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Kaho`olawe Island Reserve, HI
Standard Operating Procedure

SOP NO.	REVISION NO: 0	FILE NO:
A11	CHANGE NO: 0	A11-R0-C0

OPERATION

FINAL

Historic Preservation

PREPARED BY:	REVIEWED BY:

Parsons-UXB Joint Venture
UXO Clearance Project
Contract No.: N62742-95-D-1369

SOP Cover Sheet

OPERATION: Historic Preservation

ACTIVITIES: a: Pre-Investigation
b: Historic Property Survey
c: Monitoring
d: Data Recovery
e: Discovery and Treatment of Human Remains
f: Historic Property Protection Decision Making
g: Temporary Curation

ORGANIZATIONAL SYMBOL:

AUTHORITY: Contract No. N62742-95-D-1369

REFERENCE: Section C, Part 5.4.2, 5.6.2

PREPARED BY: Hallett Hammett — Date

REVIEWED BY: Roy R. Barnett — Date 6/12/98

SUBMITTED BY: William T. Batt, Program Manager — Date 11 Jun 98

APPROVALS (PUXB):

TITLE	SIGNATURE	DATE
Senior Project Manager	Roy R. Barnett	6/12/98
Health and Safety Manager	Najmul Hasan	6/13/98
UXO Safety Officer	John Boyden	6/12/98
Project QC Manager	Richard Burnett	6/12/98
UXO QC Manager	George DeMetropolis	6/12/98
Range Control/Operations Officer	Kevin Lombardo	
Historic Preservation Manager	Hallett Hammatt	

CONCURRENCES (U.S. NAVY)

Contracting Officer Technical Representative	Clyde Higa	
Contracting Officer	Christine Arigo	

ANNUAL REVIEW (Choose applicable internal reviewers):

TITLE	SIGNATURE	DATE
APPROVALS (PUXB)		
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Contracting Officer Technical Representative	Clyde Higa	
Contracting Officer	Christine Arigo	

Index of Activities

a. Pre-Investig ation

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
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   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
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Hazard Analysis

ACTIVITY: Pre-investigation | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Compile all existing information on Historic Properties in a work area to formulate accurate predictions on type and quantity of properties to aid Historic Properties field assessment.	No hazard. Non-range archival research activity						

PERSONNEL BY LABOR CATEGORY

HPM
HPFD

EQUIPMENT

ITEM	QUANTITY
None.	

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT:

None.

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.

b. Historic Pro perty Survey

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Hazard Analysis

ACTIVITY: Historic Property Survey

PREPARER N. Hasan, K. Lombardo, G. DeMetropolis DATE: 06/11/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Historic Property Survey Team A will locate, identify, and mark all archaeological features by Grid Map Unit concurrently with Natural Resources and Environmental and UXO assessment reports in the exclusion zones.	Inadvertent detonation of UXO during walking	Explosion/destruction	1	D	2	Provide briefing regarding UXO/OE safety prior to entry. Establish procedure to stop movement of the Area Assessment Team and call for UXO specialist when UXO encountered. Clear areas where vegetation obscures surface visibility, or use all-metals detection instrument.	1E(3)
2	Historic Property Survey Team A will mark all archaeological features by driving 12 long by ½ inch diameter location markers into the ground	Injury from striking or movement of UXO during insertion of the marker.	Explosion/destruction	1	D	2	Use detectors to select clear location for insertion of marker and avoid anomalies.	1E(3)
3	Historic Property Survey Team B will locate, identify, and record data at all archaeological features by Grid Map Unit in the company of a UXO escort.	Inadvertent detonation of UXO during walking	Explosion/destruction	1	D	2	Provide briefing regarding UXO/OE safety prior to entry. Establish procedure to stop movement of the Area Assessment Team and call for UXO specialist when UXO encountered. Clear areas where vegetation obscures surface visibility, or use all-metals detection instrument.	1E(3)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-b
ACTIVITY: Historic Property Survey	
PURPOSE OF ACTIVITY: Provide all necessary information for historic property physical identification and significance evaluations through Tier I clearance activities by means of archaeological inventory survey.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. Form Historic Property Survey Team into two sub-teams. Team A will perform historic property discovery as part of larger area assessment team. The area assessment team (UXOS, SUR, HPFS, HPFA, and NRS) reviews and further characterizes each GMU prior to commencement of UXO clearance operations. The HPFS will provide an HP briefing for each GMU and HP monitoring for the assessment team. Team B will perform historic property recording and will consist of a UXOS, HPFS, and HPFA.	(O) Team A will survey Grid Map Units (GMUs) at least one day prior to Team B performing recording tasks. (S) This SOP will be incorporated in conjunction with Range Control SOP A23.c.1, Area Assessment and A23.j.3, Land Survey Locations.
2. The HPFD will assign GMU(s) to the HPFS on Teams A and B on a daily basis.	
3. Each HPFS will ensure that their team is properly equipped, including appropriate PPE.	
4. Implement SOP A23 Activity-c which covers UXO avoidance during survey and assessment activities.	(S) UXO Safety briefing.
5. Upon entering a GMU, the team will identify the work area by the field markings .	
6. Team A proceed to Step 7. Team B proceed to Step 14.	
Team A – Historic Property Discovery	
7. Implement Range Control SOP A23 Activity b.3, Recurring Island Access and requirements of SOP A23 Activity d.1, Personnel Tracking. Commence historic property discovery by make pedestrian sweeps of 100% of the GMU in coordination with area assessment team utilizing Range Control Operations SOP A23 Activity-c, Area Assessment that covers UXO avoidance during survey and assessment activities.	(O)Standard distance between team members will not exceed 15 meters in barren areas and will be adjusted to a closer interval based on ground cover and other factors in the field

8. Identify the historic property or feature perimeter.	(O) The historic property or feature perimeter will be defined as the outer limits of a structure or other architectural feature, or scatter of artifacts or midden.
9. Map the property or feature perimeter with land survey equipment, *i.e.* GPS or Total Station.	(O) Walk the property or feature perimeter, selecting prominent points as necessary to establish its boundaries. (O) Direct the surveyor to the selected boundary points and record geographic positions.. (O) For a property or feature less than three meters in diameter the two reference points established in Step 11 will suffice
10. Upon discovery of an historic property or feature, initiate filling out form HPF-1 according to the instructions accompanying the form. Assign a field number to the historic property or feature and enter the field number and other data, as appropriate, on the HPF-1. Team B will complete the HPF-1 form during recording activities beginning in Step 15.	(O) An historic property may consist of a single feature or multiple features which are contiguous or separated. (O) The Field number will be comprised of the GMU number followed by a dash and a sequential number beginning with "1" in each GMU. (O) A separate HPF-1 will be started by Team A for each spatially separate feature of an historic property (O) Only one HPF-1 will be started by Team A for a single-historic property with contiguous features comprising a complex structure.
11. Establish the location of two Reference Points – A and B - per historic property or feature of historic property.	(O) Reference Point A will be established, by driving a ½ inch diameter by 12 inch long galvanized steel pipe, for each property or feature for which an HPF-1 form is initiated. Reference Point B may be a 2 in. by 2 in. by 8 in. wooden stake or acceptable alternate. (O) Reference Point A will be centrally located on properties or features whose integrity will not be compromised by the permanent marker (*e.g.* lithic scatters on hardpan). (O) A perimeter boundary point may be used for Reference Point B. (O) On properties or features with structural integrity or cultural sensitivity the Reference Points A and B will be established on or near the perimeter. (O)Locate Reference Point B in consideration of a vantage for taking photographs of the historic property or feature. (O) Aluminum tags will be attached to both Reference Points A and B. Each will be marked with: (1) the Reference Point designation – A or B, and (2) the historic property temporary field number assigned in Step 10, leaving space for the later addition of the SIHP number by Team B.
12. Direct surveyor to record the geographic positions of Reference Points A and B.	(O) Positional GPS data will be post-processed and UTM coordinates entered on the HPF-1
13. Mark the historic property or feature location with Blue flagging tape in a highly visible manner to make it easy to re-locate.	
Team B – Historic Property Recording	
14. Transit to each historic property or feature found in the GMU by Team A utilizing Range Control SOP A23 Activity b.3, Recurring Island Access and SOP A23 Activity d.1, Personnel Tracking.	(O) Use historic property location map printed out from the KIGIS, or GMU sketch, as available.

15. Correlate each historic property's or feature's architectural or other type remains on the ground to the appropriate NRHP historic property record forms.	(O) Record the State Inventory of Historic Places number previously assigned to the property on HPF-1:
16. Inscribe SIHP number on the aluminum tag of Reference Point A.	
17. Photograph the property or feature from previously established Reference Points A and B.	(O) Photo signboard and mini-rod scale shall be visible in each photo. (O) Photo signboard will display historic property/feature number, date and a north arrow.
18. Evaluate previously recorded data about the property or feature.	
19. Complete the HPF-1 form begun by Team A for each historic property or feature in the GMU.	(O) An HPF-1 will be completed, according to instructions in Attachment 1, for each single-feature historic property found in the GMU. When an historic property is comprised of two or more non-contiguous features, an HPF-1 will be completed for each feature of the property. (O) Supplemental mapping of historic properties or features will consist of; (1) mapping of previously unmapped architectural features, and (2) in the case of eroded features, delimiting the perimeters of the material scatters and the position and size of hummocks in cases where this information has not been recorded.
20. Team A and Team B depart GMU and Kaho`olawe island per Range Control SOP A23 Activity d.1, Personnel.	

SPECIAL REQUIREMENTS:

None.

