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SITE MANAGEMENT PLAN FISCAL YEAR 2002-2003 FORMER NAVAL AMMUNITION
SUPPORT DETACHMENT VIEQUES ISLAND PUERTO RICO
08/01/2003
CH2M HILL



Site Management Plan FY 2002-2003

Former Naval Ammunition
Support Detachment
Vieques Island, Puerto Rico



Prepared for
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List of Acronyms

ACM	asbestos-containing material
AOC	Area of Concern
AST	aboveground storage tank
BEHP	bis(2-ethylhexyl)phthalate
bls	below land surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CERFA	Community Environmental Response Facilitation Act
CFR	Code of Federal Regulations
COC	chain of custody
COPC	chemical of potential concern
CRP	Community Relations Plan
CTC	CERCLA Technology Committee
DERP	Defense Environmental Restoration Program
DoD	Department of Defense
DOI	Department of Interior
EBS	Environmental Baseline Survey
ECOSD	Ecological Comparison Criteria for Sediments
EM	Enlisted Men's (Club)
ERM	Environmental Resource Management, Inc.
ESE	Environmental Science and Engineering
ETA	Early Transfer Authority
FOSET	Finding of Suitability for Early Transfer
FS	Feasibility Study

ft	foot (or feet)
FWS	Fish & Wildlife Service
FY	fiscal year
HHERA	human health and ecological risk assessment
HHRA	human health risk assessment
HI	hazard index
IAS	Initial Assessment Study
IR	Installation Restoration (Program)
IRA	interim remedial action
IRFNA	inhibited red fuming nitric acid
LANTDIV	Atlantic Division, Naval Facilities Engineering Command
LBP	lead-based paint
LUC	land use controls
MAF-4	mixed amine fuels-4
MCL	maximum contaminant level
MEC	munitions or explosives of concern
mg/kg	milligrams per kilogram
mm	millimeter
MOV	Municipality of Vieques
MRE	meals ready-to-eat
NA	not applicable
NASD	Naval Ammunition Support Detachment
NCP	National Oil and Hazardous Substance Pollution Contingency Plan
NEPA	National Environmental Policy Act
NFA	No Further Action
NFA/DD	No Further Action/Decision Document
NOSSA	Naval Ordnance Safety and Security Activity

NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NSRR	Naval Station Roosevelt Roads
OB/OD	open burn/open detonation
OE	ordnance and explosives
OVM	organic vapor meter
OWS	oil water separator
PA	Preliminary Assessment
PA/SI	Preliminary Assessment/Site Investigation
PCBs	polychlorinated biphenyls
PR	Puerto Rico
PRE	Preliminary Risk Evaluation
PREQB	Puerto Rico Environmental Quality Board
PRGs	preliminary remedial goals
PRPB	Puerto Rico Planning Board
RA	Remedial Action
RAB	Restoration Advisory Board
RBC	risk-based concentration
RCRA	Resource Conservation and Recovery Act
RD	remedial design
RFAs	RCRA Facility Assessments
RI	Remedial Investigation
RI/FS	Remedial Investigation/Feasibility Study
RI/RA	Remedial Investigation/Risk Assessment
RI-C	remedial implementation-construction
RI-O	remedial implementation-operations
ROD	Record of Decision

ROTHR	Relocatable Over the Horizon Radar
SARA	Superfund Amendments and Reauthorization Act
SI	Site Investigation
SMP	Site Management Plan
SQAG	Sediment Quality Assessment Guidance
SVOC	semi-volatile organic chemical
SWMU	Solid Waste Management Unit
TPH	total petroleum hydrocarbon
TPH-GRO	total petroleum hydrocarbon-gasoline range organics
TRC	Technical Review Committee
TSCA	Toxic Substance Control Act
UIC	Underground Injection Control (Program)
USEPA	U.S. Environmental Protection Agency
UST	underground storage tank
UXO	unexploded ordnance
UXO/OE	unexploded ordnance/ordnance and explosives
UXO/MEC	unexploded ordnance/munitions or explosives of concern
VOC	volatile organic chemical
WTA	Western Training Area
WWTP	wastewater treatment plant



