



Explosives Safety Submission Time-Critical Removal Action Parcel XVI Paint Waste Area Munitions Response

Former Mare Island Naval Shipyard,
Vallejo, California

First Amendment

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TABLE OF CONTENTS

1.	BACKGROUND	1
1.1	RESPONSIBLE PROJECT MANAGER.....	1
1.2	MRS IDENTIFIER AND DESCRIPTION	1
1.3	REGIONAL MAP(S).....	1
1.4	SCOPE OF MUNITIONS RESPONSE.....	1
1.5	HISTORY OF MEC USE.....	2
1.6	PREVIOUS STUDIES OF EXTENT OF MEC CONTAMINATION	2
1.7	REGULATORY STATUTE, PHASE, AND OVERSIGHT.....	3
1.8	JUSTIFICATION FOR NDA/NFA DECISION	3
2.	SAR	3
2.1	NAVFAC FORM 11010/31, “REQUEST FOR PROJECT SITE APPROVAL”.....	3
2.2	ADDITIONAL INFORMATION.....	4
3.	TYPES OF MEC	4
3.1	TYPES AND QUANTITIES OF MEC, INCLUDING MPPEH	4
3.1.1	Encountering MEC Other Than the Selected MGF.....	6
3.1.2	Encountering MEC With Approved Contingency MGFs.....	6
3.2	EXPLOSIVE SOIL AND CONTAMINATED BUILDINGS	6
4.	PROJECT DATES	7
4.1	PROJECT DATES.....	7
5.	MEC MIGRATION	7
5.1	MEC MIGRATION	7
6.	QC/QA	7
6.1	QUALITY DOCUMENTATION.....	7
6.2	PERSONNEL QUALIFICATIONS	7
6.3	QC IMPLEMENTATION	7
6.4	QA IMPLEMENTATION	9
7.	DETECTION TECHNIQUES	9
7.1	DETECTION EQUIPMENT, METHOD, AND STANDARDS	9
7.2	NAVIGATIONAL EQUIPMENT, METHOD, AND STANDARDS.....	10

TABLE OF CONTENTS (Continued)

7.3	DATA COLLECTION QUALITY CONTROL.....	10
7.4	DATA COLLECTION AND STORAGE	10
8.	RESPONSE ACTIONS	11
8.1	RESPONSE TECHNIQUE.....	11
8.1.1	Vegetation Removal.....	11
8.1.2	Munitions Response Techniques	11
8.1.3	MEC Investigation and Recovery Processes	11
8.1.4	Munitions Handling Equipment.....	12
8.2	OPERATIONAL RISK MANAGEMENT	12
8.3	MEC HAZARD CLASSIFICATION, STORAGE, AND TRANSPORTATION.....	14
8.4	MEC AND MPPEH DISPOSITION PROCESSES	14
8.4.1	MEC Disposition	14
8.4.2	MPPEH Disposition.....	14
8.5	EZ ACCESS.....	15
8.6	MECHANIZED MEC PROCESSING OPERATIONS	15
8.7	EXPLOSIVES SOIL.....	16
8.8	CONTAMINATED BUILDINGS.....	16
9.	ENVIRONMENTAL, ECOLOGICAL, CULTURAL, AND/OR OTHER CONSIDERATIONS RELATED TO THE MANAGEMENT OF MEC	16
9.1	ENVIRONMENTAL, ECOLOGICAL, CULTURAL, AND/OR OTHER CONSIDERATIONS RELATED TO THE MANAGEMENT OF MEC.....	16
10.	TECHNICAL SUPPORT.....	17
10.1	EOD, UXO CONTRACTOR, OR OTHER MUNITIONS RESPONSE PERSONNEL	17
10.2	PHYSICAL SECURITY	17
11.	RESIDUAL RISK MANAGEMENT.....	17
11.1	LAND USE CONTROLS.....	17
11.2	LONG-TERM MANAGEMENT	17
12.	SAFETY EDUCATION PROGRAM	18
12.1	SAFETY EDUCATION PROGRAM	18
13.	STAKEHOLDER INVOLVEMENT	18
13.1	STAKEHOLDER INVOLVEMENT	18

TABLE OF CONTENTS (Continued)

14.	CONTINGENCIES	18
	14.1 CONTINGENCIES.....	18
15.	REFERENCES.....	19

LIST OF FIGURES

- Figure 1-1 Regional Map
Figure 1-2 Site Location Map
Figure 1-3 Paint Waste Area Recovered MEC and Radiological Items Location Map
Figure 8-1 Soil Screening Plant Arrangement

APPENDICES

- Appendix A NAVFAC 11010/31 Request for Site Approval/Explosives Safety Certification Package and the following figures:

- Figure A-1 Site Map
Figure A-2 Adjacent Land Parcels Current and Future Use
Figure A-3 Project Exclusion Zones and Nearest Inhabited Buildings
Figure A-4 MEC Storage and Treatment Facilities and Nearest Inhabited Buildings

- Appendix B Correspondence Supporting Adequacy of Fragment Protection Shielding

- Appendix C NOC letter 8020 OPR N711 Ser N71/5590 of 29 Jan 97 (Site Approval for Magazine A-180)

- Appendix D NOC letter 8020 OPR N711 Ser N71/5857 of 4 Nov 94 (Site Approval for Disposal Range No. 2)

NOTE

This ESS First Amendment incorporates the changes regarding mechanized MEC processing operations implemented in DOD 6055.09-STD on 24 March 2009. Revised Section C12.5.8.3.5 of DOD 6055.09-STD Change 1 reclassifies all planned project mechanical operations as “low input” operations requiring only unintentional detonation safety measures, versus the intentional detonation measures previously implemented. Because many sections of the ESS are affected, the entire document has been resubmitted with the First Amendment changes highlighted.

The following is a summary of ESS changes:

- 1. Section 1.1, revised to reflect current assignment of Janet Lear as Navy RPM.*
- 2. Sections 1.7 and 4.1, revised to reflect the change in estimated project completion to Fall of 2009.*
- 3. Section 2.1, revised Table (Summary of Exclusion Zones for Specific MEC Operations at the PWA Site) to reclassify all planned mechanical operations as “low input” operations fitting an unintentional detonation category (per DOD 6055.09-STD Change 1 of 24 Mar 09), with a subsequent reduction in exclusion zone size reflecting the Hazardous Fragment Distance (HFD) of expected munitions items instead of the Maximum Fragment Distance (MFD) reflected in the original ESS.*
- 4. Section 3.1, revised Table (Munition with the Greatest Fragmentation Distance) for the same reasons outlined in the preceding item.*
- 5. Section 8.2, revised text to reflect the reclassification of excavation activities as a “low input” operation. This eliminates the use of the steel excavation shield and the use of soil to cushion dumping of excavated soil into haul trucks, eliminates the necessity of a traffic control plan (exclusion zone arcs no longer reach public roads), and allows continued soil excavation if the larger MGFDF (3-inch/50 cal projectile) is identified without having to incorporate an intermediate screening/removal step. A justification was also added to indicate why the planned excavation activities should be classified as a “low input” operation.*
- 6. Section 8.6, revised text to reflect reclassification of the screening process as a “low input” operation. Also incorporated requirement to segregate soil by excavation area/lift to allow a determination of MEC source areas (facilitate any required step-out excavations to ensure complete removal).*
- 7. Section 10-2, deleted requirement to block sections of public roads to establish excavation exclusion zone.*
- 8. Section 15, revised DOD 6055.09-STD reference to reflect issue of Change 1.*

9. *Figure 1-2, changed to reflect 1.1-inch (104'), 40mm (131'), and 3-in/50 cal (301') exclusion zone arcs.*
10. *Figure A-3, revised to indicate a 301' exclusion zone (reflecting the largest MGF, the 3-in/50 cal projectile) for both the soil excavation and soil screening areas.*
11. *Deleted Figure 8-2 (Excavation Shield Box).*
12. *Deleted Figure 10-1 (Traffic Control Plan).*

1. BACKGROUND

1.1 RESPONSIBLE PROJECT MANAGER

The Navy Remedial Project Manager for the project is:

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1.2 MRS IDENTIFIER AND DESCRIPTION

The current name for the MRS is the Paint Waste Area (PWA) located on the former Mare Island Naval Shipyard (MINS) located in Vallejo, California. Although MINS is a closed naval installation with portions currently being transferred under Base Realignment and Closure (BRAC), the MRS site is still under Navy ownership. Approximately 3.5 acres will be affected by the removal action, with an estimated 25,000 cubic yards of soil requiring mechanical screening.

1.3 REGIONAL MAP(S)

See Figure 1-1.

1.4 SCOPE OF MUNITIONS RESPONSE

Soil within the MRS contains chemical contaminants which require removal and disposition under a Time-Critical Removal Action that was approved by regulatory agencies and partially completed in late 2007. During site preparation of the PWA (Figure 1-2) for the removal action, routine radiation checks of the ground surface revealed elevated readings, which were determined to be associated with several low-level radiological (RAD) luminescent deck markers. The entire upland area of the PWA was therefore scan surveyed by a qualified RAD technician using a calibrated 2-inch by 2-inch unshielded sodium iodide (NaI) scintillation detector (Ludlum Model 44-10) in conjunction with a scaler/ratemeter (Ludlum Model 2221). A total of 133 low-level RAD items, typical of RAD items found at MINS dredge outfall sites,

were recovered from 6 to 18 inches below ground surface by a UXO Technician. Soil removal was halted later in December 2007 when a MEC item (1.1-inch MK1 anti-aircraft round), typical of items found at MINS dredge outfall sites, was recovered near the surface. Locations of the recovered MEC and RAD items are shown as Figure 1-3.

This project involves the excavation and mechanical screening of soil from the PWA to remove MEC. Monitoring for RAD will occur simultaneously with the soil excavation. The excavated soil will be transported to the adjacent Investigation Area H1 (also under Navy ownership) where it will be mechanically screened to remove MEC and then placed in the landfill containment area for use as subgrade fill under the engineered cap. A post-excavation geophysical survey and RAD survey are also planned. The MRS is located within an area potentially containing endangered species habitat and future land use will remain as habitat (open space).

1.5 HISTORY OF MEC USE

There was no documented history of MEC use at the MRS. Mare Island does have a history of MEC contamination at dredge outfall locations originating from the dredging of areas within Mare Island Strait where unauthorized dumping of World War II era anti-aircraft ammunition was apparently commonplace. The MEC item (1.1-inch projectile) and the 133 RAD items already recovered at the PWA, together with other inert metallic scrap, are all indicative of dredge outfall debris. Subsequent review of a 1939 Mare Island map indicated a dredge ditch in the vicinity of the location where the MEC and RAD items were found. It is speculated that use of this dredge ditch may have resulted in material being deposited at the PWA location.

1.6 PREVIOUS STUDIES OF EXTENT OF MEC CONTAMINATION

There have been no previous studies of the specific MRS area since there was no known history of MEC-related uses or contamination. MEC was encountered in December 2007 while preparing to remediate chemically-contaminated soil at the PWA.

1.7 REGULATORY STATUTE, PHASE, AND OVERSIGHT

The remediation of the PWA site is being accomplished as a CERCLA Time-Critical Removal Action. The California Environmental Protection Agency Department of Toxic Substances Control is the lead regulatory agency for the removal action. There is no legally binding completion date, except that the excavated soil are scheduled to be placed under the Investigation Area H1 Containment Area engineered cap which is scheduled for completion in the Fall of 2009.

1.8 JUSTIFICATION FOR NDA/NFA DECISION

N/A (time-critical removal action).

