

Naval Facilities Engineering Systems Command Southwest BRAC PMO West San Diego, CA

Final Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at Runway Debris Area

Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA

November 2022

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Prepared for:

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Prepared by:



Executive Summary

This Engineering Evaluation/Cost Analysis (EE/CA) has been prepared to address material potentially presenting an explosive hazard (MPPEH) and munitions and explosives of concern (MEC) remaining in soil as part of a non-time-critical removal action (NTCRA) at the Runway Debris Area (RDA), Former Naval Weapons Station (NAVWPNSTA) Seal Beach Detachment (Det) Concord, in Concord, California (Figure ES-1). Because the Department of the Navy (Navy) anticipates conducting an NTCRA to address MPPEH/MEC in soil at the RDA that may pose an explosive hazard, this EE/CA has been prepared as required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section 300.415(b)(4)(i). This EE/CA was developed in accordance with U.S. Environmental Protection Agency (EPA) guidance for performing NTCRAs under the Comprehensive Environmental Response, Compensation, and Liability Act and the NCP (EPA, 1993).

The purpose of this EE/CA is to identify removal action objectives (RAOs) to address MPPEH/MEC in soil and develop and evaluate the effectiveness, implementability, and cost of various removal alternatives that may satisfy the RAOs. This EE/CA also presents the removal alternative recommended by the Navy. Information obtained during previous investigations and response actions was used during this EE/CA to evaluate the removal alternatives based on current and anticipated future land use.

The NTCRA addressed in this EE/CA is an interim remedy for the site. Evaluation of a final remedy for the site will be documented in an EE/CA, Proposed Plan (PP), and Record of Decision prepared after completion of this NTCRA.

ES.1 Site Background

The RDA is located along the western boundary of the Inland Area at the former NAVWPNSTA Seal Beach Det Concord and is currently used for year-round cattle grazing. The RDA is bordered on the east, west, and south by a combination of public parks, commercial and residential development, and associated improvements.

Based on historical aerial imagery, the former airfield was constructed in the early 1940s and was used to store and sort aircraft and related materials. Until 1946, portions of the RDA were used for maintenance and synchronization of aircraft-mounted machine guns. In the late 1960s, a portion of the former north-south-oriented runway was demolished and redeveloped with residential dwellings that housed U.S. Coast Guard personnel.

A series of investigations has been conducted at the RDA between 1993 and 2020. The investigations included a site investigation (1993), an environmental status report (ESR) (2002), a preliminary assessment (PA) (2007), PA/reverification investigation (RVI) (2013), three site inspections (SIs) (2017), and a Supplemental SI (SSI) (2019 through 2020).

- The 1993 site investigation included a limited detector-aided geophysical survey of the Bore Sighting Range, approximately 5.3 acres of land within the RDA. No MEC items were found during the investigation.
- The 2002 ESR was a review of historical documentation and did not include any site investigations. The ESR recommended a geophysical investigation and/or trenching in areas adjacent to the airfield to locate potential disposal areas and randomized soil sampling in select areas
- The 2007 PA included an investigation of the Bore Sighting Range at the RDA. Geophysical survey results for the berm concluded that the Bore Sighting Range was used only for sighting and prior sample results indicated munitions constituents (MC) were not present in target berm soil. No MEC items were found during the investigation.
- During the 2013 PA/RVI, 36 munitions-related items were encountered and 271 additional subsurface anomalies were identified within the 25-acre Runway Apron Fuel Pit/Septic System Area. All items encountered were left at the site and were not classified as to whether they were MPPEH/MEC or material documented as safe (MDAS). A detector-aided surface clearance performed over 125 acres of the former airfield identified 18 munitions-related items and 2 areas with a high density of subsurface anomalies. All munitions-related items were located adjacent to the former runway or concrete runway apron.
- The 2017 SI performed in the northern portion of the RDA included a detectoraided surface clearance, a digital geophysical mapping (DGM) survey of approximately 14 acres, and collection of surface soil samples for analysis of MC. No MEC items were identified during the surface clearance. The DGM survey identified 3,701 target anomalies in subsurface soil, but no subsurface anomalies were intrusively investigated.
- The 2017 SI performed in the southern portion of the RDA included a detectoraided surface clearance and a DGM survey of transects over an 18-acre area; in, 1.4 acres were surveyed by the transects. In total, 6,026 target anomalies were identified and 426 were intrusively investigated. No MEC items were recovered; however, 109 MPPEH items were recovered that were all certified as MDAS.
- The 2017 SI of the Runway and Adjacent Area included a detector-aided surface clearance and a DGM survey over approximately 93 acres of the RDA. The

DGM survey identified 1,902 target anomalies but no subsurface anomalies were intrusively investigated. No MEC or MPPEH items were recovered.

The 2019 SSI in the RDA included a detector-aided surface clearance and DGM of 38 acres of accessible areas that were not previously investigated was performed. The DGM survey identified 14,647 subsurface anomalies, and a subset of the anomalies (1,435 total) were intrusively investigated. In total, 25 MEC items were recovered and destroyed during the surface clearance and 137 MDAS items and 6,000 pounds of metal was removed. The MEC and MDAS items were all encountered in the upper 24 inches of soil, which was consistent with the findings of prior investigations.

Based on the SSI findings, the potential exists that MPPEH and MEC remain in approximately 81 acres within the subsurface at the RDA. The remaining uninvestigated subsurface anomalies (13,212 in total) pose a moderate severity and significant contact level risk. As a result, the SSI Report recommended an NTCRA and/or an evaluation of remedial alternatives in a feasibility study.

ES.2 Removal Action Objectives

The following RAO was developed to address MPPEH/MEC contamination in soil at the RDA:

• Protect human health and the environment by reducing/mitigating the risk of an uncontrolled encounter with potential munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with current and future site use.

ES.3 Identification and Analysis of Removal Alternatives

The removal alternatives listed below were developed and evaluated for the RDA.

- <u>Alternative 1, No Action</u>—baseline for comparison with other alternatives. Under this alternative, MPPEH/MEC items would be left in place without implementing any containment, removal, treatment, or other reduction/mitigation actions. For the no action alternative, MPPEH/MEC items would remain in soil at the RDA. The no action alternative does not provide for access restrictions or other land use controls (LUCs) necessary to reduce the potential for contaminant exposure to the public or the environment.
- <u>Alternative 2, Land Use Controls</u>—institutional controls (ICs) will consist of controls to reduce/mitigate explosive hazards and prevent exposure to MPPEH/MEC items in soil for public health. Specifically, LUCs include a

prohibition on ground disturbance (documented in licenses, leases, and base operations documents) except when UXO construction support and military munitions recognition and safety training for construction personnel are provided. These LUCs would be enforced by the Navy until a Final ROD is signed. For the LUC alternative, MPPEH/MEC items that may be present in subsurface soil would remain at the site.

Alternative 3, Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction—subsurface anomalies in soil would be reacquired and flagged with a real-time kinematic global positioning system (RTK-GPS) based on coordinates identified as a result of the DGM surveys previously conducted and removed to eliminate the explosive hazards posed to human health and the environment; once all subsurface anomalies have been cleared, a post-removal verification survey with a man-portable EM61 would be performed to verify no detectable explosive anomalies remain in the subsurface; MPPEH/MEC items would be inspected and classified as MEC or MDAS as appropriate. Items that cannot be classified as MDAS due to an un-inspectable void would be treated as MEC. MEC would be destroyed via detonation (either destruction in place or consolidated shot). Munitions debris (after inspection and certification as MDAS) would be demilitarized using propane and oxygen torches and/or wet band saws to assure it no longer resembled a munition item. These fragments would be placed into 55-gallon drums for subsequent transport to a certified facility for final disposal by smelting. Non-munitions related scrap would be recycled at a licensed offsite facility. Soil samples would be collected for analysis of metals and explosives if a munitions-related item is found or after detonation of any MPPEH/MEC items found. No remediation goals for MC have been established for this site; however, the Navy would identify project screening levels in the Sampling and Analysis Plan (SAP). If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment would be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil would be removed from the site and disposed of at a licensed facility. At the conclusion of the NTCRA, the Navy will have removed all detectable munitions. However, given the limits of the detection technology at this time, a risk of residual munitions remains that will be addressed in a final remedy decision document.

 <u>Alternative 4, Anomaly Reacquisition, Removal, Post-Removal Verification</u> <u>Survey (Advanced Geophysical Classification [AGC]), and Destruction</u> subsurface anomalies in soil would be reacquired and flagged with a GPS based on coordinates identified as a result of the DGM surveys previously conducted

and removed to eliminate the explosive hazards posed to human health and the environment; once all subsurface anomalies have been cleared, a post-removal verification survey with an UltraTEM operating in dynamic mode would be performed to verify no explosive anomalies remain in the subsurface; MPPEH/MEC items would be inspected and classified as MEC or MDAS as appropriate. Items that cannot be classified as MDAS due to an un-inspectable void would be as MEC. MEC would be destroyed via detonation (either destruction in place or consolidated shot). Munitions debris (after inspection and certification as MDAS) would be demilitarized using propane and oxygen torches and/or wet band saws to ensure it no longer resembled a munition item. These fragments would be placed into 55-gallon drums for subsequent transport to a certified facility for final disposal by smelting. Non-munitions related scrap would be recycled at a licensed offsite facility. Soil samples would be collected for analysis of metals and explosives if a munitions-related item is found or after detonation of any MPPEH/MEC items found. No remediation goals for MC have been established for this site; however, the Navy would identify project screening levels in the Sampling and Analysis Plan (SAP). If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment would be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil would be removed from the site and disposed of at a licensed facility. At the conclusion of the NTCRA, the Navy will have removed all detectable munitions. However, given the limits of the detection technology at this time, a risk of residual munitions remains that will be addressed in a final remedy decision document.

Alternatives 1, 2, 3, and 4 were individually evaluated with respect to their effectiveness (i.e., ability to meet the RAO), implementability, and cost. Table ES-1 summarizes the individual analysis of the alternatives for the RDA.

A comparative analysis also was performed to aid in identifying and assessing relative strengths and weaknesses between the three removal alternatives. Table ES-2 summarizes the comparative analysis of Alternatives 1, 2, 3, and 4 against each other and the three evaluation criteria.

ES.4 Recommended Removal Alternative

Based on the comparative analysis of the removal alternatives, the Navy recommends Alternative 3 (Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction). Alternative 3 is selected because it decreases risk to current and future receptors by identifying and removing all detectable munitions in soil, complies with the applicable or relevant and appropriate requirements, is feasible, and has minimal operation and maintenance cost. Implementation of Alternative 3 is estimated to require approximately 3 years for planning; site preparation; anomaly reacquisition and flagging; excavation and removal; MPPEH inspection; classification of MEC and MDAS; detonation of MPPEH/MEC; certification and demilitarization of MDAS; disposal of certified MDAS; soil sampling; post-removal verification survey using DGM methodologies; site restoration; and reporting.

The selected alternative for an NTCRA at the RDA will be documented in an Action Memorandum, which will be finalized after the public comment period on the final version of this EE/CA, and community acceptance will be addressed in the Action Memorandum.



ES-7

Executive Summary



ERRG-1811-5479-0002

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Executive Summary

ERRG-1811-5479-0002

Table ES-1: Individual Analysis of Removal Alternatives

	Removal Action Alternatives		
Criterion	1—No Action	2—LUCs	3 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction
Effectiveness			
Overall Protection of Human Health and the Environment	Not protective of human health or the environment because no action would be taken to reduce/mitigate the risk of exposure to munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil.	Provides protection of human health by preventing exposure to munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil via ICs and physical access restrictions (i.e., warning signs and posts); however, there is no protection of the environment. Relies on adherence to institutional and engineering controls in order to be protective of human health.	Protective of human health and the environment because all detectable MPPEH/MEC remaining in subsurface soil would be removed from the site thereby reducing/mitigating potential exposure to munitions-related items or explosive hazards posed to human health and the environment.
Compliance with ARARs	Does not meet any of the identified ARARs.	Complies with ARARs for mitigation of the soil disturbance exposure pathway through LUCs.	The removal action complies with all ARARs.
Long-Term Effectiveness and Permanence	Does not provide long-term effectiveness and permanence because munitions-related items or explosive hazards (i.e., MPPEH/MEC) would remain in subsurface soil and could pose an explosive hazard if disturbed.	For the soil exposure pathway, this alternative would be effective in the long-term reduction of hazards to humans as long as the physical access restrictions to prohibit exposure to subsurface soil are implemented, inspected, and maintained. The ICs and engineering controls also require implementation and consistent enforcement. Long-term effectiveness relies on adherence to the administrative and physical controls.	Provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby reducing/mitigating the potential exposure to munitions-related items or explosive hazards posed to human health and the environment.
Reduction of Toxicity, Mobility, or Volume through Treatment	Does not include treatment (i.e., removal and detonation) that would reduce the toxicity, mobility, or volume of munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.	Does not include any treatment (i.e., removal and detonation) that would reduce the toxicity, mobility, or volume of munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.	All identified MPPEH/MEC would be treated via detonation thereby reducing/mitigating the toxicity, mobility, and volume of munitions- related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.

4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

Protective of human health and the environment because all detectable MPPEH/MEC remaining in subsurface soil would be removed from the site thereby reducing/mitigating potential exposure to munitions-related items or explosive hazards posed to human health and the environment.

The removal action complies with all ARARs.

Provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby reducing/mitigating the potential exposure to munitions-related items or explosive hazards posed to human health and the environment.

All identified MPPEH/MEC would be treated via detonation thereby reducing/mitigating the toxicity, mobility, and volume of munitionsrelated items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.

Table ES-1: Individual Analysis of Removal Alternatives (continued)

	Removal Action Alternatives				
Criterion	1—No Action	2—LUCs	3 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction		
Short-Term Effectiveness	No short-term hazards posed to workers or the public because no activities would be conducted under this alternative.	No short-term increased risks because munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil would not be disturbed during implementation of this alternative.	Increased short-term risk to workers or the public due to soil disturbance; however, potential contact with munitions-related items or explosive hazards (i.e., MPPEH/MEC) would be reduced/mitigated using PPE, best management practices, and other control measures.		
Implementability					
Technical Feasibility	No action would be taken.	No technical feasibility concerns.	No technical feasibility concerns.		
Administrative Feasibility	No action would be taken.	Administratively feasible; however, LUCs have the potential to fail over time when maintenance/inspection activities or other administrative procedures do not occur or are compromised.	No administrative feasibility concerns.		
Availability of Services and Materials	No action would be taken.	No concerns identified regarding availability of services or materials.	No concerns identified regarding availability of services or materials.		
State Acceptance	Not evaluated at this time pending comments from the regulatory agencies on the Draft EE/CA and Draft				
Community Acceptance	Not evaluated at this time pending comments from the community during the 30-day public comment period planned to be				
Cost					
	Total Cost: \$0	Total Cost: \$70,000	Total Cost: \$1,980,500		
	Capital: \$0	Capital: \$70,000	Capital: \$1,980,500		
	O&M: \$0	O&M: \$0	O&M: \$0		
	Present Value: \$0	Present Value: \$70,000	Present Value: \$1,980,500		

Notes:

AGC = advanced geophysical classification

ARARs = applicable or relevant and appropriate requirement

DGM = digital geophysical mapping

EE/CA = Engineering Evaluation/Cost Analysis

ICs = institutional controls

LUCs = Land Use Controls

MDAS = material documented as safe

MEC = munitions and explosives of concern

MPPEH = material potentially presenting an explosive hazard

N/A = not applicable O&M = operation and maintenance

PPE = personal protective equipment

4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

Increased short-term risk to workers or the public due to soil disturbance; however, potential contact with munitions-related items or explosive hazards (i.e., MPPEH/MEC) would be reduced/mitigated using PPE, best management practices, and other control measures.

No technical feasibility concerns.

No administrative feasibility concerns.

No concerns identified regarding availability of services or materials.

Action Memorandum.

e held after finalization of this EE/CA.

Total Cost: \$2,413,500 Capital: \$2,413,500 O&M: \$0 Present Value: \$2,413,500

Table ES-2: Comparative Analysis of Removal Alternatives

Evaluation Criteria	Alternative 1 No Action	Alternative 2 LUCs	Alternative 3 Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction	4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction
Effectiveness		Qu	alitative Ranking	
Protection of Human Health and Environment	Not protective	Moderate	High	High
Compliance with ARARs	None	Moderate	High	High
Long-Term Effectiveness	None	Moderate	High	High
Short-Term Effectiveness	None	Moderate	High	High
Achieve RAO	None	Moderate	High	High
Reduction of Toxicity, Mobility, and Volume through Treatment	None	Low	High	High
Implementability		Qu	alitative Ranking	
Technical Feasibility	None required	High	High	High
Administrative Feasibility	None required	Moderate	High	High
Availability of Services or Materials	None required	High	High	High
Cost	Removal Action Cost			
Period of Analysis (Years)	30	30	30	30
Estimated Capital Cost	\$0.00	\$70,000	\$1,980,500	\$2,413,500
Estimated Annual/Period Cost	\$0.00	\$0	\$0	\$0
Estimated Total Cost	\$0.00	\$70,000	\$1,980,500	\$2,413,500

Table ES-2: Comparative Analysis of Removal Alternatives (continued)

Evaluation Criteria	Alternative 1 No Action	Alternative 2 LUCs	Alternative 3 Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction	4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction
Cost (continued)		Ren	noval Action Cost	
Estimated Total Present Value of Alternative	\$0.00	\$70,000	\$1,980,500	\$2,666,259
EE/CA Range (-30% / +50%)	\$0.00	\$49,000 / \$105,000	\$1,386,350 / \$2,970,750	\$1,689,450 / \$3,620,250

Notes:

AGC = advanced geophysical classification

ARARs = applicable or relevant and appropriate requirements

DGM = digital geophysical mapping

EE/CA = Engineering Evaluation/Cost Analysis

LUCs = land use controls

N/A = not applicable

RAO = removal action objective

Table of Contents

Execu	utive Su	ummar	у	ES-1
	ES.1	Site B	Background	ES-1
	ES.2	Remo	oval Action Objectives	ES-3
	ES.3	Identi	fication and Analysis of Removal Alternatives	ES-3
	ES.4	Recor	mmended Removal Alternative	ES-5
1.0	Introd	uction.		1-1
	1.1	Purpo	ose	
	1.2	Regu	latory Framework	
	1.3	Repo	rt Organization	1-3
2.0	Site C	Charact	erization	2-1
	2.1	Site L	ocation and Background	2-1
		2.1.1	Historical Facility Operations	2-1
		2.1.2	Historical Operations at the RDA	2-2
		2.1.3	Physical Setting	2-2
		2.1.4	Current and Future Land Use	2-7
	2.2	Previo	ous Investigations	2-7
		2.2.1	1993 Site Investigation Report	2-7
		2.2.2	2002 ESR	2-7
		2.2.3	2007 PA	2-8
		2.2.4	2013 PA/RVI, Portions of the RDA	
		2.2.5	2017 SI, Northern Portion of the RDA	
		2.2.6	2017 SI, Southern Portion of the RDA	2-10
		2.2.7	2017 SI, Runway and Adjacent Area	2-11
		2.2.8	2019–2020 SSI at the RDA	2-11
		2.2.9	2020–2021 Remedial Investigation at the RDA	2-13
	2.3	MEC	Hazard Analysis	2-13
	2.4	Sourc	e, Nature, and Extent of Contamination	2-14
		2.4.1	Sources of Contamination	2-14
		2.4.2	Release and Transport Mechanisms	2-14

Table of Contents (continued)

		2.4.3	Exposure Pathways and Receptors	2-15
		2.4.4	Nature and Extent of Soil Contamination	2-15
3.0	Identi	fication	of Removal Action Objectives	3-1
	3.1	Remo	val Action Objective	3-1
	3.2	NTCF	RA Scope and Planned Activities	3-1
	3.3	NTCF	RA Schedule	
	3.4	Applic	cable or Relevant and Appropriate Requirements	
4.0	Identi	fication	and Analysis of Removal Alternatives	4-1
	4.1	Gene	ral Response Actions	4-1
	4.2	Descr	iption of Removal Alternatives	
		4.2.1	Alternative 1 – No Action	4-3
		4.2.2	Alternative 2 – Land Use Controls	4-3
		4.2.3	Alternative 3 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by DGM, and Destruction	moval 4-4
			3 3 7	
		4.2.4	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction	moval 4-5
		4.2.4 4.2.5	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach	moval 4-5 4-6
	4.3	4.2.4 4.2.5 Evalu	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria	moval 4-5 4-6 4-10
	4.3	4.2.4 4.2.5 Evalu 4.3.1	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria	moval 4-5 4-6 4-10 4-10
	4.3	4.2.4 4.2.5 Evalu 4.3.1 4.3.2	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability	moval 4-5 4-6 4-10 4-10 4-11
	4.3	 4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost	moval 4-5 4-6 4-10 4-10 4-11 4-11
	4.3	 4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ 	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost	moval 4-5 4-6 4-10 4-10 4-11 4-11 4-11 4-12
5.0	4.3 4.4 Comp	4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost dual Analysis of Alternatives	moval 4-5 4-6 4-10 4-10 4-11 4-11 4-11 4-12
5.0	4.3 4.4 Comp 5.1	4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ parative Effect	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost dual Analysis of Alternatives Analysis of Removal Alternatives	moval 4-5 4-6 4-10 4-10 4-11 4-11 4-11 4-12 5-1 5-1
5.0	4.3 4.4 Comp 5.1 5.2	4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ parative Effect Imple	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost dual Analysis of Alternatives Analysis of Removal Alternatives iveness	moval 4-5 4-6 4-10 4-10 4-11 4-11 4-11 4-12 5-1 5-1 5-1
5.0	4.3 4.4 Comp 5.1 5.2 5.3	4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ barative Effect Imple Cost.	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost dual Analysis of Alternatives Analysis of Removal Alternatives iveness mentability	moval 4-5 4-6 4-10 4-10 4-11 4-11 4-11 4-12 5-1 5-1 5-1 5-1 5-2
5.0	4.3 4.4 Comp 5.1 5.2 5.3 Recor	4.2.4 4.2.5 Evalu 4.3.1 4.3.2 4.3.3 Individ barative Effect Imple Cost .	Alternative 4 – Anomaly Reacquisition, Removal, Post-Re Verification Survey by AGC, and Destruction General Project Approach ation Criteria Effectiveness Implementability Cost dual Analysis of Alternatives e Analysis of Removal Alternatives iveness mentability	moval 4-5 4-6 4-10 4-10 4-10 4-11 4-11 4-11 4-12 5-1 5-1 5-1 5-1 5-1 5-1 5-1 5-1

Table of Contents (continued)

List of Appendices

- Appendix A: Applicable or Relevant and Appropriate Requirements Evaluation
- Appendix B: Cost Analysis
- Appendix C: Supporting Information for Environmental Footprint Analysis Results
- Appendix D: Responses to Regulatory Agency Comments on Draft EE/CA

List of Figures

- Figure ES-1: Site Location Map
- Figure 1-1: Site Location Map
- Figure 2-1: Site Features
- Figure 2-2: Conceptual Site Model
- Figure 2-3: Previous Investigation Areas
- Figure 4-1: Anomaly Reacquisition and Removal Action

List of Tables

- Table ES-1: Individual Analysis of Removal Alternatives
- Table ES-2: Comparative Analysis of Removal Alternatives
- Table 4-1: Screening of General Response Actions, Technologies, and Process Options
- Table 4-2: Individual Analysis of Removal Action Alternatives
- Table 4-3: Environmental Footprint Analysis Results for the NTCRA Alternatives
- Table 5-1: Comparative Analysis of Removal Action Alternatives

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Abbreviations and Acronyms

AAR	After Action Report
AGC	advanced geophysical classification
APP	Accidental Prevention Plan
ARARs	applicable or relevant and appropriate requirements
bgs	below ground surface
BMPs	best management practices
CDFW	California Department of Fish and Wildlife
CERCLA	. Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CRLF	
CSM	conceptual site model
CTS	California tiger salamander
Det	Detachment
DGM	digital geophysical mapping
DoD	U.S. Department of Defense
DTSC	Department of Toxic Substances Control
ECs	engineering controls
EE/CA	engineering evaluation/cost analysis
EOD	Explosives Ordnance Disposal
EPA	U.S. Environmental Protection Agency
ERRG	Engineering/Remediation Resources Group, Inc.
ESR	environmental status report
ESS	Explosives Safety Submission
FS	feasibility study

Abbreviations and Acronyms (continued)

GHG	greenhouse gas
HA	Hazard Assessment
HAP	hazardous air pollutant
ICs	institutional controls
IR	Installation Restoration
КСН	CH2M HILL Kleinfelder, A Joint Venture
LUCs	land use controls
MC	munitions constituents
MDAS	material documented as safe
MEC	munitions and explosives of concern
mm	millimeter
MMEC Group	
MOA	
MOTCO	Military Ocean Terminal Concord
MPPEH	material potentially presenting an explosive hazard
MRP	Munitions Response Program
NAVWPNSTA	Naval Weapons Station
Navy	Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NFA	no further action
Nox	nitrogen oxide
NTCRA	non-time-critical removal action
O&M	operation and maintenance
OSPR	Office of Spill Prevention and Response

Abbreviations and Acronyms (continued)

РА	preliminary assessment
PM10	particulate matter less than 10 microns in size
RACSR	Removal Action Completion Summary Report
RAOs	removal action objectives
RD	Remedial Design
RDA	Runway Debris Area
RI	remedial investigation
RTK-GPS	real-time kinematic global positioning system
RVI	reverification investigation
SAP	Sampling and Analysis Plan
Sls	site inspections
SLERA	screening-level ecological risk assessment
SLHHRA	screening-level human health risk assessment
Sox	sulfur oxide
SSHP	Site Safety and Health Plan
SSI	Supplemental Site Inspection
SUXOS	Senior Unexploded Ordnance Supervisor
TDI	Tierra Data, Inc.
Techs	Technicians
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
UXO	unexploded ordnance
UXOSO	Unexploded Ordnance Safety Officer
Vollmar	Vollmar Natural Lands Consulting
Water BoardSan Fran	cisco Bay Regional Water Quality Control Board

Abbreviations and Acronyms (continued)

1.0 Introduction

This Engineering Evaluation/Cost Analysis (EE/CA) has been prepared to address material potentially presenting an explosive hazard (MPPEH) and munitions and explosives of concern (MEC) remaining in subsurface soil as part of a non-time-critical removal action (NTCRA) at the Runway Debris Area (RDA), within the former Naval Weapons Station (NAVWPNSTA) Seal Beach Detachment (Det) Concord, in Concord, California (Figure 1-1). Because the Department of the Navy (Navy) anticipates conducting an NTCRA to address MMPEH/MEC in subsurface soil at the RDA that may pose an explosive hazard, this EE/CA has been prepared as required by the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), Section (§) 300.415(b)(4)(i).

This EE/CA was developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), as amended under the Superfund Amendments and Reauthorization Act (Title 42 United States Code [U.S.C.] § 9601); the NCP (Title 40 Code of Federal Regulations [CFR] Part 300); and the following federal guidance:

- "Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA" (U.S. Environmental Protection Agency [EPA], 1993)
- "A Guide to Development and Documenting Cost Estimates During the Feasibility Study" (EPA, 2000)

Numerous investigations have been conducted at the RDA between 1993 and 2020 (see Section 2.2). During those investigations, subsurface metallic anomalies were identified throughout the RDA via digital geophysical mapping (DGM). In 2019, a surface clearance was performed and a subset of discrete anomalies were reacquired and intrusively investigated during the Supplemental Site Inspection (SSI). In total, 25 MEC items were recovered and destroyed during the surface clearance and 137 material documented as safe (MDAS) items and 6,000 pounds of metal were removed. The MEC and MDAS items were all encountered in the upper 24 inches of soil, which was consistent with the findings of prior investigations. Based on the SSI findings, the potential exists that MPPEH and MEC remain in approximately 81 acres within the subsurface at the RDA. The uninvestigated subsurface anomalies (13,212 in total) pose a moderate severity and significant contact level risk. As a result, the SSI Report recommended an NTCRA and/or an evaluation of remedial alternatives in a feasibility study (FS) (Multi-Media Environmental Compliance Group [MMEC Group], 2020a).

Engineering/Remediation Resources Group, Inc. (ERRG) prepared this EE/CA on behalf of the Navy under Contract No. N62742-17-D-1811, Task Order No. N6247320F5479.

1.1 Purpose

The purpose of this EE/CA is to (1) identify removal action objectives (RAOs); (2) develop and analyze the effectiveness, implementability, and cost of the removal alternatives that may satisfy the RAOs; and (3) recommend a removal alternative that is protective of human health and the environment and that complies with applicable or relevant and appropriate requirements (ARARs). Information obtained during previous investigations and removal efforts was used in preparing this EE/CA to evaluate the removal alternatives based on the current and anticipated future land use.

In accordance with EPA (1993) guidance, the EE/CA was prepared to meet the environmental review requirements for removal actions; to satisfy administrative record requirements for documentation of the selected removal alternative; and to identify the objectives of the selected removal alternative and analyze the effectiveness, implementability, and cost of various alternatives that may satisfy these objectives.

The NTCRA addressed in this EE/CA is an interim remedy for the site. Evaluation of a final remedy for the site will be documented in an EE/CA, Proposed Plan (PP), and Record of Decision prepared after completion of this NTCRA.

1.2 Regulatory Framework

The U.S. Department of Defense (DoD) has the authority to undertake CERCLA response actions, including removal actions, under Title 42 U.S.C. § 9604, Title 10 U.S.C. § 2705, and Federal Executive Order 12580, as amended.

On December 16, 1994, the former NAVWPNSTA Seal Beach Det Concord was included on the National Priorities List as a Superfund site pursuant to CERCLA, as amended by the Superfund Amendments and Reauthorization Act of 1986, under the Navy's Munitions Response Program (MRP). The identification number in the Comprehensive Environmental Response, Compensation, and Liability Information System for the former NAVWPNSTA Seal Beach Det Concord is CA7170024528. Munitions items have been found on the surface and subsurface at former NAVWPNSTA Seal Beach Det Concord at the RDA resulting from past site activities. The Navy has been conducting and implementing the Installation Restoration (IR) Program at the former NAVWPNSTA Seal Beach Det Concord since the early 1990s. The Navy began implementing the MRP in the early 2000s.

The Navy's cleanup efforts are being performed under the oversight of EPA Region 9, the California Department of Toxic Substances Control (DTSC), and the San Francisco Bay Regional Water Quality Control Board (Water Board) through a Federal Facility Agreement signed in 2001 (EPA, 2001).

A copy of the Draft EE/CA was provided to the EPA, Water Board, and DTSC, as well as the California Department of Fish and Wildlife (CDFW), for review and comment.

1.3 Report Organization

After Section 1.0, this EE/CA is organized as follows:

- Section 2.0 Site Characterization, describes the site background and summarizes previous investigations; the risk assessments, if applicable; and the source, nature, and extent of contamination.
- Section 3.0 Identification of Removal Action Objectives, presents the proposed RAOs that, if met, will result in protection of human health and environment; the proposed scope and schedule for the NTCRA; and defines the ARARs that will guide the NTCRA.
- Section 4.0 Identification and Analysis of Removal Alternatives, describes the development and selection of removal alternatives, summarizes the evaluation criteria, and presents the detailed analysis of the individual removal alternatives against the evaluation criteria.
- Section 5.0 Comparative Analysis of Removal Alternatives, summarizes the comparative analysis of alternatives against each other.
- Section 6.0 Recommended Removal Alternative, presents the recommended removal alternative to address MPPEH/MEC in subsurface soil at the RDA.
- Section 7.0 References, lists the documents and guidance used to develop this EE/CA.

Figures and tables are presented following Section 7.0. Appendix A presents the evaluation of ARARs. Appendix B provides the detailed cost analysis. Appendix C includes supporting information for environmental footprint analysis. Appendix D includes the Navy's responses to regulatory agency comments on the Draft EE/CA.

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2.0 Site Characterization

This section provides an overview of the site, previous investigations, prior risk assessments (as applicable), and the source, nature, and extent of contamination.

2.1 Site Location and Background

The former NAVWPNSTA Seal Beach Det Concord is located in north-central Contra Costa County, in Concord, California, about 30 miles northeast of San Francisco (Figure 1-1). NAVWPNSTA Seal Beach Det Concord is bounded by the Suisun Bay to the north, the city of Concord to the south and west, and Los Medanos Hills to the east. The facility comprises the Inland Area and the Tidal Area.

The RDA is a 186-acre former airfield located along the western boundary of the Inland Area (Figure 2-1). The former airfield consists of a north-south-oriented runway and an east-west-oriented runway. The northern portion of the RDA is located along the north-northeastern portion of the former airfield and includes the Glenn Disposal Site and Bore Sighting Range, also known as IR Site 24B. The southern portion of the RDA is located south of the east-west-oriented runway and includes land surrounding the former Runway Apron Fuel/Septic System Area. The RDA is bordered on the east, west, and south by a combination of public parks, commercial and residential development, and associated improvements. The area adjacent to the former runway is open, undeveloped grassland (Figure 2-1).

The following sections describe historical operations at the former NAVWPNSTA Seal Beach Det Concord and the RDA, as well as the physical setting and current and future land uses.

2.1.1 Historical Facility Operations

Formerly known as Port Chicago, NAVWPNSTA Seal Beach Det Concord was established in 1942 as an annex to the Mare Island Naval Shipyard with the mission of receiving, sorting, storing, and issuing ammunition to ships and Navy facilities in the San Francisco Bay Area. At the time, Port Chicago encompassed approximately 7,700 acres. By 1944, munitions passing through the Port Chicago waterfront exceeded the capacity of the new facility and the Navy acquired approximately 5,200 acres of land in the Diablo Creek Valley. This area is now known as the Inland Area and Port Chicago is now known as the Tidal Area (MMEC Group, 2020a).

Throughout its history and into the 1990s, the Inland Area was used primarily for ammunition storage, but also included facilities for maintenance, administration, and housing. In 1999, the Inland Area was placed in a reduced operational status, and in

November 2005, the Defense Base Realignment and Closure Commission recommended that the Inland Area be operationally closed and eventually transferred from federal ownership. Furthermore, the Tidal Area, along with a portion of the Inland Area (115 acres), was reassigned to the Department of the Army on September 30, 2008; this property was renamed Military Ocean Terminal Concord (MOTCO) and the Army took over as lead agency for MOTCO. The Inland Area was declared surplus in March 2007 and was operationally closed in September 2008. Currently, no military operations are performed at the former NAVWPNSTA Seal Beach Det Concord, and the property is being prepared for transfer from federal ownership (MMEC Group, 2020a).

2.1.2 Historical Operations at the RDA

Based on historical aerial imagery, the former airfield was constructed in the early 1940s and was used to store and sort aircraft and related materials. Until 1946, portions of the RDA were used for maintenance and synchronization of aircraft-mounted machine guns. In the late 1960s, a portion of the former north-south-oriented runway was demolished and redeveloped with residential dwellings that housed U.S. Coast Guard personnel. Metal debris was observed in several areas along the former runways and taxiways. The land surrounding the airfield was used for agricultural purposes since the beginning of military operations in the area (MMEC Group, 2020a).

2.1.3 Physical Setting

This section provides information on the regional and site-specific physical setting, including climate, topography, vegetation types, geology and soil, hydrology, hydrogeology, ecology, and cultural resources, as appropriate.

2.1.3.1 Climate

The climate in the area of the former NAVWPNSTA Seal Beach Det Concord is Mediterranean-like, ranging from warm, dry summers to cool, moist winters. The average annual monthly temperatures range from approximately 55°F to 81°F in the summer and approximately 40°F to 62°F in the winter. Prevailing winds are from the west, and the mean annual precipitation is approximately 16 inches per year. The rainy period is from October to May (U.S. Climate Data, 2020).

2.1.3.2 Topography

The RDA is located on the eastern margin of Clayton Valley near the southwestern flank of the Los Medanos Hills. In general, the Inland Area has variable topography, with the western half designated as alluvial slope and the norther portion sloping steeply from 100 feet to more than 800 feet above mean sea level. The topography at the RDA is generally flat, with an average elevation of 95 to 110 feet above mean sea level and open rolling hills to the east. Stormwater runoff from the RDA flows toward Mount Diablo Creek, an ephemeral creek that traverses the Inland Area (MMEC Group, 2020a).

2.1.3.3 Geology and Soil

The former NAVWPNSTA Seal Beach Det Concord is located near the boundary of the Coast Ranges and Great Valley geomorphic provinces. Consolidated Tertiary formations are exposed in outcrops along the eastern edge of Los Medanos Hills within the Inland Area. The Inland Area is underlain by a Pliocene nonmarine sedimentary rock formation that is overlain by alluvium with variable thickness and consists predominantly of silty soil, but also contains sandy and clayey soil. A 3-foot-thick layer of dark brown or gray, clayey soil is consistently present at the surface in alluvium throughout the region. Broad lowlands are underlain by the thick unconsolidated Pleistocene-age alluvial sediments that were eroded from up-thrown blocks. Soil in the Inland Area tends to be coarser at shallow depths but grade comparatively finer than soil in the north-central area. The soil at the RDA generally consists of Kimball gravelly clay loam over clay, with the Antioch loam over clay to the north and east in the field area (MMEC Group, 2020a).

Permeability of these soil types is very low, and runoff is slow to medium, with a slight to moderate erosion potential where the soil is exposed (MMEC Group, 2020a).

2.1.3.4 Hydrology

The former NAVWPNSTA Seal Beach Det Concord is located in the Mount Diablo/Seal Creek watershed, which drains an area of about 36 square miles. The watershed is bounded to the south by the northern peak of Mount Diablo, to the north by Suisun Bay, to the west by the Los Medanos Hills, and to the east by the Willow Creek and Kirker Creek Watersheds. Streams that drain the watershed have their headwaters on the slopes of Mount Diablo and flow through the ephemeral Mount Diablo Creek (referred to as Seal Creek after it enters NAVWPNSTA Seal Beach Det Concord). Seal Creek runs through the central portion of the Inland Area and empties into Suisun Bay. In addition, the Contra Costa Canal cuts through the Inland Area (MMEC Group, 2020a).

Surface water flows into Mount Diablo Creek and then Hastings Slough, and into Suisun Bay. Surface water from the tributary exits the former NAVWPNSTA Seal Beach Det Concord to the south, where surface water then migrates underground for approximately 1 mile before it reemerges as surface flow within the city of Concord. In the vicinity of the northern portion of the site, surface water drains separately along Holbrook Drive. Numerous stock ponds, watering holes, and seepage ponds are also present in the Inland Area (MMEC Group, 2020a).

2.1.3.5 Hydrogeology

Groundwater in the Inland Area occurs in both unconsolidated formations (coarser sand and gravel alluvial deposits) and bedrock and is typically encountered under semiconfined to confined conditions at 30 to 50 feet below ground surface (bgs) and deeper. Groundwater quality is moderate to poor, exhibiting total dissolved solids, hardness, chlorides, and iron at relatively high concentrations. Shallow groundwater was encountered at approximately 6 feet bgs in temporary wells installed during an investigation at the Runway Apron Fuel Pit/Septic System Area at the RDA (MMEC Group, 2020a). Other previous investigations within the Inland Area indicated that groundwater is typically encountered at depths ranging from 35 to 118 feet bgs, and that groundwater flow is toward the west-southwest (TriEco-Tt, 2016).

The RDA is located within the Clayton Valley Groundwater Basin. Groundwater flow throughout the basin generally mimics but is a subdued expression of topography. Localized variations in groundwater flow direction are likely because of natural variations in surface and subsurface features, as well as manmade structures and activities. No municipal wells are currently near the RDA. A former agricultural well that predates the Navy's use of the site was located along the eastern boundary of the RDA and was relocated and properly abandoned in 2018. The agricultural well was screened across the saturated zone to 250 feet bgs with depth to water occurring at 7 feet bgs (MMEC Group, 2020a).

2.1.3.6 Ecology

This section describes the ecology of the RDA, including vegetation, terrestrial wildlife, and marine wildlife. The most recent Biological Opinion was an amendment obtained in 2018 (USFWS, 2018) and makes (and reiterates) determinations regarding vegetation and wildlife.

Vegetation Types

The RDA consists of annual grassland dominated with non-native plants and low-level disturbances. Generally, the site is dominated by Italian ryegrass (*Lolium multiflorum*), soft chess (*bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and wild oats (*Avena fatua*), as well as many nonnative, ruderal forb species such as yellow star-thistle (*Centaurea solstitialis*), filaree (*Erodium spp.*), mustard (*Hirschfeldia incana*), and bindweed (*Convolvulus arvensis*). (MMEC Group, 2020b).

Terrestrial Wildlife

The grassland at the RDA provides potential habitat for numerous raptors, including California fully protected species (white-tailed kite [*Elanus leucurus*] and golden eagle [*Aquila chrysaetos*]) and California species of special concern (burrowing owl [*Athene*

cunicularia]). Although the golden eagle may forage at the RDA, there is no suitable nesting habitat (MMEC Group, 2020a).

The grassland habitat also has a low probability to support the California red-legged frog (CRLF) (*Rana draytonii*), a federally threatened and state species of special concern, and the California tiger salamander (CTS) (*Ambystoma californiense*), a federal and state threatened species. The Alameda whipsnake (*Masticophis lateralis*) is a special-status animal species that was found during a previous investigation at IR Site 29. The potential habitat for the Alameda whipsnake includes scrub patches dominated by the California sage (*Artemesia california*) and rock outcrops present on ridges in the portion of the Inland Area on the southeastern side of Bailey Road, which is located approximately 2 miles southeast of the RDA (MMEC Group, 2020a).

Aquatic Wildlife

The canal on the south side of the RDA is potential aquatic habitat for the CRLF, but the canal is inhabited by mosquito fish, making survival for tadpoles or young frogs unlikely. One possibly spring-fed pool in the southwest portion of the RDA may provide marginal habitat for the CRLF. The pool is shallower than aquatic habitat typically preferred by the CRLF but is not inhabited by mosquito fish (MMEC Group, 2020a).

Water and Wetlands

Based on results of the delineation of state and federal waters and wetlands (Tierra Data, Inc. [TDI], 2008), waters and wetlands observed near the former airfield appear to be associated with the historical floodplain of Mount Diablo Creek, which originally traversed the area but was rerouted about 100 years ago.

Several surface ponds occur in the flat fields adjacent to a perennial spring within the RDA. Vernal pools (i.e., pools that are underlain by soil having a restrictive subhorizon and supporting endemic plant species and/or invertebrate species) were determined to be entirely absent from the former NAVWPNSTA Seal Beach Det Concord (City of Concord, 2012).

The following descriptions of the preliminary mapped wetland vegetation types have been excerpted or summarized from the 2008 wetland delineation report (TDI, 2008) and 2008 botanical report (Vollmar Natural Lands Consulting [Vollmar], 2008):

• **Riparian Woodland and Scrub:** In the former airfield area, including a ditch along the eastern and southeastern perimeter, there is a system with permanent water that drains to the west. Both drainages continue through and past the Little League baseball fields along Holbrook Drive, eventually reaching Walnut Creek and then Suisun Bay. Water flow is sufficiently permanent to support mosquitofish, treefrogs, crayfish and some riparian vegetation. Vegetation is

similar to other riparian vegetation within the Inland Area, including willow (*Salix* spp.) trees and shrubs, and potentially cottonwood (*Populus fremontii*), valley oak, elderberry (*Sambucus racemosa*), California buckeye, and mulefat (*Baccharis salicifolia*).

- **Freshwater Marsh:** Dominated by rushes (*Juncus xiphiodies*) and stachys (*Stachys adjugoides*), freshwater marsh is adjacent to the drainage system that supports the riparian vegetation and is connected with shallow swales and ditches.
- Ephemeral Pools: Supporting nonnative hydric vegetation, several ephemeral pools are adjacent to the freshwater marshes or impounded by former airfield runways or other features. These pools commonly contain wetland species indicator plants, including rabbitsfoot grass (*Polypogon maritimus* and *Polypogon monspeliensis*), barley (*Hordeum marinum*), and bird's foot trefoil (*Lotus corniculatus*) in a matrix of upland annual grasses and weedy forbs.
- Ephemerally Wet Grasslands (Seasonal Wetlands): Ephemerally wet grasslands dominated nearly exclusively by *Hordeum marinum* (a wetland species indicator plant) are common throughout the former airfield area in a diffuse pattern that presumably follows the former floodplain of Mount Diablo Creek or other swales and depressions of a former floodplain or basin. These grasslands occur on hydric soil, but they may or may not be inundated for sufficient duration to qualify as wetland hydrology.

2.1.3.7 Cultural Resources

Cultural resources are historic or prehistoric objects, sites, buildings, or districts related to previous human activity. Both federal and state laws require their preservation and protection. A National Register-eligible prehistoric archaeological site containing human remains, identified as CA-CCO-680 (approximately 2.7 acres), is located in the RDA. This site is subject to rules and regulations identified in the 2017 Section 106 Memorandum of Agreement (MOA) between the Navy, the California State Historic Preservation Office, the City of Concord, and the East Bay Regional Park District (Navy, 2017) and the Native American Graves Protection and Repatriation Act (Title 25 U.S.C. § 3001 et seq.). The City of Concord is developing proposed plans to cap and preserve this site in place, as described in the MOA and the appended historic properties treatment plan (Navy, 2017). Avoidance and minimization measures will be taken, and an on-call archaeologist will be at the site when ground disturbance occurs within approximately 100 feet of the existing 100-foot avoidance buffer that extends around CA-CCO-680.

2.1.4 Current and Future Land Use

The RDA currently includes the remnants of the former runway, former runway support infrastructure, and undeveloped land and is characterized as open space. The RDA is currently used for cattle grazing. Cattle grazing occurs year-round and rotates among the available areas, depending on the condition of vegetation and timing of CERCLA environmental work (MMEC Group, 2020a).

The City of Concord is pursuing for potential reuse a large portion of the Inland Area, which includes the RDA. Future land uses will include residential and commercial development, predevelopment wetland mitigation, and associated improvements (MMEC Group, 2020a).

2.2 **Previous Investigations**

A series of investigations has been conducted at the RDA between 1993 and 2020. The investigations included a site investigation, an environmental status report (ESR), a preliminary assessment (PA), PA/reverification investigation (RVI), three site inspections (SIs), and an SSI.

Investigations at the RDA have included visual and geophysical surveys, soil sampling, trenching, and intrusive investigation and removal of individual subsurface anomalies. This section summarizes the results of the previous investigations relevant to the NTCRA within the RDA. Additional information on these investigations can be found in the SSI Report (MMEC Group, 2020a and 2020b).

2.2.1 1993 Site Investigation Report

A limited detector-aided geophysical survey was conducted at the Bore Sighting Range, approximately 5.3 acres of land within the RDA, during an investigation of IR Site 24B. This investigation included collecting soil samples on the southern face of the target berm of the Bore Sighting Range. Analytical results indicated no elevated concentrations of metals were present in soil on the target berm. No MEC items were found during investigation efforts (MMEC Group, 2020a).

2.2.2 2002 ESR

In August 2002, an ESR was prepared for the Inland Area. Parcel 46, which encompassed the entire airfield and is now referred to as RDA, was recommended for further investigation. Review of aerial photographs identified open storage of bulk material and possibly debris collection and disposal that occurred in the 1950s and 1960s. Historical drawings indicated that the area was used for salvaging operations. According to personnel interviews, the airfield was used for training fighter pilots prior to the construction of ammunition magazines in the 1940s. Facility records indicated the airfield was used for storage of a decommissioned oil sprayer, leaky gas tanks, Napalm, and anti-personnel bombs. Explosive ordnance disposal burning operations (including Napalm) and metal salvage operations also occurred on the site.

As a result, the ESR recommended a geophysical investigation and/or trenching in areas adjacent to the airfield to locate potential disposal areas and randomized soil sampling in select areas (MMEC Group, 2020a).

2.2.3 2007 PA

A PA was completed under the MRP at the former NAVWPNSTA Seal Beach Det Concord. The PA covered 12 areas of concern, including the Bore Sighting Range at the RDA. Munitions used at the Bore Sighting Range included 0.30- and 0.50-caliber machine guns and 20-millimeter (mm) guns. However, geophysical survey results for the berm concluded that the Bore Sighting Range was used only for sighting and prior sample results indicated munitions constituents (MC) were not present in target berm soil. On March 15, 2007, EPA concurred that no further action (NFA) was necessary at the Bore Sighting Range based on the following factors (MMEC Group, 2020a):

- No MEC items were recovered
- The former Bore Sighting Range within the RDA was not suspected to contain MEC, and chemical contamination was not identified at the Bore Sighting Range based on previous sampling results

2.2.4 2013 PA/RVI, Portions of the RDA

In 2013, a PA/RVI was conducted for the Inland Area to identify potential areas overlooked during previous assessments and to verify the appropriateness of previous recommendations for NFA for the selected sites or the need for further response actions. Because munitions-related items (40mm shell casings) were encountered near the northern boundary of the parking area at the Runway Apron Fuel Pit/Septic System Area during the land survey and intrusive investigation work in summer 2013, a detector-aided surface clearance was performed to provide information about the lateral extent of munitions-related items on and around the former parking area. In total, 36 munitions-related items were encountered and 271 additional subsurface anomalies were identified within the 25-acre Runway Apron Fuel Pit/Septic System Area. All items encountered were left at the site and were not classified as to whether they were MPPEH/MEC or MDAS (MMEC Group, 2020a).

In response to the discovery of the munitions-related items, an additional detector-aided surface clearance was performed from September 24 to October 8, 2013, over

approximately 125 acres of the former airfield. In total, 18 munitions-related items and two areas with a high density of subsurface anomalies (in transects down to 6 inches bgs) were encountered on the ground surface during the additional detector-aided surface clearance. All munitions-related items (18 munitions-related items and 2 areas with a high density of subsurface anomalies) were located adjacent to the former runway or concrete runway apron. NFA was recommended to address MPPEH in the area south of the concrete runway apron and to investigate soil gas or groundwater, because no unacceptable human health or ecological risks were identified and no evidence existed of a release from the former Runway Apron Fuel Pit/Septic System Area (MMEC Group, 2020a).

2.2.5 2017 SI, Northern Portion of the RDA

In 2017, an SI was conducted to investigate whether MPPEH/MEC were present within the northern portion of RDA. Field activities included a detector-aided surface clearance, a DGM survey of approximately 14 acres, MDAS management, and collection of surface soil samples for analysis of MC. No intrusive investigation of detected anomalies was performed in the northern portion of RDA (MMEC Group, 2020a).

No MEC items were identified during the surface clearance; however, six MPPEH items were recovered and inspected and certified as MDAS. The following MDAS items were identified (MMEC Group, 2020a):

- One 40mm cartridge case
- One 3-inch projectile cartridge case
- One lid to a 20mm ammunition can
- One 25-pound empty and unfuzed practice bomb
- One bomb lug
- One rocket tail fin

During the DGM survey, 3,701 target anomalies were identified in subsurface soil; these anomalies were not intrusively investigated (MMEC Group, 2020a). Based on the results of the geophysical survey, metallic items that may be MPPEH are present in the subsurface at the Northern RDA. As a result, the SI Report recommended the following (CH2M HILL Kleinfelder, A Joint Venture [KCH], 2018a):

- A remedial investigation (RI) should be performed at the Northern RDAs because completion of full surface clearance and DGM survey of areas were not covered during the SI.
- An intrusive investigation of selected target anomalies from the DGM survey should be conducted.

 Analytical results indicated that metals concentrations in soil samples exceeded screening levels, and the screening-level human health risk assessment (SLHHRA) and Tier 1 screening-level ecological risk assessment (SLERA) completed as part of the SI indicated that further investigation was warranted.

2.2.6 2017 SI, Southern Portion of the RDA

An SI was conducted in the southern portion of RDA to identify the presence of MPPEH/MEC. Field activities included a detector-aided surface clearance, a DGM survey, reacquisition of a subset of anomalies, intrusive investigation of the selected anomalies, MDAS management, and collection of surface soil samples for analysis of MC.

The DGM survey was performed over 100 percent of approximately 18 acres and included transect 100 percent coverage (approximately 1.4 acres) of the proposed areas where DGM transects were planned. Based on DGM data processing and target selection, 6,026 target anomalies were identified in the southern portion of the RDA. During the surface clearance and intrusive investigation, 426 DGM anomalies were investigated (a statistically representative number with 95 percent confidence level and within a ±5 percent margin of error). No MEC items were recovered; however, 109 MPPEH items were recovered that were all certified as MDAS, as summarized below (MMEC Group, 2020a).

Surface Clearance

- Four 20mm cartridge cases
- Fifty-eight 40mm cartridge cases
- One 90mm cartridge case
- One 5-inch projectile cartridge case
- Two 0.50-caliber cartridge cases

Intrusive Investigation

- Thirteen 20mm cartridge cases
- One 30mm cartridge case
- Ten 40mm cartridge cases
- One 5-inch projectile cartridge case
- One Mark 18 Mod 2 dummy fuze
- One Mark 13 primer cartridge
- Two shipping container nose covers and one nose cap
- Thirteen small arms cartridge cases (0.22- and 0.50-caliber, 0.38-special, and 7.62-mm)
It was recommended that an RI be performed at the Southern RDAs based on the following conclusions (KCH, 2018b):

- The potential exists that munitions with an explosive danger may remain in the subsurface at the Southern RDA.
- Analytical results indicated concentrations of metals and polycyclic aromatic hydrocarbons exceeded screening levels, and the SLHHRA and Tier 1 SLERA indicated that further evaluation was warranted.

2.2.7 2017 SI, Runway and Adjacent Area

In 2017, an SI was performed at the Runway and Adjacent Area (i.e., area of the RDA outside the paved runway surfaces) to identify whether MPPEH/MEC were present in soil and whether soil in the area had been impacted by former site uses. Vegetation was cleared, a detector-aided visual surface clearance was performed, and a DGM survey was successfully performed over approximately 93 acres of the RDA (MMEC Group, 2020a).

Based on DGM data processing and target selection, 1,902 target anomalies were identified. The anomaly density was generally greatest near the runways and paved areas; linear anomalies also were identified in the northern portion of the investigation area that were likely to represent underground utilities and unlikely to represent MEC (MMEC Group, 2020a).

The SI findings were generally consistent with the SI results for the northern and southern portions of the RDA. No MEC items were identified on the surface during the detector-aided surface clearance or during the DGM survey at the Runway and Adjacent Area, and all munitions items encountered were certified as MDAS. As a result, the probability of encountering MPPEH/MEC on the surface was considered low. However, because no intrusive investigation of DGM anomalies was performed at the Runway and Adjacent Area, it was recommended that an intrusive investigation be performed to confirm the presence or absence of subsurface MPPEH/MEC (MMEC Group, 2020a).

2.2.8 2019–2020 SSI at the RDA

In 2019, an SSI was performed at the RDA to further evaluate the nature and extent of MPPEH/MEC contamination in soil. The SSI included the following field activities (MMEC Group, 2020a):

- A land survey and vegetation clearance
- A detector-aided surface clearance

- DGM of 38 acres of accessible areas in the RDA that were not previously investigated
- Reacquisition of anomalies
- Intrusive investigation of previously identified and SSI anomalies
- Mag-and-dig of inaccessible areas (i.e., 0.2 acres south of the Former Runway Apron Fuel Pit/Septic System Area)
- Potholing of potential high-density anomaly areas identified during prior DGM surveys
- MPPEH management

The DGM survey identified an additional 4,286 subsurface anomalies. Those anomalies were added to the 11,203 subsurface anomalies identified during the 2017 investigations, resulting in a total of 15,489 anomalies in subsurface soil at the RDA. After 872 discrete targets were removed from selected areas during the 2017 SIs, the total anomalies remaining in subsurface soil was revised to 14,617. A subset of 1,397 anomalies was then reacquired and intrusively investigated during the SSI to characterize the presence and extent of MPPEH at the RDA. Overall, 13,212 discrete anomalies remained in the subsurface at the RDA (MMEC Group, 2020a).

In total, 25 MEC items were recovered during surface clearance activities. No MEC items were encountered during the intrusive investigation or during potholing and magand-dig operations. The MEC items with the greatest potential hazard risk were the M100 Series bomb fuzes and the MK 146 rocket tail fuze. Additionally, 137 MDAS items and 6,000 pounds of metal were recovered and transported to an offsite recycling facility (MMEC Group, 2020a).

During the SSI, surface MEC items were recovered within the northeastern corner of the north-south- and east-west-oriented runways and all munitions-related debris and metal was encountered in the upper 2 feet bgs, consistent with the historical use of the RDA for storage and sorting of metal debris and for previous agricultural use. Munitions-related debris was encountered in the general vicinity of the finished runway surfaces, and cultural debris (e.g., horseshoes) was encountered in the outlying areas away from the former runway surfaces. Furthermore, the pothole logs completed to 4 feet bgs indicated that subsurface soil consisted of more disturbed fill in the upper 1 to 2 feet bgs, where metallic anomalies were found. The surficial fill at the RDA is underlain by native alluvium consisting predominantly of the dark brown or gray silty to sandy and clayey soils found throughout the Inland Area. No disposal or burial pits were encountered throughout the RDA, which was consistent with the historical sorting, storage, and recycling operations at the site (MMEC Group, 2020a).

Based on the findings in the SSI Report, uninvestigated anomalies remaining in the subsurface of the RDA pose a moderate severity and significant contact level.

Therefore, an NTCRA and/or an evaluation of future remedial alternatives in an FS was recommended (MMEC Group, 2020a).

2.2.9 2020–2021 Remedial Investigation at the RDA

A RI is currently being performed at the RDA to further evaluate the nature and extent of chemical contamination in soil, soil gas, and groundwater (i.e., concentrations exceed project screening levels). The RI includes the following field activities:

- Soil sampling at 46 locations to assess the vertical extent of impacted soil identified during the 2017 SIs (KCH, 2018a and 2018b)
- Soil sampling at 88 locations to assess the lateral extent of impacted soil identified during the 2017 SIs and assess the nature and extent of impacted soil in the proposed area
- Soil sampling at eight locations immediately beneath MEC items, which were identified on the surface during the 2019 SSI (MMEC Group, 2020a)
- Soil sampling at two locations where MEC items were detonated in 2017 and 2019
- Groundwater monitoring well installation and sampling at six locations to evaluate the nature and extent of contamination, assess the groundwater gradient, and provide sufficient data to estimate a reliable exposure concentration for use in the risk assessment

Based on the findings in the RI Report, an evaluation of future remedial alternatives in a FS is planned to address chemical concentrations greater than project screening levels in site environmental media (MMEC Group, in preparation).

2.3 MEC Hazard Analysis

A MEC Hazard Assessment (HA) was completed during the SSI activities to assess whether current site conditions presented an explosive safety risk and the likelihood for MEC potentially present at the site to detonate and potentially cause harm as a result of human activities. The explosives hazard was determined with the consideration of three primary risk factors: (1) the presence of a MEC source, (2) site characteristics that affect the accessibility or pathway between the source and human receptor, and (3) human factors that define the receptors and types of activities that may result in direct contract between receptor and source of MEC. Based on the absence of disturbed soils below depths of approximately 24 inches bgs and the findings of shallow munitions debris (within the top 24 inches of soil), the potential for the presence of MEC in the subsurface deeper than 24 inches is unlikely. The MEC HA concluded that the MEC exposure pathway is potentially complete at the RDA due to the potential for MEC, combined with human receptors associated with both current and future land use. Based on the moderate severity and significant contact level of the recovered MEC items, it was recommended that a NTCRA and/or an evaluation of future remedial alternatives in a feasibility study be performed (MMEC Group, 2020a).

2.4 Source, Nature, and Extent of Contamination

This section describes the conceptual site model (CSM), including source, nature, and extent of MPPEH/MEC contamination, at the RDA based on information from previous investigations and the MEC HA. The CSM is a comprehensive representation of the RDA that documents the potential for exposure (under current and future land uses) to munitions-related items in soil based on the source of contamination, release and transport mechanisms, exposure pathways, and anticipated site receptors. Additionally, the extent of contamination is discussed relative to the anomalies identified based on the DGM data collected during previous investigations. Figure 2-2 provides a graphical representation of the current CSM.

An RI is being performed (under separate contract) to collect sufficient data to evaluate the nature and extent of chemicals of potential concern in soil, groundwater, and soil gas at the RDA. The RI results and evaluation of the nature and extent of contamination in site environmental media is still pending. All contamination that is not found during the NTCRA under the 13,212 anomalies will be addressed in the forthcoming RI/FS Report.

2.4.1 Sources of Contamination

Portions of the RDA were used as a former airfield, which was used to store and sort aircraft and related materials, recycling operations, maintenance and synchronization of aircraft-mounted machine guns from 1940 to 1946. MPPEH/MEC items and munitions-related debris were found during previous investigations while investigating target anomalies. According to the SSI Report, 13,212 anomalies remain in subsurface soil at the RDA.

