

CTO-076/0296

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Date: 8/7/96	No. of pages (including cover): 15
TO: Mr. Tim Latas	Contact No. (619) 687-8848 Fax (619) 687-8787
From: Tayseer Mahmoud	Contact No: (310) 590-4891

Subject: Landfills ARARS For George AFB
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Comments: I received the attached ARARS from IWMB for George AFB.
I want to share this inf with you before I send you ARARS for EL TORO which should be similar.
I hope that you will be able to incorporate these ARARS before the Sep 9 Draft FS Submittal because the ARARS request that we received from the Navy was a little late. Thanks

- Urgent-Hand carry!
- Confidential
- Information
- Per your Request
- Please Comment
- Original will / Will not follow

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STATE OF CALIFORNIA

Pete Wilson, Governor

**CALIFORNIA INTEGRATED WASTE MANAGEMENT BOARD**8800 Cal Center Drive  
Sacramento, California 95826

November 21, 1995

Mr. Tayseer Mahmoud  
Department of Toxic Substances Control  
Region 4  
Office of Military Facilities  
245 West Broadway, Suite 350  
Long Beach, CA 90805

SUBJECT: Review of the Draft Final Operable Unit 3 Remedial Investigation and Feasibility Study, August 1995, for George Air Force Base, Victorville, California

Dear Mr. Mahmoud:

Pursuant to your request staff of the California Integrated Waste Management Board (CIWMB) have reviewed the following documents:

- ▶ Draft Final Operable Unit 3 Remedial Investigation (RI) for George Air Force Base, Victorville, California, Volume I, II and III, dated August 1995, by Montgomery Watson.
- ▶ Draft Final Operable Unit 3 Feasibility Study (FS) for George Air Force Base, Victorville California, dated August 1995, by Montgomery Watson.
- ▶ Draft Work Plan for Methane Gas Monitoring Well Installation and Sampling, Site LF-14 and the Southeast Disposal Area, dated October 1995, by Montgomery Watson.

Upon reviewing these documents CIWMB staff have compiled the following comments regarding Applicable or Relevant and Appropriate Requirements (ARARs), landfill gas sampling, postclosure land use and clarifying issues.

**ARARs**

Page 4-4 of the FS states, "In the absence of a legal state opinion on the applicability of Title 14, the substantive requirements of the Title 14 regulation that relate to landfill closure and post-closure will be used as TBC guidelines in this FS". CIWMB staff and legal counsel in cooperation with staff and legal counsel from Department of Toxic Substances Control, Regional Water Quality Control Board, U.S. Environmental Protection Agency and U.S. Air Force have developed the attached table of State ARARs for Landfill Closure and Postclosure Maintenance.

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As requested by the Air Force overlapping regulations were eliminated using a stringency analysis pursuant to Comprehensive Environmental Response, Compensation and Liability Act, section 121(d). Please revise the FS to include the attached table and reflect the ARAR status of the Title 14 disposal site closure and postclosure maintenance requirements.

### Landfill Gas Monitoring

Upon reviewing the RI staff of the CIWMB found a data gap in the sampling conducted for landfill decomposition gas. Based on the age, moisture content and type of waste disposed of in the landfill, previous Air Quality Solid Waste Assessment Test results and surface emission screenings conducted by CIWMB staff, it is not anticipated that significant quantities of landfill decomposition gasses will be found at the site. Therefore, Cal EPA staff and U.S. Air Force staff agreed that limited methane monitoring should be conducted at the sites that are most likely to produce decomposition gasses. This information would fill the data gap and provide justification for an exemption from the 30 year landfill gas monitoring and control requirements.

In previous correspondence CIWMB staff sent guidance for landfill gas sampling that would justify and exemption for the 30 year monitoring and control requirements. This guidance suggested placing the landfill gas characterization wells in the waste to determine if the landfill is generating significant amounts, greater than 1 percent or 10,000 part per million by volume, of combustible gas. If the landfill is not producing significant amounts of decomposition gasses it would not be necessary to monitor for landfill gas migration thus saving the 30 year postclosure landfill gas monitoring cost.