This Site Management Plan (SMP) contains a status summary of the Installation Restoration (IR) Program for the former Naval Ammunition Support Detachment (NASD), Vieques Island, Puerto Rico (*Figure 1-1*), and presents a comprehensive strategy for implementing response actions necessary to protect human health and the environment. This SMP was prepared to be used as a management tool by the Atlantic Division, Naval Facilities Engineering Command (LANTDIV), U.S. Environmental Protection Agency (USEPA) Region II, Puerto Rico Environmental Quality Board (PREQB), Naval Ordnance Safety and Security Activity (NOSSA), and U.S. Department of Interior (DOI). This dynamic document will be updated, at a minimum, on an annual basis to provide the status of the ongoing site investigations and remedial actions at the former NASD. Based on the results of the investigations, the project schedules may be modified.

This SMP is organized as follows:

- **Section 1, Introduction**, describes the objectives of the IR Program, states the purpose of this SMP, describes the Project Team and Technical Review Committee (TRC) formed for the former NASD, and provides a brief history of the IR Program activities conducted at the former NASD.
- **Section 2, Environmental Program Status**, summarizes the current status of the environmental program at the site. It includes discussions of regulatory agency responsibilities and regulations, and summarizes completed IR Program activities.
- **Section 3, Screening, Categorization, and Future Activities**, provides details on screening criteria, summarizes the categorization and prioritization of sites, and discusses future activities at the sites.
- **Section 4, Deed Restrictions**, describes the deed restrictions placed on use of the former NASD property as part of its transfer to the Municipality of Vieques (MOV).
- **Section 5, Site Management Plan Schedules and Funding**, presents the SMP schedule, including discussions of partnering and a summary of scheduling assumptions used to develop the proposed schedule.
- **Section 6, Works Cited**, provides a list of references cited in this document.

1.1 Environmental Response Objectives

The objectives of the IR Program at the former NASD facility are to:

- Identify all historical sources of contamination.

- Characterize and identify the extent of contamination sufficiently to assess risks to human health and the environment for the purpose of either determining a No Further Action (NFA) decision or implementing remedial responses.
- Initiate selected interim remedial actions (IRAs) to control, eliminate, or reduce risks and shorten the time necessary to reach an NFA decision.
- Assess risks to human health and the environment, and use the results of risk assessment for site risk management decisions.
- Develop, screen, and select remedial actions to reduce risk to human health and the environment in a manner consistent with statutory requirements.
- Comply with existing statutes and regulations.
- Maintain the current assessment of environmental conditions at the facility.

1.2 Site Management Plan Purpose, Updates, and Distribution

The purpose of the SMP is to summarize and present information on historical restoration accomplishments, current program status, and future restoration strategy, and to present a schedule for environmental restoration at the site.

Copies of the annual updates of the SMP are distributed to Project Team and TRC members. Copies are also placed in Information Repositories for public review.

1.3 Project Team and Technical Review Committee

1.3.1 CERCLA Technical Committee

The CERCLA Technical Committee (CTC) for the former NASD facility has been established and includes representative from LANTDIV; LANTDIV's contractor CH2M HILL; PREQB; PREQB's contractors TRC Inc., and Geophex; USEPA Region II; NOSSA; and DOI. Project Team meetings are held periodically to resolve technical/regulatory issues and to reach consensus with regulators.

Table 1-1 list the Project Team/CTC members, and specifies their roles and responsibilities.

TABLE 1-1. CERCLA TECHNICAL COMMITTEE MEMBERS

Name	Organization	Role/Responsibility
Marty Clasen, PG	CH2M HILL	Project Manager
Kevin K. Cloe, PE	Navy, LANTDIV	Navy Assistant Project Manager
Pablo Connolly	MOV	Public Works Director Representative of MOV