2. SAR

2.1 NAVFAC FORM 11010/31, "REQUEST FOR PROJECT SITE APPROVAL"

Please see the NAVFAC 11010/31 site approval request package, attached as Appendix A, for the transmittal and supporting figures. The following table summarizes the exclusion zones that will be implemented for specific MEC operations at the Paint Waste Area site:

Summary of Exclusion Zones for Specific MEC Operations at the PWA Site

Operation	Sited As	Exposed Site	Basis ⁽¹⁾	ESQD (feet)
Manual Operations ⁽²⁾	Unintentional Detonation	UXO Teams	K40 of the MGF	14 ⁽⁴⁾
Manual Operations ⁽²⁾	Unintentional Detonation	Public & Non-Essential Personnel	HFD of the MGF	104 ⁽⁴⁾
"Low Input" Processing Operations ⁽³⁾	Unintentional Detonation	Essential Personnel	K24 of the MGF ⁽⁵⁾	8 ⁽⁴⁾⁽⁵⁾
"Low Input" Processing Operations ⁽³⁾	Unintentional Detonation	Public & Non-Essential Personnel	HFD of the MGF	104 ⁽⁴⁾
MEC Treatment (up to 25 pounds NEW)	Intentional Detonation	Public & All Personnel	MFD of the MGF	960 ⁽⁴⁾
Magazine (up to 1,000 pounds NEW)	Aboveground Magazine	Non-essential personnel in structures	IBD	1,250
		Non-essential personnel in the open	PTR	750

Notes:

- (1) The Munition with the Greatest Fragmentation Distance (MGFD) is the 1.1-inch MK1 projectile with a net explosive weight (NEW) of 0.037 pound.
- (2) Manual operations include detector-aided visual surface clearance and retrieving anomalies by hand digging.
- (3) “Low input” processing operations include the excavation of soil using an excavator/backhoe (Section 8.2), dumping excavated soil into off-road haul trucks, spreading out wet soil and/or mixing in dry soil using a grader, dumping excavated soil into the grizzly, and mechanical screening of soil.
- (4) Values obtained as described in Section 3.
- (5) Requires shields or barricades designed to defeat hazardous fragments from the MGFD. The K18 distance of 6 feet may be used if essential personnel are provided hearing protection providing ≥ 9 db attenuation.

2.2 ADDITIONAL INFORMATION

See Figures A-1, A-2, A-3, and A-4.

3. Types of MEC

3.1 TYPES AND QUANTITIES OF MEC, INCLUDING MPPEH

The only MEC item encountered at the MRS was a 1.1-inch MK1 projectile, along with several .50 caliber rounds. However, since the MRS contains outfall debris similar to that recovered at two nearby former dredge spoils ponds, the probability exists that other “typical” dredge outfall MEC items may also be present. Outfall MEC items have typically included 20-millimeter (mm) Oerlikon and 40-mm Bofors anti-aircraft ammunition. Much less common were several 3-inch/50 cal MK27 rounds recovered in similar outfall locations on Mare Island. Therefore the 1.1-inch MK1 (0.037 lbs Net Explosive Weight [NEW]) is considered to be the site munition with the greatest fragmentation distance (MGFD), with the 40-mm MK2 (0.187 lbs NEW) and the 3-inch/50 cal MK27 (0.74 lbs NEW) designated as contingency MGFDs.

Munition with the Greatest Fragmentation Distance

Operation	MGFDs		EZs (ft)				
	Description	NEW (lbs)	Fragmentation Effects		Blast Overpressure Effects		
			HFD (ft)	MFD (ft)	K328	K40	K24
Soil Excavation and Screening	1.1-inch MK1	0.037 ^a	104 ^c	830 ^c	110 ^d	14 ^d	8 ^d
	40-mm MK2	0.187 ^j	131 ^e	1,095 ^f	188 ^d	23 ^d	14 ^d
	3-inch/50 cal MK27	0.74 ^a	301 ^b	2,286 ^g	297 ^d	37 ^d	22 ^d
MEC Treatment	1.1-inch MK1	0.037 ^a	104 ^c	830 ^c	960 ^h	117 ^h	71 ^h
	40-mm MK2	0.187 ^j	131 ^e	722 ⁱ	960 ^h	117 ^h	71 ^h
	3-inch/50 cal MK27	0.74 ^a	301 ^b	2,286 ^g	960 ^h	117 ^h	71 ^h

Notes:

- a. Net Explosive Weight (NEW) of the item from OP 1664.
- b. Hazard Fragment Distance (HFD) is the greater distance calculated using TP-16 equations 4-14 and 4-16.
- c. Maximum Fragment Distance (MFD) and Hazardous Fragmentation Distance (HFD) is the greater distance calculated using the TP-16 Primary Fragment Range Generic Equations Calculator (Version 1.0 dated 3/5/08) for “robust” items.
- d. Reflects detonation of a single MGFD (without donor charge).
- e. HFD from the item specific Fragmentation Data Review Form dated 12/31/07.
- f. MFD from the item specific Fragmentation Data Review Form dated 12/31/07.
- g. MFD is the greater distance calculated from OP5 Tables 13-1 and 13-2 for “robust” items (note that if this contingency MGFD is implemented, the MFD for MEC Treatment operations would be reduced by sand cover to bring within the established 1,250 ft range EZ after consultation with NOSSA to obtain item-specific TP-16 Buried Explosion Module data).
- h. Reflects detonation of multiple items and associated donor charges within range limit (25 lbs NEW).
- i. Reflects use of one foot of dry sand cover; from TP-16 Buried Explosion Module (1,095 feet without cover).
- j. Net Explosive Weight (NEW) from the item specific Fragmentation Data Review Form dated 12/31/07.

3.1.1 Encountering MEC Other Than the Selected MGF

Should a MEC item having a greater fragmentation distance than the selected MGF (or the greatest of the contingency MGFs) be encountered while executing the munitions response, the Navy project manager will take the following action:

- Direct the UXO contractor or other munitions response personnel to immediately cease operations.
- Submit an amended ESS to NOSSA N5.

3.1.2 Encountering MEC With Approved Contingency MGFs

Should a MEC item having a greater fragmentation distance than the selected MGF (but less than or equal to one of the contingency MGFs) be encountered by the UXO contractor or other munitions response personnel, the responsible project manager will take the following action:

- Select from among the contingency MGFs in the approved ESS a new MGF that has a fragmentation distance equal to or greater than the newly-encountered MEC item.
- Implement the increased protection required by the new MGF.
- Notify NOSSA N54 of the change in MGF.

If the project manager wants to insert the newly encountered MEC between MEC already identified as contingency MGFs, a corrected ESS may be submitted to NOSSA N54. NOSSA N54 shall then provide EZs specific to the new MGF following guidance found in DDESB Technical Paper 16 (TP 16) "Methodologies for Calculating Primary Fragment Characteristics". The change in the MGF will be documented in the project After Action Report.

3.2 EXPLOSIVE SOIL AND CONTAMINATED BUILDINGS

No explosive soil or contaminated buildings are located within the MRS.

4. PROJECT DATES

4.1 PROJECT DATES

The excavation and screening of excavated soil is expected to begin in May 2009 and be completed by November 2009. The treatment of recovered MEC is expected to be complete by December 2009.

5. MEC MIGRATION

5.1 MEC MIGRATION

MEC migration due to naturally occurring phenomena (flooding, erosion, drought, etc.) is not a realistic concern since the area is flat and thickly vegetated. Frost heave is not an issue since the temperature rarely goes below freezing and never for extended periods.

6. QC/QA

6.1 QUALITY DOCUMENTATION

Quality oversight of project work will be implemented by a MEC-specific addendum to the project Quality Control Plan and by a Navy Quality Assessment Project Plan (QAPP).

6.2 PERSONNEL QUALIFICATIONS

The qualifications of all UXO Technicians performing MEC-related functions will meet or exceed the requirements of DDESB TP18 for their respective jobs.

6.3 QC IMPLEMENTATION

Quality control (QC) measures will be implemented in accordance with the QC requirements contained in a Mechanical Soil Screening Addendum to the original TCRA work plan. The

Mechanical Soil Screening Addendum will implement personnel, equipment, and data QC measures for all site operations. QC measures will insure that the quality of the post-excavation geophysical survey data and the effectiveness of mechanical soil screening activities meet the established data quality objectives (DQOs) for the project. The project DQOs are both qualitative and quantitative statements specifying the quality of data required to support the project.

The following DQOs were identified for the Digital Geophysical Mapping (DGM) survey and the associated data processing and anomaly selection processes. Corrective action for any identified discrepancies will be determined by the project geophysicist, and may include whatever actions considered appropriate, including the resurvey of affected grids and the reprocessing of data.

- Geophysical sensor data are of acceptable precision, sensitivity, accuracy, and completeness.
- Navigation and position data are precise and accurate.
- Data are reproducible and defensible in supporting project objectives.
- Data of sufficient density and quality to detect smallest item in area of interest per metric in addition to larger features (i.e. caches).
- Data processing to decrease noise and lower false positives.
- Signals undergo standardization to support anomaly prioritization.
- Validate anomaly selection criteria positional accuracy.
- Confirm low-amp anomalies are not processing.

QC requirements applicable to the soil excavation and screening relate primarily to the effectiveness of the screen process in removing MEC. Metallic “seed” items (representative of the anticipated MEC items (20mm, 1.1-inch, and 40mm projectiles) placed into soil prior to screening will demonstrate the effectiveness of the screen plant in removing all MEC items. QC inspections of a portion of soil that has successfully passed through the screen plant will also assist in validating the screening process. Identification of MEC or seed items in screened soil will result in correction of the root cause and rescreening of the soil.

Proper control of recovered munitions debris and non-munitions scrap will be maintained through use of DD 1348 (Transfer of Custody) forms signed by a contractor UXO Technician and a qualified Navy representative (munitions debris), or by two contractor UXO Technicians (non-munitions debris). The primary concern is to prevent the inadvertent release of MEC or munitions scrap to an unauthorized recipient.

6.4 QA IMPLEMENTATION

A QA Plan will be developed at the Navy's discretion to independently assess the quality of project work. The QA plan will be implemented by an independent third party.

7. DETECTION TECHNIQUES

7.1 DETECTION EQUIPMENT, METHOD, AND STANDARDS

An AN-19/2 Ordnance Locator and Schonstedt magnetometer will be used to support the soil excavation phase of the project. Satisfactory operation of the handheld instruments will be verified daily using an established onsite test target.

A Geonics EM61 MK 2 electromagnetic system will be used for the verification DGM survey of the MRS to be performed after soil excavation activities are completed. The Geophysical Prove-Out (GPO) Plan, based on the use of an existing GPO grid, will verify the effectiveness of equipment, operators, and data processing techniques utilizing a test grid established in similar soil conditions. Targets in the test grid include those typically found at other Mare Island dredge outfall locations, including 20mm, 40mm, and 3-inch anti-aircraft projectiles. The GPO evaluation will demonstrate the capability of the equipment to locate items as small as 20-mm projectiles at the detection limits of the instrument in similar soil conditions.

All geophysical survey instruments will be used in accordance with the Hazards of Electromagnetic Radiation to Ordnance (HERO) restrictions specified in NOSSA Letter Serial N482/1243 of August 23, 2005 (NOSSA, 2005).

7.2 NAVIGATIONAL EQUIPMENT, METHOD, AND STANDARDS

A Trimble Real Time Kinematic (RTK) Global Positioning System (GPS) receiver will be used with the EM61 system to determine and record anomaly position information with an expected accuracy of 0.1 feet.

7.3 DATA COLLECTION QUALITY CONTROL

Performance of the Geonics EM61 MK 2 data collection personnel and equipment will be demonstrated at the existing Geophysical Prove-Out area in the South Shore Area that was established to support the 2006 geophysical surveys of the Production Manufacturing Area and South Shore Area. The system will also be checked at the beginning and end of each workday following the QC criteria (i.e., equipment warm-up, sensor nulling, static, static spike, cable shake, etc.). Additional function checks may be performed throughout the day, as the operator deems necessary. The data from each sensor test will be compared with data collected on previous days. If there is a significant change in results, the instrument will be rechecked. If the difference in the data cannot be accounted for, the instrument will be taken out of service until repaired.

Navigation accuracy of the RTK GPS system will be verified each day at a known control point to ensure an accuracy of less than 0.1 feet offset.

7.4 DATA COLLECTION AND STORAGE

The geophysical teams will provide raw instrument data, digital records, and field notes to the Site Geophysicist within 24 hours after it is collected. The digital data will be an ASCII-delimited file (XYZ) format suitable for data analysis. All data related to the DGM surveys will be managed using specialized techniques that include the use of U-Hunter and Oasis Geosoft software. Descriptive attribute information about the field surveys, targets, and dig lists will be stored and maintained in a centralized, project master database in a Microsoft® format. This database will contain all QC statistics and processing parameters collected, performed, and calculated on the DGM data. All spatial data will be managed using GIS, and will be stored in

ESRI-compatible GIS file formats, primarily ArcInfo coverage's and ArcView shape files. All data will be provided electronically to the Navy and will be backed up on the contractor's internal network and project workstation.

8. RESPONSE ACTIONS

8.1 RESPONSE TECHNIQUE

8.1.1 Vegetation Removal

The site was previously cleared to support the initial contaminated soil removal that led to the discovery of MEC. Any vegetation that may interfere with the soil removal operations or subsequent geophysical survey will be cut using only handheld string trimmers.