The Methane Gas Monitoring Work Plan only proposes landfill gas migration wells out side of the waste boundary, not the landfill gas characterization wells as suggested in the guidance. To avoid monitoring for landfill gas migration for 30 years CIWMB staff recommends that landfill gas monitoring wells be located in the waste to determine if the waste is producing significant quantities of landfill decomposition gasses. Installing the wells in the waste would only require one sampling round thus allowing further cost savings by installing temporary wells that will be removed during closure. Please revise the work plan to reflect installation of the landfill gas characterization wells in the waste.

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#### Postclosure Land Use

The following Installation and Restoration Program (IRP) sites were designated as no further action in the RI: LF-13, LF-37, LF-38, LF-39, DP-46, DP-47, LF-11, LF-35 and LF-36. It is staffs understanding that institutional controls and land use restrictions will be implemented for these solid waste disposal sites. If there is a change in the land use staff must be notified by the owner of the site pursuant to California Code of Regulations, Title 14, section 17796. This requirement is not a land use restriction, it is set fourth to ensure that development on solid waste disposal sites is conducted in manner that will ensure the protection of public health and safety and the environment.

#### Clarification

CIWMB staff request clarification on the following two issues. The RI states on page ES-6 that the medical waste disposal area, FT-19b, was addressed in the FS. Staff could not find this site addressed in the FS. How will FT-19b be addressed? The second issue is that the FS states on page 10-3 that implementation of surface restoration and institutional controls at Site LF-44 will constitute landfill closure. Therefore, shouldn't LF-44 be included in the Landfill Closure ARARs table so it can be certified closed?

Thank you for the opportunity to comment on these documents. If I can be of further assistance on this matter, please call me at (916) 255-1197.

Sincerely,



Tamara Zielinski  
Waste Management Engineer  
Closure and Remediation Branch

enclosure: Table of State ARARs for Solid Waste Disposal Site  
Closure and Postclosure Maintenance

cc: Mr. Jehiel Cass, Associate WRCE, California Regional Water  
Quality Control Board, Lahontan Region

**State ARARs for Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17766 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Emergency Response Plan: 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, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17767 c,d,e,f&g Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	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. Notification signs must be posted at the site.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17771 a(2) Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Structure Removal: dismantle and remove structures are required by the closure plan.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17772 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Decommissioning of Environmental Control Systems: components of the environmental control systems, which have come into contact with leachate or landfill gas need to be dismantled and disposed of in a manner that will not pose a potential health threat.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17773 a&c-e Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Final Cover: the design and construction of the final cover must meet specific performance standards regarding infiltration, landfill gas emissions and reuse of the site. This section incorporates the prescriptive standards of 23 CCR 2581(a), however an engineered alternative that meets the performance standards is being proposed and must meet the engineered alternative criteria including 23 CCR 2510(b)&(c) and 2580(c).	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17774 a-e(1) & h(1)(2)(A)(B) Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	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 the final cover.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17776 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Final Grades: the final grades for the covered landfill must meet grading standards provided in 23 CCR 2581(b), and be based on local topography, climatic conditions and postclosure land use, they must be appropriate to control runoff and erosion. Survey monuments must be installed to monitor settlement as required by 23 CCR 2580(d). Upon completion of closure activities and in the post closure maintenance period contour maps are required to calculate settlement using 2' contour intervals and the scale specified in 23 CCR 2597(b).	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17777 a Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	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, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17778 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Final Drainage: the design of the final cover and any associated collection and holding facilities must control runoff and runoff produced by a 100 year 24 hour storm event as required by 23 CCR 2546(a),(c)&(d) and 2595(d)(2) and must be prepared according to CQA requirements.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17779 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	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, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17781 a&b Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Leachate Control During Closure and Post Closure: If leachate is being produced at the site it must be monitored, collected, treated, and discarded pursuant to 23 CCR 2559, 2543 and 2546(b) respectively.	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.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17783 (attempting an exemption) Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	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 not be at levels that cause adverse health or environmental impacts.	An exemption may be granted pursuant to 14 CCR 17783.17 once the proposed monitoring data is received.