2.4.2 Release and Transport Mechanisms

Munition-related items are present in surface and subsurface soil at the RDA. Surface runoff at the RDA occurs only locally after periods of intense rainfall. However, the site topography is relatively flat, and the potential for surface water runoff to transport MEC or MPPEH off the site is considered unlikely. There is no frost line in Concord, California, and there is no potential for frost heave to occur at the RDA that could potentially bring subsurface MPPEH/MEC to the surface. MEC could be released from subsurface soil if disturbed during intrusive activities.

2.4.3 Exposure Pathways and Receptors

Based on the current and anticipated land use (see Section 2.1.4), primary human receptors for the RDA include hypothetical future residents, future and current commercial/industrial workers (i.e., ranchers and Navy personnel), future and current construction workers, and future recreational users.

Ecological receptors include domestic animals and burrowing mammals. Buried MPPEH/MEC pose an explosive hazard to domestic animals and burrowing mammals at the site. The exposure route for MPPEH/MEC is through direct physical contact.

Potentially complete exposure pathways were identified for these receptors from contact with MEC/MPPEH in soil. Although the Navy currently restricts public access to the Inland Area (including the RDA), a portion of the site is leased as cattle grazing land and future use is intended as residential and commercial development, predevelopment wetland mitigation, and associated improvements.

2.4.4 Nature and Extent of Soil Contamination

In total, approximately 15,489 discrete subsurface anomalies have been detected at the RDA. Of those anomalies, 4,286 anomalies were detected during the 2019 SSI DGM survey over approximately 38 acres of the RDA and 11,203 anomalies were detected during the 2017 DGM surveys over approximately 126 acres of the RDA. A small portion of the anomalies may have been counted during both the 2017 and 2019 DGM surveys, so the total is approximate. During the 2017 SIs, 872 discrete targets were removed from selected areas. An additional 1,397 subsurface anomalies were reacquired and removed from the site during the 2019 SSI. As a result, an estimated 13,212 discrete anomalies currently remain in the subsurface at the RDA (MMEC Group, 2020a).

During the 2019 SSI, 1,800 pounds of MDAS was recovered, primarily clustered around the former runways, with the largest density occurring in the triangular area at the northeastern corner of the north-south- and east-west-oriented runways. Additionally, 25 MEC items were recovered during the detector-aided surface clearance, with most items found within the triangular area at the northeastern corner of the north-south- and east-west-oriented runways (Figure 2-3). The MEC items with the greatest potential to pose a hazard risk were M100 Series bomb fuzes and MK 146 rocket tail fuzes (MMEC Group, 2020a).

During the 2019 SSI, all items identified as MEC were identified during the detectoraided surface clearance. The vertical extent of identified MDAS and cultural debris did not exceed 2 feet bgs. Consistent with the previous use of the site, the vertical extent of metallic anomalies detected in the subsurface is attributed to surface erosion and deposition, agricultural activities, and frequent vegetation clearance activities that have occurred since the Navy ceased using the site. No disposal or burial pits were encountered throughout the RDA, which is consistent with the historical use of this site for sorting, storage, and recycling operations (MMEC Group, 2020a).

3.0 Identification of Removal Action Objectives

This section describes the RAO to address MPPEH/MEC in soil at the RDA, and summarizes the NTCRA scope and planned activities, schedule, and the ARARs that need to be met to achieve the RAO.

3.1 Removal Action Objective

The overall goal of the NTCRA is to reduce/mitigate munitions-related items and explosive hazards posed to human health and the environment from MPPEH/MEC remaining in soil within 81 acres of the approximately 186-acre RDA. As such, the following preliminary RAO was developed:

• Protect human health and the environment by reducing/mitigating the risk of an uncontrolled encounter with potential munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with current and future site use.

The RAO for this NTCRA may be altered after this EE/CA report is submitted if additional information becomes available from stakeholders or other interested parties that requires reevaluation of the RAO. Any alterations and refinements to the preliminary RAO will be reflected in the final RAO established in the Action Memorandum.

3.2 NTCRA Scope and Planned Activities

The scope of the NTCRA is to address the potential exposure to munitions-related items or explosive hazards to human health and the environment from MPPEH/MEC remaining in soil at the site. The following activities are planned to be performed during the NTCRA to meet the RAO:

- Vegetation removal
- Reacquisition of remaining anomalies
- Subsurface investigation and removal of all remaining anomalies
- Confirm with magnetometer and/or EM61 that the location is clear of any anomaly that may have been masked by other metal in the hole
- Post-removal verification survey using DGM methodologies to verify all anomalies have been removed
- Reacquisition of identified anomalies (if any)
- Excavation and anomaly removal (if required)
- Management of all discovered MPPEH/MEC

Additionally, soil samples will be collected for analysis of metals and explosives under any discovered munitions items, regardless of whether there is evidence of a release, and if MMPEH/MEC are explosively treated (i.e., post-demolition shot). MC results will only be used to confirm no contamination remains in soil post-demolition or following removal of compromised MPPEH/MEC items. No remediation goals have been established for this site; however, the Navy will identify project screening levels in the SAP. If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment will be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil will be removed from the site and disposed of at a licensed facility. The risks posed to human health and the environment from chemical contamination in environmental media at the RDA are being evaluated separately during the in-progress remedial investigation of the RDA.

Because the planned future land use of the RDA includes residential development, this EE/CA incorporates a goal to reduce/mitigate explosive hazards at the RDA pending a final remedy determination in a future decision document.

3.3 NTCRA Schedule

Activity	Dates
EE/CA Public Notice and 30-Day Comment Period	July 2022
Signed Action Memorandum	October 2022
Final Combined NTCRA Work Plan/Sampling and Analysis Plan (SAP)	April 2023
Perform NTCRA Field Activities*	April 2023 through October 2023
Final Removal Action Completion Summary Report	April 2024
After Action Report	March 2024

The tentative schedule for the NTCRA at the RDA is summarized below.

Notes:

* = Biological constraints limit the fieldwork season to between April 1 and October 15.

These dates may be adjusted based on completion of the regulatory agency and public review and comment process.

3.4 Applicable or Relevant and Appropriate Requirements

ARARs include site-specific standards, requirements, criteria, or limitations established under federal environmental law or any more stringent standards, requirements, criteria, or limitations promulgated in accordance with a state environmental statute. The identification of ARARs is related to contaminants, specific site characteristics, and the particular removal action proposed for the site. The NCP (Title 40 CFR Part 300) states, "Removal actions... shall to the extent practicable considering the exigencies of the situation, attain ARARs under federal environmental or state environmental or facility siting laws" (Title 40 CFR § 300.415[j]).

The NCP (Title 40 CFR § 300.5) defines "applicable requirements" as:

...those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site.

The NCP (Title 40 CFR § 300.5) defines "relevant and appropriate requirements" as:

...those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not "applicable" to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site.

State requirements identified in a timely manner and that are more stringent than corresponding federal requirements may be applicable or relevant and appropriate.

The three types of ARARs—chemical-, location-, and action-specific —are described below.

- **Chemical-Specific ARARs** are usually health- or risk-based numerical values or methodologies that, when applied to site-specific conditions, result in the establishment of numeric values (i.e., cleanup levels). These values establish the acceptable amount or concentration of a chemical that may remain in or be discharged to the environment.
- Location-Specific ARARs restrict the concentrations of hazardous substances that may remain at the site or the types of response activities that may be performed at a site solely due to its location (i.e., presence of wetlands, habitat for sensitive species, floodplains, etc.).
- Action-Specific ARARs are requirements for, or limitations on, actions taken to clean up hazardous substances or pollutants. They are identified in relation to

the particular activities that are selected as part of the remedy and address the design, construction, and operation of the remedy.

Because CERCLA onsite response actions do not require permitting, only substantive requirements are considered as potential ARARs. Administrative requirements such as approval of or consultation with administrative bodies, issuance of permits, documentation, reporting, recordkeeping, and enforcement are not ARARs for CERCLA actions confined to the site.

ARARs must be identified on a site-specific basis from information about specific chemicals at the site, the site location and specific features of the site, and actions that are being considered as part of the response action. Appendix A identifies and evaluates ARARs on a site-specific basis from information about specific chemicals at the site, the site location and specific features of the site, and the alternatives being evaluated and sets forth the Navy determinations regarding those potential ARARs for each response action alternative retained for detailed analysis in this EE/CA. In addition, non-promulgated advisories or guidance issued by federal or state governments, while not legally binding and therefore not ARARs, may be useful and are evaluated in Appendix A as potential "to be considered" (TBC) requirements that may complement but not override ARARs.

4.0 Identification and Analysis of Removal Alternatives

Potential removal alternatives to address MPPEH/MEC remaining in subsurface soil within the RDA were selected based on the RAO, ARARs, and EPA (1993) guidance. The technologies and process options specific to the response actions are screened, and the retained technologies and process options of each general response action are assembled into potential removal alternatives. Technologies are combined, if applicable, to create alternatives that will meet the RAO that is appropriate for the site conditions and have been shown to be effective at similar sites. The potential removal alternatives are then evaluated with respect to their effectiveness, implementability, and cost.

Based on the guidelines presented in the "Guidance on Conducting Non-Time-Critical Removal Actions Under CERCLA" (EPA, 1993), only the most qualified technologies that apply to the media or source of contamination should be discussed in the EE/CA. Limiting the number of alternatives to those that have been selected in the past at similar sites or for similar contaminants provides an immediate focus to the discussion and selection of alternatives. The remainder of this section summarizes the general response actions, presents the evaluation criteria, identifies the potential removal alternatives, and summarizes the analysis of alternatives with respect to the evaluation criteria.

4.1 General Response Actions

This section identifies general response action categories that include:

- 1. **No action:** No response actions would be taken. Potential MPPEH would be left in place without implementing any LUCs or active remediation.
- LUCs: LUCs are physical, legal, or administrative mechanisms to implement restrictions on land use and access to limit exposure of landowners or users of the property to potential MPPEH (i.e., institutional controls [ICs] and or engineering controls [ECs]). LUCs also can be used to maintain the integrity of a response action. Monitoring and inspections occur to ensure effectiveness of and compliance with restrictions.
- 3. Anomaly reacquisition, removal, post-removal verification survey by DGM, and destruction: Potential MPPEH/MEC would be reacquired and removed to reduce the potential for direct contact with explosives and treated by detonation to eliminate the explosive hazard. A post-removal verification survey using DGM methodologies would be performed to verify no detectable explosive anomalies remain in the subsurface. Residual MDAS would be demilitarized and recycled

off site. Soil samples would be collected for analysis of MC if a munitions-related item is found or on the footprint of the former munitions item post-detonation. ICs would be included as de-facto restrictions controlled by the Navy to reduce/mitigate explosive hazards and risk of residual munitions in soil.

4. Anomaly reacquisition, removal, post-removal verification survey by AGC, and destruction: Potential MPPEH would be removed to reduce the potential for direct contact with explosives and treated by detonation to eliminate the explosive hazard. A post-removal verification geophysical survey with AGC would be performed to confirm no detectable explosive anomalies remain in the subsurface. Residual MDAS would be demilitarized and recycled off site. Soil samples would be collected for analysis of MC if a munitions-related item is found or on the footprint of the former munitions item post-detonation. ICs would be similar to that described in Alternative 3.

The no-action alternative is retained throughout the evaluation process as required by the NCP to provide a baseline for comparison with other alternatives. Table 4-1 summarizes the screening of technologies and processes associated with the general response actions. The removal alternatives discussed in Section 4.2 were selected based on the general response actions.

4.2 Description of Removal Alternatives

The following alternatives were identified to address MPPEH/MEC remaining in soil at the RDA based on the general response actions and screening discussed in Section 4.1:

- Alternative 1, No Action
- Alternative 2, LUCs
- Alternative 3, Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction
- Alternative 4, Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

Sections 4.3.1, 4.3.2, and 4.3.3 describe the components of each alternative. Specifically, the alternatives are analyzed for effectiveness, implementability, and cost. Following the individual analysis of alternatives presented below, each alternative is compared against the others to aid in determining the recommended alternative (see Sections 5.0 and 6.0).

4.2.1 Alternative 1 – No Action

Under Alternative 1, no action would be taken at the site under current or future land use scenarios and soil would be left in place. The no-action alternative is evaluated as required by the NCP to provide a baseline for comparison with other removal alternatives.

4.2.2 Alternative 2 – Land Use Controls

Alternative 2 assumes that LUCs, without additional MPPEH/MEC removal on any portion of the RDA, would be implemented to address the risk of an uncontrolled encounter with potential munitions-related items and explosive hazards by unqualified/untrained personnel during intrusive or ground-disturbing activities. The LUCs alternative consists of prohibition on ground disturbance (documented in licenses, leases, and base operations documents) except when UXO construction support and military munitions recognition and safety training for construction personnel are provided. These LUCs would be enforced by the Navy until a Final ROD is signed.

UXO construction support may be required in the short-term at the RDA for activities relating to facility maintenance and for licensed activities under Navy oversight. Discovery of any munitions-related item(s) shall be reported to the Navy. For most licensed activities, subsurface disturbance is prohibited. In rare cases when subsurface activities are authorized, UXO construction support is required by and overseen by the Navy caretaker.

The authorization of subsurface activities with UXO construction support under Navy oversight also requires military munitions recognition and safety training to increase awareness of and ability to recognize when a munition is encountered. Prior to planned intrusive activities, a qualified, UXO technician shall provide military munitions recognition and safety training to every worker who will perform or be present in the immediate vicinity of intrusive activities. These licensed activities are not expected to be performed close to the base boundary where the surrounding community would be able to meaningfully see, hear, or be impacted by those activities. Should these activities impact the community, the Navy may, in coordination with the City of Concord, provide educational awareness materials and community outreach to mitigate the risks of an uncontrolled encounter by the general public, as appropriate.

For on-call construction support, UXO-qualified technician must be contacted prior to the start of intrusive activities to ensure their availability, be advised about the project, and placed "on call" to assist if munitions-related items are encountered. If munitions-related items are encountered, intrusive and ground-disturbing work at the RDA will immediately cease, and the on-call UXO-qualified technician will be notified to come to the RDA. If a munitions item is discovered, the UXO-qualified technician shall clear the

site of all people and notify the Navy immediately. Response to the suspected munition may be in the form of the Navy's EOD or the municipality bomb squad through 911.

For onsite construction support, the implementation of construction support is similar to the on-call support in the identification and notification of potential munitions. The principal difference is the length of presence at the site. The UXO-qualified technician must be contacted prior to the start of intrusive activities, be advised about the project, and scheduled to be present on the site during all intrusive construction activities.

4.2.3 Alternative 3 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction

Alternative 3 includes a combination of anomaly reacquisition; removal; a post-removal verification survey using DGM methodologies to verify no detectable explosive anomalies remain in the subsurface; reacquisition of identified anomalies, if any; intrusive investigation and anomaly removal, if required; and management of all discovered MPPEH/MEC.

Prior to removal activities, vegetation would be cut to near ground level from approximately 81 acres of the RDA, followed by reacquisition and flagging with a real-time kinematic global positioning system (RTK-GPS) of the remaining 13,212 anomalies to be investigated (see Figure 4-1). UXO teams would then intrusively investigate and remove the reacquired anomalies. The team would confirm that each anomaly has been removed/cleared of all metal by surveying the hole with a magnetometer and/or EM61.

Once all anomalies are removed, a post-removal verification survey would be performed to verify no subsurface anomalies remain in the RDA. The post-removal verification survey would be performed using an EM61. If anomalies are found during the post-removal verification survey, they would be reacquired, intrusively investigated, and removed. The post-removal verification survey would be re-performed in those areas to verify all anomalies have been removed from the berm footprint.

Each MPPEH/MEC item found would be properly documented, inspected, and classified. Items that cannot be classified as MDAS due to an un-inspectable void would be treated as MEC. MEC would be destroyed via detonation (either destruction in place or consolidated shot). Munitions debris (after inspection and certification as MDAS) would be demilitarized using propane and oxygen torches and/or wet band saws to ensure it no longer resembled a munition item. These fragments would be placed into 55-gallon drums for subsequent transport to a certified facility for final disposal by smelting. Non-munitions related scrap would be recycled at a licensed offsite facility.

Additionally, soil samples would be collected for analysis of MC (metals and explosives) from beneath all munitions-related items discovered during the intrusive investigation and if MPPEH/MEC are explosively treated (i.e., post-demolition shot). MC results would only be used to confirm no contamination remains in soil following removal of munitions-related items or post-demolition. No remediation goals have been established for this site; however, the Navy will identify project screening levels in the SAP. If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment will be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil would be removed from the site and disposed of at a licensed facility.

Excavated areas would be restored to match the original grade. The disturbed areas would be reseeded using a seed mix composed of plants native to the area.

Section 4.2.5 discusses the general project approach developed to assist with the analysis of Alternative 3, including developing the rough order of magnitude pricing.

4.2.4 Alternative 4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

Alternative 4 includes a combination of anomaly reacquisition; removal; a post-removal verification survey using AGC methodologies to verify no detectable explosive anomalies remain in the subsurface; reacquisition of identified anomalies, if any; intrusive investigation and anomaly removal, if required; and management of all discovered MPPEH/MEC.

Prior to removal activities, vegetation would be cut to near ground level from approximately 81 acres of the RDA, followed by reacquisition and flagging with a RTK-GPS of the remaining 13,212 anomalies to be investigated (see Figure 4-1). UXO teams would then intrusively investigate and remove the reacquired anomalies. The team would confirm that each anomaly has been removed/cleared of all metal by surveying the hole with a magnetometer and/or EM61.

Once all anomalies are removed, a post-removal verification geophysical survey would be performed to verify no subsurface anomalies remain in the RDA. The post-removal verification geophysical survey would be performed using an UltraTEM in dynamic mode. If anomalies are found during the post-removal verification geophysical survey, they would be reacquired, intrusively investigated, and removed. The post-removal verification survey would be re-performed in those areas to confirm all anomalies have been removed from the berm footprint.

Each MPPEH/MEC item found would be properly documented, inspected, and classified. Items that cannot be classified as MDAS due to an un-inspectable void

would be treated as MEC. MEC items would be destroyed by detonation (either destruction in place or consolidated shot). Munitions debris (after inspection and certification as MDAS) would be demilitarized using propane and oxygen torches and/or wet band saws to ensure it no longer resembled a munition item. These fragments would be placed into 55-gallon drums for subsequent transport to a certified facility for final disposal by smelting. Non-munitions related scrap would be recycled at a licensed offsite facility.

Additionally, soil samples would be collected for analysis of MC (metals and explosives) from beneath all munitions-related items discovered during the intrusive investigation and if MPPEH/MEC are explosively treated (i.e., post-demolition shot). MC results would only be used to confirm no contamination remains in soil following removal of munitions-related items or post-demolition. No remediation goals have been established for this site; however, the Navy will identify project screening levels in the SAP. If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment will be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil would be removed from the site and disposed of at a licensed facility.

Excavated areas would be restored to match the original grade. The disturbed areas would be reseeded using a seed mix composed of plants native to the area.

Section 4.2.5 discusses the general project approach developed to assist with the analysis of Alternative 4, including developing the rough order of magnitude pricing.

4.2.5 General Project Approach

4.2.5.1 Work Plans/Reporting

Prior to excavation activities, a Work Plan, MC SAP, and MR-QAPP will be combined into a NTCRA Work Plan/SAP to describe the goals, methods, and procedures for the NTCRA activities that the three documents would have required. The combined NTCRA Work Plan/SAP would describe the field and data quality methods and procedures to be performed and would include the following appendices: Contractor Quality Control Plan, Community Relations Plan, and an Environmental Protection Plan. Additionally, an Accident Prevention Plan (APP), including Site Safety and Health Plan (SSHP), and Explosives Safety Submission (ESS) would be prepared under separate cover.

Planning and execution will take into consideration green remediation metrics in accordance with EPA's "Methodology for Understanding and Reducing a Project's Environmental Footprint" (EPA, 2012). Sections 4.3.1 and 4.4 present additional information on the evaluation of green remediation metrics for a removal action.

After the NTCRA has been completed, an After Action Report (AAR) would be prepared. The AAR would summarize the actions that occurred (or did not occur), the MPPEH/MEC items recovered, and the relative effectiveness or any limitations of the technologies used to complete the NTCRA.

A Removal Action Completion Summary Report (RACSR) also would be completed after fieldwork is completed for the NTCRA. The RACSR would document all field activities completed to date and would include an updated vertical CSM, any survey data, validated laboratory data, waste manifests, and other pertinent documentation of the NTCRA. The information in the RACSR would be sufficient to demonstrate successful completion of the NTCRA and attainment of the RAO.

The combined NTCRA Work Plan/SAP and RACSR would be submitted for regulatory review and comment, which would be incorporated in the final documents. The APP/SSHP would be submitted to the Navy and Marine Corps Public Health Center for review and approval. The ESS and AAR would be submitted to the Naval Ordnance Safety and Security Activity for review and approval. The ESS would then be submitted to the DoD Explosives Safety Board for final approval.

4.2.5.2 Anomaly Reacquisition and Subsurface Anomaly Removal

Under Alternatives 3 and 4, 13,212 anomalies would be reacquired by a two-person reacquisition team using RTK-GPS (Figure 4-1). The RTK-GPS would locate each anomaly location based on preloaded data from previous investigations. Once the location of each anomaly is reacquired, a pin flag would be placed to mark the location approximately 1 foot north of the anomaly location. The location of each pin flag would be cleared with an all-metals detector, MineLab, or similar prior to placement of the flag. The anomaly number would be written on each pin flag, and both members of the reacquisition team would review the flag to ensure the data are written correctly before the team moves to the next location.

UXO Technicians (Techs) would locate each anomaly by the appropriate flag number and intrusively investigate each anomaly location. UXO Techs would investigate up to an approximately 1-meter radius around the anomaly and vertically to detection depth or until approximately 4 feet bgs. After each anomaly is removed using hand tools, the location would be verified to be clear of anomalies with a man-portable EM61.

After all anomalies have been removed, a geophysical survey team would conduct a post-removal verification survey of the entire subsurface removal area using either DGM (Alternative 3) or AGC in dynamic mode (Alternative 4) methodologies to confirm no anomalies remain within the subsurface. MPPEH and MEC items encountered would be documented by recording the RTK-GPS location coordinates, taking photographs, and recording depths, along with other relevant information.

Excavations would be backfilled with excavated soil and restored to previous conditions. The disturbed areas would be reseeded using a seed mix composed of plants native to the area if needed.

4.2.5.3 Post-Removal Verification Geophysical Survey

After the subsurface anomaly removal team investigates all anomalies, a post-removal verification survey would be performed over 81 acres within the RDA to confirm no anomalies remain in the subsurface. Geophysical data would be collected using either a man-portable EM61 (Alternative 3 – DGM) or an UltraTEM operating in dynamic mode (Alternative 4 – AGC in dynamic mode) to confirm no anomalies remain. The use of AGC in dynamic mode is being considered because it focuses the team on the removal of targets of interest while avoiding the excavation of non-explosive anomalies. Geophysical data would be reviewed daily to ensure the equipment is passing QC requirements. A California Licensed Geophysicist would then process the data to determine if any anomalies remain.

If remaining anomalies are identified during post-removal verification activities, the geophysicist would create a target list. Reacquisition of subsurface targets would be performed by two-person UXO teams (comprising UXO Technicians [Techs] II and I). The team will use a RTK-GPS to locate each target location based on of the preloaded data collected during the post-removal verification survey. UXO Techs would intrusively investigate the location.

Once the remaining anomaly is intrusively investigated, the man-portable EM61 (Alternative 3) or an UltraTem in dynamic mode (Alternative 4) would be used to check for targets of interest while avoiding the excavation of non-explosive anomalies and additional geophysical data would be recorded over the location and reprocessed to ensure the anomaly is removed. Excavated soil would be used as backfill to the excavation.

4.2.5.4 Management of MPPEH/MEC

All MPPEH would undergo a 100 percent inspection by a UXO Tech III, followed by 100 percent inspection by the SUXOS. Items that cannot be classified as MDAS due to an un-inspectable void would be treated as MEC. MEC would be destroyed via detonation (either destruction in place or consolidated shot). If the MPPEH/MEC is acceptable to move, it may be transported to a consolidated shot location. All MEC items will be guarded until demolition is performed. A UXO Tech would perform demolition operations on a periodic as-needed basis. A licensed commercial carrier would deliver explosives to the RDA the same day of demolition activities. No donor explosives would be stored at the site.

Consolidated demolition shots would be used to the extent possible. Detonation in place would occur on items deemed unacceptable to move by the Senior UXO Supervisor (SUXOS) and UXO Safety Officer (UXOSO).

Items classified as MDAS would be stored separately. The UXOSO would perform an independent inspection and 100 percent reinspection of the items prior to their final certification as MDAS. All certified MDAS, prior to release to the public and after a 100 percent inspection by the SUXOS, will be demilitarized, as needed, until it no longer resembles military munitions. Munitions debris (after inspection and certification as MDAS) would demilitarized by ERRG using propane and oxygen torches and or wet band saw in accordance with DoD Manual 4160.21, "Defense Materiel Disposition, Volumes 1 through 4" (DoD, 2019b) and DoD Manual 4160.28, "Defense Demilitarization, Volumes 1 through 3" (DoD, 2019a). Demilitarized fragments would be placed into 55-gallon drums for subsequent transport to an MDAS certified facility for final disposal by smelting. MDAS would be transported in locked containers, under chain-of-custody, and with an accompanying DD 1348-1A form to the designated final disposal facility.

4.2.5.5 Soil Sampling

Discrete soil samples would be collected underneath any discovered munitions items, regardless of whether there was evidence of a release, and at post-demolition shot locations where detonation in place occurs or consolidated MPPEH/MEC detonation occurs, if applicable. A California-licensed surveyor would survey each sample location and document RTK-GPS coordinates. All soil samples would be analyzed for metals by EPA Methods 6020 and 7471 and explosives by EPA Method 8330.

No remediation goals have been established for this site; however, the Navy will identify project screening levels in the SAP. If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment would be evaluated. If the risk assessment results indicate that unacceptable risk is present, then impacted soil would be removed from the site and disposed of at a licensed facility.

4.2.5.6 Monitoring and Avoidance

Because wildlife species, including the CTS and CRLF, may be present at the RDA, biological monitoring and avoidance would be performed under Alternatives 3 and 4. Biological education training would be provided to the field personnel. A USFWS qualified-biologist (reviewed by CDFW-OSPR) would be present during all ground-disturbing field activities. Sensitive species are not expected to affect the implementation of Alternative 3 and 4, but the biologist would confirm that sensitive species continue to be absent from the site. Appropriate avoidance and minimization

measures would be implemented in accordance with the 2018 Biological Opinion amendment (USFWS, 2018). The CDFW Provisions (CDFW, 2012) will be considered in the development of protective measures to reduce/prevent impacts to the ecosystem, particularly for threatened, endangered, or protected species.

As stated in Section 2.1.3.7, archaeological monitoring would be performed, when necessary, during intrusive activities.

4.3 Evaluation Criteria

The analysis of alternatives is qualitative in nature and is based on the following three evaluation criteria as recommended by EPA (1993): effectiveness, implementability, and relative cost. The following subsections summarize each criterion.

4.3.1 Effectiveness

Alternatives are evaluated for effectiveness based on the criteria summarized below.

- <u>Overall Protection of Human Health and the Environment</u>: This criterion assesses the ability of the alternative to be protective of human health and the environment under present and future land use conditions.
- <u>Compliance with ARARs</u>: Identifies whether implementation of the alternative would comply with all chemical-specific, action-specific, and location-specific ARARs
- <u>Long-Term Effectiveness</u>: This criterion addresses the magnitude of residual risk remaining after implementation of the alternative. It addresses the adequacy and reliability of controls established by an alternative to maintain reliable protection of human health and the environment over time.
- <u>Reduction of Toxicity, Mobility, and Volume through Treatment</u>: Identifies whether implementation of the alternative would reduce the toxicity, mobility, or volume of contaminants in soil.
- <u>Short-Term Effectiveness</u>: This criterion addresses the effects of an alternative during the construction and implementation phase until the RAO is met. This criterion includes the time it takes for the remedy to achieve protectiveness and the potential to create adverse impacts on human health and the environment during construction and implementation. Environmental impacts are provided in this EE/CA for overall consideration of the NTCRA alternatives. The potential impacts to the environment that could occur during implementation of the alternatives were considered and include land and species impacts, power and water consumption, use of natural resources, air emissions, and production of waste materials (Appendix C).

4.3.2 Implementability

Alternatives are evaluated for implementability based on the criteria summarized below.

- <u>Technical Feasibility</u>: Evaluates constructability and operational considerations, as well as demonstrated performance/useful life.
- <u>Administrative Feasibility</u>: Evaluates those activities such as statutory limits, permitting requirements, easements and rights of way, and impacts on adjoining property.
- <u>Availability of Services and Materials</u>: Evaluates the availability of qualified vendors and/or contractors to provide the services and/or materials needed to complete the tasks required by the alternative. For the RDA, this could include site preparation, design, equipment, personnel, services and materials, transportation times, and availability of a certified facility that smelts MDAS.
- <u>State Acceptance</u>: The concurrence of the State of California with the proposed alternatives.
- <u>Community Acceptance</u>: The acceptance of the proposed alternatives by stakeholders.

4.3.3 Cost

Alternatives are evaluated for cost based on the following criteria:

- Capital Costs and Operation and Maintenance (O&M) Costs
- Post-Removal Site Control Costs
- Present Value

For the purposes of the cost estimate summaries (Appendix B), selected contingency and technical service percentages are based on "A Guide to Developing and Documenting Cost Estimates during the Feasibility Study" (EPA, 2000). A typical construction contingency ranges from 10 to 20 percent. Technical service percentages are based on capital cost expenditures associated with each alternative. The present values were calculated using a 1.9 percent real discount rate.

Appendix B presents total capital cost, total periodic cost (30 year period), total cost (i.e., total capital cost + total periodic cost), and present-value cost (i.e., cost if all work [capital + periodic] were performed today) for each alternative. The general cost components for each alternative are described below.

- Alternative 1: No costs are included under this alternative.
- Alternative 2: Preparation of a LUC RD and Site Management Plan.

- Alternative 3: Preparation of removal action planning documents, anomaly reacquisition, removal, and MPPEH/MEC demolition and disposal, post-removal verification survey by DGM methodologies, MC soil sampling, and management of all discovered MPPEH/MEC. Assumes no target anomalies will be identified during the post-removal verification survey requiring intrusive investigation.
- Alternative 4: Preparation of removal action planning documents, anomaly reacquisition, removal, and MPPEH/MEC demolition and disposal, post-removal verification survey by AGC methodologies, MC soil sampling, and management of all discovered MPPEH/MEC. Assumes no target anomalies will be identified during the post-removal verification survey requiring intrusive investigation.

4.4 Individual Analysis of Alternatives

This section presents the detailed individual analysis of Alternatives 1, 2, 3, and 4 based on their effectiveness, implementability, and cost. Table 4-2 summarizes the analysis of each alternative and the rough order of magnitude costs developed for each alternative. Appendix B includes supporting information for the rough order of magnitude costs. Following the individual analysis of alternatives presented below, each alternative will be compared against the others to select the recommended alternative (see Sections 5.0 and 6.0).

The qualitative descriptions for each removal alternative are described below.

Alternative 1 (No Action): The description of Alternative 1 is in Section 4.2.1.

- <u>Effectiveness</u>: Alternative 1 would not provide short-term or long-term protection of human health because explosive hazards contributing risks to human receptors would not be removed from the RDA. This alternative would not involve any action, so a comparison with ARARs is not applicable. The time required to achieve the RAO would be indefinite, and risks to current and future receptors would remain indefinitely because munitions items and explosive hazards do not readily degrade in the environment. The toxicity, mobility, or volume of contamination at the site would not be reduced through treatment, and potential exposure pathways would remain for current and future receptors. Alternative 1 would not have any adverse short-term effects because it would not involve remediation activities that might pose risks to the community, workers, or the environment.
- <u>Implementability</u>: No resources, services, or materials would be required to implement Alternative 1, and no known administrative considerations would affect its overall implementability. As a result, Alternative 1 would be technically

and administratively feasible. State and community acceptance for Alternative 1 will be assessed following comment on this EE/CA.

• <u>Costs:</u> The total estimated cost for Alternative 1 is \$0 (Appendix B). No capital or site control costs, contingencies, or professional or technical services are associated with this alternative.

Alternative 2 (LUCs): The description of Alternative 2 is in Section 4.2.2.

- <u>Effectiveness</u>: This alternative is protective of human health and generally meets the RAO. LUCs would limit access to the site; however, protection of human health would depend on the reliability of the access controls. Alternative 2 meets ARARs (for mitigation of the soil disturbance exposure pathway through LUCs). It may be effective in controlling access to the site, but its long-term effectiveness is moderate because mitigating risks to current and future receptors would require long-term maintenance and inspections of access controls. The toxicity, mobility, or volume of contamination at the site would not be reduced through treatment. There are no short-term increased risks because MPPEH/MEC would not be disturbed during implementation of this alterative.
- <u>Implementability:</u> Alternative 2 would be technically and administratively feasible, and services or materials necessary to implement the LUCs would be readily available in the local community. State and community acceptance for Alternative 2 will be assessed following comment on this EE/CA.
- <u>Costs:</u> Alternative 2 includes capital costs for developing and implementing LUCs. There are no periodic costs (e.g., annual O&M or 5-year review activities) or contingency costs associated with this alternative. The total present-value cost for Alternative 2 is \$70,000 (Appendix B). The estimated total cost for Alternative 2 is \$70,000 (ranges from \$49,000 to \$105,000).

Alternative 3 (Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, Destruction): Section 4.2.3 describes Alternative 3.

 <u>Effectiveness:</u> Alternative 3 would provide short-term and long-term protection of human health. Implementation of this alternative would comply with ARARs through planning. The RAO, which is to reduce/mitigate exposure to munitions items and explosive hazards in the subsurface, would be achieved through removal activities. The toxicity and/or mobility and volume of contamination at the site would not be reduced through chemical treatment; however, it would be reduced through removal and/or destruction. Alternative 3 is considered to be reliable based on accepted industry standards for similar projects. Removal activities could be implemented in such a way that short-term impacts to human

health and the environment would be minimized. Public and worker protection would be provided during implementation through strict adherence to an APP/SSHP. An exclusion zone and a support zone would be established at the site where equipment is being operated and there is a potential for site personnel to be exposed to MPPEH. The exclusion zone would encompass the areas of intrusive activities; any persons entering this zone must be authorized to be present during MPPEH clearance or disposal activities. The support zone is where equipment and material storage areas, employee break areas, safety information and supplies, etc. are located and will be considered open access for site personnel. Items recovered during excavation of subsurface geophysical anomalies will go through an inspection process. Items identified as MEC would be explosively destroyed. Demilitarized fragments would be placed into 55gallon drums for subsequent transport to an MDAS certified facility for final disposal by smelting. Non-munitions-related debris may be transported to a disposal center. MDAS would be transported in locked 55-gallon drums, under chain-of-custody, and with an accompanying DD 1348-1A form to the designated final disposal facility. Excavations would be backfilled with excavated soil, and the finished surface would be reasonably smooth, compacted, and free from irregular surface changes. The disturbed areas would be reseeded using a seed mix composed of plants native to the area if needed.

- <u>Implementability:</u> Alternative 3 would be technically and administratively feasible, and most services and materials would be readily available in the local community or could be easily brought to the site. Excavation and destruction are a proven method for achieving long-term reduction of anomalies. Alternative 3 would not affect future use of the sites and could be implemented in a way that would minimize environmental impacts. Field activities for Alternative 3 could be completed within 2 months. The terrain of the anomaly areas within the site is relatively flat and would not pose any additional concerns. A possible constraint to implementing Alternative 3 would be weather conditions causing a schedule delay. Alternative 3 is considered administratively feasible, but several factors would need to be addressed with regard to excavation and destruction.
- <u>Costs:</u> Alternative 3 includes capital costs for excavating subsurface anomalies. Following excavation and the post-removal verification survey using DGM methodologies, the anomaly excavations would be backfilled with the excavated soil and restored to previous conditions. There are no periodic costs (e.g., annual O&M or 5-year review activities) associated with this alternative. For this cost estimate, the design contingency was estimated at 10 percent and the construction contingency was estimated at 10 percent. Technical services for projects with costs between \$400,000 and \$1,000,000 include project

management (10 percent), remedial design (12 percent), and construction management (10 percent). The total present-value cost for Alternative 3 is \$1,980,500 (Appendix B). The estimated total cost for Alternative 3 is \$1,980,500 (ranges from \$1,386,350 to \$2,970,750).

Alternative 4 (Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, Destruction): Section 4.2.4 describes Alternative 4.

- Effectiveness: Alternative 4 would provide short-term and long-term protection of human health. Implementation of this alternative would comply with ARARs through planning. The RAO, which is to reduce/mitigate exposure to munitions items and explosive hazards in the subsurface, would be achieved through removal activities. The toxicity and/or mobility and volume of contamination at the site would not be reduced through chemical treatment; however, it would be reduced through removal and/or destruction. Alternative 4 is considered to be reliable based on accepted industry standards for similar projects. Removal activities could be implemented in such a way that short-term impacts to human health and the environment would be minimized. Public and worker protection would be provided during implementation through strict adherence to an APP/SSHP. An exclusion zone and a support zone would be established at the site where equipment is being operated and there is a potential for site personnel to be exposed to MPPEH. The exclusion zone would encompass the areas of intrusive activities; any persons entering this zone must be authorized to be present during MPPEH clearance or disposal activities. The support zone is where equipment and material storage areas, employee break areas, safety information and supplies, etc. are located and will be considered open access for site personnel. Items recovered during excavation of subsurface geophysical anomalies will go through an inspection process. Items identified as MEC would be explosively destroyed. Demilitarized fragments would be placed into 55gallon drums for subsequent transport to an MDAS certified facility for final disposal by smelting. Non-munitions-related debris may be transported to a disposal center. MDAS would be transported in locked 55-gallon drums, under chain-of-custody, and with an accompanying DD 1348-1A form to the designated final disposal facility. Excavations would be backfilled with excavated soil, and the finished surface would be reasonably smooth, compacted, and free from irregular surface changes. The disturbed areas would be reseeded using a seed mix composed of plants native to the area if needed.
- <u>Implementability:</u> Alternative 4 would be technically and administratively feasible, and most services and materials would be readily available in the local community or could be easily brought to the site. Excavation and destruction are

a proven method for achieving long-term reduction of anomalies. Alternative 4 would not affect future use of the sites and could be implemented in a way that would minimize environmental impacts. Field activities for Alternative 4 could be completed within 2 months. The terrain of the anomaly areas within the site is relatively flat and would not pose any additional concerns. A possible constraint to implementing Alternative 4 would be weather conditions causing a schedule delay. Alternative 4 is considered administratively feasible, but several factors would need to be addressed with regard to excavation and destruction.

 <u>Costs:</u> Alternative 4 includes capital costs for excavating subsurface anomalies. Following excavation and the post-removal verification survey using AGC methodologies, the anomaly excavations would be backfilled with the excavated soil and restored to previous conditions. There are no periodic costs (e.g., annual O&M or 5-year review activities) associated with this alternative. For this cost estimate, the design contingency was estimated at 10 percent and the construction contingency was estimated at 10 percent. Technical services for projects with costs between \$400,000 and \$1,000,000 include project management (10 percent), remedial design (12 percent), and construction management (10 percent). The total present-value cost for Alternative 4 is \$2,413,500 (Appendix B). The estimated total cost for Alternative 4 is \$2,413,500 (ranges from \$1,689,450 to \$3,620,250).

Table 4-2 summarizes the analysis for each alternative and the rough order of magnitude costs developed for each alternative. Appendix B includes supporting information for the rough order of magnitude costs.

Table 4-3 summarizes the estimated values for the green remediation metrics for materials, waste, water, energy, and air. The green remediation metrics were calculated using the level of detail and assumptions discussed in Section 4.2 and Appendix C includes supporting information for the green remediation metric values. As part of the NTCRA planning, including development of the combined NTCRA Work Plan/SAP, green remediation best management practices (BMPs) will be evaluated and selected as appropriate to minimize the environmental footprint of the NTCRA. The guidance in "Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites" (EPA, 2008) and "Methodology for Understanding and Reducing a Project's Environmental Footprint" (EPA, 2012) would be considered to facilitate selection of green remediation BMPs for the NTCRA.

5.0 Comparative Analysis of Removal Alternatives

The removal alternatives identified in Section 4.2 were compared with one another using the evaluation criteria described in Section 4.3. This section describes the results of the comparative analysis. Table 5-1 presents the comparative analysis of the alternatives for munitions-related items at the RDA. Appendix A presents the detailed ARARs analysis for each alternative.

5.1 Effectiveness

Alternative 1 is considered the least effective alternative to protect human health and the environment because risks to current and future receptors would remain indefinitely and the toxicity, mobility and volume of munitions-related items through treatment at the site would not be reduced.

Alternative 2 is considered to be moderately effective alternative to protect public health and the environment because the LUCs are as effective as removal for protecting human health but not for the environment. However, LUCs would require long-term maintenance of administrative controls (as identified in Section 4.2.2) to ensure risks to current and future receptors continue to be mitigated/reduced, and toxicity, mobility, and volume through treatment of munitions-related items at the site would not be reduced. Alternative 2 meets identified ARARs.

Alternative 3 is considered very effective for protection of public health and the environment because all remaining previously identified anomaly locations would be reacquired, investigated, and removed, thus reducing/mitigating MPPEH/MEC at the site and lowering the overall hazard level posed to human health and the environment. Alternative 3 meets identified ARARs.

Alternative 4 is considered very effective for protection of human health and the environment because remaining previously identified anomaly locations would be reacquired, investigated, and removed. Alternative 4 differs from Alternative 3 in that it would verify all anomalies have been removed from the site with a different geophysical methodology. Alternative 4 meets identified ARARs.

5.2 Implementability

Implementability is not an issue with Alternative 1 because no action would be taken and no services or materials are needed.

Alternative 2 is technically and administratively feasible and the services and materials necessary to implement the alternative are readily available. However, LUCs have the

potential to fail over time when maintenance/inspection activities or other administrative procedures do not occur or are compromised and is therefore rated slightly lower than the other alternatives for implementability.

Alternatives 3 and 4 are both technically and administratively feasible, and the services and materials necessary to implement the alternatives are readily available. Alternatives 3 and 4 are considered equal in terms of implementability; however, depending on the method of execution and the number of targets identified, Alternative 4 could possibly require some extra time to execute (i.e., on the order of a couple weeks).

5.3 Cost

The costs for each alternative are summarized below and provided in Appendix B.

- The estimated total cost for Alternative 1 is \$0 because no action would be taken.
- The estimated total cost for Alternative 2 is \$70,000 (ranging from \$49,000 to \$105,000). The estimated capital cost is 70,000, with an annual/period cost of \$0. The estimated total present value of Alternative 2 is \$70,000.
- The estimated total cost for Alternative 3 is \$1,980,500 (ranging from \$1,386,350 to \$2,970,750). The estimated capital cost is \$1,980,500, with an annual/period cost of \$0. The estimated total present value of Alternative 3 is \$1,980,500.
- The estimated total cost for Alternative 4 is \$2,732,975 (ranging from \$1,866,381 to \$3,999,388). The estimated capital cost is \$2,515,400, with an annual/period cost of \$7,253. The estimated total present value of Alternative 4 is \$2,666,259.

Alternatives 3 and 4 would remove all detectable MPPEH/MEC from the RDA. Alternative 3 is considered the most cost-effective alternative. At the conclusion of the NTCRA, the Navy will have removed all detectable munitions. However, given the limits of the detection technology at this time, a risk of residual munitions remains that will be addressed in a final remedy decision document.

6.0 Recommended Removal Alternative

Based on results of the detailed and comparative analysis of alternatives, the removal alternative recommended for the NTCRA at the RDA is **Alternative 3**, **Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction**. Alternative 3 was selected because it is the most-cost-effective alternative that would meet the RAO for the site by removing detectable MPPEH/MEC in soil, thereby reducing/mitigating the explosive hazard to human health and the environment.

Implementation of Alternative 3 is estimated to require approximately 3 years for planning; site preparation; anomaly reacquisition and flagging; excavation and removal; MPPEH inspection; classification of MEC and MDAS; detonation of MPPEH/MEC; certification and demilitarization of MDAS; disposal of certified MDAS; soil sampling; post-removal verification survey using DGM methodologies; site restoration; and reporting.

Figure 4-1 shows the locations of the remaining 13,212 anomalies that would be reacquired and removed during the NTCRA. The anomalies are anticipated to be recovered from the 0- to 2-foot-bgs depth interval. Excavation would extend laterally up to an approximately 1-meter radius around the anomaly target flag and vertically until the subsurface anomaly is removed and/or until 4 feet bgs. A post-removal verification DGM survey would be performed to confirm the removal action has met the RAO. ICs would be included as administrative or de-facto restrictions.

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7.0 References

- California Department of Fish and Wildlife, 2012. Memorandum regarding "Review of Draft Removal Action Work Plan, Non-Time-Critical Removal Action Installation Restoration (IR) Site 24A (UXO 0001A), and Draft Sampling and Analysis Plan, Installation Restoration (IR) Site 24A (UXO 0001A), Former Naval Weapons Station Seal beach, Detachment Concord, Concord, California (Site# 201776)." To Jim Pinascom, DTSC Remedial Project Manager. April 3.
- CH2M HILL Kleinfelder, A Joint Venture (KCH). 2018a. Final Site Inspection Northern Runway Debris Area. Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California. August.
- 2018b. Final Site Inspection Southern Runway Debris Area. Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California. August.
- City of Concord, 2010. "Final Environmental Impact Report." Concord Community Reuse Project Office. State Clearinghouse Number 2007052094. January. Available Online: http://www.concordreuseproject.org/170/Key-Documents>.
- , 2012. "Final Environmental Impact Report Addendum and Initial Study of Environmental Significance for the Concord Reuse Project Area Plan." January 24. Available Online: http://www.concordreuseproject.org/170/Key-Documents.
- Department of the Navy (Navy), 2017. "Section 106 Memorandum of Agreement Between the United States Navy, the California State Historic Preservation Officer, the City of Concord, and the East Bay Regional Park District Regarding the Disposal and Reuse of the Former Naval Weapons Station, Concord, In Concord, California." March.
- Multi-Media Environmental Compliance Group (MMEC Group), 2020a. "Final Supplemental Site Inspection Report Runway Debris Area and Southern Railroad Revetment Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California." December.
 - ____, 2020b. "Final Work Plan Remedial Investigation at Runway Debris Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California." September.

- Tierra Data, Inc. (TDI), 2008. "Wetlands Delineation and Aquatic Habitat Inventory for the Inland Area, Naval Weapons Station Seal Beach Detachment Concord, Concord, California." June.
- TriEco-Tt, 2016. "Final Preliminary Assessment/Re-Verification Investigation Report for the Inland Area, Former Naval Weapons Station Seal Beach, Detachment Concord, Concord, California." June.
- U.S. Climate Data, 2020. "Climate Concord, California." Website Accessed on November 9, 2020: <https://www.usclimatedata.com/climate/concord/california/unitedstates/usca2033>.
- U.S. Department of Defense (DoD), 2019a. DoD Manual 4160.28, "Defense Demilitarization, Volumes 1 through 3." Incorporating Change 2 dated August 31, 2018 (Volume 3) and Change 3 dated July 15, 2019 (Volume 1) and August 9, 2019 (Volume 2). Available Online at: ">https://www.esd.whs.mil/DD/>.
 - _____, 2019b. DoD Manual 4160.21, "Defense Material Disposition, Volumes 1 through 4." Incorporating Change 3 dated November 30, 2019 (Volumes 2, 3, and 4) and October 2, 2019 (Volume 1). Available Online at: <https://www.esd.whs.mil/DD/>.
- U.S. Environmental Protection Agency (EPA), 1993. "Guidance on Conducting Non-Time-Critical Removal Actions under CERCLA." Office of Emergency and Remedial Response. EPA/540-R-93-057. August. Available Online at: https://www.epa.gov/superfund/non-time-critical-removal-actions>.
 - _____, 2000. "A Guide to Developing and Documenting Cost Estimates During the Feasibility Study." OSWER No. 9355.0-75. July. Available Online at: https://www.epa.gov/superfund/cost-remedy-selection-process>.
- ____, 2001. "Federal Facility Agreement Under CERCLA Section 120, Administrative Docket Number: 01-." June 14.
- _____, 2008. "Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites." EPA 542-R-08-002. April. Available Online at: https://www.epa.gov/remedytech/green-remediation-incorporatingsustainable-environmental-practices-remediation.

- _____, 2012. "Methodology for Understanding and Reducing a Project's Environmental Footprint." EPA 542-R-12-002. February. Available Online at: <https://www.epa.gov/remedytech/methodology-understanding-and-reducingprojects-environmental-footprint>.
- U.S. Fish and Wildlife Service, 2012. "Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California." File #81420-2011-F-0313. August 31.
- Vollmar Natural Lands Consulting (Vollmar), 2008. "2008 Sensitive Botanical Resources Survey Report, Concord Naval Weapons Station, Inland Area, City of Concord, Contra Costa County, California." September.

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FIGURES

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Engineering Evaluation/Cost Analysis for the Non-Time Critical Remedial Action at Runway Debris Area Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA









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TABLES

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Response Action	Technology (Technology Process Option)	Description	Screening Summary
1. No Action	None (Not applicable)	No active remediation	 Not protective of human health. Not effective or permanent in long-term. Because no action is taken, workers would not be adversely affected in the short-term. No reduction of toxicity, mobility, or volume through treatment. No technical or administrative feasibility concerns nor availability concerns. No costs
2. LUCs	ICs (deed restrictions, notices, and education materials)	Internal Navy prohibition on ground disturbance (documented in licenses, leases, and base operations documents) except when UXO construction support and military munitions recognition and safety training for construction personnel are provided. These LUCs would be enforced by the Navy until a Final ROD is signed.	 Administrative controls (i.e., dig restrictions and safety training requirements) would be somewhat effective in meeting RAOs through restrictions on excavation activities and safety training for construction personnel, readily implementable, and low cost.

Response Action	Technology (Technology Process Option)	Description	Screening Summary
3. Anomaly Reacquisition, Removal, Post- Removal	Reacquisition	Use of DGM survey equipment to identify varying electromagnetic fields in soil to reacquire previously detected anomalies.	 This method is effective in identifying potential MPPEH and readily implementable.
Verification Survey by DGM, and Destruction	Removal (hand excavation and mechanized removal)	Excavate individual anomalies using commonly available hand tools. Excavate anomalies with shielded excavating equipment practicing anomaly avoidance (backhoes and/or excavators).	 Hand excavation has limited effectiveness in hard soil such as those at the site but is readily implementable and is low cost. Mechanized excavation is effective for excavation of single anomalies in hard soil and effective when used in conjunction with hand excavation but is readily implementable and is lower in cost.
	Post-removal verification geophysical survey	Use of DGM survey equipment to identify varying electromagnetic fields in soil. Reacquire anomalies, intrusively investigate, and collect soil samples, if required.	 This method is effective in identifying potential anomalies and readily implementable. The costs for DGM are lower than the costs for AGC in dynamic mode.

Response Action	Technology (Technology Process Option)	Description	Screening Summary
3. Anomaly Reacquisition, Removal, Post- Removal Verification Survey by DGM, and Destruction (continued)	Physical treatment (BIP and consolidated shot)	Destruction of MPPEH by explosive detonation in place when the risk of movement beyond the immediate vicinity of discovery is not considered acceptable. Collection, configuration, and subsequent destruction by explosive detonation of MPPEH for which the risk of movement has been determined to be acceptable either within a current working sector or at an	 BIP is effective because munitions are individually or collectively destroyed with the destruction verified. Also, it is readily implementable because it uses field-proven techniques, transportable tools, and equipment and is low cost. Consolidated shot is effective by generally using the same techniques, tools, and equipment as BIP, except it is limited in use to munitions that are "acceptable to move." Also, it is readily implementable but requires a larger area and greater controls than BIP. It is low cost but
		established demolition ground.	manpower intensive.
4. Anomaly Reacquisition, Removal, Post- Removal Verification Survey by AGC, and Destruction	Reacquisition	Use of DGM survey equipment to identify varying electromagnetic fields in soil to reacquire previously detected anomalies.	 This method is effective in identifying potential anomalies and readily implementable.

Response Action	Technology (Technology Process Option)	Description	Screening Summary
4. Anomaly Reacquisition, Removal, Post- Removal Verification Survey by AGC, and Destruction	Removal (hand excavation and mechanized removal)	Excavate individual anomalies using commonly available hand tools. Excavate anomalies with shielded excavating equipment practicing anomaly avoidance (backhoes and/or excavators).	 Hand excavation has limited effectiveness in hard soil such as those at the site but is readily implementable and is low cost. Mechanized excavation is effective for excavation of single anomalies in hard soil and effective when used in conjunction with hand excavation but is readily implementable and is lower in cost.
(continued)	Post-removal verification geophysical survey	Use of AGC in dynamic mode survey equipment to identify varying electromagnetic fields in soil from multiple aspects to assign likelihood of a subsurface item from classification algorithms.	 This method is effective in identifying potential MPPEH and readily implementable.

Response Action	Technology (Technology Process Option)	Description	Screening Summary
4. Anomaly Reacquisition, Removal, Post- Removal Verification Survey by AGC, and Destruction (continued)	Physical treatment (BIP and consolidated shot)	Destruction of MPPEH by explosive detonation in place when the risk of movement beyond the immediate vicinity of discovery is not considered acceptable. Collection, configuration, and subsequent destruction by explosive detonation of MPPEH for which the risk of movement has been determined to be acceptable either within a current working sector or at an established demolition ground.	 BIP is effective because munitions are individually or collectively destroyed with the destruction verified. Also, it is readily implementable because it uses field-proven techniques, transportable tools, and equipment and is low cost. Consolidated shot is effective by generally using the same techniques, tools, and equipment as BIP, except it is limited in use to munitions that are "acceptable to move." Also, it is readily implementable but requires a larger area and greater controls than BIP. It is low cost but manpower intensive.

Notes:

AGC = advanced geophysical classification

BIP = blow in place

DGM = digital geophysical mapping

ICs = institutional controls

LUCs = Land Use Controls

MEC = munitions and explosives of concern

MPPEH = material potentially presenting an explosive hazard

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Table 4-2: Individual Analysis of Removal Action Alternatives

		Remo	val Action Alternatives
Criterion	1—No Action	2—LUCs	3 – Anomaly Reacquisition, Removal, Post- Removal Verification Survey by DGM, and Destruction
Effectiveness			
Overall Protection of Human Health and the Environment	Not protective of human health or the environment because no action would be taken or reduce/mitigate the risk of exposure to munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil.	Provides protection of human health by preventing exposure to munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil via administrative polices (i.e., dig restrictions and safety training). There is no protection of the environment.	Protective of human health and the environment because all detectable MPPEH/MEC remaining in subsurface soil would be removed from the site thereby reducing/mitigating potential exposure to munitions-related items or explosive hazards posed to human health and the environment.
Compliance with ARARs	Does not meet any of the identified ARARs.	Complies with ARARs for mitigation of the soil disturbance exposure pathway by preventing soil disturbance through LUCs.	The removal action complies with all ARARs.
Long-Term Effectiveness and Permanence	Does not provide long-term effectiveness and permanence because munitions-related items or explosive hazards (i.e., MPPEH/MEC) would remain in subsurface soil and could pose an explosive hazard if disturbed.	For the soil exposure pathway, this alternative would be effective in the long-term reduction of hazards to humans as long as the administrative policies prohibit exposure to subsurface soil are implemented, inspected, and maintained. The administrative policies also require implementation and consistent enforcement. Long-term effectiveness relies on adherence to the administrative controls.	Provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby reducing/mitigating the potential exposure to munitions-related items or explosive hazards posed to human health and the environment.
Reduction of Toxicity, Mobility, or Volume through Treatment	Does not include treatment (i.e., removal and detonation) that would reduce the toxicity, mobility, or volume of munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.	Does not include any treatment (i.e., removal and detonation) that would reduce the toxicity, mobility, or volume of munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.	All identified MPPEH/MEC would be treated via detonation thereby reducing/mitigating the toxicity, mobility, and volume of munitions- related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.
Short-Term Effectiveness	No short-term hazards posed to workers or the public because no activities would be conducted under this alternative.	No short-term increased risks because munitions-related items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil would not be disturbed during implementation of this alternative.	Increased short-term risk to workers or the public due to soil disturbance; however, potential contact with MPPEH/MEC would be reduced/mitigated using PPE, best management practices, and other control measures.

4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

Protective of human health and the environment because all detectable MPPEH/MEC remaining in subsurface soil would be removed from the site thereby reducing/mitigating potential exposure to munitions-related items or explosive hazards posed to human health and the environment.

The removal action complies with all ARARs.

Provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby reducing/mitigating the potential exposure to munitions-related items or explosive hazards posed to human health and the environment.

All identified MPPEH/MEC would be treated via detonation thereby reducing/mitigating the toxicity, mobility, and volume of munitionsrelated items or explosive hazards (i.e., MPPEH/MEC) in subsurface soil at the site.

Increased short-term risk to workers or the public due to soil disturbance; however, potential contact with MPPEH/MEC would be reduced/mitigated using PPE, best management practices, and other control measures.

Table 4-2: Individual Analysis of Removal Action Alternatives (continued)

		Removal Action Alternatives			
Criterion 1—No Action		2—LUCs	3 – Anomaly Reacquisition, Removal, Post- Removal Verification Survey by DGM, and Destruction		
Implementability		·			
Technical Feasibility	No action would be taken.	No technical feasibility concerns.	No technical feasibility concerns.		
Administrative Feasibility	No action would be taken.	Administratively feasible; however, LUCs have the potential to fail over time when administrative procedures are not followed.	No administrative feasibility concerns.		
Availability of Services and Materials	No action would be taken.	No concerns identified regarding availability of services or materials.	No concerns identified regarding availability of services or materials.		
State Acceptance	Not	evaluated at this time pending comments from the	regulatory agencies on the Draft EE/CA and Draft		
Community Acceptance	Not evaluated at this	s time pending comments from the community duri	ing the 30-day public comment period planned to be		
Cost					
	Total Cost: \$0	Total Cost: \$70,000	Total Cost: \$1,980,500		
	Capital: \$0	Capital: \$70,000	Capital: \$1,980,500		
	O&M: \$0	O&M: \$0	O&M: \$0		
	Present Value: \$0	Present Value: \$70,000	Present Value: \$1,980,500		

Notes:

AGC = advanced geophysical classification

ARARs = applicable or relevant and appropriate requirement

DGM = digital geophysical mapping

EE/CA = Engineering Evaluation/Cost Analysis

ICs = institutional controls

LUCs = Land Use Controls

MDAS = material documented as safe

MEC = munitions and explosives of concern

MPPEH = material potentially presenting an explosive hazard

N/A = not applicable

O&M = operation and maintenance

PPE = personal protective equipment

4 – Anomaly Reacquisition, Removal, Post-Removal Verification Survey by AGC, and Destruction

No technical feasibility concerns.

No administrative feasibility concerns.

No concerns identified regarding availability of services or materials.

Action Memorandum.

e held after finalization of this EE/CA.

Total Cost: \$2,413,500 Capital: \$2,413,500 O&M: \$0 Present Value: \$2,413,500

Table 4-3: Environmental Footprint Analysis Results for the NTCRA Alternatives

Core			Metric Value			
Element	Metric	Unit of Measure	Alt. 1	Alt. 2	Alt. 3	Alt. 4
	Materials and W	/aste				
Materials	Refined materials used on the site	Tons	0	Negligible	Negligible	Negligible
and Waste	% of refined materials from recycled or reused material	%	0	0	0	0
	Unrefined materials used on the site	Tons	0	0	0	0
	% of unrefined materials from recycled or reused material	%	0	0	0	0
	Onsite hazardous waste disposed of off site	Tons	0	0	0	0
	Onsite nonhazardous waste disposed of off site	Tons	0	0	0	0
	% of total potential waste recycled or reused	%	0	0	0	0
Water	Public water supply, equipment decontamination, disposed of off site as liquid nonhazardous waste	MG	0	Negligible	Negligible	Negligible
	Public water supply, dust control, evaporate from site	MG	0	0	0.03	0.03
Energy	Total energy used (on site and off site)	MMBtu	0	Negligible	149.2	149.2
	Energy voluntarily derived from renewable resources					
	Onsite generation or use and biodiesel use	MMBtu	0	0	0	0
	Voluntary purchase of renewable electricity	MWh	0	0	0	0
	Voluntary purchase of Renewable Energy Certificates	MWh	0	0	0	0
Air	Onsite NOx, SOx, and PM10 emissions	Pounds	0	Negligible	132.8	132.8
	Onsite HAP emissions	Pounds	0	Negligible	0	0
	Total NOx, SOx, and PM10 emissions	Pounds	0	Negligible	156.7	156.7

Table 4-3:	Environmental	Footprint Analys	s Results for the	NTCRA Alternatives	(continued)
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Core				Metri	c Value	
Element	Metric	Unit of Measure	Alt. 1	Alt. 2	Alt. 3	Alt. 4
	Total HAP emissions	Pounds	0	Negligible	2.3	2.3
	Total greenhouse gas emissions	Tons CO ₂ e*	0	Negligible	12	12
Land and Eco Systems	Qualitative [Description – see EE	/CA text			

Notes:

Alternative 1 is no action, Alternative 2 is LUCs, Alternative 3 is anomaly reacquisition, removal, post-removal verification survey by DGM, and destruction

Alternative 4 is anomaly reacquisition, removal, post-removal verification survey by AGC, and destruction

The environmental footprint analysis of Alternatives 1 through 3 will not be used as a basis of decision logic but is provided for informational purposes for overall consideration of the alternatives.

