



California Integrated Waste Management Board

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Environmental
Protection

April 10, 2001

V/R
Ms. Lynn Marie Hornecker
Southwest Division, Naval Facilities Engineering Command
BRAC Programs Office
1220 Pacific Highway
Code 06CC.LMH
San Diego, CA 92132-5190

SUBJECT: Solicitation for Applicable or Relevant and Appropriate Requirements (ARARs) for the Disposal Pits Crows Landing Flight Facility, Site 11, Stanislaus County

Dear Ms. Hornecker:

The California Integrated Waste Management Board (CIWMB) would like to thank you for the opportunity to provide you with input for CIWMB ARARs pertaining to landfill closure and postclosure maintenance activities. Based on the description provided in the Revised Draft Final Feasibility Study Report Installation Restoration Program Sites 11 and 17 it is unclear what type of remedial actions are proposed. As proposed remedial actions are unknown, I am enclosing ARARs for two types of remedial action scenarios, landfill excavation/consolidation and landfill closure. CIWMB staff look forward to working on the remediation of this site.

If you have any questions please call me at (916) 341-6359.

Sincerely,

Scott S. Humpert, P.E.
Waste Management Engineer, Range D
Permitting and Enforcement Division
California Integrated Waste Management Board

California Environmental Protection Agency

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Ms. Lynn Marie Hornecker
Crows Landing Disposal Pits, Sites 11 and 17
April 10, 2001
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Attachments:

cc: Mike Wochnick, California Integrated Waste Management Board
Alex Alimohammadi, Colorado Regional Water Quality Control Board

BRAC OFFICE

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State ARARs for Solid Waste Disposal Site Closure and Postclosure Maintenance

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21130 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Emergency Response: 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 Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100.	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21135 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Site Security: 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 Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21137 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Structure Removal: site structures and leachate and gas control systems not intended for reuse will be dismantled and removed at the time of closure to protect public health and safety.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21140 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Final Cover: the final cover shall function with minimum maintenance and provide waste containment to protect public health and safety by controlling at a minimum, vectors, fire, odor, litter and landfill gas migration. The final cover shall also be compatible with postclosure land use.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21142 Ch. 3, Sub. 5, Article 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Final Grading: final grades must be designed and maintained to reduce impacts to health and safety and take into consideration any postclosure land use.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21145 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Slope Stability: the operator shall ensure the integrity of final slopes under both static and dynamic conditions to protect public health & safety and prevent damage to postclosure land uses, roads, structures, utilities, gas monitoring and control systems, leachate collection and control systems to prevent public contact with leachate, and prevent exposure of waste.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100.	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21150 Ch. 3, Subch. 5, Art. 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Drainage and Erosion Control: the drainage and erosion control system shall be designed and maintained to ensure integrity of postclosure land uses, roads, and structures; to prevent public contact with waste and leachate; to ensure integrity of gas monitoring and control systems; to prevent safety hazards; and to prevent exposure of waste.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Sub. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21160 Ch. 3, Sub. 5, Article 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Landfill Gas Control and Leachate Contact: landfill gas control shall be implemented and maintained; leachate must be collected and controlled in a manner which prevents public contact and controls vectors, nuisance and odor.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2. Scope & Applicability pursuant to 27 CCR 21100. 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.	For closing sites

State ARARs for Solid Waste Disposal Site Closure and Postclosure Maintenance

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 20921-20937 Ch. 3, Sub. 4, Article 6, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Gas Monitoring and Control During Closure and Postclosure: to protect public health and safety and the environment, landfill gases generated at a disposal site will be controlled to ensure that: 1) concentrations of methane gas do not exceed 1.25% by volume in air within on-site structures, 2) concentrations of methane do not exceed 5% by volume in air at the property or designated landfill boundary and 3) trace gases do not pose an acute or chronic exposure to toxic or carcinogenic compounds	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2, Scope & Applicability pursuant 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21180 Ch. 3, Sub. 5, Article 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Postclosure Maintenance: the landfill must be maintained and monitored for no less than 30 years following closure.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2, Scope & Applicability pursuant 27 CCR 21100.	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43020	27 CCR 21190 Ch. 3, Sub. 5, Article 2, Closure & Postclosure Maint. Standards for Disposal Sites and Landfills	Applicable or Relevant and Appropriate	Postclosure 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. Changes in postclosure land use must be approved by the appropriate State agency prior to implementation.	Closure or Postclosure Maintenance Standards for Disposal Sites and Landfills of 27 CCR, Ch. 3, Subch. 5, Art. 2, Scope & Applicability pursuant 27 CCR 21100	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	27 CCR 21800 Ch. 4, Subch. 4, Final Closure Plan Contents	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 November 1990. Relevant and appropriate for closing sites that did not receive waste after November 1990	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	27 CCR 21830 Ch. 4, Subch. 4, Final Closure Plan Contents	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 November 1990. Relevant and appropriate for closing sites that did not receive waste after November 1990.	For closing sites
California Integrated Waste Management Act of 1989 PRC 40502 & 43509	27 CCR 21880 Ch. 4, Subch. 4, Final Closure Plan Contents	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 November 1990. Relevant and appropriate for closing sites that did not receive waste after November 1990	For closing sites