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17788 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Relevant and Appropriate	Post Closure Maintenance: the landfill must be maintained and monitored for no less than 30 years following closure and in accordance with 23 CCR 2581(c).	Maintenance and monitoring is to continue for 30 years following closure until it can be demonstrated that the landfill does not pose a threat to public health and safety or a threat to the environment.
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	14 CCR 17796 Chapter 3, Article 7.8 Disposal Site Closure and Postclosure Maintenance	Applicable	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. The owner of the site must notify the agencies of any proposed changes in postclosure land. Changes in the land use must be implemented in accordance with the standards in this section to ensure that public health and the environment are adequately protected.	Closure or Postclosure Maintenance Standard of Title 14, CCR, Chapter 3, Article 7.8. Scope and Applicability pursuant to 14 CCR 17760.
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	14 CCR 18262.3 a(1-5)&(8) Chapter 5, Article 3.4 Closure Plans	Relevant and Appropriate	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.
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	14 CCR 18265.3 a(1-7)and(9&10) Chapter 5, Article 3.4 Postclosure Maintenance Plans	Relevant and Appropriate	Provides the content requirements for postclosure maintenance plans for solid waste disposal sites.	Applies to solid waste disposal sites that received waste after January 1, 1988.
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	14 CCR 18275 Chapter 5, Article 3.4 Postclosure Maintenance Plans	Relevant and Appropriate	Provides the content requirements to obtain certification that the solid waste disposal sites has closed pursuant to state standards.	Applies to solid waste disposal sites that received waste after January 1, 1988.
Water Quality Control Plan for the Lahontan Region (Basin Plan)	Table 2-1, Beneficial Uses of Ground Waters in Upper Mojave Hydrologic Unit (628.20)	Applicable	Defines beneficial uses for ground waters beneath George AFB as: municipal, agricultural, industrial service and freshwater replenishment	The identification of the ground waters beneath landfill sites as potential drinking water sources forms a basis for selection of concentration limits, cleanup levels and treatment levels
	Objectives for Ground Water	Applicable	Defines the ground water quality objectives for: non-degradation, taste and odor, bacteria, chemical constituents, radioactivity, and minerals	Concentrations limits, cleanup levels, and treatment levels must conform to the objectives.

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
	California Water Code § 13176	Applicable	Requires the analysis of material to be performed in a State certified laboratory	For all investigation and remedial actions
	California Water Code § 13370 et seq.	Applicable	Requires compliance with Federal Clean Water Act requirements for surface water discharges. Includes National Pollutant Discharge Elimination System Requirements for storm water runoff from certain construction or industrial activities. The Air Force must comply with the substantive requirements for a) eliminating most non-storm water discharges, b) developing and implementing a storm water pollution prevention plan, and c) performing monitoring of stormwater discharges. For landfills that are inactive, prior to final closure these regulations are contained in the SWRCB General Industrial Storm Water Permit (Order No. 91-13-DWQ, as amended by Order No. 92-12-DWQ)(NPDES No. CAS000001). For Landfills that are going through final closure, these regulations are contained in the SWRCB General Construction Activity Storm Water Permit (Order No. 92-08-DWQ)(NPDES No. CAS000002).	
	California Water Code § 13750	Applicable	Requires an intent to drill notice to be filed with the State Department of Water Resources for water wells, monitoring wells, and cathodic protection wells	For any well
	California Water Code § 13750.5	Applicable	Requires well drillers to possess a C-57 license	For any well
	California Water Code § 13752	Applicable	Allows other governmental agencies to obtain submit well reports, provided the public is allowed to see them only after obtaining written permission from the owner	For any well
Discharges of Waste to Land, Chapter 15, Title 23, Cal. Code of Regs (CCR), Article 2 - Waste Classification and Management	§ 2510(g)	Relevant and Appropriate	Closed, inactive, or abandoned waste management units as of 11/27/84 may be required to implement a monitoring program. If water quality impairment is discovered, corrective action may be required.	
	§ 2520	Relevant and Appropriate	Defines a waste classification and disposal criteria system. Requires accurate self-classification	The wastes within these landfills are classified as non-hazardous solid waste.
	§ 2523	Relevant and Appropriate	Non-Hazardous Solid Waste - putrescible and non-putrescible waste that may be discharged to a Class III unit	