The green remediation metrics are zero for Alternative 1, No Action, because no action (i.e., removal, treatment, monitoring, restrictions, LUCs, reviews, or any other mitigating actions) would be performed under the current or future land use scenarios. This alternative was included in the EE/CA as a baseline for comparison to the other alternatives.

The materials assumed to be required on the site under Alternative 2, LUCs, are installation of warning signs and post, as well as any repairs. The recycled or reused content of the material is unknown at this time, so it is presented as 0. Waste potentially generated under Alternative 2 would likely include damaged posts and signs, which are anticipated to be constructed of recyclable materials. The water, energy, and air metrics for Alternative 2 are presented as negligible because they would be related to installation of the posts and warning signs (one time event), annual sign and post inspection and maintenance, and site visits, if required, for five-year reviews.

The following are not anticipated for any of the NTCRA alternatives: onsite generation of renewable energy, onsite or offsite use of biodiesel fuel, voluntary purchase of renewable electricity from an electricity provider in the form of a "green pricing" or "green marketing" product, or voluntary direct purchase of Renewable Energy Certificates.

Total greenhouse gases emissions (in CO₂e) include consideration of carbon dioxide, methane, and nitrous oxide emissions.

Alt. = alternative	MWh = megawatt hours (i.e., thousands of kilowatt-hours or millions of watt-
CO ₂ e = carbon dioxide equivalents of global warming potential	hours)
EE/CA = Engineering Evaluation/Cost Analysis	NOx = nitrogen oxide
HAP = hazardous air pollutant	NTCRA = non-time-critical removal action
LUCs = land use controls	PM10 = particulate matter less than 10 microns in size
MG = millions of gallons	SOx = sulfur oxide
MMBtu = million British thermal unit	= not applicable

ERRG-1811-5479-0002

Table 5-1: Comparative Analysis of Removal Action Alternatives

Evaluation Criteria	Alternative 1 No Action	Alternative 2 LUCs	Alternative 3 Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction	4 – Anomaly Reacquisition, Removal, Post-Removal Verification SURVEY by AGC, and Destruction	
Effectiveness		Qu	alitative Ranking		
Protection of Human Health and Environment	Not protective	Moderate	High	High	
Compliance with ARARs	None	Moderate	High	High	
Long-Term Effectiveness	None	Moderate	High	High	
Short-Term Effectiveness	None	Moderate	High	High	
Achieve RAO	None	Moderate	High	High	
Reduction of Toxicity, Mobility, and Volume through Treatment	None	Low	High	High	
Implementability	Qualitative Ranking				
Technical Feasibility	None required	High	High	High	
Administrative Feasibility	None required	Moderate	High	High	
Availability of Services or Materials	None required	High	High	High	
Cost	Removal Action Cost				
Period of Analysis (Years)	30	30	30	30	
Estimated Capital Cost	\$0.00	\$70,000	\$1,980,500	\$2,413,500	
Estimated Annual/Period Cost	\$0.00	\$0	\$0	\$0	
Estimated Total Cost	\$0.00	\$70,000	\$1,980,500	\$2,413,500	

Table 5-1:	Comparative A	nalysis of Removal Action	Alternatives (continued)
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Evaluation Criteria	Alternative 1 No Action	Alternative 2 LUCs	Alternative 3 Anomaly Reacquisition, Removal, Post-Removal Verification Survey by DGM, and Destruction	4 – Anomaly Reacquisition, Removal, Post-Removal Verification SURVEY by AGC, and Destruction
Cost (continued)		Rer	moval Action Cost	
Estimated Total Present Value of Alternative	\$0.00	\$70,000	\$1,980,500	\$2,413,500
EE/CA Range (-30% / +50%)	\$0.00	\$49,000 / \$105,000	\$1,386,350 / \$2,970,750	\$1,689,450 / \$3,620,250

Notes:

AGC = advanced geophysical classification

ARARs = applicable or relevant and appropriate requirements

DGM = digital geophysical mapping

EE/CA = Engineering Evaluation/Cost Analysis

LUCs = land use controls

N/A = not applicable

RAO = removal action objective

APPENDIX A APPLICABLE OR RELEVANT AND APPROPRIATE REQUIREMENTS EVALUATION

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Table of Contents

Section A.1	IntroductionA-vi		vi
A.1.1	Summary of CERCLA and NCP RequirementsA-1		-1
A.1.2	Methodology Description		-4
	A.1.2.1	GeneralA-	-4
	A.1.2.2	Identifying and Evaluating Federal ARARsA-	-5
	A.1.2.3	Identifying and Evaluating State ARARsA-	-6
A.1.3	Other General IssuesA-7		-7
	A.1.3.1	General Approach to Requirements of the Federal Resource Conservation and Recovery ActA-	-7
	A.1.3.2	California Toxicity Criteria RuleA-	-8
A.1.4	Waste Ch	naracterizationA-	.9
	A.1.4.1	RCRA Hazardous Waste DeterminationA-	-9
	A.1.4.2	California-Regulated, Non-RCRA Hazardous Waste A-1	2
	A.1.4.3	Other California Waste Classifications A-1	2
Section A.2	Chemical	-Specific ARARsA-1	4
A.2.1	Summary	of ARARs Conclusions by MediumA-1	5
	A.2.1.1	Soil ARARs Conclusions A-1	6
A.2.2	Detailed I	Discussion of ARARsA-1	7
	A.2.2.1	Soil ARARs A-1	7
	A.2.2.2	Military Munitions ARARs A-1	9
Section A.3	Location	Specific ARARsA-2	22
A.3.1	Summary of Location-Specific ARARsA-23		23
	A.3.1.1	Cultural Resources ARARs Conclusions A-2	23
	A.3.1.2	Wetlands Protection Conclusions A-2	23
	A.3.1.3	Biological Resources Conclusions A-2	<u>2</u> 4
A.3.2	Detailed I	Discussion of ARARsA-2	25
	A.3.2.1	Cultural Resources ARARs A-2	25
	A.3.2.2	Wetlands Protection ARARs A-2	26

Table of Contents (continued)

	A.3.2.3	Biological Resources ARARs	A-28
Section A.4	Action-Specific ARARs		A-34
A.4.1	Alternative 1 – No Action		
A.4.2	Alternative 2 –Land Use Controls		A-35
	A.4.2.1	Federal ARARs	A-36
	A.4.2.2	State ARARs	A-36
A.4.3	Alternative 3 – Anomaly Reacquisition, Removal, Post-Removal Survey (DGM), and Destruction		Survey A-36
	A.4.3.1	Federal ARARs	A-37
	A.4.3.2	State ARARs	A-38
A.4.4	Alternative 4 – Anomaly Reacquisition, Removal, Post-Removal Survey (AGC), and DestructionA		Survey A-38
	A.4.4.1	Federal ARARs	A-38
	A.4.4.2	State ARARs	A-39
Section A.5	SummaryA-40		A-40
Section A.6	References		A-42

List of Tables

- Table A2-1: Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements
- Table A3-1: Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements
- Table A4-1: Federal and State Action-Specific Applicable or Relevant and Appropriate Requirements

Acronyms and Abbreviations

AGC	advanced geophysical classification
ARARs	applicable or relevant and appropriate requirements
Cal	California
C.C.R	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CDFWPs	California Department of Fish and Wildlife Provisions
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
C.F.R	Code of Federal Regulations
ch	Chapter
Civ	Civil
CRLF	
CRUP	Covenant to Restrict the Use of Property
CTS	California tiger salamander
CWA	
C.W.C	
DFW	Department of Fish and Wildlife
DGM	digital geophysical mapping
DDESB	DoD Explosives Safety Board
Det	Detachment
div	Division
DoD	U.S. Department of Defense
DTSC	Department of Toxic Substances Control
EE/CA	Engineering Evaluation/Cost Analysis
EP	extraction procedure

Acronyms and Abbreviations (continued)

EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
Fed. Reg	Federal Register
F.G.C	Fish and Game Code
LDRs	land disposal restrictions
LUCs	land use controls
MBTA	
MDAS	material documented as safe
MDEH	material documented as an explosive hazard
MEC	munitions and explosives of concern
MMEC Group	
MOA	
MPPEH	material potentially presenting an explosive hazard
National Register.	National Register of Historic Places
NAVSEA	Naval Sea Systems Command
NAVWPNSTA	Naval Weapons Station
Navy	Department of the Navy
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NHPA	
NTCRA	non-time-critical removal action
RAO	removal action objective
RCRA	Resource Conservation and Recovery Act
RDA	
STLCs	soluble threshold limit concentrations

Acronyms and Abbreviations (continued)

subpt	subpart
SWRCB	State Water Resources Control Board
ТВС	to be considered
TCLP	toxicity characteristic leaching procedure
TTLCs	total threshold limit concentrations
U.S.C	United States Code
USFWS	U.S. Fish and Wildlife Service
UXO	unexploded ordnance
Water Board	San Francisco Bay Regional Water Quality Control Board
WET	Waste Extraction Test
WQOs	water quality objectives
§	Section
§§	Sections

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Section A.1 Introduction

This appendix identifies and evaluates potential federal and State of California applicable or relevant and appropriate requirements (ARARs) from the universe of regulations, requirements, and guidance and sets forth the Department of the Navy (Navy) determinations regarding those potential ARARs for each response action alternative retained for detailed analysis in this Engineering Evaluation/Cost Analysis (EE/CA) NTCRA at Runway Debris Area, Former Naval Weapons Station (NAVWPNSTA) Seal Beach Detachment (Det) Concord, Concord, California.

This evaluation includes an initial determination of whether the potential ARARs actually qualify as ARARs and a comparison for stringency between the federal and state regulations to identify the controlling ARARs. The identification of ARARs is an iterative process. The final determination of ARARs (no longer "potential" ARARs) will be made by the Navy in the Action Memorandum, after public review, as part of the response action selection process.

A.1.1 Summary of CERCLA and NCP Requirements

Section (§) 121(d) of Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (Title 42 United States Code [U.S.C.] § 9621[d]), as amended, states that remedial actions at CERCLA sites must attain (or the decision document must justify the waiver of) any federal or more stringent state environmental standards, requirements, criteria, or limitations determined to be legally applicable or relevant and appropriate. Although § 121(d) of CERCLA does not itself expressly require that CERCLA remedial actions comply with ARARs, the U.S. Environmental Protection Agency (EPA) has promulgated a requirement in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) mandating that CERCLA removal actions "...shall, to the extent practicable considering the exigencies of the situation, attain applicable or relevant and appropriate requirements under federal environmental or state environmental or facility siting laws" (Title 40 Code of Federal Regulations [C.F.R.] § 300.415[j]). It is Navy policy to follow that requirement. Certain specified waivers may be used for removal actions, as is the case with removal actions.

Applicable requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that specifically address circumstances at a CERCLA site. The requirement is applicable if the jurisdictional prerequisites of the standard show a direct correspondence when objectively compared to the conditions at the site. An applicable federal requirement is an ARAR. An applicable state requirement is an ARAR only if it is more stringent than federal ARARs.

If the requirement is not legally applicable, then the requirement is evaluated to determine whether it is relevant and appropriate. Relevant and appropriate requirements are those cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that, while not applicable, address problems or situations similar to the circumstances of the proposed response action and are well suited to the conditions of the site (EPA, 1988a). A requirement must be determined to be both relevant and appropriate to be considered an ARAR.

The criteria for determining relevance and appropriateness are listed in 40 C.F.R. § 300.400(g)(2) and include the following:

- the purpose of both the requirement and the CERCLA action;
- the medium regulated or affected by the requirement and the medium contaminated or affected at the CERCLA site;
- the substances regulated by the requirement and the substances found at the CERCLA site;
- the actions or activities regulated by the requirement and the response action contemplated at the CERCLA site;
- any variances, waivers, or exemptions of the requirement and their availability for the circumstances at the CERCLA site;
- the type of place regulated and the type of place affected by the release or CERCLA action;
- the type and size of structure or facility regulated and the type and size of structure or facility affected by the release or proposed in the CERCLA action; and
- any consideration of use or potential use of affected resources in the requirement and the use or potential use of the affected resources at the CERCLA site.

According to CERCLA ARARs guidance (EPA, 1988a), a requirement may be "applicable" or "relevant and appropriate," but not both. ARARs must be identified on a site-specific basis and involve a two-part analysis: first, a determination whether a given requirement is applicable; then, if it is not applicable, a determination whether it is both relevant and appropriate. It is important to explain that some regulations may be applicable or, if not applicable, may still be relevant and appropriate. When the analysis determines that a requirement is both relevant and appropriate, such a requirement must be complied with to the same degree as if it were applicable (EPA, 1988a).

Tables A2-1, A3-1, and A4-1 included in this appendix present each potential ARAR with an initial determination of ARAR status (i.e., applicable or relevant and appropriate). For the determination of relevance and appropriateness, the pertinent criteria were examined to determine whether the requirements address problems or

situations sufficiently similar to the circumstances of the release or response action contemplated, and whether the requirement is well suited to the site. A negative determination of relevance and appropriateness indicates that the requirement does not meet the pertinent criteria. Negative determinations are documented in the tables of this appendix and are discussed in the text only for specific cases.

To qualify as a state ARAR under CERCLA and the NCP, a state requirement must be:

- a state law or regulation,
- an environmental or facility siting law or regulation,
- promulgated (of general applicability and legally enforceable),
- substantive (not procedural or administrative),
- more stringent than federal requirements,
- identified in a timely manner, and
- consistently applied.

To constitute an ARAR, a requirement must be substantive. Therefore, only the substantive provisions of requirements identified as ARARs in this analysis are considered to be ARARs. Permits are considered to be procedural or administrative requirements. Provisions of generally relevant federal and state statutes and regulations that were determined to be procedural or non-environmental, including permit requirements, are not considered to be ARARs. CERCLA § 121(e)(1), Title 42 U.S.C. § 9621(e)(1), states, "No Federal, State, or local permit shall be required for the portion of any removal or remedial action conducted entirely on-site, where such remedial action is selected and carried out in compliance with this section." The term on-site is defined for purposes of this ARARs discussion as "the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of the response action" (40 C.F.R. § 300.5).

Nonpromulgated advisories or guidance issued by federal or state governments are not legally binding and do not have the status of ARARs. Such requirements may, however, be useful and are "to be considered" (TBC). TBC requirements (40 C.F.R. § 300.400[g][3]) complement ARARs but do not override them. They are useful for guiding decisions regarding cleanup levels or methodologies when regulatory standards are not available.

Pursuant to EPA guidance (EPA, 1988a), ARARs are generally divided into three categories: chemical-, location-, and action-specific requirements. This classification was developed to aid in the identification of ARARs; some ARARs do not fall precisely into one group or another. ARARs are identified on a site-specific basis for removal and remedial actions where CERCLA authority is the basis for cleanup.

As the lead federal agency, the Navy has primary responsibility for identifying federal ARARs at the former NAVWPNSTA Seal Beach Det Concord, Concord, California. Section A.1.2.2 discusses the potential federal ARARs that have been identified for the EE/CA for the Runway Debris Area (RDA). Pursuant to the definition of the term "onsite" in 40 C.F.R. § 300.5, the on-site areas for the RDA are shown on Figure 4-1 of the EE/CA and may contain material potentially presenting an explosive hazard (MPPEH) and munitions and explosives of concern (MEC) in subsurface soil. ARARs apply to CERCLA response action activities completed on site. Statutory and regulatory requirements that apply to offsite actions are not ARARs. Offsite actions (e.g., offsite disposal) are required to comply with applicable requirements only and are not required to comply with relevant and appropriate requirements identified as ARARs for onsite actions. However, requirements for off-site activities may not be waived.

Identification of potential state ARARs was initiated through Navy requests that the California Environmental Protection Agency Department of Toxic Substances Control (DTSC) identify potential state ARARs, an action described in more detail in Section A.1.2.3. Potential state ARARs that have been identified for the RDA are discussed below.

A.1.2 Methodology Description

The process of identifying and evaluating potential federal and state ARARs is described in this subsection.

A.1.2.1 General

As the lead federal agency, the Navy has primary responsibility for identification of potential ARARs for the RDA. In preparing this ARARs analysis, the Navy undertook the following measures, consistent with CERCLA and the NCP:

- Identified federal ARARs for each response action alternative addressed in the EE/CA, taking into account site-specific information for the RDA
- Reviewed potential ARARs identified by the state to determine whether they satisfy CERCLA and NCP criteria that must be met in order to constitute state ARARs
- Evaluated and compared federal ARARs and their state counterparts to determine whether state ARARs are more stringent than the federal ARARs or are in addition to the federally required actions
- Reached a conclusion as to which federal and state ARARs are the most stringent and/or "controlling" ARARs for each alternative

As outlined in Section 3.1 of the EE/CA, the removal action objective (RAO) for the RDA is to:

• Protect human health and the environment by reducing/mitigating the risk of an uncontrolled encounter with potential munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with current and future site use.

Removal action alternatives retained for detailed analysis in the EE/CA are designed to accomplish this RAO. The alternatives for the site use similar technologies to accomplish the goals but differ in the conceptual approach to their implementation.

The RDA removal action alternatives considered for detailed analysis, and for which an ARARs analysis is presented in this appendix, are as follows:

- Alternative 1: No Action
- Alternative 2: Land Use Controls (LUCs)
- Alternative 3: Anomaly Reacquisition, Removal, Post-Removal Survey (Digital Geophysical Mapping [DGM]), and Destruction
- Alternative 4: Anomaly Reacquisition, Removal, Post-Removal Survey (Advanced Geophysical Classification [AGC]), and Destruction

A.1.2.2 Identifying and Evaluating Federal ARARs

The Navy is responsible for identifying federal ARARs as the lead federal agency under CERCLA and the NCP. The final determination of federal ARARs will be made when the Navy issues the Action Memorandum. The federal government implements a number of federal environmental statutes that are the source of potential federal ARARs, either in the form of the statutes or regulations promulgated thereunder. Examples include the Resource Conservation and Recovery Act (RCRA), the Clean Water Act (CWA), the Safe Drinking Water Act, the Toxic Substances Control Act, and their implementing regulations. See NCP preamble at 55 Federal Register (Fed. Reg.) 8764–8765 (1990) for a more complete listing.

The Navy reviewed the proposed removal action and alternatives against all potential federal ARARs, including but not limited to those set forth at 55 Fed. Reg. 8764–8765 (1990) to determine whether they were applicable or relevant and appropriate using the CERCLA and NCP criteria and procedures for ARARs identification by lead federal agencies.

A.1.2.3 Identifying and Evaluating State ARARs

This subsection describes the process of identifying and evaluating potential state ARARs by the state and the Navy.

A.1.2.3.1 Solicitation of State ARARs under NCP

EPA guidance recommends that the lead federal agency consult with the state when identifying state ARARs for response actions (EPA, 1988b). In essence, the CERCLA/NCP requirements at 40 C.F.R. § 300.515 for response actions provide that the lead federal agency request that the state identify chemical- and location-specific state ARARs upon completion of site characterization. The requirements also provide that the lead federal agency request identification of all categories of state ARARs (chemical-, location-, and action-specific) upon completion of identification of remedial alternatives for detailed analysis. The state must respond within 30 days of receipt of the lead federal agency requests. The remainder of this subsection documents the Navy's efforts to date to identify and evaluate state ARARs.

The Navy followed the procedures of the process set forth in 40 C.F.R. § 300.515 in seeking state assistance in identifying state ARARs.

A.1.2.3.2 Chronology of Efforts to Identify State ARARs

The following chronology summarizes the Navy's efforts to obtain state assistance with identification of state ARARs for the removal action at the former NAVWPNSTA Seal Beach Det Concord, Concord, California. Key correspondence between the Navy and the state agencies relating to this effort has been included in the Administrative Record for the EE/CA.

The Navy formally requested state chemical-, location-, and action-specific ARARs for the RDA in November 2020. Letters were sent to the DTSC and San Francisco Bay Regional Water Quality Control Board (Water Board) soliciting ARARs based on preliminary response technologies and process options detailed to the agencies by the Navy.

The Navy received a response from DTSC, which included a response from the California Department of Fish and Wildlife (CDFW), dated December 18, 2020, and a response from the Water Board dated February 5, 2021.

This ARARs analysis addresses the potential state ARARs identified in the abovementioned correspondence from DTSC, CDFW, and Water Board.

A.1.3 Other General Issues

This subsection discusses general issues identified during the evaluation of ARARs for the RDA.

A.1.3.1 General Approach to Requirements of the Federal Resource Conservation and Recovery Act

RCRA is a federal statute passed in 1976 to meet four goals: protection of human health and the environment, reduction of waste, conservation of energy and natural resources, and elimination of the generation of hazardous waste as expeditiously as possible. The Hazardous and Solid Waste Amendments of 1984 significantly expanded the scope of RCRA by adding new corrective action requirements, land disposal restrictions (LDRs), and technical requirements. RCRA, as amended, contains several provisions that are potential ARARs for CERCLA sites.

Substantive RCRA requirements are applicable to response actions on CERCLA sites if the waste is a RCRA hazardous waste, and either:

- the waste was initially treated, stored, or disposed after the effective date of the particular RCRA requirement; or
- the activity at the CERCLA site constitutes treatment, storage, or disposal as defined by RCRA (EPA, 1988a).

The preamble to the NCP indicates that state regulations that are components of a federally authorized or delegated state program are generally considered federal requirements and potential federal ARARs for the purposes of ARARs analysis (55 Fed. Reg. 8666, 8742 [1990]). The State of California received approval for its base RCRA hazardous waste management program on 23 July 1992 (57 Fed. Reg. 32726 [1992]). The State of California "Environmental Health Standards for the Management of Hazardous Waste," set forth in Title 22 California Code of Regulations (C.C.R.), Division (div.) 4.5, were approved by EPA as a component of the federally authorized State of California RCRA program. On 26 September 2001, California received final authorization of its revised State Hazardous Waste Management Program from EPA (63 Fed. Reg. 49118 [2001]).

The regulations of 22 C.C.R., div. 4.5 are therefore a source of potential federal ARARs for CERCLA response actions. The exception is when a state regulation is "broader in scope" than the corresponding federal RCRA regulations. In that case, such regulations are not considered part of the federally authorized program or potential federal ARARs. Instead, they are purely state law requirements and potential state ARARs.

The EPA notice of 23 July 1992, approving the State of California RCRA program (57 Fed. Reg. 32726 [1992]), specifically indicated that the state regulations addressed certain non-RCRA, state-regulated hazardous wastes that fell outside the scope of federal RCRA requirements. As such, 22 C.C.R., div. 4.5 requirements would be potential state ARARs for such non-RCRA, state-regulated wastes.

A key threshold question for the ARARs analysis is whether the military munitions at the RDA constitute federal hazardous waste as defined under RCRA and the state's authorized program or qualify as non-RCRA, state-regulated hazardous waste. Section A.1.4 discusses waste characterization.

A.1.3.2 California Toxicity Criteria Rule

The Navy does not accept the California Toxicity Criteria Rule (TCR) at 22 C.C.R., div. 4.5, Chapter 51, Article 2 as ARARs for purposes of risk assessments, screening levels, or remediation goals. With respect to conducting risk assessments or identifying screening levels, under CERCLA, the lead agency conducts human health risk assessments during the initial, investigative stage of the process, whereas state-based requirements that the State has identified and proposed as potential ARARs are evaluated as part of the EE/CA, with final selection of any ARARs (both federal and state) made in the Action Memorandum. Accordingly, there is no requirement to attain or to evaluate ARARs for purposes of risk assessments or screening levels.

With respect to cleanup goals, as the EPA has explained, "[c]hemical-specific ARARs are usually health-or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment." The EPA has further stated, "Levels or standards of control are basic performance objectives for (a) remedial action (e.g., acceptable exposure levels after the remedial action is completed)." (See NCP Preamble, Proposed Rule, 53 Fed. Reg. at 51437, 51443.) While the values referenced by the TCR for particular COPCs may potentially be "applied to site-specific conditions," they do not in themselves establish "the acceptable amount or concentration of a chemical that may remain in, or be discharged to, the ambient environment," nor do they represent "basic performance objectives for (a) remedial action (e.g., acceptable exposure levels after the remedial concentration of a chemical that may remain in, or be discharged to, the ambient environment," nor do they represent "basic performance objectives for (a) remedial action (e.g., acceptable exposure levels after the remedial action is completed)."

Moreover, it does not appear that the State itself intended the TCR values to be viewed as ARARs. As stated in the responses to comments during administrative rulemaking for the TCR (and in keeping with the TCR stated connection to human health risk-based remediation RGs), "[r]egarding the request to have the rule state that it is not intended to require remediation goals to be set at 1×10^{-6} incremental risk or a HQ of 1, the rule
only requires that (risk-based) remediation goals be based on the toxicity criteria in accordance with § 69021. The rule does not set remediation goals at any particular point in the risk management range and is intentionally silent on that issue to defer to the regular NCP risk-management process and the flexibility provided within that process. The rule neither requires nor prohibits risk managers from setting remediation goals at 1×10⁻⁶ incremental risk (or HQ of 1), or at any other point within the risk management range. The remediation goal-setting decision is made for each individual site based on site-specific facts and conditions." (See https://dtsc.ca.gov/wp-content/uploads/sites/31/2018/07/Revised-Toxicity-Criteria-Rule-RTCs.pdf at bottom of pg. 33 of 64.)

The Navy notes that the above response addresses only potential ARARs status and that the Navy will take into consideration the toxicity values associated with the TCR in conducting risk assessments and identifying screening levels for munitions constituents detected at the RDA. No removal action goals are being set for this EE/CA, so the TCR is not being used.

A.1.4 Waste Characterization

This subsection describes the selection of ARARs involving the characterization of wastes.

A.1.4.1 RCRA Hazardous Waste Determination

Federal RCRA hazardous waste determination is necessary to determine whether a waste is subject to RCRA requirements at 22 C.C.R., div. 4.5 and other state requirements at 23 C.C.R., div. 3, Chapter 15. The first step in the RCRA hazardous waste characterization process is to evaluate contaminated media at the site(s) and determine whether the contaminant constitutes a "listed" RCRA waste. The preamble to the NCP states that "...it is often necessary to know the origin of the waste to determine whether it is a listed waste and that, if such documentation is lacking, the lead agency may assume it is not a listed waste" (59 Fed. Reg. 47384 [1994]).

This approach is confirmed in EPA guidance for CERCLA compliance with other laws (EPA, 1988a) as follows.

To determine whether a waste is a listed waste under RCRA, it is often necessary to know the source. However, at many Superfund sites, no information exists on the source of wastes. The lead agency should use available site information, manifests, storage records, and vouchers in an effort to ascertain the nature of these contaminants. When this documentation is not available, the lead agency may assume that the wastes are not listed RCRA hazardous wastes, unless further analysis or information becomes available that allows the lead agency to determine that the wastes are listed RCRA hazardous wastes.

RCRA hazardous wastes that have been assigned EPA hazardous waste numbers (or codes) are listed in 22 C.C.R., § 66261.30–66261.33. The lists include hazardous waste codes beginning with the letters "F," "K," "P," and "U."

Knowledge of the exact source of a waste is required for source-specific listed wastes (K waste codes). Some knowledge of the nature or source of the waste is required even for listed wastes from nonspecific sources, such as spent solvents (F waste codes) or commercial chemical products (P and U waste codes). These listed RCRA hazardous wastes are restricted to commercially pure chemicals used in particular processes such as degreasing.

P and U wastes cover only unused and unmixed commercial chemical products, particularly spilled or off-specification products (EPA, 1991a). Not every waste containing a P or U chemical is a hazardous waste. To determine whether a CERCLA investigation-derived waste contains a P or U waste, there must be direct evidence of product use. In particular, all the following criteria must be met. The chemicals must be:

- discarded (as described in 40 C.F.R. § 261.2[a][2]),
- either off-specification commercial products or a commercially sold grade,
- not used (i.e., soil contaminated with spilled unused wastes is a P or U waste), and
- the sole active ingredient in a formulation.

The Navy has not found any information indicating that there is any listed waste, including listed munitions items, at the RDA.

The second step in the RCRA hazardous waste characterization process is to evaluate potential hazardous characteristics of the waste. The evaluation of characteristic waste is described in EPA guidance as follows (EPA, 1988a).

Under certain circumstances, although no historical information exists about the waste, it may be possible to identify the waste as RCRA characteristic waste. This is important in the event that (1) remedial alternatives under consideration at the site involve on-site treatment, storage, or disposal, in which case RCRA may be triggered as discussed in this section; or (2) a remedial alternative involves off-site shipment. Since the generator (in this case, the agency or responsible party conducting the Superfund action) is responsible for determining whether the wastes exhibit any of these characteristics (defined in 40 C.F.R. § 261.21–261.24), testing may be required. The lead agency must use best professional

judgment to determine, on a site-specific basis, if testing for hazardous characteristics is necessary.

In determining whether to test for the toxicity characteristic using the extraction procedure (EP) toxicity test, it may be possible to assume that certain low concentrations of waste are not toxic. For example, if the total waste concentration in soil is 20 times or less the EP toxicity concentration, the waste cannot be characteristic hazardous waste. In such a case, RCRA requirements would not be applicable. In other instances, where it appears that the substances may be a characteristic hazardous waste (ignitable, corrosive, reactive, or EP toxic), testing should be performed.

Hazardous waste characteristics, as defined in 40 C.F.R. § 261.21–261.24, are commonly referred to as ignitability, corrosivity, reactivity, and toxicity. California environmental health standards for the management of hazardous waste set forth in 22 C.C.R., div. 4.5 were approved by EPA as a component of the federally authorized California RCRA program. Therefore, the characterization of RCRA waste is based on the state requirements.

The characteristics of ignitability, corrosivity, reactivity, and toxicity are defined in 22 C.C.R., § 66261.21–66261.24. According to 22 C.C.R., § 66261.24(a)(1)(A), "A waste that exhibits the characteristic of toxicity pursuant to subsection (a)(1) of this section has the EPA Hazardous Waste Number specified in Table I of this section which corresponds to the toxic contaminant causing it to be hazardous." Table 1 in 22 C.C.R., § 66261.24 assigns hazardous waste codes beginning with the letter "D" to wastes that exhibit the characteristic of toxicity; D waste codes are limited to "characteristic" hazardous wastes.

According to 22 C.C.R., § 66261.10, waste characteristics can be measured by an available standardized test method or be reasonably classified by generators of waste based on their knowledge of the waste provided that the waste has already been reliably tested or there is documentation of chemicals used.

The requirements at 22 C.C.R. § 66261.24 list the toxic contaminant concentrations that determine the characteristic of toxicity. The concentration limits are in milligrams per liter. These units are directly comparable to total concentrations in waste groundwater and surface water. For waste soil, these concentrations apply to the extract or leachate produced by the toxicity characteristic leaching procedure (TCLP).

A waste is considered hazardous if the contaminant concentrations in the wastewater or soil TCLP extract equal or exceed the TCLP limits. TCLP testing is required only if total

contaminant concentrations in soil equal or exceed 20 times the TCLP limits because the TCLP uses a 20-to-1 dilution for the extract (EPA, 1988a).

A.1.4.2 California-Regulated, Non-RCRA Hazardous Waste

A waste determined not to be a RCRA hazardous waste may still be considered a California-regulated non-RCRA hazardous waste. The state's RCRA program is broader in scope in its hazardous waste determination. 22 C.C.R., § 66261.24(a)(2) lists the total threshold limit concentrations (TTLCs) and the soluble threshold limit concentrations (STLCs) for non-RCRA hazardous waste. The state applies its own leaching procedure, the Waste Extraction Test (WET), which uses a different acid reagent and has a different dilution factor (tenfold). There are other state requirements that may be broader in scope than federal ARARs for identifying non-RCRA wastes regulated by the state. Those may be potential ARARs for wastes not covered under federal ARARs. See additional subsections of 22 C.C.R., § 66261.24. A waste is considered hazardous if its total concentrations exceed the TTLCs or if the extract concentrations from the WET exceed the STLCs. A WET is required when the total concentrations exceed the STLC but are less than the TTLCs (22 C.C.R., div. 4.5, ch. 11, Appendix II [b]).

A.1.4.3 Other California Waste Classifications

For waste discharged after 18 July 1997, solid waste classifications at 27 C.C.R., Sections (§§) 20210, 20220, and 20230 are used to determine applicability of waste management requirements. These are summarized below.

- A "designated waste" under 27 C.C.R., § 20210 is defined at California Water Code (C.W.C.) § 13173. Under C.W.C. § 13173, designated waste is hazardous waste that has been granted a variance from hazardous waste management requirements or nonhazardous waste that consists of or contains pollutants that, under ambient environmental conditions at a waste management unit, could be released in concentrations exceeding applicable water quality objectives (WQOs) or that could reasonably be expected to affect beneficial uses of the waters of the state.
- A "nonhazardous solid waste" under 27 C.C.R., § 20220 is all putrescible and nonputrescible solid, semisolid, and liquid wastes, including garbage, trash, refuse, paper, rubbish, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discarded waste (whether of solid or semisolid consistency), provided that such wastes do not contain wastes that must be managed as hazardous wastes or

wastes that contain soluble pollutants in concentrations that exceed applicable WQOs or could cause degradation of waters of the state.

Under 27 C.C.R., § 20230, inert waste is that subset of solid waste that does not contain hazardous waste or soluble pollutants at concentrations in excess of applicable WQOs and does not contain significant quantities of decomposable waste.

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Section A.2 Chemical-Specific ARARs

Chemical-specific ARARs are generally health- or risk-based numerical values or methodologies applied to site-specific conditions that result in the establishment of a cleanup level. Many potential ARARs associated with particular response action alternatives (such as closure or discharge) can be characterized as action-specific but include numerical values or methodologies to establish them; therefore, they fit into both categories (chemical- and action-specific). To simplify the comparison of numerical values, most action-specific requirements that include numerical values are included in this chemical-specific section and, if repeated in the action-specific section, the discussion refers back to this section.

This section presents the conclusions of the ARARs determination and summarize the potential ARARs, followed by a more detailed discussion of the ARARs for soil.

Table A2-1, included at the end of this section, summarizes potential federal and state chemical-specific ARARs.

A.2.1 Summary of ARARs Conclusions by Medium

Section 2.1 of the EE/CA provides detailed historical information on the former NAVWPNTSA Seal Beach Det Concord.

Based on historical aerial imagery, the former airfield was used to store and sort aircraft and related materials. The land surrounding the airfield was used for agricultural purposes since the beginning of military operations in the area (Multi-Media Environmental Compliance Group [MMEC Group], 2020).

The only surface water on the site is found in seasonal wetlands. Photos 3, 4, and 6 of the Biological Summary Report (Appendix D of the Supplemental Site Inspection Report) for the RDA and Southern Railroad Revetment Area indicate that surface water was present at the RDA in August 2019 (MMEC Group, 2020). Hydrologic conditions conducive to the presence of a surface water body (i.e., a pond) occur so rarely that onsite surface water is not a medium of concern. However, because surface water may be present on the RDA, the Navy has identified potential location-specific ARARs to protect surface water from impacts that may occur during completion of Alternatives 3 and 4. Section A.3 discusses those potential ARARs.

Soil is the only environmental medium of concern for this NTCRA because potential MPPEH/MEC is in subsurface soil. Other non-munitions related chemical contamination in soil at the RDA is being investigated in a remedial investigation (RI);

however, this chemical contamination is not being addressed in this NTCRA. The following sections present conclusions for ARARs pertaining to that medium.

A.2.1.1 Soil ARARs Conclusions

The Navy has identified the following potential chemical-specific ARARs for Alternative 3 and 4, which would generate waste, including waste MPPEH/MEC and possibly waste soil if soil is excavated as part of the MPPEH/MEC removal. The Navy would determine if the waste is RCRA hazardous or state-regulated, non-RCRA hazardous waste, according to the following potential chemical-specific ARARs:

- 22 C.C.R. §§ 66261.21(a)(2) and (4), 66261.22(a)(1), 66261.23(a), 66261.24(a)(1), and 66261.100 defining a RCRA hazardous waste
- 22 C.C.R. §§ 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101(a)(1), (2), and (3)– defining a non-RCRA state-regulated hazardous waste

The Navy also has identified the following provisions of the Military Munitions Rule as potential ARARs because of the potential for MPPEH/MEC to be at the site:

• Military Munitions Rule at 40 C.F.R. § 266.202(b) and (c) for determining when a military munition is a solid waste

The MPPEH/MEC remaining at the site meet the definition of solid waste.

Alternatives 3 and 4 would generate waste, including waste MPPEH/MEC and possibly waste soil if soil is excavated as part of the MPPEH/MEC removal. Analytical results from previous sampling events at the RDA indicate that the soil has the potential to exceed the toxicity characteristic for some metals and thus will have to be tested to evaluate whether it is RCRA hazardous waste or California-regulated, non-RCRA hazardous waste. In addition, MPPEH/MEC may meet the definition of ignitability or reactivity. Therefore, the RCRA hazardous waste definitions at 22 C.C.R. § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 are potential federal ARARs for determining whether the waste soil and waste MPPEH/MEC exhibits the characteristics of RCRA hazardous waste. Additionally, the non-RCRA, state-regulated waste definition requirements at 22 C.C.R. § 66261.3(a)(2)(C) 66261.3(a)(2)(F), 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101(a)(1) and (a)(2) are potential state ARARs for determining whether the waste soil and waste MPPEH/MEC is California-regulated, non-RCRA hazardous waste.

The Navy has identified the Military Munitions Rule at 40 C.F.R. § 266.202(b) and (c), which specify when unused and used military munitions become solid waste as potential ARARs for determining when munitions from the RDA constitute solid wastes. The munitions at the RDA meet the definition of solid waste. The Navy then would

determine if the military munition meets the definition of RCRA characteristic waste using the potential RCRA ARARs identified in the previous paragraph by determining if it is a live munition. If it is live, the munition meets the definition of RCRA characteristic waste. Once the characteristic is removed, the munition is no longer a RCRA hazardous waste.

A.2.2 Detailed Discussion of ARARs

This section provides a detailed discussion of potential federal and state ARARs. Pertinent and substantive provisions of the potential ARARs listed and described below were reviewed to determine whether they are potential federal or state ARARs for the EE/CA and MPPEH/MEC in subsurface soil at the RDA.

Table A2-1 at the end of this section identifies the requirements that are determined tobe ARARs. ARARs determinations are presented in the column with the heading"ARAR Determination. The following subsections discuss specific issues concerningsome of the requirements.

A.2.2.1 Soil ARARs

The key threshold question for soil ARARs is whether potential waste soil at the RDA would be classified as hazardous waste. The soil may be classified as federal hazardous waste as defined by RCRA and the state-authorized program or as non-RCRA, state-regulated hazardous waste. If the soil is determined to be hazardous waste, the appropriate requirements will apply.

A.2.2.1.1 Federal ARARs

The subsections below discuss the federal requirements evaluated as potential ARARs for soil.

RCRA

The federal RCRA requirements at 40 C.F.R. Part 261 do not apply in California because the state RCRA program is authorized, so the authorized state RCRA requirements are considered federal ARARs. The applicability of RCRA requirements depends on whether the waste is a RCRA hazardous waste; whether the waste was initially treated, stored, or disposed of after the effective date of the particular RCRA requirement; and whether the activity at the site constitutes treatment, storage, or disposal as defined by RCRA. RCRA requirements may be relevant and appropriate even if they are not applicable. Examples include activities that are similar to the definition of RCRA treatment, storage, or disposal for waste similar to RCRA hazardous waste.

The determination of whether a waste is a RCRA hazardous waste can be made by comparing the site waste with the definition of RCRA hazardous waste. The RCRA requirements at 22 C.C.R., §§ 66261.21(a)(2) and (4), 66261.22(a)(1), 66261.23(a), 66261.24(a)(1), and 66261.100 are potential ARARs because they define RCRA hazardous waste. These requirements are potential ARARs for soil and for any other waste generated in performance of the NTCRA. A waste can meet the definition of hazardous waste if it meets any of the characteristic waste definitions. If the Navy determines that the waste is RCRA hazardous waste, the Navy will comply with all independently applicable requirements for proper off-site disposal, such as packaging, manifesting, and land disposal restrictions. The CERCLA Off-Site Rule requires that CERCLA wastes may only be placed in a facility operating in compliance with the RCRA or other applicable federal or state requirements (CERCLA § 121(d)(3) [42 U.S.C. § 9621(d)(3)] and 40 C.F.R. § 300.440). The Navy has not identified these requirements as ARARs because the disposal of the waste will take place off site and regulatory requirements that apply to off-site actions are not ARARs.

Based on the Navy's knowledge of previous operations and the contamination at the RDA, the Navy does not anticipate that the waste soil meets the definition of ignitable, corrosive, or reactive waste as defined in 22 C.C.R. §§ 66261.21, 66261.22, and 66261.23. As long as waste remains inside the area of contamination, it will not be subject to RCRA LDRs.

A.2.2.1.2 State ARARs

The subsections below discuss the state requirements evaluated as potential ARARs for soil.

RCRA Requirements

State RCRA requirements included within the EPA-authorized RCRA program for California are considered to be potential federal ARARs and are discussed in the previous section. The exception is when a state regulation is broader in scope than the corresponding federal RCRA regulations. In that case, such regulations are not considered part of the federally authorized program or potential federal ARARs. Instead, they are purely state law requirements and potential state ARARs.

State requirements such as the non-RCRA, state-regulated hazardous waste requirements may be potential state ARARs because they are not within the scope of the federal ARARs (57 Fed. Reg. 60848). The 22 C.C.R., div. 4.5 requirements that are part of the state-approved RCRA program would be potential state ARARs for non-RCRA, state-regulated hazardous wastes.

The Navy accepts the following potential state ARARs for characterizing waste that may be generated in Alternatives 3 and 4:

22 C.C.R. §§ 66261.3(a)(2)(F), 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101(a)(1), (2), and (3) – defining a non-RCRA state-regulated hazardous waste.

A.2.2.2 Military Munitions ARARs

Neither military munitions nor MPPEH/MEC is, as a class, designated as CERCLA hazardous substances. However, the Navy is addressing munitions items at the RDA through the CERCLA framework, which is consistent with U.S. Department of Defense (DoD) policy.

Addressing the unique problems associated with MPPEH/MEC on military installations requires an approach that modifies the one taken under the CERCLA response and RCRA corrective action programs. The most significant reason for this difference is the absolute need to minimize explosives safety risks in planning, conducting, and implementing response actions. This is because the acute hazards associated with military munitions (especially MPPEH/MEC) are the primary factors driving the scope, sequence, and types of actions that are possible on the impacted sites. These concerns are unique to military installations in that most actions on CERCLA response or RCRA corrective action sites do not need to consider an explosion hazard posed by the presence of munitions or explosives. Response actions to address potentially live munitions items require a different approach to balance the risks and impacts of addressing the military munitions and/or MPPEH/MEC with the risks of inaction. Therefore, prior to commencement of the NTCRA activities, an explosives safety remediation plan will be prepared in accordance with the DoD's guidance titled DoD Explosives Safety Board's (DDESB) guidance "Defense Explosives Safety Regulations 6055.09, Edition 1," dated October 13, 2019.

At the RDA, the munitions items, including potential MPPEH/MEC, munitions debris/MDAS, and non-munitions-related scrap are waste. Therefore, certain substantive requirements of RCRA are potential ARARs for handling the waste material from the RDA.

A.2.2.2.1 Federal

Ammunition products produced or owned by the DoD are regulated under the Military Munitions Rule (62 Fed. Reg. 6621, 12 February 1997). The Military Munitions Rule identifies when conventional and chemical military munitions become a hazardous waste under RCRA. It also provides for safe storage and transport of such waste. Munitions are defined under 40 C.F.R. § 260.10, and the definition includes items such as explosive rounds and small arms rounds. A military munition is classified as hazardous waste if it is either a listed waste or exhibits a hazardous characteristic. The DoD has tested small arms ammunition (less than .50 caliber) and these items were found to not exhibit a reactive characteristic with respect to 40 C.F.R. § 261.23(a)(6). Munitions rounds of .50 caliber or greater may be reactive, and the individual items may constitute a hazardous waste due to reactivity. Hazardous waste classification analysis of military munitions also must consider other hazardous waste characteristics such as toxicity and ignitability.

The requirements for military munitions have been consolidated into 40 C.F.R. Part 266, subpart M with appropriate references to other requirements (such as treatment and disposal).

The definition of solid waste is further defined in the Military Munitions Rule at 40 CFR § 266.202. A military munition is not a solid waste when it is used for its intended purpose. An unused military munition is a solid waste when abandoned, removed from storage for treatment or disposal, or is deteriorated or damaged to the point that it is not serviceable. A used or fired military munition is a solid waste when transported offsite for disposal or if collected and disposed by burying or landfilling. A used or fired military munition is a solid waste if it lands off range and is not promptly rendered safe or retrieved. These criteria must be evaluated to determine whether the MPPEH/MEC could be a hazardous waste because to be a hazardous waste, the military munitions would have to be a solid waste. Therefore, the substantive provisions of 40 CFR § 266.202(b) and (c) are potential ARARs for determining that MPPEH/MEC is a solid waste.

Comparing MPPEH/MEC to the definition of RCRA hazardous waste aids in making the determination that a solid waste also meets the definition of RCRA hazardous waste. The RCRA requirements at 22 C.C.R. §§ 66261.21, 66261.22(a)(I), 66261.23, 66261.24(a)(I), and 66261.100 are applicable ARARs because they define RCRA hazardous waste. Available information regarding the RDA indicates that waste munitions on the site are not considered a RCRA listed waste. However, MPPEH/MEC may be considered a RCRA characteristic hazardous waste. The Navy would determine if the military munition meets the definition of RCRA characteristic waste using the potential RCRA ARARs by determining if it is a live munition. If it is live, the munition meets the definition of RCRA characteristic is removed, the munition is no longer a RCRA hazardous waste.

If scrap metal is found in the excavation, it will be recycled. The scrap metal is not expected to meet the definition of RCRA characteristic waste and therefore is exempted from regulation under California hazardous waste laws.

A.2.2.2.2 State

California has not yet adopted the federal RCRA Military Munitions Rule and continues to regulate ordnance items that meet the definition of "hazardous waste" under the

22 C.C.R. div. 4.5, hazardous waste regulations that are evaluated as potential federal ARARs.

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Section A.3 Location Specific ARARs

This section identifies and discusses potential location-specific ARARs. The discussions are presented based on various attributes of the site location, such as whether it is within a floodplain. Additional surveys will be performed in connection with the response action design and implementation to confirm location-specific ARARs where inadequate siting information currently exists, or in the event of changes to planned facility locations.

A.3.1 Summary of Location-Specific ARARs

Seven general resource categories are associated with evaluating and identifying location-specific ARARs. Those resource categories are cultural resources, wetland protection and floodplain management, hydrologic resources, biological resources, coastal resources, and geologic characteristics. Cultural resources, wetlands protection, and biological resources are the only resource categories relating to location-specific requirements potentially affected by the response action at the RDA. The following subsections present conclusions for ARARs pertaining to the identified resources.

A.3.1.1 Cultural Resources ARARs Conclusions

The Navy has identified the following potential ARARs under the National Historic Preservation Act (NHPA) because a National Register-eligible prehistoric archaeological site containing human remains, identified as CA-CCO-680 (approximately 2.7 acres), is located within the RDA:

• 54 U.S.C. § 306108 and implementing regulation at 36 C.F.R. § 800.4(d)(1) - requiring federal agencies to determine if proposed actions will affect historic properties and, if so, to avoid, minimize, or mitigate adverse effects

Site CA-CCO-680 is subject to rules and regulations identified in the 2017 NHPA Section 106 Memorandum of Agreement (MOA) (Navy, 2017) between Navy, the California State Historic Preservation Office, the City of Concord, and the East Bay Regional Park District. The City of Concord is developing proposed plans to cap and preserve this site in place, as described in the MOA and the appended historic properties treatment plan (Navy, 2017).

A.3.1.2 Wetlands Protection Conclusions

Jurisdictional wetlands were delineated at the RDA in 2008 (Tierra Data, Inc. [TDI] 2008). This delineation is more than 10 years old. However, wetlands at the RDA

may be jurisdictional. The wetlands that may be jurisdictional include areas to the south of the Former Runway Apron Fuel Pit/Septic System Area, areas immediately east and west of the north-south oriented former runway, and the area south of the railroad tracks curve as shown on Figure 4-1 of the EE/CA. These areas are identified based on the presence of wetland plants, ponding after rain events, and presence of anomalies that would be dug up in Alternatives 3 and 4. The Navy has identified the following for the vegetation removal and excavation in Alternatives 3 and 4:

- Executive Order 11990, Sections 1, 2, and 5 requiring federal agencies avoid, to the extent possible, adverse impacts associated with the destruction or loss of wetland and avoid support of new construction in wetlands if practicable alternatives exist
- Clean Water Act § 404 prohibiting the discharge of dredge or fill material

The Navy would use the substantive provisions of Nationwide Permit 38 as a means of complying with the requirements of Clean Water Act § 404. However, pursuant to CERCLA § 121(e), the Navy is not required to obtain a permit or submit a notice of intent to discharge under this general permit. In addition, pursuant to the 2018 Biological Opinion amendment, when CERCLA activities include excavation in a wetland, the Navy will complete a Site Restoration Plan as part of the removal action design documents and submit it to U.S. Fish and Wildlife Service (USFWS).

A.3.1.3 Biological Resources Conclusions

Several species of protected biological resource are present or potentially present at the RDA. The California red-legged frog (CRLF), a federal threatened species and a State species of special concern, and the California tiger salamander (CTS) (Central California distinct population segment), a federal and State threatened species, are present or potentially present on the RDA. Migratory birds also are potentially present at the RDA. The Navy has identified the following as potential ARARs for the protection of these biological resources:

- Federal Endangered Species Act at 16 U.S.C. §§1536(a)(2) and (3) and1538(a)(1) – prohibiting federal agency action from jeopardizing the continued existence of listed species and prohibiting the take of endangered species
- Migratory Bird Treaty Act at 16 U.S.C. § 703 prohibiting unregulated taking of migratory birds

The Navy also accepts the following as potential State ARARs because the Swainson's hawk, a State threatened species (but not a federal listed species), and the Golden

eagle and the White-tailed kite, both State fully protected birds, are present or potentially present at the RDA:

- California Endangered Species Act at California Fish and Game Code § 2080
- California Fish and Game Code § 3511(a)(1) and (b)(7) and (12) prohibiting the taking of fully protected birds
- California Fish and Game Code § 5650(a)(6) prohibiting the placement of enumerated substances or materials into waters of the State that are deleterious to fish, plant life, mammals, or bird life.

Alternatives 2, 3, and 4 would comply with the conservation measures, including Biological monitoring by an onsite USFWS-qualified biologist (reviewed by CDFW) during all ground-disturbing field activities identified in the 2018 amendment to the "Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California" (USFWS, 2012 and 2018). The CDFW Provisions (CDFWPs) (CDFW, 2012), will be considered in the development of protective measures for State protected species, including the Swainson's hawk, Golden eagle, and White-tailed kite.

A.3.2 Detailed Discussion of ARARs

This subsection provides a detailed discussion of potential federal and state ARARs by location-specific resources. Pertinent and substantive provisions of the potential ARARs listed and described below were reviewed to determine whether they are potential federal or state ARARs for the NTCRA to address MPPEH/MEC at the RDA and this EE/CA.

Table A3-1 at the end of this appendix identifies the requirements that are determined to be potential ARARs. ARARs determinations are presented in the column with the heading "ARAR Determination." Determinations of status for location-specific ARARs were generally based on maps or lists included in the regulation or prepared by the administering agency. References to the document or agency consulted are provided in the "Comments" column and may be provided in footnotes to the table. The following subsections discuss specific issues concerning some of the requirements.

A.3.2.1 Cultural Resources ARARs

A.3.2.1.1 Federal

The National Historic Preservation Act is a potential federal location-specific ARAR for the RDA.

National Historic Preservation Act

Pursuant to the National Historic Preservation Act (NHPA) and its implementing regulations at 36 C.F.R. Part 800, federal agency actions should take into account the effects of the actions on historic properties included on or eligible for inclusion on the National Register [https://www.nps.gov/nr]. The National Register is a list of districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. Under 54 U.S.C. § 306103, a federal agency shall initiate measures to ensure that where, as a result of federal action or assistance carried out by the agency, a historic property would be substantially altered or demolished, timely steps would be taken to make appropriate records and deposit them in the Library of Congress or some other appropriate agency for future use and reference.

The Navy has identified 54 U.S.C. § 306108 and the implementing regulation at 36 C.F.R. § 800.4(d)(1) as potential ARARs because a National Register-eligible prehistoric archaeological site containing human remains, identified as CA-CCO-680 (approximately 2.7 acres), is located within the RDA. Pursuant to 40 C.F.R. § 800.4(d)(1), the Navy has determined that the removal action activities associated with Alternatives 2, 3, and 4 will not affect the National Register-eligible prehistoric archaeological site CA-CCO-680 and is documenting this determination in this EE/CA and will document it again in the Action Memorandum. Anomalies have not been identified within site CA-CCO-680. Anomalies have been identified near the southwestern tip of the buffer around site CA-CCO-680. For Alternative 2, signs will not be constructed near the area; and, for Alternatives 3 and 4, the Navy will have an on-call archaeological monitor on the site when ground disturbance occurs within approximately 100 feet of the existing 100-foot avoidance buffer that already extends around site CA-CCO-680. The on-call archaeological monitor will oversee the ground-disturbing activities and ensure that there are no effects on site CA-CCO-680.

A.3.2.2 Wetlands Protection ARARs

Jurisdictional wetlands were delineated at the RDA in 2008 (TDI, 2008). This delineation is more than ten years old. However, the Navy has identified wetlands protection requirements as potential federal ARARs for Alternatives 3 and 4 which would include vegetation cutting and removal and hand digging for anomaly retrieval in certain portions of the RDA (Figure 4-1 of the EE/CA) that may be jurisdictional wetlands based on the presence of wetland plants and ponding after rain events.

A.3.2.2.1 Federal

This subsection discusses the federal requirements evaluated as potential ARARs for wetlands protection.

Protection of Wetlands, Executive Order No. 11990

Executive Order No. 11990 requires that federal agencies minimize the destruction, loss, or degradation of wetlands; preserve and enhance the natural and beneficial value of wetlands; and avoid support of new construction in wetlands if a practicable alternative exists.

Executive Order No. 11990 is not promulgated; therefore, it is not a potential ARAR. However, the Navy has identified Executive Order No. 11990, Sections 1, 2, and 5 as potential TBC criteria for activities in wetland areas in Alternatives 3 and 4. None of the activities will result in destruction, loss, or degradation of the wetlands.

Clean Water Act (33 U.S.C. § 1344)

Section 404 of the CWA of 1977 governs the discharge of dredged and fill material into waters of the United States, including adjacent wetlands. Wetlands are areas that are inundated by water frequently enough to support vegetation typically adapted for life in saturated soil conditions. Wetlands include swamps, marshes, bogs, and similar areas. Adjacent wetlands are wetlands that border, are contiguous to, or neighbor wetlands and include wetlands separated by man-made dikes or barriers, natural river berms, beach dunes, and the like. Both EPA and U.S. Army Corps of Engineers (USACE) have jurisdiction over wetlands. EPA's § 404 guidelines are promulgated in 40 C.F.R. Part 230, and the USACE's guidelines are promulgated in 33 C.F.R. Part 320.

The Navy has identified Clean Water Act § 404 as a potential federal ARAR for Alternatives 3 and 4. Alternatives 3 and 4 include vegetation removal and hand digging to recover anomalies in wetland areas that may be jurisdictional wetlands. These areas were identified based on ponding after rain events and he presence of wetland plants (Figure 4-1 of the EE/CA). The Navy would use the substantive provisions of Nationwide Permit 38 as a means of complying with the requirements of Clean Water Act § 404. However, pursuant to CERCLA § 121(e), the Navy is not required to obtain a permit or submit a notice of intent to discharge under this general permit. The Navy would restore the wetland excavations to the original grade and would reseed the areas with the vegetation that was removed. In addition, the 2018 Biological Opinion Amendment requires a Site Restoration Plan be developed for excavation in wetland areas and submitted to USFWS for approval. The Navy would develop the Site Restoration Plan as part of the CERCLA removal action design work plan and submit it to USFWS. The activities would not result in the loss of wetlands, so mitigation requirements are not identified as potential ARARs. CWA § 404 is not identified for Alternative 2 because ground-disturbing activities for constructing signs would not be in any of the wetland areas.

A.3.2.3 Biological Resources ARARs

The following regulated biological resources may be found at the RDA.

- CRLF, a federal threatened species and a State species of special concern
- CTS (Central California distinct population segment), a federal and a State threatened species
- Swainson's hawk, a State threatened species (but not a federal listed species)
- Golden eagle, a State fully protected bird
- White-tailed kite, a State fully protected bird
- Migratory birds

The Navy identified the substantive provisions of the Endangered Species Act (ESA) at 16 U.S.C. §§ 1536(a)(2) and (3) and 1538(a)(1) and the Migratory Bird Treaty Act (MBTA) at 16 U.S.C. § 703 as potential federal ARARs. The Navy accepts the following sections of the California Fish and Game Code as potential state ARARs: California Fish and Game Code §§ 2080, 3511, and 5650(a)(6).

A.3.2.3.1 Federal

Federal requirements evaluated as potential ARARs for biological resources are discussed in the subsections below.

Endangered Species Act of 1973

The ESA of 1973 (16 U.S.C. §§ 1531–1543) provides a means for conserving various species of fish, wildlife, and plants that are threatened with extinction. The ESA defines endangered and threatened species and provides for the designation of critical habitats. Critical habitat is a specific geographical area that is deemed essential for the conservation of a listed species, as designated by the Secretary of Interior or Secretary of Commerce under the ESA. Under Section 7(a) of the ESA (16 U.S.C., ch. 35, § 1536[a][2]), Federal agencies shall carry out conservation programs for threatened and endangered species. Federal agencies may not fund, authorize, or carry out any action that is likely to jeopardize the continued existence of any listed species or cause the destruction or adverse modification of critical habitat. Also, it is unlawful under Section 9 of the ESA for any person, including federal agencies, to "take" any listed fish or wildlife species (16 U.S.C. § 1538[a][1][B]) or remove, maliciously damage, or destroy any listed plant species (16 U.S.C. § 1538[a][2][B]). "Take" is defined broadly and includes, but is not limited to, harassing, harming, or killing (16 U.S.C. § 1532[19]). Incidental take may be authorized for the limited circumstances outlined in 16 U.S.C. § 1536(b)(4) and only when not associated with a finding of jeopardy or adverse modification. The Endangered Species Committee may grant an exemption for agency action when there are no reasonable and prudent alternatives to agency action and

reasonable mitigation and enhancement measures such as propagation, transplantation, and habitat acquisition and improvement are not sufficient to avoid a finding of jeopardy or adverse modification (16 U.S.C. § 1536[h]). The substantive requirements at 16 U.S.C. §§ 1536(a)(2) and (3) and 1538(a)(1) are potential ARARs for CERCLA sites that have listed species or designated critical habitats. The administrative requirements of ESA, including the Section 7 consultation process and the associated production of Biological Assessment and Biological Opinion documents and the Section 10 permit requirements, are not ARARs (EPA, 1989).

Compliance with the substantive requirements of the ESA requires the Navy to determine whether listed species and designated critical habitat are present at the CERCLA site and to identify reasonable and prudent mitigation measures to avoid "takes" of listed species and allow the response action to be undertaken without jeopardizing the continued existence of a listed species or resulting in the destruction or adverse modification of designated critical habitat. If the Navy determines that endangered species or critical habitat are not present or will clearly not be affected by the proposed response actions (without having to implement mitigation measures), then no further action is required.