27 CCR - California Code of Regulations, Title 27 ARAR - applicable or relevant and appropriate requirement ROD - Record of Decision RD/RA - remedial design/remedial action

State ARARs for Solid Waste Disposal Site Excavation 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	27 CCR 20510(a) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20510(a), Disposal Site Operating 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	27 CCR 20510(b) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20510(b), Disposal Site Operating Records	Applicable	Excavation Records: records shall be maintained for excavations which may affect the safe and proper operation of the site or cause damage to adjoining properties.	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	27 CCR 20530 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20530, Site Security	Applicable	Site Security: the site shall be designed to discourage unauthorized access by persons or vehicles by using a perimeter barrier or topographic constraints. Areas within the site where open storage or ponding of hazardous materials occurs shall be separately fenced.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20540 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20540, Roads	Applicable	Roads: landfill roads must minimize dust and tracking of materials onto public roads. Such roads shall be kept in safe condition and maintained such that vehicle access and unloading can be conducted during inclement weather.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites.
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20630 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20630, Confined Unloading	Applicable	Confined Unloading: unloading of solid wastes shall be confined to as small an area as possible without resulting in traffic, personnel or public safety hazards. Requires normal deposition of waste at toe of fill.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20640 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20640, Spreading and Compacting	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 and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20650 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20650, Grading of Fill Surface	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 and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20660 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20660, Stockpiling	Applicable	Stockpiling: Requires stockpiled cover material and unsuitable 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 and excavation sites
California Integrated	27 CCR 20700	Applicable	Intermediate Cover: Requires compacted earthen material of at least	Applies to solid waste disposal sites as	For consolidation and

State ARARs for Solid Waste Disposal Site Excavation and Consolidation

Source	Standard Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20700, Intermediate Cover		12 inches on all surfaces of the fill where no additional solid waste will be deposited within 180 days.	defined by Public Resources Code Section 40122.	excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20710(a) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20710(a), Scavenging, Salvaging and Storage	Applicable	Scavenging: Scavenging is prohibited.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20710(b) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20710(b), Scavenging, Salvaging and Storage	Applicable	Salvaging Permitted: Salvaging is permitted in a planned and controlled manner.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20710(c) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20710(c), Scavenging, Salvaging and Storage	Applicable	Storage of Salvage: Salvage material must be safely isolated for storage.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20710(c) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20710(c), Scavenging, Salvaging and Storage	Applicable	Removal: Storage time for salvage materials shall be limited to a duration specified by the enforcement agency.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20720 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20720, Non-Salvageable Items	Applicable	Non-Salvageable Items: Items capable of impairing public health shall not be salvaged without approval by the agencies.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20730 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20730, Volume Reduction & Energy Recovery	Applicable	Volume Reduction and Energy Recovery: Volume reduction and energy recovery are permitted in planned and controlled manners. Processing area shall be confined to specified, clearly identifiable areas of the site.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20760 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20710(c), Nuisance Control	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 and excavation sites
California Integrated Waste Management Act of 1989	27 CCR 20780(b) Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec.	Applicable	Burning Wastes: Burning wastes shall be extinguished.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites

State ARARs for Solid Waste Disposal Site Excavation and Consolidation

Source	Standard, Requirement, Criterion, or Limitation	ARAR Status	Description	Comment	Associated Site
PRC 40502, 43020, 43021 and 43030	20780(b), Open Burning & Burning Wastes				
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20790 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 1, Sec. 20790, Nuisance Control	Applicable	Leachate Control: The operator shall ensure that leachate is controlled to prevent contact with the public.	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 and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20800 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20800, Dust Control	Applicable	Dust Control: The operator shall take adequate measures to minimize the creation of dust and prevent safety hazards due to obscured visibility.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20810 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20810, Dust Control	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 and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20820 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20820, Drainage and Erosion Control	Applicable	Drainage And Erosion Control: The drainage system shall be designed and maintained to: ensure integrity of roads, structures, and gas monitoring and control systems; prevent safety hazards; and prevent exposure of waste.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20830 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 4, Sec. 20830, Grading of Fill Surface	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 and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 20919 Div. 2, Subdiv. 1, Ch. 3, Subch. 4, Art. 6, Sec. 20919, Gas Control	Applicable	Gas Control: The operator shall cause the site to be monitored for the presence and movement of landfill gas and take any necessary action to control such gases in the event that the gas causes a hazard or nuisance.	Applies to solid waste disposal sites as defined by Public Resources Code Section 40122.	For consolidation and excavation sites
California Integrated Waste Management Act of 1989 PRC 40502, 43020, 43021 and 43030	27 CCR 21600 Div. 2, Subdiv. 1, Ch. 4, Subch. 3, Art. 2, Sec. 21600, Report of Disposal Site Info	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

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TRANSMITTAL

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