PERSONNEL BY LABOR CATEGORY

Team A – Historic Property Discovery Team:
HPFS (1)
HPFA (1)
NRS (1)
SUR (1)
UXOS (1)

Team B – Historic Property Recording Team:
HPFS (1)
HPFT (1)
UXOS (1)

EQUIPMENT	
ITEM	QUANTITY
Individual Members of Team A and Team B	
Magnetic Compass	1
Engineer's Scale	1
Protractor	1
Minimum 3 m. x Minimum ½" Wide Retractable Metric Tape Measure	1
Notebook	1
Mechanical Pencil with Extra Lead (hardness	2
Flagging Tape Color-Code Chart	1
Blue, and White Flagging Tape	Minimum 2 rolls of each color
Historic Property Discovery Team (Team A)	
Work Area Map with Pre-Investigation Predicted Historic Property Locations	1
NRHP Records of Historic Properties in the Grid Map Unit(s) Work Area	As determined by pre-investigation
Historic Properties Survey Field Data Forms (HPF-1)	1 per feature of each historic property
Historic Property Reference Point Markers – ½ inch diameter X 12 inch long galvanized steel pipes	2 per historic property
Sledge, 2 lb.	1
Aluminum Historic Property Identification Tags with wire for attachment	2 per historic property
Portable Radio	1
Charger for Portable Radio	1
Historic Property Recording Team (Team B)	
Hand-held GPS Unit	1
Work Area Map with Pre-Investigation Predicted Historic Property Locations	1
NRHP Records of Historic Properties in the Grid Map Unit(s) Work Area	As determined by pre-investigation
HPF-1, Historic Property Survey Field Data Forms Initiated by Team A, and Copy of Team A Field Notes	As present
Aluminum Historic Property Identification Tags with wire for attachment	20
60 m. Tape Measure	1
Digital Camera	1
Memory Diskettes for Digital Camera	1
Photo signboard	1
Metric mini-rod for photography scale	1
Portable Radio (assigned to HPFS for HP communications, and backup to UXOS radio)	1
Charger for Portable Radio	1

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: Individual first aid kit
SPECIAL TRAINING AND REFRESHER REQUIREMENTS: The HPFS will be thoroughly familiar with the Grid Map Unit numbering system.
WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY: None.

Historic Property (HP) Survey Field Data Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Team A HPFS:	Badge No.:	Grid Map Unit: _____	Team A Date:
Team B HPFS:	Badge No.:		Team B Date:

Reference Point A:	Reference Point B:	SIHP #: 50-20-97-
X: _____	X: _____	Feature Designation: (Alphabetical)
Y: _____	Y: _____	
Z:	Z:	Field No.:

Historic Property Status: ☐ New ☐ Previously Recorded ☐ Uncertain

Topography: (Check one or more boxes)
☐ Flat (0°-3°) ☐ Gentle Slope (3°-15°) ☐ Moderate Slope (15°-30°)
☐ Steep Slope (30°-70°) ☐ Cliff, Gulch (>70°)

Setting (Check one box from each of the three categories):

I:	☐ Coastal	☐ Intermediate	☐ Inland
II:	☐ Valley	☐ Non-Valley	
III:	☐ Crater	☐ Hardpan	☐ Other

Historic Property Type: (Check One Or More Boxes)

☐ Enclosure	☐ Terrace	☐ Platform	☐ Cave	☐ Dyke	☐ Scatter
☐ TCP	☐ Deposit	☐ Area	☐ Mound	☐ Cairn	☐ Petroglyph
☐ Alignment	☐ Wall	☐ Other	☐ Modified Outcrop		

Historic Property Function (check one or more boxes):

☐ Habitation	☐ Quarry	☐ Activity Area	☐ Ranch Wall	☐ Marker	☐ Ceremonial
☐ Agricultural	☐ Shelter	☐ Mine	☐ Midden	☐ Burial	☐ Water Control
☐ Transportation	☐ Rock Art	☐ Other	☐ Indeterminate	☐ Animal Husbandry	

Material Characteristics of Historic Property: (Check One Or More Boxes)

☐ Intact Cultural Layer (Hummock)	☐ Volcanic Glass	☐ Basalt Artifacts	☐ Finished Adz
☐ Adz Pre-Forms/Rejects	☐ Basalt Flakes	☐ Fractured Basalt	☐ Fireplace
☐ Coral Abrader	☐ Stone Sinkers	☐ Other Artifacts	
☐ Lithic Raw Material Source	☐ Shell/Bone Midden	☐ Cowry Shell Lure	
☐ Polished Flakes From Finished Adzes			

Artifact Quantity (Check one box):
☐ Less Than 10 Artifacts ☐ 11 – 100 Artifacts ☐ More Than 100 Artifacts

Artifact Density: (Check One Box)
☐ High (>c. 3/m^2) ☐ Medium (c. 1-3/m^2) ☐ Low (<c. 1/m^2)

Historic Property Age: (Check One Box)
☐ Hawaiian ☐ Ranch ☐ Military ☐ Indeterminate

Evidence For Age: (Check One Or More Boxes)
☐ Artifacts ☐ Midden ☐ Stratigraphy ☐ Historical Research ☐ Oral Statement

Historic Property Measurements

Length:	Width:	Area:	Avg. Height:

Condition: (Check One Or More Boxes)
☐ Intact ☐ Partially Collapsed ☐ Deflated ☐ Buried ☐ Submerged

	Photo #	Disc #	Frame #	View Direction:	View Image
Digital Photo Record:	1	_____	_____	☐ N ☐ S ☐ E ☐ W	☐
	2	_____	_____	☐ N ☐ S ☐ E ☐ W	☐
	3	_____	_____	☐ N ☐ S ☐ E ☐ W	☐
	4	_____	_____	☐ N ☐ S ☐ E ☐ W	☐
	5	_____	_____	☐ N ☐ S ☐ E ☐ W	☐

Historic Property (HP) Survey Field Data Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

NRHP New or Revised Data: (Check all that apply)

☐ Type	☐ Function	☐ Material Characteristics	☐ Quantity
☐ Density	☐ Age	☐ Measurements	☐ Condition
☐ NRHP Form Description		☐ NRHP Map	

New or Revised NRHP Form Description:

Sub-Surface Cultural Materials: ☐ Observed ☐ Potential

Evidence For Potential Sub-Surface Material:

Historic Property (HP) Survey Field Data Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Team A Instructions	
Team A HPFS	Enter the name of the Team A HPFS.
Badge No.	Enter the badge number of the Team A HPFS.
Grid Map Unit	Team A enter the Grid Map Unit (GMU) in which the HP is located. If the property is located in more than one GMU, enter the GMU in which the majority of the property is located.
Team A Date	Enter the date Team A assessed this site.
Reference Point A	Team A enters the X, Y, and Z GPS coordinates for reference point A.
Reference Point B	Team A enters the X, Y, and Z GPS coordinates for reference point B.
Field No.	Team A assigns a temporary field number to every property whether not-previous-recorded, or previously-recorded but not correlated to the appropriate NRHP form at this time of assessment. TEMPORARY field numbers consist of the GMU number that the property is located in, followed by a hyphen, and a sequential number beginning with "1."
Topography	Estimate the ground slope.
Setting	Check the applicable setting description, defined as follows: **Coastal** – Shoreline to 400 meters inland **Intermediate** - 400 meters to 325 meters AMSL **Inland** – Above 325 meters AMSL **Valley** – On or within the walls of gulches and valleys **Non-valley** – On the lands between valleys **Crater** – On exterior or interior slopes of the cinder and spatter cones **Hardpan** – Exposed C horizon sediment surfaces without soil development
Team B Instructions	
Team B HPFS	Enter the name of the Team B HPFS.
Badge No.	Enter the badge number of the Team B HPFS.
Team B Date	Enter the date Team B assessed this site.
SIHP #	Enter the State Inventory of Historic Places complete, four-part number. a) If the HP is not a previously-recorded property, Team B assigns an SIHP Number. b) Team A leaves SIHP Number box blank, unless the SIHP number is known.
Feature Designation	Enter the HP feature designation if the property comprises multiple features. All features will be designated by capital letters. If the property is comprised of a single feature, enter "None."
Historic Property Status	Team B - mark the appropriate box. Use "Uncertain" only if all attempts to identify the property are exhausted.
Historic Property Type	Check the type of historic property or historic property feature defined as follows: **Enclosure** – walls that together enclose an area. These may be rectangular, circular, C-shaped, or other confining shape. **Terrace** – relatively flat surfaces bounded by a steeper ascending slope on one side and by a steeper descending slope on the opposite side **Platform** – a flat surface raised above the surrounding surface on three or more sides **Cave** – a cavity, recess, chamber or series of chambers beneath the surface of the earth **Dyke** – a tabular body of igneous rock that cuts across the structure of adjacent rocks **Scatter** – a small supply or number irregularly distributed or strewn about **TCP** – Traditional Cultural Property **Deposit** – a distinct stratigraphic layer **Area** – Scope of an activity; extent of space serving a special function **Mound** – piled stones for purposes other than markers, such as planting, land clearing, or burial

Historic Property (HP) Survey Field Data Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