Although consulting with and obtaining a Biological Opinion is a procedural requirement that is not necessary for on-site CERCLA actions, the Navy has obtained Biological Opinions for CERCLA investigation, identification, and removal of hazardous substances in its installation and munitions response program for sites at the base, which include the RDA. The most recent Biological Opinion was an amendment obtained in 2018 (USFWS, 2018) and makes (and reiterates) determinations regarding endangered plants, Alameda whipsnake, CTS , and CRLF. In the 2018 Biological Opinion amendment, a no effect determination on endangered plants was made (based on the absence of endangered plants from the project area) and may affect, but not likely to adversely affect determinations were made for the Alameda whipsnake, CTS, and CRLF. The Alameda whipsnake determination is based on negative survey results, lack of observations, and conservation measures that require the presence of biological monitors (USFWS, 2018).

The 2018 Biological Opinion amendment identified conservation measures including requiring a USFWS-qualified biologist (reviewed by CDFW) to be present during all ground-disturbing field activities in Alternatives 2, 3, and 4. Although the Alameda whipsnake is not a basis for the identification of the Endangered Species Act as a potential ARAR because it has not been identified on the RDA, the Navy would have a biological monitor on site while the ground-disturbing activities occur to monitor for the Alameda whipsnake in compliance with the basis for the determinations made in the 2018 Biological Opinion amendment (USFWS, 2018). Sensitive species are not expected be at the site, but the biologist would confirm that sensitive species continue

to be absent from the site. The other conservation measures identified in the 2018 Biological Opinion amendment also would be implemented (USFWS, 2018).

Migratory Bird Treaty Act of 1972

The MBTA (16 U.S.C. §§ 703–712) protects migratory bird species. The substantive provisions at 16 U.S.C. § 703 prohibit at any time, using any means or manner, the pursuit, hunting, capturing, and killing or the attempt to take, capture, or kill any migratory bird. The MBTA also prohibits the possession, sale, export, and import of any migratory bird or any part of a migratory bird, as well as nests and eggs. A list of migratory birds for which this requirement applies is found at 50 C.F.R. § 10.13. It is the Navy's position that this act is not legally applicable to Navy actions; however, the DoD signed (September 2014) a Memorandum of Understanding with the USFWS. The MBTA will continue to be evaluated as a potentially relevant and appropriate requirement for Navy CERCLA response actions.

Because the response action may potentially affect migratory birds as prohibited by the MBTA, substantive provisions at 16 U.S.C. § 703 are potentially relevant and appropriate for this EE/CA. None of the alternatives are expected to adversely impact migratory birds. The Navy will complete an ecological survey of the RDA before ground disturbing field activities in Alternatives 2, 3, and 4 to determine if migratory birds are present at the site and will be adversely affected by the removal action. If so, the Navy would develop appropriate measures to protect migratory birds.

A.3.2.3.2 State

The State of California has identified following sections of the California Fish and Game Code that have been accepted as potential State ARARs.

- §§ 2080 and 3511 for threatened or endangered species and fully protected birds
- § 5650(a)(6) prohibiting the deposition of certain prohibited substances where it can pass into waters of the State

California Fish and Game Code §§ 2080 and 3511

The California ESA is set forth in the California Fish and Game Code §§ 2050–2116. The substantive provisions in F.G.C. § 2080 prohibit the "take" of California endangered or threatened species. "Take" is defined in California Fish and Game Code § 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill."

California Fish and Game Code § 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time.

California Fish and Game Code §§ 2080 and 3511 are not applicable because the United States of America has not waived sovereign immunity in the federal ESA for this State of California requirement. The CTS and Swainson's hawk, state threatened species, are present or potentially present on the RDA. Fully protected birds that are potentially present at the RDA include the Golden eagle and White-tailed kite. These species are protected under California Fish and Game Code §§ 2080 and 3511. The substantive provisions of California Fish and Game Code §§ 2080 and 3511 meet the pertinent NCP criteria under 40 C.F.R. § 300.400(g)(2)(vii) and are "relevant and appropriate" because the CTS, Swainson's hawk, Golden eagle, and White-tailed kite are present or potentially present at the site and protection of these vulnerable resources allows them to be "used" in the sense that they continue to provide their unique value to the State of California.

The Navy accepts California Fish and Game Code §§ 2080 and 3511(a)(1) and (b)(7) and (12) as potential state ARARs for Alternatives 2 and 3 subject to the following conditions. The State of California, through CDFW concurs that this statute addresses prohibited conduct but does not provide for or prescribe affirmative measures to avoid a "taking." Notwithstanding the absence of specific affirmative measures in the statute, the Navy will implement reasonable measures to ensure adequate protection of ecological receptors during response action construction following issuance of a CERCLA decision document pursuant to the Navy's obligations under CERCLA to select removal or remedial actions that are protective of human health and the environment [see CERCLA § 121(b)(1)]. The Navy will coordinate with the State, through CDFW, prior to implementation of such reasonable measures. Reasonable measures may include the following: biological monitoring and avoidance, biological education training for field personnel, presence of USFWS-qualified biologist (reviewed by CDFW) during all ground-disturbing field activities, and implementation of the other conservation measures in accordance with the 2018 Biological Opinion Amendment (USFWS, 2018). Additionally, the CDFWPs (CDFW, 2012) will be considered in the development of protective measures to reduce/prevent impacts to the ecosystem, particularly for threatened, endangered, or fully protected birds. The Navy understands that the State reserves the right to conduct periodic site visits during removal or remedial activities to confirm implementation of avoidance measures.

No endangered native or rare plants have been observed on the RDA (USFWS, 2018).

California Fish and Game Code §§ 3503.5 and 3513

California Fish and Game Code § 3503.5 prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds-of-prey) or to take possess or destroy the nests or eggs of such birds. California Fish and Game Code § 3513 requires action to be taken to prevent the take of migratory nongame birds (as

designated in the MBTA). The State has withdrawn its previous identification of these requirements as State ARARs in light of the Navy's identification of the substantive provisions of the MBTA as a relevant and appropriate federal ARAR for this action.

California Fish and Game Code §§ 3005 and 3503

California Fish and Game Code § 3005 makes it is unlawful to take birds or mammals with any net, pound, cage, trap, set line or wire, or poisonous substance, or to possess birds or mammals so taken, whether taken within or without this state.

California Fish and Game Code § 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.

The Navy is not going to take any bird or mammal with a net, pound, cage, trap, set line or wire. Further, this NTCRA is addressing potential MPPEH/MEC remaining in subsurface soil at the RDA. The potential MPPEH/MEC does not poison birds or mammals as prohibited in California Fish and Game Code § 3005. Chemical contamination at the RDA, including potential risk to ecological receptors, is being completed under a separate CERCLA investigation. Therefore, the Navy does not accept California Fish and Game Code § 3005 as a potential ARAR.

The Navy has determined that California Fish and Game Code § 3503 is not applicable or relevant and appropriate. The State of California, through CDFW, asserts that § 3503 is a state ARAR because it is relevant and appropriate. Whereas the Navy and the State have not agreed upon whether California Fish and Game Code § 3503 is an ARAR, this EE/CA report documents each party's position on the statute but does not attempt to resolve the issue. Nonetheless, the Navy agrees that it will undertake the following measures in order to generally avoid harm to nests and eggs when there is the potential that they may be impacted by response action construction: survey the area for nests or eggs prior to removing munitions to see if the removal would affect a nest or eggs and to the extent practicable try to avoid affecting nests or eggs, and have biological monitors during the removal action. The State will not dispute the selected removal action for failure to identify California Fish and Game Code § 3503 as an ARAR because the State has determined that the mutually agreed measures to generally avoid harm will result in substantive compliance with the State requirement.

California Fish and Game Code § 5650(a), (b), and (c)

California Fish and Game Code § 5650(a), (b), and (c) prohibits depositing or placing, where it can pass into waters of the state, any petroleum products, factory refuse, sawdust, shavings, slabs or edgings, and any substance deleterious to fish, plant life, or bird life except under certain prescribed circumstances. California Fish and Game Code § 5650(b) states that this section does not apply to a discharge or a release that is

expressly authorized pursuant to, and in compliance with, the terms and conditions of a waste discharge requirement pursuant to California Water Code (C.W.C.) § 13263 or a waiver issued pursuant to C.W.C. § 13269, subdivision (a), issued by the State Water Resources Control Board (SWRCB) or Water Board after a public hearing, or that is expressly authorized pursuant to, and in compliance with, the terms and conditions of a federal permit for which the SWRCB or Water Board has, after a public hearing, issued a water quality certification pursuant to C.W.C. § 13160.

The Navy accepts California Fish and Game Code § 5650(a)(6) as a potential state ARAR for Alternatives 3 and 4 because of the proximity of wetlands and the channelized surface water drainages (waters of the state) at the site. Alternatives 3 and 4 are the only alternatives evaluated in the EE/CA that includes removal action construction excavation; therefore, they are the only alternatives that could result in the placement of prohibited materials. The Navy will develop stormwater controls to prevent the discharge to the waters of the State.

Fish and Game Commission Wetlands Policy

The Fish and Game Commission wetlands policy was included in the state's identification of ARARs. However, the Fish and Game Commission Wetlands Policy is not a regulation and was suggested as a TBC requirement. Because adequate ARARs have been identified for the protection of wetlands, no TBC requirement is necessary for this removal action.

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Section A.4 Action-Specific ARARs

The EE/CA evaluates response action alternatives for the RDA at the former NAVWPNSTA Seal Beach Det Concord. This ARARs analysis is based on four alternatives:

- Alternative 1: No Action
- Alternative 2: LUCs
- Alternative 3: Anomaly Reacquisition, Removal, Post-Removal Survey (DGM), Destruction, and LUCs
- Alternative 4: Anomaly Reacquisition, Removal, Post-Removal Survey (AGC), Destruction, and LUCs

Section 4.2 of the EE/CA provides detailed descriptions of the response action alternatives.

Table A4-1 at the end of this appendix presents federal and state potential actionspecific ARARs for the RDA. This section discusses the requirements determined to be pertinent to each alternative being evaluated for the RDA. A discussion of how the alternative complies with each identified ARAR also is provided.

A.4.1 Alternative 1 – No Action

There is no need to identify ARARs for the no action alternative because ARARs apply to "any removal or remedial action conducted entirely on-site" and "no action" is not a removal or remedial action (EPA, 1991b). Therefore, a discussion of action-specific ARARs is not appropriate for this alternative.

A.4.2 Alternative 2 – Land Use Controls

Alternative 2 includes implementation of LUCs, specifically a prohibition on ground disturbance (documented in licenses, leases, and base operations documents) except when UXO construction support and military munitions recognition and safety training for construction personnel are provided, to reduce/mitigate exposure of receptors to MPPEH/MEC in subsurface soil at the RDA. Alternative 2 does not include treating or removing any MPPEH/MEC from the site. LUCs are required to maintain the integrity of the site by preventing unacceptable risk to human health due to explosive hazards while still allowing access to the site. Please see Section 4.2.2 of the EE/CA for specific details on Alternative 2.

The following are potential action-specific ARARs for Alternative 2.

A.4.2.1 Federal ARARs

There are no potential federal ARARs for the land use controls. The Navy has identified the following requirements as potential ARARs for the military munitions that may remain at the site. The requirements for military munitions have been consolidated into 40 CFR 266, Subpart M, with appropriate reference to other requirements (for example, treatment and disposal).

The Navy has identified the following federal requirements as potential action-specific ARARs for the military munitions that may remain in the subsurface at the site:

• The requirement that the treatment and disposal of military munitions comply with the treatment and disposal requirements of RCRA at 40 CFR § 266.206

The Navy has also identified the following as potential federal action-specific ARARs for munitions that remain in place:

• The requirement that owners and operators of RCRA hazardous waste facilities that store ignitable or reactive waste protect the facility from sources of ignition or reaction at 22 C.C.R. tit. 22, §66264.17(a) and (b)

The potential military munitions remaining on site are in subsurface soil, which would function as an engineering control to prevent exposure and the ICs evaluated in Alternative 2 would ensure compliance with this potential ARAR.

A.4.2.2 State ARARs

No State ARARs were identified for the RDA.

A.4.3 Alternative 3 – Anomaly Reacquisition, Removal, Post-Removal Survey (DGM), and Destruction

Alternative 3 includes a combination of anomaly reacquisition, removal, and destruction by detonation to reduce/mitigate munitions-related items and the explosive hazard posed by MPPEH/MEC in subsurface soil at the RDA. UXO teams would intrusively investigate and remove the reacquired anomalies. If MPPEH/MEC is found that is unacceptable to move, it would be detonated in place. If the MPPEH/MEC is acceptable to move, it may be transported to a consolidated shot location within the footprint of the RDA. All MEC items will be guarded until demolition is performed. A post-removal verification survey using DGM methodologies would be performed to verify no subsurface anomalies remain. If anomalies are found, they would be reacquired, intrusively investigated and removed, and a post-removal verification survey using DGM methodologies would be re-performed to verify all anomalies have been removed. Additionally, soil samples would be collected for analysis of MC (metals and explosives) if munitions-related items are discovered during the intrusive investigation, or MPPEH/MEC are explosively treated (i.e., post-demolition shot). MC results would only be used to confirm no contamination remains following removal of MPPEH/MEC items or post-demolition. Please see Section 4.2.3 of the EE/CA for specific details on Alternative 3.

The following are potential action-specific ARARs for Alternative 3. However, actions associated with Alternative 3 trigger potential location-specific ARARs. Please see Section A.3 for the discussion of potential location-specific ARARs.

A.4.3.1 Federal ARARs

The Navy may generate waste soil from hotspot excavations. The Navy will determine if the waste soil is hazardous at the time it is generated. The waste soil would then be disposed of off site. Potential ARARs for the identification and management of hazardous waste are listed below.

- RCRA hazardous waste identification requirements, at 22 C.C.R. § 66262.11
- The requirement to analyze generated waste to determine if it is hazardous, at 22 C.C.R. § 66264.13(a)
- If, based on the hazardous waste determination described under the federal chemical-specific ARARs discussion, wastes are determined to be hazardous, substantive requirements of 22 C.C.R., § 66262.34 (pertaining to hazardous waste accumulation) will be applicable.
- Container storage (22 C.C.R., § 66264.171–66264.174 and 66264.176– 66264.178) are potential ARARs.
- The requirement for the initial generator of waste to determine the applicable EPA hazardous waste number, at 22 C.C.R. § 66268.9(a).

The Military Munitions Rule identifies when conventional and chemical military munitions become a hazardous waste under RCRA. It also provides for safe storage and transport of such waste. The requirements for military munitions have been consolidated into 40 C.F.R. Part 266, subpart M with appropriate references to other requirements (for example, treatment and disposal). These requirements are applicable federal ARARs for the proposed NTCRA at the RDA. The state has not yet adopted the federal RCRA Military Munitions Rule and continues to regulate munitions items that meet the definition of "hazardous waste" under 22 C.C.R. hazardous waste regulations.

Munitions remaining on the RDA meet the definition of solid waste identified as potential federal chemical-specific ARARs. The Navy has identified the following requirements as a potential federal ARARs for the waste munitions:

- The requirement to comply with the RCRA treatment requirements if the military munition is RCRA characteristic waste at 40 CFR § 266.206
- The requirements to detonate waste explosives in a manner that does not threaten human health or the environment and to detonate the explosives at locations that are a minimum distance away from the property of others at 22 C.C.R. § 66265.382

The Navy would characterize munitions found on the RDA according to the definitions of RCRA characteristic waste by determining if the munition is live. If the munition is live, it meets the definition of a RCRA reactive or ignitable waste. The munition would be blown in place if it is unacceptable to move or moved, then detonated on site. The detonation locations would meet the minimum distance requirements based on the pounds of waste explosives. The detonation would remove the RCRA reactive of ignitable waste characteristic and the waste would no longer be RCRA hazardous waste.

A.4.3.2 State ARARs

The Navy would determine if waste generated under Alternative 3 meets the definition of non-RCRA, state-regulated hazardous waste accepted as potential State chemical-specific ARARs.

A.4.4 Alternative 4 – Anomaly Reacquisition, Removal, Post-Removal Survey (AGC), and Destruction

Alternative 4 is identical to Alternative 3, except for the post-removal survey method. Under Alternative 4, the post-removal verification survey would be performed using AGC in dynamic mode. There are no ARARs for post-removal survey methods. Other components of Alternative 4 are the same as Alternative 3, so the potential actionspecific ARARs are the same.

Actions associated with Alternative 4 trigger potential location-specific ARARs. Please see Section A.3 for the discussion of potential location-specific ARARs.

A.4.4.1 Federal ARARs

The potential federal ARARs identified for Alternative 3 are potential federal ARARs for this alternative.

A.4.4.2 State ARARs

The Navy would determine if waste generated in Alternative 4 meets the definition of non-RCRA, state-regulated hazardous waste accepted as potential State chemical-specific ARARs.

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Section A.5 Summary

Controlling ARARs have been identified in this appendix for each environmental medium of concern, location-specific characteristic of the RDA, and each evaluated removal action alternative.

The Navy has identified potential chemical-specific ARARs for characterizing waste and waste munitions from the State of California's approved RCRA program and the Military Munitions Rule.

The Navy has identified several location-specific ARARs to protect regulated resources present at the RDA. Cultural resource protection requirements are identified to protect a National Register-eligible prehistoric archaeological site containing human remains, identified as CA-CCO-680 (approximately 2.7 acres), at the RDA. Biological resource protection requirements are identified because the grassland habitat is suitable to support federal and state threatened and endangered species namely, the CRLF, CTS, and Swainson's hawk, species of migratory birds, and the state fully protected White-tailed kite and Golden eagle Wetland resource protection requirements are identified because jurisdictional wetlands may be present in areas that will be investigated under Alternative 3.

Sources of potential action-specific ARARs include the Military Munitions Rule for the waste munitions and the approved State of California RCRA program.

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Section A.6 References

- California Department of Fish and Wildlife, 2012. Memorandum regarding "Review of Draft Removal Action Work Plan, Non-Time-Critical Removal Action Installation Restoration (IR) Site 24A (UXO 0001A), and Draft Sampling and Analysis Plan, Installation Restoration (IR) Site 24A (UXO 0001A), Former Naval Weapons Station Seal beach, Detachment Concord, Concord, California (Site# 201776)." To Jim Pinascom, DTSC Remedial Project Manager. April 3.
- Department of the Navy (Navy), 2017. "Section 106 Memorandum of Agreement Between the United States Navy, the California State Historic Preservation Officer, the City of Concord, and the East Bay Regional Park District Regarding the Disposal and Reuse of the Former Naval Weapons Station, Concord, in Concord, California." March.
- Naval Sea Systems Command, 2020. OP 5, Volume 1, Seventh Revision, "Ammunition and Explosives Safety Ashore." Change 15. March 25.
- Multi-Media Environmental Compliance Group (MMEC Group), 2020. "Draft Supplemental Site Inspection Report Runway Debris Area and Southern Railroad Revetment Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, California." April.
- Tierra Data, Inc. (TDI), 2008. "Wetlands Delineation and Aquatic Habitat Inventory for the Inland Area, Naval Weapons Station Seal Beach Detachment Concord, Concord, California." June.
- U.S. Department of Defense (DoD), 2018. Manual 4145.26, "DOD Contractor's Safety Manual for Ammunition and Explosives." March 13, 2008 (incorporating Change 2, August 31, 2018). Available Online at: https://www.esd.whs.mil/DD/>.
- _____, 2019a. Directive 6055.09E, "Explosives Safety Management (ESM)." November 18, 2016 (incorporating Change 3, June 26, 2019). Available Online at: <<u>https://www.esd.whs.mil/DD/</u>>.
 - _, 2019b. Instruction 4140.62, "Material Potentially Presenting an Explosive Hazard (MPPEH)." August 20, 2015 (incorporating Change 3, September 9, 2019). Available Online at: https://www.esd.whs.mil/DD/>.
- ____, 2021. Manual 4140.72, "Management of Material Potentially Presenting an Explosive Hazard," May 7 2021. Available Online at: .

- DoD Explosives Safety Board, 2019. "Defense Explosives Safety Regulation 6055.09, Edition 1." January 13. Available Online at: https://denix.osd.mil/ddes/home/home-documents/desr-6055-09/>.
- U.S. Environmental Protection Agency (EPA), 1988a. "CERCLA Compliance with Other Laws Manual, Interim Final." EPA/540/G-89/006. Office of Emergency and Remedial Response, Washington, DC. August. Available Online at: <https://nepis.epa.gov/>.
 - _____, 1988b. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA." EPA/540/G-89/004. OSWER Directive 9355.3-01. October. Available Online at: https://www.epa.gov/superfund/superfundremedial-investigationfeasibility-study-site-characterization.
- _____, 1991a. "Management of Investigation-Derived Wastes During Site Inspections." EPA/540/G-91/009. May. Available Online at: <https://nepis.epa.gov/>.
- _____, 1991b. "ARARs Q's and A's: General Policy, RCRA, CWA, SDWA, Post-ROD Information, and Contingent Waivers." Publication 9234.2-01/FS-A. Office of Solid Waste and Emergency Response. Washington, DC. June. Available Online at: https://nepis.epa.gov/>.
- U.S. Fish and Wildlife Service (USFWS), 2012. "Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California." File #81420-2011-F-0313. August 31.
 - ____, 2018. "Second Reinitiation of Formal Consultation for the Environmental Investigations on the Former Nava Weapons Station Seal Beach, Detachment Concord, Concord, Contra Costa County, California."
- Vollmar Natural Lands Consulting (Vollmar), 2008. "2008 Sensitive Botanical Resources Survey Report, Concord Naval Weapons Station, Inland Area, City of Concord, Contra Costa County, California." September.
TABLES

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Table A2-1: Federal and State Chemical-Specific Applicable or Relevant and Appropriate Requirements

Standard, Requirement, Criteria, or Limitation	Prerequisite	Citation ¹	Preliminary ARAR Determination	Com
SOIL AND WASTE	•			
FEDERAL				
Resource Conservation and Recove	ry Act (42 U.S.	C., ch. 82, § 6901 through § 6991[i])2	
Defines RCRA hazardous waste. A solid waste is characterized as toxic, based on the TCLP, if the concentration exceeds the TCLP maximum concentrations.	Waste	22 C.C.R. §§ 66261.21(a)(2) and (4), 66261.22(a)(1), 66261.23(a), 66261.24(a)(1), and 66261.100	Applicable	The substantive provisions of these requirent that generate waste. Waste, including waste excavated with the removal of the munitions The Navy would characterize the waste at the
Military Munitions Rule (40 C.F.R. Pa	art 266 Subpart	M) ²		
Identification of hazardous waste munitions and treatment and storage requirements for hazardous waste munitions.	Military munitions.	40 C.F.R. § 266.202(b) and (c)	Applicable	The substantive provisions of this requireme definition of solid waste. The military munition definition of solid waste. Alternatives 3 and would characterize waste munitions by deter inert. If munitions are live, the Navy would re then transport this material offsite for recyclin
STATE	•			
CalEPA Department of Toxic Substa	nces Control			
Definition of "non-RCRA hazardous waste"	Waste	22 C.C.R. §§ 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101(a)(1), (2), and (3)	Applicable	The substantive provisions of these requiren that generate waste. Waste, including waste excavated with the removal of the munitions The Navy would characterize the waste at th
Notes:				
1 = Only the substantive provisions of the require 2 = Statutes and policies, and their citations, are or policy as potential ARARs; specific potential	ements cited in this provided as headi ARARs are address	s table are potential ARARs. Ings to identify general categories of potentia sed in the table below each general heading	al ARARs for the conv , only pertinent substa	enience of the reader; listing the statutes and policies do ntive requirements of specific citations are considered p
ARAR = applicable or relevant and appropriate	requirement	MEC = munitions and expl	losives of concern	U.S.C. = United Sta
CalEPA = California Environmental Protection A	gency	MPPEH = material potenti	ally presenting an exp	losive hazard § = Section
C.C.R. = California Code of Regulations		Navy = Department of the	Navy	§§ = Sections

C.F.R. = Code of Federal Regulations

ch. = Chapter

Navy = Department of the Navy RCRA = Resource Conservation and Recovery Act TCLP = toxicity characteristic leaching procedure

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	v .		<u> </u>

nents are potentially applicable to activities munitions and waste soil that may be may be generated in Alternatives 3 and 4. ne time it is generated.

ent define when military munitions meet the ons that remain on the RDA meet the 4 would generate waste munitions. The Navy rmining whether the munitions are live or ender them inert using controlled detonation, ng or disposal.

nents are potentially applicable to activities e munitions and waste soil that may be , may be generated in Alternatives 3 and 4. ne time it is generated.

loes not indicate that the Navy accepts the entire statute potential ARAR

ates Code

Location	Requirement	Prerequisite	Citation ¹	Preliminary ARAR Determination	Comments
FEDERAL					
National Histor	ric Preservation Act of 19	66, as Amended 5	4 U.S.C. §§ 3001	101-320303) ²	
Historic project owned or controlled by federal agency	Action to preserve historic properties; planning of action to minimize harm to properties listed on or eligible for listing on the National Register of Historic Places.	Property included in or eligible for the National Register of Historic Places.	54 U.S.C § 306108 36 C.F.R. § 800.4(d)(1)	Applicable	A National Register-eligible prehistoric archaeological site CA-CCO-680 (approximately 2.7 acres), is located within 800.4(d)(1), the Navy has determined that the removal ac and 4 will not affect site CA-CCO-680 and is documenting document it again in the Action Memorandum. Anomalies 680. Anomalies have been identified near the southwester For Alternative 2, signs will not be constructed near the an have an on-call archaeological monitor on the site if groun 100 feet of the existing 100-foot avoidance buffer that alre archaeological monitor will oversee the ground-disturbing on site CA-CCO-680.
Exec. Order No	o. 11990, Protection of W	etlands ²			
Wetland	Avoid, to the extent possible, the adverse impacts associated with the destruction or loss of wetlands and avoid support of new construction in wetlands if practicable alternatives exist.	Wetland meeting definition of Section 7(c) of the Exec. Order No. 11990.	Executive Order No. 11990 Sections 1, 2, and 5	TBC	Wetlands are present at the RDA. This Executive Order r destruction, loss, or degradation of wetlands and to avoid no practicable alternative and all practicable measures to identified as TBC to guide the Navy's actions in the wetlan degradation of the wetlands and Alternative 2 does not inc
Clean Water A	ct of 1977, as Amended,	Section 404 (33 U.S	S.C. § 1344) ²		
Wetland	Action to prohibit discharge of dredged or fill material into wetland without permit.	Discharge of dredge or fill material into waters of the US, including adjacent wetlands	33 U.S.C. § 1344 (Clean Water Act § 404)	Relevant and appropriate	Jurisdictional wetlands were delineated at the RDA more the RDA may still meet the definition of jurisdictional wetla Act § 404 as a potential ARAR for Alternatives 3 and 4 tha digging anomalies in wetland areas as shown on Figure 4 substantive provisions of Nationwide Permit 38 as a mean Water Act § 404. However, pursuant to CERCLA § 121(e or submit a notice of intent to discharge under this general restored to the original grade and would be reseeded. No Alternatives 3 and 4, so mitigation is not required. In addia amendment, when CERCLA activities include excavation Restoration Plan as part of the removal action design doc

Table A3-1: Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements

e containing human remains, identified as the RDA. Pursuant to 40 C.F.R. § ction activities associated with Alternatives 2, 3, g this determination in this EE/CA and will s have not been identified within site CA-CCOern tip of the buffer around site CA-CCO-680. rea; and, for Alternatives 3 and 4, the Navy will nd disturbance occurs within approximately eady extends around site CA-CCO-680. The activities and ensure that there are no effects

requires federal agencies to minimize the new construction in wetlands unless there is minimize harm to wetlands. This was nds. Alternatives 3 and 4 will not result in clude new construction in the wetlands.

than 10 years ago in 2008. Wetland areas at ands. The Navy has identified Clean Water at includes removing vegetation and hand 4-1 of the EE/CA. The Navy would use the ns of complying with the requirements of Clean e), the Navy is not required to obtain a permit al permit. After excavation, the area would be o wetlands would be lost by the activities in lition, pursuant to the 2018 Biological Opinion in a wetland, the Navy will complete a Site cuments and submit it to USFWS.

Location	Requirement	Prerequisite	Citation ¹	Preliminary ARAR Determination	Comments
FEDERAL (con	tinued)				·
Endangered Sp	Decies Act of 1973 (16 U.S	6.C. §§ 1531–1543) ²		
Location where endangered or threatened species are present or location designated as critical habitat.	Federal agencies may not jeopardize the continued existence of any listed species or cause the destruction or adverse modification of critical habitat.	Presence of endangered species, listed species, or critical habitat.	16 U.S.C. §§ 1536(a)(2) and (3) and 1538(a)(1)	Applicable	The substantive requirements of these sections are poten threatened and endangered species are present or poten Although the Section 7 consultation required under the fe- requirement for onsite CERCLA actions, the Navy has ob for CERCLA activities in its installation and munitions resp Opinion was a 2018 amendment. The Navy will comply v 2018 Biological Opinion amendment for ground disturbing
Migratory Bird	Treaty Act of 1972 (16 U.	S.C. §§ 703–712) ²			
Migratory bird area	Protects almost all species of native migratory birds in the U.S. from unregulated "take," which can include poisoning at hazardous waste sites.	Presence of migratory birds	16 U.S.C. § 703	Relevant and appropriate	The substantive provisions of these requirements are ARA potentially present at the RDA. None of the alternatives a birds. The Navy will complete a survey prior to earthmovid determine if migratory birds are present and would be adv are present and would be adversely affected, the Navy will be adversely affected.
STATE					
California Depa	artment of Fish and Wildl	ife			
California Enda	angered Species Act (F.G	6.C. §§ 2050–2116)	2		
Area used by endangered or threatened species	No person shall take any endangered or threatened species.	Threatened or endangered species are present.	California Fish and Game Code §2080	Relevant and appropriate	While California Fish and Game Code §2080 does not que United States of America has not waived sovereign immus substantive provisions meet the pertinent NCP criteria une potentially "relevant and appropriate" because Swainson's RDA. The Navy will complete an ecological survey before construction. If state threatened species are present at the action, the Navy will develop reasonable implementation a adequate protection of the species during removal action Memorandum.

Table A3-1: Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements

ntially applicable because the following federal ntially present at the RDA: CRLF and CTS. deral ESA is considered a procedural tained Biological Opinions from the USFWS ponse programs. The most recent Biological with the conservation measures identified in the g activities conducted in Alternatives 3 and 4.

ARs because migratory birds are present or are expected to adversely impact migratory ing activities in Alternatives 3 and 4 to versely affected by activities. If migratory birds ill develop appropriate avoidance measures.

alify as an "applicable" ARAR because the unity for this State of California requirement, the der 40 C.F.R. § 300.400(g)(2)(vii) and are 's hawk and CTS are or may be present at the re activities associated with removal action he site and may be affected by the removal actions in coordination with CDFW to ensure construction following issuance of an Action

Location	Requirement	Prerequisite	Citation ¹	Preliminary ARAR Determination	Comments
STATE (continu	ed)				•
California Depa	artment of Fish and Wildl	life			
California Fish	& Game Code ²				
Fully protected bird species/ habitat	Fully protected birds or parts thereof may not be taken or possessed at any time.	A fully protected species must be potentially affected.	California Fish and Game Code § 3511(a)(1) and (b)(7) and (12)	Relevant and appropriate	The Navy accepts California Fish and Game Code § 3511 Fish and Game Code §3511 does not qualify as an "applie America has not waived sovereign immunity for this State provisions meet the pertinent NCP criteria under 40 C.F.F. "relevant and appropriate" because the White-tailed kite a RDA. The Navy will complete an ecological survey before construction. If the White-tailed kite and Golden eagle are the removal action, the Navy will develop reasonable impl to ensure adequate protection of the species during remo an Action Memorandum.
California Depa	artment of Fish and Wild	life			
Waters of the state	Prohibits the passage of enumerated substances or materials into waters of the state deleterious to fish, plant life, mammals or birds life.	Discharge not authorized under C.W.C. § 13263 or a waiver issued pursuant to subdivision (a) of C.W.C. § 13269.	California Fish and Game Code §5650 (a)(6)	Relevant and appropriate	While California Fish and Game Code §5650 does not que United States of America has not waived sovereign immu substantive portions of this standard will be complied with as potential state ARARs because wetlands and channelin state) are on the site. Alternatives 3 and 4 are the only all removal action construction activities; therefore, they are placement of prohibited materials. The Navy will develop to the wetlands.

Table A3-1: Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements

Notes:

1 = Only the substantive provisions of the requirements cited in this table are potential ARARs.

2 = Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Navy accepts the entire statute or policy as potential ARARs; specific potential ARARs are addressed in the table below each general heading, only pertinent substantive requirements of specific citations are considered potential ARAR

ARAR = applicable or relevant and appropriate requirements	CTS = California tiger salamander	RCRA = Resource
BMPs = best management practices	EE/CA = Engineering Evaluation/Cost Analysis	RDA = Runway Dis
C.F.R. = Code of Federal Regulations	ESA = Endangered Species Act	Stats. = Statutes
CDFW = California Department of Fish and Wildlife	MBTA = Migratory Bird Treaty Act	SWRCB = State Wa
CERCLA = Comprehensive Environmental Response, Compensation, and	Navy = Department of the Navy	U.S.C. = United Sta
Liability Act	NCP = National Oil and Hazardous Substances Pollution Contingency Plan	USFWS = U.S. Fish
ch. = Chapter	NPDES = National Pollutant Discharge Elimination System	TBC = to be conside
C.W.C. = California Water Code	p. = page	§ = Section
CRLF = California red-legged frog	pt. = Part	§§ = Sections

;

1 as a potential state ARAR. While California icable" ARAR because the United States of e of California requirement, the substantive R. § 300.400(g)(2)(vii) and are potentially and Golden eagle are or may be present at the re activities associated with remvoal action re present at the site and may be affected by olementation actions in coordination with CDFW oval action construction following issuance of

ualify as an "applicable" ARAR because the unity for this State of California requirement, the n as an ARAR. The Navy accepts this section ized surface water drainages (waters of the Iternative evaluated in this EE/CA that includes the only alternatives that could result in the o stormwater controls to prevent the discharge

Conservation and Recovery Act

ater Resources Control Board ates Code h and Wildlife Service lered

				Pr Det	elimir ARAI ermin	nary R ation	
Action	Requirement	Prerequisite	Citation ¹	Α	RA	ТВС	
Alternative 2 –	LUC		-				
Disposal of military munitions	Standards for the treatment and disposal of waste military munitions	Waste military munitions	40 CFR § 266.206	~			Waste munitions would exposure would be conti
Requirements for ignitable or reactive waste	The owner or operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste. The waste shall be separated and protected from sources of ignition or reaction and while ignitable or reactive waste is being handled, the owner or operator shall confine smoking and open flame to designated locations. The owner or operator of a facility that transfers, treats, stores, or disposes of ignitable or reactive waste shall take precautions to prevent reactions.	Facilities that transfer, treat, stores or dispose of ignitable or reactive waste	22 C.C.R., § 66264.17(a) and (b)	1			The regulations are pote will remain in the subsur
Alternatives 3	and 4 – Anomaly Reacquisition, Removal, I	Post-Removal Survey, a	nd Destruction				•
Store hazardous waste on site	On-site hazardous waste accumulation is allowed for up to 90 days without getting a RCRA treatment, storage, and disposal permit, if the waste is stored in containers that comply with 22 C.C.R. § 66264.171- 66264.171.178.	Hazardous waste	22 C.C.R. § 66262.34	✓			The waste soil from pote RCRA hazardous waste containers to determine of off site within the 90-d
Container storage	 Containers of RCRA hazardous waste must be: maintained in good condition, compatible with hazardous waste to be stored, and closed during storage except to add or remove waste. 	Storage of RCRA hazardous waste not meeting small-quantity generator criteria before treatment, disposal, or storage elsewhere in a container.	22 C.C.R., div. 4.5, ch. 14, Article 9, §§ 66264.171, 66264.172, 66264.173, 66264.174, 66264.176, 66264.177, and 66264.178		✓		If hot spot soil excavatio store excavated soil in c that the soil will meet the requirements are identifi
Onsite waste generation	Person who generates waste shall determine if that waste is a hazardous waste.	Generator of waste.	22 C.C.R., § 66262.11	√			The Navy may generate related material. The Na related material is hazar

Comments

remain in the subsurface of the RDA and rolled through administrative policies.

ential ARARs for the disposal of munitions that rface at the RDA.

ential hot spot excavations is not expected to be e. However, the waste soil may be stored in e if it is hazardous, and if so, would be disposed day time period.

on is necessary, the Navy would temporarily containers prior to offsite disposal. It is unlikely e definition of RCRA hazardous waste, so these fied as relevant and appropriate.

e waste when excavating soil and munitionsavy will determine if the waste soil or munitionsrdous at the time it is generated.

				Pr Det	Preliminary ARAR Determinatio		
Action	Requirement	Prerequisite	Citation ¹	Α	RA	ТВС	1
Alternatives 3	and 4 – Anomaly Reacquisition, Removal, I	Post-Removal Survey, a	nd Destruction (continu	ued)			
Onsite Waste Generation	Requirements for analyzing waste for determining whether waste is hazardous.	Generator of waste.	22 C.C.R., § 66264.13(a)	✓ 			Applicable to operations generate waste in excar Navy will determine if th hazardous at the time it
Open Detonation of Waste Explosives	Owners or operators who open detonate waste explosives shall do so in a manner that does not threaten human health or the environment and at minimum prescribed distances from the property of others.	Waste explosives include waste which has the potential to detonate and bulk military propellants which cannot safely be disposed of through other modes of treatment.	22 C.C.R., § 66265.382		~		Detonation of munitions personnel or UXO-traine Alternatives 3 and 4. Th pertaining to the open d appropriate.
Treatment and Disposal of Munitions	The treatment and disposal of munitions are subject to the applicable RCRA standards	Munitions	40 CFR § 266.206	✓			The Navy would charactive definitions of RCRA munition is live. If the magnetized reactive or ignitable was not safe to move or move would remove the RCR the waste would no long
Construction and Land Disturbance	Owners and operators of construction activities must comply with discharge standards, including substantive provisions of the general requirements for stormwater plans and best management practices.	Construction activity that disturbs 1 or more acres of soil.	33 U.S.C. § 1342(p) and 40 CFR § 122.44(k)(2) and (4)	V			Excavation and clearan more than 1 acre; there Stormwater controls wil entering wetlands or ch to comply with California
Construction and Land Disturbance	Most non-stormwater discharges are prohibited. Requires BMPs, developing and implementing a stormwater pollution prevention plan, and monitoring of stormwater discharges. Contains numeric effluent limits and action levels.	Construction site that disturbs 1 or more acres of soil.	SWRCB Order No. 2009-0009-DWQ, as amended by 2010- 0014-DWQ and 2012-0006 DWQ (General Construction Activity Storm Water Permit)				Pursuant to CERCLA § actions are exempt from Permit. The State of Ca Permit is such a permit. implement the substant federal CWA ARARs for activities that affect at le BMPs and prepare a CE monitoring, sampling an required under the state

Table A4-1: Federal and State Action-Specific Applicable or Relevant and Appropriate Requirements

Comments

s where waste is generated. The Navy may wating soil and munitions-related material. The ne waste soil or munitions-related material is t is generated.

s items by explosive ordnance disposal ed specialists may be performed as part of herefore, the substantive requirements detonation of waste explosives are relevant and

cterize munitions found on the RDA according to A characteristic waste by determining if the munition is live, it meets the definition of a RCRA aste. The munition would be blown in place if it is oved, then detonated on site. The detonation RA reactive of ignitable waste characteristic and ager be RCRA hazardous waste.

ace activities in Alternatives 3 and 4 will affect fore, stormwater controls are necessary. Il also be used to prevent materials from nannelized surface water drainages at the RDA ia Fish and Game Code § 5650(a)(6).

121 (e) [42 U.S.C. § 9621 (e)], onsite response n permit requirements, including a NPDES alifornia's General Construction Storm Water . Although not an ARAR in itself, the Navy will tive provisions of this permit to comply with or discharges associated with construction east 1 acre of land. The Navy will implement ERCLA Storm Water Plan, which will include nd analysis, and numeric action levels as e general storm water permit.

Table A4-1: Federal and State Action-Specific Applicable or Relevant and Appropriate Requirements

Notes:

1 = Statutes and policies, and their citations, are provided as headings to identify general categories of potential ARARs for the convenience of the reader; listing the statutes and policies does not indicate that the Navy accepts the entire statute or policy as potential ARARs; specific potential ARARs are addressed in the table below each general heading, only pertinent substantive requirements of specific citations are considered potential ARAR.

A = applicable

ARAR = applicable or relevant and appropriate requirements BMPs = best management practices Cal. = California C.C.R. = California Code Regulations CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act ch. = Chapter Civ. = Civil CWA = Clean Water Act div. = Division DTSC = Department of Toxic Substances Control EPA = U.S. Environmental Protection Agency Navy = Department of the Navy NPDES = National Pollutant Discharge Elimination System NTCRA = non-time-critical removal action RA = relevant and appropriate RCRA = Resource Conservation and Recovery Act SWRCB = State Water Resources Control Board TBC = to be considered U.S.C. = United States Code UXO = unexploded ordnance § = Section §§ = Sections

APPENDIX B COST ANALYSIS

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Table B-1. Alternatives Cost Estimate Summary

Site: Runway Debris Area Location: NAVWPNSTA Seal Beach Det Concord Phase: EE/CA (-30% / +50%)

Remedial		Total		Total	Period of			Pr	esent Value			
Alternative	C	apital Cost	Per	iodic Cost	Analysis ⁽²⁾	Тс	otal Cost ⁽³⁾		Cost ⁽⁴⁾	Range for	r -30%	۵ / +50%
1	\$	-	\$	-	30 years	\$	-	\$	-	\$ -	to \$	-
2	\$	70,000	\$	-	30 years	\$	70,000		\$70,000	\$ 49,000	to \$	105,000
3	\$	1,980,500	\$	-	30 years	\$	1,980,500		\$1,980,500	\$ 1,386,350	to \$	2,970,750
4	\$	2,413,500	\$	_	30 years	\$	2,413,500		\$2,413,500	\$ 1,689,450	to \$	3,620,250

Notes:

(1) Appended tables summarize backup calculations for all cost estimates provided.

(2) Period of analysis assumes the base year is 2020.

(3) Total cost includes a 25 percent contingency factor to account for changes in scope, changes to bid quantities, and inflation.

(4) Based on a 2.4 percent discount factor for projects with a 30-year (or greater) duration (base year of 2020), as specified for federal facility sites in Appendix C of Office of Management and Budget Circular A-94 (effective March 2022) at https://www.whitehouse.gov/wp-content/uploads/2022/05/discount-history.pdf.

Table B-2. Alternative 2 - Cost Summary

Site: Runway Debris Area			De	escription: A	Iternative 2 (Land Use Controls)
Location: NAVWPNSTA Seal Be	ach Det Cor	ncord		C	ost Summary for the NTCRA EE/CA
CAPITAL COSTS:					
DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	SOURCE/NOTES
Pre-construction documents					
Land Use Controls Remedial Design (LUC RD)	1	LS	\$ 40,000.00	\$40,000	Assumes internal draft, draft, and final verisons of LUC RD
Site Management Plan (SMP)	1	LS	\$ 30,000.00	\$30,000	Assumes internal draft, draft, and final verisons of SMP
			SUBTOTAL:	\$70,000	

TOTAL CAPITAL COSTS: \$70,000

Table B-2. Alternative 2 - Cost Summary

Site: Runway Debris Area **Location:** NAVWPNSTA Seal Beach Det Concord **Description:** Alternative 2 (Land Use Controls) Cost Summary for the NTCRA EE/CA

			Five-Year			
		Annual	Review		Discount Factor	
Year	Capital Costs	O&M Costs	Report	Total Cost	(2.4%) ¹	Present Value
0	\$70,000	\$0	\$0	\$70,000	1.0000	\$70,000
1	\$0	\$0	\$0	\$0	0.9766	\$0
2	\$0	\$0	\$0	\$0	0.9537	\$0
3	\$0	\$0	\$0	\$0	0.9313	\$0
4	\$0	\$0	\$0	\$0	0.9095	\$0
5	\$0	\$0	\$0	\$0	0.8882	\$0
6	\$0	\$0	\$0	\$0	0.8674	\$0
7	\$0	\$0	\$0	\$0	0.8470	\$0
8	\$0	\$0	\$0	\$0	0.8272	\$0
9	\$0	\$0	\$0	\$0	0.8078	\$0
10	\$0	\$0	\$0	\$0	0.7889	\$0
11	\$0	\$0	\$0	\$0	0.7704	\$0
12	\$0	\$0	\$0	\$0	0.7523	\$0
13	\$0	\$0	\$0	\$0	0.7347	\$0
14	\$0	\$0	\$0	\$0	0.7175	\$0
15	\$0	\$0	\$0	\$0	0.7006	\$0
16	\$0	\$0	\$0	\$0	0.6842	\$0
17	\$0	\$0	\$0	\$0	0.6682	\$0
18	\$0	\$0	\$0	\$0	0.6525	\$0
19	\$0	\$0	\$0	\$0	0.6372	\$0
20	\$0	\$0	\$0	\$0	0.6223	\$0
21	\$0	\$0	\$0	\$0	0.6077	\$0
22	\$0	\$0	\$0	\$0	0.5935	\$0
23	\$0	\$0	\$0	\$0	0.5796	\$0
24	\$0	\$0	\$0	\$0	0.5660	\$0
25	\$0	\$0	\$0	\$0	0.5527	\$0
26	\$0	\$0	\$0	\$0	0.5398	\$0
27	\$0	\$0	\$0	\$0	0.5271	\$0
28	\$0	\$0	\$0	\$0	0.5148	\$0
29	\$0	\$0	\$0	\$0	0.5027	\$0
30	\$0	\$0	\$0	\$0	0.4909	\$0
Total Costs:	\$ 70,000	\$0	\$0	\$70,000		\$70,000

Notes:

(1) Based on a 2.4 percent discount factor for projects with a 30-year (or greater) duration (base year of 2020), as specified for federal facility sites in Appendix C of Office of Management and Budget Circular A-94 (effective March 2022) at https://www.whitehouse.gov/wp-content/uploads/2022/05/discount-history.pdf.

BMPs = best management practices

EE/CA = Engineering Evaluation/Cost Analysis

LS = lump sum

NTE = not to exceed

Site: Runway Debris Area			0	Description: Alt	ternative 3 (DGM Removal and Treatment)
Location: NAVWPNSTA Seal Be	ach Det Co	ncord		Co	ost Summary for the NTCRA EE/CA
CAPITAL COSTS:	_			_	
DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	SOURCE/NOTES
Planning documents	1	LS	\$152,185.00	\$152,185	Includes Internal Draft, Draft, and Final document versions of a EE/CA, AM, Work Plan, SAP, EPP, QC Plan, APP/SSHP, and ESS
Mobilization- Demobilization/Site Preparation	1	LS	\$86,000.00	\$86,000	Includes costs to mobilize and demobilize personnel and equipment to the site; install BMPs, and establish work zones. Includes approximately 30 field staff, one office, 2 storage connexes, and 4 pieces of equipment.
			SUBTOTAL:	\$238,185	
Site Work					
Vegetation Clearance	1	LS	\$32,000	\$32,000	Includes costs to conduct vegetation removal on approximately 83 acres and providing dust control. Includes 4 field staff, 2 pieces of equipment, and hand tools.
Anomaly Reacquisition	1	LS	\$146,000	\$146,000	Includes labor to reacquire approximately 13,000 anomalies using real- time-kinematic global positioning system. Includes labor for 4 field staff, hand tools, and flags.
Subsurface Anomaly Removal	1	LS	\$1,027,000	\$1,027,000	Includes labor to investigate approximately 13,000 anomalies. Includes 25 field staff, 3 EM-61s, and 2 pieces of equipment.
Soil Sampling	1	LS	\$23,900.00	\$23,900	Includes cost for approximately 50 soil grab samples analyzed for metals and up to 10 samples to be analyzed for explosives, inclusive of labor for one sampling technician, and lab costs.
DGM	1	LS	\$99,875.00	\$99,875	Includes set up for IVS, DGM using Towed-Array, geophysical technician interpretation, and labor field costs.
Demolition/Demilitarization	1	LS	\$51,800.00	\$51,800	Includes costs for 2 consolidated demolition shots and disposal of MDAS and scrap metal. Includes 5 field staff, subcontractor costs for disposal, and cost for explosives (including delivery).
RACR	1	LS	\$24,500	\$24,500	Includes a Draft, Draft Final, and Final RACR and two rounds of comments.
AAR	1	LS	\$19,800	\$19,800	Includes Internal Draft, Draft, and Final document versions of an After Action Report
Project Management	10%			\$166,306	Includes project management during all phases of construction, regulatory interface, and permitting.
Construction Management	10%			\$151,088	Includes construction management, quality control, and quality control testing.
			SUBTOTAL:	\$1,742,269	
		TOTAL C		\$1,980,500	

Table B-3. Alternative 3 - Cost Summary

Site: Runway Debris Area	
Location: NAVWPNSTA Seal Beach Det Concord	

Description: Alternative 3 (DGM Removal and Treatment) Cost Summary for the NTCRA EE/CA

			Five-Year			
		Annual	Review		Discount Factor	
Year	Capital Costs	O&M Costs	Report	Total Cost	(2.4%) ¹	Present Value
0	\$1,980,500	\$0	\$0	\$1,980,500	1.0000	\$1,980,500
1	\$0	\$0	\$0	\$0	0.9766	\$0
2	\$0	\$0	\$0	\$0	0.9537	\$0
3	\$0	\$0	\$0	\$0	0.9313	\$0
4	\$0	\$0	\$0	\$0	0.9095	\$0
5	\$0	\$0	\$0	\$0	0.8882	\$0
6	\$0	\$0	\$0	\$0	0.8674	\$0
7	\$0	\$0	\$0	\$0	0.8470	\$0
8	\$0	\$0	\$0	\$0	0.8272	\$0
9	\$0	\$0	\$0	\$0	0.8078	\$0
10	\$0	\$0	\$0	\$0	0.7889	\$0
11	\$0	\$0	\$0	\$0	0.7704	\$0
12	\$0	\$0	\$0	\$0	0.7523	\$0
13	\$0	\$0	\$0	\$0	0.7347	\$0
14	\$0	\$0	\$0	\$0	0.7175	\$0
15	\$0	\$0	\$0	\$0	0.7006	\$0
16	\$0	\$0	\$0	\$0	0.6842	\$0
17	\$0	\$0	\$0	\$0	0.6682	\$0
18	\$0	\$0	\$0	\$0	0.6525	\$0
19	\$0	\$0	\$0	\$0	0.6372	\$0
20	\$0	\$0	\$0	\$0	0.6223	\$0
21	\$0	\$0	\$0	\$0	0.6077	\$0
22	\$0	\$0	\$0	\$0	0.5935	\$0
23	\$0	\$0	\$0	\$0	0.5796	\$0
24	\$0	\$0	\$0	\$0	0.5660	\$0
25	\$0	\$0	\$0	\$0	0.5527	\$0
26	\$0	\$0	\$0	\$0	0.5398	\$0
27	\$0	\$0	\$0	\$0	0.5271	\$0
28	\$0	\$0	\$0	\$0	0.5148	\$0
29	\$0	\$0	\$0	\$0	0.5027	\$0
30	\$0	\$0	\$0	\$0	0.4909	\$0
Total Costs:	\$1,980,500	\$0	\$0	\$1,980,500		\$1,980,500

Notes:

(1) Based on a 2.4 percent discount factor for projects with a 30-year (or greater) duration (base year of 2020), as specified for federal facility sites in Appendix C of Office of Management and Budget Circular A-94 (effective March 2022) at https://www.whitehouse.gov/wp-content/uploads/2022/05/discount-history.pdf.

BMPs = best management practices

EE/CA = Engineering Evaluation/Cost Analysis

LS = lump sum NTE = not to exceed

Table B-3. Alternative 4 - Cost Summary

Site: Runway Debris Area			D	Description: Alte	ernative 4 (AGC Removal and Treatment)
Location: NAVWPNSTA Seal Bea	ach Det Con	cord		Co	st Summary for the NTCRA EE/CA
CAPITAL COSTS: DESCRIPTION	QTY	UNIT	UNIT COST	TOTAL	SOURCE/NOTES ¹
Planning documents	1	LS	\$179,016	\$179,016	Includes a Draft, Draft Final, and Final Work Plan and two rounds of comments.
Mobilization-Demobilization/ Site Preparation	1	LS	\$120,000	\$120,000	Includes costs to mobilize and demobilize personnel and equipment to the site; install BMPs, and establish work zones.
			SUBTOTAL:	\$299,016	
Site Work					
Vegetation Clearance	1	LS	\$32,000	\$32,000	Includes costs to conduct vegetation removal on approximately 83 acres and providing dust control. Includes 4 field staff, 2 pieces of equipment, and hand tools.
Anomaly Reacquisition	1	LS	\$146,000	\$146,000	Includes labor to reacquire approximately 13,000 anomalies using real-time-kinematic global positioning system. Includes labor for 4 field staff, hand tools, and flags.
Subsurface Anomaly Removal	1	LS	\$1,027,000	\$1,027,000	Includes labor to investigate approximately 13,000 anomalies. Includes 25 field staff, 3 EM-61s, and 2 pieces of equipment.
Soil Sampling	1	LS	\$23,900	\$23,900	Includes cost for approximately 50 soil grab samples analyzed for metals and up to 10 samples to be analyzed for explosives, inclusive of labor for one sampling technician, and lab costs.
AGC	1	LS	\$365,000	\$365,000	Includes set up for IVS, DGM using Towed-Array, geophysical technician interpretation, and labor field costs.
Demolition/Demilitarization	1	LS	\$51,800	\$51,800	Includes costs for 2 consolidated demolition shots and disposal of MDAS and scrap metal. Includes 5 field staff, subcontractor costs for disposal, and cost for explosives (including delivery).
RACR	1	LS	\$61,670	\$61,670	Includes a Draft, Draft Final, and Final RACR and two rounds of comments.
AAR	1	LS	\$19,800	\$19,800	Includes Internal Draft, Draft, and Final document versions of an After Action Report.
Project Management	10%			\$202,619	Includes project management during all phases of construction, regulatory interface, and permitting.
Construction Management	10%			\$184,717	Includes construction management, quality control, geotechnical testing, and quality control testing.
			SUBTOTAL:	\$2,114,506	

TOTAL CAPITAL COSTS: \$2,413,500

Table B-3. Alternative 4 - Cost Summary

Site: Runway Debris Area **Location:** NAVWPNSTA Seal Beach Det Concord **Description:** Alternative 4 (AGC Removal and Treatment) Cost Summary for the NTCRA EE/CA

			Five-Year			
		Annual	Review		Discount Factor	
Year	Capital Costs	O&M Costs	Report	Total Cost	(2.4%) ¹	Present Value
0	\$2,413,500	\$0	\$0	\$2,413,500	1.0000	\$2,413,500
1	\$0	\$0	\$0	\$0	0.9766	\$0
2	\$0	\$0	\$0	\$0	0.9537	\$0
3	\$0	\$0	\$0	\$0	0.9313	\$0
4	\$0	\$0	\$0	\$0	0.9095	\$0
5	\$0	\$0	\$0	\$0	0.8882	\$0
6	\$0	\$0	\$0	\$0	0.8674	\$0
7	\$0	\$0	\$0	\$0	0.8470	\$0
8	\$0	\$0	\$0	\$0	0.8272	\$0
9	\$0	\$0	\$0	\$0	0.8078	\$0
10	\$0	\$0	\$0	\$0	0.7889	\$0
11	\$0	\$0	\$0	\$0	0.7704	\$0
12	\$0	\$0	\$0	\$0	0.7523	\$0
13	\$0	\$0	\$0	\$0	0.7347	\$0
14	\$0	\$0	\$0	\$0	0.7175	\$0
15	\$0	\$0	\$0	\$0	0.7006	\$0
16	\$0	\$0	\$0	\$0	0.6842	\$0
17	\$0	\$0	\$0	\$0	0.6682	\$0
18	\$0	\$0	\$0	\$0	0.6525	\$0
19	\$0	\$0	\$0	\$0	0.6372	\$0
20	\$0	\$0	\$0	\$0	0.6223	\$0
21	\$0	\$0	\$0	\$0	0.6077	\$0
22	\$0	\$0	\$0	\$0	0.5935	\$0
23	\$0	\$0	\$0	\$0	0.5796	\$0
24	\$0	\$0	\$0	\$0	0.5660	\$0
25	\$0	\$0	\$0	\$0	0.5527	\$0
26	\$0	\$0	\$0	\$0	0.5398	\$0
27	\$0	\$0	\$0	\$0	0.5271	\$0
28	\$0	\$0	\$0	\$0	0.5148	\$0
29	\$0	\$0	\$0	\$0	0.5027	\$0
30	\$0	\$0	\$0	\$0	0.4909	\$0
Total Costs:	\$2,413,500	\$0	\$0	\$2,413,500		\$2,413,500

Notes:

(1) Based on a 2.4 percent discount factor for projects with a 30-year (or greater) duration (base year of 2020), as specified for federal facility sites in Appendix C of Office of Management and Budget Circular A-94 (effective March 2022) at https://www.whitehouse.gov/wp-content/uploads/2022/05/discount-history.pdf.

BMPs = best management practices

EE/CA = Engineering Evaluation/Cost Analysis

LS = lump sum NTE = not to exceed This page intentionally left blank

APPENDIX C SUPPORTING INFORMATION FOR ENVIRONMENTAL FOOTPRINT ANALYSIS RESULTS

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Environmental impacts are provided in this EE/CA for overall consideration of the NTCRA alternatives. The potential impacts to the environment that could occur during implementation of the alternatives were considered and include land and species impacts, power and water consumption, use of natural resources, air emissions, and production of waste materials. As part of the environment impact assessment, estimated numerical values were calculated for the green remediation metrics in accordance with EPA's "Methodology for Understanding and Reducing a Project's Environmental Footprint" (EPA, 2012).

The green remediation metrics, as defined by EPA (2012), are summarized below.

- Refined materials used on site—refers to the mass of manufactured or significantly processed materials that are used on site and come from offsite sources. Examples include chemicals, water, and plastics.
- Percent of refined materials from recycled or waste material—refers to the percentage of the "refined materials" that is produced using recycled or reused materials or is otherwise a waste product of a manufacturing process
- Unrefined materials used on site—refers to the mass of materials that are used at the site, come from offsite sources, and generally have not undergone significant processing or refinement.
- Percent of unrefined materials from recycled or waste material—refers to the percentage of "unrefined materials" obtained from recycled or reused materials or is otherwise a waste product.
- Onsite hazardous waste generated—refers to the mass of hazardous waste generated at the site and disposed of at an offsite hazardous waste facility or in a regulated onsite disposal unit.
- Onsite nonhazardous waste generated—refers to the mass of nonhazardous waste that is generated at the site and disposed of off-site or in a regulated onsite disposal unit. An example would be excavated soil contaminated with MC.
- Percent of total potential onsite waste that is recycled or reused—reflects the total potential waste (hazardous or nonhazardous) generated at the site that is recycled or reused on or off site.
- Onsite water use—considers the source and amount of water used at the site, as well as the fate and quality of the water after use.
- Total energy use—refers to the total amount of energy used by the alternative for onsite and
 offsite activities, including electricity generation, transportation, materials manufacturing, and
 other offsite activities that support the alternative.
- Total energy voluntarily derived from renewable resources—refers to renewable energy that a project team voluntarily generates or uses in place of energy derived from other resources. This metric category comprises the following three submetrics that distinguish between various forms of renewable energy production and use:
 - Onsite energy generation or use and biodiesel use—refers to renewable energy that is generated at the site and biodiesel used both on site and off site. To be counted toward this metric, the rights to the renewable energy generated by the systems described here need to be retained by the cleanup project and not transferred to other parties or facilities.

- Voluntary purchase of renewable electricity—refers to the voluntary purchase of renewable electricity from an electricity provider in the form of a "green pricing" or "green marketing" product.
- Voluntary purchase of renewable energy certificates—refers to the direct purchase of renewable energy certificates.
- Onsite nitrogen oxides (NOx), sulfur oxides (SOx), and particulate matter less than 10 microns in size (PM10) emissions—refers to the sum of the onsite emissions for NOx, SOx, and PM10 before consideration of potential reductions from voluntary purchases of emissions off-sets, renewable electricity, renewable energy certificates, or similar products.
- Onsite hazardous air pollutant (HAP) emissions—refers to onsite combined HAP emissions (i.e., the sum of all listed HAPs) before consideration of potential reductions from voluntary purchases of emissions offsets, renewable electricity, renewable energy certificates, or similar products.
- Total NOx, SOx, and PM10 emissions—refers to the total onsite and offsite NOx, SOx, and PM10 emissions before consideration of potential reductions from voluntary purchases of emissions offsets, renewable electricity, renewable energy certificates, or similar products.
- Total HAP emissions—refers to the total onsite and offsite HAP emissions before consideration of potential reductions from voluntary purchases of emissions offsets, renewable electricity, renewable energy certificates, or similar products.
- Greenhouse gas (GHG) emissions—refers to the total onsite and offsite GHG emissions
 associated with the alternative measured in tons of carbon dioxide equivalent of global warming
 potential before consideration of potential reductions from voluntary purchases of emissions
 offsets, renewable electricity, renewable energy certificates, or similar products. Onsite
 emissions are not presented separately from offsite emissions because the effects of GHGs are
 independent of the location of the emissions.
- Land and ecosystems—qualitative description of the likely land and ecosystem impacts during alternative implementation.