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
Discharges of Waste to Land, Chapter 15, Title 23, Cal. Code of Regs (CCR), Article 4 - Construction Standards.	§ 2546	Relevant and Appropriate	Precipitation and Drainage Controls - criteria for diversion and drainage of storm water	
	§ 2550.1	Relevant and Appropriate	Defines the type of monitoring programs that apply. Different monitoring programs may apply at the same unit at the same time. The requirements (ROD) must specify the type of program applicable to the unit.	
	§ 2550.4	Relevant and Appropriate	Concentration Limits (CL) - Must be established for ground water, surface water, and the unsaturated zone. Must be based on background, equal to background, or for corrective actions, may be greater than background (CLGTB), not to exceed the lower of the MCL or the concentration technologically or economically achievable. CLGTB are re-evaluated every 5 years and reduced to background. Must be specified in the requirements (ROD).	
	§ 2550.7(b)(1)(A)	Relevant and Appropriate	Have a "sufficient number" of background MPTs	
	§ 2550.7(b)(1)(B)	Relevant and Appropriate	For detection monitoring, have a sufficient number of MPTs at the POC, additional locations as necessary, unsaturated zone, perched aquifers, and zones of highest conductivity	
	§ 2550.7(b)(2)	Relevant and Appropriate	Background monitoring does not necessarily have to be upgradient of unit, it may be representative of upgradient conditions	
	§ 2550.7(b)(4)	Relevant and Appropriate	Monitoring wells are to be constructed and cased in a manner to prevent being a conduit for contaminant transport	For all wells
	§ 2550.7(b)(5)	Relevant and Appropriate	Sampling interval shall be appropriately screened and equipped with a filter pack to enable representative ground water sample collection	For all wells
	§ 2550.7(b)(6)	Relevant and Appropriate	The annular space shall be appropriately sealed to prevent cross-contamination	For all wells
	§ 2550.7(b)(7)	Relevant and Appropriate	Monitoring wells are to be adequately developed	For all wells

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
	§ 2550.7(e)(2)	Relevant and Appropriate	Cuttings to be logged during drilling under supervision of a registered geologist, lithology logs submitted to Regional Boards: Soils - USGS, Rocks - as appropriate, Unsaturated Zone - record depth and thickness	For all wells
	§ 2550.7(e)(3)	Relevant and Appropriate	Separate ground water monitoring systems are not necessary for contiguous units	
	§ 2550.7(e)(4)	Relevant and Appropriate	Consistent sampling and analytical procedures are required incorporating: sample collection, sample preservation and shipment, analytical procedures, and chain-of-custody control	
	§ 2550.7(e)(5)	Relevant and Appropriate	Monitoring program to include appropriate methods for each COC and monitoring parameter (MPa)	The monitoring parameters are the metal surrogates chloride, sulfate, nitrate as nitrogen, total dissolved solids, and volatile organic constituents as defined by Appendix I of 40 CFR 258. The constituents of concern are those constituents listed in Appendix II of 40 CFR 258.
	§ 2550.7(e)(6)	Relevant and Appropriate	For each unit collect all data necessary to select an appropriate statistical method for establishing background. As a minimum, quarterly sampling for one year, considering highest and lowest ground water elevations.	
	§ 2550.7(e)(7)	Relevant and Appropriate	Propose a statistical method for evaluation of each COC and MPa. Must be specified in requirements (ROD). Selection criteria are given	
	§ 2550.7(e)(8)	Relevant and Appropriate	Acceptable Statistical Methods: - ANOVA using mean values - ANOVA using median values - Tolerance or Prediction Interval - Control Charts - Alternate Proposal, verification criteria are included	
	§ 2550.7(e)(9)	Relevant and Appropriate	Performance Standards are given for each statistical method	
	§ 2550.7(e)(10)	Relevant and Appropriate	Based upon the data collected and statistical method chosen to analyze the data, propose and justify a procedure to determine background for each COC and MPa, may use: - background - method to update background with new data	