	Cairn – a marker of piled stones **Petroglyph** – a carving or inscription on a rock **Alignment** – a forming in line **Wall** – high thick masonry structure forming a long rampart or an enclosure **Other** - Specify what other type
Historic Property Function	Check one or more boxes indicating the function (defined as follows) of the historic property or of the historic property feature: **Habitation** – place for living **Quarry** – exposure of lithic material being harvested **Activity Area** – Scope of an activity; extent of space serving a special function **Marker** – a point visibly marked for the purpose of identifying a point on a line on the surface of the earth such as a boundary or trail **Ceremonial** – used for ritual/religious purposes **Fireplace** – Burn pit or lens of burned material in a limited area **Shelter** – place utilized on a very short term basis **Mine** – underground workings (quarrying) having a roof of undisturbed rock **Burial** – interment of human skeletal remains **Agriculture** – farming, horticulture, subsistence planting **Water control** – Drain, irrigation ditch, terraces in valley bottoms **Animal husbandry** – associate with livestock **Transportation** – Roads, trails, aircraft landing sites **Rock art** – Default function for petroglyphs and pictographs **Other** – Specify other function on continuation sheet **Indeterminate** - unknown function
Material Characteristics of Historic Property	Check one or more boxes that describe the material characteristics of the historic property.
Artifact Quantity	Check box that describes the estimated number of artifacts contained in the historic property.
Artifact Density	Check box that describes the density to artifacts within the historic property.
Historic Property Age	Check the box that indicates the earliest age of the historic property.
Evidence for Age	Check all boxes that describe the evidence used to determine the age of the historic property.
Historic Property Measurements	Enter the length, width, and average height of the historic property, in meters. Leave the area blank, it will be calculated in the DMS.
Condition	Check the boxes that best describe the condition of the historic property.
Digital Photo Record	Record the Disc Number, Frame Number, and View Direction of each photo taken of the property. Leave view image space blank.
NRHP New or Revised Data	Check all boxes corresponding historic property data that is new to or a revision of the data on the NRHP form for the property.
New or Revised NRHP Form Description	Enter text of new or revised NRHP form description. Attach a continuation sheet, if required.
Subsurface Cultural Materials	Check observed if sub-surface cultural materials are visible. Check potential if, in your best judgement, sub-surface cultural materials may be present.
Evidence for Potential Subsurface Cultural Materials	Describe observed materials, or list evidence for potential presence of subsurface cultural materials. Attach a continuation sheet, if required.

c. Monitoring

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Hazard Analysis

ACTIVITY: Monitoring | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Historic Preservation Monitor accompanies surveyor during Grid Map Unit stakeout observing placement of stakes.	Inadvertent detonation of UXO	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to commencing activity. Follow UXO escort instructions. Establish procedures to stop movement of workers when UXO encountered. Use all metals detection instrument in areas not cleared of vegetation that may obscure surface visibility.	IE(3)
2	Monitoring of surface UXO/OE clearance in vicinity of historic properties.	Inadvertent detonation of UXO	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to commencing activity. Follow UXO escort instructions.	IE(3)
3	Monitoring of geophysical surface investigation for UXO/OE clearance in vicinity of historic properties.	Inadvertent detonation of UXO	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to commencing activity. Follow UXO escort instructions.	IE(3)
4	Monitoring of subsurface excavation for anomaly verification in vicinity of historic properties. Monitor observes strata bared by digging anomalies after digging completed, or at prescribed intervals when digging is stopped specifically for Historic Preservation monitor to make observations.	Inadvertent detonation of UXO.	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to commencing activity. Follow UXO escort instructions. Monitor will remain at safe distance or behind protective cover during digging between observation periods.	IE(3)

Hazard Analysis

ACTIVITY: Monitoring | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
5	Monitoring of subsurface excavation for BIPs in vicinity of historic properties. Monitor observes strata bared by digging anomalies after digging completed, or at prescribed intervals when digging is stopped specifically for Historic Preservation monitor to make observations.	Inadvertent detonation of UXO	Explosion/destruction	I	D	2	Provide briefing regarding UXO/OE safety prior to commencing activity. Follow UXO escort instructions. Monitor will remain safe distance away or behind protective cover during digging between observation periods.	IE(3)
6	Monitoring of construction activities in the vicinity of historic properties	Injury to monitor from hazard associated with construction activities, i.e. slips, trips and falls, foot injuries and head injuries.	Personal injury.	III	D	3	Provide briefing regarding construction safety prior to entry Provide PPE, hard hat, steel toe shoes (ANSI 241	IE(3)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-c
ACTIVITY: Monitoring	
PURPOSE OF ACTIVITY: To ensure protection of historic properties by monitoring protective measures used during clearance activities.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. Pre-assessment activities (e.g., land survey) will be subject to Historic Preservation monitoring. Additional Historic Preservation monitoring activities will be based on direction from the Review Board decisions for each Grid Map Unit.	
2. Transit to work area, in coordination with clearance or other team, utilizing Range Control SOP A23 Activity b.3, Recurring Island Access and requirements of SOP A23 Activity d.1, Personnel Tracking.	
3. The monitor will communicate with UXO or Construction team leader about the monitoring requirements for the GMU or work area.	
4. HPFS, in coordination with UXO or construction supervisory personnel, will provide specific orientation and instruction to UXO or construction field personnel on Historic Properties avoidance and precautionary actions required.	
5. Conduct monitoring activity following Range Control Operation SOP for the specific operation.	(S) Safety briefing on UXO/EO or construction hazards as appropriate. (O) Range Control Operation SOP activities include: • SOP A23 Activity j.1, Survey Control • SOP A23 Activity j.2, Land Survey Stakeout of Grid Map Unit and UXO Clearance Boundaries. • SOP A23 Activity g, Area Preparation • SOP A23 Activity e, Sweep Operations • SOP A23 Activity f, Geophysical Detection Operations • SOP A23 Activity h.1, Excavation Operations • SOP A23 Activity t.2, Construction of Protective Works • SOP A23 Activity l, Demolition Operations
6. The monitor will complete the Monitoring Activity Form (HPF-12), according to its specific instructions, to	(O) Documentation on HPF-12 will consist of: a. Date and times of monitoring b. Grid Map Unit(s) monitored

document activities for all tasks, except Survey Control, and Land Survey Stakeout of Grid Map Unit and UXO Clearance area boundaries. For survey control and survey stakeout the monitor will record all available data.	c. Site number/Feature number of Historic Property d. Brief general description of Historic Property (e.g., surface scatter, adz quarry) e. Description of activity being monitored (e.g., brush cutting, surveying, etc.) f. Name and badge number of UXO or construction team leader. g. Any observations on Historic Property to supplement information already recorded h. Instructions given in field to working crew on site avoidance and protection i. Any specific problems encountered and steps taken to resolve them
7. If monitoring a surface (Tier I) activity, go to Step 17. If monitoring a sub-surface (Tier II) activity, go to Step 8.	
Monitoring of Sub-Surface (Tier II) Activities	
8. Where safety regulations allow, HP monitors will observe the ground disturbing activities in progress. When not allowed, during excavation of known UXO, HP monitors will observe open trenches or disturbed ground upon periodic cessation of digging activities.	
9. The HPFS monitor will document the monitoring activities on the Monitoring activity Form HPF-12.	(O) All Supplemental information will be attached to the HPF-12 (O) If monitoring a sub-surface (Tier II) activity in a known historic property with sub-surface features, additionally document: a. Scale drawing of profiles of exposed trenches showing all strata b. Description of all strata encountered with recording of color, texture, consistency, artifactual and midden materials, and depth and thickness c. Estimate of age of each strata d. Photographic record of trench profiles e. Location of trenches relative to Reference Points A and B.
10. If a previously unknown historic property is identified during monitoring of a subsurface activity, the monitor will request a suspension of the operations to evaluate the historic property.	
11. HPFS will make preliminary observations on nature of findings and make preliminary evaluation of the significance of the findings. If HPFS determines that findings are of no significance, HPFS will allow work to resume. If HPFS determines that findings are potentially significant and that continued digging will impact the findings, proceed to Step 12.	
12. HPFS will inform HPFD of findings.	
13. HPFD will notify RCO of the requirement that the historic property be assessed.	

14. HPFD will inform HPM and on-site HPNTR.	
15. Site will be assessed (see Historic Preservation SOP A11 Activity a., Historic Property Survey).	
16. Mitigative action will be taken only after presentation of findings and recommendations to the Review Board and receipt of a Review Board Decision.	
17. The monitoring will continue at the site until UXO or construction activity potentially impacting the Historic Property is completed or until, in the judgement of the HPFS, the potential adverse effects have been completely mitigated and continued monitoring is not justified. The HPFD will decide, in consultation with the HPFS, when monitoring is no longer required at a site.	
18. Monitors depart GMU and Kaho'olawe island per Range Control SOP A23 Activity d.1, Personnel Tracking and SOP A23 Activity b.3, Recurring Island Access.	

SPECIAL REQUIREMENTS:

None.

PERSONNEL BY LABOR CATEGORY

HPFS (1)
HPFT (as needed)
HPFA (as needed)

EQUIPMENT

ITEM	QUANTITY
Work Area Map with Historic Property Locations	1
HPF-1, Historic Property Survey Field Data Forms, Field Notes, and NRHP Records of Historic Properties in the Grid Map Unit(s) Work Area	For each historic property
Magnetic Compass	1
Engineer's Scale	1
Protractor	1
Minimum 3 m. x Minimum ½" Wide Retractable Metric Tape Measure	1
Notebook	1
Mechanical Pencil with Extra Lead (hardness 2B)	2
Flagging Tape Color-Code Chart	1
Blue, and White Flagging Tape	Minimum 2 rolls of each color
Digital Camera	1

Memory Diskettes for Digital Camera	2
30 m Tape Measure	1
Portable Radio (for HPFS only, for HP Communication and emergency back up)	1
Charger for Portable Radio	1

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT:

Individual first aid kit

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.