TABLE 1-1. CERCLA TECHNICAL COMMITTEE MEMBERS

Name	Organization	Role/Responsibility
Andy Crossland	USEPA Region 2	Hydrogeologist
Rafael Cruz Perez	Office of the Commissioner for Vieques and Culebra	Environmental Consultant for the Commissioner
Oscar Diaz	DOI-Fish & Wildlife Service (FWS)	Vieques Wildlife Refuge Manager
Felix Lopez	DOI-FWS	Contamination Specialist
Yarissa Martinez	PREQB	Department of Defense (DoD) and Vieques Affairs Coordinator PREQB Project Manager
Vijaya Mylavarapu, PhD	CH2M HILL	Risk Assessor
Jim Pastorick	Geophex, UXO	Unexploded Ordnance (UXO) Contractor
Christopher T. Penny, REM	Navy, LANTDIV	Designated Navy Project Coordinator
Daniel Rodriguez	USEPA	USEPA Caribbean Representative
Helen Shannon	USEPA Region 2	USEPA Project Manager
Susan Silander	DOI-FWS	Caribbean Refuge Manager
Michael Sivak	USEPA Region 2	Risk Assessor
Andrew Smyth	TRC, Inc.	Project Manager
John Tomik, PG	CH2M HILL	Activity Manager
Rick Urbanski	NOSSA	UXO Project Manager
Robert Wing	USEPA Region 2	Chief, Federal Facilities

1.3.2 Technical Review Committee

The TRC was established to regularly bring together members of the Navy, regulatory agencies, and the community to review and comment on technical documents and plans regarding ongoing environmental studies and restoration activities at the former NASD facility. Community members are expected to serve as liaisons with the community and to disseminate the environmental restoration information to community members and groups. Technical support staff are available to provide informational support and explanation to TRC members. *Table 1-2* lists TRC members and their affiliations.

TABLE 1-2. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Organization	Role
Pablo Connelly	MOV	Vieques Public Works Director
Arcinio Corcino Melendez	Community Member	Vieques Resident
Luis Davila Soto	Community Member	Vieques Resident
Oscar Diaz	U.S. Fish & Wildlife Service	Wildlife Refuge Manager
Yarissa Martinez	Puerto Rico (PR) Environmental Quality Board	DoD and Vieques Affairs Coordinator
Colleen McNamara	Community Member	Vieques Resident
Michael Diaz	Community Member	Vieques Resident
Jorge Fernandez Porto	Community Member	Vieques Resident
Ricardo Jordan	Community Member	Vieques Resident
Felix Lopez Arroyo	U.S. Fish & Wildlife Service	Biologist
Lirio Marquez D'Acunti	Community Member	Vieques Resident
Stacie Notine	Community Member	Vieques Resident

TABLE 1-2. TECHNICAL REVIEW COMMITTEE MEMBERS

Name	Organization	Role
Myrna Pagan	Community Member	Vieques Resident
Christopher T. Penny	Navy, LANTDIV	Remedial Project Manager
Madeline Rivera Ruiz	Navy, Naval Station Roosevelt Roads (NSRR)	Environmental Program Manager
Robert Wing	USEPA, Region 2	Chief, Federal Facilities

1.4 Status of Community Involvement

During 2000, President Clinton issued a directive to the Secretary of Defense stipulating that the Navy shall submit legislation to Congress to transfer the former NASD property on Vieques Island, Puerto Rico (with the exception of approximately 100 acres of land on which the Relocatable Over the Horizon Radar [ROTHR] and Mount Pirata telecommunications sites are located), to the Commonwealth of Puerto Rico. Congress passed legislation on October 12, 2000, instructing the Secretary of the Navy to convey or transfer most of the real property that comprises the former NASD Vieques to MOV, the Puerto Rico Conservation Trust, and DOI no later than May 1, 2001.

The property has since been transferred. The amount of land that was transferred on April 30, 2001, from the NASD Navy property was as follows:

- DOI (3,100 acres)
- MOV (4,000 acres)
- Puerto Rico Conservation Trust (800 acres)

Figure 1-2 shows the approximate boundaries and ownership of these properties.

An Information Repository has been established to maintain copies of documents regarding the environmental restoration at the former NASD and to include approved IR Program reports, fact sheets, and community relations reports. The address, phone number, and hours of the Information Repository is as follows:

Biblioteca Pública
Jose Gautier Benitez
Calle Baldorioty de Castro
Vieques Island, PR 00765

Phone: 787-741-3706

Hours: Monday-Friday, 8:00 am-6:00 pm

The experience resulting from the events discussed above have emphasized the need for an effective Community Relations Plan (CRP), especially as the remedial program begins to progress toward remediation and site closures. Now that the transfer of the property from the Navy to MOV has occurred, the public will have accessibility to the former NASD facility; therefore, a high level of public interest is expected.