8.1.2 Munitions Response Techniques

Soil within the MRS will be excavated in 12-inch layers utilizing mechanized equipment (backhoe/excavator). Excavation of the soil in layers will continue until no additional metallic anomalies or RAD items can be detected utilizing hand held survey instruments. A post-excavation digital geophysical survey utilizing an EM61-MK2 system will be completed in concert with a high-density RAD survey to confirm that all remaining items have been removed. Any detected metallic or RAD anomalies will be investigated.

8.1.3 MEC Investigation and Recovery Processes

All MEC items recovered from dredge outfall sites to date have been unfired and therefore are categorized as discarded military munitions (DMM).

The excavated soil will be placed into off-road haul trucks and transported to the nearby screen plant location. Soil will be stockpiled pending screening and, if excessively wet, spread out and allowed to dry or combined with drier soil using earth-moving equipment to facilitate the screening process. The soil will be placed into the screen plant that will consist of a 6-inch grizzly, and vibratory 2-inch and ¾-inch screens. Magnets will be positioned above the

conveyors before the 2-inch screen and after the ¾-inch screen. Ferrous material collected by the magnets will be discharged in separate hoppers for later inspection and categorization by UXO Technicians. The screen plant will run unattended, except for the loading of unscreened soil and the movement of oversized (reject) material and sifted soil to facilitate continued plant operation. Equipment operators performing soil handling operations, and other essential personnel remaining inside the established exclusion zone (Hazardous Fragment Distance) during screen plant operations will be protected against fragments and blast overpressure by fragment shielding and by maintaining a minimum K24 distance from the screen plant. DDESB-approved overpressure-mitigating engineering controls (standard hearing protection devices) may be used to provide an equivalent level of protection (2.3 psi) to allow a reduction in the K24 distance to K18. All other personnel will retreat outside the exclusion zone during operation of the plant. Cleaning of screens will be performed only while the screen plant is shut down.

Recovered material will be categorized and managed appropriately as either MEC, MPPEH, or non-munitions related scrap.

8.1.4 Munitions Handling Equipment

Recovered MEC is anticipated to be smaller items (20-mm to 3-inch ammunition) that will not require mechanized handling equipment. Items will be packaged in metal ammunition cans with inert filler material. Cans will be sealed and secured in a wooden pickup bed liner for transport to the storage magazine.

8.2 OPERATIONAL RISK MANAGEMENT

The inherent risks involve the possibility of inadvertent detonation of MEC items, and the resulting fragmentation and blast overpressure hazards to site workers and the public. The public will be protected from fragments and blast overpressure by the established EZ. Equipment operators (essential personnel) performing tasks within the established exclusion zones will be protected by 3-inch cast Plexiglas fragment shielding and a K24 blast overpressure distance. DDESB-approved overpressure-mitigating engineering controls (standard hearing protection devices) may be used to provide an equivalent level of protection (2.3 psi) to allow a reduction in

the K24 distance to K18. The 3-inch cast Plexiglas material was determined to be adequate protection for the site MGF and contingency MGFs by the USACE, Huntsville (Michelle Crull). Email correspondence supporting this determination for a previous Mare Island MEC removal project (Marine Corps Firing Range) is included in Appendix B.

The following mechanized processing operations to be employed during the project are classified as “low-input” operations by Section C12.5.8.3.5 of DOD 6055.09-STD Change 1 dated 24 March 2009 (DOD, 2009):

- Dumping of excavated soil from into and out of haul trucks.
- Using mechanized equipment such as a grader to spread out wet soil and/or adding dry soil.
- Dumping of excavated soil into the screen plant grizzly.
- Operation of the screen plant equipment (including grizzly, vibratory screens, and metal separation magnets).

The mechanized excavation of soil using an excavator/backhoe is also considered to be a low-input operation for this project, based on the following:

- The anticipated MEC items are smaller (20-mm and 1.1-inch anti-aircraft ammunition based on the items recovered at other dredge outfall areas) and are not likely to be contacted by the excavator bucket.
- All MEC items recovered on Mare Island have been classified as DMM, due to their unfired condition and badly deteriorated fuzes that would prevent them from functioning as designed.
- Soil will be excavated in 12-inch lifts, using a horizontal dragging motion of the excavator bucket toward the operator. This would result in any potential detonation being shielded by ~1 foot of soil and the excavator bucket; fragment shielding would provide protection for the operator.
- The soft clay nature of the soil will cushion mechanical impact forces on any MEC items that might be present and minimize the likelihood of an unintentional detonation.

8.3 MEC HAZARD CLASSIFICATION, STORAGE, AND TRANSPORTATION

MEC that is determined safe to move and transport by the UXO Safety Officer (UXOSO) will be packaged and transported to the MEC storage magazine on dredge pond levee roads (items will not be transported over public roads). The location and corresponding Inhabited Building Distance (IBD) Explosives Safety Quantity-Distance (ESQD) footprint of the existing NOC (NOSSA) site approved storage magazine (Building A180 Magazine) is shown on Figure A-4 of Appendix A. The storage site, with an established 1,250 foot ESQD footprint (IBD) and a limit of 1,000 lbs NEW, was site-approved for the storage of recovered MEC in 1997 (site approval is attached as Appendix C). Access into the ESQD is controlled by the Navy and is restricted by a series of fences and locked gates. Items will remain in temporary storage in Building A180 Magazine pending thermal treatment at the onsite treatment range.

8.4 MEC AND MPPEH DISPOSITION PROCESSES

8.4.1 MEC Disposition

Recovered MEC will be thermally treated (detonated) at the onsite treatment range. The location and corresponding exclusion zone footprint of the existing NOC (NOSSA) approved treatment range (Disposal Range #2) is also shown on Figure A-4 of Appendix A. The range was site-approved for the disposal of recovered MEC in 1994 (site approval is attached as Appendix D), with an established 1,250 foot exclusion zone that is controlled by the Navy and is restricted by fencing and gates. Since an established demolition area exists, no in-grid consolidated shots will be required. Treatment of MEC items with MFDs exceeding the established range EZ of 1,250 ft will utilize sand cover, as discussed in Section 6 of DDESB Technical Paper 16 (DDESB, 2005), to reduce the size of the required exclusion zone to bring it within range limits.

8.4.2 MPPEH Disposition

MPPEH will be segregated and placed into a locked container for storage, under the control of the SUXOS, pending transfer for disposal. MPPEH will be inspected and certified to be free of explosives or related materials by the project Senior Unexploded Ordnance Supervisor (SUXOS)

and a qualified Navy representative before being transferred to a qualified munitions scrap recycling contractor for demilitarization and disposal. MPPEH determined to contain explosives will be thermally treated as described in Section 8.4.1. All MPPEH management procedures will be in accordance with Section 13-15 of NAVSEA OP 5.

8.5 EZ ACCESS

Access to an EZ while munitions response operations are occurring will be limited to essential personnel and authorized visitors. The UXOSO will determine the maximum number of persons (essential personnel and authorized visitors) that can be in the EZ at a given time. Visitor access to the site will be based on the operational risk analysis of the scheduled MEC operations and availability of escorts, as well as a demonstrated visitor need and the completion of visitor safety briefings.

8.6 MECHANIZED MEC PROCESSING OPERATIONS

As described in Section 8.2, the project soil excavation and processing operations are classified as low-input mechanized operations. The protections provided for accidental (unintentional) detonations are therefore considered to be appropriate.

Soil will be excavated in 12-inch thick lifts using an excavator/backhoe and placed into off-road haul trucks for transport to the screen plant site. Soil will be kept segregated throughout the screening process by excavation area and lift to enable determining the source of any recovered MEC items. If required, a dozer or loader will be used to spread out wet soil and/or add dry soil to facilitate screening. Mechanized screening equipment will be used to separate potential MEC items from the excavated soil. The screen plant will consist of a 6-inch static grizzly, 2-inch and ¾-inch vibratory screens, two magnets, and a discharge stacking conveyor. The screen plant will run unattended, except for the loading of unscreened soil and the movement of oversized (reject) material and sifted soil by fragment-shielded equipment operators to facilitate continued plant operation. Maintenance and cleaning of the screen plant will be performed with the plant shut down. A diagram of the planned screen plant arrangement is shown on Figure 8-1.

8.7 EXPLOSIVES SOIL

No known explosives soil is present in the MRS.

8.8 CONTAMINATED BUILDINGS

No buildings are located in the MRS.

9. ENVIRONMENTAL, ECOLOGICAL, CULTURAL, AND/OR OTHER CONSIDERATIONS RELATED TO THE MANAGEMENT OF MEC

9.1 ENVIRONMENTAL, ECOLOGICAL, CULTURAL, AND/OR OTHER CONSIDERATIONS RELATED TO THE MANAGEMENT OF MEC

The MRS is primarily an upland area surrounded by non-tidal wetlands presumed to be suitable habitat for the endangered salt marsh harvest mouse (SMHM). A magnetometer-assisted sweep of the pickleweed-dominated wetlands immediately adjacent to the upland portion of the area indicated that buried metal debris extends into the wetlands for 25 to 75 feet, primarily along the southern and western extent of the upland. Therefore an Endangered Species Act formal consultation with the US Fish and Wildlife Service (USFWS) has been initiated to address the potential step-out into the adjacent pickleweed wetlands. An existing informal consultation with USFWS was completed in 2007 for the upland portion of the site which includes appropriate mitigation measures to avoid impacts to the SMHM.

In addition to MEC hazards, the site is known to contain low-level RAD items. The excavation will proceed in one-foot intervals with individual scan surveys using radiation detectors before each lift to locate and remove RAD items prior to mechanical screening of the soil/debris for removal of MEC. A post-excavation high-density radiation survey using an ultra-sonic range and detection system (USRADS) will be performed similar to the DGM survey previously described.

10. TECHNICAL SUPPORT

10.1 EOD, UXO CONTRACTOR, OR OTHER MUNITIONS RESPONSE PERSONNEL

The team of UXO Technicians performing the MEC screening should require no additional munitions response support. The only exception would be the discovery of a MEC item that could not be safely moved, since donor explosives are not stored onsite and are not available on short notice. In that event, the Travis Air Force Base EOD unit has an agreement with the Navy and could support.

10.2 PHYSICAL SECURITY

The MRS is located in a restricted wetland area not readily accessible to the public. The site is secured by a combination of natural barriers (wetlands) and a gate on the only access road to the site as shown on Figure 1-2. Access to both the MRS excavation site and the soil screening facility will be strictly controlled during operation.

No donor explosives will be stored onsite; explosives for treatment operations will be brought in daily by a local supplier. The MEC storage facility is an existing site-approved magazine structure located in a restricted area and protected by several layers of fencing/gates.

11. RESIDUAL RISK MANAGEMENT

11.1 LAND USE CONTROLS

Not applicable (time-critical removal action).

11.2 LONG-TERM MANAGEMENT

Not applicable (time-critical removal action).

12. SAFETY EDUCATION PROGRAM

12.1 SAFETY EDUCATION PROGRAM

The site is currently restricted and is under the control of the Navy. To ensure that all persons who may enter the site in the future are aware of the potential hazards associated with possible remaining munitions, a safety education program will be implemented. The education program will place emphasis on potential future passive use by recreational visitors (public trail) and also will include appropriate covenants, deed restrictions, and intrusive work procedures.

13. STAKEHOLDER INVOLVEMENT

13.1 STAKEHOLDER INVOLVEMENT

All potential stakeholders have been involved throughout the planning stages of the TCRA. A fact sheet, summarizing the planned TCR remedial activities, was prepared and mailed to all Mare Island residents, landowners, and tenants, and to several hundred other potentially interested individuals and organizations in Vallejo and the surrounding communities. Presentations to the public detailing progress of previous soil removal activities including discovery of MEC and RAD at the PWA, and planning for the current MEC/RAD removal project at the PWA have been made at recent meetings of the Mare Island Restoration Advisory Board.

14. CONTINGENCIES

14.1 CONTINGENCIES

Contingency MGFs have been identified in Section 3.2. No other contingency actions are anticipated.