Monitoring Activity Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

HP Monitor:	Badge No.:	Grid Map Unit: |__|__|__|__|__|__|__|__|	Date:
Activity Team Leader:	Badge No.:	Time of Monitoring: From: _____ To: _____	

Instructions Given to Activity Team:
☐ Cultural Sensitivity ☐ Physical Sensitivity (avoidance/protection) ☐ Regulations and Penalties

Historic Properties in GMU

SIHP No.	Historic Property Type	Reference Point A			Reference Point B		
		X	Y	Z	X	Y	Z

Activity Being Monitored:
☐ Survey Stakeout ☐ Area Preparation ☐ Sweep Operation
☐ Geophysical Detection ☐ Excavation ☐ Demolition Operation
☐ Construction ☐ Construction of Protective Works

Describe Activities Performed by Monitor and Activity Team:

Problems Encountered/Resolution:

Supplemental Information About Historic Property

SIHP No.	Information

Document Any Modifications Made to or Adverse Effects on Historic Property During Activity

SIHP No.	Modification/Adverse Effect

Monitoring Activity Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
HP Monitor	Enter the name of the historic property monitor.
Badge No.	Enter the badge number of the HP monitor.
Grid Map Unit	Enter the Grid Map Unit being monitored.
Date	Enter today's date.
Activity Team Leader	Enter the name of the leader of the UXO or construction team being monitored.
Badge No.	Enter the badge number of the UXO or construction team leader.
Time of Monitoring	Enter the beginning and ending time of the monitoring.
Instructions Given to Activity Team	Provide instructions to the activity team in each of the areas listed; check the boxes when construction is complete.
Historic Properties in GMU	This table will be provided by the DMS.
Activity Being Monitored	Check one box indicating the activity being monitored. Complete a separate HPF-12 for each activity.
Describe Activities Performed by Monitor and Activity Team	Describe the activities in chronological order.
Problems Encountered /Resolution	Describe any problems encountered in chronological order. Describe the resolution of the problems.
Supplemental Information About Historic Property	Include any observations on HP to supplement information already recorded.
Modifications or Adverse Effects	Describe any modifications made to or adverse effects on the historic property by the activity being monitored.

d.1 Data Recovery

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
   b. When an approved change or revision is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
   a. When first assigned to the operation.
   b. When an approved change is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Data Recovery | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Excavation by hand in sediments previously cleared to Tier II level in historic properties for archaeological data collection.	Inadvertent detonation of UXO not previously identified.	Explosion/injury	I	E	3	Provide briefing regarding UXO/OE safety prior to commencing work. Use all metals detection instrument in areas where excavation will occur. Establish procedures to stop work of the Data Recovery Team and call for UXO Specialist when UXO encountered.	IE(3)
2	Excavate by hand in of an historic property to document the historic property, to allow for subsequent geophysical characterization of detected anomalies or removal of UXO.	Inadvertent detonation of UXO.	Explosion/destruction	I	D	2	Safety brief by UXOS. Use of point detection and avoidance by digging a safe distance (2m.) on the side of the anomaly.	IE(3)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-d.1
ACTIVITY: Data Recovery – Field	
PURPOSE OF ACTIVITY: Data recovery may be implemented when the usual means of site protection, avoidance, is not an option because of specific circumstances. By gathering important archaeological data that may be lost through unavoidable damage to historic properties, data recovery procedures attempt to mitigate damage to historic properties.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
Pre-Field Preparation	
1. The HPFD will provide all necessary historic property background data to the HPFS.	(O) Information to include: a. Relevant Grid Map Unit (GMU) information; b. NRHP Forms, Historic Property Record Forms (HPF1), field notes, maps, and pertinent photographs of the property. c. These records and maps will include all update-data produced by historic property survey and monitoring.
2. The team HPFS will ensure that logistics needs for the excavation or other data recovery work will be met.	
3. UXOS and HPFS will brief the data recovery team prior to the fieldwork. If Data Recovery consists only of Detailed Mapping and Recording proceed to Step 4. If Data Recovery consists of Excavation proceed to Step 8.	(O) HPFS briefing of objectives, scope and methods of the data recovery work. (S) UXO/OE safety briefing.
4. Transit to each historic property or feature within the GMU for mapping and detailed recording data recovery, utilizing Range Control SOP A23 Activity b.3, Recurring Island Access and requirements of SOP A23 Activity d.1, Personnel Tracking.	(O) Use historic property location map printed out from the KIGIS, or GMU sketch as available.
Data Recovery - Mapping and Detailed Recording	
5. Confirm property identity.	(O) Locate the historic properties Reference Points A and B and confirm the SIHP number or Field number.
6. Photograph the property or feature as necessary to document data recovery tasks (including detailed mapping and recording) in the scope of work	(O) Photo signboard and mini-rod scale shall be visible in each photo. (O) Photo signboard will display historic property/feature number, date and a north arrow.

7. Perform special tasks as called for in the scope of work for data recovery	(O) Scope of work will be determined in accordance with the Historic Property Protection Decision Making SOP.
Data Recovery - Excavation, Area Preparation	
8. If vegetation clearance is required, refer to Range Control Operation SOP A23 Activity g, Area Preparation	
9. Photograph site before establishing excavation grid.	(O) Photo signboard should contain: a. Historic Property Number b. Feature designation c. Calendar date
10. Establish an excavation grid and grid datum. Record distance from grid corners and datum to Reference Points A and B.	(O) A metric grid at one meter intervals will be used. (O) Coordinates of each grid corner and the datum will be recorded on HPF-6, and on HPF-7 as appropriate according to instructions with the form.
11. Photograph excavation grid prior to beginning excavation.	(O) Photo signboard should contain: a. Historic Property Number b. Feature designation c. Calendar date
12. Record the Excavation Grid and Excavation Units To Scale on the Historic Property Plan View Map.	
Excavation	
13. UXOS conducts geophysical point detection for anomalies at the location to be excavated in accordance with Range Control Operation SOP A23 Activity f, Geophysical Detection Operations.	(O) EM61 detection equipment clears excavation to four foot depth. (O) Re-locate selected excavation grid to avoid any anomalies.
14. Horizontal control will be maintained by the one (1) meter square grid system.	(O) The excavation grid datum will have relative coordinates (0,0). All meter square excavation units will be defined by means of the local coordinate system originating at this datum. (O) Excavation units, sub-units or internal feature positions, and sample or artifact provenience within the grid will be designated by distance in meters and direction north, south, east, and west from the datum. (O) Basic one meter units will be excavated by quadrant and provenience of all materials will maintained by quadrants.
15. Excavate one meter units by quadrant and by level	(O) Levels a. Ten (10) centimeter thick arbitrary levels will be used within natural strata where possible. b. Arbitrary levels of greater than ten cm. thick will be used as necessary, such as in sediments with large components of cobbles and boulders, or less than ten cm. thick where strata are thin and distinct. (O) Depths a. Depth of excavation levels, materials or internal features will be recorded in depth below surface. b. Line level and tape measure will be used to measure excavation depths. (O) If human skeletal remains are encountered, proceed to Historic Preservation SOP A11 Activity e, Discovery and Treatment of Human Remains.

16. Complete HPF-6, Level Records for each excavation unit.	(O) A minimum of one Level Record will be completed for each basic excavation unit. (O) One HPF-6 Level Record will be completed for each arbitrary level within each strata or for each strata as necessary.
17. Take photographs for documentation during activities at historic properties.	(O) Use the digital camera provided for each team. a. Elements of the excavation to photograph include b. Excavation unit c. Internal features, d. Stratigraphic profiles, e. *In situ* artifacts of note, etc.
18. Include a suitable signboard with provenience data in each photograph of the excavations.	(O) The signboard will identify: a. The historic property number; b. Excavation unit designation; c. Feature or object of note; d. Stratigraphic profile location; e. Calendar date.
19. Include metric scales and north-arrow indicators in each photograph of the excavations.	
20. Record photographs of historic properties excavations on the historic property Photo Record HPF-5	(O) Log date, film roll number, frame number, historic property number and feature designation, subject of photo, and orientation of photo view
21. Volume control will be maintained during excavations.	(O) Use calibrated excavation buckets to measure sediment volumes. (O) Record excavated sediment volumes on HPF-8, Excavated Material Volume form.
22. Excavate internal features as sub-units of the basic excavation unit.	(O) Where appropriate these features will be sectioned to provide feature profiles
23. Record internal features of an excavation as a sub-unit of the basic excavation unit.	(O) Labeling of internal features. a. Use the abbreviation FE. # b. Number sequentially beginning with number one using Arabic numerals within each excavation unit. For example the second internal feature (FE. 2) found in excavation unit N1W1 will be labeled N1W1 / FE.2. (O) Record plan views and descriptions on HPF-6 (O) Record cross sections and descriptions on HPF-7:
24. Screen excavated materials	(O) Sift sediments, except specific samples noted below, through 1/8th inch wire mesh screen. (O) Screen sediments from internal features separately.
25. Collect all archaeological material remaining in the screen following sifting.	

26. Bag collected archaeological material by provenience during all excavations.	(O) Use pre-labeled bags for all collected material. (O) When archaeological material is excavated by sub-units or internal feature the provenience will be maintained at the sub-unit level. (O) Objects will also be recorded *in situ* as necessary. (O) Charcoal and other datable material collected as C14 samples will be bagged separately and clearly labeled for "C14" analysis, in addition to all other provenience information.
27. Record provenience of all excavated material.	Fill in all provenience information on pre-labeled bags containing archaeological and sample material.
28. Complete HPF-9, Bag Inventory form for each excavation.	(O) Number bags consecutively beginning with the number "1" for each site.
29. Complete HPF-7, Profile Record for each excavation unit.	(O) A minimum of one Profile Record will be completed for each basic excavation unit. (O) A separate HPF-7 Profile Record will be use to record the cross-section of an internal feature. Location of Column Samples will be recorded on the HPF-7 Profile Record.
30. Back-filling of excavations.	(O) Excavation units will be back-filled at completion of data recovery if the historic property will not be destroyed in the clearance process.
31. Excavation team depart GMU and Kaho'olawe island per Range Control SOP A23 Activity d.1, Personnel.	

