(a)	Applicable	Liquid Restrictions: Bulk and noncontainerized wastes can not be added to any MSWLF except septic waste from a household. Leachate and condensate derived from the MSWLF can be placed in the unit if the unit has a composite liner and leachate collection system.		4

(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4, unless the requirement in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 15, and Title 14 California Code of Regulations, Division 7, Chapter 3 is more stringent, and in that event, the State requirement is the ARAR.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.28(b)	Applicable - A waiver may be needed because you can not tell if the origin was "household waste"	Liquid Restrictions: Containerized liquids placed into a MSWLF must meet three restrictions: 1) the containers must be similar in size to that normally found in household waste; 2) the container is designed to hold liquids for use other than storage; 3) or the waste is household waste		4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.51	Applicable	Groundwater Monitoring Systems: A groundwater monitoring system must be installed that characterizes the upper aquifer. More than one unit may be monitored by the same system if the hydrogeological setting is appropriate. The system must include a sufficient number of wells positioned in locations to characterize the quality of groundwater in unaffected area (i.e., background) and at either a point of compliance or at the unit boundary. Monitoring wells must be constructed to provide representative samples and prevent contamination from surface sources of chemicals.		4

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(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4, unless the requirement in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 15, and Title 14 California Code of Regulations, Division 7, Chapter 3 is more stringent, and in that event, the State requirement is the ARAR.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.60(a) and (b)	Applicable ✓	Closure Criteria: All MSWLF must install a final cover to minimize infiltration and erosion. The cover must: have a permeability of permeability of 0.00001 cm/sec or less; have an infiltration layer containing a minimum of 18-inches of earthen materials; and have an erosion layer with a minimum of 6-inches of earthen materials that is capable of sustaining native plant growth. Alternative designs may be approved if they meet the performance standards for minimization of infiltration, wind erosion, and water erosion.		4
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.60(f) and (g)	Applicable	Closure Criteria: All MWSLF must begin closure 30-days after the receipt of the final load of waste. The closure activities must be complete within 180 days unless an exemption has been granted and all steps are taken to prevent threats to human health and the environment.		4
Resource Conservation and Recovery Act, Subtitle D f	40 CFR 258.60(i)	Applicable (for Site 4) and Relevant and Appropriate (for Sites 2 and 3) ✓	Closure Criteria: Following closure a notification must be added to the deed or equivalent instrument to notify a purchaser that the property was used as a landfill.	As of 1994 there are no deeds to the Mather Air Force Base (AFB) property. Notification of the property use is planned to be added to the transfer records.	4: Applicable 2 and 3: Relevant and Appropriate

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(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4, unless the requirement in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 15, and Title 14 California Code of Regulations, Division 7, Chapter 3 is more stringent, and in that event, the State requirement is the ARAR.

Table 2.42 Mather AFB Landfill Operable Unit Federal ARARs^(a)

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
Resource Conservation and Recovery Act, Subtitle D	40 CFR 258.61(a)(1), 40 CFR 258.61(a)(3), & 40 CFR 258.61(a)(4)	Applicable (for Site 4) and Relevant and Appropriate (for Sites 2 and 3) ✓	Post-Closure Care Requirements: For a period of 30 years (unless determined that another period is appropriate), the final cover and gas collection system must be maintained. Further groundwater must be monitored pursuant to the groundwater monitoring requirements identified in 40 CFR 258.50 - 258.58.	<p>Waste will be added to Site 4 following the applicable date for Subtitle D (i.e., October 9, 1991), thus it is applicable.</p> <p>The post-closure requirements are considered relevant and appropriate for Sites 2 and 3 because they were used for the disposal of municipal solid waste prior to the passage of RCRA Subtitle D. Further, the requirements for post-closure address systems (final covers, gas venting wells, and groundwater monitoring networks) that are being planned as part of the closure of these sites.</p> <p>Maintenance of a leachate collection system (40 CFR 258.61(a)(2) has not been identified as an applicable or relevant and appropriate requirement (ARAR) for Sites 2, 3, or 4. Because there are no leachate collection systems in the final remedial alternative.</p>	4: Applicable 2 and 3: Relevant and Appropriate

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(a) The requirements of the Federal Resource Conservation and Recovery Act Subtitle D program in 40 CFR Part 258 et. seq. are the ARARs for the Sites 2, 3, and 4 in the State, Subtitle D regulations in Title 23, California Code of Regulations, Division 3, Chapter 16, and in that event, the State requirement is the ARAR.