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
	§ 2550.7(e)(11)	Relevant and Appropriate	The requirements (ROD) shall specify the method chosen above	
	§ 2550.7(e)(12)	Relevant and Appropriate	For each COC and MPa the requirements (ROD) shall specify the sampling methods to establish background and for monitoring, consistent with: - the appropriate number and kind of samples for the statistical test chosen - the sampling method, including frequency and interval, ensuring independent samples	
	§ 2550.7(e)(13)	Relevant and Appropriate	Must collect ground water surface elevation and field parameters each time a well is sampled	For each well
	§ 2550.7(e)(14)	Relevant and Appropriate	All data must be graphed at least annually, criteria are given graphs	except where there is no new data, the guidelines of the PAT documents entitled <u>Long Term Monitoring and Reporting Hydrogeologic Data</u> are appropriate.
	§ 2550.7(e)(15)	Relevant and Appropriate	At least quarterly the ground water flow rate and direction must be determined	RPMs should adjust this requirement as necessary. Semi-annual determination should be adequate.
	§ 2550.7(e)(16)	Relevant and Appropriate	All data collected shall be maintained. The requirements (ROD) shall specify when data is to be reported.	
	§ 2550.8	Relevant and Appropriate	Detection Monitoring	
	§ 2550.8(d)	Relevant and Appropriate	The requirements (ROD) shall specify the WQPS	
	§ 2550.8(e)	Relevant and Appropriate	MPas shall be proposed and specified in requirements (ROD) to include physical parameters, hazardous constituents, and reaction products to provide a reliable indication of a release. A list of items to consider are given	MPas may be known as the Short List as opposed to the Long List of COCs
	§ 2550.8(f)	Relevant and Appropriate	Monitoring parameters and frequencies shall be as specified	
	§ 2550.8(g)	Relevant and Appropriate	COCs to be monitored if there is statistic evidence of a release.	
	§ 2550.8(h)	Relevant and Appropriate	All data must be maintained so that statistical evidence of a release may be determined	

**State ARARs For Solid Waste Disposal Site Closure and Postclosure Maintenance  
Sites DP-03, DP-04, LF-12, LF-14 and SEDA**

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status <sup>1</sup>	Description	Comment
	§ 2550.8(i)	Relevant and Appropriate	Lists criteria for determining statistical evidence of a release, includes physical determination (ie rapid pond declines or spills)	
	§ 2580(c)	Relevant and Appropriate	Prevents excessive irrigation of on the final cover.	
California Well Standards for water wells, monitoring wells, and cathodic protection wells	Bulletin 74-90 and 74-81, adopted pursuant to California Water Code § 13800	To Be Considered	Provides minimum construction and destruction criteria for water wells, monitoring wells, and cathodic protection wells. Also includes criteria for borehole abandonment	For all wells
Hazardous Waste Control Laws	Title 22, California Code of Regulations (CCR), Division 4.5 Environmental Health Standards for Management of Hazardous Waste), Chapters 11, 12, 14, and 18	Applicable	Regulations governing hazardous waste control; identification and listing of hazardous waste, standards applicable to generators of hazardous waste waste transfer; treatment, storage, and disposal facilities; and land disposal restriction.	Only applicable if the wastes from the sites are classified as hazardous waste.
California Health and Safety Code, Div. 26, Chapter 13	Mojave DESSERT Air Quality Management District (MDAQMD), Rule 401	Applicable	This rule prohibits the discharge of air contaminants which obscure visibility by more than 20 percent for a period of more than three minutes in any one hour.	This regulation is applicable to any remedial action activity, which may cause a visible emission.
California Health and Safety Code, Div. 26, Chapter 13	MDAQMD, Rule 402	Applicable	This rule prohibits the discharge of air contaminants in quantities which may cause injury, detriment, nuisance, or annoyance to any considerable number of persons or which endangers the comfort, response, health, or safety of any such person or which causes or has natural tendency to cause injury or damage to business or property.	This regulation is applicable to any remedial action activity, which may discharge air contaminants as defined by the rule.
California Health and Safety Code, Div. 26, Chapter 13	MDAQMD, Rule 403	Applicable	This rule requires a person to take reasonable precaution no to cause or allow emissions of fugitive dusts from being air borne beyond the property line from which the emission originated.	This regulation is applicable to any remedial action activity, which may cause the release of fugitive dust.
California Health and Safety Code, Div. 26, Chapter 13	MDAQMD, Rule 1303	Applicable	This rule requires the installation of best available technology (BACT) to a new emission unit or modification of existing emissions unit.	This regulation is applicable to any remedial action activity, which may cause the emissions of 25 pound per day or more of any Nonattainment Air Pollutant.