SPECIAL REQUIREMENTS:

None.

PERSONNEL BY LABOR CATEGORY

HPFD

Historic Property Data Recovery Team
HPFS (1)
HPFT (1)
HPFA (1)

EQUIPMENT

ITEM	QUANTITY
Historic Preservation Mapping and Recording Data Recovery Team	
Magnetic Compass	1
Engineer's Scale	1
Protractor	1
Minimum 3 m. x Minimum ½" Wide Retractable Metric Tape Measure	1

Notebook	1
Mechanical Pencil with Extra Lead.	2
Flagging Tape Color-Code Chart	1
Blue, and White Flagging Tape	Minimum 2 rolls of each color
Hand-held GPS Unit	1
Work Area Map with Pre-Investigation Predicted Historic Property Locations	1
NRHP Records of Historic Properties in the Grid Map Unit(s) Work Area	As determined by pre-investigation
HPF-1, Historic Property Survey Field Data Forms Initiated by Team A, and Copy of Team A Field Notes	As present
Aluminum Historic Property Identification Tags with wire for attachment	20
30 m. Tape Measure	1
Digital Camera	1
Memory Diskettes for Digital Camera	1
Photo signboard	1
Metric mini-rod for photography scale	1
Portable Radio (for HPFS only, for HP Communication and emergency back up)	1
Charger for Portable Radio	1
Historic Preservation Excavation Data Recovery Team – Minimums	
Buckets, 5 gal. 7 or 9 mil plastic	2
Screen sieves, 1/8th in. galvanized wire mesh	2
Rock Hammer	1
Pre-labeled plastic bags	As needed
Sharpie brand, fine-point indelible black ink pens	As needed
Excavation recording forms	As needed
Digital camera	1
Photo signboard	1
Memory disks for digital camera	2
Munsell Soil Color Charts	1
Soil Description Key	1
Historic Preservation Data Recovery Team – As Necessary	
Pick	1
Shovel	1
'o'o (digging bar – metal)	1

Whellbarrow	1
Data Recovery Team Members – Personal Toolkit	
Trowel	1
Minimum 3 m. x Minimum ½" Wide Retractable Metric Tape Measure. (Wood, folding two (2) meter carpenters ruler is an acceptable alternative, or additional rule).	1
Line level	1
Roll of line	1
Dustpan	1
Whiskbroom	1
Magnetic compass	1
Plumb bob	1
Mechanical pencil and spare lead (hardness 2B)	2
Fine (dental) pick	1
Fine brush	1
Engineer's scale	1
Protractor	1

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT:

Individual first aid kit.

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:

None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:

None.

KAHO`OLAWE UXO CLEARANCE
PHOTO LOG

HPFS: ______________________________ Type of Film: _____________

Date: ________________________________ Roll No: ________________

SIHP No.	Date	Frame	Subject	View

Form HPF-5
3/12/98

PHOTOGRAPHIC LOG (HPF-5)
INSTRUCTIONS

HPFS	Enter name of HP Field Supervisor in charge of operation.
DATE:	Enter date film is loaded into camera.
TYPE OF FILM	Enter brand and ASA.
ROLL NUMBER	Print roll number of film canister and enter here. If there is no film number on the canister, contact the HPFD.
SIHP Number	Enter the SIHP number of the site being photographed.
DATE	Enter the date the photograph is taken.
FRAME	Enter the frame number, consecutive from the number "one." (List frame number, even if a photo is blank. At the end of the roll, enter "end of roll."
SUBJECT	Enter a detailed description of the subject of the photograph
VIEW	Enter the compass direction the camera is pointing towards.

Level Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Recorder:	Badge No.:	Grid Map Unit: |__|__|__|__|__|__|__|__|	Date:
Unit or Trench:	Datum GPS Position:		SIHP #: 50-20-97-
Stratum:	X: _____		Feature Designation: (Alphabetical) _____
Level:	Y: _____		
	Z: _____		Field No.: _____

Depth:

From: _____ To: _____ ☐ c.m.b.s ☐ c.m.b.d.

Subsurface Feature Description (hearths, trashpits, crypts, cultural floors, etc.):

Cultural Material (artifact and midden type, charcoal, etc.):

Material Collected

Type:	Amount:
☐ Sorted ☐ Unsorted	No. of bags: _____ C14 Samples: _____ Soil Samples: _____

Soil Matrix General Observations (e.g., color, grain, size, inclusions [roots, % gravel-pebbles-cobbles-boulders]):

Summary/Interpretations:

Supervisor Signature

Name:	Badge No.:	Signature:	Date:

HPF-06
Rev. 0
06/12/98

Level Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Recorder	Enter the name of the recorder.
Badge No.	Enter the badge number of the recorder.
Grid Map Unit	Enter the Grid Map Unit in which the site is located.
Date	Enter today's date.
Unit Or Trench	Enter the number of the trench being documented.
Stratum	Enter stratum number (Roman Numeral) at this level.
Level	Enter level designation.
Depth	Enter the depth of the beginning and the end of the level, in centimeters. Check whether the depth is measured as centimeters below surface (c.m.b.s.) or centimeters below datum (c.m.b.d.).
Subsurface Feature Description	Enter description of the subsurface features of this level. Describe the soil or rock features visible at this level, include dimensions.
Cultural Material	Describe the artifact and midden content of this level.
Material Collected - Type	Check whether material collected is sorted or unsorted.
Material Collected - Amount	Enter the total number of bags, and the number of C14 and soil samples taken from this level.
Soil Matrix General Observations	Describe the soil characteristics of this level.
Summary / Interpretations	Add any comments, as appropriate.
Supervisor Signature	Enter the name, badge number and signature of the responsible HPFS. Enter the date the form is signed.

Excavation Profile/Stratigraphy Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Recorder:	Badge No.:	Grid Map Unit: _____	Date:
Unit or Trench:	GPS Position:	SIHP #: 50-20-97-	
Location of Profile: ☐ Road Cut ☐ HP Excavation ☐ Trench ☐ Erosion Exposure ☐ Other:	X: _____ Y: _____ Z: _____	Feature Designation: (Alphabetical) _____ Field No.: _____	

Profile Orientation:
☐ N (315°-45°) ☐ S (135°-225°) ☐ E (45°-135°) ☐ W (225°-315°)

Soil Profile Descriptions

St	Hori-zon	Depth	Color		Texture	Structure	Consistence	Roots	Pores	% Gravel	Clay Films	Boundary
			Moist	Dry								

Supervisor Signature			
Name:	Badge No.:	Signature:	Date:

HPF-07
Rev. 0
06/12/98

Excavation Profile/Stratigraphy Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Recorder	Enter the name of the recorder.
Badge No.	Enter the badge number of the recorder.
Grid Map Unit	Enter the Grid Map Unit in which the site is located.
Date	Enter today's date.
Unit Or Trench	If the profile is in a controlled HP excavation, enter the number of the excavation unit being documented.
Location of Profile	Check one box that describes the location of the profile. Specify other.
GPS Position	If the profile is in a controlled HP excavation, enter reference point A of the historic property. If the profile is located in a cut, trench, or other exposure, record the geographic location of the upper right corner of the profile.
SIHP # **Feature Designation** **Field No.**	Enter this identifying information if the profile is in an historic property.
Profile Orientation	Check orientation of profile (in degrees True).
Soil Profile Description	Enter strata number and soil description into table.
Supervisor Signature	Enter the name, badge number and signature of the responsible HPFS. Enter the date the form is signed.

Excavation Profile/Stratigraphy Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Recorder	Enter the name of the recorder.
Badge No.	Enter the badge number of the recorder.
Grid Map Unit	Enter the Grid Map Unit in which the site is located.
Date	Enter today's date.
Unit Or Trench	If the profile is in a controlled HP excavation, enter the number of the excavation unit being documented.
Location of Profile	Check one box that describes the location of the profile. Specify other.
GPS Position	If the profile is in a controlled HP excavation, enter reference point A of the historic property. If the profile is located in a cut, trench, or other exposure, record the geographic location of the upper right corner of the profile.
SIHP # **Feature Designation** **Field No.**	Enter this identifying information if the profile is in an historic property.
Profile Orientation	Check orientation of profile (in degrees True).
Soil Profile Description	Enter strata number and soil description into table.
Supervisor Signature	Enter the name, badge number and signature of the responsible HPFS. Enter the date the form is signed.

KAHO`OLAWE UXO CLEARANCE
EXCAVATED MATERIAL VOLUMES

HPFS: ______________________ SIHP: ______________ Date: ____________

Excavation Date	Trench	Feature	Stratum	Depth (cm)	Volume (liters)

HPF-8
3/12/98

EXCAVATED MATERIAL VOLUMES (HPF-8)

INSTRUCTIONS

HPFS	Enter name of HP Field Supervisor in charge of operation.
SIHP	Enter SIHP number.
DATE:	Enter date form started.
EXCAVATION DATE	Enter date of excavation.
TRENCH	Enter the number of the trench excavated.
FEATURE	Enter feature number.
STRATUM	Enter stratum number (Roman Numeral).
DEPTH (cm)	Enter top and lower depth of level excavated (in centimeters).
VOLUME (liters)	Enter the volume in liters.