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17766 Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ²	Emergency Response Plan (ERP): potential emergency conditions that may exceed the design of the site and could endanger the public health or environment must be anticipated. Response procedures for these conditions must be addressed in the RD/RA plans.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17767 ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ²	Security at Closed Sites: all points of access to the site must be restricted, except permitted entry points. All monitoring, control, and recovery systems shall be protected from unauthorized access	Closure or Postclosure Maintenance Standard of Title 14, CCR, division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable

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- 1: The State does not agree on the characterizations of certain ARARs in this table to be "Relevant and Appropriate" instead of "Applicable." However since these requirements are included in the ROD as ARAR, the State will not dispute this ROD.
- 2: The requirements of the Federal RCRA Subtitle D program in 40 CFR Part 258 et seq. are the ARARs for landfills 2,3, and 4, unless the requirement in the State Subtitle D regulations in 23 CCR, Div. 3, Ch. 15, or 14 CCR, Div. 7, Ch. 3 is more stringent, and in that event, the state requirement is the ARAR.
- 3: Identification of provisions of Title 14 CCR, Chapter 3, Article 7.8 as "Relevant and Appropriate" to Sites 2 & 3 is subject to consistency with the selected remedial alternative for each site.
- 4: U.S. EPA believes this requirement of Chapter 15 is applicable only because Site 4 is now subject to the state Subtitle D Regulations in Chapter 15.

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
✓ California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17773(b) to 17773(e) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Final Cover: the design and construction of the final cover must meet specific prescriptive standards. These include minimum thickness and quality of the construction material (14 CCR 17773(b) and (e))	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
✓ California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17774(a) & 17774(c) to 17774(h) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Construction Quality Assurance (CQA): a CQA program must be designed and implemented. It must include specific parameters (and for some components specific testing methods) for each component of the final cover.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
✓ California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17776(a); (c); substantive requirements of (d); (e) & (f) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Final Grades: the final grades for the covered landfill must meet grading standards provided in 23 CCR 2581, they must be appropriate to control runoff and erosion.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
✓ California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17777(a) & 17777(b), and substantive content of 17777(c) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Final Site Face: the design of the final site face must provide for the integrity of the final cover both under static and dynamic conditions.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable

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Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17778(a), & 17778(c) to 17778(j) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Final Drainage: the design of the final cover must control runoff and runoff produced by a 100 year 24 hour storm event and must be prepared according to CQA requirements	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17779(a), & 17779(c) to 17779(i) ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Slope Protection and Erosion Control: the design and construction of the slopes must protect the integrity of the final cover and minimize soil erosion	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17781 ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for Sites 2 & 3 ³	Leachate Control During Closure and Post Closure: leachate must be monitored, collected, treated, and discarded appropriately	The state does not intend that subsurface leachate monitoring and collecting systems need to be added to existing landfills unless leachate production and/or accumulation is evident.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17783 ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for 2 & 3 ³	Gas Monitoring and Control During Closure and Post Closure: landfill gases must be collected and analyzed; the concentration of combustible gas at the landfill boundary must be 5% or less, trace gases must be controlled to prevent adverse acute and chronic exposure to toxic and/or carcinogenic compounds	Monitoring should be conducted for 30 years or until authorized to be discontinued by showing that there is no potential for gas migration beyond the property boundary or into onsite structures, and that landfill gases do not pose a threat to public health and safety or a threat to the environment.	2 & 3 ³ : Relevant and Appropriate 4: Applicable