The draft CRP was developed by an environmental public affairs specialist and was submitted in May 2001 to USEPA and PREQB for comment. The revised draft final CRP was issued on May 16, 2001. A copy of the CRP can be found in the online library at the web address:

<http://www.vieques-navy-env.org/security/login.asp>.

1.5 Brief History of the Former NASD

Vieques Island lies approximately 7 miles southeast of Naval Station Roosevelt Roads (NSRR), Puerto Rico (*Figure 1-1*). NASD formerly occupied approximately 8,000 acres along the western third of the island. The Navy currently owns approximately 100 acres at the former NASD facility. The remainder of the 8,000 acres are now owned by DOI (3,100 acres), MOV (4,000 acres), and the Puerto Rico Conservation Trust (800 acres). *Figure 1-3* shows the topography of the western portion of the Vieques Island. *Figure 1-2* presents the approximate property boundary for each group.

NASD was utilized by the U.S. Navy Atlantic Fleet for storage of munitions from approximately 1942 to 2000. The activities at NASD were directed under the consolidated command of Commander Fleet Air Caribbean, Naval Forces Caribbean, and Antilles Defense Command, with headquarters at NSRR. The mission of NASD was to receive, store, and issue all ordnance authorized by NSRR for support of Atlantic Fleet activities.

1.6 Site Descriptions

This section provides a brief site description and the results of previous investigations for each of the 17 IR sites. Two phases of an Expanded Preliminary Assessment/Site Investigation (PA/SI) was conducted to investigate the 17 sites.

Appendix A includes a current summary of all reports prepared for the 17 sites. *Figure 1-3* shows the locations of the 17 sites. A confirmation study to identify various sites was conducted through verification sampling (ESE, May 1986, 1988).

1.6.1 Solid Waste Management Unit 4 – Open Burn/Open Detonation Site

Solid Waste Management Unit (SWMU) 4, the inactive open burn/open detonation (OB/OD) site, was used for thermal destruction of waste munitions, fuels, or propellants. The material to be burned was placed in the open burn area, and a squib or other detonator was placed in the waste material. The open burn was then initiated from a safe distance using electrical detonation. In addition, material from the rework of munitions (loose powder and primers) and flares and cartridge-activated devices may also have been disposed of at the unit (Initial Assessment Study [IAS] Greenleaf, 1984).

The PA/SI field investigations for SWMU 4 included collection of soil and groundwater samples. All the samples were analyzed for volatile organic chemicals (VOCs), semi-volatile organic

chemicals (SVOCs), pesticides, polychlorinated biphenyls (PCBs), and metals. Parameters exceeding screening criteria in soils included aluminum, arsenic, barium, iron, lead, thallium, vanadium, 2,4-dinitrotoluene, 2,4,6-trinitrotoluene, and hexahydro-1,3,5-trinitro-1,3,5,7-tetrazocine. Parameters exceeding screening criteria in groundwater included aluminum, barium, cadmium, chromium, iron, manganese, nickel, selenium, vanadium, and zinc. A Remedial Investigation will be completed to:

Assess which constituents occur as background in the environment.

Delineate the nature and extent of these constituents.

Assess if the levels detected pose an unacceptable risk to human health and the environment.

A workplan for the Environmental Remedial Investigation/Feasibility Study (RI/FS) is scheduled to be completed in December 2003 .

The PA/SI identified various UXO items and spent munitions or explosives of concern (MEC) at the site. A UXO/MEC RI was conducted at the site to assess the nature and extent of UXO and MEC. A Draft RI/FS, to address the explosive hazards associated with the UXO and MEC detected at the site, is scheduled to be completed in October 2003.

1.6.2 SWMU 5 – Inhibited Red Fuming Nitric Acid / Mixed Amine Fuels Disposal Site

SWMU 5 is located within the magazine area of the former NASD and includes a drainage ditch southeast of Magazine #422, which leads to a nearby quebrada. At this location in 1975, fuel was reportedly emptied from leaking drones into a low spot in a road near Magazine #422, which drained into the quebrada via the drainage ditch. The IAS report (Greenleaf, 1984) stated that the quebrada is in the probable surface recharge area for one of the few naturally occurring springs on the island that flows year-round. However, this is unlikely because the spring and SWMU 5 are not located in the same drainage basin.