KAHO`OLAWE UXO CLEARANCE
BAG INVENTORY

HPFS: _____ Recorder: _____

									Type of Material (Check One)				
Date	SIHP No.	Lot No.	Feature	Trench	Stratum	Level	Internal Feature	Depth (cm)	Artifacts	Midden	Charcoal	Soil	Other

HPF-9
3/12/98

KAHO`OLAWE UXO CLEARANCE
BAG INVENTORY

HPFS: _____ Recorder: _____

									Type of Material (Check One)				
Date	SIHP No.	Lot No.	Feature	Trench	Stratum	Level	Internal Feature	Depth (cm)	Artifacts	Midden	Charcoal	Soil	Other

HPF-9
3/12/98

BAG INVENTORY (HPF-9)
INSTRUCTIONS

HPFS	Enter name of HP Field Supervisor in charge of operation.
RECORDER	Enter name of person completing form.
DATE:	Enter date materials are collected.
SIHP NO.	Enter SIHP number.
LOT NO.	Enter lot number.
FEATURE	Enter feature number.
TRENCH	Enter the number of the trench excavated.
STRATUM	Enter stratum number (Roman Numeral).
LEVEL	Enter the top and bottom depth of the level.
INTERNAL FEATURE	Identify internal feature, if present.
DEPTH (cm)	Enter top and lower depth of level excavated (in centimeters).
TYPE OF MATERIAL	Check one. Identify "other" category.

d.2 Data Recovery - Laboratory Analysis

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
   b. When an approved change or revision is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
   a. When first assigned to the operation.
   b. When an approved change is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Laboratory Analysis | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Sort archaeological materials collected from the field and prepare them for curation.	UXO/OE inadvertently contained is contents of collected materials	Explosion/injury	II	E	3	Provide briefing regarding UXO/OE safety prior to beginning lab operations. Establish procedures to stop work of the Laboratory Team and call for UXO Specialist if UXO encountered.	IVE(4)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-d.2
ACTIVITY: Laboratory Analysis	
PURPOSE OF ACTIVITY: Data recovery may be implemented when the usual means of site protection, avoidance, is not an option because of specific circumstances. By gathering important archaeological data that may be lost through unavoidable damage to historic properties, data recovery procedures attempt to mitigate damage to historic properties.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. HPFS Will Deliver Excavated Material and Samples with Documentation Records to the Temporary Curation Facility (Lab) at Range Control Daily.	(O) Transfer of materials to the Lab will be recorded in a log at the curation facility.
2. Define the Unit of Analysis for data recovery excavations.	(O) The standard unit of analysis for data recovery excavations will be the historic property or historic property feature.
3. Classify Materials From the Excavation	(O) Classification of materials for processing will be: a. Artifacts; b. Midden; c. Special Samples.
4. Analyze Artifacts.	(O) Separate Artifacts by: a. Period – Indigenous (traditional Hawaiian) or Historic; b. Type (Function); c. Material. (O) Measure Artifacts: a. Length, width, thickness and other measurement as appropriate. (O) Weigh (metric) Artifacts as appropriate.
5. Record Artifact Analysis Data in HPF-11 Artifact Catalogue.	(O) Separate HPF-11 forms will be maintained for: a. Indigenous artifacts; b. Historic artifacts (artifacts of material exotic to Hawaii). (O) Assign a unique, sequential accession number for each artifact beginning with:

	a. Number 1 for prehistoric artifacts; b. Number H-1for historic artifacts.
6. Store Cataloged Artifacts in Separate Pre-labeled Bags.	(O) Transfer all provenience information from the original bag from the field. a. Record artifact accession number on the new bag; b. Curate according to procedures of SOP A11 Activity-f, Temporary Curation.
7. Analyze Excavated Midden Material.	(O) HPLD with HPLT and HPLA will perform gross separation of midden by: a. Flora – Fauna; b. Terrestrial – Marine; c. Vertebrate – Invertebrate; d. Genus, Species e. Charcoal. (O) HPLD with HPLT and HPLA will identify invertebrate remains. (O) Separated midden materials will be stored, labeled by provenience, and prepared for curation following the SOP A11 Activity- f, Temporary Curation. (O) HPLD will prepare samples of charcoal and vertebrate remains from midden for specialized analysis.
8. Record Midden Analysis Data in HPF-10, Midden Catalog.	
9. Store Cataloged Artifacts in Separate Pre-labeled Bags.	(O) Transfer all provenience information from the original bag from the field. c. Record material and gross weight on the new bag; (O) Curate according to procedures of SOP A11 Activity-f, Temporary Curation.
10. Submit Special Samples for Analysis as provided in the excavation scope, in coordination with the on-site HPNTR, maintaining a record of chain of custody.	(O) Specialized analysis will be performed on: a. Vertebrate faunal material, b. Pollen, c. Macrofossils, d. Petrologic samples, e. Charcoal. (O) Identification and analysis will be conducted by qualified specialists as provided in the excavation scope.
SPECIAL REQUIREMENTS: None.	

PERSONNEL BY LABOR CATEGORY

Historic Preservation Laboratory Team

HPLD (1)

HPLT (3)

HPLA (1)

EQUIPMENT

ITEM	QUANTITY
Log Book For recording of received field materials For recording of sample transfers and disposition	2
Hawaiian Mollusk Identification manual	1
Sharpie fine point indelible ink pens	As needed
Black Ink pens	As needed
Pencils	As needed
Digital scale (Gram weight to 100ths accuracy)	2
Manual scale (Kilogram weight to 10ths accuracy)	1
Pre-labeled and other plastic bags in sizes a. 4x5 in. b. 6x9 in. c. 9x12 in. d. 12x15 in. e. Bags smaller than 4x5 are not pre-labeled	As needed
Digital calipers	1
Tweezes	1
Palette knife	2

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.

KAHO`OLAWE U) LEARANCE
MIDDEN CATALOG

HPLD: **Date:** _____

SIHP No.													
Trench/Quad													
Depth/Strata													
Cassis cornuta													
Cellana sp.													
Charonia tritonis													
Conus sp.													
Cymatium sp.													
Cypraea caputserpentis													
Cypraea granulata													
Cypraea maculifera													
Cypraea mauritiana													
Haslula inconstans													
Hipponix sp.													
Littorina													
Nerita picea													
Nerita polita													
Strombus maculatus													
Terebra sp.													
Thaididae sp.													
Trochus intextus													
Turbo sandvicensis													
Chama iostoma													
Brachidontes crebristiatus													
Periglypta reticulata													
Tellina palatam													
Unidentified/Other shell													
Total Molluska													
Crab													
Sea urchin													
Fish bones and scales													
Total Marine Midden													
Bird													
Pig													
Dog													
Rat													
Post contact mammals													
Unidentified mammals													
Total mammal bone													
Kukui nuts													
Total Terrestrial Midden													
Total Midden													

MIDDEN CATALOG (HPF-10)
INSTRUCTIONS

HPLD	Enter name of HPLD in charge of operation.
DATE:	Enter date materials are analyzed.
SIHP NO.	Enter SIHP number.
TRENCH/QUAD NO.	Enter the number of the trench and/or quadrant.
DEPTH/STRATA	Enter the depth in centimeters and stratum number (Roman Numeral).
FOLLOWING ROWS	Enter weights of midden components after identification. Weights will be totaled.

KAHO`OLAWE UXO CLEARANCE
ARTIFACT CATALOG

Name:

Date:

Acc.	SIHP NO.	Feature	Trench/ Quad.	Stratum	Depth	# of pcs	Length	Width	Thickness	Total Weight	Material Type	Comments

ARTIFACT CATALOG (HPF-11)
INSTRUCTIONS

Name	Enter name of person completing form.
DATE:	Enter date form completed.
Acc.	Enter accession number of artifact.
SIHP	Enter SIHP number.
FEATURE.	Enter feature number.
TRENCH/QUAD	Enter trench and quadrant numbers.
STRATUM	Enter stratum number (Roman Numeral).
DEPTH (cm)	Enter top and lower depth of level excavated (in centimeters).
# OF PIECES	Enter quantity of items.
LENGTH	Enter maximum length of item.
WIDTH	Enter maximum width of item.
THICKNESS	Enter maximum thickness of item.
TOTAL WEIGHT	Enter total weight of item.
MATERIAL TYPE	Enter material type.
COMMENTS	Provide additional comments.

e. Discovery a n d Treatment of Human Remains

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
   b. When an approved change or revision is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
   a. When first assigned to the operation.
   b. When an approved change is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Discovery and Treatment of Human Remains.

PREPARER: N. Hasan/W. Folk

DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Assessment of skeletal material found in the field in previously cleared Grid Map Units to determine if human and to excavate and relocate as directed.	Inadvertent detonation of UXO previously not identified.	Explosion/injury	I	E	3	Provide briefing regarding UXO/OE safety, and use all metals detection instrument prior to assessment and excavation at the find. Stop assessment or excavation and call for UXO Specialist when UXO encountered.	1E(3)

Hazard Analysis

ACTIVITY: Discovery and Treatment of Human Remains.