15. REFERENCES

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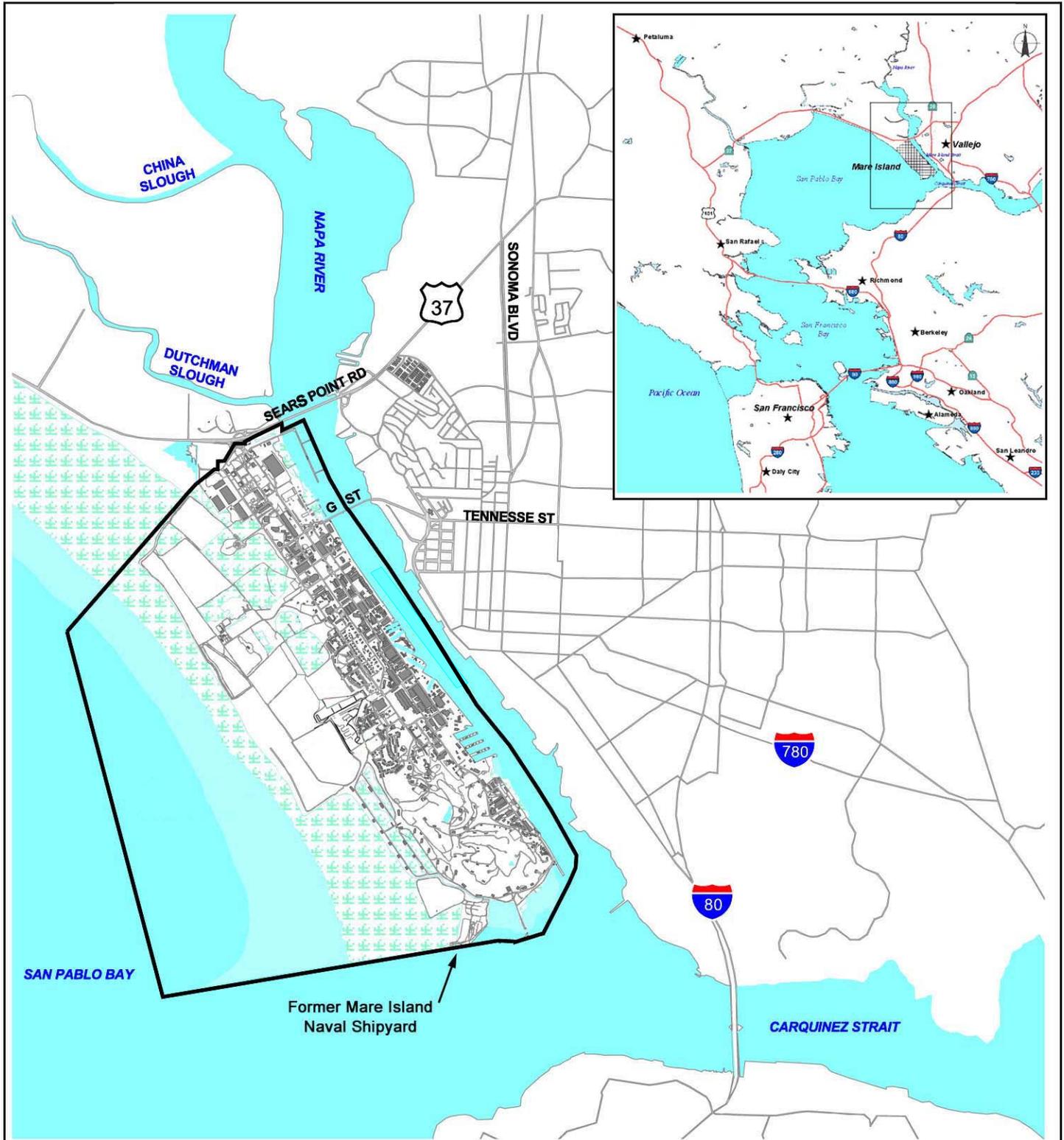
Roy F. Weston, Inc. 2001. *Revised Draft Summary Report, Unexploded Ordnance Intrusive Investigation. Dredge Spoils Ponds, Mare Island, Vallejo, California*.

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FIGURES



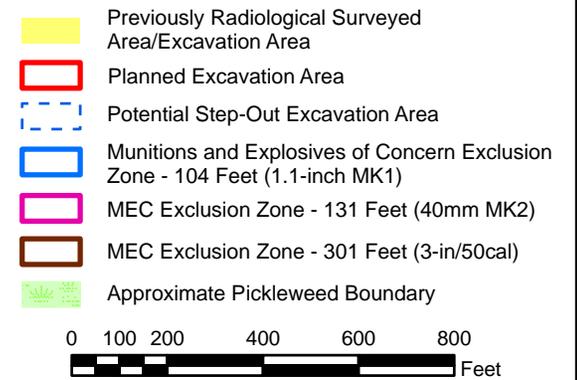
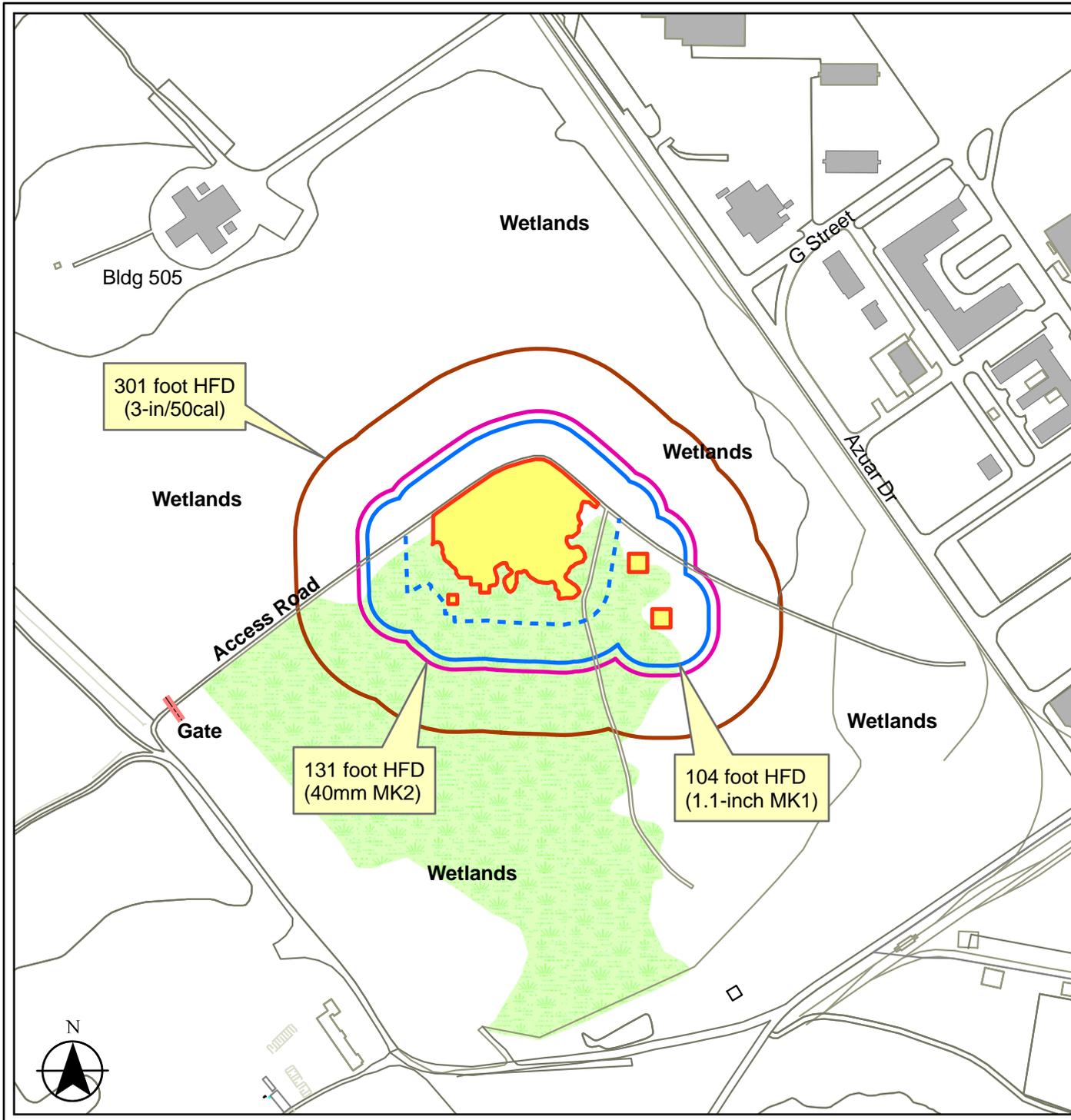
NOT TO SCALE

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San Diego, California

**FIGURE 1-1
REGIONAL MAP**

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California

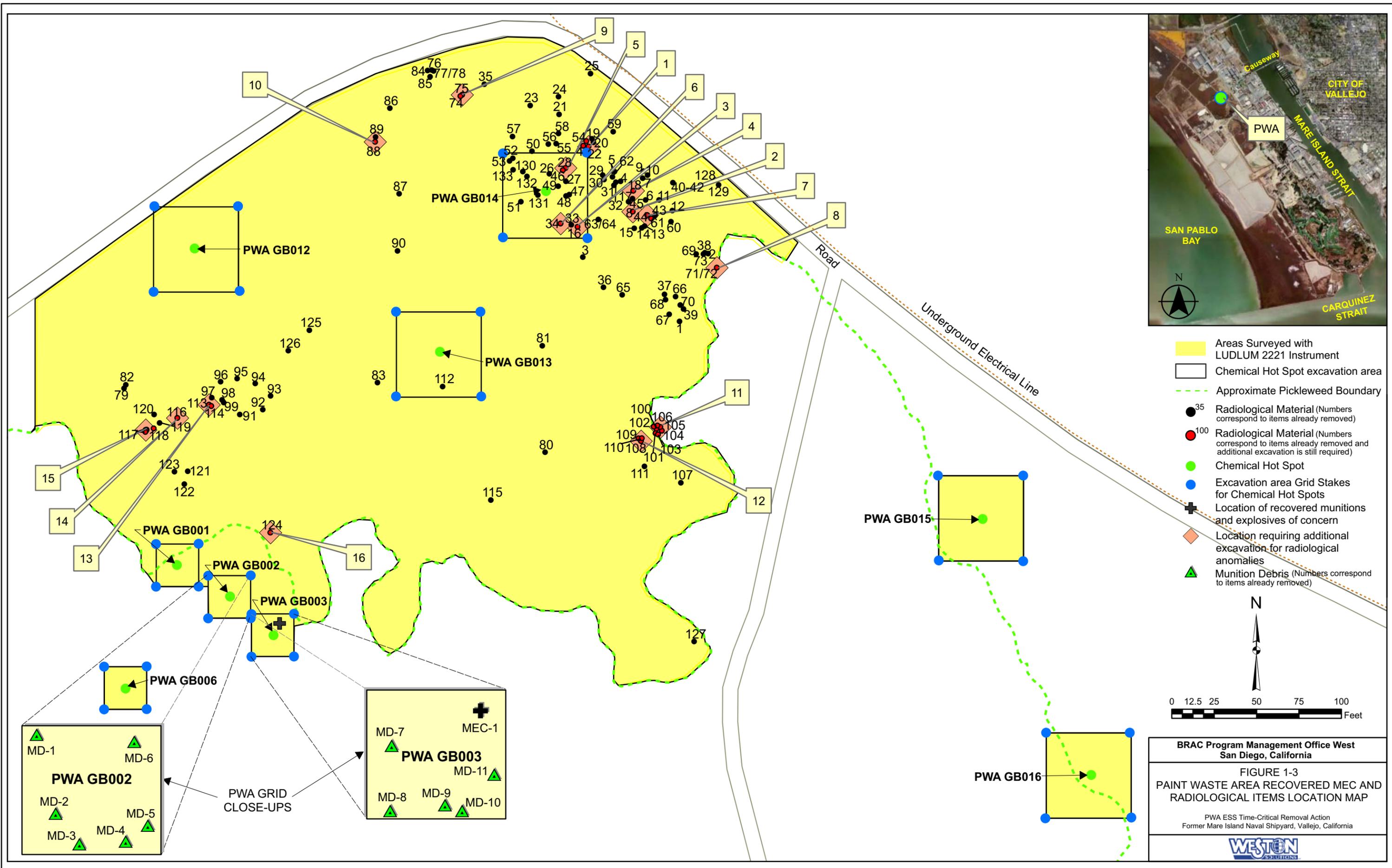




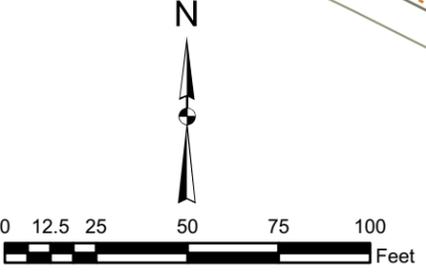
**BRAC Program Management Office West
San Diego, California**