The fuel contained inhibited red fuming nitric acid (IRFNA) and mixed amine fuels (MAF-4). Although it is likely that much of the material volatilized or has biodegraded, site investigations evaluated the potential presence of persistent nitrogen-containing chemicals in the soil.

The PA/SI field investigations for SWMU 5 were conducted in April and May 2000, and included collection of surface soil and subsurface soil samples from four borings. The samples were analyzed for metals, VOCs, SVOCs, pesticides, explosives, and PCBs. Analytical results from the PA/SI indicated a single detection of benzo(a)pyrene at a concentration above the residential risk-based concentration (RBC). All other parameters were either non-detect, or were detected at concentrations below applicable screening criteria. A risk assessment was conducted on the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.3 SWMU 6 – Mangrove Disposal Site

The Mangrove Disposal Site is located in an 2-acre ocean-side mangrove swamp in Laguna Arenas along North Shore Road (Route 70) on the former NASD. There is no known history of permits pertaining to this site. The disposal site was in use during the 1960s and 1970s, and was used as a base disposal area.

Previous investigations included the collection of soil, sediment, surface water, and groundwater samples for VOCs, SVOCs, pesticides, PCBs, and metals analysis. Parameters exceeding screening criteria in surface soils included aluminum, antimony, arsenic, iron, lead, thallium, and benzo(a)pyrene. In subsurface soils, only arsenic exceeded screening criteria. Parameters exceeding screening criteria in groundwater included aluminum, arsenic, barium, cadmium, iron, lead, manganese, PCB-1221, and PCB-1232. In surface water, arsenic, copper, lead, mercury, and silver exceeded screening criteria. Parameters exceeding screening criteria in sediment included arsenic, chromium, copper, lead, nickel, and zinc. The metals detected at the site were detected at concentrations indicative of background concentrations for the island. As part of an RI, additional field investigations at this site were completed during August and September of 2003. The draft RI report for this site is scheduled to be completed in December 2003.

1.6.4 SWMU 7 – Quebrada Disposal Site

SWMU 7 is located within the north central portion of the former NASD, immediately south of Route 70, and includes a steep embankment and bottom of a quebrada. The site encompasses approximately 1 acre, and was reportedly used as a waste disposal site between the early 1960s and late 1970s.

The quebrada varies from 20 to 30 feet wide and 10 to 20 feet deep. More than 1,500 cubic yards of material are estimated to be present at the site (Greenleaf, 1984).

The PA/SI field investigation for SWMU 7 was conducted in April 2000 and included re-sampling of one existing monitoring well, installation and sampling of two new monitoring wells, and resampling of six surface soil locations and three sediment locations. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI indicate detections of benzo(a)pyrene in surface soil at concentrations above the residential RBC. Several metals were also detected in groundwater, surface soil, and sediment above applicable screening criteria. The metal detections are likely attributable to background conditions. As part of an RI, additional field investigations at this site were completed during August and September of 2003. A draft RI report for this site is scheduled to be completed in December 2003.

1.6.5 SWMU 10 – Waste Paint and Solvents Disposal Site

SWMU 10 is located in the public works area of the former NASD and consists of an area of soil outside the Paint Locker (Building 4001). This area was used for the open dumping of waste paints

and solvents. SWMU 10 has been in use since the mid-1970s. Waste paints and solvents have recently been transferred to NSRR for proper disposal.

The PA/SI field investigations at SWMU 10 were conducted in April and May 2000, and included the collection of 10 surface soil samples and 10 subsurface soil samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI indicate that no organic compounds were detected above applicable screening criteria. The results for inorganic compounds indicate detections of several metals in surface soil, and arsenic in subsurface soil above applicable screening criteria. These metal detections are likely attributable to background conditions. Additional background studies for metals were conducted during the PA/SI, and the metals concentrations will be evaluated against the background concentrations once approved by USEPA and PREQB. A risk assessment was conducted on the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.6 SWMU 14 – Wash Rack

SWMU 14 is located within the public works area of the former NASD and includes the washrack and former oil/water separator located west of Buildings 2015 and 2016. The washrack was in use from the late 1970s until 2000, and consists of a concrete driveway with 4-inch curbs on each side and ramps on each end, measuring approximately 20 feet long by 10 feet wide. The area was primarily used for cleaning Navy vehicles. Facility personnel stated that degreasing solvents were used occasionally in this area to facilitate cleaning. A swale at the end of the unit facilitated the discharge of runoff water to a ditch that eventually discharges to the Atlantic Ocean. The oil/water separator was removed in 2000.