PREPARER: N. Hasan/W. Folk

DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Assessment of skeletal material found in the field in previously cleared Grid Map Units to determine if human and to excavate and relocate as directed.	Inadvertent detonation of UXO previously not identified.	Explosion/injury	I	E	3	Provide briefing regarding UXO/OE safety, and use all metals detection instrument prior to assessment and excavation at the find. Stop assessment or excavation and call for UXO Specialist when UXO encountered.	1E(3)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-e
ACTIVITY: Discovery and Treatment of Human Remains	
PURPOSE OF ACTIVITY: To outline procedures to be implemented upon discovery of suspected human remains, and to ensure treatment is conducted in accordance with the contract and Site Protection Agreement.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. All personnel at the site of discovery of possible human skeletal remains should stop work.	(O) Stop work: all archaeological work, construction, UXO excavation, area preparation or any other ground disturbing activities.
2. Protect the discovery from imminent harm.	(O) Secure the area from pedestrian and vehicular traffic and temporarily protect the remains from exposure by lightly covering.
3. RC/OC notify on-site Historic Preservation Field Director (HPFD), on-site HPNTR, and KIRC of the discovery of skeletal remains.	
4. HPFS qualified in identification of human skeletal remains, or the HPFD or HPM, transit to GMU where discovery is located in accord with Range Control SOP A23 Activity b.3, Recurring Island Access and requirements of SOP A23 Activity d.1, Personnel Tracking	
5. Confirm human identity of the remains – (HPFS, HPFD or HPM).	(O) Avoid or minimize handling and ground disturbance. Do not take any photographs. (O) If remains are identified as non-human then no further action will be taken.
6. Notify HPM, SPM, on-site HPNTR, KIRC and Land Surveyor of identification (human or not human). – (HPFD).	
7. Enter historic property number, discovery background, location, context, and condition of remains in the Burial Record Form HPF-4 – (HPFS or HPFD).	(O)An HPF-4 will be initiated for every find with location and Field number recorded. (O) Surveyor to record precise geographic location
8. Work will be suspended in the vicinity of the discovery .	(O)Contracting officer issues written notice to proceed, (O) Notice to proceed may include instructions regarding site stabilization, data collection, data recovery, or other actions such as Review Board Recommendations.

9. Implement instructions or treatment measures received from the Contracting Officer or designated representative	
10. Team departs GMU and Kaho'olawe island per Range Control SOP A23 Activity d.1, Personnel Tracking.	

SPECIAL REQUIREMENTS:

Training in the identification of human remains.

PERSONNEL BY LABOR CATEGORY

HPFS
HPFD

EQUIPMENT

ITEM	QUANTITY
Field manual on the identification of human remains	2
Equipment identified in SOP A11 Activity-d, Data Recovery, equipment list	As needed

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT:

None.

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.

Historic Property Survey Human Burial Record
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Name:	Badge No.:	Grid Map Unit:	Date:

Reference Point A:	Reference Point B:	SIHP #: 50-20-97-
X:	X:	Feature Designation: (Alphabetical)
Y:	Y:	
Z:	Z:	Field No.:

Historic Property Status: ☐ New ☐ Previously Recorded ☐ Uncertain

Discovery Background

Who Made Discovery:	Badge No.

Activity During Which Discovery was Made:

How Discovered:

Wall Profiled
☐ N ☐ S ☐ E ☐ W ☐ Other: _____

STRATIGRAPHIC ASSOCIATION						
	Strata postdating burial feature	☐ I	☐ II	☐ III	☐ IV	☐ V
	Strata contemporaneous with burial feature	☐ I	☐ II	☐ III	☐ IV	☐ V
	Strata predating burial feature:	☐ I	☐ II	☐ III	☐ IV	☐ V
	Indeterminate	☐				

Burial Description

FEATURES OF BURIAL
☐ Pit Outline ☐ No Pit Outline ☐ Coffin ☐ Indeterminate ☐ Other _____

AGE
☐ Historic ☐ Prehistoric (evidence) ☐ Indeterminate

ARTICULATION
☐ Fully ☐ Partially ☐ Disarticulated ☐ Indeterminate

Describe features, evidence for determining age, elements of disarticulation:

Orientation

Orientation (Direction Head Is Towards)
☐ N (315°-45°) ☐ S (135°-225°) ☐ E (45°-135°) ☐ W (225°-315°) ☐ Indeterminate

Cranium Facing Direction:
☐ N (315°-45°) ☐ S (135°-225°) ☐ E (45°-135°) ☐ W (225°-315°) ☐ Indeterminate

Position

I: ☐ Flexed ☐ Semi-flexed ☐ Extended ☐ Indeterminate
II: ☐ Prone ☐ Supine ☐ Right Side ☐ Left Side ☐ Seated

Describe Position:

HPF-04
Rev. 0
06/12/98

Historic Property Survey Human Burial Record
UXO Clearance Project
Kahoʻolawe Island Reserve, Hawaii

Condition of Burial				
PRESERVATION	☐ Excellent	☐ Good	☐ Fair	☐ Poor
CONDITION	☐ Intact	☐ Previously Disturbed	☐ Disturbed by Project	
Explain				
Dimensions of Area if Remains Are Scattered:				
CONTEXT	☐ Primary	☐ Secondary		
Explain				
ARTIFACTS	☐ Associated (grave goods)	☐ Non-Associated		
Explain/Describe:				
Disposition:	☐ Preserved in Place	☐ Relocated		
If relocated:				
GPS Location of Reburial: X: _____ Y: _____ Z: _____	**Date:**	**Responsible Organization:**		
☐ Profile view attached	☐ Plan view attached			

HPF-04
Rev. 0
06/12/98

Historic Property Survey Human Burial Record
UXO Clearance Project
Kaho'olawe Island Reserve, Hawaii

Instructions	
Name	Enter the name of the HP Survey Team Leader.
Badge No.	Enter the badge number of the HP Survey Team Leader.
Grid Map Unit	Enter the GMU the in which the remains were discovered. If the burial is located in more than one GMU, list the GMU in which the majority of the burial resides.
Date	Enter today's date.
SIHP #	If the burial is not previously recorded , a new SIHP number should be assigned and used on this form. If a field number has been assigned upon initial discovery, this should also be written on the form.
Feature Designation	Enter the historic property feature designation if the property is comprised of multiple features. All feature designations will be in capital letters. If the property is comprised of a single feature, enter "None."
Field #	Enter the temporary field number if the HP has not been previous recorded or if the HP was probably previously recorded but cannot be correlated to the appropriate NRHP form at this time. TEMPORARY field numbers consist of the GMU number that the property is located in, followed by a hyphen, and a sequential number beginning with "1."
Historic Property Status	Check the applicable status, newly discovered, previously recorded, or uncertain.
Discovery Background	Enter the name and badge number of the person who discovered the burial. Describe the activity during which the discovery was made, and briefly describe how the burial was discovered.
Wall Profiled	Check the appropriate box to indicate the compass direction associated with the unit profile being recorded. Specify other.
Stratigraphic Association	Indicate the stratigraphic sequence relation to the burial position as shown on profile drawing and in the profile description.
Features Of Burial	Check one box to describe the features of the burial. If other is checked, specify and describe below.
Age	Check one box. Describe evidence for age below.
Articulation	Check one box. Describe elements of disarticulation below, if appropriate.
Description	Provide text to describe features of burial, evidence for determining age, and elements of disarticulation.
Orientation	Check one box. Orientation reading should be taken along the line of the vertebral column from pelvis to head. Bearings are in degrees True.
Cranium Facing Direction	Check one box.
Position	Check one box for each of the two types of positioning.
Explanation	Describe details for each of the two types of positioning of the burial.
Preservation	Check one box to describe the preservation of human remains.
Condition	Check one box to describe the condition of the human remains.
Explanation	Provide details on the preservation and condition of the burial.
Context	Check one box.
Explanation	Provide details for context.
Artifacts	Check one box.
Explanation	Description of artifacts. Use continuation sheets, if required.
Disposition	Check box that describes disposition of burial.
If relocated	If the remains are relocated, enter the location and date of the reburial, as well as the organization responsible for the reburial.
Profile And Plan View	Provide profile and plan view drawing of stratigraphic relationships and of features, position, orientation and artifact position on attached graph sheet. Include scale and North arrow.

f. Historic Pro perty Protection Decision Making

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
   b. When an approved change or revision is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
   a. When first assigned to the operation.
   b. When an approved change is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Historic Property Protection Decision Making | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	To determine the effect operations may have on historic properties, formulate recommendations for protection of historic properties, and obtain Government and KIRC approval.	No hazards.						
2	Field re-evaluation of select historic properties during decision making on protection measures.	Inadvertent detonation of UXO.	Explosion/Injury	I	D	2	Re-evaluation in the presence of UXO escort in the field.	

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-f
ACTIVITY: Historic Property Protection Decision Making	
PURPOSE OF ACTIVITY: To determine the effect operations may have on historic properties, formulate recommendations for protection of historic properties, and obtain Government and KIRC approval.	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. Review HPF-1 - Historic Property Survey Field Data Form – and HPF-10 – Historic Property Monitoring Form - and all other relevant data. - (HPFD and HPM)	(O) HPM will conduct site visits to formulate recommendations as needed, especially If new historic properties are identified through inadvertent discovery. (S) Field re-evaluation will be conducted in the presence of UXO escort.
2. Consult with KIRC on Traditional Cultural Properties within a work area. – (HPFD or HPM)	
3. Consult with UXO, construction, and/or support activity personnel, confirm operational activities in areas where Historic Properties are located, and determine the potential impacts activities may have on Historic Properties. – (HPM or HPFD)	
4. Analyze data and formulate recommendations for protection of specific Historic Properties. (HPFD and/or HPM)	
5. Complete Historic Property Survey Findings and Recommendations Form (HPF-2) and Grid Map Unit Assessment Findings and Recommendations Form (HPF-3). – (HPM and/or HPFD)	(O) HPF-2 will be complete for individual historic properties or features as appropriate.
6. Present determination of effect and recommendations for specific treatments for each Historic Property on HPF-2, and for each GMU on HPF-3, to the Review Board. – (HPM)	(O) Consult with the Review Board, as required
7. Approve, conditionally approve, or disapprove the recommendation and formulate a Record of Decision (Review Board)	(O) When disapproving a recommendation, the Review Board will provide further directives for changes to the recommendation. (O) If there is a need for dispute resolution refer to Regulatory Framework, Section V.

8. Notify the HPFD, RCO and other relevant parties that a Review Board Decision has been formulated. – (HPM)	
9. Coordinate with RC/OC and assign site-specific protection tasks. – (HPFD)	

SPECIAL REQUIREMENTS:

None.