**FIGURE 1-2
SITE LOCATION MAP**

PWA Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



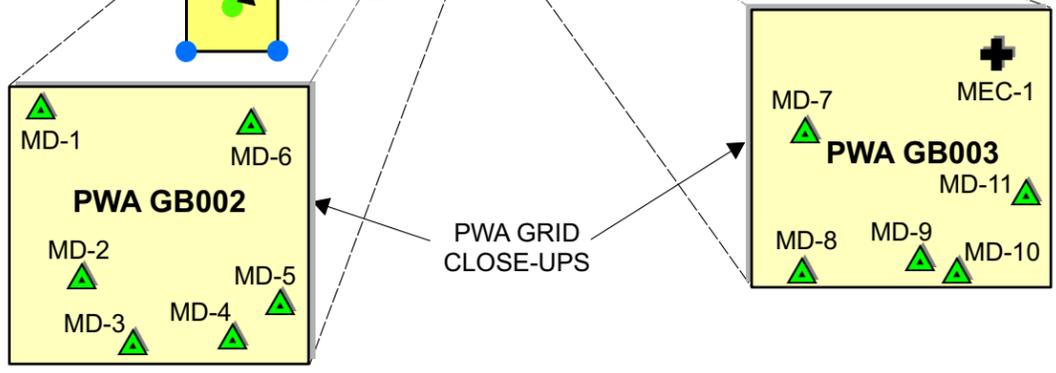
- Areas Surveyed with LUDLUM 2221 Instrument
- Chemical Hot Spot excavation area
- Approximate Pickleweed Boundary
- ³⁵ Radiological Material (Numbers correspond to items already removed)
- ¹⁰⁰ Radiological Material (Numbers correspond to items already removed and additional excavation is still required)
- Chemical Hot Spot
- Excavation area Grid Stakes for Chemical Hot Spots
- + Location of recovered munitions and explosives of concern
- Location requiring additional excavation for radiological anomalies
- Munition Debris (Numbers correspond to items already removed)

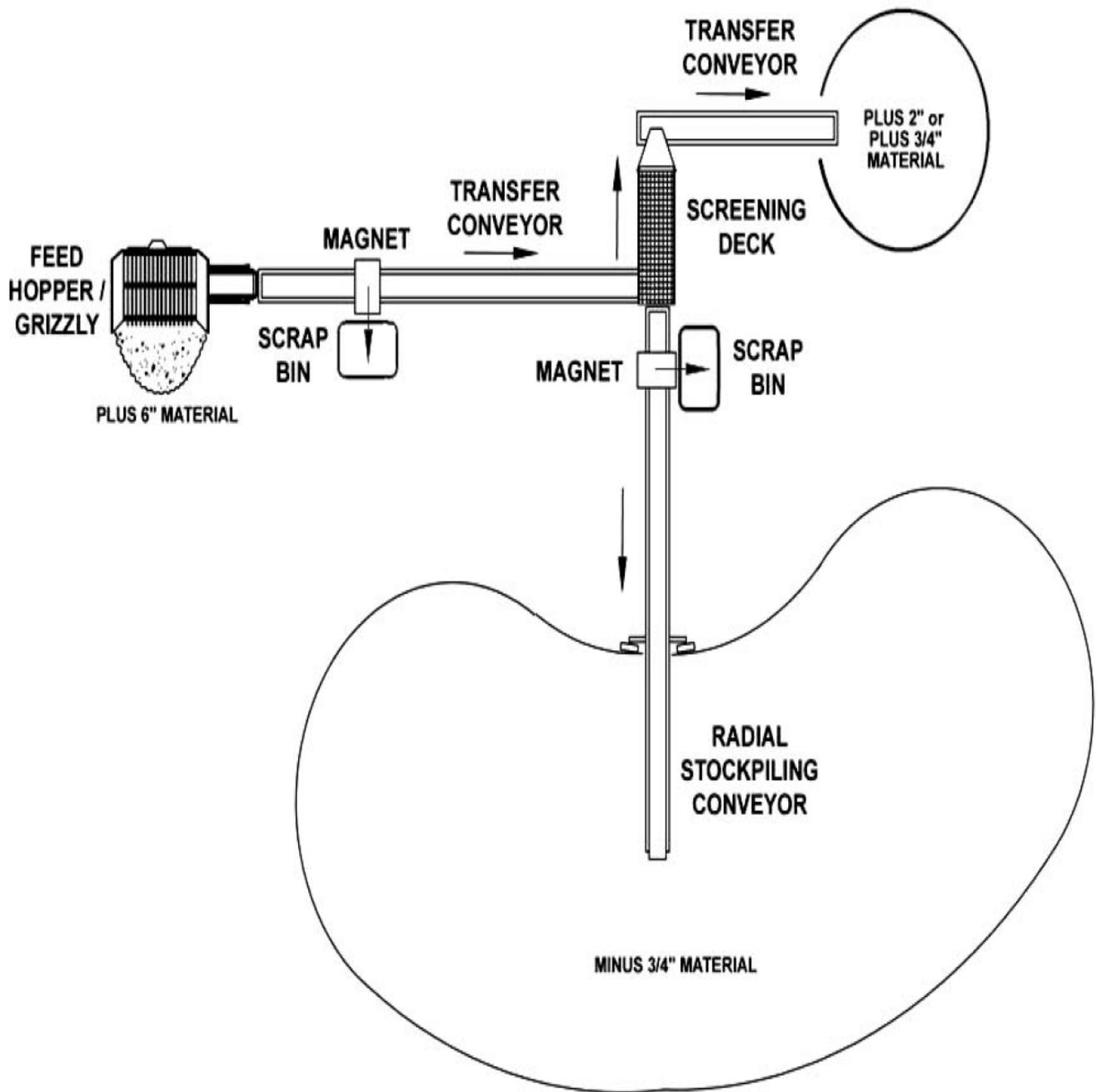


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**FIGURE 1-3
PAINT WASTE AREA RECOVERED MEC AND
RADIOLOGICAL ITEMS LOCATION MAP**

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



BRAC Program Management Office West
San Diego, California

FIGURE 8-1
SOIL SCREENING PLANT ARRANGEMENT

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



**APPENDIX A
NAVFAC 11010/31 REQUEST FOR
SITE APPROVAL/EXPLOSIVES SAFETY
CERTIFICATION PACKAGE**

REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (REV. 5-2001)

PART I

INSTRUCTIONS IN NAVFACINST 11010.45

SECTION A – INSTALLATION SUBMISSION

1 To **Naval Ordnance Safety and Security Activity (N7)** 2 From **Naval Facilities Engineering Command Southwest**

3 Program Year 4 Cost (\$000) 5 Type Funding 6 Activity UIC: **N68711** 7 Date: **April 2009**

8 Category Code and Project Title: **Paint Waste Area Time-Critical Removal Action, Former Mare Island Naval Shipyard, Vallejo, California** 9 Project Number: **N/A**

10 Type of Project: New Construction, Relocation of Structure, Other, Change Use, Maintenance and/or Repairs, Addition to Existing Facility, Repair by Replacement, Major Modification to Existing Facility, Demolition

11 Type of Request: Airfield Safety Site Approval, Explosives Site/Safety Certification, EMR Site Approval, Resubmittal or Standard Site Approval (No Safety Criteria Involved)

12 Project Description:
 The project will supplement the chemically contaminated soil removal activities already completed at the site by removing and mechanically screening soil to recover dredge outfall debris that could represent Munitions and Explosives of Concern (MEC).
 See attached Explosives Safety Submission for details.

13 4 Sets of Project Maps Attached 14 4 Sets Part II Division(s) A Attached

SECTION B – EFD REVIEW

1 Name/Code/Phone No. of Reviewer/E-Mail Address: 2 Date Received:

3 Evaluation:

4 Safety Review Requested (check appropriate box(es)):
 NOSSA DDESB SPAWAR NAVAIR CNO OTHER

5 Date Forwarded:

6 Date of Safety Certification: NOSSA DDESB SPAWAR NAVAIR CNO OTHER

SECTION C – FINAL SITE APPROVAL ACTION

1 Approvals: Site Approved, Site Disapproved, Deferred/Returned, Explosives Safety Certification Approved, Explosives Safety Certification DISAPPROVED, Interim Construction Waiver Approved

2 Certification Identification:

3 Remarks:

4 Other Approvals: Airfield Safety Waiver Required, Final Explosives Safety Review Required

5 Approving Official: 6 Date:

PART II DIVISION A-EXPLOSIVES SAFETY

INSTRUCTIONS IN NAVFACINST 11010.45

1. NEW/Class/Division/ESQD arcs* of project.
See Section 3 of the attached Explosives Safety Submission.

2. CNO Waivers and Exemptions:
 N/A

3. Personnel (numbers)
MEC storage facility: Three persons may be present during storage and removal of MEC at Magazine A180.
MEC treatment facility: Four persons may be present during placement of MEC and donor charges.
Excavation site: Six persons may be present at any time within each MEC exclusion zone.
Soil Screen Plant: One person (soil loader) may be present during plant operation.

	Proposed	Existing
Military:		
Civilian:	19	
Other:		
Total:	19*	

* Total number of personnel will be less than 19 since all tasks will not be performed concurrently.

4. Facility Number/Type	Personnel	NEW	Class/Division	Distance* Actual/Required
Paint Waste Area	6	(0.037 lbs NEW) 1.1-inch anti-aircraft round	1.1	104 ft / 104 ft
Soil Screening Site	6	(0.037 lbs NEW) 1.1-inch anti-aircraft round	1.1	104 ft / 104 ft
Magazine A180 (MEC storage)	3	1,000 lb	1.1	1,250 ft / 1,250 ft
Disposal Range #2 (MEC treatment)	4	25 lb maximum	1.1	1,250 ft / 1,250 ft

5. Siting Rationale:

Proposed siting rationale will adequately protect the public and essential/non-essential site personnel from the effects of an intentional or unintentional detonation of the site MGFD.

See attached Explosives Safety Submission for details.

*Distance from project. Specify IB: (Inhabited Building); IL: (Intraline); IM: (Intermagazine); PTR: (Public Transportation Route); B (Barricaded); UB: (Unbarricaded)

6. Signature of Public Works/Base Civil Engineer (Name/Code) Incl E-Mail Address

[Handwritten Signature]