<sup>1</sup> The State does not agree on the Characterization of certain ARARs in this table to be "Relevant and Appropriate" instead of "Applicable". However, since these requirements are included in the ROD as ARARs, the State will not dispute this ROD.

NOTE: 14 CCR - California Code of Regulations, Title 14, 23 CCR - California Code of Regulations, Title 23, ARAR - applicable or relevant and appropriate requirement, ROD - Record of Decision, RD/RA - remedial design/remedial action, CoC - Constituent of Concern, WQPS - Water Quality Protection Standards, ANOVA - Analysis of Variance, PoC - Point of Compliance, MPTs - Monitoring Points, MCL - Maximum Contaminant Level, CLGTB - Concentration Limit Greater than Background

AUG-07-1996 15:57 FROM DTSC - LONG BEACH - REG 4 TO 86196878787 P.12/18

## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17636 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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17637 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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17658 Chapter 3, Article 7.4 Disposal Site Improvements	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17659 Chapter 3, Article 7.4 Disposal Site Improvements	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17676 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.	For consolidation sites

## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17677 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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17678 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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17680 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 site operations.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17684 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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17686 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Scavenging: Scavenging is prohibited.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites

## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17687 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Salvaging Permitted: Salvaging is permitted in a planned and controlled manner.	No salvage planned as a part of the selected action.  Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17688 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17689 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17690 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Storage of Salvage: Salvage material must be safely isolated for storage.	No salvage planned as a part of the selected action.  Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17691 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Removal: Storage time for salvage materials shall be limited to a safe duration.	No salvage planned as a part of the selected action.  Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites

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## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17692 Chapter 3, Article 7.5 Disposal Site Operations	Applicable	Non-Salvageable Items: Items capable of impairing public health shall not be salvaged without approval by Enforcement Agency and local health entity.	No salvage planned as a part of the selected action.  Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17701 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17704 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17705 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17706 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites

## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17707 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17708 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17709 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17710 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030 California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17711 Chapter 3, Article 7.6 Disposal Site Controls	Applicable	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.	For consolidation sites

## ARARs for George AFB OU 3 Landfills - Closure, Postclosure Maintenance and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17713 Chapter 3, Article 7.6 Disposal Site Controls	Applicable or Relevant and Appropriate	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.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 17741 Chapter 3, Article 7.6 Disposal Site Controls	Applicable or Relevant and Appropriate	Burning Wastes: Burning wastes shall be extinguished.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	14 CCR 18222 Chapter 5, Article 3.2 Reports of Facility Information	Applicable or Relevant and Appropriate	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.	For consolidation sites

14 CCR - California Code of Regulations, Title 14

ARAR - applicable or relevant and appropriate requirement

ROD - Record of Decision

RD/RA - remedial design/remedial action