All Components

		AI	Compone	nts - On-Si	ite Footprin	t (Scope 1)								
			Ene	rgy	GI	IG	NC)x	SO	(PI	N	HAP	s
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Contributors to Footprints	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
On-Site														
On-site Renewable Energy														
Renewable electricity generated on-site	MWh	0	3.413	0										
Landfill gas combusted on-site for energy use	ccf CH4	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
User-defined on-site renewable energy use #1	gal	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined on-site renewable energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Renewable Energy Subtotal	S			0		0		0		0		0		0
On-site Conventional Energy														
On-site arid electricity	MWh	0	3.413	0										
On-site diesel use - Other	Gal	742.5	0.139	103.208	22.5	16706.25	0.17	126.2	0.0054	4.01	0.0034	2.525	5.2E-06	0.004
On-site diesel use <75 hp	Gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75 <hp<750< td=""><td>Gal</td><td>0</td><td>0.139</td><td>0</td><td>22.24</td><td>0</td><td>0.101</td><td>0</td><td>0.00013</td><td>0</td><td>0.009</td><td>0</td><td>0.00004</td><td>0</td></hp<750<>	Gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	Gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
On-site gasoline use - Other	Gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.0005	0	0.000039	0
On-site gasoline use <25 hp	Gal	0	0.124	0	17.48	0	0.037	0	0.00025	0	0.165	0	0.00008	0
On-site gasoline use >25 hp	Gal	0	0.124	0	19.93	0	0.032	0	0.00029	0	0.002	0	0.00009	0
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
On-site compressed natural gas use - Other	ccf	0	NP		1957.835	0	16.033	0	0.023045	0	0.2775	0	0	0
On-site compressed natural gas use	ccf	0	NP		1957.835	0	16.033	0	0.023045	0	0.2775	0	0	0
On-site liquefied petroleum gas use - Other	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquefied petroleum gas use	gal	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Other forms of on-site conventional energy use #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Other forms of on-site conventional energy use #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Conventional Energy Subtotal	S			103.21		16,706		126		4		3		0
Other On-site Emissions														
On-site HAP process emissions	lbs	0											1	0
On-site GHG emissions	lbs CO2e	0			1	0								
On-site carbon storage	lbs CO2e	0			1	0								
GHG avoided by flaring on-site landfill methane	Lbs	0			-262	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
Other on-site NOx emissions or reductions	lbs	0					1	0						
Other on-site SOx emissions or reductions	lbs	0							1	0				
Other on-site PM emissions or reductions	lbs	0									1	0		
User-defined recycled/reused on-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused on-site #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0

Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019

Runway debris Area Alternatives 3 & 4

All Components

	All Components - On-Site Footprint (Scope 1) (continued)													
	Energy		Gl	łG	NOx		SOx		PM		HAPs			
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Contributors to Footprints	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
On-site Totals		103		16,706		126		4.0		2.5		0.0		

All Components - Electricity Generation Footprint (Scope 2)

			Energy		GHG		NOx		SOx		PM		HAPs	
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Contributors to Footprints	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Electricity Generation														
Grid electricity	MWh	0	6.929	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0	N/A*	0
* Conversion factors are not applied to grid electricit	y in the '	"All Com	ponents" ta	ab since m	ultiple fuel	mixes may	be used.	The v	alue for ea	ch cell	shaded y	rellow ii	n Row 51 is	s the
sum of values from Components 1 - 6.														
Voluntary purchase of renewable electricity	MWh	0								-		-		
Voluntary purchase of RECs	MWh	0								1		-		

All Components - Transportation Footprint (Scope 3a)

			Ene	rgy	G	HG	NC)x	SO	x	P	Ν	HAP	s
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Contributors to Footprints	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Conventional Energy														
Transportation diesel use	gal	20.1	0.139	2.7939	22.5	452.25	0.17	3.417	0.0054	0.109	0.0034	0.068	5.2E-06	1E-04
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.0005	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	190.8	0.124	23.6592	19.79	3775.932	0.035	6.678	0.00036	0.069	0.003	0.572	0.00661	1.261
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.0005	0	0.000039	0
Transportation natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
User-defined conventional energy transportation #1	TBD	10	0	0	0	0	0	0	0	0	0	0	0	0
User-defined conventional energy transportation #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Conventional Energy Subtotals				26		4,228		10		0		1		1
Renewable Energy														
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
User-defined renewable energy transportation #1	TBD	0	Biodiesel		0	0	0	0	0	0	0	0	Ref.	

All Components

			Ene	rgy	GHG		NC)x	SOx				
			Conv.		Conv.		Conv.		Conv.				
Contributors to Footprints	Units	Usage	Factor	MMBtus	Factor	Ibs CO2e	Factor	lbs	Factor	lbs			
User-defined renewable energy transportation #2	TBD	0	mpg or		0	0	0	0	0	0			
			pmpg										
Renewable Energy Subtotals				0		0		0		0			
Transportation Totals	26		4228		10		0						

All Components - Transportation Footprint (Scope 3a) (continued)

All Components	- Off-Site	Footprint	(Scope	3b)
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			Ener	rgy	Greenho	ouse Gas	NC)x	SO	(PN	1	HAP	s
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	Ibs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Construction Materials			-			-								
Aluminum, Rolled Sheet	lb	0	0.0633	0	9.15	0	0.0148	0	0.0283	0	0.0088	0	0.00102	0
Asphalt, mastic	lb	0	0.0412	0	0.85	0	0.0027	0	0.00798	0	0.0008	0	0.00107	0
Asphalt, paving-grade	lb	0	0.5	0	8.58	0	0.0299	0	0.0969	0	0.0091	0	0.0133	0
Ethanol, Corn, 95%	lb	0	0.0318	0	-0.0199	0	0.0043	0	0.00303	0	0.0005	0	8.46E-05	0
Ethanol, Corn, 99.7%	lb	0	0.0324	0	0.0591	0	0.0043	0	0.0031	0	0.0005	0	0.000087	0
Ethanol, Petroleum, 99.7%	lb	0	0.0205	0	1.25	0	0.002	0	0.00214	0	0.0003	0	5.89E-05	0
Gravel/Sand Mix, 65% Gravel	lb	0	0.0000248	0	0.0024	0	2E-05	0	4.52E-06	0	3E-06	0	3.08E-07	0
Gravel/sand/clay	lb	0	0.000028	0	0.00335	0	2E-05	0	0.000015	0	2E-06	0	2.05E-10	0
HDPE	lb	0	0.0332	0	1.94	0	0.0033	0	0.00409	0	0.0004	0	6.41E-05	0
Photovoltaic system (installed)	W	0	0.0336	0	4.47	0	0.015	0	0.032	0	0.0006	0	2.9E-06	0
PVC	lb	0	0.0262	0	2.02	0	0.004	0	0.00274	0	0.0004	0	0.000375	0
Portland cement, US average	lb	0	0.0139	0	1.34	0	0.0065	0	0.0104	0	0.0038	0	0.00097	0
Ready-mixed concrete, 20 MPa	ft3	0	0.217	0	19.5	0	0.0975	0	0.154	0	0.057	0	0.0141	0
Round Gravel	lb	0	0.0000248	0	0.0024	0	2E-05	0	4.52E-06	0	3E-06	0	3.08E-07	0
Sand	lb	0	0.0000248	0	0.0024	0	2E-05	0	4.52E-06	0	3E-06	0	3.08E-07	0
Stainless Steel	lb	0	0.0116	0	3.4	0	0.0075	0	0.012	0	0.0044	0	0.000144	0
Steel	lb	0	0.0044	0	1.1	0	0.0014	0	0.0017	0	0.0006	0	0.000067	0
Other refined construction materials	lb	0	0.01885	0	2.115	0	0.004	0	0.005133	0	0.0014	0	0.000163	0
Other unrefined construction materials	lb	0	0.000028	0	0.00335	0	2E-05	0	0.000015	0	2E-06	0	2.05E-10	0
Treatment Materials & Chemicals														
Cheese Whey	lbs	0	0.0025	0	0.031	0	6E-05	0	0.000033	0	2E-06	0	NP	
Emulsified vegetable oil	lbs	0	0.0077	0	3.44	0	0.0066	0	0.0019	0	3E-05	0	NP	
Granular activated carbon, primary	lbs	0	0.0356	0	4.82	0	0.0793	0	0.128	0	0.001	0	0.000657	0
Granular activated carbon, regenerated	lbs	0	0.00873	0	1.7	0	0.0073	0	0.0129	0	0.0009	0	0.000671	0
Hydrogen Peroxide, 50% in H2O	lbs	0	0.00979	0	1.19	0	0.0014	0	0.0024	0	0.0003	0	6.29E-05	0
Iron (II) Sulfate	lbs	0	0.00147	0	0.167	0	0.0003	0	0.000589	0	0.0001	0	0.000023	0

PN	Λ	HAP	S
Conv.		Conv.	
Factor	lbs	Factor	lbs
0	0	0	0
	0		0
	1		1

All Components

	All Components - Off-Site Footprint (Scope 3b) (continued)													
			Ener	rgy	Greenho	use Gas	NC)x	SO	x	PI	M	HAP	s
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Lime, Hydrated, Packed	lbs	0	0.00206	0	0.762	0	0.0005	0	0.000358	0	0.0001	0	6.57E-06	0
Molasses	lbs	0	0.0044	0	0.48	0	0.0011	0	0.00024	0	4E-06	0	NP	
Phosphoric Acid, 70% in H2O	lbs	0	0.0067	0	0.882	0	0.0028	0	0.0294	0	0.0017	0	0.000163	0
Potassium Permanganate	lbs	0	0.00981	0	1.16	0	0.0023	0	0.0032	0	0.0004	0	0.000122	0
Sodium Hydroxide, 50% in H2O	lbs	0	0.00977	0	1.09	0	0.0019	0	0.00352	0	0.0004	0	0.000129	0
Other Treatment Chemicals & Materials	lbs	0	0.015	0	1.67	0	0.003	0	0.0065	0	0.0006	0	0.000016	0
Fuel Processing														
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.0008	0	NP	
Diesel produced	gal	762.6	0.017	12.9642	3.02	2303.052	0.0051	3.889	0.0062	4.728	0.0017	1.296	0.0011	0.839
Gasoline produced	gal	190.8	0.033	6.2964	2.8	534.24	0.0046	0.878	0.005	0.954	0.0015	0.286	0.001	0.191
Liquefied Petroleum Gas Produced	gal	0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Natural Gas - Compressed Produced	ccf	0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Natural Gas Produced	ccf	0	0.0052	0	2.2	0	0.0037	0	0.0046	0	7E-05	0	6.1E-06	0
Fuel Processing Subtota	S			19		2837.292		4.767		5.682		1.583		1.0
Public water	gal x 100	30	0.0092	0.276	5	150	0.0097	0.291	0.0059	0.177	0.016	0.48	0.000015	5E-04
User-defined water resource #1	gal x 100	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined water resource #2	gal x 100	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-Site Services														
Hazardous waste incineration	lb	0	0.00609	0	2.43	0	0.0016	0	0.00167	0	0.0002	0	0.000087	0
Off-site waste water treatment (POTW)	gal x 100	0	0.015	0	4.4	0	0.016	0	0.015	0	NP		NP	
Off-site non-hazardous waste landfill	ton	0	0.16	0	25	0	0.14	0	0.075	0	0.4	0	0.0014	0
Off-site hazardous waste landfill	ton	0	0.18	0	27.5	0	0.154	0	0.0825	0	0.44	0	0.00154	0
Off-site Laboratory Analysis - Other	sample	0	0.058071	0	6.8534384	0	0.1314	0	0.303876	0	0.0456	0	0.033017	0
Off-site Laboratory Analysis - Metals	sample	0	0.212	0	27.4693	0	0.6423	0	1.5072	0	0.2264	0	0.1643	0
Off-site Laboratory Analysis - Mercury	sample	0	0.0731715	0	9.325458	0	0.2127	0	0.49824	0	0.0747	0	0.054233	0
Off-site Laboratory Analysis - Inorganic Anions	sample	0	0.0074025	0	0.6459478	0	0.0068	0	0.014793	0	0.0022	0	0.001554	0
Off-site Laboratory Analysis - Alkalinity	sample	0	0.0174398	0	1.3381922	0	0.007	0	0.01325	0	0.0019	0	0.001283	0
Off-site Laboratory Analysis - Perchlorate	sample	0	0.023885	0	1.8717054	0	0.008	0	0.014154	0	0.0021	0	0.001287	0
Off-site Laboratory Analysis - Nitrogen/Nitrate	sample	0	0.0336475	0	4.29897	0	0.0955	0	0.222665	0	0.0335	0	0.024251	0
Off-site Laboratory Analysis - Sulfate s		0	0.0141225	0	1.4726728	0	0.008	0	0.013602	0	0.002	0	0.001202	0
Off-site Laboratory Analysis - PCBs		0	0.0512769	0	5.224902	0	0.0833	0	0.190477	0	0.0284	0	0.021208	0
Off-site Laboratory Analysis - VOCs	sample	0	0.0762045	0	9.016814	0	0.1045	0	0.227074	0	0.034	0	0.023589	0
Off-site Laboratory Analysis - SVOCs	sample	0	0.0715602	0	7.870422	0	0.1459	0	0.337304	0	0.0505	0	0.037258	0

All Components

All Components - Off-Site Footprint (Scope 3b) (continued)														
			Ene	rgy	Greenho	ouse Gas	NC)x	SO	x	PN	1	HAP	S
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	Ibs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Resource Extraction for Electricity														
Coal extraction and processing	MWh	0	3.1	0	180.0	0	0.8	0	0.2	0	0.0	0	NP	
Natural gas extraction and processing	MWh	0	1.6	0	270.0	0	0.2	0	13.0	0	0.0	0	NP	
Nuclear fuel extraction and processing	MWh	0	0.2	0	25.0	0	0.2	0	0.5	0	0.0	0	NP	
Oil extraction and processing	MWh	0	2.3	0	270.0	0	1.7	0	0.1	0	0.0	0	NP	
Other fuel extraction and processing	MWh	0	0	0	0	0	0	0	0	0	0	0	0	0
Resource Extraction Subtotals				0		0		0		0		0		0
Electricity Transmission														
Transmission and distribution losses	MWh	0	1.0342	0										
User-defined Materials														
User-defined material #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #4	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #5	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #6	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #7	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #8	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #9	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #10	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #11	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #12	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #13	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #14	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #15	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #16	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #17	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #18	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #19 TB		0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined material #20	0	0	0	0	0	0	0	0	0	0	0	0	0	
User-defined Waste Destinations														
User-defined recycled/reused off-site #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined recycled/reused off-site #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0

Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019

Runway debris Area Alternatives 3 & 4

All Components

All Components - Off-Site Footprint (Scope 3b) (continued)														
		Energy Greenho		use Gas	ise Gas NOx		SOx		PM		HAP	s		
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	lbs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
			Energy		GHG		NOx					1		
			(MMBtu/uni		(lbs CO2e/		(lbs/unit		SOx		PM	1	HAPs	
User-defined recycled/reused off-site #3	TBD	0	t)		unit))		(lbs/unit)		(lbs/unit)	1	(lbs/unit)	
User-defined non-hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined non-hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #1	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #2	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
User-defined hazardous waste destination #3	TBD	0	0	0	0	0	0	0	0	0	0	0	0	0
Off-site Totals		19.5366		2987.292		5.058		5.859		2.063		1.03		

All Components - Intermediate Totals Energy **Greenhouse Gas** NOx SOx Conv. Conv. Conv. Conv. Ibs CO2e | Factor | Ibs Category Units Usage Factor MMBtus Factor Factor lbs **Total Grid Electricity Footprint** MWh 0 3.413 On-site grid electricity 0 --------------Electricity Generation Grid electricity MWh 0 6.929 1124.3 2.2421 4.607887 0 0 0 0 **Resource Extraction for Electricity** Coal extraction and processing MWh 0 3.1 0 180.0 0 0.8 0 0.2 0 Natural gas extraction and processing MWh 0 1.6 0 270.0 0 0.2 0 13.0 0 Nuclear fuel extraction and processing 0.2 0 0 25.0 0 MWh 0 0.2 0 0.5 Oil extraction and processing 0 270.0 0 MWh 0 2.3 1.7 0 0.1 0 0 0 Other fuel extraction and processing MWh 0.0 0 0.0 0.0 0 0.0 0 Electricity Transmission Transmission and distribution losses MWh 0 1.0342 0 112.43 0 0.2242 0.460789 0 0 0 0 **Total Grid Electricity Footprint** 0 0 **Total Fuel Footprints** Total Gasoline Footprint 19.6 On-site gasoline use - Other 0 0.124 0 0 0.11 0 0.0045 0 gal On-site gasoline use <25 hp 0.124 0 17.48 0 0.037 0 0 0.00025 gal 0 On-site gasoline use >25 hp 0 0.124 0 19.93 0 0.032 0 0.00029 gal 0

C-8

PN	Λ	HAP	s
Conv.		Conv.	
Factor	lbs	Factor	lbs
0.0575	0	0.210237	0
0.0	0	NP	
0.0	0	0.0	0
0.0058	0	0.021024	0
	0		0
0.0005	0	0.000039	0
0.165	0	0.00008	0
0.002	0	0.00009	0

All Components

		All C	Component	s - Interme	diate Total	s (continued)							
			Ene	rgy	Greenho	ouse Gas	NC	Dx	SO	x	P	M	HAP	'S
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	Ibs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Transportation gasoline use	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.0005	0	0.000039	0
Transportation gasoline use - car	gal	0	0.124	0	19.77	0	0.027	0	0.00036	0	0.003	0	0.0067	0
Transportation gasoline use - passenger truck	gal	190.8	0.124	23.6592	19.79	3775.932	0.035	6.678	0.00036	0.069	0.003	0.572	0.00661	1.261
Transportation gasoline use - User Defined	gal	0	0.124	0	19.6	0	0.11	0	0.0045	0	0.0005	0	0.000039	0
Gasoline produced	gal	190.8	0.033	6.2964	2.8	534.24	0.0046	0.878	0.005	0.954	0.0015	0.286	0.001	0.191
Total Gasoline Footprint		190.8		29.9556		4310.172		7.556		1.023		0.859		1.452
Total Diesel Footprint						-								
On-site diesel use - Other	gal	742.5	0.139	103.208	22.5	16706.25	0.17	126.2	0.0054	4.01	0.0034	2.525	5.2E-06	0.004
On-site diesel use <75 hp	gal	0	0.139	0	22.21	0	0.1565	0	0.000145	0	0.0145	0	0.00004	0
On-site diesel use 75 <hp<750< td=""><td>gal</td><td>0</td><td>0.139</td><td>0</td><td>22.24</td><td>0</td><td>0.101</td><td>0</td><td>0.00013</td><td>0</td><td>0.009</td><td>0</td><td>0.00004</td><td>0</td></hp<750<>	gal	0	0.139	0	22.24	0	0.101	0	0.00013	0	0.009	0	0.00004	0
On-site diesel use >750 hp	gal	0	0.139	0	22.24	0	0.149	0	0.00013	0	0.006	0	0.00004	0
Transportation diesel use	gal	20.1	0.139	2.7939	22.5	452.25	0.17	3.417	0.0054	0.109	0.0034	0.068	5.2E-06	1E-04
Transportation diesel use - car	gal	0	0.139	0	22.57	0	0.015	0	0.0002	0	0.003	0	0.00252	0
Transportation diesel use - passenger truck	gal	0	0.139	0	22.545	0	0.0585	0	0.0002	0	0.007	0	0.002605	0
Transportation diesel use - User Defined	gal	0	0.139	0	22.5	0	0.17	0	0.0054	0	0.0034	0	5.2E-06	0
Diesel produced	gal	762.6	0.017	12.9642	3.02	2303.052	0.0051	3.889	0.0062	4.728	0.0017	1.296	0.0011	0.839
Total Diesel Footprint		762.6		118.966		19461.55		133.5		8.846		3.889		0.843
Total Biodiesel Footprint				-		-		-	-	-	-	-	-	-
On-site biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
On-site biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
Transportation biodiesel use	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
Transportation biodiesel use - User Defined	gal	0	0.127	0	22.3	0	0.2	0	0	0	0.001	0	NP	
Biodiesel produced	gal	0	0.029	0	-16.8	0	0.018	0	0.033	0	0.0008	0	NP	
Total Biodiesel Footprint		0		0		0		0		0		0		0
Total Natural Gas Footprint	-					-	-				•		-	
On-site natural gas use	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
Transportation natural gas use ccf			0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
Transportation natural gas use - User Defined	ccf	0	0.103	0	13.1	0	0.01	0	6.3E-06	0	0.0008	0	8.4E-06	0
Natural gas produced ccf			0.0052	0	2.2	0	0.0037	0	0.0046	0	7E-05	0	6.1E-06	0
Total Natural Gas Footprint	0		0		0		0		0		0		0	

Spreadsheets for Environmental Footprint Analysis (SEFA) Version 3.0, November 2019

Runway debris Area Alternatives 3 & 4

All Components

		All C	component	s - Interme	diate Total	s (continued	<i>y</i>							
			Ene	rgy	Greenhouse Gas		NOx		SOx		PN	Λ	HAP	s
			Conv.		Conv.		Conv.		Conv.		Conv.		Conv.	
Category	Units	Usage	Factor	MMBtus	Factor	Ibs CO2e	Factor	lbs	Factor	lbs	Factor	lbs	Factor	lbs
Total Liquefied Petroleum Gas Footprint						•	-				•			
On-site liquefied petroleum gas use - Other	ccf	0	NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
On-site liquefied petroleum gas use ccf			NP		12.69	0	0.021	0	0.00013	0	0.001	0	0	0
Liquefied petroleum gas produced ccf		0	0.088	0	1.47	0	0.0016	0	0.0024	0	0.0007	0	0.0003	0
Total Natural Gas Footprint		0		0		0		0		0		0		0
						-			•					
Total Compressed Gas Footprint														
On-site compressed gas use - Other	ccf	0	NP		1957.835	0	16.033	0	0.023045	0	0.2775	0	0	0
On-site compressed gas use ccf		0	NP		1957.835	0	16.033	0	0.023045	0	0.2775	0	0	0
Compressed gas produced ccf		0	19.983	0	343.92	0	0.4732	0	2.1651	0	0.1846	0	0.2895	0
Total Natural Gas Footprint		0		0		0		0		0		0		0
Natao														

Notes:

ccf = centum cubic feet,

CH4 = methane CO2 = carbon dioxide

Conv. = Conversion

. . .

gal = gallon

GHG = greenhouse gas

HAP = hazardous air pollutant

lbs = pounds

MWh = megawatt-hours

N/A = not applicable

Nox = nitrogen oxides

NP = not probable,

SOx = sulfur oxides

TBD = to be determined

APPENDIX D RESPONSES TO REGULATORY AGENCY COMMENTS ON DRAFT EE/CA

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Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal A Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021											
Comment #	Section #	Page #	Comment	Response	Comment						
Comment	ts provided by Yvor	nne Fong, d	ated October 22, 2021		Comments provided Yvonne Fo						
1	ES.1	ES-1, pg3	Revise this section to include a basic overview of the site including information about previous operations.	The following text has been added to the ES: "Based on historical aerial imagery, the former airfield was constructed in the early 1940s and was used to store and sort aircraft and related materials. Until 1946, portions of the RDA were used for maintenance and synchronization of aircraft-mounted machine guns. In the late 1960s, a portion of the former north- south-oriented runway was demolished and redeveloped with residential dwellings that housed U.S. Coast Guard personnel."	Agreed						
2	ES.1, 2 nd paragraph (para)	ES-1, pg3	"A series of investigations" Although this introductory sentence refers to a series of investigations, the text that follows only describes the SSI. Revise the text to summarize other relevant investigations/findings	The following text has been added "1993 and 2020. During those The investigations, included a site investigation (1993), an environmental status report (ESR) (2002), a preliminary assessment (PA) (2007), PA/reverification investigation (RVI) (2013), three site inspections (SIs) (2017), and a Supplemental SI (SSI) (2019 through 2020)." Additional text has been added to summarize the previous investigations.	Agreed						
3	ES.1	ES-2, pg4	"SSI Report recommended an NTCRA" This text is inconsistent with the characterization of the 2019 SSI Report in Section 2.2.8, which states: "an NTCRA and/or an evaluation of future remedial alternatives in a feasibility study was recommended" (emphasis added). Please resolve the inconsistency.	Text has been revised to as follows: "the SSI Report recommended an NTCRA <u>and/or an evaluation</u> <u>of remedial alternatives in a feasibility study</u> to remove MEC, <u>MPPEH</u> , and scrap metal (2 inches and greater) in soil and remove the potential explosive hazard posed to human health and the environment."	Agreed						
4	ES.1	ES-2, pg4	"remove the potential" Please clarify whether the SSI recommendation is for "removal" of the explosive hazard, or reduction/mitigation of it, as stated in the RAO immediately below, and revise the text as appropriate.	The SSI recommendation is to reduce/mitigate the explosive hazards. However, the subject text has been revised in response to comment #3, as follows: "the SSI Report recommended an NTCRA <u>and/or an evaluation</u> <u>of remedial alternatives in a feasibility study</u> to remove MEC, <u>MPPEH, and scrap metal (2 inches and greater) in soil and remove the potential explosive hazard posed to human health and the environment.</u> " Additionally, the RAO has been revised as indicated in the response to comment #5. "Prevent direct contact with MPPEH/MEC that may be present within Protect human health and under the subsurface to reduce or mitigate environment by reducing/mitigating the explosive hazard associated risk of an uncontrolled encounter with potential exposure to incidental munitions-related items <u>and explosive hazards by</u> <u>unqualified/untrained personnel during ground-disturbing activities</u> <u>associated with current and future site use</u> ."	Agreed						

	Response
ong, dated 6	/24/2022
	Noted
	Noted
	Noted
	Noted

Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on theDraft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area,Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021

Comment	Section #	Daga #	Commont	Destronge	Commont
#	Section #	rage #	Comment	Kesponse	Comment
Commen	ts provided by Yvor	ine Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
5	ES.2, bullet 1	ES-2, pg4	Given the fact that 13,212 uninvestigated subsurface anomalies remain, it appears inappropriate to classify them as "incidental" munitions. Is the objective merely to "reduce or mitigate potential exposure?" If that is the case, how is direct contact "prevented?" Also, this statement of the RAO is inconsistent with the statement in Section 3.1. Please resolve this inconsistency. Assuming the Navy revises the RAO here to match the statement in Section 3.1, as noted in a comment on the last paragraph of Section ES-1, the use of the phrase "remove the potential explosive hazard" in the preceding paragraph is inconsistent with the RAO's reference to reduction or mitigation.	The presence of subsurface anomalies is not necessarily indicative of the presence of munitions. Most of the subsurface anomalies are expected to be pieces of metal debris associated with general materials handling operations conducted at this site during its operation. By removing (reducing/mitigating) the anomaly, direct contact by future receptors is "prevented". The RAO has been revised as follows throughout the EE/CA (including in Section 3.1): • "Protect human health and the environment by reducing/mitigating the risk of an uncontrolled encounter with potential munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with current and future site use." Additionally, the word "incidental" has been removed throughout the EE/CA as it relates to potential munitions-related items.	Agreed
6	ES.3, bullet 2	ES-2, pg4	"mitigate explosives" It appears that the term "hazards" is missing. Please revise as appropriate.	The text has been revised to state "to <u>reduce/mitigate explosive</u> <u>hazards</u> and prevent exposure to MPPEH/MEC items in soil <u>for</u> <u>public health</u> ." In addition the following text has been added: "For the LUC alternative, MPPEH/MEC items that may be present in subsurface soil would remain at the site."	Delete "for public health."
7	ES.3, bullet 3	ES-2, pg4	"Anomaly Reacquisition and Removal" Please revise the heading to reflect each element of the alternative, including "treatment."	The heading has been revised to reflect each element of the alternative as follows: "Alternative 3, Anomaly Reacquisition, and Removal, <u>and</u> <u>Destruction</u> " and throughout the document.	Agreed
8	ES.3, bullet 3	ES-2, pg4	"reacquired" Please clarify by what means reacquisition would occur; e.g., dgm?	Reacquisition would occur by using the coordinates listed in Table 1-DGM Target Reacquisition of the SSI report. The following text has been added "subsurface anomalies in soil would be reacquired <u>based on coordinates identified as a result of the DGM</u> <u>surveys previously conducted</u> and removed to eliminate the explosive hazards posed to humans <u>health</u> and the environment; a post-removal geophysical survey".	Agreed
9	ES.3, bullet 3	ES-2, pg4	"(either digital geophysical mapping [DGM] or advanced geophysical classification [AGC])" Compared to the Bermed Area EE/CA, explain why DGM and AGC are presented as one alternative here. Presumably the technical or cost differences support their treatment as variants of the same general alternative as shown in Tables ES-1 and ES-2. Revise the EE/CA to consistently present the alternative(s).	The subject text and other applicable text in the EE/CA have been revised to state: "(either digital geophysical mapping [DGM] <u>Variation 3A</u> –or <u>Variation 3B</u> – advanced geophysical classification <u>in dynamic mode</u>)"	Agreed

	Response
ong, dated 6	/24/2022
	Noted
	The text has been revised as follows: "exposure to MPPEH/MEC items in soil for public health."
	Noted
	Noted
	Noted

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Ager on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	ncy (EPA) on the ne Runway Disposal Area, , dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)	·	Comments provided Yvonne Fo
10	ES.3, bullet 3	ES-2, pg4	"MPPEH items would be inspected and" Clarify whether classification would MPPEH items would also be classified.	The subject text has been revised as follows: "MPPEH/ <u>MEC</u> items would be inspected and <u>MPPEH/MEC</u> <u>classified as MEC or MDAS as appropriate</u> . Items that cannot be <u>classified as MDAS due to an uninspectable void</u> would be treated <u>onsite</u> . <u>MEC would be destroyed</u> via detonation (either destruction in place or consolidated shot)."	Agreed
11	ES.3, bullet 3	ES-2, pg4	"MDAS and non-munitions related scrap would be disposed of at an offsite recycling facility" Please explain the difference in the Navy's approach to MDAS and non-munitions related scrap at the RDA and BA (which involves "demilitarization").	The subject text has been revised as follows: " <u>MDAS (after certification and MDAS demilitarization) would be</u> <u>demilitarized using propane</u> and non munitions related scrap would <u>be disposed of at an offsite recycling oxygen torches and/or wet</u> <u>band saws to assure it no longer resembled a munition item. These</u> <u>fragments would be placed into 55-gallon drums for subsequent</u> <u>transport to a certified</u> facility"	Agreed
12	ES.3, bullet 3	ES-2, pg4	"This alternative would support future unrestricted use/unrestricted exposure at the site." The text is inaccurate in that the Navy's proposed clearance activities do not appear to support UU/UE (i.e., the Navy will not be able to prepare an NFA ROD based on the RDA NTCRA), and therefore O&M will be necessary in relation to LUCs that will be required to address residual munitions risk.	The subject text has been revised as follows: "This alternative would support future unrestricted use/unrestricted exposure no further removal action (NFRA) at the site."	It is not clear what the Navy mear reference "no further removal acti does not appear that the revision i responsive to EPA's comment tha residual munitions risk will requir remedy decision document that se least LUCs for a remedy.
13	ES.3, bullet 3	ES-2, pg4	"compromised MEC item is found." Please explain the basis of the Navy's position to sample for MC only if "compromised" MEC is encountered, rather than whenever a munitions related item is found.	The subject text has been revised as follows: "facility; soil for final disposal by smelting. Soil samples would be collected for analysis of <u>MC if a munitions-related item is found</u> or on the footprint of the former munitions constituents only item post-detonation or if a compromised MEC item is found."	Agreed
14	ES.3, bullet 3	ES-3, pg5	"within the scope of the NTCRA)" Please explain the meaning of the highlighted text, as it appears to represent a qualification of the RAO.	The subject text " within the scope of the NTCRA " has been removed from the EE/CA.	Agreed
15	ES.4 Title	ES-3, pg5	The term used in the EE/CA context is "Recommended," per the BA EE/CA, not "Selected."	The text title has been revised to state "Selected Recommended Remedy Removal Alternative"	Agreed

	Response							
ong, dated 6/24/2022								
	Noted							
	Noted							
ns by the ion," but it s t a re a elects at	This EE/CA is associated with an interim action. No land use changes will be made prior to development of a comprehensive RI/FS after the completion of this interim action. Any evaluation of the efficacy of LUCs with respect to land use changes will be addressed in that document. LUCs presented in this EE/CA are specifically intended as an interim action associated with current land use. Consequently, the protectiveness of these LUCs for a residential use scenario is not relevant. The following change has been made to the text "This alternative would support no further removal action (NFRA) at the site. At the conclusion of the NTCRA, the Navy will have removed all detectable munitions. However, given the limits of the detection technology at this time, a risk of residual munitions remains that will be addressed in a final remedy decision document."							
	Noted							
	Noted							
	Noted							
	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
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Comment #	Section #	Page #	Comment	Response	Comment	Response		
Comment	s provided by Yvon	ine Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022		
16	ES.4	ES-3, pg5	"(Anomaly Reacquisition and Removal)." Please revise the description in accordance with the comment above on reflecting each element of the proposed action.	The subject text has been revised as follows: "the Navy recommends Alternative 3 <u>A</u> (Anomaly Reacquisition, and Removal <u>, and Destruction</u>)."	The structure of the text above regarding the alternatives is not sufficiently clear to support designation of the recommended alternative as "Alternative 3A," especially given the parenthetical that follows which simply restates the title of Alternative 3. Please revise the alternative description to define to sub-alternatives, name them appropriately, and then use the appropriate name/title in Section ES.4 and the rest of the EE/CA.	Alternatives 3A and 3B have been renamed throughout all the documents to be Alternative 3 – Anomaly Reacquisition, Removal, Post-Removal Survey by DGM, and Destruction and 4 – Anomaly Reacquisition, Removal, Post-Removal Survey by AGC, and Destruction.		
17	ES.4	ES-3, pg5	"does not require any operation and maintenance, and would support future unrestricted use/unrestricted exposure at the site." The text is inaccurate in that the Navy's proposed clearance activities do not appear to support UU/UE (i.e., the Navy will not be able to prepare an NFA ROD based on the RDA NTCRA), and therefore O&M will be necessary in relation to LUCs that will be required to address residual munitions risk.	The subject text has been revised as follows: "is feasible, does not require any <u>has minimal</u> operation and maintenance <u>cost</u>, and would support future unrestricted use/unrestricted exposure <u>NFRA</u> at the site."	As noted in the comment on RTC 12, the reference to "NFRA" is unclear, but it appears incorrectly to suggest that after the NTCRA the Navy need not prepare a ROD to select at least LUCs as a remedy. Please revise to reflect the Navy's post-removal obligation to select a remedy given that the NTCRA will not achieve UU/UE.	The subject text has been revised to as follows: Alternative $3A$ was selected is recommended for the removal action because it is the most cost-effective alternative permanently reduces explosives hazards in soil posed decreases risk to current and future receptors by identifying and removing all detectable munitions in soil; complies with the applicable or relevant and appropriate requirements, is feasible, and has minimal operation and maintenance cost ₇ and would support NFRA at the site."		
18	ES.4	ES-3, pg5	"and disposal" Please revise to refer to each element of the proposed removal action, including treatment.	The subject text has been revised as follows: "3 years for planning,; site preparation,; anomaly reacquisition, removal and disposal of, MPPEH/ inspection, classification of MEC; and MDAS, detonation of MPPEH/MEC, certification and non-munitions-related metal scrap; demilitarization of MDAS, disposal of certified MDAS, soil sampling, and post-removal DGM geophysical confirmation,; site restoration,; and reporting."	Agreed	Noted		
19	Table ES-1, Overall Protection row, 2-LUCs column	ES-6, pg8	Please clarify how this alternative is compatible with residential use given that it is described in Section 4.2.2.1 as restricting use to commercial/industrial use.	It is not effective if future land use includes residential. As a result, the following clarifying text has been added to the table: "(i.e., warning signs and posts); <u>however, there is no protection of the environment. Relies on adherence to institutional and engineering controls in order to be protective of human health.</u> "	Although: 1) the Navy addressed the inconsistency by deleting the reference to "commercial/industrial use" in Section 4.2.2.1; and 2) the added text is acceptable. It remains unclear whether the proposed LUCs would be sufficient to ensure protection of human health in a residential use context.	This EE/CA is associated with an interim action. No land use changes will be made prior to development of a comprehensive RI/FS after the completion of this interim action. Any evaluation of the efficacy of LUCs with respect to land use changes will be addressed in that document. LUCs presented in this EE/CA are specifically intended as an interim action associated with current land use. Consequently, the protectiveness of these LUCs for a residential use scenario is not relevant. No changes have been made to the text in response to this comment.		
20	Table ES-1, Overall Protection row, 1-No Action column	ES-6, pg8	"eliminate or reduce" The RAO is about reducing or mitigating the risk of exposure; please revise the text to reflect this fact, e.g., "to reduce or mitigate the risk of exposure to."	The subject text has been revised as follows: "Not protective because no action would be taken to eliminate or reduce/mitigate the risk of exposure to munitions-related items or explosive hazards (i.e. MPPEH/MEC) in subsurface soil."	Agreed	Noted		

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Commen	ts provided by Yvor	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022	
21	Table ES-1, Overall Protection row, 3-Berm Removal column	ES-6, pg8	"detectable" qualifying term undercuts the Navy's assertion elsewhere in the document that the removal action is sufficient to support UU/UE. Without LUCs too, therefore, it is questionable whether this alternative is protective in the long term.	All references to "unlimited use/unrestricted exposure (UU/UE)" have been changed to "no further removal action (NFRA)" within the EE/CA. Column has subsequently been relabeled "Anomaly Reacquisition, and Removal, and Destruction"	As noted in earlier comments, references to "NFRA" are unclear, but appear inconsistent with the need for a remedy decision document that selects at least a LUC remedy.	Please see the response to comment #12. No changes have been made to the text in response to this comment.	
22	Table ES-1, Overall Protection row, 3-Berm Removal column	ES-6, pg8	"mitigating" Similar to the preceding comment, this term underscores that the risk is not "eliminated," just "mitigated."	The subject text has been revised as follows: "Protective of human health and the environment because all detectable subsurface MPPEH/MEC remaining in subsurface soil would be removed from the site, thereby reducing/mitigating potential explosive exposure to incidental munitions-related items or explosive hazards posed to humans health and the environment." Column has subsequently been relabeled "Anomaly Reacquisition, Removal, and Destruction"	Alternative 3 does not appear to achieve cleanup to a UU/UE standard, and therefore will require LUCs to ensure protectiveness in the future. Alternative 3[A], does not include any LUCs as a component of the action, so it will not in itself achieve adequate protection of human health or the environment.	Please see the response to comment #12. No changes have been made to the text in response to this comment.	
23	Table ES-1, Compliance with row, 2-LUCs column	ES-6, pg8	Please revise to something like: "Complies with ARARs for mitigation of the soil disturbance exposure pathway through land use controls."	The subject text has been revised as follows: "Complies with <u>some</u> ARARs by mitigating the soil pathway through LUCs."	The RTC does not respond to the comment, in that it completely deletes text that the comment requested be revised.	The subject text has been revised as follows: "Complies with some ARARs for mitigation of the soil disturbance exposure pathway through LUCs."	
24	Table ES-1, Overall Protection row, 3-Berm Removal column	ES-6, pg8	The question is not whether the alternative is "designed to comply" with ARARs, but whether it does comply (with all ARARs).	The subject text has been revised as follows: "Removal <u>The removal</u> action is designed to comply <u>complies</u> with the action specific <u>all</u> ARARs." Column has subsequently been relabeled "Anomaly Reacquisition, Removal, and Destruction"	Please explain how Alternative 3A complies with all ARARs when it does not appear to include a LUC component that is necessary to ensure protectiveness.	Alternative 3 focuses on a short-term, active removal action of anomaly reacquisition, removal, and destruction. The Navy acknowledges that a UU/UE determination will not be made at this time and that institutional controls (in the interim prior to a ROD) are required. After completion of the removal action, the Navy, in consultation with the regulatory agencies, will make a determination regarding the necessity for follow-on long-term remedial actions. The following text has been added to the end of the column: "Also, Alternative 3 provides protection of human health and the environment by preventing exposure to residual munitions in subsurface soil via ICs."	
25	Table ES-1, Long-Term Effectiveness row, 2-LUCs column	ES-6, pg8	"Does not provide long-term effectiveness" This statement is incorrect; LUCs often are relied on for both short- and long-term effectiveness (and protectiveness). Indeed, the point of ICs that "run with the land" is to ensure long-term effectiveness (and protectiveness). That said, it may well be true that LUCs are not as effective in the long-term as removal of all potential hazards. Please revise the text in this row/column to reflect that LUCs are effective in the long-term, though may not be as effective in the long-term due to issues with maintenance, etc.	Agreed. LUCs can have long-term effectiveness if everyone adheres to the administrative and physical controls. The possibility of non-adherence makes it less effective than removal. The 1 st paragraph has been removed as a result of this comment. The following text has been added at the end " <u>Long-term</u> <u>effectiveness relies on adherence to the administrative and physical</u> <u>controls</u> ."	Consider whether the sentence "Not a permanent solution" should be deleted.	The sentence "Not a permanent solution" was deleted as requested.	

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comment	s provided by Yvor	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022	
26	Table ES-1, Long-Term Effectiveness row, 3-Berm Removal column	ES-6, pg8	"detectable MPPEH/MEC would be removed from subsurface soil thereby mitigating" Ditto comments on terms "detectable" and "mitigating" in this column, 1st row.	The subject text has been revised as follows: "Provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby <u>reducing</u> /mitigating the potential exposure to incidental munitions-related items or explosive hazards posed to humans <u>health</u> and the environment." All references to "unlimited use/unrestricted exposure (UU/UE)" have been changed to "no further removal action (NFRA)" throughout the EE/CA. Column has subsequently been relabeled "Anomaly Reacquisition, Removal, and Destruction"	Per earlier comments, Alternative 3A is not protective without LUCs, so the text needs to be revised.	The following text has been added: " <u>The ICs also require implementation and consistent</u> <u>enforcement. Long-term effectiveness relies on adherence to</u> <u>the ICs.</u> "	
27	Table ES-1, Short-Term Effectiveness row, 2-LUCs column	ES-6, pg8	"Would not achieve the RAO of reducing or mitigating MPPEH/MEC in site soil" This is not an accurate statement of the RAO; the RAO isn't the reduction or mitigation of MPPEH/MEC in soil, but instead the reduction or mitigation of "the explosive hazard associated with potential exposure to incidental munitions-related items" through the prevention of direct contact with MPPEH/MEC . Please revise the highlighted text accurately to capture the RAO. Also, the statement is not accurate as LUCs that prevent ground disturbing activity and include engineering controls such as controlled access, would seem to accomplish the RAO properly characterized.	The subject text has been deleted. Text has been revised to state "Would not achieve the RAO <u>for protection</u> of reducing or mitigating MPPEH/MEC in site soil. Less than 2 years to achieve the environment. Achieves the RAO of protecting human health from exposure to <u>MPPEH/MEC by</u> developing a LUC Remedial Design (to include implementation, inspection, and maintenance) and by installing the physical access restrictions <u>munitions-related items or explosive hazards</u> (i.e. e.g., warning signs and posts <u>MPPEH/MEC</u>). No short-term increased risks because <u>munitions-related items or</u> <u>explosive hazards (i.e. MPPEH/MEC)</u> in <u>subsurface</u> soil would not be disturbed during implementation of this alternative."	Please explain why a reference to the RAO is appropriate in the discussion of "short- term protectiveness." Ditto for column 3.	The reference to the RAO is not required. The text has been revised as follows in all columns to remove the reference to the RAO: "Would not achieve the RAO. " "Would not achieve the RAO for protection of the environment. Achieves the RAO of protecting human health from exposure to munitions related items or explosive hazards (i.e., MPPEH/MEC)." "Anticipated to achieve the RAO in approximately 3 years, which is the time required for planning, site preparation, anomaly reacquisition, removal, MPPEH inspection, elassification of MEC and MDAS, detonation of MPPEH/MEC, certification and demilitarization of MDAS, disposal of certified MDAS, soil sampling, post removal DGM confirmation, site restoration, and reporting."	
28	Table ES-1, Technical Feasibility row, 2-LUCs column	ES-7, pg9	"N/A" This text is inconsistent with the description on page 5-1 and with the definition of technical feasibility.	The subject text has been revised as follows: "N/A, does not require any removal or remedial technology for implementation No technical feasibility concerns."	Agreed	Noted	
29	Table ES-2, Protection of Human Health, Compliance with ARARs, Long- term, Short-term, achieve RAO, Reduction of Toxicity rows, Alternative 1 column	ES-8, pg10	The entries highlighted in the column for Alternative 1 that specify "Low" should be changed to "None," or, e.g., with regard to "Protection of Human Health and Environment," "Not protective," rather than "N/A," consistent with Highlight 6-25 in the ROD Guidance (the ROD Guidance is relevant to questions of how to analyze an alternative under the removal action evaluation criteria because the criteria are identical in most instances). Also, the characterization in the "Comparative Analysis" should match the characterization in the "Individual Analysis."	The subject text for "Protection of Human Health and Environment" was changed to "Not protective" and "Low" was changed to "None" for the other effectiveness criteria.	Agreed	Noted	

Table 1: Responses to Comments from the US Environmental Protection Agency (EF Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Run Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated					
Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvoi	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
30	Table ES-2, Protection of Human Health, Compliance with ARARs rows, Alternative 2 column	ES-8, pg10	Compared to the Bermed Area EE/CA, explain why the LUCs Alternative is rated as "Moderate" instead of "High."	The Administrative Feasibility for Alternative 2 has been revised to "Moderate". As stated in comment 25, "Long-term effectiveness relies on adherence to the administrative and physical controls." Alternative 2 is considered to be moderately effective alternative to protect public health and the environment because LUCs are as effective as removal for protecting human health but not for the environment, mitigating risks to current and future receptors would require long-term maintenance and inspections of access controls. Alternative 3 provides long-term effectiveness and permanence because detectable MPPEH/MEC would be removed from subsurface soil thereby reducing/mitigating the potential exposure to munitions-related items or explosive hazards posed to human health and the environment.	Agreed
31	Table ES-2, Technical Feasibility row, Alternative 1 column	ES-8, pg10	This characterization is inconsistent with the characterization in the "Individual Analysis," as is the entry in the row below for "Administrative Feasibility." Although the entry for "Availabilty of Services" is the same as in the "Individual Analysis," this should follow the example of Highlight 6-25 "None required." See ROD Guidance, Highlight 6-25.	The entries in the column for Alternative 1 that specify "High" have been changed to "None required"	Agreed
32	Table ES-2, Technical Feasibility row, Alternative 2 column	ES-8, pg10	This entry is inconsistent with the entry in the "Individual Analysis" which states "N/A," but this is the more accurate characterization.	Please see the response to comment #28. No change has been made in response to this comment.	Agreed
33	1.0, 3 rd para	1-1, pg18	"(2 inches and greater)" Clarify if the NTCRA is intended to only address items greater than 2 inches. The RAO does not limit the scope of the NTCRA based on size.	The SSI Report suggested addressing items of this dimension. However, the proposed NTCRA would remove all 13,212 previously mapped anomalies, with no consideration of minimum size. The size limitation has been removed from the text. See comment #34 for text revision.	Agreed
34	1.0, 3 rd para	1-1, pg18	"remove" Same comment as above at the top of page ES-2 on the use of the term "remove."	The subject text has been revised as follows: "the SSI Report recommended an NTCRA to remove MEC, MPPEH, and serap metal (2 inches and greater)/or an evaluation of remedial alternatives in soil and remove the potential explosive hazard posed to humans and the environment <u>a</u> feasibility study (FS) (Multi-Media Environmental Compliance Group [MMEC Group], 2020 <u>a</u>)."	Agreed
35	1.1, 1 st para	1-2, pg19	"and associated costs" Delete "and associated costs" as "cost of the removal action" is already stated in this sentence.	The subject text has been revised to state "…removal action alternatives and associated costs that may satisfy…"	Agreed
36	1.1, 1 st para	1-2, pg19	"during" Recommend changing to "in preparing."	The subject text has been revised to state "removal efforts was used <u>in preparing during</u> this EE/CA to evaluate the"	Agreed

	Response
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Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne For
37	1.1, 2 nd para	1-2, pg19	"is completed" Recommend changing to "was prepared."	The subject text has been revised to state "the EE/CA is completed <u>was prepared</u> to meet the environmental review requirements for removal actions"	Agreed
38	1.2, 2 nd para	1-2, pg19	"Munition items have been found on the surface and subsurface at former NAVWPNSTA Seal Beach Det Concord at the RDA resulting from past site activities." Please explain why the description in the RDA EE/CA focuses only munitions items, whereas the BA EE/CA broadly references "organic and inorganic contaminants."	An RI is being performed by another contractor at the RDA. The RI includes sampling and analysis of surface and subsurface soil and groundwater in the RDA to evaluate nature and extent of contamination and guide preparation of a FS to address contamination that is not related to munitions. Contamination identified as part of the RI will be addressed under a different contract. This NTCRA includes sampling under any MEC/MDAS found. Any contamination found under a MEC/MDAS item will be addressed as part of this NTCRA. The EE/CA for the Bermed Area is more broad because the nature	Agreed
				and extent of MC at the Bermed Area has been evaluated and MC contamination is not present in soil.	
39	1.2, 2 nd para	1-2, pg19	"Installation Restoration (IR) Program" Revise the text to address the MMRP.	The subject text has been revised as follows: "the Installation Restoration (IR) Program at the former NAVWPNSTA Seal Beach Det Concord since the early 1990s. <u>MRP began being implemented in the early 2000s.</u> "	Change the awkward passive voice construction here; to, "The Navy b implementing the MMRP in the ea 2000s."
40	1.2, 3 rd para	1-2, pg19	"in conjunction with" Suggest changing to "under the oversight of."	The subject text has been revised to state "The Navy's cleanup efforts are being performed under the oversight of <u>-in conjunction</u> with of EPA Region 9, the San Francisco Bay Regional Water Quality Control Board (Water Board), and the California Department of Toxic Substances Control (DTSC) <u>, and the San</u> <u>Francisco Bay Regional Water Quality Control Board (Water Board)</u> through a Federal Facilities <u>Facility</u> Agreement signed in 2001 (EPA, 2001)."	Agreed
41	1.2, 3 rd para	1-3, pg20	"Under this agreement" EPA's authority to co-select remedies is referenced in the FFA, but its basis is statutory, CERCLA 120(e)(4)(A): " selection of a remedial action by the head of the relevant department, agency, or instrumentality and the Administrator or, if unable to reach agreement on selection of a remedial action, selection by the Administrator." Please revise the text to note the statutory basis for EPA's authority to co-select the remedy.	The text "Under this agreement the Navy and EPA co-select the remedies, and then the DTSC and Water Board concur with the remedies." has been deleted since the Navy is implementing a removal action, not a remedial action.	Agreed
42	1.2, 3 rd para	1-3, pg20	"co-select the remedies, and then the Water Board and DTSC concur with the remedies."It is important to note EPA's authority in relation to remedy selection, but as the Navy has opted to proceed by an NTCRA rather than a ROD, it also is important to note that EPA's authority is different, and much more limited, in relation to removal actions.	See response to comment #41.	Agreed

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e began arly	Text has been revised as follows: "MRP The Navy began being implementing ed the MRP in the early 2000s."
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	Noted

Comment #	Section #	Page #	Comment	Response	Comment
Commen	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)	·	Comments provided Yvonne Fo
43	2.1.2	2-2, pg23	"Historical photographs also indicate that the former airfield was used to store and sort aircraft parts and related materials because metal debris was observed in several areas along the former runways and taxiways." This sentence is repetitive of the first sentence of the paragraph with the exception of the text beginning "because." Recommend consolidating this sentence with the first sentence.	Agreed. The fourth sentence has been revised as follows: "Guard personnel. Historical photographs also indicate that the former airfield was used to store and sort aircraft parts and related materials because metal <u>Metal</u> debris was observed in several areas along the former runways and taxiways."	Agreed
44	2.1.3.3	2-3, pg24	Please explain why the description of NAVWPNSTA's geology and soil differs between the RDA and BA EE/CAs (not references to different conditions at the respective sites which, given their different locations, would be expected). Also, the BA EE/CA references the status of soil borings there; have there been any soil borings in the RDA?	Geologic conditions are not uniform across the installation, so therefore, the respective geology sections are sourced from different historic reports that relate to each site, as referenced. No changes have been made in response to this comment. To date, 246 soil borings, from 0 to 4 feet bgs, have been advanced at the RDA. However, any soil borings advanced during the RI will be discussed as part the RI/FS Report.	Agreed
45	2.1.3.4, 1 st para	2-3, pg24	"The watershed is bounded to the south by the northern peak of Mount Diablo and to the north by Suisun Bay" Given references to northern and southern boundaries of the watershed, please also reference the western and eastern boundaries.	The subject text has been revised as follows: "The watershed is bounded to the south by the northern peak of Mount Diablo and, to the north by Suisun Bay, <u>to the west by the</u> <u>Los Medanos Hills, and to the east by the Willow Creek and Kirker</u> <u>Creek Watersheds</u> ."	Agreed
46	2.1.3.6.1	2-4, pg25	"the northern portion of the site" Given the description of the northern portion, please describe the southern portion too.	DTSC comment #9 requested that the biological resources be changed to reflect the "following native plant species that have the potential to be present at FNWS Concord Inland area sites: Federally endangered Contra Costa goldfields (Lasthenia conjugens) and Keck's Checker-mallow (Sidalcea keckii), and Federally and State endangered large-flowered fiddleneck (Amsinckia grandiflora)." The subject text has been revised as follows: "Generally, the northern portion the site is dominated by Italian ryegrass (Lolium multiflorum); soft chess (bromus hordeaceus); ripgut brome (Bromus diandrus); and wild oats (Avena fatua)) <u>Contra Costa goldfields (<i>Lasthenia conjugens</i>), Keck's Checker- <u>mallow (<i>Sidalcea keckii</i>), and large-flowered fiddleneck (<i>Amsinckia grandiflora</i>) (MMEC Group, 2020a). <u>In the 2018 Biological</u> <u>Opinion amendment, a no effect determination on endangered</u> plants was made (based on the absence of endangered plants from <u>the project area) (</u>USFWS, 2018)."</u></u>	Agreed
47	2.1.3.7	2-6, pg27	"Section 106 Memorandum of Agreement" Please specify the parties to the Section 106 MOA in addition to the Navy.	The following text has been added in Section 2.1.3.7: "in the 2017 Section 106 Memorandum of Agreement (MOA) between the Navy, the California State Historic Preservation Office, the City of Concord, and the East Bay Regional Park District (Navy, 2017) and"	Agreed

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	Former Naval Weapons Station Seal Beach Detachment Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comment	ts provided by Yvo	onne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated (5/24/2022	
48	2.1.4, 1 st para	2-7, pg28	"The RDA is currently undeveloped land" This statement does not appear to accurately reflect the remnants of the runways and associated support infrastructure. Revise the text.	The subject text has been revised as follows: "The RDA is currently includes the remnants of the former runway, former runway support infrastructure, and undeveloped land"	Agreed	Noted	
49	2.1.4, 2 nd para	2-7, pg28	"The City of Concord is pursuing a large portion of the Inland Area, which includes the RDA, for potential use." For clarity, consider revising to: "The City of Concord is pursuing for potential reuse a large portion of the Inland Area, which includes the RDA."	The subject text has been revised as follows: "The City of Concord is pursuing <u>for potential reuse</u> a large portion of the Inland Area, which includes the RDA , for potential use ."	Agreed	Noted	
50	2.2.2	2-8, pg29	"condemned oil sprayer" Please clarify what a "condemned oil sprayer" is.	The term "condemned oil spray" is from the draft SSI. It refers to a decommissioned oil sprayer. The text has been revised to state "…used for storage of a condemned <u>decommissioned</u> oil sprayer, leaky gas…"	Agreed	Noted	
51	2.2.4, 2 nd para	2-9, pg30	"munitions-related items were located" Please clarify to what the phrase "munitions-related items" refers, the 18 specific items only, or also the two high anomaly areas, and revise the sentence as necessary.	The subject text has been revised as follows: "All munitions-related items (<u>18 munitions-related items and 2</u> <u>areas with a high density of subsurface anomalies</u>) were located adjacent"	Agreed	Noted	
52	2.2.4, 2 nd para	2-9, pg30	"or" Change "or" to "and."	The subject text has been revised as follows: "area south of the concrete runway apron or <u>and</u> to investigate soil gas or groundwater"	Agreed	Noted	
53	2.2.5, 1 st para	2-9, pg30	"conducted investigate" It appears that the word "to" after the term "conducted" is missing from the first sentence. Please revise as appropriate.	The subject text has been revised as follows: "In 2017, an SI was conducted <u>to</u> investigate whether MEC/ MPPEH/ <u>MEC</u> were present within"	Agreed	Noted	
54	2.2.6, 1 st para	2-9, pg30	"SI was conducted in the southern portion of RDA to identify the presence of MEC/MPPEH. Field activities included a detector- aided surface clearance, a DGM survey, reacquisition of a subset of anomalies, intrusive investigation of the selected anomalies, and MDAS management." Clarify that no MC sampling was conducted for the Southern RDA, as was conducted at the Northern RDA.	Surface samples were collected during the SI of the Southern portion of the RDA. The subject text has been revised as follows: "intrusive investigation of the selected anomalies, and MDAS management, <u>and collection of surface soil samples for analysis of</u> <u>MC</u> ."	Agreed	Noted	
55	2.2.6, 2 nd para	2-10, pg31	"statistically representative number of DGM anomalies" State the percentage of anomalies that were intrusively investigated. Also add the word "a" before the term "statistically."	The total number of anomalies investigated during the intrusive investigation at the Southern RDAs indicated a 95 percent confidence level (with \pm 5 percent sampling error) that less than 1 percent of the remaining uninvestigated DGM anomalies at the Southern RDAs represent MPPEH. A final list of 426 targeted anomalies, including the blind seed items, was selected for intrusive investigation. The subject text has been revised as follows: "During the surface clearance and intrusive investigation, of statistically representative number of 426 DGM anomalies were investigated (a statistically representative number of DGM anomalies, no with 95 percent confidence level and within a \pm 5 percent margin of error). No MEC items were recovered"	Agreed	Noted	

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
Comments	s provided by Yvon	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	5/24/2022		
56	2.2.7, 1 st para	2-11, pg32	"that were unlikely to represent MEC" State what the "linear anomalies" are likely to represent.	The subject text has been revised as follows: "…linear anomalies also were identified in the northern portion of the investigation area that were <u>likely to represent underground</u> <u>utilities and</u> unlikely to represent MEC (MMEC Group, 2020 <u>a</u>)."	Agreed	Noted		
57	2.2.8, 5 th para	2-12, pg33	"an NTCRA and/or an evaluation of future remedial alternatives" See comment above at the end of Section ES-1 about the inconsistency between the characterization of the 2019 SSI report there and here.	Please see the response to comment #3. The executive summary was revised to be consistent with Section 2.2.8.	Agreed	Noted		
58	2.3	2-12, pg33	"MEC HA concluded that the MEC exposure pathway is potentially complete at the RDA due to the potential for MEC, combined with human receptors associated with both current and future land use" Provide the MEC HA scores for the current and future land uses, and narratively describe the results.	The MEC HA included in the Final SSI Report was qualitative and no scores were provided. The conclusions of the MEC HA have been provided in the EE/CA. The following text was added to the section " <u>Based on the absence of disturbed soils below depths of</u> <u>approximately 24 inches bgs and the findings of shallow munitions</u> <u>debris (within the top 24 inches of soil), the potential for the</u> <u>presence of MEC in the subsurface deeper than 24 inches is</u> <u>unlikely.</u> The MEC HA concluded and future land use. <u>Based</u> <u>on the moderate severity and significant contact level of the</u> <u>recovered MEC items, it was recommended that a NTCRA and/or</u> <u>an evaluation of future remedial alternatives in a feasibility study be</u> <u>performed</u> (MMEC Group, 2020 <u>a</u>)."	Agreed	Noted		
59	2.4, 1 st para	2-13, pg34	"MC do not pose an unacceptable risk to human health and the environment. As a result, soil is not considered to be chemically affected." Clarify that the lack of impacts to soil specifically relates to MC. The RDA RI Work Plan noted exceedances of screening levels for SVOCs and metals.	The entire Section 2.4 has been revised to state: "This section describes the <u>conceptual site model (CSM), including</u> source, nature, and extent of MPPEH/MEC contamination at the RDA based on information from previous investigations and the MEC HA. The extent of contamination is discussed relative to the anomalies identified based on the DGM data collected during previous investigations. Per the PA in 2007, which included portions of the RDA, MC do not pose an unacceptable risk to human health and the environment. As a result, soil is not considered to be chemically affected. Also, because no soil contamination was visually discovered (i.e., stained soil) during previous investigations, a release and impacts to groundwater are unlikely (MMEC Group, 2020). This section describes the current conceptual site model (CSM). The CSM is a comprehensive representation of the RDA that documents the potential for exposure (under current and future land uses) to <u>incidental</u> munitions-related items in soil based on the source of contamination, release and transport mechanisms, exposure pathways, and anticipated site receptors. <u>Additionally, the</u> <u>extent of contamination is discussed relative to the anomalies</u> identified based on the DGM data collected	Agreed	Noted		