9. Signature of Explosive Safety Officer/Installation Safety Officer
 Incl E-Mail Address

[Handwritten Signature]
 L.Maggini@WestonSolutions.com

7. Telephone Numbers

(DSN) 915-743-4720

8. Date

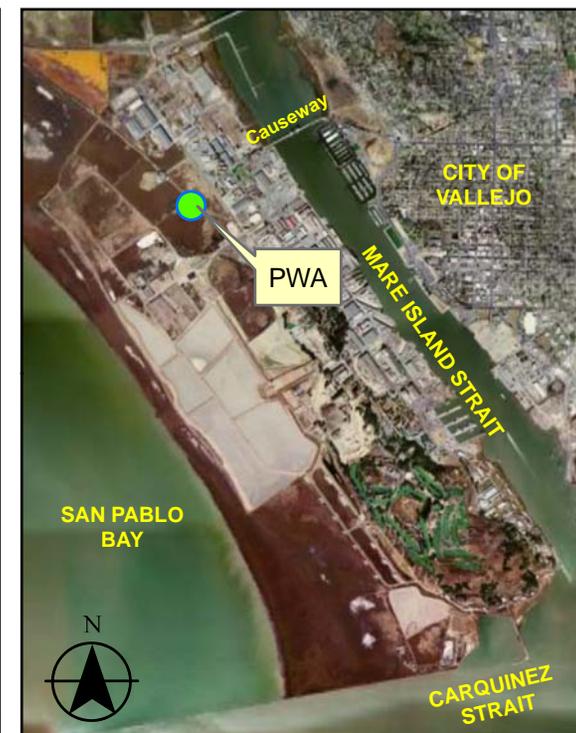
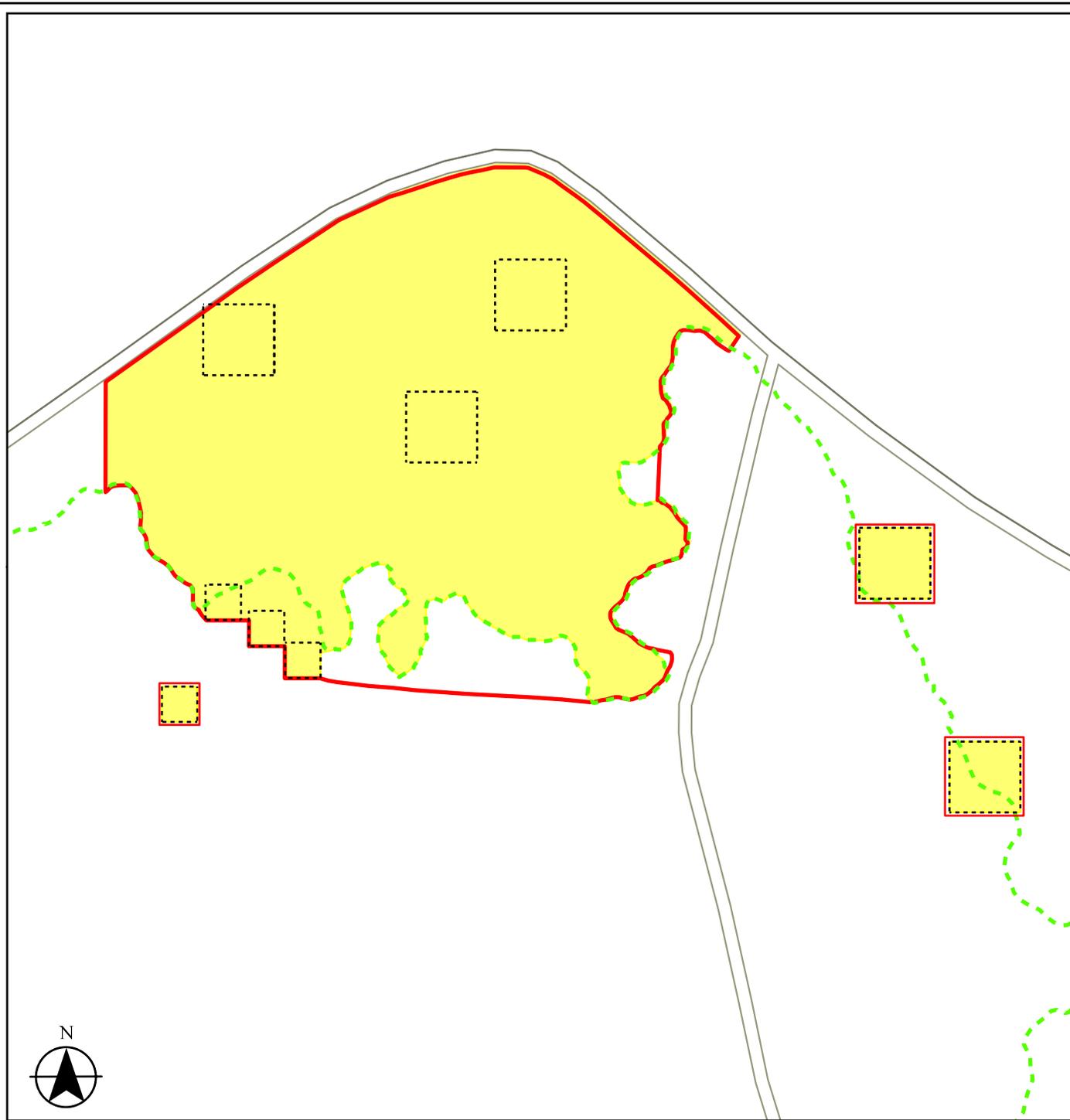
4/9/09

10. Telephone Numbers

(707) 562-3310
 DSN

11. Date

April 2009



- Previously Surveyed Areas
- Survey Boundary
- Non-Rad Hotspot Area
- Pickleweed Boundary

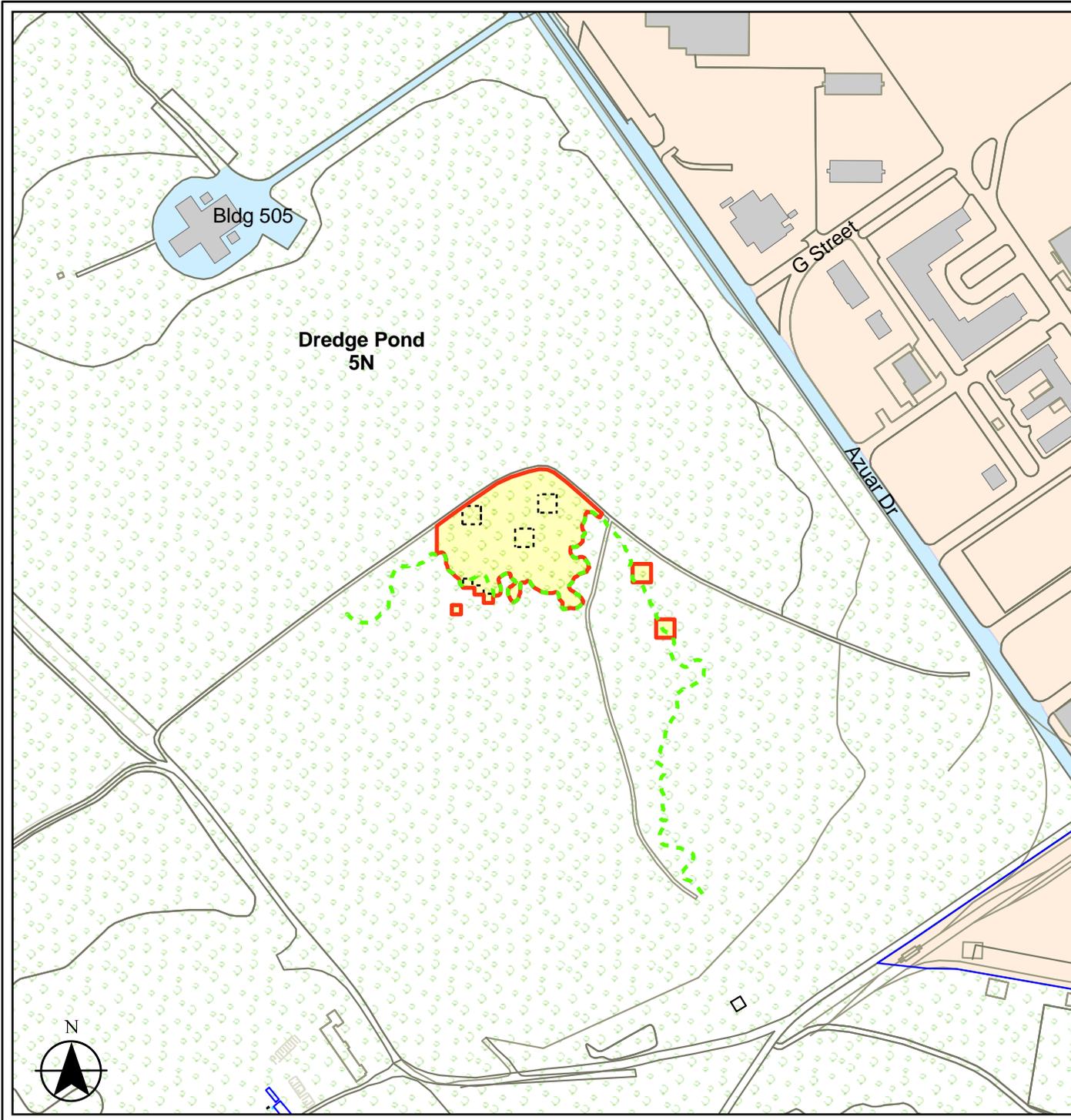


**BRAC Program Management Office West
San Diego, California**

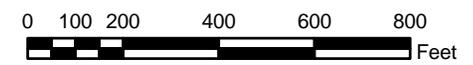
**FIGURE A-1
SITE MAP**

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California





-  Open Space
-  Light Industrial & Commercial
-  Public Access
-  Previously Surveyed Areas
-  Planned Excavation Area
-  Non-Rad Hotspot Area
-  Pickleweed Boundary



**BRAC Program Management Office West
San Diego, California**

**FIGURE A-2
ADJACENT LAND PARCELS
CURRENT AND FUTURE USE**

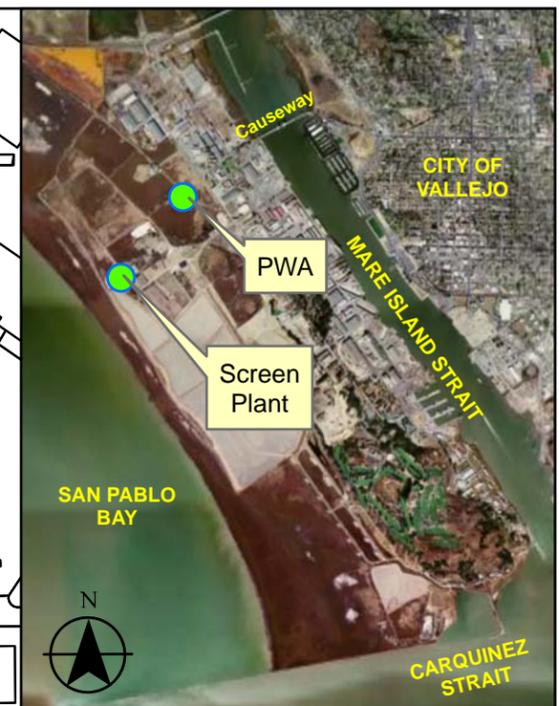
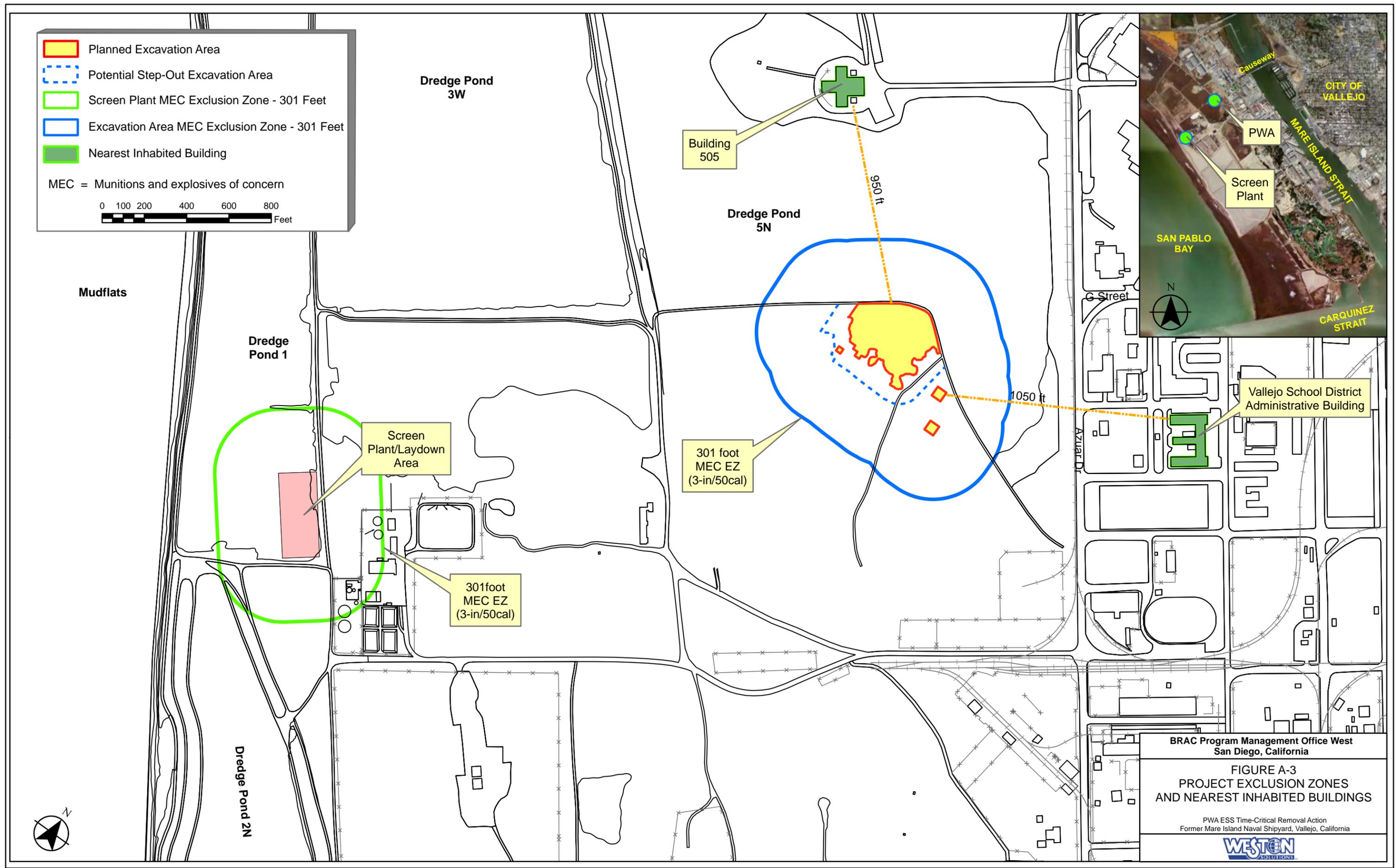
PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