PERSONNEL BY LABOR CATEGORY

HPM
HPFD

EQUIPMENT

ITEM	QUANTITY
None.	

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT:

None.

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.

Historic Property Survey Findings and Recommendations Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Name:	Badge No.:	Grid Map Unit:	Date:
		|__|__|__|__|__|__|__|__|	

Reference Point A:	Reference Point B:	SIHP #: 50-20-97-
X: _____	X: _____	Feature Designation: (Alphabetical) _____
Y: _____	Y: _____	
Z: _____	Z: _____	Field No.: _____

Historic Property Status: ☐ New ☐ Previously Recorded ☐ Uncertain

Brief Description of Historic Property

Criteria of Significance:

- ☐ A. Important events or patterns in history; traditional cultural places
- ☐ B. Associated with important persons
- ☐ C. Excellent or unique example of type or period
- ☐ D. Potential for information

Historic Property Protection Measures

Proposed Activity						
Area Preparation	Surface Clearance	Subsurface Detection	Anomaly Excavation	In Situ Detonation	Construction	Recommendations for Protection
						No Mitigation Measures Required
						Monitoring
						No Activities w/in Historic Property or Feature
						Further Recording, Testing, Data Recovery
						Protective Works

BASIS FOR RECOMMENDATIONS

Historic Preservation Manager Signature:

Name:	Badge No.:	Signature:	Date:

Historic Property Survey Findings and Recommendations Form
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Name	Name of the HPFS, provided by the DMS.
Badge No.	Badge number of the HPFS, provided by the DMS.
Grid Map Unit	GMU the HP is located in. If the property is located in more than one GMU, the GMU in which the majority of the HP resides. Provided by the DMS.
Date	Date property was surveyed. Provided by the DMS.
Reference Point A	The X, Y, Z GPS coordinates of reference point A, provided by the DMS.
Reference Point B	The X, Y, Z GPS coordinates of reference point B, provided by the DMS.
SIHP #	The State Inventory of Historic Places four-part number. Provided by the DMS.
Feature Designation	The HP feature designation, if the property is comprised of multiple features. Provided by the DMS.
Field No.	Temporary field number for property, if SIHP number has not yet been assigned. Provided by the DMS.
Historic Property Status	The status of the historic property, provided by the DMS.
Brief Description of Historic Property	Enter a brief description of the historic property.
Criteria Of Significance	Note criteria applicable to the historic property. (Check one or more boxes.)
Historic Property Protection Measures	For each potential activity in or around the historic property (Proposed Activity columns, on left), check the action recommended to protect the property (Recommendations for Protection column, on right).
Basis For Recommendation	Enter a brief, verbal justification describing the protection that these recommendations will accomplish.
Historic Preservation Manager Signature	Enter the name, badge number, and signature of the Historic Preservation Manager. Enter the date the form is signed.

Grid Map Unit Assessment Findings and Recommendations
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Proposed Activity:	Grid Map Unit: |__|__|__|__|__|__|__|__|

Historic Properties in This Grid Map Unit

SIHP #	Feature #	Field #	Criteria of Significance	Property Type	Property Function	Recommendation for Protection for Proposed Activity

Recommendations for Protection for Grid Map Unit:

☐ No Mitigation Measures Necessary ☐ Monitoring ☐ Further Recording, Testing, Data Recovery ☐ Protective Works

Special Instructions:

Historic Preservation Manager Signature:

Name:	Badge No.:	Signature:	Date:

HPF-03
Rev. 0
06/12/98

Grid Map Unit Assessment Findings and Recommendations
UXO Clearance Project
Kaho`olawe Island Reserve, Hawaii

Instructions	
Proposed Activity	The activity proposed for the grid map unit; provided by the DMS.
Grid Map Unit	GMU the proposed activity is located in; provided by the DMS.
Historic Properties in This Grid Map Unit	The DMS will print out the SIHP #, Feature #, Field #, Criteria of Significance, Property Type, Property Function, and Recommendation for Protection for each historic property in the grid map unit.
Recommendations for Protection	Check all mitigation measures that apply.
Special Instructions	Enter any special instructions regarding mitigation activities in this GMU.
Historic Preservation Manager Signature	Enter the name, badge number, and signature of the Historic Preservation Manager. Enter the date the form is signed.

g. Temporary Curation

Supervisor's Statement

1. The Supervisor will sign this statement:
   a. When first assigned as supervisor of the operation.
   b. When an approved change or revision is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has not supervised the operation for more than 15 consecutive days.
2. I have personally reviewed each of the operational steps of this SOP and have no question in my mind that the operation can be performed safely and efficiently using the SOP. I have verified to my satisfaction that my operators have been trained and can do their parts of the operation safely and efficiently, and I have instructed them to follow the SOP without deviation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from the SOP is allowed.

Printed Name	Signature	Badge Number	Date

Operator's Statement

1. The operator will sign this statement:
   a. When first assigned to the operation.
   b. When an approved change is made to the SOP.
   c. During the last two weeks of every quarter.
   d. When he or she has been absent from the job for more than 15 consecutive workdays.
2. I have read or have had read to me and understand the general and specific safety and environmental requirements, personnel and explosive limits, work description, hazard briefing, and inspection requirements necessary to accomplish this operation. I have been thoroughly trained in, and am familiar with, my part of the operation.
3. I will follow the SOP exactly as it is written and approved, and I understand that no deviation from it is allowed.

Printed Name	Signature	Badge Number	Date

Hazard Analysis

ACTIVITY: Temporary Curation | PREPARER: N. Hasan/W. Folk | DATE: 06/12/98

Item no.	Description Of Operation	Description Of Hazard	Effect On Operation	Hazard		RAC without Control	Recommended Control	RAC with Con-trol
				Severity	Probability			
1	Receive archaeological materials collected from the field for curation.	UXO/OE inadvertently contained is contents of collected materials	Explosion/injury	II	E	3	Provide briefing regarding UXO/OE safety prior to beginning lab operations. Establish procedures to stop work of the Laboratory Team and call for UXO Specialist if UXO encountered.	IVE(4)

Operations

OPERATION: Historic Preservation	ACTIVITY NO.: A11-g
ACTIVITY: Temporary Curation	
PURPOSE OF ACTIVITY: To ensure artifacts and samples (except human remains and associated objects) are recorded and prepared for long term storage in accordance with 36 CFR 79.9 (Curation of Federally Owned and Administered Archaeological Collections).	
EXPLOSIVE LIMITS: N/A DISTANCE: ft (m) N.E.W. (lbs):	
PERSONNEL LIMITS: N/A OPERATORS: SUPPORT: OTHER:	

STEP NO. & DESCRIPTION	SPECIFIC INSTRUCTIONS (Safety, Operational, Quality Checks)
1. Record the delivery of each artifact/sample bag to the temporary curation facility in the Laboratory Inventory Book. – (HPFS or HPLD)	(O) The following information should be entered into the Laboratory Inventory Book: a. Date of arrival b. Person delivering material c. Person inventorying material d. Site number, feature number e. Trench number f. Stratum level g. Type of sample (artifact, midden, charcoal, or soil) (O) The standard unit of analysis for data recovery excavations will be the historic property or historic property feature.
Cleaning Artifacts and Samples	
2. Clean artifacts and midden materials.	(S) Provide safety briefing on hazards of UXO. (S) Stop work activities if any materials relating to UXO are encountered in the Lab. O) Remove excess soil or foreign materials that prevent identification and analysis of the items. (O) Cleaning will be limited to moistening items to dislodge soil. (O) Soil, charcoal, and other samples will not be cleaned, but may be dry screened or hand sorted, as required, to concentrate charcoal for dating analysis.
Sorting, Identifying, and Cataloging Artifacts and Samples	
3. Processing of artifacts and samples for laboratory analysis will be carried out in the Temporary Curation Facility.	(O) Sort, identify and catalog artifacts and samples according to Laboratory Analysis procedures presented in Historic Preservation SOP A11 Activity d.2, Laboratory Analysis.

4. Catalog midden samples	(O) Catalog by provenience as flora or fauna a. Catalog fauna as: - land animal or marine animal. - Vertebrate or invertebrate
5. Catalog other samples (charcoal, soil, minerals, plants, etc.)	(O) Catalog provenience and by: a. weight b. moisture content c. general condition d. Purpose of Sample (C14, pollen, mineralogical analysis, general identification)
6. Catalogue records (including field notes, historic property forms, reports, maps, and photographs) in a general inventory list.	
Preparation for Long Term Storage	
7. Place curated items in sturdy cardboard boxes, seal, and clearly label the boxes. – (HPLD)	(O) Boxes will be constructed of acid-free material.
8. Store containers for curation in an orderly manner in the temporary curation facility.	
Inventory	
9. HPLD inspects collections and facilities for damage and deterioration on a monthly basis.	(O) Temporary Curation Facility will be contained within the Range Control building. (O) Maintenance requirements for the Facility will be developed at the time of construction.
10. Report any damage or deterioration of the collection to the HPM and recommend corrective actions.	
11. Inform PUXB and NTR of problems, corrective actions, or recommendations for actions. – (HPM)	

SPECIAL REQUIREMENTS: None.

PERSONNEL BY LABOR CATEGORY

HPLD (1)
HPLT (as required)
HPLA (as required)

EQUIPMENT

ITEM	QUANTITY
Shelving	As required
Cardboard boxes constructed of acid-free material	As necessary

ADDITIONAL PERSONAL PROTECTIVE EQUIPMENT: None.

SPECIAL TRAINING AND REFRESHER REQUIREMENTS:
None.

WAIVERS, EXEMPTIONS, SPECIFIC AUTHORIZATIONS, OR APPROVED DEVIATIONS THAT APPLY TO THIS ACTIVITY:
None.