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Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comments	provided by Yvor	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	5/24/2022	
59	2.4, 1 st para	2-13, pg34	(see comment above)	during previous investigations. Figure 2-2 provides a graphical representation of the current CSM.An RI is being done performed (under separate contract) to collect sufficient data to evaluate the nature and extent of chemicals of potential concern in soil, and groundwater, and soil gas at the RDA. The RI results and evaluation of the nature and extent of contamination in site environmental media is still pending. All contamination that is not found during the NTCRA under the 13,212 anomalies will be addressed in the forthcoming RI/FS Report."	Agreed	Noted	
60	2.4.2	2-13, pg34	"There is no frost line in Concord, California, and there is no potential for frost heave to occur" Clarify whether this assessment takes into account potential climate change impacts.	This does not take into account climate change. However, current climate change models predict an increase in temperature, not a decrease, and it is unlikely that Concord will ever have a frost line as climate change progresses. The elevation of the site is at 100 feet and is unlikely to be affected by future sea level rise. No change has been made in response to this comment.	Agreed	Noted	
61	3.1, Bullet	3-1, pg36	This statement of the RAO is inconsistent with the statement in the ES: "Prevent direct contact with MPPEH/MEC that may be present within and under the subsurface to reduce or mitigate the explosive hazard associated with potential exposure to incidental munitions-related items." Please resolve the inconsistency.	The RAO has been revised as follows: "Protect human health and the environment by <u>reducing</u> /mitigating the risk of an uncontrolled encounter with potential incidental munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with the current <u>and future</u> site use."	Agreed	Noted	
62	3.1, 2 nd para	3-1, pg36	"As such, the Action Memorandum will define the final RAO to reflect any alterations and refinements." Please revise this text along the lines of: "Any alterations and refinements to the preliminary RAO will be reflected in the final RAO established in the Action Memorandum.	Subject text has been revised as follows: "As such, the Action Memorandum will define the final RAO to reflect any <u>Any</u> alterations and refinements to the preliminary RAO will be reflected in the final RAO established in the Action <u>Memorandum</u> ."	Agreed	Noted	
63	3.2, 2 nd para	3-1, pg36	"or if compromised MEC items are discovered" Please explain why the Navy is using a different standard in the RDA EE/CA to trigger soil sampling than is used in the BA EE/CA. (A similar comment was noted earlier at page ES-2.)	The subject text has been revised as follows: "Additionally, soil samples will be collected for analysis of metals and explosives under any discovered munitions items, regardless-if <u>of whether</u> there was is evidence of a release, and if MMPEH/MEC are explosively treated (i.e., post-demolition shot) or if compromised MEC items are discovered during the intrusive investigation ."	Agreed	Noted	

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Comment #	Section #	Page #	Comment	Response	Comment	Response
Comments	provided by Yvo	onne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
64	3.2, 2 nd para	3-2, pg37	"being evaluated separately during the in-progress remedial investigation of the RDA." Please explain whether the sampling results from the NTCRA will be incorporated into the on-going RDA RI, and revise the text to reflect whether or not the results will be incorporated.	Sampling results from the NTCRA will not be incorporated into the ongoing RDA RI. The RDA RI will include all contamination found during previous investigations, as well as the RI field activities. The NTCRA will only address any MC contamination associated with the 13,212 anomalies. No change has been made in response to this comment.	The NTCRA, like the RI, will assess metals and explosives. Explain why the NTCRA data will not be used in the RI to evaluate nature and extent of contamination and risk.	The objective of the NTCRA is to remove known detectable anomalies identified in the digital geophysical investigation performed in the RI and confirm presence or absence of MC that may have been released because of discarded military munitions. Navy acknowledges that re-acquisition of the target anomalies yield information about what the metallic anomalies are, e.g. if those anomalies are in fact munitions, how it does or does not support the current CSM, whether there was a visual release of MC, among other important information. This action is different than assessing nature and extent of contamination because nature and extent has already been established in the RI - there is enough information about the site, both historically and from field data that support its historical operational use ("nature" of why the site exists) and how laterally far and how deep vertically contamination is located ("extent" of contamination). The scope and design of the NTCRA is based on the current understanding of the CSM, which is built on the conclusions of the RI. Therefore, additional nature and extent investigations are not planned and are not appropriate for the NTCRA. Should any re-acquisitions or MC sampling analyses show deviance from the current CSM established by the RI, a supplemental RI would be appropriate to address those data gaps, which would revisit assumptions of nature and extent of contamination. For this reason, the Navy recommends maintaining the current language of the text.
65	3.2, 3 rd para	3-2, pg37	"considered future unlimited use/unrestricted exposure (UU/UE) for explosive hazards to support the potential future clean closure of the RDA." It isn't clear exactly what this text means, but to the extent it is intended to indicate that the proposed clearance activities will achieve UU/UE, and thereby also support clean closure a the site, this is an inaccurate and inappropriate statement.	The subject text has been revised as follows: "Because the planned future land use of <u>the</u> RDA includes residential development, this EE/CA considered future unlimited <u>use/unrestricted exposure (UU/UE) for-incorporates a goal of no</u> <u>further removal action (NFRA) to reduce/mitigate</u> explosive hazards-to support the potential future cleanup closure of <u>at</u> the RDA."	As noted above in relation to similar revisions, changing the characterization from "UU/UE" to "NFRA" does not change the fact that the NTCRA in itself will not achieve a level of cleanup that allows the Navy to forgo a remedy and remedy decision document.	Agreed. LUCs will be implemented as discussed in the response to comment #12. Text has been revised as follows: "Because the planned future land use of the RDA includes residential development, this EE/CA incorporates a goal of no further removal action (NFRA) to reduce/mitigate explosive hazards at the RDA pending a final remedy determination in a future decision document."
66	3.4	3-2, pg37	See comments on identical text in Section 3.4 of the BA EE/CA.	Acknowledged. Comments on the BA EE/CA are included in this RTC table as 67 through 78 and have been addressed, as appropriate.	Agreed	Noted

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Comment	0 1 1	D "				D. D
# Common	Section #	Page #	Comment	Response	Comment	Response
Commen	s provided by Y vor	ine Fong, a	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated o	5/24/2022
67	3.4, 1 st para	3-2, pg37	"regulatory requirements, standards, and guidance" Please revise this text to reflect the definition of ARARs provided in the text that follows.	The subject text has been revised as follows: "Substantive regulatory <u>ARARs include site-specific standards</u> , requirements, <u>standards</u> , and <u>guidance are referred to as</u> <u>ARARs.criteria</u> , or limitations established under federal <u>environmental law or any more stringent standards</u> , requirements, <u>criteria</u> , or limitations promulgated in accordance with a state <u>environmental statute</u> ."	Agreed	Noted
68	3.4, 1 st para	3-2, pg37	"ARARs depend on the detected" Please revise the highlighted text along the lines of "The identification of ARARs is related to."	The subject text has been revised as follows: " <u>The identification of ARARs-depend on the detected is related to</u> contaminants, specific site characteristics, and <u>the</u> particular removal action proposed for the site."	Agreed	Noted
69	3.4, 5 th para	3-3, pg38	"Three types of ARARs: chemical-, location-, and action-specific have been identified and are summarized below." Please revise to: "The three types of ARARschemical-, location-, and action-specificare described below."	The subject text has been revised as requested. "Three The three types of ARARs-(chemical-, location-, and action-specific), have been identified as summarizedare described below"	Agreed	Noted
70	3.4, Chemical- Specific ARARs bullet	3-3, pg38	"of" Change to "or."	The subject text has been revised as follows: "acceptable amount of <u>or</u> concentration of a chemical"	Agreed	Noted
71	3.4, Chemical- Specific ARARs bullet	3-3, pg38	"may be found in or discharged to the ambient environment." Please revise to: "may remain in or be discharged to the environment"	The subject text has been revised as follows: "that may be found remain in or discharged to the ambient environment."	Agreed	Noted
72	3.4, Location- Specific ARARs bullet	3-3, pg38	"activities that can be performed based because they occur in special locations." Please revise to something like: "Location-Specific ARARs restrict the concentrations of hazardous substances that may remain at a site or the types of response activities that may be performed at a site solely due to its location (e.g., presence of wetlands, habitat for sensitive species, floodplains)."	 The subject bullet has been revised as follows: "Location-Specific ARARs are restrictions placed on restrict the concentrations of hazardous substances that may remain at the site or the types of response activities that can may be performed based because they occur in special locations. Location specific ARARs relate to the geographical or physical position of the at a site solely due to its location the presence of protected or regulated resources (e.g., presence of wetlands, habitat for sensitive species,)." 	Agreed	Noted
73	3.4, Location- Specific ARARs bullet	3-3, pg38	"based" Delete "based."	Please see the response to comment #72	Agreed	Noted
74	3.4, Action- Specific ARARs bullet	3-3, pg38	Please revise to something like: "Action-Specific ARARs are requirements for, or limitations on, actions taken to clean up hazardous substances or pollutants. They are identified in relation to the particular activities that are selected as part of the remedy, and address the design, construction and operation of the remedy."	 The subject bullet has been revised as follows: "Action-Specific ARARs are activity based requirements for, or limitations on, actions taken with respect to clean up hazardous substances or pollutants. These requirements They are triggered by identified in relation to the particular activities that are selected to accomplish a as part of the remedy Thus, action-specific requirements in themselves do not determine and address the removal alternative; rather, they indicate how a 	Agreed	Noted

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
Comment	Questi en ll	Dama II	Comment	Dumunu	Comment		
#	Section #	rage #	Comment	Response selected alternative must be achieved through design, construction, and operation or management. of the remedy."	Comment		
75	3.4, 7 th para	3-3, pg38	"specific features of the site location" Please revise to: "the site location and specific features of the site"	The subject text has been revised as follows: "chemicals at the site, <u>the site location and specific features of</u> the site <u>location</u> , and"	Agreed		
76	3.4, 7 th para	3-3, pg38	"actions that are being considered as removal actions." Please revise to: "actions that are being considered as part of the response action."	The subject text has been revised as follows: "actions that are being considered as removal actions part of the response action."	Agreed		
77	3.4, 7 th para	3-3, pg38	"regulations, requirements, and" Please revise per the comment on the first sentence of section 3.4.	The subject text has been revised as follows: "Appendix A identifies and evaluates potential federal and State of <u>California ARARs on a site-specific basis</u> from the universe of <u>regulations, requirements, information about specific chemicals at</u> <u>the site, the site location and guidance specific features of the site,</u> and"	Agreed		
78	3.4, 7 th para	3-4, pg39	"guidance" Guidance may be a TBC, but generally isn't considered "applicable" or "relevant and appropriate" because it does not satisfy the "promulgated" requirement.	Text has been revised to state at the beginning to state of Section 3.4 "Substantive regulatory ARARs include site-specific standards, requirements, standards, and guidance are referred to as ARARs.criteria, or limitations established under federal environmental law or any more stringent standards, requirements, criteria, or limitations promulgated in accordance with a state environmental statute. The identification of ARARs depend on the detected is related to contaminants, specific site characteristics, and the particular" Text has been added to state at the end of Section 3.4 "Appendix A identifies and evaluates potential federal and State of California ARARs on a site-specific basis from the universe of regulations, requirements, information about specific chemicals at the site, the site location and guidance specific features of the site, and sets forth the Navy determinations regarding those potential ARARs for each response action alternative retained for detailed analysis in this EE/CA. In addition, nonpromulgated advisories or guidance issued by federal or state governments, while not legally binding and therefore not ARARs, may be useful and are evaluated in Appendix A as potential "to be considered" (TBC) requirements that may complement but not override ARARs."	Agreed Please reference action-specific cat ARARs too.		
80	4.1, Number 2.	4-1, pg40	"restriction" Please change to "restrictions."	The text has been revised to state: "2. Land use controls (LUCs) (i.e., institutional controls [ICs] such as administrative or legal restriction or engineered controls such as fences and signage): LUCs are physical, legal, or administrative mechanisms to implement restrictions on land use and access to limit exposure of landowners or users of the property to potential MPPEH (i.e. institutional controls [ICs] and or engineering controls [ECs]). LUCs also can be used to maintain the integrity of a response action. Monitoring and inspections occur to ensure effectiveness of and compliance with restrictions."	Agreed		

	Response
	Noted
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fic category of	Noted The text has been revised as follows: "Appendix A identifies and evaluates <u>ARARs</u> on a site- specific basis from information about specific chemicals at the site, the site location and specific features of the site, <u>and</u> <u>the alternatives being evaluated</u> "
	Noted

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	s provided by Yvoi	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
81	4.2.2, 1 st para	4-2, pg41	"incidental," Given the fact that 13,212 uninvestigated subsurface anomalies remain, it appears inappropriate to classify them as "incidental" munitions.	The term "incidental" as it relates to munitions has been removed from throughout the EE/CA.	Agreed	Noted
82	4.2.2, 1 st para	4-2, pg41	"For the purpose of the EE/CA, especially for development of the rough order of magnitude pricing, Alternative 2 was assumed to consist of installing, periodically inspecting and maintaining warning signs for the possible UXO hazard, and five-year reviews." Clarify the text to state whether the alternative includes inspection/maintenance of perimeter fencing. Review and modify the cost analysis, as necessary, to account for costs associated with ensuring the integrity of the perimeter fencing. The costing also needs to take into account the costs associated with preparation, implementation and monitoring of the ICs (just as in the FIB ROD situation the Navy needed to include such costs).	The text in the 1 st and 2 nd paragraph has been revised as follows: "Alternative 2-includes implementation of assumes that LUCs, specifically ICs and engineering controls, to prevent or minimize without additional MPPEH/MEC remediation on any portion of the <u>RDA</u> , would be implemented to address the risk of an uncontrolled encounter with potential exposure to incidental, subsurface munitions-related items in soil and explosive hazards by unqualified/untrained personnel during intrusive or ground- disturbing activities. The LUCs alternative consists of prohibition on ground disturbance with deed restrictions, military munitions recognition and safety training, unexploded ordnance (UXO) construction support, signs, fencing, and long-term monitoring." Annual costs include installing warning signs and periodically inspecting and maintaining the signs and fence. Capital costs include LUC RD, SMP, and post-mounted warning signs. No changes have been made to the costs.	Please clarify what and where paragraph 2 is, as Section 4.2.2 appears only ever to have had one paragraph? Please clarify if these statements mean that the costs calculations already include both the annual and capital costs.	 Paragraph 2 from the Draft version no longer exists. It talked about LUC RD and discussed the property transfer that is now part of Section 4.2.2.1. The revised text states "The LUCs alternative consists of prohibition on ground disturbance (documented in licenses, leases, and base operations documents) except when with deed restrictions, UXO construction support and military munitions recognition and safety training for construction personnel are provided. These LUCs would be enforced by the Navy until a Final ROD is signed., signs, fencing, and long-term monitoring." Correct. The costs already include the annual and capital costs. No changes have been made to the text in response to this comment.
83	4.2.2, 2 nd para	4-2, pg41	"Details concerning the ICs and engineering controls would be developed in the LUC Remedial Design (RD)." This text is too lacking in specifics to be sure, but it may indicate an approach that is inconsistent with the outcome of EPA/Navy discussions about the FIB ROD. Please clarify the remedy elements that the Navy will include in the decision document (e.g., the ICs selected as part of the removal action and associated procedures and protocols) and the RD (and an SMP, if such is planned), so that it corresponds to the FIB ROD. Also, please explain why a LUC RD is being used here instead of the Site Management Plan proposed in the Bermed Area EE/CA. However, it is unclear whether long-term ICs may be implemented through a removal action and, if so, whether a LUC RD would be the appropriate document for specifying the implementation details for the performance objectives.	The new sections 4.2.2.1 through 4.2.2.4 have been added to include detail in a similar manner as the FIB ROD.	See comments on new section 4.2.2.1 in the redline of the Pre-Final EE/CA. The discussion of munitions recognition and safety training (Section 4.2.2.2), and UXO Construction Support (Section 4.2.2.4) generally seem ok but the same question regarding the scope of the restrictions beyond large scale development activities that DTSC raised in the context of the FIB LUC RD is present here (e.g., what about an individual resident who wants to put in a garden).	Only sections 4.2.2.1 Monitoring and Avoidance and 4.2.2.2 Military Munitions Recognition, and Safety Training and Construction Support have been included in Section 4.2.2 Alternative 2 – Land Use Controls based on the responses to comments #19 and #200.

	Former Naval Weapons Station Seal Beach Detachment Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Commen	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022	
84	4.2.2, 2 nd para	4-2, pg41	"In addition, when the property is transferred, the site restrictions would implement appropriate activity access restrictions or other controls through the application of terms and conditions mirroring the IC requirements in leases and licenses." This sentence appears to be incorrect in that it suggests post- transfer, use restrictions will be imposed via leases, etc., whereas presumably the sentence is meant to explain how the restrictions will be implemented pre-transfer. Please review the sentence and revise it as necessary to make the intended point (e.g., In addition, prior to transfer, implementation of appropriate activity access restrictions or other controls would be accomplished through the application of terms and conditions in leases and licenses that mirror the IC requirements" Also, as written, this sentence is missing a "period" at the end.	The new sections 4.2.2.1 through 4.2.2.4 have been added to include detail in a similar manner as the FIB ROD.	See comments on new section 4.2.2.1 in the redline of the Pre-Final EE/CA. The discussion of munitions recognition and safety training (Section 4.2.2.2), and UXO Construction Support (Section 4.2.2.4) generally seem ok but the same question regarding the scope of the restrictions beyond large scale development activities that DTSC raised in the context of the FIB LUC RD is present here (e.g., what about an individual resident who wants to put in a garden).	Please see the response to comment #83.	
85	4.2.2.1, 1 st para	4-2, pg41	"of land use at the RDA to commercial/industrial use." Such a restriction would be incompatible with the reasonably anticipated future use of the property which the Navy earlier in the RDA EE/CA acknowledges includes residential use. Please evaluate this issue and revise this sentence and other portions of the EE/CA that are affected by a change to this text.	The new sections 4.2.2.1 through 4.2.2.4 have been added to include detail in a similar manner as the FIB ROD.	See comments on new section 4.2.2.1 in the redline of the Pre-Final EE/CA. The discussion of munitions recognition and safety training (Section 4.2.2.2), and UXO Construction Support (Section 4.2.2.4) generally seem ok but the same question regarding the scope of the restrictions beyond large scale development activities that DTSC raised in the context of the FIB LUC RD is present here (e.g., what about an individual resident who wants to put in a garden).	Please see the response to comment #83.	
86	4.2.2.1, 2 nd para	4-3, pg42	"ICs would be implemented to inform all personnel entering the site about the possible MPPEH/MEC hazard." This description suggests that the ICs consist solely of notification as the text does not describe any kinds of restrictions on activities such as, for example, a prohibition on ground disturbance absent training or a requirement that UXO personnel be on call. This description is at odds with the description in the second paragraph of Section 4.2.2, however, which references "other controls" and the first sentence of subsection 4.2.2.1, which references restricting land use to commercial/ industrial use.	The new sections 4.2.2.1 through 4.2.2.4 have been added to include detail in a similar manner as the FIB ROD.	See comments on new section 4.2.2.1 in the redline of the Pre-Final EE/CA. The discussion of munitions recognition and safety training (Section 4.2.2.2), and UXO Construction Support (Section 4.2.2.4)generally seem ok but the same question regarding the scope of the restrictions beyond large scale development activities that DTSC raised in the context of the FIB LUC RD is present here (e.g., what about an individual resident who wants to put in a garden).	Please see the response to comment #83.	
87	4.2.2.1, 2 nd para	4-3, pg42	"Physically, base access is limited by a secure fence around the facility and a manned entrance gate." Please confirm that these access controls will remain in place on transfer. Also, it appears that the Navy is relying on the fencing as part of the remedy. Therefore, the heading for the next section should be revised to "Signage and Fencing," and clear reference to reliance on the fencing included.	Section 4.2.2.5 (formerly 4.2.2.1) has been revised as follows: "Warning signs would be posted to current <u>existing</u> fencing on the west side of the RDA, and warning signs would be installed on metal posts in areas where fencing does not already exist <u>on the</u> <u>eastern side</u> ." The title of Section 4.2.2.5 has also been revised to "Signage <u>and</u> <u>Fencing</u> ."	Agreed	Please see the response to comment #83.	

Comment #	Section #	Page #	Comment	Response	Comment
Commen	ts provided by Yvoi	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
88	4.2.2.2, 1 st para	4-3, pg42	"Because the site can only be accessed through a gate managed by the East Bay Regional Parks District, additional fencing to enclose the entire RDA is unnecessary and would restrict the current use of the site for open cattle grazing that occurs year-round." Please clarify what gate is referenced, and why EBRPD controls access in an area slated for transfer to the City of Concord.	Section 4.2.2.5 (formerly 4.2.2.1) has been revised as follows: "Because the <u>Navy restricts access to the installation and the RDA,</u> <u>the site</u> can only be accessed through a gate managed by the East Bay Regional Parks District <u>on Bailey Road</u> , additional fencing to enclose the entire RDA is" EBRPD does not control access to the site; the Navy does. EBRPD controls the gate that allows access into the area where RDA is located.	Agreed
89	4.2.3	4-3, pg42	As commented earlier, please revise the heading to accurately describe the elements of the alternative.	The heading has been revised to "Alternative 3 – Anomaly Reacquisition <u>, and Removal, and Destruction</u> ."	Ok except for the discrepancy bet distinction drawn earlier between 3B, and the reference here simply
90	4.2.3, 4 th para	4-4, pg43	"or if munitions-related items are discovered" This statement is inconsistent with other statements in the RDA EE/CA about the scope of soil sampling, which limit it to instances of "compromised" munitions. Please resolve the inconsistency.	The subject text has been revised as follows: "Additionally, soil samples will would be collected for analysis of MC (metals and explosives) or from beneath all munitions-related items discovered during the intrusive investigation and if MPPEH/MEC are explosively treated (i.e., post-demolition shot). MC results will would only be used to confirm no contamination remains in soil post-demolition or following removal of munitions- related items or post-demolition. Please see the response to comment #13.	Agreed
91	4.2.3, 5 th para	4-4, pg43	"Reseeding" Clarify that this reseeding is to restore vegetation and does not relate to munitions test seeds.	This reseeding refers to restoring vegetation. The subject paragraph has been revised as follows for clarity: "Excavated areas will would be restored to match the original grade. Reseeding may be applicable in the project staging <u>The</u> <u>disturbed</u> areas <u>Although this removal action will not trigger the 5- year review requirement, for comparing the cost would be reseeded</u> <u>using a seed mix composed</u> of alternatives, costs for 5-year reviews are included in this alternative plants native to the area."	Agreed
92	4.2.3, 6 th para	4-4, pg43	"Although this removal action will not trigger the 5-year review requirement, for comparing the cost of alternatives, costs for 5-year reviews are included in this alternative." Explain why the Five Year Review requirement would not be triggered by this removal action. Five Year Reviews are required whenever wastes are left in place and unlimited use/unrestricted exposure is precluded, and given the technological limits of detection, the proposed clearance activities will not support a UU/UE determination.	Pursuant to CERCLA § 121(c) and the NCP at 40 C.F.R § 300.430(f)(4)(ii), 5 year reviews are done only when a <i>remedy</i> is selected (emphasis added) that leaves concentrations of hazardous substances in place above levels that allow for unlimited use and unrestricted exposure. CERCLA 5-year reviews are not done on removal actions. Therefore, this text and costs associated with 5 year reviews were removed. The Navy agrees that a determination regarding unlimited use and unrestricted exposure will not be made in this EE/CA or the AM. Text has not been change for this comment.	Agreed
93	4.2.3.2, 1 st para	4-5, pg44	"Once each location is located" Suggest revising the introductory clause to: "Once the location of each anomaly is reacquired."	The subject has been revised as follows: "Once-each the location of each anomaly is located reacquired, a pin flag would be placed to mark the location approximately 1 foot north of the anomaly location."	Agreed

	Response
ong, dated 6	/24/2022
	Noted
ween the 3A and to "3."	As discussed in comment #16, Alternatives 3A and 3B were renumbered as Alternatives 3 and 4. Section 4.2.3 now discusses only Alternative 3, and a new Section 4.2.4 has been added to discuss Alternative 4.
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			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Agen on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	ncy (EPA) on the ne Runway Disposal Area, , dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne For
94	4.2.3.3, 2 nd para	4-6, pg45	"demolitions shots" Please confirm plural form of "demolitions" is correct.	The text has been revised as follows: "Consolidated demolitions demolition shots would be used"	Agreed
95	4.2.3.4	4-6, pg45	"0 to 6 inches" It may be more appropriate to stipulate these parameters in the NTCRA Work Plan.	The subject text has been revised as follows: "Discrete soil samples would be collected from 0 to 6 inches below underneath any discovered munitions items,"	Agreed
96	4.2.3.5	4-6, pg45	This appears to repeat information already presented in Section 4.2.3.2. Review and revise as appropriate.	The section does repeat information presented previously; however, this subsection is discussing the Post-Removal Survey and it is appropriate to restate the methods used. No changes related to this comment have been made.	Agreed
97	4.2.3.5	4-6, pg45	"a post-removal geophysical survey would be conducted over 76 acres within the RDA to confirm no anomalies remain in the subsurface." Explain why the post-removal geophysical survey is limited to 76 acres of the 81 acre site.	Text has been revised to state: "a post-removal geophysical survey would be conducted over 7681 acres within the RDA to confirm no anomalies remain in the subsurface."	Agreed
98	4.2.3.5	4-7, pg46	"Once the anomalies are intrusively investigated, the EM61 or UltraTEM would be used to recollect geophysical data to verify the locations are clear." Clarify if additional geophysical data would be recorded over the location and reprocessed to ensure the anomaly is removed and that, for each anomaly reinvestigated after post-removal geophysical survey, a California licensed surveyor would be present to survey the limits of removal, depth, and the volume of soil removed. These steps are included in the Bermed Area EE/CA.	The text has been revised to clarify that geophysical data will be collected and processed post-anomaly removal. Post-removal processing will occur over the entire 81 acres. The Bermed Area has a licensed surveyor to survey once the berm is removed to record depth and the volume of soil removed. Since the RDA is going to preexisting coordinates from a calibrated GPS station, a surveyor is not needed. All MEC/MDAS will be documented on a RTK-GPS.	Agreed
99	4.2.3.6, 3 rd para	4-7, pg46	"This alternative does not trigger a requirement for 5-year reviews, however, for the purpose of cost estimating, costs for 5-year reviews are included." Explain why the Five Year Review requirement would not be triggered by this removal action. Five Year Reviews are required whenever wastes are left in place and unlimited use/unrestricted exposure is precluded, and given the technological limits of detection, the proposed clearance activities will not support a UU/UE determination.	Text has been revised to state " This alternative does not trigger a requirement for 5 year reviews, however, for the purpose of cost estimating, Costs for 5-year reviews are included."	Per prior RTC (re. Section 4.23), d FYR reference is acceptable as the will not have been implemented at conclusion of the NTCRA. Given the however, and that the statement ab being included in the NTCRA cost calculations was deleted in the earl it is unclear why it is included/reta
100	4.3.1, bullet 4	4-8, pg47	"Toxicity" Revise the text to state how "toxicity" is addressed by this action or how this aspect of the criterion is not applicable to this action.	 The subject bullet has been revised as follows: "Identifies whether or not implementation of the alternative would reduce the toxicity, mobility, or volume of MPPEH/MEC in soil." Text has been revised in section 4.4 to address Toxicity. 	Agreed

	Response
Fong, dated 6	/24/2022
	Noted
, deleting the remedy at the en this fact, about costs ost- earlier text, etained?	LUCs and 5 year reviews have been removed from the Alternatives 3 and 4 because this is an interim action. Five year reviews will be discussed as part of the final remedy decision document.
	Noted

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Agen on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	icy (EPA) on the ne Runway Disposal Area, , dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvo	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
101	4.3.1, bullet 5	4-8, pg47	"with which the remedy achieves" Please revise to: "it takes for the remedy to achieve."	The subject bullet has been revised as follows: "This criterion includes the time with which it takes for the remedy achieves to achieve protectiveness and the potential to create adverse impacts on human health and the environment during construction and implementation."	Agreed
102	4.3.4, 1 st para	4-9, pg48	"Environmental impacts are provided in this EE/CA for overall consideration of the NTCRA alternatives." These considerations should be integrated into the short-term effectiveness criterion; there is no basis for considering them separately in the removal context.	Text in Section 4.3.4 has been removed and the following text has been added to section 4.2.3.1 " <u>Planning and execution will take into</u> <u>consideration green remediation metrics in accordance with EPA's</u> " <u>Methodology for Understanding and Reducing a Project's</u> <u>Environmental Footprint</u> " (EPA, 2012)."	Ok to add sentence to the Workpl section, but reference to environn impacts in 4.3.4 should be include description of "Short-term Effecti Section 4.3.1, the discussion of in alternatives in Section 4.4, and th comparative discussion of alterna Section 5.1. The lengthy discussio "green remediation" can be added appendix.
103	4.3.4, 1 st para	4-9, pg48	"included" Please change to "include."	See response to comment #102.	See comment to #102
104	4.3.4, 1 st para	4-9, pg48	"environment" Please change to "environmental."	See response to comment #102.	See comment to #102
105	4.3.4, 2 nd para	4-9, pg48	"The green remediation metrics, as defined by EPA (2012), are summarized below." Consider moving this section of summary bullets to the Cost Analysis, Appendix B.	See response to comment #102.	See comment to #102
106	4.4	4-11, pg50	This section does not address the central questions of effectiveness, implementability and cost, including the various sub-categories under the categories of effectiveness and implementability.	The section has been replaced to address each alternative's effectiveness, implementability, and cost.	Agreed
107	4.4, 1 st para	4-11, pg50	 "as well as potential environmental impacts during implementation." This is not an independent category; instead, as the description of "short-term effectiveness" states, it includes "adverse impacts on . the environment during construction and implementation." 	The section has been replaced to address each alternative's effectiveness, implementability, and cost. Text has been revised to state "…based on their effectiveness, implementability, and cost , as well as potential environmental impacts during implementation . Table 4-2 summarizes…"	Agreed
108	4.4, 2 nd para	4-11, pg50	"The following are the qualitative descriptions for the land and ecosystem impacts during the implementation of the NTCRA alternatives:" This discussion should be integrated into the discussion of "effectiveness."	Text has been revised to state "The following are the qualitative descriptions for the land and ecosystem impacts during the implementation of the NTCRA alternatives each removal alternative are describe below." The section has been replaced to address each alternative's effectiveness, implementability, and cost	Agreed
109	4.4, bullet 2	4-11, pg50	"signs" Revise to include maintenance of the perimeter fencing on the western edge of the RDA.	The former text has been replaced in its entirety, thus this comment is no longer applicable.	Agreed

	Response
ong, dated 6	/24/2022
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ans nental ed in the veness in dividual e tives in on of as an	The following text was added to the end of Section 4.3.1 Short-Term effectiveness: "Environmental impacts are provided in this EE/CA for overall consideration of the NTCRA alternatives. The potential impacts to the environment that could occur during implementation of the alternatives were considered and include land and species impacts, power and water consumption, use of natural resources, air emissions, and production of waste materials (Appendix C)."
	Please see the response to comment #102
	Please see the response to comment #102
	The text that was included in the Draft version has been moved to Appendix C.
	Noted
	Noted
	Noted
	Noted

Comment #	Section #	Page #	Commont	Rosponso	Comment
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Commen	ts provided by Yvoi	nne Fong, d	ated October 22, 2021 (continued)		Comments provided Yvonne For
110	4.4, bullet 3	4-11, pg50	"to ensure geophysical efforts could be performed throughout the 81 acres to confirm all anomalies are removed from the RDA." Earlier the text states that the confirmation survey will be limited to 76 of 81 acres. Please resolve this inconsistency.	Please see the response to comment #97	Agreed
111	4.4, bullet 3	4-11, pg50	"During fieldwork, it is not anticipated that any wildlife in the area would be disturbed and/or frightened from the area due to the amount of activity and noise." Please explain how this statement is credible if detonation of MEC is required.	The former text has been replaced in its entirety, thus this comment is no longer applicable.	Agreed
112	4.4, bullet 3	4-11, pg50	"are anticipated to be" Please explain the use of the highlighted phrase, rather than, for example, "would be."	The former text has been replaced in its entirety, thus this comment is no longer applicable.	Agreed
113	4.4, bullet 3	4-12, pg51	"measure" Please change to "measures."	The former text has been replaced in its entirety, thus this comment is no longer applicable.	Agreed
114	4.4, bullet 3	4-12, pg51	Please include a reference to soil sampling for MC, use of sampling results, and use of excavated soil to regrade the RDA given that an RI is on-going.	The section has been revised to address each alternative's effectiveness, implementability, and cost.	Agreed
115	5.0	5-1, pg52	"alternatives" Please revise to "removal alternatives."	The subject text has been revised as follows: "The removal action alternatives identified in Section 4.2 were"	Agreed
116	5.1, 1 st para	5-1, pg52	"Alternative 1 is considered the least effective alternative to protect human health and the environment because risks to current and future receptors would remain indefinitely and the toxicity, mobility, and volume of munitions-related items would not be reduced. Alternative 2 is not considered an effective alternative to protect public health and the environment because risks to current and future receptors would remain indefinitely at the site, and toxicity, mobility, and volume through treatment of contamination at the site would not be reduced." This description essentially treats the no-action and LUCs alternatives as equivalent, but they are not. Please revise the text to distinguish between the effectiveness of the two alternatives. Please also address the sub-criteria noted in the NTCRA Guidance. Also, the discussion needs to address the inconsistency between the described restriction on use to commercial/industrial, and the reasonably anticipated future use	Text has been revised to state "Alternative 2 is not considered an to <u>be moderately</u> effective alternative to protect public health and the environment because <u>LUCs are as effective as removal for</u> protecting human health but not for the environment, mitigating risks to current and future receptors would remain indefinitely at the site require long-term maintenance and inspections of access <u>controls</u> , and toxicity, mobility and volume through treatment of contamination at the site would not be reduced. "	Highlight in Yellow but not explai

	Response
ong, dated 6	/24/2022
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ined	Text has been revised as follows: "and the environment because <u>the</u> LUCs are as effective as removal for"

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Ager on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	icy (EPA) on the 1e Runway Disposal Area, ., dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	s provided by Yvo	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
117	5.1, 1 st para	5-1, pg52	"toxicity" Revise the text to state how "toxicity" is addressed by this action or how this aspect of the criterion is not applicable to this action.	Within the Section 5.1, toxicity is described for alternatives 1 and 2. Neither alternative reduces the toxicity of the site as stated. Alternative 1, "and the toxicity, mobility and volume of munitions-related items would not be reduced." Alternative 2, "and toxicity, mobility, and volume through treatment of contamination at the site would not be reduced." The following text has been added for Alternative 3: " <u>All identified MPPEH/MEC would be treated via detonation</u> <u>thereby reducing/mitigating the toxicity, mobility, and volume of</u> <u>MPPEH/MEC in subsurface soil at the site.</u> "	Agreed
118	5.1, 1 st para	5-1, pg52	"removal" The use of the term "removal" is not appropriate given that the RAO is for mitigation, and because the proposed clearance activities do not support UU/UE.	Text has been revised to separate Alternative 3 into <u>Variant 3A</u> (DGM) and <u>Variation 3B in dynamic mode</u> (AGC). Both methodologies will "remove" anomalies from the site, thus reducing/mitigating the explosive hazard as stated in the revised preliminary RAO.	The introduction of another term is confusing. Identify the two sub-a simply as "Alternative 3A" and "A 3B."
119	5.1, 1 st para	5-1, pg52	"achieve the goal of UU/UE to support the potential clean closure of the site." The NTCRA cannot be judged to have achieved the goal of UU/UE if the RAO does not state that as the intended purpose of the NTCRA; the RAO is not "elimination of all residual incidental munitions risk for potential future residential use," but just "mitigating the risk of an uncontrolled encounter." Revise this text.	Please see the response to comment #21. All references to "unlimited use/unrestricted exposure (UU/UE)" have been revised to "no further removal action (NFRA)" throughout the EE/CA.	See other comments on the use of being unacceptable.
120	5.2	5-1, pg52	"equally" Generally, LUCs are rated slightly lower for implementability as there is the potential for failure over time when maintenance/inspection activities or other administrative procedures do not occur or are compromised. Revise the text accordingly.	Text has been revised as follows: "The three alternatives Alternatives <u>1 has no implementability since</u> <u>there is no technical or administrative feasibility required and no</u> <u>services or materials</u> are <u>equally needed</u> . <u>Alternative 2</u> is technically and administratively feasible and the services and materials necessary to implement the alternative are readily available. <u>However, LUCs have has</u> the potential to fail over time when maintenance/inspection activities or other administrative procedures do not occur or are compromised and is therefore rated slightly lower than the other alternatives for implementability. Alternative <u>3</u> is technically and administratively feasible, and the <u>services and materials necessary to implement the alternatives are</u> <u>readily available</u> ." Tables ES-2 and 5-1 has been revised to show "Moderate" for Administrative Feasibility of Alternative 2.	This use of the term "implem seems incorrect; perhaps "Impler is not an issue with Alternative 1 b
121	5.3	5-1, pg52	"If this alternative were selected, the remaining anomalies and potential MPPEH/MEC at the RDA could require future action because this alternative would not achieve the RAO, which would result in future costs." This sentence does not make sense: by definition the no-action alternative does not involve any action, hence does incur any costs.	The subject text has been revised as follows: "If this alternative were selected, the remaining anomalies and potential-MPPEH/MEC would remain in soil at the RDA could require future action because this alternative would not achieve and the RAO, which would result in future costs could not be achieved. See response to comment #123 for remaining text for Alternative 2.	The achievement of the RAO isn't to the cost of Alternative 1; please this text and revise the revised tex to state that "The estimated cost for Alternative 1 is \$0 because no act be taken."

	Response
ong, dated 6	/24/2022
	Noted
is lternatives	Please see the response to comment #16.
Alternative	
`NFRA	Please see the response to comment #12. The use of NFRA has been removed from this section.
entability"	The subject text has been revised as follows:
nentability because"	"Implementability is not an issue with Alternative 1 has no implementability since because there is no action would be taken technical or administrative feasibility required
t relevant e delete	The text has been revised as follows: "The estimated <u>total</u> cost for Alternative 1 is \$0 <u>because no</u>
or ion would	<u>ACTION WOULD BE TAKEN</u> . If this alternative were selected, MPPEH/MEC would remain in soil at the RDA and the RAO could not be achieved."

	Former Navar weapons station Sear Beach Detachment Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comments	s provided by Yvo	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fong, dated 6/24/2022		
122	5.3	5-1, pg52	"The estimated cost for Alternative 2 is \$631,200." See earlier comment on costs in subsection 4.2.2 that need to be included for Alternative 2.	The estimated cost for Alternative 2 is correct. No change has been made in response to this comment.	Please see comment on RTC 82.	Please see the response to comment #82.	
123	5.3	5-1, pg52	"Alternative 2 would not reduce toxicity, mobility, or volume of MPPEH/MEC at the site because it would be left in place and its effectiveness to protect human health and the environment would rely on implementation and maintenance of LUCs. Alternative 2 would not support the potential" This text is not relevant to the discussion of cost, except to the extent that under the LUC alternative on-going monitoring, etc., would be required, whereas assuming as the Navy does that Alternative 3 results in UU/UE (an assumption with which EPA does not agree), no further action would be required at the RDA.	The subject text has been revised as follows: "The estimated cost for Alternative 2 is \$631,200. Alternative 2 would not reduce toxicity, mobility, or volume of MPPEH/MEC at achieve the site because it would be left in place and its effectiveness RAO with respect to protect human health and but not for the environment because MPPEH/MEC would remain in site soil. In addition, the alternatives protectiveness of human health would rely on implementation and maintenance of LUCs in perpetuity. Alternative 2 would not support the potential clean closure of the site and the goal of UU/UE NFRA."	The revised text is no more relevant to the cost analysis than was the original text. Please delete.	A discussion of just costs has been added to the section, and all text previously revised has been deleted as requested.	
124	5.3	5-2, pg53	"achieve the RAO and the goal of UU/UE." The NTCRA cannot be judged to have achieved the goal of UU/UE if the RAO does not state that as the intended purpose of the NTCRA; the RAO is not "elimination of all residual incidental munitions risk for potential future residential use," but just "mitigating the risk of an uncontrolled encounter." Revise this text.	Please see the response to EPA comment #21. All references to "unlimited use/unrestricted exposure (UU/UE)" have been change to "NFRA" throughout the EE/CA.	See other comments about the unacceptability of the Navy's use of the term NFRA.	The last paragraph in Section 5.3 has been revised as follows: "Alternatives 3A and 3B 4 would remove <u>all detectable</u> MPPEH/MEC from the RDA and achieve the RAO and the goal of NFRA . Alternative 3A is considered the most cost- effective alternative-to achieve the RAO and the goal of NFRA. At the conclusion of the NTCRA, the Navy will have removed all detectable munitions. However, given the limits of the detection technology at this time, a risk of residual munitions remains that will be addressed in a final remedy decision document."	
125	6.0, 1 st para	6-1, pg54	"Anomaly Reacquisition and Removal Action" Please revise the name per earlier comments.	The title of Alternative 3 has been revised as requested per prior comments. "…NTCRA at the RDA is Alternative 3A, Anomaly Reacquisition, and Removal <u>, and Destruction</u> Action .	Please make use of the reference "Alternative 3A" consistent throughout the EE/CA.	Please see the response to comment #16.	
126	6.0, 1 st para	6-1, pg54	"RAO for the site by removing potential MPPEH/MEC in soil, thereby reducing human exposure and removing the exposure pathway for current and future receptors." EPA does not agree with the Navy that the proposed clearance work would "remov[e] the exposure pathway for current and future receptors."	The subject text has been revised as follows: Alternative 3A would meet the RAO for the site by removing potential MPPEH/MEC in soil, thereby reducing/mitigating the <u>explosive hazard</u> to human <u>health and the environment exposure</u> and removing the exposure pathway for current and future receptors."	Agreed	Noted	
127	6.0, 3 rd para	6-1, pg54	"The ultimate goal of the NTCRA" Please explain the meaning of this phrase. The "ultimate goal" of the NTCRA is to achieve the RAO, and thereby protection of human health and the environment.	The subject text has been revised as follows: "The ultimate goal <u>objective</u> of the NTCRA is to <u>reduce/mitigate</u> address the potential exposure to incidental munitions-related items or explosive hazards to current and future human receptors <u>and the</u> <u>environment</u> based on current and future land use."	This revised text reads as though the reference is to the RAO, which is repetitive of the 2nd sentence of the 1st paragraph of Section 6. Please revise so that there is just one clear statement of the RAO.	The last paragraph of the section has been deleted since it is repetitive.	

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Agen on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	ncy (EPA) on the ne Runway Disposal Area, , dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Commen	ts provided by Yvoi	nne Fong, da	ated October 22, 2021 (continued)		Comments provided Yvonne Fo
128	6.0, 3 rd para	6-1, pg54	"future land use." The RAO does not refer to future land use, only current land use: "associated with the current site use."	 The preliminary RAO in Sections ES.2 and 3.1 has been revised as follows: "Protect human health and the environment by reducing/mitigating the risk of an uncontrolled encounter with potential incidental munitions-related items and explosive hazards by unqualified/untrained personnel during ground disturbing activities associated with the current and future site use." 	Agreed
129	6.0, 3 rd para	6-1, pg54	"achieve the goal of UU/UE to support the potential clean closure of the site." EPA does not agree with the Navy that the proposed clearance work would achieve the goal of UU/UE or support clean closure. Revise this text.	Please see the response to EPA comment #21. All references to "unlimited use/unrestricted exposure (UU/UE)" have been change to "NFRA" throughout the EE/CA.	EPA does not accept the Navy's u term NFRA or the formulation th recommended alternative will ach goal.
130	TOC	A-i, pg78	ToC page numbers do not match actual page numbers, which include the Appendix number as in A-1. Please revise the ToC page numbers so that they match the actual page numbers.	ToC will be regenerated before submittal. An "A-" was added to the page numbers of the ToC.	Agreed
131	Acronyms and Abbreviations	A-iv, pg81	Please add the "acronym abbreviation "EOD" for "explosive ordnance disposal," as that term is used in the RDA EE/CA.	"EOD" was only used once in in the text and once in a table. So, no acronym is required.	The Navy's response is unclear be term is used 2x in the text of the l and an abbreviation for EOD was the acronyms list for the text.
132	A1.1, last para	A-2, pg85	"addressed." Should be "address."	The subject text has been revised as follows: "the requirements addressed address problems or situations"	Agreed
133	A1.1, 1st para, 1 st sentence	A-3, pg86	"was" Should be "is."	The subject text has been revised as follows: "the requirement was is well suited"	Agreed
134	A1.1, 1st para, 2 nd sentence	A-3, pg86	"did" Should be "does."	The subject text has been revised as follows: "the requirement did does not meet"	Agreed
135	A1.1, 1st para, last sentence	A-4, pg87	"Off-site actions (i.e., off-site disposal) are required to comply with applicable requirements only and are not required to comply with relevant and appropriate requirements identified as ARARs for on- site actions." As the Navy chooses to distinguish between the status of requirements for on-site an off-site cleanup related activities, it should also note that requirements for off-site activities may not be waived, as ARARs may.	The following text has been added to the end of the paragraph: "Regulatory ARARs apply to CERCLA response action activities completed on site. Statutory and regulatory requirements that apply to off site offsite actions are not ARARs. Off site Offsite actions (i.e., off-site offsite disposal) are required to comply with applicable requirements only and are not required to comply with relevant and appropriate requirements identified as ARARs for on- site actions. <u>However, requirements for offsite activities may not be</u> waived."	"Off site <u>Offsite</u> actions (i.e., off disposal)" Please change to "e.g.,".

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	Noted
se of the at the lieve this	Please see the response to comment #127.
	Noted
ecause the EE/CA, added to	The acronym list in this document is only for Appendix A and only acronyms defined in Appendix A are included. If an acronym is not used in Appendix A, then it is not included in the list.
	Noted
	Noted
	Noted
site offsite	The text has been revised as requested.

Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the

	Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	Comments provided by Yvonne Fong, dated November 24, 2021				Comments provided Yvonne Fong, dated 6	5/24/2022
136	A1.1, 1 st bullet	A-5, pg88	"• Prevent direct contact with MPPEH/MEC that may be present within and under the subsurface to reduce or mitigate the explosive hazard associated with potential exposure to incidental munitions- related items." This statement of the RAO is not the same as the statement in Section 3.1, which is not the same as the statement in the ES (which is the same as the statement of the RAO here). Please ensure that all statement of the RAO are the same throughout the document.	 The RAO has been revised as follows: "Prevent direct contact with MPPEH/MEC that may be present within Protect human health and under the subsurface to reduce or mitigate environment by reducing/mitigating the explosive hazard associated risk of an uncontrolled encounter with potential exposure to incidental munitions-related items and explosive hazards by unqualified/untrained personnel during ground-disturbing activities associated with current and future site use." 	Agreed	Noted
137	A1.1	A-5, pg88	"Alternative 3 – anomaly reacquisition and removal" As noted in other earlier comments, please reference "treatment" in the description of alternative 3, as the narrative description of the alternative in Section 4.2.3 notes that MEC will be destroyed. (This revision should be made to references to alternative 3 throughout the EE/CA.)	Text has been revised to state "Alternative 3 – anomaly reacquisition <u>Anomaly Reacquisition</u> , and Removal, and removal <u>Destruction</u> " to match the EE/CA.	Agreed	Noted
138	A2.1, 1 st and 2 nd para	A-12, pg95	It isn't clear why all of this historical information is repeated here. Please explain and consider deleting it, or at least tailoring it more carefully to information that may be helpful to understanding the Navy's ARAR analysis.	Text has been revised to state as follows: "Based on historical aerial imagery, the former airfield was constructed in the early 1940s and was used to store and sort aircraft and related materials. Until 1946, portions of the RDA were used for maintenance and synchronization of aircraft-mounted machine guns. In the late 1960s, a portion of the former north- south-oriented runway was demolished and redeveloped with residential dwellings that housed U.S. Coast Guard personnel. Historical photographs also indicate that the former airfield was used to store and sort aircraft parts and related materials because metal debris was observed in several areas along the former runways and taxiways. The land surrounding the airfield was used for agricultural purposes since the beginning of military operations in the area (<u>Multi-Media Environmental Compliance Group</u> [MMEC Group], 2020). "	See comments on red-lined Appendix A.	Please see the response to comment #206.

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Comment #	Section #	Page #	Comment	Response	Comment	Response
Commen	ts provided by Yvon	ne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6/24/2022	
139	A2.1, last para	A-12, pg95	"Soil is the only environmental medium potentially affected by the RDA response actions. The conclusions for ARARs pertaining to this medium are presented in the following sections." This seems appears to be inconsistent with the site characterization in section 2.3.6.4, which notes that "There are several surface ponds occurring in the flat fields adjacent to a perennial spring within the RDA." Please explain how no potential impacts may result to the wetlands and surface waters, and revise the text as appropriate in response to this comment.	The subject text has been revised as follows: "Soil is the only environmental medium potentially affected by of concern for this NTCRA because potential MPPEH/MEC is in subsurface soil. Other non-munitions related chemical contamination in soil at the RDA response actions-is being investigated in a remedial investigation (RI); however, this chemical contamination is not being addressed in this NTCRA. The following sections present conclusions for ARARs pertaining to this that medium are presented in the following sections." As stated in Section A2.1, "The only surface water on the site is found in seasonal wetlands. Hydrologic conditions conducive to the presence of a surface water is not a medium of concern." Because the project will occur between April and October, there is very small chance of encountering onsite surface water while implementing the selected remedy.	The response seems to miss the point, which is that conduct of the NTCRA including detonations could impact the water resources (the "perennial spring") in the vicinity.	The text was revised as follows: "Hydrologic conditions conducive to the presence of a surface water body (i.e., a pond) occur so rarely that onsite surface water is not a medium of concern. <u>However</u> , <u>because surface water may be present on the RDA, the Navy</u> <u>has identified potential location-specific ARARs to protect</u> <u>surface water from impacts that may occur during</u> <u>completion of Alternatives 3 and 4</u> . Section A.3 discusses <u>those potential ARARs</u> ."
140	A2.1.1., 1 st para, 2 nd sentence	A-13, pg96	"No chemical contaminants have been identified at the RDA" This does not seem correct as there is an on-going non-MMRP investigation of the RDA for chemical contamination. It could be correct to say that the scope of the EE/CA does not encompass chemical contamination. Please revise the text as appropriate to address these comments.	 The text has been replaced with the following: "The Navy has identified the following potential chemical-specific ARARs for Alternative 3, which would generate waste, including waste MEC/MPEH and possibly waste soil if soil is excavated as part of the MPPEH/MEC removal. The Navy would determine if the waste is RCRA hazardous or state-regulated, non-RCRA hazardous waste, according to the following potential chemical-specific ARARs: 22 C.C.R. §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 – defining a RCRA hazardous waste 22 C.C.R. §§ Cal. Code Regs. tit. 22, §§ 66261.3(a)(2)(C), 66261.22(a)(3) and (4), 66261.24(a)(2)–(a)(8), 66261.101(a)(1) and (a)(2) – defining a non RCRA state-regulated hazardous waste The Navy also has identified the following provisions of the Military Munitions Rule as potential ARARs because of the potential for MPPEH/MEC to be at the site: Military Munitions Rule at 40 C.F.R. § 266.202(b) and (c) for determining when a military munition is a solid waste definitions The Navy also has identified the site meet the definition of solid waste. 	No highlighting	 The text has been revised as follows: " to the following potential chemical-specific ARARs: 22 C.C.R. §§ 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 – defining a RCRA hazardous waste 22 C.C.R. §§ Cal. Code Regs. tit. 22, §§ 66261.3(a)(2)(C), 66261.22(a)(3) and (4), 66261.24(a)(2)-(a)(8), 66261.101(a)(1) and (a)(2) – defining a non-RCRA state-regulated hazardous waste"

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	s provided by Yvon	ne Fong, da	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
140 (cont.)	A2.1.1., 1 st para, 2 nd sentence	A-13, pg96	"No chemical contaminants have been identified at the RDA" This does not seem correct as there is an on-going non-MMRP investigation of the RDA for chemical contamination. It could be correct to say that the scope of the EE/CA does not encompass chemical contamination. Please revise the text as appropriate to address these comments.	Alternative 3 would generate waste, including waste MPPEH/MEC and possibly waste soil if soil is excavated as part of the MPPEH/MEC removal. Analytical results from previous sampling events at the RDA indicate that the soil has the potential to exceed the toxicity characteristic for some metals and thus will have to be tested to evaluate whether it is RCRA hazardous waste or California-regulated, non-RCRA hazardous waste. In addition, MPPEH/MEC may meet the definition of ignitability or reactivity. Therefore, the RCRA hazardous waste definitions at 22 C.C.R. § 66261.21, 66261.22(a)(1), 66261.23, 66261.24(a)(1), and 66261.100 are potential federal ARARs for determining whether the waste soil and waste. MPPEH/MEC exhibits the characteristics of RCRA hazardous waste. Additionally, the non-RCRA, state- regulated waste definition requirements at 22 C.C.R. § 66261.3(a)(2)(C) 66261.3(a)(2)(F), 66261.22(a)(3) and (4), 66261.24(a)(2)-(a)(8), 66261.101(a)(1) and (a)(2) are potential state ARARs for determining whether the waste soil and waste MPPEH/MEC is California-regulated, non-RCRA hazardous waste. The Navy has identified the Military Munitions Rule at 40 C.F.R. § 266.202(b) and (c), which specify when unused and used military munitions become solid waste as potential ARARs for determining when munitions from the RDA constitute solid wastes. The munitions at the RDA meet the definition of solid waste. The Navy then would determine if the military munition meets the definition of RCRA characteristic waste using the potential RCRA ARARs identified in the previous paragraph by determining if it is a live munition. If it is live, the munition meets the definition of RCRA characteristic waste. Once the characteristic is removed, the munition is no longer a RCRA hazardous waste."	"The munitions at the RDA meet the definition of solid waste. The Navy then would determine" Please explain why the Navy is making a determination in the EE/CA ARARs discussion regarding the status of munitions at the RDA as a "solid waste". To better fit the context, the text could be revised to say something along the lines of: "If munitions at the RDA meet the definition of solid waste, then the Navy would determine" " <u>If it is live, the munition meets the definition of RCRA characteristic waste.</u> <u>Once the characteristic is removed, the munition is no longer a RCRA hazardous waste.</u> " This text also seems out of place in a discussion of potential ARARs; the Navy is getting ahead of itself and already making determinations under the still-potential ARARs. Please revise the text to focus on what requirements are ARARs, not whether the site-specific circumstances fall within the scope of the ARARs.	The Navy disagrees with this assessment. One of the first determinations regarding ARARs is whether a requirement is applicable and, if not applicable, whether the requirement is relevant and appropriate. This is a site-specific determination based on the characteristics of the particular site, the substances at the site, and circumstances of the site. In order for the Navy to determine if provisions in the Military Munitions Rule are applicable, the Navy first must determine if the military munitions at the RDA are solid waste. Typically, definitions are not identified as potential ARARs, but the Navy has identified the definitions associated with military munitions in this case because meeting the definition triggers other requirements in the Military Munitions Rule. Pursuant to 40 CFR § 266.202(b), an unused military munition is a solid waste when it is abandoned by being disposed of. Pursuant to subsection (c), a used military munition is a solid waste when transported off range or from the site of use for the purpose of storage. The munitions are believed to be present at the RDA from stored materials that were discarded or remained in the area until 1946 when the area was no longer used as a runway. Therefore, the Navy has made the determination that military munitions that remain on the RDA are solid waste, which in turn, makes provisions of the Military Munitions rule applicable. Second, the objective of the discussion around determining if the military munition is live or not is to show compliance with the RCRA requirements for characterizing waste. The Military Munitions Rule identifies when military munitions become a hazardous waste and it is based on the RCRA requirements. No, if a munition is "live" it likely meets the definition of RCRA reactive waste.
141	A2.1.1., 1 st para, last sentence	A-13, pg96	"There are no chemical-specific ARARs for munitions-related material at the RDA that establish a cleanup standard." This statement does not reflect the scope of Alternative 3, which includes at a minimum soil sampling for metals (Section 4.2.3.4) for which the Navy must identify screening levels to determine whether the metal contaminants found, if any, pose a risk to human health or the environment. Please revise the text to reflect these comments.	The statement has been deleted from Section A.2.1.1. However, the screening levels for munitions constituents that may be collocated with munitions items are not identified as potential chemical-specific ARARs because screening levels are not promulgated.	Although they may not ARARs, if the Navy is relying on them, they should be cited at least as TBCs.	The Navy will not identify "screening levels" as TBCs because screening levels change over time and a generic identification of screening levels as TBCs does not provide any helpful information in performing the removal action. Instead, pertinent screening levels will be identified in the removal design documents.