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17788 ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for 2 & 3 ³	Post Closure Maintenance: the landfill must be maintained and monitored for no less than 30 years following closure	Monitoring is continued for 30 years following closure unless it can be demonstrated that the landfill does not pose a threat to public health and safety or a threat to the environment. If the threat has been eliminated, post-closure maintenance can be discontinued.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resource Code Section 40502 Section 43020	14 CCR 17796 ² Title 14, CCR, Division 7, Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable for Site 4 Relevant and Appropriate for 2, 3, 5 & 6 ³	Post Closure Land Use: Site Closure Design shall show one or more proposed uses of the closed site or show development that is compatible with open space	Closure or Postclosure Maintenance Standard of Title 14, CCR, Division 7, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.	2, 3, 5, & 6 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502 and 43509	14 CCR 18262.3 ² Title 14, CCR, Chapter 5, Article 3.4 Closure and Postclosure Maintenance Plans	Applicable for Site 4 Relevant and Appropriate for 2 and 3	Provides the content requirements for closure plans for solid waste disposal sites.	Applies to solid waste disposal sites that received waste after January 1, 1988.	2 & 3 ³ : Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502 and 43509	14 CCR 18265.3 ² Title 14, CCR, Chapter 5, Article 3.4 Closure and Postclosure Maintenance Plans	Applicable for Site 4 Relevant and Appropriate for Sites 2 and 3	Provides the content requirements for postclosure plans for solid waste disposal sites.	Applies to solid waste disposal sites that received waste after January 1, 1988.	2 and 3: Relevant and Appropriate 4: Applicable
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17636 ² Title 14, CCR, Division 7, Chapter 3, Article 7.3 Disposal Site Records	Applicable	Weight/Volume Records: the weight or volume of waste accepted must be determined to an accuracy of $\pm 10\%$	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17637 Title 14, CCR, Division 7, Chapter 3, Article 7.3 Disposal Site Records	Applicable	Subsurface Records: the length and depth of any cut(s) made in natural terrain where fill will be placed and the depth to groundwater must be determined and documented	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122. While it is not planned that solid waste will be placed in cuts in native soil, clean fill will be used where refuse or contaminated soil has been excavated.	4
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17658 ² Title 14, CCR, Division 7, Chapter 3, Article 7.4 Disposal Site Improvements	Applicable to Site 4 Relevant and Appropriate for Sites 5 & 6	Site Security: the perimeter of the landfill must be secured either through barriers or topographic constraints to discourage unauthorized entry	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 and 6: Relevant and Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17659 ² Title 14, CCR, Division 7, Chapter 3, Article 7.4 Disposal Site Improvements	Applicable to Site 4 Relevant and Appropriate for Sites 5 & 6	Access Roads: landfill roads must be reasonably smooth to minimize dust and tracking of materials onto public roads	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 and 6: Relevant and Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17676 Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Confined Unloading: Requires limiting unloading area, controlling windblown materials, and deposition at toe of fill	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17677 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Spreading and Compacting: Requires spreading and compacting of refuse in layers	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4

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Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17678 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Slopes and Cuts: The slope of the working face shall be maintained at a ratio which will allow effective compaction of the wastes. The depth of cuts and slopes of trench sides shall not exceed specified horizontal to vertical ratios	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17680 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Stockpiling: Requires stockpiled cover material and unacceptable native materials to be placed so as not to cause problems or interference with operations	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17684 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Intermediate Cover: Requires cover on fill where no additional refuse will be deposited within 180 days.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17686 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Scavenging: Scavenging is prohibited.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17687 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Salvaging Permitted: Salvaging is permitted in a planned and controlled manner.	No salvage is currently foreseen as a part of the selected action, but it may be proposed depending on character of refuse exposed.	4: Applicable 5 & 6: Relevant & Appropriate