The PA/SI field investigation at SWMU 14 was conducted in April and May 2000, and included the installation and sampling of two monitoring wells, the collection of 14 surface and subsurface soil samples, and the collection of three samples of the accumulated soil from the oil/water separator. All samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results indicated dieldrin in the upgradient monitoring well at concentrations exceeding the tap water RBC. Several metals were detected in groundwater and soil above applicable screening criteria. These metal detections are likely attributable to background conditions. A risk assessment was conducted on the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.7 SWMU 15 – Waste Transportation Vehicle

SWMU 15 is located in the public works area of the former NASD and includes a grassy area west of the washrack and oil/water separator (SWMU 14) where a Navy truck was parked that reportedly contained numerous drums of a waste labeled as caustic D002 (USEPA code for corrosive waste). It has been determined that the drums contained napalm from NSRR. The truck

contained 55-gallon metal drums and overpack drums, suggesting that the material inside may have leaked at one time from a drum or another source.

The PA/SI field investigation at SWMU 15 included the installation and sampling of one monitoring well and the collection of 16 surface soil samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI indicate that no organic compounds were detected above applicable screening criteria. The results for inorganic compounds indicate detections of several metals in groundwater and surface soil above applicable screening criteria. These metal detections are likely attributable to background conditions. A risk assessment was conducted using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.8 AOC B – Wastewater Treatment Plant and Disposal Ground

Area of Concern (AOC) B, the wastewater treatment plant (WWTP) in the public works area of the former NASD, has been in operation since approximately 1983. It consists of one aeration tank and one separation tank, with two blowers to supply air for the biological treatment. Effluent from the WWTP then drains into a series of four lagoons with no discharge point.

The Phase II PA/SI field investigation at AOC B included the collection of 16 surface soil and subsurface soil samples. Analysis of laboratory data identified four metals in surface soils above residential preliminary remedial goals (PRGs). All concentrations of analytes in subsurface soil were either not detected, or were detected at concentrations below screening criteria. A risk assessment was conducted using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.9 AOC C – Drainage Ditch in the Vicinity of Transportation Shop Area

AOC C is located within the public works area of the former NASD and includes a septic tank north of Building 2045 and stormwater drainage ditches on both sides of the road leading from Route 70 into the public works area. The two ditches near the transportation shop routinely handle stormwater runoff during rain events. An oily sheen was observed in one of the ditches during the visual site inspection.

The PA/SI field investigation at AOC C included the installation and sampling of one monitoring well, the collection of 15 surface soil samples, the collection of 20 subsurface soil samples, and the collection of two sediment samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI indicate that no organic compounds were detected above applicable screening criteria. The results for inorganic compounds indicate detections of several metals in groundwater and soil above applicable screening criteria. These metal detections are likely attributable to background conditions. A risk assessment was conducted

using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.10 AOC E – Underground Storage Tank Site 2016

AOC E is located within the public works area of the former NASD at the former location of an underground storage tank (UST) near the northwest corner of Building 2016. The former UST was a 550-gallon, single-wall, steel waste oil tank. The piping system associated with the UST consisted of single-wall steel pipes. The UST was installed in 1970 to store waste oil generated from vehicle maintenance activities that take place in Building 2016.

As part of UST removal activities conducted at Site 2016, the former UST and associated piping were removed. In addition, soil samples were collected and submitted for laboratory analysis with detected total petroleum hydrocarbon (TPH) concentrations ranging from 568 to 1,790 milligrams per kilogram (mg/kg). Navy personnel indicated that no accidental spills associated with the UST at Site 2016 had occurred.