Comment #	Section #	Page #	Comment	Response	Comment
Commen	ts provided by Yvoi	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fo
142	A2.1.1., 3 rd para, last sentence	A-13, pg96	"For any material that is disposed of as waste, RCRA waste disposal requirements are potential ARARs. " This statement appears to be inconsistent with the Navy's description of Alternative 3, which involves the off-site disposal of waste such that RCRA's waste disposal requirements would be applicable, but they would not be ARARs as the Navy notes earlier in Appendix A. Please explain the meaning of this statement, and/or revise it to reflect this comment.	The paragraph that this statement is being commented on has been removed in its entirety and replaced with the text in comment #140.	Agreed
143	A2.1.1., 4 th para, 1st sentence	A-13, pg96	"off-site disposal." It isn't just "off-site disposal" for which waste identification is necessary; indeed, if off-site disposal were the only issue, it would not be appropriate to cite the provisions as ARARs, as for off-site actions the requirements may not be waived.	We have revised the text as follows: "The Navy would determine if the waste is RCRA hazardous or state-regulated, non-RCRA hazardous waste, according to the following potential chemical-specific ARARs:"	Agreed
144	A2.1.1., 4 th para, 2 nd sentence	A-13, pg96	"potential federal and state chemical-specific ARARs:" Please see ARARs tables for comments on specific citations.	Noted.	Agreed
145	A2.2.2.2, 2 nd para, 1 st sentence	A-18, pg101	"to prevent direct contact with MPPEH/MEC that may be present within and under the subsurface to reduce or mitigate the explosive hazard associated with potential exposure to incidental munitions-related items" This statement of objective corresponds to the RAO in the ES, but not the one in Section 3.1. Please ensure that this statement is consistent with the other statements throughout the RDA EE/CA. Please also consider whether it would be appropriate to align the RAOs for the RDA and BA EE/CAs.	Subject text in has been removed from the document: The RAO has been modified to match the ES, Section 3.1, and Section A.1.2.1.	Agreed
146	Table A2-1	A-19, pg102	"40 C.F.R. Part 261, Subpart A, B, C, and D" The citation is overbroad; please provide specific citations to the provisions within Subparts A, B, C and D that the Navy considers "Applicable."	40 C.F.R Part 261, Subparts A, B, C, and D have been removed from Table A2-1. The State of California has an approved RCRA program. So the source of potential ARARs for characterizing hazardous waste are contained in California Code of Regulations Title 22, Division 4.5, Chapter 11. These have been identified as the potential federal ARARs for characterizing waste.	Agreed
147	Table A2-1	A-19, pg102	"203, .205, and .206" The citation is overbroad; please provide specific citations to the provisions within Subpart M that the Navy considers "Applicable." In addition, it appears that Section 266.203 is not an ARAR as it concerns the transportation of military munitions which would appear to be an off-site action not subject to ARARs; Section 266.205 includes provisions that are procedural in nature, not substantive; and Section 266.206 is an overly broad cross-reference to "permitting, procedural, and technical standards" for the treatment and disposal of military munitions, and thus to provisions that are not ARARs because they are not substantive. Finally, please provide the full citation for the subsections, at a minimum, e.g., 266.203, .205, and .206.	Table A2-1 and the text in Section A.2 has been revised to identify 40 CFR § 266.202(b) and (c) as the potential federal ARARs for determining when the munitions remaining on the RDA meet the definition of solid waste. The other provisions of the Military Munitions Rule are evaluated as potential federal action-specific ARARs.	Agreed

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	Noted
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	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comments	provided by Yvor	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
148	Table A2-1	A-19, pg102	"40 C.F.R. Parts 122, 123, 124, (National Pollution Discharge Elimination System) NPDES, implemented by" The CFR references are unnecessary, but as cited they are overbroad; please delete. The references to the SWRCB, as amended, are sufficient, but should be as narrowly tailored as possible.	The Navy has deleted the citation to 40 CFR Parts 122, 123, and 124 and SWRCB Orders from Table A2-1. The Navy has identified Clean Water Act 33 U.S.C. § 1342 and 40 CFR § 122.44(k)(2) and (4) as potential applicable action-specific ARARs for Alternative 3 in Table A4-1 because construction activity associated with anomaly reacquisition, removal, and destruction would affect more than one acre. The Navy accepts the substantive provisions of SWRCB Order No. 2009-0009-DWQ as amended by SWRCB Order Nos.2010-0014 and 2012-006 as TBCs for complying with the federal Clean Water Act requirements identified as potential federal action-specific ARARs. See the discussion of the SWRCB Orders in Table A4-1.	 "Act 33 U.S.C. § 1342 and" This citation is overbroad; please revise. "SWRCB Order No. 2009-0009-DWQ as amended by SWRCB Order Nos.2010-0014 and 2012-006 as TBCs" Please explain why the Navy characterizes these SWQCB orders as TBCs. 	The Navy has revised the citation to 33 U.S.C. § 1342(p) in Table A4-1. The Navy has identified the SWRCB general permit for stormwater associated with construction activities that affect at least 1 acre as a TBC because it is a permit. It embodies compliance with Clean Water Act requirements, so it provides actions necessary to comply with the Clean Water Act's potential ARARs. However, pursuant to CERCLA § 121(e), the Navy is not required to obtain a permit for removal actions conducted on the site. The excavation and clearing activities in Alternative 3 would occur on the site, so obtaining the SWRCB general permit is not necessary. No changes have been made to the text in response to this comment.
149	A3.1.2, 1 st sentence	A-20, pg103	"Wetlands are present at the RDA; however, the wetlands are not being degraded by the explosive hazard at the site and will not be adversely impacted by the response action for the site." This determination seems incorrect; with wetlands at the site, it would seem appropriate to cite wetlands protections ARARs to "ensure" the activities take such protections into account. The explanation provided here seems directed at the action-specific ARAR context, not the location-specific context. Please provide an appropriate explanation or include citations to wetland protection provisions.	Agreed. Jurisdictional wetlands (waters of the US) were delineated at the RDA in 2008, more than 10 years ago (Tierra Data, Inc. 2008). However, for Alternative 3, the Navy will identify Clean Water Act §404 as a potential federal ARAR for activities in wetland areas, including the area south of the Former Runway Apron Fuel Pit/Septic System Area; the areas east and west of the north-south former runway and the channelized surface water drainage; and the area to the south of the curved railroad tracks because these areas may be jurisdictional wetlands as shown on Figure 4-1 of the EE/CA. The Navy plans to remove vegetation in these areas, hand dig and remove anomalies, then restore the area to the original grade and reseed wetland areas with the vegetation that was removed. These activities will not result in a loss of wetlands, so mitigation is not required. In addition, the 2018 Biological Opinion Amendment requires a Site Restoration Plan be developed for excavation in wetland areas and submitted to the US Fish and Wildlife Service for approval. The Navy would develop the Site Restoration Plan as part of the CERCLA removal action design work plan and submit it to the US Fish and Wildlife Service.	 "Clean Water Act §404 as a" This citation is overbroad; please revise it. In addition, as noted, this is action-specific ARAR. Please identify potential location- specific ARARs related to wetlands. "In addition, the 2018 Biological Opinion Amendment requires a" A biological opinion is based on the ESA, which typically is considered a location- specific ARAR (i.e., species of concern in the area). Please note the related ESA provisions and the biological opinion as ARARs. 	Clean Water Act § 404 is routinely identified as a location- specific ARAR for activities in waters of the US, including adjacent wetlands, that may result in the discharge of dredge or fill material. The Navy has identified Clean Water Act § 404 as a potential location-specific ARAR for certain portions of the RDA shown on Figure 4-1 of the EE/CA. However, as explained in the location-specific ARARs, Section A.3.2.2.1, only Alternatives 3 and 4 would trigger the Clean Water Act § 404 requirements because that is the only alternative evaluated in the EE/CA that includes removal action construction in the wetland areas. The Navy has revised the text and the tables to identify Nationwide Permit 38 as TBC criteria for complying with Clean Water Act § 404. Because Nationwide Permit 38 embodies the requirements for compliance with Clean Water Act § 404, no other potential location-specific ARARs are identified for the potential wetlands at the RDA. The Navy knows the Biological Opinion is based on the ESA. The Navy has identified ESA requirements as potential location-specific ARARs. The Navy did not identify the Biological Opinion or the 2018 Biological Opinion Amendment as potential ARARs because they are specific to NAVWPNSTA Seal Beach Det Concord and do not meet the criteria in order for a requirement to be identified as an ARAR (e.g., these are not promulgated and are not of general applicability). No changes to the text were made as a result of this comment.

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	s provided by Yvo	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	//24/2022
150	A3.1.3	A-21, pg104	"No hydrologic resources were identified at the RDA that could be affected by the removal action. This determination seems incorrect given the presence of wetlands and a perennial stream. Please provide an appropriate explanation or include citations to potential ARARs.	The intent of the section was to show that there are no other protected hydrologic resources on the RDA (for example, surface water regulated by the Wild and Scenic Rivers Act) since wetlands had already been discussed. Since the site-specific characteristic at the RDA pertaining to location-specific requirements are identified in Section A.3.1 (cultural, wetland, and biological resources) specific subsections stating that the resources are not present on the RDA were deleted.	Agreed	Noted
151	A3.1.4	A-21, pg104	No discussion of biological resources potentially affected as in BA EE/CA. Please include both as to animals and plants.	 The following text has been added as the first two paragraphs to Section A.3.1.3 (formerly A.3.1.4): "Several species of protected biological resource are present or potentially present at the RDA. The California red legged frog, a federal threatened species, and the California tiger Salamander, a federal endangered and a State threatened species are present or potentially present on the RDA. Migratory birds also are potentially present at the RDA. The Navy has identified the following as potential ARARs for the protection of these biological resources: Federal Endangered Species Act at 16 U.S.C §§1531-1534 – prohibiting federal agency action from jeopardizing the continued existence of listed species Migratory Bird Treaty Act at 16 U.S.C. § 703 – prohibiting unregulated taking of migratory birds The Navy also accepts the following as potential State ARARs because the Swainson's hawk, a State threatened species (but not a federal listed species), and the Golden eagle and the White-tailed kite, both State fully protected birds, are present or potentially present at the RDA: California Endangered Species Act at California Fish and Game Code § 2080 California Fish and Game Code § 3511(a)(1) and (b)(7) and (12) – prohibiting the taking of fully protected birds" 	 "16 U.S.C §§1531-1534 –" The citation listed here in the RTCs is overbroad, and even though the citations in Appendix A (Section A.3.1.4) are narrower, they remain overbroad; please revise. "Act at 16 U.S.C. § 703" Include the regulation(s) listing the covered species but limit them to only those species potentially present at the RDA or vicinity. "Code § 2080" Please add statutory and/or regulatory citation(s) for the specific species potentially affected. 	The Navy has revised the citations to 16 U.S.C. §§ 1536(a)(2) and (3) and 1538(a)(1) in the text and Table A3-1. The Navy notes that 16 U.S.C. § 1536(a) only has four subsections and § 1538(a) has only two subsections and fails to see why such specific citations are necessary. Further, citing these specific subsections did not change the actions the Navy will take to protect threatened and endangered species that may be on the RDA. The Navy has not identified the list of migratory birds as a potential federal ARAR because it is not necessary. The Navy has acknowledged that migratory birds are or may be present at the RDA, and the Navy will complete a survey to determine if migratory birds are present and will be adversely affected by the removal action, which is unlikely. The Navy also will have a biological monitor during the removal action to ensure that migratory birds are protected. No changes were made in response to this comment. California Fish and Game Code § 2080 is a State statute and was identified by the California Department of Fish and Wildlife. The Navy accepted that provision as a potential State ARAR and does not accept State statutory or regulatory citations that are not first identified by the State. No changes were made in response to this comment.
152	A3.2.1, last sentence	A-22, pg106	"an on-call archaeologist will be at the site when ground disturbance occurs within approximately 100 feet of the existing 100-foot avoidance buffer that extends around CA-CCO-680. An archaeological monitor would be at the site when activities are within 100 feet of the archaeologically protected area." Recommend clarifying the distinction between the two types of archaeological support.	There is no distinction between the 2 different aspects of the monitoring to be done. The text has been moved to the end of Section A.3.2.1.1 and revised as follows: "For Alternative 2, if signs are going to be constructed near the area, and for Alternative 3 anomaly recovery, the Navy will have an on-call archaeological monitor on the site when ground disturbance occurs within approximately 100 feet of the existing 100-foot avoidance buffer that <u>already</u> extends around <u>site CA-CCO-680 to oversee the activities and ensure that there are no effects on site CA-CCO-680."</u>	Agreed	Noted

	Former Naval Weapons Station Seal Beach Detachment Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	s provided by Yvon	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
153	A3.2.2.1.1, 2 nd para	A-23, pg106	"Wetlands are present at the RDA; however, the wetlands are not being degraded by the explosive hazard at the site." This explanation does not address concern about potential impacts on the wetlands and related waters related to Alternative 3. Please provide an appropriate explanation and, as appropriate revise the text to respond to this comment.	Agreed. Please see the Navy's response to comment #149.	See comments on RTC 149.	Please see the response to comment #149.
154	A3.2.2.1.3, 2 nd para	A-24, pg107	"Discharge of dredged or fill material to a wetland is not planned as part of the response action." Please explain whether Section 404 is limited to planned discharges only; if not, why requirements prohibiting discharges are not cited as ARARs; and if appropriate revise the text to incorporate them.	Clean Water Act § 404 applies to the discharge of dredge or fill material into waters of the US including adjacent wetlands whether or not the discharge is the objective of the action. The Navy has determined that Clean Water Act § 404 is a potential ARAR for the CERCLA response action activities of removing vegetation and digging up anomalies in wetland areas in Alternative 3 (see the Navy's response to comment #149).	See comments on RTC 149, although deletion of the text referenced in the original comment is appropriate.	Noted
155	A3.2.2.2, 1 st sentence	A-24, pg107	"evaluated above" Please cross-reference the location of the "evaluation."	The subject site is not part of the floodplain and the text has been removed from the ARARs discussion.	See comment in the red-lined Appendix regarding deletion of the citation to and text about floodplain management E.O. 11988. Regarding the RTC here: 1) the statement that the RDA is not in a floodplain is contradicted by the text of A3.2.2.1.2; and 2) the fact that a flood is unlikely to occur during implementation of the NTCRA does not justify not including the cited authority as an ARAR. Please restore the citation and discussion.	The floodplain text in Section A.3.2.2.1.2 has been deleted in the previous draft. The Navy has determined that floodplain requirements are not potential ARARs for this EE/CA for the RDA. Based on FEMA maps, only an area on Olivera Road is listed as Zone A0—defined as river or stream flood hazard area with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. None of the alternatives will affect or result in adverse impacts to the small area designated as Zone AO. No changes to the text were made in response to this comment.
156	A3.2.3	A-25, pg108	"There is a wetland within the RDA but there is no expected action that would discharge dredged or fill material into wetland during this response action." This statement appears inconsistent with the activities likely to occur as part of Alternative 3, including the excavaction o anomalies and stockpiling of soil adjacent to the excavations. Please appropriately explain the basis of he Navy's assertion that no discharge will occur and, as appropriate, revise the text.	Agreed. Please see the response to comment #149.	See comment on RTC 149.	Please see the response to comment #149.
157	A3.2.3	A-25; pg108	"No potential location-specific state ARARs were identified for hydrologic resources." What about protections for the perennial stream?	The objective of this section is to identify non-wetland hydrologic resources since wetlands had already been discussed. Please see the response to comment #149. Since the hydrologic resources on the RDA are potential jurisdictional wetlands, discussed in Section A.3.2.2 this section has been removed to avoid confusion.	Agreed	Noted

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
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Commen	ts provided by Yvon	ne Fong, da	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022	
158	A3.2.4.1.2, 2 nd para, 2 nd sentence	A-27, pg110	"A USFWS" Why no eco survey per BA EE/CA? See BA EE/CA pdf p. 107, 1st full Para.	The following text has been added to the end of Section A.3.2.3.1 as follows: "are potentially relevant and appropriate for this EE/CA. <u>None</u> of the alternatives are expected to adversely impact migratory birds. <u>The Navy will complete an ecological survey of the RDA before</u> ground disturbing field activities in Alternatives 2 and 3 to determine if migratory birds are present at the site and will be adversely affected by the removal action. If so, the Navy would develop appropriate measures to protect migratory birds."	" <u>None of the alternatives are expected to</u> <u>adversely impact migratory birds.</u> " As noted elsewhere is a similar context, the likelihood of no adverse impacts is not a sufficient basis for not including a location- specific requirement as an ARAR.	The Navy has identified the Migratory Bird Treaty Act as a potential federal ARAR.	
159	A3.2.4.2.,	A-28, pg111	"F.G.C. Section §§1908, 3511, and 2080 are" Please correct grammar: "Sections" "are".	This text in Section A3.2.3.2 (formerly A3.2.4.2) has been revised as follows: "F.G.C. Section §§1908, 2080 and 3511, and 2080 are – for threatened or endangered species and fully protected birds	""F.G.C. Section §§1908, 2080 and 3511, and 2080" This text does not appear consistent with the text at the bottom of p. A-32 carrying over to the top of p. A-33: "The Navy accepts the following sections of the California Fish and Game Code as potential state ARARs: California Fish and Game Code §§ 1908, 3511, 2080, and 5650(a)(6)." Please explain.	The text in Section A.3.2.3 has been revised to delete California Fish and Game Code § 1908 as an accepted State ARAR. The objective of this text is to summarize the identification of potential federal and state ARARs.	
160	A3.2.4.2.4, 2 nd para, 3 rd sentence	A-33, pg116	"The Navy will determine if the activities could result in the placement of prohibited materials in the waters of the state in the removal action documents." It isn't clear what this text means, but to be clear, the Navy needs to determine the ARARs in the action memo.	The Navy has revised the last paragraph of California Fish & and Game Code § 5650(a), (b)), and (c) (formerly Section A.3.2.4.2.4) to indicate it will develop stormwater controls to prevent discharge to waters of the State at the RDA.	"The Navy has revised the last paragraph of California Fish & and Game Code § 5650(a), (b)), and (c)" Please clarify which provisions the Navy is citing as potential ARARs as the RTC and EE/CA text both reference Section 5650(a) - (c), yet at another point the text appears to limit the Navy's acceptance to 5650(a)(6).	The last paragraph of Section A.3.2.3.2 under the subheading California Fish and Game Code § 5650(a), (b), and (c) states "The Navy accepts California Fish and Game Code § 5650(a)(6)" to indicate the specific provision that is accepted as a potential State ARAR. California Fish and Game Code § 5650(a)(6) is also identified in Table A3-1, and Section A.3.2.3 was revised to add California Fish and Game Code § 5650(a)(6).	

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Comments	provided by Yvor	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	5/24/2022
161	A3.2.4.2.5	A-33, pg116	"Because adequate ARARs have been identified for the protection of wetlands, no TBC requirement is necessary for this removal action." The issue isn't the adequacy of the Federal ARAR, but whether the State policy even as a TBC is more stringent.	Pursuant to the NCP at 40 CFR § 300.400(g)(3), non-promulgated state criteria may be identified for a particular release. The "to be considered" category consists of advisories, criteria, or guidance that may be useful in developing CERCLA remedies. USEPA further discussed the TBC criteria in its CERCLA Compliance with Other Laws Manual from 1988. Most of the discussion centers around setting protective cleanup goals (similar to chemical-specific ARARs). A procedure for determining when a guidance should be included as a TBC is included in Exhibit 1-8. The final decision-making box explains that if the guidance, criteria, or advisory <i>is necessary to achieve a protective remedy</i> the TBC should be used (emphasis added). Then the use of the TBC is then documented, which includes the determination that no potential ARARs are identified that cover a particular situation or that the ARARs is a crucial step to determining whether a TBC should be used. In the case of the California Fish and Game Commission Wetland policy, the Navy has determined that there are adequate ARARs identified for the protection of wetlands and these ARARs can achieve a protective remedy. Therefore, the acceptance of this policy as TBC criteria is not necessary.	"the acceptance of this policy as TBC criteria is not necessary" As the Navy notes, the ARARs guidance it references is focused on chemical-specific type TBCs, so the analysis is not directly on point for a location-specific TBC. Although it may well be, as the Navy contends, that it has identified adequate ARARs to ensure the protection of the wetlands resources, and therefore need not cite the State Wetlands Policy as a TBC, the Navy has not documented nor justified its determination, it has simply asserted it.	The Navy disagrees with the assertions made in this comment. First, the title of Exhibit 1-8 is "General Procedure for Determining if Guidance of Criteria Should be Considered." The exhibit is not limited to chemical-specific type TBCs. So, the analysis is on point any time a TBC is identified. The use of TBCs must be necessary to achieve a protective remedy and justified. Further, EPA is aware of the Navy's identification of Clean Water Act § 404 as a potential ARAR even though the surface water drainages and wetlands have not been currently delineated to be waters of the US. EPA is also aware that the Navy has identified the Federal and State ESA as potential ARARs and stated that it would develop a wetland Site Restoration Plan pursuant to the 2018 Amendment to the Biological Opinion in order to protect wetland habitat for threatened and endangered species. Clearly, the Navy has identified and documented in the EE/CA adequate potential ARARs to protect the wetlands at the RDA. The Navy's compliance with these requirements results in a protective remedy. Further, the California Fish and Game Commission Wetland policy is directed to compensating for loss of wetland acreage and loss to habitat values. So not only are adequate ARARs identified for the protection of the wetlands at the RDA, but the removal action also will not result in loss of wetlands or habitat values.

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Comments	s provided by Yvon	ine Fong, da	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	5/24/2022
162	Table A3-1	A-34, pg117	"16 U.S.C. § 469-469c-1" The citation is overbroad; please provide citation(s) to the specific sections and/or sub-sections that the Navy considers "relevant and appropriate."	Upon further consideration, the Navy has determined that the Archaeological and Historic Preservation Act is not a potential ARAR for the RDA. The RDA has been surveyed for cultural resources and only one area was identified - site CA-CCO-680. This site is eligible for inclusion on the National Register of Historic Places, so the Navy has identified the National Historic Preservation Act as a potential federal ARAR for the protection of this site. None of the actions associated with Alternatives 2 and 3 would cause irreparable hard, loss, or destruction of this site or other significant artifacts. Therefore, this Act is not a potential ARAR.	"this Act is not a potential ARAR." The determination that one statute is an ARAR does not in itself justify a determination that another statute is not an ARAR, as the Navy's explanation seems to suggest. Moreover, as noted in other contexts, the lack of certainty about potential impacts does not justify not including location-specific requirements as ARARs.	The Navy has determined that the applicable requirement for Site CA-CCO-680 is the National Historic Preservation Act. The site is eligible for listing on the National Register of Historic Places and the Navy, California State Historic Preservation Officer, the City of Concord, the East Bay Regional Park, the Ione Band of Miwok Indians, and Shingle Springs Band of Miwok Indians entered into a National Historic Preservation Act Section 106 Memorandum of Agreement to preserve Site CA-CCO-680 in place. This is the controlling requirement for preservation of Site CA- CCO-680. The agreement governs the Navy's transfer of property in the inland area and the Navy's caretaker maintenance and pre-conveyance licensing and leasing program (the "undertaking"); however, the Navy's CERCLA response actions should not conflict with this agreement. The Navy completed a Phase I archaeological survey of the Inland Area, consulted with the California State Historic Preservation Officer and other consulting parties, and identified only two National Register of Historic Places- eligible resources: CA-CCO-680 (in the RDA) and P-861. Because Site CA-CCO-680 is governed by the National Historic Preservation Act and no other archaeological preservation sites are on the RDA, there is no basis for identifying the Archaeological and Historic Preservation Act as a potential ARAR and it does not add any other requirements to the Navy's removal action at the RDA. Further, the Navy does not have a lack of certainty with regard to impacts to Site CA-CCO-680. The Navy knows where the site is, anomalies are not present within 100 feet of Site CA-CCO-680, and for Alternative 3, the Navy will have an archaeological monitor if ground disturbing activity occurs with 100 feet of the existing 100-foot avoidance buffer. The Navy knows that its activities in Alternatives 2 and 3 will not cause irreparable harm, loss, destruction, or

			Table 1: Response Draft Engineering Evaluati Former Naval Wea	es to Comments from the US Environmental Protection Ager on/Cost Analysis for Non-Time-Critical Removal Action at th apons Station Seal Beach Detachment Concord, Concord, CA	ncy (EPA) on the ne Runway Disposal Area, ., dated July 2021	
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Comment	s provided by Yvo	nne Fong, d	lated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	5/24/2022
163	Table A3-1	A-34, pg117	"Pub. L. No. 96-95 16 U.S.C. § 470aa–470mm" The citation is overbroad; please provide citation(s) to the specific sections and/or sub-sections that the Navy considers "relevant and appropriate."	Upon further consideration, the Navy has determined that the Archaeological Resources Protection Act of 1979, which prevents unauthorized removal, damage alteration, or defacement of archaeological resources, is not a potential ARAR for the RDA. None of the actions associated with Alternatives 2 and 3 include excavation in, removal of, or damage to site CA-CCO-680.	"the Navy has determined" Ditto the preceding comment on RTC 162.	Please see the response to comment #162.
164	Table A3-1	A-34, pg117	"Exec. Order No. 11990" The citation is overbroad; please provide citation(s) to the specific sections and/or sub-sections that the Navy considers "TBC."	The Navy revised the citation column to identify Section 1 and 2 of Executive Order 11990 as the specific TBC sections.	It would seem that Section 5, also may be an ARAR. Please consider.	Agreed. The Navy will add Section 5 to the text and table identifications associated with Executive Order 11990.
165	Table A3-1	A-34, pg117	Row for Wetland - "Not an ARAR" Please explain why, given that wetlands are located at the RDA, the cited provision is not potentially "relevant and appropriate." If on further consideration the Navy determines the cited provision may be "relevant and appropriate," please narrow the citation to the specific sections and/or sub-sections that may be "relevant and appropriate."	Upon further consideration, the Navy has determined that Clean Water Act § 404 is a potential federal ARAR and has revised the Preliminary ARAR Determination column to "relevant and appropriate." Please see response to comment number 149 Fong.	Please see notes elsewhere regarding the overbreadth of the citation to Section 404. Also, if the wetlands are "jurisdictional," then it would seem that the specific sections of the provision related to the potential removal alternatives would be "applicable," not "relevant and appropriate." Please explain the Navy's position if it disagrees.	Please see the Navy's response to comment #149. The current status of the wetlands and surface water drainages on the site as jurisdictional is unknown. The delineation was done 14 years ago, and a current delineation may not identify the wetlands and surface water drainages as jurisdictional. The Navy is not planning on completing a current jurisdictional delineation but intends to protect the wetlands and surface water drainages as if they were jurisdictional. As a result, the Navy identified the requirements as relevant and appropriate, not applicable. No changes have been made to the text in response to this comment.
166	Table A3-1	A-35, pg118	"16 U.S.C. §§ 1531–1543" The citation is overbroad; please provide specific citations to the specific sections and sub-sections that the Navy considers "Applicable."	The Navy revised the citation column to identify 16 U.S.C. §§ 1536(a) and 1538(a) as the potential ARARs.	No highlighting	No change to the document based on the coloring that was in the returned file.
167	Table A3-1	A-36, pg119	"F.G.C. §2080" Please also reference the statutory or regulatory provision that lists the covered "threatened or endangered" species.	The State only identified California Fish and Game Code § 2080 as the potential state ARAR. The California tiger Salamander and the Swainson's hawk are the state threatened species that are present or potentially present on the RDA. Identifying the entire list of state threatened or endangered species is unnecessary to make the determination that the Navy accepts California Fish and Game Code § 2080 as a potential state ARAR.	The original comment was related to the citation of FGC Section 3511, which lists specific species, and which the Navy cites with specificity in response to another EPA comment (see RTC 169).	Noted
168	Table A3-1	A-36, pg119	"F.G.C. §1908" Please also reference the statutory or regulatory provision that lists the native plants determined to be "endangered" or "rare."	Upon further consideration, the Navy does not accept California Fish and Game Code § 1908 as a potential state ARAR. No state endangered or rare plants are on the RDA.	Agreed	Noted

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Comment	s provided by Yvor	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022	
169	Table A3-1	A-36, pg119	"F.G.C. §3511" Unless all of the bird species listed in Section 3511(b) are potentially present at or near the Bermed Area, please revise the citation to reference only those species potentially present at or near the Bermed Area.	The Navy assumes this comment is intended for the RDA and that it is directed to the row that begins with "Fully protected bird species/habitat" since that is the row with California Fish and Game Code § 3511. The Navy has changed the citation to California Fish and Game Code § 3511(a)(1) and (b)(7) and (12) because that is the substantive provision. The comment column already identified the specific fully protected species that are present or potentially present at the RDA.	Agreed	Noted	
170	Table A3-1	A-37, pg120	"Pursuant to 40 C.F.R. § 300.400(g)(2) of the NCP, the Navy has determined that this requirement is not "relevant and appropriate" because it does not address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action and is not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP." Please address the question of whether Section 3005's provision about "Mitigation plans relating to mining operations approved by the department shall, among other criteria, require avoidance of take, where feasible, and include reasonable and practicable methods of mitigating the unavoidable take of birds and mammals" is sufficiently similar to the Navy's proposed actions in Alternative 3 such as to warrant its citation as "relevant and appropriate."	Please see response to CDFW comment #14 regarding California Fish and Game Code § 3005. Further, in order to make the ARARs tables an easy reference to determine which requirements are actually identified as ARARs, requirements determined not to be ARARs, including this requirement, were deleted from the tables. The Navy's evaluation of this requirement is still discussed in Section A.3.2.4.2.3. The Navy has determined that mining mitigation plans approved by CDFW are not sufficiently similar to CERCLA response actions. The purposes of and actions associated with mining and CERCLA cleanup at the RDA are clearly different. Further, the Navy and CDFW have reached an "agree to disagree" agreement regarding California Fish and Game Code § 3005. The Navy does not accept it as a potential ARAR, but will consider that "poisoning" may include releases of CERCLA hazardous substances that pose risk to ecological receptors and will work with CDFW to set numerical cleanup goals that are protective of ecological receptors when ecological risk has been identified.	Agreed	Noted	
171	Table A3-1	A-38, pg121	"Pursuant to 40 C.F.R. § 300.400(g)(2) of the NCP, the Navy has determined that this requirement is not "relevant and appropriate" because it does not address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action and is not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP. " Please explain the Navy's analysis that this section concerns the "conditions for the taking of the species."	In order to make the ARARs tables an easy reference to determine which requirements are actually identified as ARARs, requirements determined not to be ARARs, including this requirement, were deleted from the tables. The Navy's evaluation of this requirement is still discussed in Section A.3.2.4.2.3.	It is unclear which citation this RTC relates to given the extensive red-lining of Appendix A's narrative text, and the deletion of the citation from Table A3-1. Please clarify which citation this RTC relates to.	The Navy's response refers to California Fish and Game Code § 3503. California Fish and Game Code § 3503 was removed from Table A3-1; however, the Navy's reason for rejecting it is still discussed in the text of Appendix C in Section A.3.2.3.2.	
172	Table A3-1	A-39, pg122	"F.G.C. §5650 (a)" The citation is overbroad; please provide specific citations to the specific sections and sub-sections that the Navy considers "Relevant and appropriate."	The Navy has revised the citation column to identify California Fish and Game Code § 5650(a)(6) as the potential ARAR.	Agreed	Noted	

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Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	ts provided by Yvor	nne Fong, d	lated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	j/24/2022
173	Table A3-1	A-39, pg122	"This is not a promulgated requirement. " Please explain whether this guidance may be a TBC. Also, please explain whether the Navy considered other State-based wetlands requirements such as provisions of the Porter-Cologne Water Quality Act, and State Water Board resolutions No. 2008-0026 and 2019-0015 may be ARARs or TBCs.	In order to make the ARARs tables an easy reference to determine which requirements are actually identified as ARARs, requirements determined not to be ARARs, including this requirement, were deleted from the tables. The Navy's evaluation of this requirement is still discussed in Section A.3.2.4.2.5. Please see response number 161 Fong regarding TBC criteria. The Navy did not evaluate the Porter-Cologne Water Quality Act or State Water Board Resolutions No. 2008-0026 or 2019-0015 as ARARs or TBCs. The Navy analyzes state statutes and regulations that are identified by the state in response to the Navy's solicitation of state ARARs, as described in Section A.1.2.3. Other State-based wetlands requirements such as the such as provisions of the Porter- Cologne Water Quality Act, and State Water Board Resolutions No. 2008-0026 and 2019-0015, were not identified by the State.	"Please see response number 161" This RTC appears to concern the F&G Commission Wetlands Policy. See comment on RTC 161.	It is unclear what comment is being made. The first sentence of comment #173 was directed to the Navy's determination on the California Fish and Game Commission Wetlands Policy. The second sentence of comment #173 asks the Navy to "explain whether the Navy considered other State- based wetlands requirements" The first part of the Navy's response is for the California Fish and Game Commission Wetlands Policy, and the Navy's response to comment #161 is still a valid reference for this comment. The second part of the Navy's response is to the comment about other State-based wetlands requirements. No changes have been made to the text in response to this comment.
174	Table A3-1	A-39, pg122	"40 C.F.R. Parts 122, 123, 124, NPDES, implemented by SWRCB Order No. 2009-0009-DWQ (General Permit for Discharges of Storm Water Associated with Construction Activity) (as amended by Orders 2010-0014 and 2012-006)." See earlier comment on this citation and revise in accordance with it.	The Navy has deleted the citation to 40 CFR Parts 122, 123, and 124 and SWRCB Orders from Table A3-1. The Navy has identified Clean Water Act 33 U.S.C. § 1342 and 40 CFR § 122.44(k)(2) and (4) as potential applicable action-specific ARARs for Alternative 3 in Table A4-1. The Navy accepts the substantive provisions of SWRCB Order No. 2009-0009-DWQ as amended by SWRCB Order Nos.2010-0014 and 2012-006 as TBCs for complying with the federal Clean Water Act requirements identified as potential federal action-specific ARARs. See the discussion of the SWRCB Orders in Table A4-1. Please see the response to comment #148."	Agreed	Noted
175	A4, 1 st para, 3 rd sentence	A-40, pg123	"anomaly reacquisition and removal" Please add a reference to treatment as well per the description of the alternative in the main body of the EE/CA.	Text has been revised as follows: Section 4 paragraph 1: "Alternative 3 entails anomaly reacquisition, and removal, and destruction. " All text that states Anomaly Reacquisition and Removal has been revised to state "Anomaly Reacquisition, and Removal, and Destruction"	Agreed	Noted
176	A4, 5 th para	A-40, pg123	"Alternative 3" This discussion is much more extensive than in the BA EE/CA (at pdf p. 119 4th Para from bottom). Please explain the reason for the differential, and consider providing equivalent treatment.	The discussions are different because they have different approaches to the work. RDA is a mag and dig of existing DGM coordinates where Bermed Area is a removal of an earthen berm from the ground surface. More discussion will be added to the Bermed Area ARAR. No change was made to the text.	Agreed	Noted
177	A4, 6 th para, 1 st sentence	A-40, pg123	" in the RDA" Why isn't there a statement about reacquisition and investigation if anomalies found, per BA EE/CA pdf p. 119 3rd Para from bottom.	The subject text has been revised as follows: "in the RDA. <u>If anomalies are found, they will be reacquired,</u> <u>intrusively investigated, and removed and post-removal DGM will</u> <u>be re-performed to confirm all anomalies have been removed.</u> "	The text referenced in the RTC does not seem to be the same as the text in the revised Section A.4.3 (Action-Specific ARARs for Alternative 3), or the original text in section A4. Please clarify.	The following text was added to Section A4.3: " <u>If anomalies are found, they would be reacquired,</u> <u>intrusively investigated and removed, and post-removal</u> <u>verification survey using DGM methodologies would be re-</u> <u>performed to confirm all anomalies have been removed.</u> " Section A.4 was revised to remove details on the alternatives in order to remove repetition.

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Agen on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	cy (EPA) on the ne Runway Disposal Area, , dated July 2021	
Comment #	Section #	Page #	Comment	Response	Comment	Response
Comment	s provided by Yvon	ne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022
178	A4, 6 th para, 2 nd sentence	A-40, pg123	" compromised MEC" Please explain/justify the limitation on sampling to "compromised" MPPEH/MEC per comments on main body of the EE/CA.	Text has been revised as follows: "Additionally, soil samples will would be collected for analysis of MC if MMPEH/MEC are explosively treated (i.e., postdemolition shot) or if compromised MEC munitions-related items are discovered during the intrusive investigation, regardless of whether there was evidence of a release, or if MMPEH/MEC are explosively treated (i.e., post-demolition shot). MC results will would only be used to confirm no contamination remains in soil post demolition or following removal of compromised MPPEH/MEC items or post-demolition."	The text referenced in the RTC does not seem to be the same as the text in the revised Section A.4.3 (Action-Specific ARARs for Alternative 3), or the original text in section A4. Please clarify.	The following text was added to Section A.4.3: "regardless of whether there was evidence of release, or if <u>MPPEH/MEC are explosively treated (i.e., post-demolition</u> <u>shot). MC results would only be used to confirm no</u> <u>contamination remains following removal of MPPEH/MEC</u> <u>items or post-demolition.</u> " Section A.4 was revised to remove details on the alternatives in order to remove repetition.
179	A4.1, last sentence	A-41, pg124	"action-specific ARARs" What about chemical-specific and location-specific ARARs? EPA ROD Guidance suggests in the exemplar language re the no-action alternative, that chem-specific ARARs should be identified as not being achieved.	For the RDA, the potential chemical-specific ARARs are identified for the characterization of waste (not as cleanup goals) and the potential location-specific ARARs are triggered by the activities to be completed as part of Alternatives 2 or 3. So there are no potential chemical- or location-specific ARARs that are not being met within the scope of this removal action. No change was made to the text.	This goes to the issue of screening levels. the soil RSLs are the only standards available for soil cleanup, yet the Navy's position is that they are not ARARs or, apparently, TBCs. Yet the NTCRA states that the Navy will be sampling for chemical contaminants associated with munitions as part of the NTCRA. For this reason, the Navy needs to cite to the RSLs for soil as a TBC.	Please see the response to comment #141.
180	A4.3, 1 st para, 3 rd sentence	A-43, pg126	"Because the non-time-critical removal action (NTCRA) project is being conducted on a Base Realignment and Closure site, DoD and Navy publications that address the handling, storage, transportation, clearance, and disposal requirements for OEW can be used as guidance for the removal action." Please explain the meaning of this statement.	The objective of the text was to demonstrate that Alternative 3, which includes anomaly recovery and destruction, would be conducted in compliance with all DoD and Navy requirements whether or not the requirements are promulgated or identified as ARARs. However, the text has been removed to avoid confusion and will be cited as necessary in the removal action design documents.	Contrary to the statement that the text has been removed, it is still very much still present in Section A.4.3 (albeit now as the 3rd paragraph). Please explain.	This text in Section A.4.3 has now been removed.
181	Table A4-1, Land use covenants row	A-45, pg128	"See Section A4.2 for DTSC and EPA positions" EPA has not agreed to "agree-to-disagree" language with regard to Section 67391.1, and therefore requests that the Navy citation reflect EPA's position that only a, d & e, and f & i as indicated, are ARARs.	The text in the comment column does not state that there was agree- to-disagree language; the language references "positions" for DTSC and EPA positions in Section 4.2. Section 4.2 has been revised as follows: "EPA agrees that the substantive portions of the state statutes and regulations referenced in this section are ARARs. EPA specifically considers <u>sub</u> sections (a)(1), (a)(2), (d), (e) (1) and (e)(2) (f), and (i) of 22 C.C.R. § 67391.1, to be ARARs for this EE/CA. DTSC's position is that all of the state statutes and regulations referenced in this section are ARARs." Further, the comment column associated with 22 C.C.R. § 67391.1 was revised to remove the reference for DTSC and EPA positions.	"(a)(1), (a)(2), (d), (e) (1) and (e)(2) (f), and (i)" The citation in the citation column of Table A4-1 for 22 CCR 67391.1 does not include subsection f. Please add a reference to this subsection.	The Navy does not agree that 22 CCR § 67391.1(f) is a potential ARAR. The RDA at Former NAVWPNSTA Seal Beach Det Concord is slated for transfer to a non-federal entity. So, it is feasible for the Navy to enter into and record a land use covenant.
182	Table A4-1, Land use controls row	A-45, pg128	"Cal. Health & Safety Code § 25202.5" Please revise the citation to include only the substantive portions of the provision.	California Health and Safety Code § 25202.5 was removed from the text in Section A4.2 and Table A4-1 because it was not identified as a potential ARAR by the State.	Agreed	Noted

Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021 Comment Section # Comment Comment Page # Response Comments provided by Yvonne Fong, dated November 24, 2021 (continued) **Comments provided Yvonne Fo** 183 Table A4-1, Land "Cal. Health & Safety Code §§ 25223 and 25224" California Health and Safety Code §§ 25223 and 25224 were A-45. Agreed use controls row pg128 removed from the text in Section A4.2 and Table A4-1 because Please document (i.e., provide evidence) that, as the narrative they were not identified as potential ARARs by the State. Further, discussion of "Action-Specific ARARs" states, EPA agrees that the language about EPA agreeing to state statutes and regulations Sections 25223 and 25224 are ARARs, as they appear to concern has been deleted. The language about EPA considering subsections the procedures by which an applicant may request the modification (a) (d), (e), (f), and (i) of 22 C.C.R. § 67391.1 to be ARARs has or termination of a covenant and the grounds upon which State been retained. may grant the request. 184 Table A4-1, Land "...§§ 25221..." A-46, California Health and Safety Code §§ 25221 was removed from the Agreed use controls row text in Section A4.2 and Table A4-1 because it was not identified as pg129 Please explain the basis on which the Navy determined that Section a potential ARAR by the State. 25221 is an ARAR given that is permissive in character, not mandatory (i.e., it authorizes a person to enter into an agreement with the State to restrict uses of the person's property ("may enter into") 185 Table A4-1, Land A-46, "...25355.5" The Navy accepts this as a relevant and appropriate potential state Please delete the reference to Heal ARAR because it is specifically mentioned the model covenant that Safety Code 25355.5 as it does no use controls row pg129 EPA does not understand the Navy's explanation that Section will be offered to DTSC upon transfer of property out of federal the criteria as a substantive enviro 25355.5 is an ARAR; it appears that the section concerns the ownership. requirement. Instead it sets forth requirements for the expenditure from a state account for removal requirements that must be satisfied or remedial actions. the State "may expend[] from the account for removal or remedial a any site selected for inclusion on established pursuant to Section 25 186 Table A4-1. A-46. "The Navy would attempt to remove any remaining military The language indicating that military munitions would be stored in Please confirm that the narrative t Storage pg129 munitions. Such munitions would be stored less than 90 days and RCRA containers was deleted. No military munitions will be EE/CA also no longer references Container row disposed of at an appropriate facility." stored in RCRA or other containers. If hot spot soil excavation is of munitions in RCRA containers. necessary, the waste soil would be stored in RCRA containers then Confirm this also true of RDA EE/CA- Per the EE/CA, under disposed of off site. Alternative 3 the Navy would "treat" any MEC or MPPEH as well as MDAS (by cutting it up), at which point, presumably, the material no longer would be "hazardous." If this description of Alternative 3 is correct, please explain why the cited provisions are ARARs. 187 Table A4-1, A-46, "No treatment of munitions-related material are planned for waste This row was deleted from Table A4-1 because the ARARs tables Agreed were revised to remove determinations that are "not ARARs." The Treatment row pg129 management." commenter is correct, live munitions would be detonated and that Please explain the Navy's analysis given that the description of constitutes treatment. Alternative 3 specifies that it includes the treatment of munitions identified as MEC or MPPEH.

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ong, dated 6/	/24/2022							
	Noted							
	Noted							
Ith and ot satisfy onmental d before state state state state state size on the list size on	The Navy accepts California Health and Safety Code § 25355.5(a)(1)(C) as a potential State ARAR. The substantive provisions allow DTSC to enter into agreements with the landowner to execute and record and land use covenant, etc. on the present and future uses of the land and provides constructive notice that the covenant, etc. runs with the land. The jurisdictional prerequisite cited in the comment is not met, so the requirement is not applicable. However, the circumstances of entering agreements with landowners to control the future uses of the land and that bind future landowners when remedying releases of hazardous substances is relevant and appropriate to the actions evaluated in Alternative 2. No changes have been made to the text in response to this comment.							
ext of the the storage	Confirmed							
	Noted							
	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
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Comment #	Section #	Page #	Comment	Response	Comment	Response		
Comment	ts provided by Yvon	ine Fong, da	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6	/24/2022		
188	Table A4-1, On- Site Waste Generation row	A-46, pg129	"Not an ARAR. The Navy may generate waste in excavating munitions-related material. The Navy will determine if the waste or munitions-related material is hazardous at the time it is generated." EPA does not agree with the Navy's stated determination; the Navy's explanation simply restates the point of the citations, and makes clear that the provisions are ARARs.	Upon further consideration, the Navy has identified 22 C.C.R § 66262.11 as a potential ARAR because waste, including waste soil and munitions would be generated. The typographical error in the citations were corrected to 22 C.C.R. § 66262.11. The objective of the statement in the comments column is to show that the determination would be made " <i>at the time it is generated</i> ;" not now when the Navy cannot make the determination. No change was made to the text in the column.	Agreed	Noted		
189	Table A4-1, On- Site Waste Generation row	A-46, pg129	"§66264.13(a)(b)" Please consider whether the citation to .13 should be limited to .13(a)(1). Also, please explain the basis for including subsection (b) as an ARAR given that it concerns the requirements for a generator to develop and follow a written waste analysis plan.	The Navy has deleted 22 C.C.R. § 66264.13(b) as a potential ARAR.	Please further limit the citation to 22 CCR66264.13(a)(1), as it is the only part of (a) that is a substantive requirement.	The Navy disagrees that subpart (a)(1) is the only substantive requirement of 22 CCR § 66264.13(a). For example, subsection (a)(2) allows the use of data developed under chapter 11, which includes the standards used to determine when a hazardous waste is reactive; a determination which will be made for live munitions. No changes to the text were made in response to this comment.		
190	Table A4-1, Site Closure row	A-47, pg130	"Not an ARAR. No land-based disposal units are planned for waste management." Please explain the Navy's analysis that the cited provision is not an ARAR given that it is applicable to "the owners and operators of all hazardous waste management facilities" (subsection .110), not just to land-based disposal units.	This row was deleted from Table A4-1 because the ARARs tables were revised to remove determinations that are "not ARARs." The Navy has determined that the closure standard contained in 22 C.C.R. § 66264.111 is not a potential ARAR for the activities in Alternative 3. The RDA is not a RCRA hazardous waste facility and is not sufficiently similar to the a RCRA hazardous waste facility (determining if RCRA hazardous waste is present at the RDA in the form of live munitions or waste soil that meets the definition of toxicity characteristic waste is part of Alternative 3, but is not known at this time) and the activities in Alternative 3 are not sufficiently similar to the closure of a RCRA facility (the primary activity in Alternative 3 is the reacquisition, removal, and destruction of munitions and hot spot soil that is excavated, which is not expected to meet the definition of RCRA toxicity characteristic waste, would be placed in containers, not in a new RCRA facility) such that this requirement is an ARAR	EPA is not persuaded by the Navy's explanation but, as the cited requirement is a State regulation, EPA will leave this matter for the State to pursue should it wish to do so.	Noted		
191	Table A4-1, Clean Closure row	A-47, pg130	"3" Please explain why this citation does not include a comment similar to the comment in the Bermed Area ROD.	This row was deleted from Table A4-1 because the ARARs tables were revised to remove determinations that are "not ARARs."	Please clarify which citation the original comment related to as it is not possible to so determine given the deletion of the provision.	The comment was made on 22 C.C.R. § 66264.114. This regulation was removed from Table A4-1 because it is not identified as a potential ARAR.		

			Table 1: Response Draft Engineering Evaluatie Former Naval Wea	es to Comments from the US Environmental Protection Agen on/Cost Analysis for Non-Time-Critical Removal Action at th pons Station Seal Beach Detachment Concord, Concord, CA	cy (EPA) on the le Runway Disposal Area, , dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	s provided by Yvoi	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fong, dated 6/2
192	Table A4-1, Waste Piles row	A-47, pg130	"Not an ARAR. Wastes are not planned to be managed as waste piles as part of this action." Please explain why the Navy does not cite to either waste pile or staging pile regulations as ARARs given that Alternative 3 describes UXO Techs potentially investigating up to an approximately 1-meter radius around an anomaly and vertically to detection depth or until approximately 4 feet bgs.	This row was deleted from Table A4-1 because the ARARs tables were revised to remove determinations that are "not ARARs." The soil is being removed so the UXO techs can identify the source for a magnetic anomaly that was detected from the ground surface. The source of the anomaly may or may not be an MPPEH item. If it is an MPPEH item, then soil beneath the item will be sampled for potential contamination. If no MPPEH is found, then the excavated soil would be placed back in the hole. This soil does not meet the definition of waste and this soil is not waste soil (soil is not inherently waste like until it is treated like a waste). Therefore, managing this soil in waste piles or other types of units pursuant to RCRA is not applicable or relevant and appropriate. Soil that is sampled from beneath an MPPEH item that is found to be contaminated and is excavated for offsite disposal is waste. This soil will be placed in containers, not managed in waste piles or other types of units.	EPA does not agree with the Navy's position that it does not need to manage soil excavated in the course of the anomaly excavation process. Until the Navy samples the excavated soil it cannot know whether or not it is a "hazardous waste," and pending the determination it must manage the soil in compliance with requirements (e.g., staging piles).

Response

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The methodology that would be implemented in Alternative 3 is anomaly removal by hand tools, then clearance of the anomaly removal area. If the anomaly is not a munitions item, the soil would be returned to the excavation. If the anomaly is a munitions item, the Navy would determine if it is live and acceptable to move. If live and acceptable to move, it would be moved to a controlled detonation site; if not, it would be blown in place. The Navy would sample the soil below discovered munitions items and below items detonated in place; soil with chemical concentrations exceeding screening levels would be disposed of off site. This methodology does not consist of large excavations and is not conducive to managing waste in piles. Further, the soil is not waste until the Navy intends to dispose of it (soil is an environmental medium and is not inherently wastelike).

Further, RCRA is not applicable to the RDA, the anomalies, or the soil at this point. RCRA Subtitle C requirements for the treatment, storage, or disposal of hazardous will be applicable if: (1) the waste is a listed or characteristic waste under RCRA and (2) the waste was treated, stored, or disposed after the effective date of the RCRA requirements under consideration; or (3) the activity at the CERCLA site constitutes treatment, storage, or disposal as defined by RCRA (CERCLA compliance with Other Laws Manual: Interim Final. EPA/540/G-89/006. August 1988). Whether waste generated during Alternative 3 (not all soil that is dug out by hand is waste) is RCRA waste is not known at this time, and the disposal of the anomalies occurred prior to the enactment of RCRA. The CERCLA activity may generate RCRA hazardous waste (live munitions or contaminated soil) and that determination would be made when the waste is generated. EPA has recognized that the scenarios for determining if RCRA is applicable is *contingent* upon determinations that a RCRA Subtitle C hazardous waste is present and on the identification of the period of waste management (emphasis added) (CERCLA compliance with Other Laws Manual: Interim Final. EPA/540/G-89/006. August 1988). If RCRA Subtitle C is not applicable, a determination is made as to whether RCRA requirements are relevant and appropriate. This determination can be based on several factors; however, EPA has recognized that the mere presence of hazardous constituents in CERCLA waste does not mean the waste is sufficiently similar to a RCRA hazardous waste to trigger Subtitle C as an ARAR (CERCLA Compliance with Other Laws Manual: Interim Final. EPA/540/G-89/006. August 1988).

			Table 1: Response Draft Engineering Evaluatio Former Naval Wea	es to Comments from the US Environmental Protection Ager on/Cost Analysis for Non-Time-Critical Removal Action at tl pons Station Seal Beach Detachment Concord, Concord, CA	icy (EPA) on the ne Runway Disposal Area, ., dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comment	ts provided by Yvoi	nne Fong, d	ated November 24, 2021 (continued)		Comments provided Yvonne Fo
192 (cont.)			(see comment above)	(see response above)	(see comment above)
193	Table A4-1, Closure of Staging Pile row	A-47, pg130	"Not an ARAR. Wastes are not planned to be managed as waste piles as part of this action." See comment on Waste Piles one row above.	Please see the response to comment #192.	Please comment on RTC 192.
194	Table A4-1, Temporary Unit row	A-47, pg130	"Not an ARAR. Wastes are not planned to be managed as waste piles as part of this action." See comment on Waste Piles two rows above.	Please see the response to comment #192.	Please comment on RTC 192.
195	Table A4-1, Construction and land disturbance row	A-47, pg130	"Pursuant to CERCLA Section 121 (e) (42 USC Section 9621 [e]), on-site response actions are exempt from permit requirements, including an NPDES Permit. The State of California's General Construction Storm Water Permit is such a permit. Although not an ARAR in itself, Navy will implement the substantive provisions of this permit to comply with federal CWA ARARs and state water quality ARARs for discharge to surface water. The Navy will implement BMPs and prepare a CERCLA Storm Water Plan which will include monitoring, sampling and analysis, and numeric action levels as required under the state general storm water permit." Please designate the SWRCB Order as amended an ARAR as is done, e.g., in the first ARARs table.	The Navy has determined the State's General Construction Activity Storm Water Permit is not an ARAR. However, the Navy has identified it as a TBC for complying with the Clean Water Act stormwater requirements, which were identified as ARARs and added to Table A4-1. The entries for Clean Water Act stormwater requirements and the State's General Construction Activity Storm Water Permit were deleted from Tables A2-1 (chemical-specific ARARs) and A3-1 (location-specific ARARs).	See comment in text about the cit provision, General Construction S Water Permit.
196	A5, last para, 3 rd sentence	A-49, pg132	"golden eagle" This reference appears incomplete; what about the other bird species listed earlier in the ARARs narrative?	The text has been revised to remove specific ARAR citations since specific ARAR citations are already included in text and tables. The text has been revised as follows:"state fully protected <u>white- tailed kite (Elanus leucurus)</u> and golden eagle (Aquila chrysaetos) " Please see the response to CDFW comment #10 about the discussion of the burrowing owl.	Agreed
					Comments provided Yvonne Fo
197	ES.3, bullet 2	ES-4			"controls, and property use restrictions)" "property use restrictions" are not "engineered controls;" please mov reference to such restrictions to "institutional controls."

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	Response				
ng, dated 6/24/2022					
	The presence of hazardous constituents in the soil at the RDA is unknown at this time. So, the Navy has determined that RCRA Subtitle C requirements for managing waste in piles are not applicable or relevant and appropriate. No changes have been made to the text in response to this comment.				
	Please see the response to comment #192.				
	Please see the response to comment #192.				
ed Storm	Noted.				
	Noted				
ong, dated 6	/24/2022				
ve the	Text has been revised as follows: "(construction, periodic inspections, maintenance of physical access controls, <u>etc.</u> and property use restrictions) to reduce/mitigate"				

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
					Comments provided Yvonne Fong, dated 6	/24/2022 (continued)		
198	Table ES-1	ES-10			Column heading "3 – Anomaly Reacquisition, Removal, and Destruction" In the narrative text above, the Navy identifies (inadequately as noted in an associated comment) the preferred alternative as 3A, but here just references it as 3. Please make all references to the preferred alternative consistent throughout the document.	Column heading has been revised to follows: "3 – Anomaly Reacquisition, Removal, <u>Post-Removal</u> <u>Survey by DGM</u> , and Destruction" "4 – Anomaly Reacquisition, Removal, <u>Post-Removal</u> <u>Survey</u> <u>by AGC</u> , and Destruction"		
199	4.2, 2 nd para	4-2			"to select" In the NTCRA context the EE/CA only identifies the preferred alternative; the Action Memo selects the removal alternative.	The text has been revised as follows: "each alternative is compared against the others to select <u>aid in determining</u> -the recommended alternative (see Sections 5.0 and 6.0)."		
200	4.2.2.1, 1 st para	4-2			"If" Given that the Navy notes elsewhere in the EE/CA that the property is slated for transfer and redevelopment why is the text written in the conditional formulation "If . would need "?	This EE/CA is associated with an interim action. Any evaluation of the efficacy of LUCs with respect to land use changes will be addressed in that document. LUCs presented in this EE/CA are specifically intended as an interim action associated with current land use. Consequently, the protectiveness of these LUCs for a residential use scenario is not relevant. No changes have been made to the text in response to this comment.		
201	4.2.2.1, 1 st para	4-2			"any real property documents necessary for transferring ownership from the Navy." By its terms this phrase would not seem to include a state land use covenant, but such a covenant would be required to comply with ARARs (e.g., 22 CCR 67391.1). Please revise the text to clarify that a state land use covenant also would be entered into as part of the transfer process.	Please see the response to comments #19 and #200.		
202	4.2.3	4-5			"4.2.3 Alternative 3 – Anomaly Reacquisition, Removal, and Destruction" Above Alternative 3 is distinguished between 3A and 3B, so the distinction should be carried on throughout the EE/CA.	Please see the response to comment #16. Alternative 4 is now Section 4.2.4.		
203	4.2.3.2	4-7			"4.2.3.2 Anomaly Reacquisition and Subsurface Anomaly Removal" Distinguish 3A and 3B	The subject text in Section 4.2.5.2 has been revised as follows: "Under Alternatives 3A and 4, 13,212 anomalies"		

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
(continued					Comments provided Yvonne Fong, dated 6	/24/2022		
204	4.4, 2 nd bullet	4-11			"Alternative 2 does comply with some location- and action-specific ARARs." Please explain the use of the term "some" in this statement, because it would seem that a LUCs only remedy most likely would comply with all location-specific and action-specific ARARs given the limited activities associated with the LUCs-only remedy.	The subject text has been revised as follows: "Alternative 2-does comply with some location and action specific meets-ARARs (for mitigation of the soil disturbance exposure pathway through LUCs)."		
205	5.3	5-2			"the goal of NFRA. Alternative 3A is considered the most cost-effective alternative to achieve the RAO and the goal of NFRA." Reference to the NFRA is not acceptable.	Please see the response to comment #124.		
206	A.2.1.1, 3 rd para	A-14			"The MPPEH/MEC remaining at the site meet the definition of solid waste." See comment on RTC 140.	Please see the response to comment #140.		
207	A2.2.2, 2 nd para	A-17			"goal of this response action" Please explain why the Navy made this text revision, which is inconsistent with edits made to the narrative EE/CA text.	The subject text has been revised as follows: "munitions items require a different approach to balance the risks and impacts of addressing the military munitions and/or MPPEH/MEC with the risks of inaction. Minimizing explosive safety risks while achieving the proper balance between these competing concerns is the goal of this response action. Therefore, prior to"		
208	A.3.1.1, 1 st bullet	A-19			"§§ 300101-302505" This citation is massively overbroad; please revise.	The citation has been revised to 54 U.S.C. § 306108.		
209	A.3.1.1, 1 st bullet	A-19			"and 306101" This citation is overbroad; please revise.	Please see the response to comment #208		
210	A.3.1.1, 1 st bullet	A-19			"36 C.F.R. § 800.4" It appears that this citation is both overbroad and not sufficiently broad (e.g., it doesn't capture responsibilities in the event of a finding of adverse effects). Please reexamine the related regulations and revise the ARARs citation.	The citation has been revised to 40 CFR § 800.4(d)(1). The EE/CA documents that Alternatives 2, 3 and 4 will have no effect on Site CA-CCO-680. The Navy knows where Site CA-CCO-680 is, anomalies are not present within 100 feet of Site CA-CCO-680, and, for Alternatives 3 and 4, the Navy will have an archaeological monitor for ground-disturbing activity within 100 feet of the existing 100-foot buffer to ensure that there is no irreparable harm, loss, destruction, or alteration to Site CA-CCO-680.		

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021								
Comment #	Section #	Page #	Comment	Response	Comment	Response			
(continued	l)				Comments provided Yvonne Fong, dated 6	/24/2022			
211	A.3.2	A-21			"that are determined to be ARARs."	The word "potential" was added before ARARs.			
					This statement is inconsistent with statements that the EE/CA ARARs determinations are simply "potential ARARs," which is accurate; please revise this text to reference "potential ARARs."				
212	A.3.2.1.1, 2 nd para	A-21			"identified 54 U.S.C. § 300101-302505 and 306101, and the implementing regulation at 36 C.F.R. § 800.4"	Please see the response to comments #208 and #210.			
					See comments above about these citations.				
213	A.3.2.1.1, 2 nd para	A-21			"removal action activities associated with Alternatives 2 and 3 will not affect the National Register-eligible prehistoric archaeological site CA-CCO-680"	Please see the response to comment #162.			
					The Navy's determination that its actions are not likely to impact an area, does not justify not citing an ARAR that addresses an issue that could arise by virtue of location (or action). The Navy's removal will occur in proximity to a "protected" site, and the ARARs related to the "protected" status of the site must be identified.				
214	A.3.2.2.1, 3 rd	A-22			" as potential TBC criteria"	The subject text has been revised as follows:			
	para				Please explain why the Navy considers an E.O to be a TBC.	" <u>Executive Order No. 11990 is not promulgated and</u> <u>therefore cannot be a potential ARAR. However, the Navy</u> has identified this <u>Executive Order 11990</u> , Sections 1, 2, and <u>5</u> as potential TBC criteria for activities in wetland areas in Alternatives 3 and 4. None of the activities will result in destruction, loss, or degradation of the wetlands."			
215	A.3.2.2.1, 2 nd para	A-23			"original grad" Added the "e."	Noted			
216	A.3.2.3, 2 nd para	A-23			"(ESA) at 16 U.S.C. §§ 1536(a) and 1538(a) and the Migratory Bird Treaty Act (MBTA) at 16 U.S.C. § 703 as potential federal ARARs." See comments above on these citations.	Please see the response to comment #162.			
217	A.3.2.3.1, 1 st para	A-24			"and a Biological Opinion documents" Either "Biological Opinion documents" or "a Biological Opinion document."	The subject text was revised to remove the "a."			

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
(continued)				Comments provided Yvonne Fong, dated 6	5/24/2022		
218	A.3.2.3.1, 3 rd para	A-24			 "and obtaining a Biological Opinion is a procedural requirement that is not necessary for on-site CERCLA actions" Please explain the basis of this statement as, arguably, adherence to the Biological Opinion is a substantive requirement for complying with the no-take provision of the ESA. 	The basis for the statement was documented in the last sentence of the first paragraph under the Endangered Species Act of 1973 subsection. No changes to the text were made in response to this comment.		
219	A.3.2.3.2, 3 rd para	A-27			"§§ 3503.5" Please explain the basis for the Navy's deletion of the citation to CF&G Section 3503.5.	The basis for the Navy's deletion of California Fish and Game Code is stated in the third sentence of the paragraph under California Fish and Game Code §§ 3503.5 and 3513 heading. No changes have been made to the text in response to this comment.		
220	A.3.2.3.2, 1 st para	A-28			"and 3503" The Navy's analysis of 3503 does not appear well founded in that the language of the provision does not suggest that it is limited to "intentional" takes. Please explain the Navy's analysis.	The Navy has revised the discussion of California Fish and Game Code § 3503 to reflect the Navy and CDFW's agree-to disagree language on this State statute. California Fish and Game Code § 3503 states "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." "Take" is defined in California Fish and Game Code § 86 as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." These are intentional acts directed toward a species (versus unintended consequences of an otherwise lawful act). Regardless, the Navy has agreed to certain measures to avoid harm to nests and eggs. No changes have been made to the text in response to this comment.		
221	A.4.2, 1 st para	A-30			"to prevent exposure of receptors" This description is inconsistent with the RAO of reduce/mitigate. Please revise to make consistent.	The text was revised as follows: "to prevent reduce/mitigate exposure of receptors"		
222	A.4.2, 1 st para	A-31			"ARARs for the military munitions that may remain in the subsurface at the site:" Please explain the Navy's thinking with relation to the military munitions rule being an ARAR for a LUCs only alternative.	Alternative 2 would not remove anomalies, which may be live munitions. Therefore, the RDA would be a disposal site for military munitions. No changes have been made to the text in response to this comment. Navy is not identifying MMR as an ARAR with respect to treatment and disposal procedures under 40 CFR 260-270.		