- Planned Excavation Area
- Potential Step-Out Excavation Area
- Screen Plant MEC Exclusion Zone - 301 Feet
- Excavation Area MEC Exclusion Zone - 301 Feet
- Nearest Inhabited Building

MEC = Munitions and explosives of concern

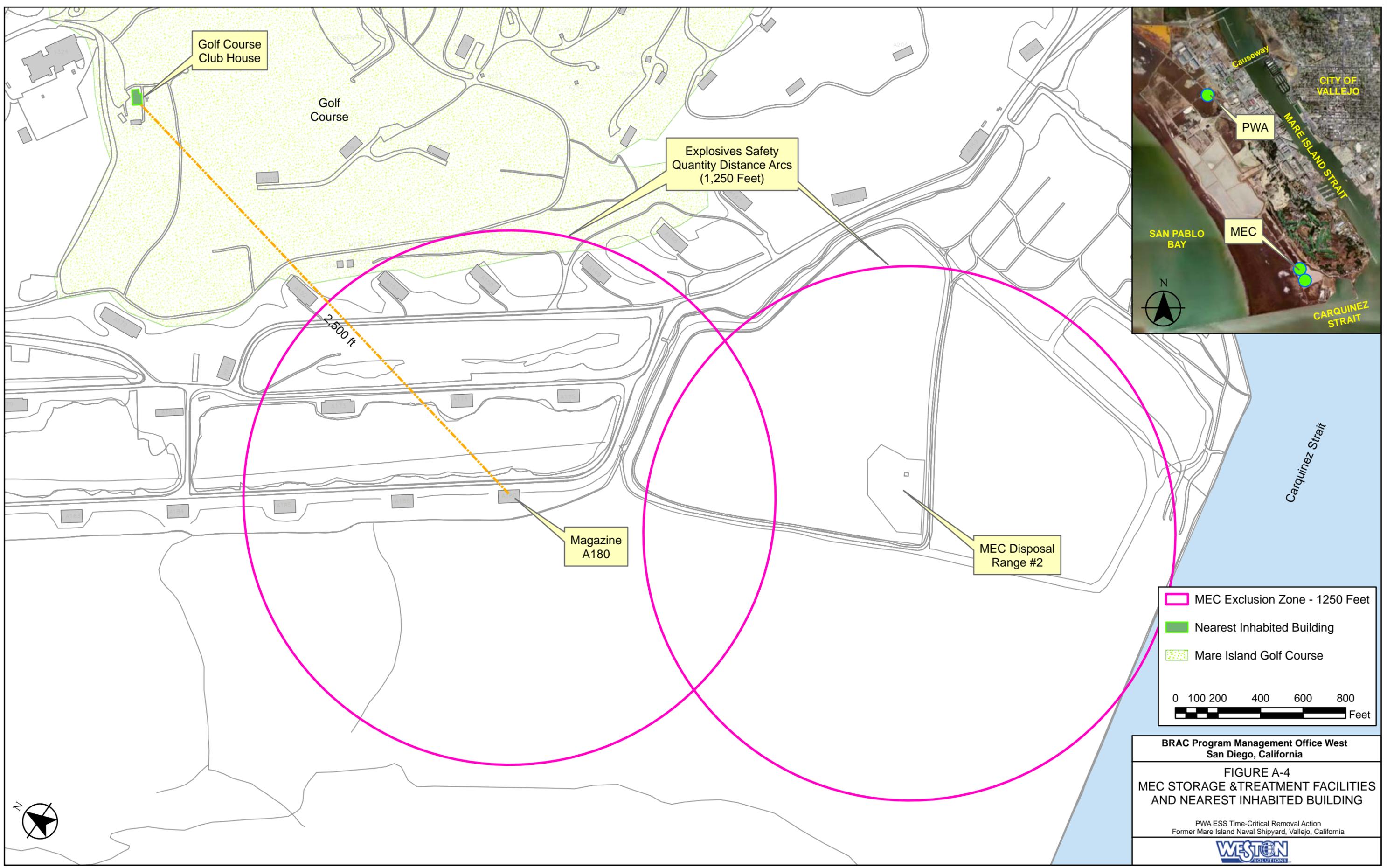
0 100 200 400 600 800 Feet



BRAC Program Management Office West
San Diego, California

FIGURE A-3
PROJECT EXCLUSION ZONES
AND NEAREST INHABITED BUILDINGS

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



BRAC Program Management Office West
San Diego, California

FIGURE A-4
MEC STORAGE & TREATMENT FACILITIES
AND NEAREST INHABITED BUILDING

PWA ESS Time-Critical Removal Action
Former Mare Island Naval Shipyard, Vallejo, California



APPENDIX B
CORRESPONDENCE SUPPORTING ADEQUACY OF
FRAGMENT PROTECTION SHIELDING

FRAGMENTATION DATA REVIEW FORM

Database Revision Date 12/31/07

Category:	HE Rounds	DODIC:	B562
Munition:	40 mm MK2	Date Record Created:	7/30/2004
Primary Database Category:	projectile	Last Date Record Updated:	7/9/2007
Secondary Database Category:	40 mm	Individual Last Updated Record:	Crull
Munition Case Classification:	Robust	Date Record Retired:	

Munition Information and Fragmentation Characteristics

Explosive Type:	TNT
Explosive Weight (lb):	0.18700
Diameter (in):	1.5748
Max Fragment Weight (lb):	0.033061
Critical Fragment Velocity (fps):	3605

Theoretical Calculated Fragment Range

HFD [Range to No More Than 1 Hazardous Fragment per 600 Square Feet] (ft):	131
MFR-V [Vertical Range of Max Weight Fragment] (ft):	847
MFR-H [Horizontal Range of Maximum Weight Fragment] (ft):	1095

Overpressure Distances

Inhabited Building Distance (12 psi), K40 Distance:	24
Inhabited Building Distance (09 psi), K50 Distance:	30
Intentional MSD (0065 psi), K328 Distance:	199

Minimum Thickness to Prevent Perforation

4000 psi Concrete (Prevent Spall):	2.17
Mild Steel:	0.40
Hard Steel:	0.33
Aluminum:	0.86
LEXAN:	3.41
Plexi-glass:	2.08
Bullet Resist Glass:	1.63

Required Sandbag Thickness

Max Fragment Weight (lb)SB:	0.033061
Critical Fragment Velocity (fps)SB:	3605
Kinetic Energy 106 (lb-ft ² /s ²)SB:	0.2148
Required Wall Roof Sandbag Thickness (in)SB:	12
Expected Maximum Sandbag Throw Distance (ft)SB:	25
Minimum Separation Distance (ft)SB:	200

Water Containment System and Minimum Separation Distance:

Max Fragment Weight (lb)W:	0.033061
Critical Fragment Velocity (fps)W:	3605
Kinetic Energy 106 (lb-ft ² /s ²)W:	0.2148
Water Containment System:	5 gal carboys/ inflatable pool
Minimum Separation Distance (ft)W:	200/200



Print This Form

Close Form

Maggini, Larry

From: Crull, Michelle M HNC [Michelle.M.Crull@hnd01.usace.army.mil]
Sent: Thursday, January 13, 2005 8:38 AM
To: Maggini, Larry; Crull, Michelle M HNC
Cc: murraydl@ih.navy.mil; Gemar, Dwight
Subject: RE: Blast Shielding Confirmation

Larry,

Yes, the numbers below are correct. These are based on the THOR equations and analysis in accordance with DDESB TP 16. Plexiglas always results in a lower required thickness than LEXAN. Don't ask me to explain that because I can't but the THOR equations are based on tests done on all of these various materials.

Michelle

From: Maggini, Larry [mailto:L.Maggini@WestonSolutions.com]
Sent: Monday, January 10, 2005 2:56 PM
To: Crull, Michelle M
Cc: murraydl@ih.navy.mil; Dwight Gemar (Gemar, Dwight)
Subject: Blast Shielding Confirmation

Michelle,

Doug Murray at NOSSA suggested that I contact you. Weston has been contracted by the Navy to complete a Mare Island MEC removal project previously awarded to TetraTech FW (Marine Corps Firing Range and 4S Dredge Outfall). The approved ESS for the project contained details of required equipment shielding materials and thicknesses (table below) that were provided by Huntsville. The MPM is a 3 inch-50 cal anti-aircraft round (0.74 lbs Comp A/TNT filler). I'd like confirmation that the table is correct (the Plexiglas and Lexan thickness don't look right in our experience). Thank you.

Construction Material	Required Thickness	Comments
Plexiglas (cast)	2.96"	Most recommended. May be layered. Available COTS.
	Lexan [®] 4.45"	Single Pane
Bullet-resistant Glass	2.46"	Least recommended

Larry Maggini

Weston Solutions, Inc.
 Unexploded Ordnance Program
 Mare Island Site Office, 750 Dump Road
 P.O. Box 2135
 Vallejo, CA 94592-0135
 (707) 562-3310
 Fax (707) 562-3266
 L.Maggini@WestonSolutions.com

APPENDIX C
NOC LETTER 8020 OPR N711
SER N71/5590 OF 29 JAN 97
(SITE APPROVAL FOR MAGAZINE A-180)



DEPARTMENT OF THE NAVY
NAVAL ORDNANCE CENTER
FARRAGUT HALL BLDG D-323
23 STRAUSS AVENUE
INDIAN HEAD MD 20640-5555

8020
OPR N711
Ser N71/5590
29 Jan 97

FIRST ENDORSEMENT on SUPSHIP Portsmouth ltr 8020 Ser 120/272
of 18 Dec 96

From: Commander, Naval Ordnance Center
To: Supervisor of Shipbuilding, Conversion, and Repair, USN,
Portsmouth, Director, SSPORTS Environmental Detachment,
Vallejo, CA

Subj: SITE APPROVAL CHANGE REQUEST FOR MAGAZINE A-180, MARE
ISLAND, VALLEJO, CALIFORNIA

1. Forwarded for continuing action.
2. This project, to reduce the explosives limit of torpedo Magazine A-180 to allow storage of C/D 1.1 explosives in support of removal of buried ordnance, has been reviewed with respect to and meets the explosives safety criteria of reference (a).
3. The new limit for Magazine A-180 is 1,000 pounds net explosives weight (NEW) C/D 1.1 material for dud-fired/unserviceable ammunition.


RICHARD T. ADAMS
By direction

Copy to:
NAVORDCEN ESSOPAC (Code 004) ←
ENGFLDACT West (Code 20)

**APPENDIX D
NOC LETTER 8020 OPR N711
SER N71/5857 OF 4 NOV 94
(SITE APPROVAL FOR DISPOSAL RANGE NO. 2)**

**REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (REV. 4-87)
PART II DIVISION A—EXPLOSIVES SAFETY
INSTRUCTIONS ON REVERSE AND NAVFACINST 11010.44E**

1. **NEW/Class/Division/ESQD area* of project:** Convert the existing site approved demolition training range (Demolition Range #2) to a disposal range with a maximum limit of 25 pounds NEW for use by Navy Explosive Ordnance Disposal personnel in support of Mare Island unexploded ordnance removal operations.

2. **CNO Waivers and Exemptions:** None

3. **Personnel (numbers)**

No Change

	Proposed	Existing
Military:	0	0
Civilian:	0	0
Contractor:	0	0
Other:	0	0
Total:	0	0

4. **Facility Number/Type**

Disposal Range

Personnel

0

NEW

25 pounds maximum*

Class/Division

1.1, 1.2 (except
(18) frag material),
1.3, and 1.4

Distance*

1250 feet

* Actual quantities will be kept as small as possible to mitigate noise impact on surrounding communities.

5. **Siting Rationale:**

The range will be used for the treatment, by open burning/open detonation, of recovered unexploded ordnance materials. The range is a Class D detonation site generating a 1250 foot ESQD arc per OP 5 Volume 1, Table 13-1 Note 4.

The range is exempt from Federal, State, and local permit requirements in support of on-site response actions pursuant to Section 104 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) and Sections 300.120(c) and 300.400(e) of the National Oil and Hazardous Substances Pollution Contingency Plan (NCP, 40 CFR Part 300).