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17688 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Volume Reduction and Energy Recovery: Volume reduction and energy recovery are permitted in planned and controlled manners.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17689 ³ Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Processing Area: Processing area shall be confined to greatest degree practicable.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17690 <u>112</u> Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Storage of Salvage: Salvage material must be safely isolated for storage.	No salvage is currently foreseen as a part of the selected action, but it may be proposed depending on character of refuse exposed. Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17691 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Removal: Storage time for salvage materials shall be limited to a safe duration.	No salvage is currently foreseen as a part of the selected action, but it may be proposed depending on character of refuse exposed. Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate

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Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17692 ² Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Non-Salvageable Items: Items capable of impairing public health shall not be salvaged without approval by Enforcement Agency and local health entity.	No salvage is currently foreseen as a part of the selected action, but it may be proposed depending on character of refuse exposed. Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17696 <u>112</u> Title 14, CCR, Division 7, Chapter 3, Article 7.5 Disposal Site Operations	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Operating Site Maintenance: The operator shall monitor and promptly repair deteriorated or defective conditions with respect to requirements of these standards.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17701 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Nuisance Control: Each site shall be operated and maintained so as not to create a public nuisance.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17703 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Fire Control: Operator shall take adequate measures for prompt fire control as required by local fire authorities.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17704 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Leachate Control: The operator shall take adequate steps to monitor, collect, treat, and effectively dispose of leachates	The state does not intend that subsurface leachate monitoring and collection systems need to be installed at existing sites unless there is evidence of leachate production and/or accumulation. Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17705 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Gas Control: Landfill gas control may be required based on the monitoring results	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17706 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Dust Control: The operator shall take adequate measures to minimize the creation of dust.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17707 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Vector and Bird Control: The operator shall take adequate measures to control or prevent the propagation, harborage, or attraction of flies, rodents, or other vectors, and to minimize bird problems.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17708 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5 and 6	Drainage And Erosion Control: Adequate drainage shall be provided. Effects of erosion shall be promptly repaired and steps taken to prevent further occurrence.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17709 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5 & 6	Contact with Water: No solid waste shall be deposited in direct contact with surface water.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17710 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5 and 6	Grading of Fill Surface: Covered surfaces of the disposal area shall be graded to promote run-off and prevent ponding, accounting for future settlement.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17711 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5 and 6	Litter Control: Litter and loose materials shall be routinely collected and disposed of properly.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17712 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Noise Control: Noise shall be controlled to prevent health hazards to persons using the site.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate

Table 2.43 Mather AFB Landfill Operable Unit State ARARs¹

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site(s)
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17713 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable to Site 4 Relevant & Appropriate to Sites 5, and 6	Odor Control: The disposal site shall not be a source of odor nuisances.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 17741 ² Title 14, CCR, Division 7, Chapter 3, Article 7.6 Disposal Site Controls	Applicable Relevant & Appropriate to Sites 5 and 6	Burning Wastes: Burning wastes shall be extinguished.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant & Appropriate
California Integrated Waste Management Act of 1989 Public Resources Code Sections 40502, 43020, 43021 and 43030	14 CCR 18222 Title 14, CCR, Division 7, Chapter 5, Article 3.2 Reports of Facility Information	Applicable to Site 4 Relevant & Appropriate for Sites 5 & 6	Report of Disposal Site Information: The planning and procedural requirements necessary to ensure that solid waste is handled and disposed in manners that protect public health and safety and the environment must be conducted.	Applies to operating solid waste disposal sites as defined by Public Resources Code Section 40122.	4: Applicable 5 & 6: Relevant and Appropriate
Porter-Cologne Water Quality Control Act (California Water Code Sections 13240, 13241, 13242, 13243)	Water Quality Control Plan (Basin Plan) for the CVRWQCB.	Applicable	Establishes water quality objectives, including narrative and numerical standards, that protect the beneficial uses of surface and ground waters in the region. The designated beneficial uses are municipal and domestic; agricultural; and industrial supply.	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, for example, a new discharge of contaminated soils or insitu treatment or containment of contaminated soils, that may affect water quality must not result in water quality exceeding water quality objectives.	2, 3, 4, 5, & 6