	Table 1: Responses to Comments from the US Environmental Protection Agency (EPA) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021								
Comment #	Section #	Page #	Comment	Response	Comment	Response			
(continued) Comments provided Yvonne Fong, dated 6/24/2022						/24/2022			
223	A.4.2, 3 rd para	A-31			"The potential military munitions remaining on site are in subsurface soil, which would function as an engineering control to prevent exposure and the ICs evaluated in Alternative 2 would ensure compliance with this potential ARAR."	Munitions that may remain on the RDA would be in the subsurface and not readily accessible. The soil would act as a barrier to accessibility. So, activities that would breach the "barrier" and lead to potential exposure would be controlled. No changes have been made to the text in response to this comment.			
					The meaning of this text is unclear; it seems to suggest that the location of the munitions below ground is "an engineering control," but this does not seem accurate.				
224	A.5, 3 rd para	A-315			"jurisdiction wetlands" Added "al"	Noted			

			Table 2: Responses Draft Engineering Evalu Former Naval W	to Comments from the Department of Toxic Substances and Control (DTSC) on the ation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Debris An leapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021	rea,
Comment #	Section #	Page #	Comment	Response	
Comments	provided by Bret	t Leary (DT	SC, Military and Corrective Action Unit), dated September 16,	2021	Comm
1			Regarding the sampling for MCs, if any chemical or contaminant of concern is found and is also named as an analyte in the "Toxicity Criteria Rule", then the "Toxicity Criteria Rule"; Title 22, California Code of Regulations, sections (68400.5, 69020-69022, must be applied as an "Applicable" or "Relevant and Appropriate" Requirement (ARAR) to prepare human health risk assessments and to calculate screening levels and remediation goals.	No removal action goals have been established for this site; however, the Navy will identify project screening levels in the Sampling and Analysis Plan. If MC are identified at concentrations exceeding the project screening levels, then the need for a risk assessment will be evaluated. The following language was added as Section A.1.3.2 in Appendix A : The Navy does not accept the California Toxicity Criteria Rule (TCR) at 22 C.C.R., Division 4.5, Chapter 51, Article 2 as ARARs for purposes of risk assessments, screening levels, or remediation goals. With respect to conducting risk assessments or identifying screening levels, inder CERCLA, the lead agency conducts human health risk assessments during the initial, investigative stage of the process, whereas state-based requirements that the State has identified and proposed as potential ARARs are evaluated as part of the EE/CA, with final selection of any ARARs (both federal and state) made in the Action Memorandum. Accordingly, there is no requirement to attain or to evaluate ARARs for purposes of risk assessments or screening levels. With respect to cleanup goals, as the EPA has explained, "[c]hemical-specific ARARs are usually health-or risk-based numerical values or methodologies which, when applied to site-specific conditions, result in the establishment of numerical values. These values establish the ambient environment." The EPA has further stated, "Levels or standards of control are basic performance objectives for (a) remedial action (e.g., acceptable exposure levels after the remedial action is completed)." (See NCP Preamble, Proposed Rule, 53 Fed. Reg. at 51437, 51443) While the values referenced by the TCR for particular COPCs may potentially be "applied to site-specific conditions," they do not in themselves establish "the acceptable and apposes to comments during administrative ruling for the TCR (and in keeping with the TCR stated connection to human health risk-based remediation GGs), "[r]gearding the request to has the fits that its in the inten	Agreed

Comment	Response
ents provided Yvonne Fong, da	ted 6/24/2022
	Noted

Table 2: Responses to Comments from the Department of Toxic Substances and Control (DTSC) on the

	Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Debris Area, Former Naval Weapons Station Seal Beach Detachment Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
Comment	s provided by Brett	Leary (DT	SC, Military and Corrective Action Unit), dated September 16, 2	2021 (continued)	Comments provided Hortensia Muni	, dated 6/30/2022		
2			Regarding decisions of future unrestricted use/unrestricted exposure, removal of the MPPEH/MEC and MDAS in soil on- site, does not guarantee unrestricted use/unrestricted exposure for the Runway Debris Area. Land use covenants per California Civil Code §1471(a) through (d), and land use controls per California Health & Safety Code §25355.5, may still be appropriate even after the completion of Alternative 3. Any decisions for No Further Action that is unrestricted use/unrestricted exposure, or land use controls or otherwise, should be documented appropriately.	Sections ES.4, 3.2, 5.1, 5.3, and 6.0 of the EE/CA have been revised as follows: "unlimited use/unrestricted exposure (UU/UE) no further removal action (NFRA)" Additionally, the acronym list has been revised to remove "UU/UE" and include "NFRA."	Agreed	Noted		
3		ES-2, pg4	On page 4 of 155, within bullet "Alternative 3, Anomaly Reacquisition and Removal" the digital geophysical mapping and advanced geophysical classification (AGC) variants are not noted here as they ought to be. AGC does not confirm that no anomalies remain in the subsurface, but instead focuses the team on the removal of targets of interest while avoiding the excavation of non-explosive anomalies.	Noted. The text has been edited to include "explosive" anomalies in the text in response to this comment. Also the text has been revised to state "removal geophysical survey (either digital geophysical mapping [DGM] Variation 3A – DGM or Variation 3B – advanced geophysical classification [AGC] in dynamic mode) would be performed to confirm no explosive anomalies remain in the subsurface; MPPEH/MEC items would be inspected and MPPEH/MEC classified as MEC or MDAS as appropriate. Items that cannot be classified as MDAS due to an uninspectable void would be treated onsite. MEC would be destroyed via detonation (either destruction in place or consolidated shot."	Agreed	Noted		
4	Appendix A, Table A4-1	A-46, pg129	For the suggested ARAR "On-Site Waste Generation" per 22 C.C.R. §66260.10(a) and §66260.11, the Navy determined this was not an ARAR, but the Navy's process as described, is the same as the requirements of the ARAR. The Navy generates waste excavating munitions-related material. The Navy determines if the waste or munitions-related material is hazardous at the time it is generated.	Please see response to EPA comment #188.	Agreed	Noted		
5	Appendix B, Table B-3	B-8, pg145	In Appendix B, the "Table B-3. Alternative 3B – Cost Summary" includes a \$225,000 cost for "Planning documents", an increase from \$116,000 for the DGM-only variant. That increase is inconsistent with the increase for AGC used on the Draft Engineering Evaluation/Cost Analysis for Non-Time- Critical Removal Action at the Bermed Area, UXO Site 0012.	Costs for Planning Documents in both tables were entered incorrectly and have been revised. Note that the level of effort between the RDA and Bermed Area are not the same; therefore, the costs are not comparable.	Agreed	Noted		
6	Appendix B, Table B-3	B-5, pg142 B-8, pg145	The "Table B-3. Alternative 3A" and "Table B-3. Alternative 3B" cost summaries both estimate \$1,027,000 for the cost to complete "Subsurface Anomaly Removal". The cost for "Subsurface Anomaly Removal" should be less for Alternative 3B because of the use of AGC.	The cost for Subsurface Anomaly Removal is the same for both alternatives because the Navy already has DGM data for the 13,000 targets that will be reacquired and intrusively investigated. Alternatives 3A and 3B are being compared as options for confirmation DGM only; therefore, there will be no reduction in targets. No changes have been made in response to this comment.	Agreed	Noted		
7	Appendix B, Table B-3	B-8, pg145	The "Table B-3. Alternative 3B – Cost Summary" does not include a separate line item for the cost of AGC. That cost appears to be included in the "DGM" line item instead. It should appear as a separate line item.	Line 20 of Table B-4, Alternative 3B – Cost Summary has been revised to AGC in dynamic mode.	Agreed	Noted		

			Table 2: Responses t Draft Engineering Evalu Former Naval W	to Comments from the Department of Toxic Substances and Control (DTSC) on the ation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Debris Ar eapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021	·ea,
Comment #	Section #	Page #	Comment	Response	
Comment	s provided by Brett	t Leary (DT	SC, Military and Corrective Action Unit), dated September 16, 2	2021 (continued)	Comm
8	Appendix B, Table B-3	B-8, pg145	The "Table B-3. Alternative 3B – Cost Summary" line item for "RACR" is double the cost of the DGM-only variant, presumably due to AGC. That increase is inconsistent with the increase for AGC used on the <i>Draft Engineering</i> <i>Evaluation/Cost Analysis for Non-Time-Critical Removal Action</i> <i>at the Bermed Area, UXO Site 0012.</i>	The level of effort between the RDA and Bermed Area are not the same; therefore, the costs are not comparable. Costs for additional AGC in dynamic mode to RACR were split between RACR and AAR. This error has been corrected in Table B-4 and throughout the EE/CA (Table ES-1, ES-2, and Section 5.3), as appropriate.	Agreed
9	Appendix B, Table B-3	B-8, pg145	The "Table B-3. Alternative 3B – Cost Summary" includes a line item for an "AAR", but the "Table B-3. Alternative 3A – Cost Summary" does not.	A line item for "AAR" has been included in Table B-3, Alternative 3A, and throughout the EE/CA (Table ES-1, ES-2, and Section 5.3), as appropriate.	Agreed
General C	Comments provided	by Ed Wal	ker (DTSC Engineering and Special Projects), dated September	14, 2021	Comm
1			ESPO concurs with the EE/CA recommendation that Alternative 3 be implemented as it would remove MPPEH/MEC from the RDA and achieve the RAO. However, removal of the MPPEH/MEC and MDAS in soil does not guarantee UU/UE. Land use covenants per California Civil Code §1471(a) through (d), and land use controls per California Health & Safety Code §25355.5, may still be appropriate even after the completion of Alternative 3. Any decisions for No Further Action, that is UU/UE, or land use controls or otherwise, should be documented appropriately.	Please see the response to DTSC comment #2 in Table 2.	Agreed
2	4.2.3.1	4-3, pg44	The EE/CA states that a NTCRA Work Plan would be prepared that describe the field and data quality methods and procedures to be performed and would include a Sampling and Analysis Plan (SAP), a Contractor Quality Control Plan, and an Environmental Protection Plan. An Accident Prevention Plan (APP), Site Safety and Health Plan (SSHP), and Explosives Safety Submission (ESS) would be prepared under separate cover. The EE/CA does not reference the inclusion of an MR-QAPP into the NTCRA Work Plan or updating of the MEC Quality Assurance Project Plan (SSI MEC QAPP) that was prepared for the SSI (Multi-Media Environmental Compliance Ground, 6 June 2019). ESPO recommends that NTCRA Work Plan include an updated version of the SSI QAPP that addresses the NTCRA scope of work and includes revised worksheets to address the potential use of Advanced Geophysical Classification (AGC) methodology as a possible alternative to Digital Geophysical Mapping (DGM).	To help facilitate regulatory review, the Work Plan, MC SAP, and MR-QAPP will be combined into one Work Plan/SAP that covers all worksheets and sections required by all three documents. An Environmental Protection Plan, Community Relations Plan, and Contractor Quality Control Plan will be included as appendices to the combined Work Plan/SAP. If AGC in dynamic mode is not the preferred variation, it will not be included in the Work Plan/SAP. Section 4.2.3.1 has been revised to state that a combined Work Plan/SAP would be prepared. The subject text has been revised as follows: "Prior to excavation activities, a <u>Work Plan, MC SAP, and MR-QAPP will be combined into a</u> NTCRA Work Plan would be prepared/SAP to describe <u>the</u> goals, methods, and procedures for the NTCRA activities <u>that the three documents would have required</u> . The <u>combined</u> NTCRA Work Plan/ <u>SAP</u> Work Plan would describe the field and data quality methods and procedures to be performed and would include <u>a Sampling and Analysis Plan (SAP) a the following</u> <u>appendices</u> : Contractor Quality Control Plan, <u>Community Relations Plan</u> , and an Environmental Protection Plan."	Agreed

Comment	Response
ents provided Hortensia Muni,	dated 6/30/2022
	Noted
	Noted
ents provided Hortensia Muni,	dated 6/30/2022
	Noted
	Noted

			Table 3: Responses to Draft Engineering Evaluatio Former Naval Wear	Comments from the California Department of Fish and n/Cost Analysis for Non-Time-Critical Removal Action oons Station Seal Beach Detachment Concord, Concord	Wildlife (CDFW) on the at the Runway Disposal Area, , CA, dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Commen	its provided by Ta	ami LaBon	ty (CDFW Office of Spill Prevention and Response), date	ed September 3, 2021	Comments provided Tami L
1	Table ES-1	ES-6, pg8	 a. Alternative 3 is labeled as "3 – Berm Removal, Post Removal Geophysical Survey, MPPEH Detection, Removal, and Treatment." It is our understanding that the berm at the RDA will not be removed as part of this EE/CA. Please revise the table accordingly. b. Under the column for Alternative 3, for Short-Term Effectiveness, the words "site preparation" are listed twice. Please revise the table accordingly. 	Column has been relabeled "Anomaly Reacquisition, and Removal, and Destruction" Within Tables ES-1 and 4-2, the duplicate words "site preparation" have been removed.	Agreed
2	2.1.3.6.2 Appendix A, ARARs Evaluation, Section A.3.2.4.1.1	2-5, pg26 A-27, pg110	The text states, "The grassland habitat also has a low probability to support the California red-legged frog (CRLF) (Rana draytonii) and the California tiger salamander (CTS) (Ambystoma californiense), which are federally threatened and state species of special concern." Please revise the text to state, "The grassland habitat also has a low probability to support the California red-legged from (CRLF) (Rana draytonii), a federally threatened and state species of special concern, and the California tiger salamander (CTS) (Ambystoma californiense), a federally and state threatened species."	The subject text has been revised as follows: "The grassland habitat also has a low probability to support the California red-legged frog (CRLF) (Rana draytonii), a <u>federally threatened and state species of special concern</u> , and the California tiger salamander (CTS) (Ambystoma californiense), which are a federally threatened and state <u>threatened</u> species of special concern." The text in Appendix A has been deleted and replaced in its entirety to discuss the 2018 Biological Opinion.	Agreed
3	3.1	3-1, pg36	The text states, "The overall goal of the NTCRA [Non-Time Critical Removal Action] is to reduce hazards posed to humans from MMPEH/MEC remaining in soil within 81 acres of the approximately 186-acre RDA." Please revise the text to state, "The overall goal of the NTCRA is to reduce hazards posed to humans and the environment from MMPEH/MEC remaining in soil within 81 acres of the approximately 186-acre RDA" to be consistent with the RAO which states, "Protect human health and the environment"	The subject text has been revised as follows: "The overall goal of the NTCRA is to reduce/ <u>mitigate</u> <u>munitions-related items and explosive</u> hazards posed to <u>humans human health and the environment</u> from MPPEH/MEC remaining in soil within 81 acres of the approximately 186-acre RDA."	Agreed

	Response
aBonty, dated 6/2	9/2022
	Noted
	Noted
	Noted

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
Commen	ts provided by Ta	ami LaBont	y (CDFW Office of Spill Prevention and Response), date	d September 3, 2021 (continued)	Comments provided Tami LaBonty, dated 6/2	9/ 2022 (continued)		
4	4.2.2.2, 4.2.3.6, and 4.4 Appendix A, ARARs Evaluation, A3.1.4	4-3, pg42 4-7, pg46 4-2, pg41 A-21, pg104 A-29, pg112 A-31, pg114	The text states, "Appropriate avoidance and minimization measures would be implemented in accordance with the 'Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concords, Contra Costa County, California' (U.S. Fish and Wildlife Service [USFWS], 2012)." Please revise the text to state, "Appropriate avoidance and minimization measures would be implemented in accordance with the 'Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California' (U.S. Fish and Wildlife Service [USFWS], 2012) and the California Department of Fish and Wildlife Provisions (CDFWPs) (CDFW, 2012)."	The following text has been revised in Sections 4.2.2.3 (formerly 4.2.2.2) and 4.2.3.6 and removed from Section 4.4: "Other avoidance and minimization measures appropriate to the installation of signs would be implemented in accordance with the 2018 to the Biological Opinion amendment (USFWS, 2018). The CDFW Provisions (CDFWPs) (CDFW, 2012 RDA. Alternative 2 does not) will be considered in the development of protective measures to reduce/prevent impacts to the ecosystem, for threatened, endangered, or fully protected birds." The end of Section A.3.1.3 (formerly A3.1.4) has been revised as follows: "Due to wetlands that are identified within the RDA, biological Alternatives 2 and 3 would comply with the conservation measures, including Biological monitoring (including by an onsite U.S. Fish and Wildlife Service [USFWS]-qualified biologist (reviewed by CDFW) during all ground-disturbing field activities), as well as appropriate avoidance and minimization measure in accordance with identified in the 2018 amendment to the "Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California" (USFWS, 2012 and 2018) The CDFW Provisions (CDFWPs) (CDFW, 2012), will be implemented considered in the development of protective measures for State protected species, including the Swainson's hawk, Golden eagle, and White-tailed kite to reduce/prevent impacts to the ecosystem, particularly for threatened, endangered, or State protected species."	CDFW-OSPR requested that the text be revised to state, "Appropriate avoidance and minimization measures would be implemented in accordance with the 'Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California' (U.S. Fish and Wildlife Service [USFWS], 2012) and the California Department of Fish and Wildlife Provisions (CDFWPs) (CDFW, 2012)" (LaBonty, 2021). The Navy responded that the text has been revised as follows, "The CDFW Provisions (CDFWPs) (CDFW, 2012), will be implemented considered in the development of protective measures for State protected species, including the Swainson's hawk, Golden eagle, and White-tailed kite to reduce/prevent impacts to the ecosystem, particularly for threatened, endangered, or State protected species." The CDFWPs were implemented for the Final Work Plan Supplemental Site Inspection at Runway Debris Area and Southern Railroad Revetment Area (Multi-Media Environmental Compliance Group [MMEC], 2019), the Final Remedial Investigation Work Plan for Red Rock Main Disposal Area (Adanta, Inc., 2021), and the Final Work Plan Data Gap Investigation for Site 24A (KMEA MACTEC Joint Venture, 2021). Please explain why the CDFWPs will only be "considered" in the development of protective measures for State protected species for the RDA EE/CA rather than "implemented" as was done for other Concord sites.	The text has been revised to state the following: "Alternatives 2, 3, and 34 would comply with the conservation measures, including Biological monitoring by an onsite U.S. Fish and Wildlife Service [USFWS]-qualified biologist (reviewed by CDFW-OSPR) during all ground-disturbing field activities identified in the 2018 amendment to the "Biological Opinion for the Environmental Investigations on the Former Naval Weapons Station Seal Beach, Detachment Concord, Contra Costa County, California" (USFWS, 2012 and 2018) The CDFW Provisions (CDFWPs) (CDFW, 2012), will be considered in the development of protective measures for State protected species, including the Swainson's hawk, Golden eagle, and White-tailed kite to reduce/prevent impacts to State protected species." The CDFW Provisions are being analyzed for the purposes of identifying ARARs; they are accepted as TBCs. Since we are not at the workplan stage they are not being "implemented" pursuant to the EE/CA.		
5	4.2.3.6 Appendix A, ARARs Evaluation	4-7, pg46 A-29, pg112 A-31, pg114	The text states, "A USFWS-qualified biologist would be present during all ground-disturbing field activities." Please revise the text to state, "A USFWS and CDFW-OSPR qualified biologist would be present during all ground-disturbing field activities" since special status species which may be present on or adjacent to the site are protected under Federal and/or State ARARs.	The text has been revised as requested throughout the EE/CA to state "A USFWS qualified-biologist <u>(reviewed by CDFW-OSPR)</u> would be" The associated acronyms have been included in the acronym list and defined upon first mention in the text, as appropriate.	Agreed	Noted		

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021								
Comment #	Section #	Page #	Comment	Response	Comment	Response			
Commen	ts provided by Ta	mi LaBont	ty (CDFW Office of Spill Prevention and Response), date	ed September 3, 2021 (continued)	Comments provided Tami LaBonty, dated 6/2	19/ 2022 (continued)			
6	4.4	4-12, pg51	The text states, "the disturbed areas would be reseeded using a seed mix composed of plants native to the area, and no operation and maintenance activities would be required." CDFW-OSPR recommends that contingencies for monitoring and maintenance of the reseeded areas be included (e.g., supplemental seeding and/or watering during drought conditions) to ensure the hydroseeding is successful (e.g., 70% vegetative cover within two years) to restore impacted habitat and prevent erosion. Please revise the text accordingly.	Because 13,212 individual locations will be investigated, the grasses that were on top of the location will be used as much as possible. No changes were made to the text in response to this comment; though, the section has been revised to address each alternative's effectiveness, implementability, and cost	CDFW-OSPR recommended that contingencies for monitoring and maintenance of the reseeded areas be included (e.g., supplemental seeding and/or watering during drought conditions) to ensure the hydroseeding is successful (e.g., 70% vegetative cover within two years) to restore impacted habitat and prevent erosion (LaBonty, 2021). The Navy responded, "No changes were made to the text in response to this comment; though, the section has been revised to address each alternative's effectiveness, implementability, and cost." The response does not address the comment. Please explain how the Navy will ensure the hydroseeding is successful and will restore impacted habitat and prevent erosion.	Due to the type of removal, the amount of ground cover that will be removed is small. The ground would not be scrapped and hydroseeding would not be needed.			
7	Appendix A, ARARs Evaluation, Section A.2.1	A-12, pg95	 The text states, "The only surface water on the site is found in seasonal wetlands. Hydrologic conditions conducive to the presence of a surface water body (i.e. a pond) occur so rarely that on-site surface water is not a medium of concern." This statement appears to contradict the information provided in Section 2.1.3.6.4 Water and Wetlands (pages 2-5 to 2-6) which states: The following descriptions of the preliminary mapped wetland vegetation types have been excerpted or summarized from the 2008 wetland delineation report (TDI, 2008) and 2008 botanical report (Vollmar Natural Lands Consulting [Vollmar], 2008): a. Riparian Woodland Scrub: In the former airfield area, including a ditch along the eastern and southeastern perimeter, there is a system with permanent water that drains to the westWater flow is sufficiently permanent to support mosquitofish, treefrogs, crayfish and some riparian vegetation b. Freshwater Marsh: Dominated by rushes (Juncus xiphiodies) and stachys (Stachys adjugoides), freshwater marsh is adjacent to the drainage system that supports the riparian vegetation and is connected with shallow swales and ditches. Based on this information, it appears that surface water should also be a medium of concern. Please explain or resolve the discrepancy. 	As stated in Section A2.1, "The only surface water on the site is found in seasonal wetlands. Hydrologic conditions conducive to the presence of a surface water body (i.e. a pond) occur so rarely that on-site surface water is not a medium of concern." Because the project will occur between April and October, there is very small chance of encountering onsite surface water while implementing the selected remedy.	CDFW-OSPR commented that based on the information provided in Section 2.1.3.6.4 Water and Wetlands (pages 2-5 to 2-6), it appears that surface water should also be a medium of concern (LaBonty, 2021). The Navy responded, "As stated in Section A2.1, "The only surface water on the site is found in seasonal wetlands. Hydrologic conditions conducive to the presence of a surface water body (i.e. a pond) occur so rarely that on-site surface water is not a medium of concern." Because the project will occur between April and October, there is very small chance of encountering onsite surface water while implementing the selected remedy." Photos 3, 4, and 6 of the Biological Summary Report for the Supplemental Site Inspection Report for the RDA and SRRA (MMEC, 2020; see Attachment 1) indicate surface waters were present at the RDA during August of 2019. Please revise the text to include this information. CDFW-OSPR maintains its concern that surface waters are present at RDA and should be a medium of concern. These habitats will need to be protected during removal activities at the RDA.	The text was revised as follows: "The only surface water on the site is found in seasonal wetlands. <u>Photos 3, 4, and 6 of the</u> <u>Biological Summary Report (Appendix D of the</u> <u>Supplemental Site Inspection Report) for the RDA</u> <u>and Southern Railroad Revetment Area indicate that</u> <u>surface water was present at the RDA in August</u> <u>2019 (MMEC Group, 2020).</u> Hydrologic conditions conducive to the presence"			

			Table 3: Responses to Draft Engineering Evaluatio Former Naval Wea	Comments from the California Department of Fish and n/Cost Analysis for Non-Time-Critical Removal Action pons Station Seal Beach Detachment Concord, Concord	Wildlife (CDFW) on the at the Runway Disposal Area, , CA, dated July 2021
Comment #	Section #	Page #	Comment	Response	Comment
Comme	nts provided by Ta	mi LaBon	ty (CDFW Office of Spill Prevention and Response), dat	ed September 3, 2021 (continued)	Comments provided Tami L
8	Appendix A, ARARs Evaluation, Section A.2.1.1	A-13, pg96	The text states, "No chemical contaminants have been identified at the RDA, therefore, no chemical-specific ARARs or TBCs [To Be Considered] have been identified for this project." This statement appears to contradict the information provided in Section 3.2 NTCRA Scope and Planned Activities (pages 3-1 to 3-2) which states, "The risk posed to human health and the environment from chemical contamination in environmental media at the RDA are being evaluated separately during the in-progress remedial investigation of the RDA." Based on this information it appears that chemical contamination is present at the RDA. Please explain or resolve the discrepancy.	Please see response to EPA comment #140 in Table 1.	Agreed
9	Appendix A, ARARs Evaluation, Section A.3.2.4	A-25, pg108	 The text states: "The following are regulated biological resources that may be found at the RDA. Italian ryegrass (Lolium multiflorum) Soft chess (bromus hordeaceus) Ripgut brome (Bromus diandrus) Wild oats (Avena fatua)" These four plants species are non-native and are not regulated under federal or State ARARs. Please remove these species and replace them with the following native plant species that have the potential to be present at FNWS Concord Inland area sites: Federally endangered Contra Costa goldfields (<i>Lasthenia conjugens</i>) and Keck's Checker-mallow (<i>Sidalcea keckii</i>), and Federally and State endangered large-flowered fiddleneck (<i>Amsinckia grandiflora</i>). 	 The Navy did not identify any of the federal endangered plants because none of them have been observed at the RDA as per the BO amendment. The text has been revised to state the following: "The following are regulated biological resources that may be found at the RDA. California red legged frog, a federal threatened species California tiger Salamander, a federal endangered and a State threatened species Swainson's hawk, a state threatened species (but not a federal listed species) Golden eagle, a state fully protected bird White-tailed kite, a state fully protected bird Migratory birds 	 Response to Specific Comment 9 responded, "The text has been rev following: The following are regu resources that may be found at the • "California red legged frog, a species California tiger Salamander, a endangered and a State threate Please revise the text to state: • "California red legged frog, a species and a State species of s California tiger salamander, a threatened species."
10	Appendix A, ARARs Evaluation, Section A.3.2.4.2	A-28, pg111	CDFW-OSPR submitted the TBC for Species of Special Concern (SSCs) (LaBonty, 2021), but this TBC was not included in the ARARs evaluation. Several SSCs have the potential to be present on or adjacent to the site, including California red-legged frog, Burrowing Owl, and Northern Harrier. We again request this TBC be included in the ARARs evaluation.	The Navy acknowledges the commenter's position with regards to the inclusion of SSCs as a TBC; however, actions related to SSCs are not explicitly regulated and thus are not included in this ARAR evaluation. Further, the California red-legged frog is a federal threatened species and will be protected under the federal Endangered Species Act identified as a potential federal ARAR. The burrowing owl has not been identified on the site or in the area (on the access road) for the past three years. Further, the previous burrowing owl sitings were in the winter and the ground disturbing activities evaluated in Alternatives 2 and 3 would not occur in the winter. No change has been made to the text in response to this comment.	Agreed

	Response
aBonty, dated 6/2	9/ 2022 (continued)
	Noted
. The Navy vised to state the ilated biological e RDA. federal threatened federal ned species." federal threatened special concern federal and State	 The subject text has been revised as follows: "The following regulated biological resources may be found at the RDA. <u>CRLF</u>, a federal threatened species <u>and a State species of special concern</u> <u>CTS (Central California distinct population segment)</u>, a federal endangered and a-State threatened species Swainson's hawk, a state threatened species (but not a federal listed species) Golden eagle, a state fully protected bird White-tailed kite, a state fully protected bird Migratory birds
	Noted

Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021								
Comment # Section #	Page #	Comment	Response	Comment	Response			
Comments provided by Ta	mi LaBon	ty (CDFW Office of Spill Prevention and Response), date	ed September 3, 2021 (continued)	Comments provided Tami LaBonty, dated 6/2	9/ 2022 (continued)			
 Appendix A, ARARs Evaluation, Subsection F.G.C. §§1908, 2080, and 3511; Subsection Endangered or Rare Native Plants – F.G.C. § 1908; Subsection California Endangered Species Act; Subsection Fully Protected Species; Section A.3.2.4.2.3, F.G.C. §§3005 and 3503; and Table A3-1, Federal and State Location-Specific Applicable or Relevant and Appropriate Requirements 	A-28, pg111 A-29, pg112 A-30, pg113 A-31, pg114 A-32, pg115	The text states, "F.G.C. §§1908, 3511, and 2080 is not applicable because the United States of America has not waived sovereign immunity in the federal Endangered Species Act for this State of California requirement." Please note that CERCLA specifically waives sovereign immunity for each "department, agency and instrumentality of the federal government" and waives sovereign immunity at all facilities "owned or operated" by the federal government. (42 U.S.C. 9607). If further information on ARARs is desired please contact Nicole Gleason, Senior Attorney at 916-206-1747.	The Navy acknowledges the commenter's position; however, the Navy has determined that the requirements are relevant and appropriate. Relevant and appropriate requirements must be complied with to the same extent as applicable requirements. So compliance with relevant and appropriate requirements will be the same as if the requirements are identified as applicable. No change has been made to the text in response to this comment.	The text stated, "F.G.C. §§1908, 3511, and 2080 is not applicable because the United States of America has not waived sovereign immunity in the federal Endangered Species Act for this State of California requirement." CDFW-OSPR commented that CERCLA specifically waives sovereign immunity for each "department, agency and instrumentality of the federal government" and waives sovereign immunity at all facilities "owned or operated" by the federal government. (42 U.S.C. 9607). If further information on ARARs is desired please contact Nicole Gleason, Senior Attorney at 916-206-1747 (LaBonty, 2021). The Navy responded, "The Navy acknowledges the commenter's position; however, the Navy has determined that the requirements are relevant and appropriate. Relevant and appropriate requirements must be complied with to the same extent as applicable requirements. So compliance with relevant and appropriate requirements will be the same as if the requirements are identified as applicable. No change has been made to the text in response to this comment." CDFW-OSPR concurs with the statement that "Relevant and appropriate requirements must be complied with to the same extent as applicable requirements." For the Administrative Record, CDFWOSPR maintains our position with regards to the Navy's claim of sovereign immunity.	Noted.			

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comme	nts provided by Ta	mi LaBon	ty (CDFW Office of Spill Prevention and Response), date	d September 3, 2021 (continued)	Comments provided Tami LaBonty, dated 6/2	9/ 2022 (continued)	
12	Appendix A, ARARs Evaluation, Section A.3.2.4.2, State, Subsection F.G.C. §§1908, 2080, and 3511	A-28, pg111	 a. The text states, "Fully protected birds that are potentially present at the RDA include the golden eagle (Aquila chrysaetos) and white-tailed kite (Elanus leucurus). These species are protected under F.G.C. 2080 and 3511." The Golden Eagle is a fully protected bird species under F.G.C. §3511, but it is no longer State listed as endangered under F.G.C. §2080. The White-tailed Kite is a fully protected species under F.G.C. §3511, but it is not listed as threatened or endangered under F.G.C. §2080. Please revise the text to state, "These species are protected under F.G.C. §3511." b. The text states, "The substantive provisions of F.G.C. 1908, 2080, and 3511 meet the pertinent NCP [National Oil and Hazardous Substances Pollution Contingency Plan] criteria under 40 C.F.R. §300.400(g)(2)(vii) and are 'relevant and appropriate' because the Golden Eagle and White-tailed Kite and are present at the site and protection of this vulnerable resource allows it to be 'used' in the sense that it continues to provide its unique value to the State of California." CDFW-OSPR appreciates the Navy accepting these statues as relevant and appropriate. However, because the Golden Eagle and White-tailed Kite are not protected under F.G.C. §1908 (rare and endangered native plants) or §2080 (California Endangered Species Act), it would be more accurate to revise the text to state, "The substantive provisions of F.G.C. §1908, colden Eagle, White-tailed Kite, and California tiger salamander can potentially be present at the site and protection of these vulnerable resources allows them to be 'used' in the sense that it california tiger salamander can potentially be present at the site and protection of these vulnerable resources allows them to be 'used' in the sense that they continue to provide their unique value to the State of California." 	The first three paragraphs of Section A.3.2.4.2.1 have been revised as follows: "A.3.2.4.2.1 F.G.C California Fish and Game Code §§ 1908, 2080 and 3511 The California ESA is set forth in the California Fish and Game Code §§ 2050–2116. The substantive provisions in F.G.C. § 2080 prohibit the "take" of California endangered or threatened species. "Take" is defined in California Fish and Game Code § 86 as "hunt, pursue, catch, capture, or kill. or attempt to hunt, pursue, catch, capture, or kill." California Fish and Game Code § 3511 states that fully protected birds or parts thereof may not be taken or possessed at any time. California Fish and Game Code F.G.C. Section §§1908, 2080 and 3511, and 2080 are not applicable because the United States of America has not waived sovereign immunity in the federal Endangered Species Act ESA for this State of California requirement. The CTS and Swainson's hawk, state threatened species, are present or potentially present at the RDA. Fully protected birds that are potentially present at the RDA include the golden eagle (Aquila chrysaetos) and white- tailed kite (Elanus leueurus). These species are protected under F.G.C. California Fish and Game Code §§ 1908, 2080 and 3511. The substantive provisions of F.G.C., California Fish and Game Code §§ 1908, 2080 and 3511 meet the pertinent NCP criteria under 40 C.F.R. § 300.400(g)(2)(vii) and are "relevant and appropriate" because the <u>CTS</u> , <u>Swainson's hawk, golden eagle, and</u> white-tailed kite are present or potentially present at the site and protection of this these vulnerable resources allows it them to be "used" in the sense that it they continue to provide its their unique value to the State of California."	Agreed	Noted	

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, CA, dated July 2021							
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# Commo	Section #	Page #	Comment	Kesponse	Comment	Response		
	It's provided by Ta		The test of the State land with the state of the state	The september 3, 2021 (communed)	Comments provided 1 ann Labonty, dated 0/2			
	Appendix A, ARARs Evaluation, Section A.3.2.4.2.2, Cal. Fish and Game Code §§3503.5 and 3513; and Table A3-1 Federal and State Location- Specific Applicable or Relevant and Appropriate Requirements	A-31, pg114	 Increase states, The state has windrawn its previous identification of the substantive provisions of the MBTA as a relevant and appropriate federal ARAR for this action." a. This text is listed twice after F.G.C. §3513. Please revise accordingly. b. <i>Fish and Game Code</i> §3503.5. CDFW-OSPR no longer withdraws its identification of this requirement as a State ARAR due to the position taken in the U.S. Department of Interior Solicitor's memorandum dated December 22, 2017, titled The Migratory Bird Treaty Act Does Not Prohibit Incidental Take ("M-37050"). California Fish and Game Code §3503.5 prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. This code section imposes a substantive, promulgated environmental protection requirement that is more stringent than federal law. This section applies to all locations within the state where such species and/or their nests and eggs are located. According to the Draft SSI (MMEC, 2020), the biologists observed American Kestrel (<i>Falco sparverius</i>) and Great Horned Owl (<i>Bubo virginianus</i>) at RDA. Pre-construction surveys, buffer zones, and other avoidance and minimization measures are available to protect falcon and owl species and their nests and eggs. CDFW-OSPR again requests this requirement be included as an ARAR for the EE/CA. 	 a. The text has been revised as requested. b. The State has withdrawn its previous identification of this requirement as a state ARAR in light of DON's identification of the substantive provisions of the Migratory Bird Treaty Act (MBTA) as a "relevant and appropriate" federal ARAR for this action." 	 h. In regard to Fish and Game Code §3503.5, the Navy responded, "The State has withdrawn its previous identification of this requirement as a state ARAR in light of DON's [Department of the Navy] identification of the substantive provisions of the Migratory Bird Treaty Act (MBTA) as a "relevant and appropriate" federal ARAR for this action." CDFW-OSPR reiterates, we no longer withdraw our identification of this requirement as a State ARAR (LaBonty, 2021). California Fish and Game Code §3503.5 prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto. This code section imposes a substantive, promulgated environmental protection requirement that is more stringent than federal law. This section applies to all locations within the state where such species and/or their nests and eggs are located (LaBonty, 2021). CDFW-OSPR requests that the Navy coordinate with CDFW-OSPR and USFWS when developing and implementing biological avoidance, minimization, and mitigation measures for the protection of birds of prey. 	Because CDFW-OSPR states that it "no longer withdraws its identification " Fish and Game Code Sections 3503.5 and 3513, the Navy has evaluated these code sections and determined that they are not ARARs. Cal. Fish & Game Code Sections 3503.5 and 3513 are not applicable because the United States of America has not waived sovereign immunity for these State of California requirements. Pursuant to 40 C.F.R. § 300.400(g)(2) of the NCP, the Navy has determined that these requirements are not "relevant and appropriate" because they does not address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action and are not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP. CERCLA response actions are intended to respond to releases of hazardous substances in order to protect human health and the environment including environmental receptors. In contrast, the purpose of this State requirement is to regulate the "taking" of the species addressed by those requirements. Moreover, that purpose is achieved through the regulation of intentional conduct directed at the species as opposed to incidental "take" (or possession, etc.) of species in the course of lawful activity such as CERCLA sites. In summary, the purposes of these State requirements and the actions that they regulate do not include responding to releases of hazardous substances. Therefore, they are not "relevant and appropriate" based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP. Although these requirements are not ARARs, the Navy will coordinate with other natural resource trustees throughout the CERCLA remedial action process. The Navy's ecological risk assessment process considers representative environmental receptors for the site and final remediation/cleanup goals that will ensure they are adequately protected from exposure to CERCLA hazardous substances that present unacceptable risk. protected species will be address		

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Comment #	Section #	Page #	Comment	Response	Comment		
# 13 (cont.)	Section # (see above)	Page # A-31, pg114	Comment (see comment above)	(see response above)	Comment (see comment above)		

Response
CERCLA response action and are not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP. CERCLA response actions are intended to respond to releases of hazardous substances in order to protect human health and the environment including environmental receptors. In contrast, the purpose of these State requirements is to regulate and set forth conditions for the "taking" of the species addressed by those requirements. Moreover, that purpose is achieved through the regulation of intentional conduct directed at the species as opposed to incidental "take" (or possession, etc.) of species in the course of lawful activity such as CERCLA removal action. The focus on intentional conduct is not well-suited to the circumstances at CERCLA sites. In summary, the purposes of these State requirements and the actions that they regulate do not include responding to releases of hazardous substances. Therefore, they are not "relevant and
 Appropriate - based upon the pertinent provisions of NCP § 300.400(g)(2)(i) and (iv). Although these requirements are not ARARs, the Navy will coordinate with other natural resource trustees throughout the CERCLA response action process. The Navy's ecological risk assessment process takes into account representative environmental receptors for the site and final remediation/cleanup goals will ensure that they are adequately protected from exposure to CERCLA hazardous substances that present unacceptable risk. In addition, any species that are present and are federal and/or state endangered, threatened, or fully protected species are addressed by ARARs related to those designations. California Fish and Game Code § 3503.5 prohibits the take, possession, or destruction of any birds in the orders of Falconiformes or Strigiformes (birds-of-prey) or to take possess or destroy the nests or eggs of such birds. California Fish and Game Code § 3513 requires action to be taken to prevent the take of migratory nongame birds (as designated in the Migratory Bird Treaty Act). The State has

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on theDraft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal AreFormer Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	
Comment	s provided by Tam	i LaBonty (O	CDFW Office of Spill Prevention and Response), dated Septem	ber 3, 2021 (continued)		
13 (cont.)	(see above)	A-31, pg114	 c. Fish and Game Code §3513. CDFW-OSPR no longer withdraws its identification of this requirement as a State ARAR due to the position taken in the U.S. Department of Interior Solicitor's memorandum dated December 22, 2017, titled The Migratory Bird Treaty Act Does Not Prohibit Incidental Take ("M-37050"). Section 3513 makes it unlawful to take or possess any migratory nongame bird as designated in the Migratory Bird Treaty Act or any part of such migratory nongame bird except as provided by rules and regulations adopted by the Secretary of the Interior under provisions of the Migratory Bird Treaty Act prior to January 1, 2017 or after January 20, 2025. This state law is a more stringent than the MBTA and rejects the position taken in the U.S Department of Interior Solicitor's memorandum dated December 22, 2017, titled The Migratory Bird Treaty Act Does Not Prohibit Incidental take ("M37050"). This section is relevant and appropriate to the extent that migratory nongame birds and their habitat are potentially located on or near the site. Suitable habitat for migratory nongame birds at and near the RDA include grasslands, oak woodlands, freshwater marsh, riparian areas, ephemeral pools, and seasonal wetlands. According to the Draft SSI (MMEC, 2020), the biologists observed various bird species on site, including American Kestrel, Black Phoebe, Cliff Swallow, Red-tailed Hawk, and White-tailed Kite. Section 3513 is relevant and appropriate. Pre-construction surveys, buffer zones, and other avoidance and minimization measures are available to protect migratory birds. CDFW-OSPR again requests this requirement be included as and ARAR for the EE/CA. 	(see response above)	(see comment above)	

Response

requirements as State ARARs in light of the Navy's identification of the substantive provisions of the Migratory Bird Treaty Act as a relevant and appropriate federal ARAR for this action." c. Please see the response to California Fish and Game Code § 3503.5 in subsection "b" above. The Navy has restored the agreement between the Navy and CDFW regarding California Fish and Game Code §§ 3503.5 and 3513.

Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Ar Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment
Comment	s provided by Tam	i LaBonty (CDFW Office of Spill Prevention and Response), dated Septem	ber 3, 2021 (continued)	
14	Appendix A, ARARs Evaluation, Section A.3.2.4.2.3, F.G.C. §§ 3005 and 3503	A-32, pg115	 a. Ine text states, "Pursuant to 40 C.F.R. §300.400(g)(2) of the NCP, the Navy has determined that this requirement is not 'relevant and appropriate' because it does not address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action and is not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP." These ARARs are relevant and appropriate because they do address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action at the site and are well-suited to the site in light of the potential presence of species and the potential for residual MPPEH/MEC and MCs in soil under the MPPEH/MEC in the subsurface to pose explosive and chemical hazards to ecological receptors. F.G.C. §3005 prohibits the taking of birds and mammals by poison. It is relevant and appropriate to locations in the state where birds and mammals encounter poisonous materials, including hazardous substances that are the subject of a CERCLA action. F.G.C. §3503 prohibits the take of the nest or eggs of any bird. Although the Navy may not intend to "take" bird's nest or eggs, the potential for explosive hazards from residual MPPEH/MEC, chemicals from MCs, and impacts from removal activities may result in "take" for purposes of the F.G.C. definitions as explained above. Therefore, these statutes are considered relevant and appropriate to the RDA and should be included as ARARs in the EE/CA. b. The text states, "the purpose of this state requirement is to regulate and set forth conditions for the "taking" of the species addressed by those requirements. Moreover, that purpose is achieved through the regulation of intentional conduct is not well-suited to the circumstances at CERCLA sites." These statues are resource protection laws to manage the species and take (whether intentional or incident to a lawful activity) of the species in attempt to ensure their conti	 a. Atthough the Navy would be sampling under anomalies to determine if MC are present and comparing concentrations to human health and ecological screening levels and removing hot spot areas where MCs exceed screening levels, concentrations are not expected to be a levels "poisoning" ecological receptors. The Navy will be evaluating potential ecological risk in its investigations of chemical contamination at the RDA, which is a more appropriate way to determine if releases of hazardous substances pose potential risk to ecological receptors. The first three paragraphs of third section of A.3.2.3.2 (formerly Section A.3.2.4.2.3) have been revised as follows: "California Fish and Game Code § 3005 makes it is unlawful to take birds or mammals with any net, pound, cage, trap, set line or wire, or poisonous substance, or to possess birds or mammals so taken, whether taken within or without this state. California Fish and Game Code § 3503 makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto. The Navy is not going to take any bird or mammal with a net, pound, cage, trap, set line or wire. Further, this NTCRA is addressing potential MEC/MPPEH remaining in subsurface soil at the RDA. The potential MEC/MPPEH does not poison birds or mammals as prohibited in California Fish and Game Code § 3005. Chemical contamination at the RDA, including potential risk to ecological receptors, is being completed under a separate CERCLA investigation. Therefore, the Navy does not accept California Fish and Game Code § 3005 and 3503 but notes that the language noted by the commenter is in accord with the negotiated position between the Navy and CDFW, as reflected in the exchange of letters dated June 16, 2009, December 3, 2009, and April 29, 2010 between Messrs. Rex Callaway and Michael Waters (for the Navy) and Ms. 	In regards to F.G.C §§ 3005 and 3 states, "Pursuant to 40 C.F.R. §30 NCP, the Navy has determined th is not 'relevant and appropriate' b address problems or situations sur to the circumstances of the release response action and is not well-sur based upon the pertinent provision 300.400(g)(2)(i) and (iv) of the N further states, " the purpose of requirement is to regulate and set for the "taking" of the species add requirements. Moreover, that purp through the regulation of intention directed at the species as opposed "take" (or possession, etc.) of spe of lawful activity such as CERCL The focus on intentional conduct to the circumstances at CERCLA OSPR refuted these statements (I The Navy responded, "The Navy commenter's position on Californ Codes §§ 3005 and 3503 but note noted by the commenter is in acco negotiated position between the N as reflected in the exchange of let 2009, December 3, 2009, and Ap between Messrs. Rex Callaway at (for the Navy) and Ms. Wendy Jo CDFW)." Please note that the lan by the Navy was taken from the N letter dated June 16, 2009 (Callaw 2009) which provides the Navy's ARARs and was refuted by CDF' attorney in the letter dated Decem (Johnson, 2009). CDFW-OSPR accepts the Navy's "Chemical contamination at the F potential risk to ecological recept completed under a separate CERC Therefore, the Navy does not acc- and Game Code § 3005 as a poter this EE/CA. However, CDFWOS that Fish and Game Code § 3503 this EE/CA. Please include the fo disagree language in the text, whi

Response

3503, the text 00.400(g)(2) of the hat this requirement because it does not ifficiently similar se or CERCLA uited to the site ons of Subsections NCP." The text this state forth conditions ldressed by those pose is achieved nal conduct to incidental ecies in the course A remedial action. t is not well-suited sites." CDFWaBonty, 2021).

v acknowledges the nia Fish and Game es that the language cord with the Navy and CDFW, tters dated June 16, oril 29, 2010 and Michael Waters ohnson (for nguage referenced Navy attorneys' way and Waters, s position on 'W-OSPR's nber 3, 2009

s explanation that RDA, including tors, is being CLA investigation. cept California Fish ential ARAR" for SPR still maintains is an ARAR for collowing agree-toich is based on the The language that CDFW requests be included is the agreed upon language for California Fish and Game Code § 3503. The agreement was that the Navy would use the language when the Navy and CDFW agreed upon the avoidance measures to be used. If there were no agreed-upon avoidance measures or an agreement on the avoidance measures could not be reached, the Navy was to state its position; and that is what the Navy did by including the language originally in the subsection because there were no agreed-upon measures.

However, the Navy will include the following avoidance measures and will include the agree-todisagree language.

The text was revised as follows:

"California Fish and Game Code § 3503 is not applicable because the United States of America has not waived sovereign immunity in the federal ESA for this State of California requirement. Pursuant to 40 C.F.R. § 300.400(g)(2) of the NCP, the Navy has determined that this requirement is not "relevant and appropriate" because it does not address problems or situations sufficiently similar to the circumstances of the release or CERCLA response action and is not well-suited to the site based upon the pertinent provisions of Subsections 300.400(g)(2)(i) and (iv) of the NCP. CERCLA response actions are intended to respond to releases of hazardous substances in order to protect human health and the environment including environmental receptors. In contrast, the purpose of this State requirement is to regulate and set forth conditions for the "taking" of the species addressed by those requirements. Moreover, that purpose is achieved through the regulation of intentional conduct directed at the species as opposed to incidental "take" (or possession, etc.) of species in the course of lawful activity such as a CERCLA response action. The focus on intentional conduct is not well suited to the circumstances at CERCLA sites. In summary, the purpose of this State requirement and the actions that it regulates do not include responding to releases of hazardous substances. Therefore, it is not "relevant and appropriate" based upon the

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on theDraft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway DisposalFormer Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021					
Comment #	Section #	Page #	Comment	Response	Comment	
Comment	ts provided by Tam	i LaBonty ((CDFW Office of Spill Prevention and Response), dated Septem	ber 3, 2021 (continued)		
14 (cont.)	Appendix A, ARARs Evaluation, Section A.3.2.4.2.3, F.G.C. §§ 3005 and 3503	A-32, pg115	 can occur despite lack of intent per California F.G.C. section 86, Department of Fish and Game v. Anderson-Cottonwood Irrigation District (1992) 8 Cal. App. 4th 1554; 11 Cal Rptr. 2d222. CDFW-OSPR disagrees with the Navy's interpretation of the purpose of F.G.C. provisions and while the Navy may not intend to effectuate a "take" of a species, potential MPPEH/MEC and MCs on site or future intrusive activities may result in "take" for purposes of the F.G.C. definition regardless of intent not intend to effectuate a "take" of a species, potential MPPEH/MEC and MCs on site or future intrusive activities may result in "take" for purposes of the F.G.C. definition regardless of intent not intend to effectuate a "take" of a species, potential MPPEH/MEC and MCs on site or future intrusive activities may result in "take" for purposes of the F.G.C. definition regardless of intent. c. The text states, "In addition, any species that are present and are federal and/or state endangered, threatened, or fully protected species will be addressed by ARARs related to those designations." F.G.C. §3503 protects the nest or eggs of any bird, including those not protected under federal and state endangered, threatened, or fully protected species statutes. 	(see response above)	Navy attorneys' letter dated Apri (Callaway and Waters, 2010): "The DON has determined that F is not a state ARAR because it is relevant and appropriate. The Sta through CDFWOSPR, asserts tha state ARAR because it is relevant Whereas, the DON and the State upon whether Section 3503 is an Engineering Evaluation/Cost Ana documents each party's position of does not attempt to resolve the iss the DON agrees that it will under agreed upon measures in order to harm to nests and eggs when ther they may be impacted by respons construction. The State will not d remedy for failure to identify F& ARAR because the State has dete mutually agreed measures to gen will result in substantive complia requirement."	

Response

29, 2010

F&GC Section 3503 not applicable or ate of California, at Section 3503 is a and appropriate. have not agreed ARAR, this alysis (EE/CA) on the statute but sue. Nonetheless, rtake mutually generally avoid re is potential that se action lispute the selected GC 3503 as an ermined that the erally avoid harm nce with the state

pertinent provisions of NCP § 300.400(g)(2)(i) and (iv).

Although this requirement is not an ARAR, the Navy will coordinate with other natural resource trustees throughout the CERCLA response action process. The Navy's ecological risk assessment process takes into account representative environmental receptors for the site and final remediation/cleanup goals will ensure that they are adequately protected from exposure to CERCLA hazardous substances that present unacceptable risk. In addition, any species that are present and are federal and/or state endangered, threatened, or fully protected species will be addressed by ARARs related to those designations.

The Navy has determined that California Fish and Game Code § 3503 is not applicable or relevant and appropriate. The State of California, through CDFW, asserts that § 3503 is a state ARAR because it is relevant and appropriate. Whereas the Navy and the State have not agreed upon whether California Fish and Game Code § 3503 is an ARAR, this EE/CA report documents each party's position on the statute but does not attempt to resolve the issue. Nonetheless, the Navy agrees that it will undertake the following measures in order to generally avoid harm to nests and eggs when there is the potential that they may be impacted by response action construction: survey the area for nests or eggs prior to removing munitions to see if the removal would affect a nest or eggs, to the extent practicable try to avoid affecting nests or eggs, and have biological monitors during the removal action. The State will not dispute the selected removal action for failure to identify California Fish and Game Code § 3503 as an ARAR because the State has determined that the mutually agreed measures to generally avoid harm will result in substantive compliance with the State requirement."

These avoidance measures apply to birds that are not Federal or State threatened or endangered or State fully protected. The Navy will use the avoidance and minimization measures in the 2018 Biological Opinion Amendment.

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021						
Comment #	Section #	Page #	Comment	Response	Comment	Response	
Comme	nts provided by Ta	mi LaBon	ty (CDFW Office of Spill Prevention and Response), date	Comments provided Tami LaBonty, dated 6/2	29/ 2022 (continued)		
15	Appendix A, ARARs Evaluation, Table A3-1	A-35, pg118	Under the Comments column for the Migratory Bird Treaty Act of 1972, the text states, "the substantive provisions of these requirements are ARARs if the species are present and the Navy and CDFW agree that they may potentially be impacted by the response action construction." Please revise the text to state, "the substantive provisions of these requirements are ARARs if the species are present and the Navy, USFWS, and the CDFW agree"	The Navy will make the determination of whether migratory birds are present and will be impacted by removal action construction. The text has been revised as follows: "The substantive provisions of these requirements are ARARs because migratory birds are present or potentially present at the RDA. None of the alternatives are expected to adversely impact migratory birds. The Navy will complete a survey prior to earthmoving activities in Alternative 3 to determine if migratory birds are present and would be adversely affected by removal action construction. If migratory birds are present and would be adversely affected, the Navy will develop appropriate avoidance measures."	In regard to the Migratory Bird Treaty Act, CDFW- OSPR requested the text be revised to state, "the substantive provisions of these requirements are ARARs if the species are present and the Navy, USFWS, and CDFW agree that they may potentially be impacted by the response action construction." The Navy responded, "The Navy will make the determination of whether migratory birds are present and will be impacted by removal action construction." Please note that the USFWS and CDFW are regulatory agencies and make the determination of when take occurs for protected species in accordance with our respective ARARs. Please revise the text to state, "If migratory birds are present and would be adversely affected, the Navy will develop appropriate avoidance and minimization measures in coordination with the regulatory agencies."	The Navy agrees that it will coordinate with CDFW pursuant to California Fish and Game Code §§ 2080 and 3511 for State threatened and State fully protected birds. The Navy does not agree to coordinate with CDFW (or the USFWS or other regulatory agencies) for migratory birds. The Navy has successfully completed numerous CERCLA investigations and actions at NAVWPNSTA Seal Beach Det Concord, has the experience and expertise to address migratory birds, and will have biological monitors during the removal action.	
16	Appendix A, ARARs Evaluation, Section A4, Action-Specific ARARs	A-40, pg123	The text states, "Alternative 2 includes implementation of LUCs [Land Use Controls], specifically intuitional controls" Please revise the word "intuitional" to "institutional".	The text has been revised as follows: "Alternative 2 includes implementation of LUCs [Land Use Controls], specifically intuitional institutional controls"	Agreed	Noted	
17	Appendix A, ARARs Evaluation, Section A4, Action-Specific ARARs	A-41, pg124	The text states, "Following all field activities, the site would be restored by backfilling all excavated areas to the original grade using native soil. Reseeding may be applicable in the project staging areas." Please revise the text to state, "Following all field activities, the site would be restored by backfilling all excavated areas to the original grade using native soil. The disturbed areas would be reseeded using a seed mix composed of plants native to the area" to be consistent with the text on page 4-12, Section 4.4.	This reseeding refers to restoring vegetation. Section 4.2.3 (EE/CA) have been revised as follows: "Excavated areas will would be restored to match the original grade. Reseeding may be applicable in the project staging <u>The disturbed areas Although this removal action will not</u> trigger the 5-year review requirement, for comparing the cost would be reseeded using a seed mix composed of alternatives, costs for 5-year reviews are included in this alternative plants native to the area." Discussion of reseeding has been removed from Section A.4 (Appendix A).	Agreed	Noted	
18	Appendix B, Cost Analysis, Table B-3 Alternative 3A- Cost Summary and Table B-4	B-5 B-8	Please clarify whether these tables include cost estimates for a biological monitor, hydroseeding, and revegetation maintenance and monitoring (e.g., supplemental seeding, and/or watering) to ensure the hydroseeding is successful (e.g., 70% vegetative cover within two years) to restore impacted habitat and prevent erosion.	Biological monitor costs have been added throughout the EE/CA (Table ES-1, ES-2, and Section 5.3), as appropriate. Costs for 2 years of revegetation maintenance and monitoring were added at the same rate as Annual Inspection. These revised costs also were incorporated throughout EE/CA, as appropriate.	Agreed	Noted	

	Table 3: Responses to Comments from the California Department of Fish and Wildlife (CDFW) on the Draft Engineering Evaluation/Cost Analysis for Non-Time-Critical Removal Action at the Runway Disposal Area, Former Naval Weapons Station Seal Beach Detachment Concord, Concord, CA, dated July 2021							
Comment #	Section #	Page #	Comment	Response	Comment	Response		
Commen	ts provided by Ta	imi LaBon	ty (CDFW Office of Spill Prevention and Response), date	d September 3, 2021 (continued)	Comments provided Tami LaBonty, dated 6/2	Comments provided Tami LaBonty, dated 6/29/2022 (continued)		
19	2.1.3.6	2-4			The text states, "Generally, the site is dominated by Contra Costa goldfields (Lasthenia conjugens), Keck's Checker-mallow (Sidalcea keckii), and large-flowered fiddleneck (Amsinckia grandiflora) (MMEC Group, 2020a). In the 2018 Biological Opinion amendment, a no effect determination on endangered plants was made (based on the absence of endangered plants from the project area) (USFWS, 2018)." These two sentences appear to contradict each other. Contra Costa goldfields, Keck's Checker-mallow, and large-flowered fiddleneck are federally and/or State endangered species. Please revise the text to list the actual plant species that have been observed in previous surveys, such as was included in the Draft EE/CA: Italian ryegrass (Lolium multiflorum), soft chess (Bromus hordeaceus), ripgut brome (Bromus diandrus), and wild oats (Avena fatua).	The text has been revised as follows: "Generally, the site is dominated by Contra Costa goldfields (<i>Lasthenia conjugens</i>), Keck's Checker- mallow (<i>Sidalcea keckii</i>), and large-flowered fiddleneck (<i>Amsinckia grandiflora</i>) Italian ryegrass (<i>Lolium multiflorum</i>), soft chess (<i>bromus</i> hordeaceus), ripgut brome (<i>Bromus diandrus</i>), and wild oats (<i>Avena fatua</i>), as well as many nonnative, ruderal forb species such as yellow star-thistle (<i>Centaurea solstitialis</i>), filaree (Erodium spp.), mustard (<i>Hirschfeldia incana</i>), and bindweed (<i>Convolvulus arvensis</i>) (MMEC Group, 2020a 2020b). In the 2018 Biological Opinion amendment, a no effect determination on endangered plants was made (based on the absence of endangered plants from the project area) (USFWS, 2018).		
20	Appendix A, ARARs Evaluation, Section A.3.1.3	A-20			The text states, "The California red legged frog, a federal threatened species, and the California tiger Salamander, a federal endangered and a State threatened species are present or potentially present on the RDA." Please revise the text to state, "The California redlegged frog, a federal threatened species and State species of special concern, and the California tiger salamander, a federal and State threatened species are present or potentially present on the RDA."	The text has been revised as follows: "The California red legged frog, a federal threatened species <u>and State species of special concern</u> , and the California tiger salamander (Central California distinct population segment), a federal endangered and a -State threatened species are present or potentially present on the RDA."		
21	Appendix A, ARARs Evaluation, Table A3-1				For Fish and Game Code § 5650 (a)(6), under the column "Requirement," the text states, "Prohibits the passage of enumerated substances or materials into the waters of the state deleterious to fish, plant life, or birds." Please revise the text to state, "Prohibits the passage of enumerated substances or materials into the waters of the state deleterious to fish, plant life, mammals, or bird life."	Text has been revised as follows: "Prohibits the passage of enumerated substances or materials into the waters of the state deleterious to fish, plant life, <u>mammals</u> , or bird <u>life</u> ."		