There are no IBD, PTR, or IM arc interfaces. No structures of any type are located in the immediate range area.

*Distance from project. Specify IB, (Inhabited Building); I, (Intraline); M, (Intermagazine); PTR, (Public Transportation Route); B (Barricaded); UB, (Unbarricaded)

6. **Point of Contact:**

John Randell, Mare Island Naval Shipyard Code 106.4

8. **Requested By:**

CDR R. J. WESTBERG, JR.

7. **Telephone Number:**

Commercial (707) 646-6430. DSN 253-6430

9. **Date:**

SEP 16 1994

REQUEST FOR PROJECT SITE APPROVAL/EXPLOSIVES SAFETY CERTIFICATION NAVFAC 11010/31 (REV. 4-87)
PART I
INSTRUCTIONS ON REVERSE AND NAVFACINST 11010.44E

SECTION A

1. To: COMMANDER, WESTERN DIVISION, NAVAL FACILITIES ENGINEERING COMMAND			2. From: COMMANDER, MARE ISLAND NAVAL SHIPYARD		
3. Program Year: 95	4. Cost (\$000): N/A	5. Type Funding: N/A	6. Activity UIC: N00221	7. Date: 9-13-94	
8. Category Code and Project Title: ORDNANCE DISPOSAL RANGE 148-20				9. Project Number: N/A	
10. Type of Project: <input type="checkbox"/> New Construction <input type="checkbox"/> Change Use <input type="checkbox"/> Addition to Existing Facility <input type="checkbox"/> Major Modification to Existing Facility			<input type="checkbox"/> Relocation of Structure <input type="checkbox"/> Maintenance and/or Repairs <input type="checkbox"/> Repair By Replacement <input checked="" type="checkbox"/> Other		11. Type of Request: <input type="checkbox"/> Site Approval <input checked="" type="checkbox"/> Explosives Safety Certification <input type="checkbox"/> Resubmittal
12. Project Description: Convert existing approved demolition training range No. 2 (Ordnance demolition) to an ordnance disposal range with a maximum NEW of 25 pounds. Existing ESQD Arc will not change.					
13. <u>6</u> Sets of Project Maps Attached			14. <u>6</u> Sets Part II Division(s) <u>A</u> Attached		

SECTION B

1. Name/Code/Phone No. of Reviewer: <i>June Packinbeau, Code 09FNP, DSN 494.3767</i>		2. Date Received: <i>27 SEP 94</i>
3. Evaluation:		
4. EFD Action: (check appropriate box(es))		
<input type="checkbox"/> Site Approved <input type="checkbox"/> Site Disapproved <input type="checkbox"/> Returned <input type="checkbox"/> Additional Data	<input type="checkbox"/> Requires NAVFACHQ Approval <input checked="" type="checkbox"/> Explosives Safety <input type="checkbox"/> Airfield Safety <input type="checkbox"/> Electromagnetic Radiation Safety	
5. Date Approval/Forwarding: <i>9.30.94</i>	6. Signature of Approving/Forwarding Official: 	

SECTION C

1. Name and Code of Reviewer:		2. Date Received:
3. Safety Review Requested: (check appropriate box(es))		4. Date:
<input type="checkbox"/> NAVSEA <input type="checkbox"/> CNO <input type="checkbox"/> DDESB <input type="checkbox"/> SPAWAR <input type="checkbox"/> NAVAIR <input type="checkbox"/> OTHER		
5. Date of Safety Certification:		
<input type="checkbox"/> NAVSEA <input type="checkbox"/> CNO <input type="checkbox"/> DDESB <input type="checkbox"/> SPAWAR <input type="checkbox"/> NAVAIR <input type="checkbox"/> OTHER		

SECTION D

1. Approvals:-		2. Certification Identification:	
<input type="checkbox"/> Site Approved <input type="checkbox"/> Site Disapproved <input type="checkbox"/> Deferred/Returned <input type="checkbox"/> Explosives Safety Certification Approved <input type="checkbox"/> Explosives Safety Certification DISAPPROVED <input type="checkbox"/> Interim Construction Waiver Approved		3. Remarks:-	
4. Other Approvals Required:		5. Approving Official:	6. Date:
<input type="checkbox"/> Airfield Safety Waiver Required <input type="checkbox"/> Final Explosives Safety Review Required			

ENCL 1



DEPARTMENT OF THE NAVY
ENGINEERING FIELD ACTIVITY, WEST
NAVAL FACILITIES ENGINEERING COMMAND
900 COMMODORE DRIVE
SAN BRUNO, CALIFORNIA 94066-2402

105
IN REPLY REFER TO:

11010
Ser 09F1JP/P1-212

001 -5 1994

From: Commanding Officer, Engineering Field Activity, West
To: Commander, Department of Defense Explosive Safety Board
Via: Commander, Naval Ordnance Center (N711)

Subj: SITE APPROVAL REQUEST TO INCREASE NET EXPLOSIVE WEIGHT
FOR EXISTING ORDNANCE DISPOSAL RANGE NO. 2, NAVAL
SHIPYARD, MARE ISLAND

Ref: (a) OPNAVINST 8020.8J
(b) NAVFACINST 11010.44E
(c) NAVSEA OP-5, Vol. 1 (Fifth Rev)

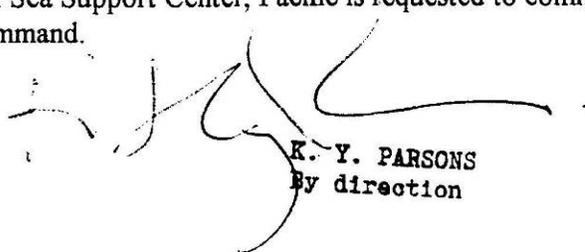
Encl: (1) NAVFAC Form 11010/31 (w/Part II, Div.A)
(2) Site Data Sketch dtd 27 Sep 94
(3) Station Map

1. In compliance with references (a), (b) and (c), enclosures (1) and (2) are forwarded to obtain site plan approval and final explosive safety review. Enclosure (3) is provided as additional information.

2. Site approval is requested to increase the Net Explosive Weight (NEW) of Disposal Range No. 2 from 5 pounds of Class 1.1 to 25 pounds of Class 1.1, 1.2 (except (18) frag material), 1.3, and 1.4 material. This is not a change in function nor does it increase or change the existing Explosive Safety Quantity Distance (ESQD) arc already approved for this range. The range will be used for the treatment, by open burning/open detonation, of recovered unexploded ordnance materials. The range is a Class D detonation site.

3. The existing site is compatible with related, planned, and existing facilities and land use. There is no cost associated with this project.

5. By copy of this letter, Naval Sea Support Center, Pacific is requested to comment directly to Naval Ordnance Command.


K. Y. PARSONS
By direction

Copy to:
NAVSEACENPAC (w/encls)
NAVSHIPYD Mare Island (Code 106.4) (w/encls (1) and (2))

C-861



DEPARTMENT OF THE NAVY
NAVAL ORDNANCE CENTER
FARRAGUT HALL BLDG D-323
23 STRAUSS AVENUE
INDIAN HEAD MD 20640-5555

8020
OPR N711
Ser N71/5857
4 Nov 94

FIRST ENDORSEMENT on EFA West ltr 11010 Ser 09F1JP/P1-212
of 5 Oct 94

From: Commander, Naval Ordnance Center
To: Commanding Officer, Engineering Field Activity West, Naval
Facilities Engineering Command

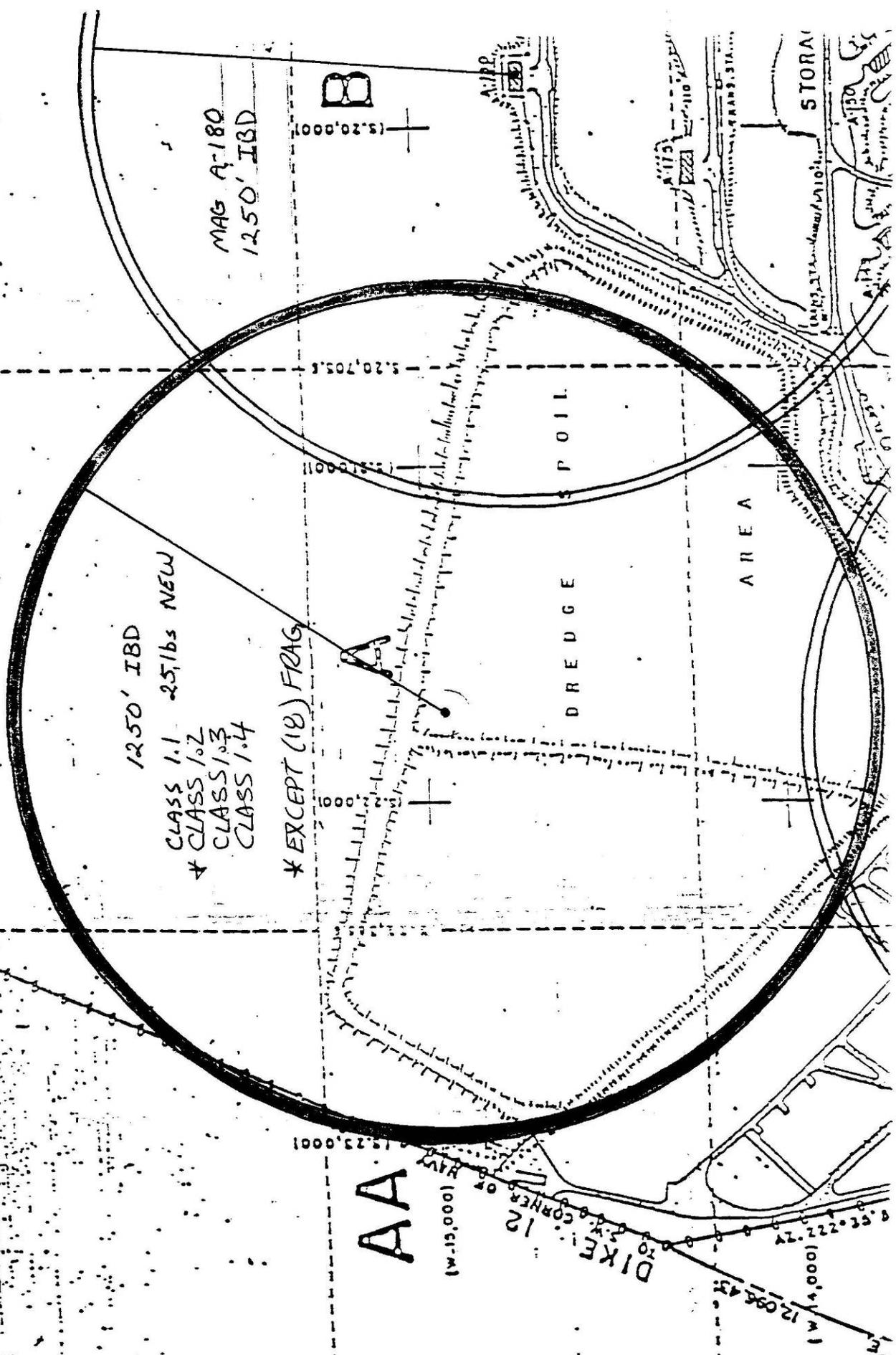
Subj: SITE APPROVAL REQUEST TO INCREASE NET EXPLOSIVE WEIGHT FOR
EXISTING ORDNANCE DISPOSAL RANGE NO. 2, NAVAL SHIPYARD,
MARE ISLAND

1. Readdressed and returned for continuing action.
2. This project has been reviewed with respect to and meets the explosives safety criteria of reference (c). Accordingly, the project is granted both explosives safety site and final safety approvals. The following stipulations must be satisfied:
 - a. The revised explosive limit for Ordnance Disposal Range No. 2 is 25 pounds net explosive weight (NEW) of all classes/divisions (C/D) of explosives except C/D 1.2 (18), which may not be disposed of on the range.
 - b. All other provisions of existing approvals for this range remain in effect.


EDWARD W. KRATOVIL
By direction

Copy to:
NAVSEACENPAC (Code 950)
NAVSHIPYD Mare Island (Code 106.4)

C-861



MAG A-180
1250' IBD

(S.20,000)

1250' IBD
CLASS 1.1 25lbs NEW
* CLASS 1.2
CLASS 1.3
CLASS 1.4

* EXCEPT (18) FRAG

DREDGE
POIL
AREA

STORAGE

AA

DIKE CORNER 12

(W.15,000) (000) (M)

(M) (4,000)

LET