A 1999 site investigation included the installation and sampling of three groundwater monitoring wells and the installation of six soil borings. Analytical data from soils collected during the site characterization at AOC E indicated that total petroleum hydrocarbon-gasoline range organics (TPH-GRO) was detected at a concentration that exceeded the PREQB target level of 100 mg/kg for this constituent in the soil sample at the groundwater interface (45- to 47-foot [ft] interval) at one of the soil borings in the center of the site (SB-01). Relatively low levels of benzene and ethyl benzene were also reported at 12 to 14 ft depths but were not detected at deeper depths at any of the soil borings.

Overall, soil analytical data from historical investigations and the RI program indicate that releases to the environment from the former UST appear to be limited to a small localized area around the center of the site. These data are supported by field and laboratory data from soil borings that surround SB-01/MW-01, where little to no impacts from petroleum-related compounds were detected, as summarized above.

Surface soil data indicate no impacts to soil quality above the 6-ft depth around the immediate vicinity of the source area. Surface soil quality is further supported by field organic vapor meter (OVM) information that has not identified any surface soil jar headspace value above background concentrations. Further details are included in the RI report that is being prepared for this site.

Field investigations for the RI at AOC E included the installation and sampling of three new monitoring well and the collection of groundwater samples from two existing monitoring wells. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI investigation indicated exceedance of PREQB target levels for petroleum constituents in soil and groundwater at the site. In addition, free-floating petroleum was discovered in monitoring well MW-01, installed at the former location of the UST. A pilot study was conducted to address free product removal at this site, and groundwater has been further monitored by installing two

additional wells. Groundwater depths were also measured at all these wells to determine the flow direction in this area. A draft RI report being prepared for this site includes all the details of the current site conditions and results of an RA completed for the site. The draft RI report is scheduled to be completed during September 2003.

1.6.11 AOC F – Underground Injection Control Septic System Site

AOC F is located within the public works area of the former NASD and includes a 1,500-gallon septic tank located near the Enlisted Men's (EM) Club. In 1997, this underground injection control (UIC) system was scheduled to be closed. A sampling and testing program was conducted in July 1997. Results of the soil sampling showed exceedances of soil screening criteria for several parameters.

The PA/SI field investigation at AOC F included the installation and sampling of five monitoring wells and the collection of 20 subsurface soil samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Analytical results from the PA/SI indicated detections of several metals in groundwater and soil above applicable screening criteria. These metal detections are likely attributable to background conditions. A risk assessment was conducted using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.12 AOC H – Abandoned Power Plant

AOC H is located on the north side of Route 200 just east of the public works area. It consists of an abandoned power plant that operated from 1941 to 1943. The power plant building was reportedly used for fire-fighter training from the 1960s through the 1980s. Fire-fighting activities reportedly consisted of placing diesel fuel on tires and igniting the tires inside the building. The diesel fuel was stored in a 2,000- to 3,000-gallon aboveground storage tank (AST) located on the western side of the power plant building.

The Phase II PA/SI field investigation at AOC H included the collection of 40 soil samples (20 surface soil samples and 20 subsurface soil samples) and the installation and sampling of four monitoring wells. The samples were analyzed for metals, VOCs, SVOCs, pesticides, PCBs, and explosives. Results of laboratory analysis identified four metals above the screening criteria in surface soils. Two exceedances of an explosive (2,6-dinitrotoluene) were also identified in surface soils. Concentrations of analytes in subsurface soil were either below screening criteria, or below the instrument and method detection limits. Seven exceedances of metals above either the maximum contaminant level (MCL) or tap water PRGs were noted in the groundwater laboratory data. As part of an RI, additional field investigations at this site were completed during August and September 2003. The draft RI report for this site is scheduled to be completed in December 2003.

1.6.13 AOC I – Asphalt Plant

AOC I is located on the south side of Route 200 just west of the north gate and consists of a former asphalt plant. Operations at the plant were conducted from the 1960s until 1998. AOC I consists of two asphalt truck parking/loading containment areas and the location of two former diesel ASTs.

The Phase II PA/SI field investigation at AOC I included the collection of 26 soil borings (26 surface soil samples and 26 subsurface soil samples). The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. TPH was identified above the PREQB criterion of 100 mg/kg at several surface soil sampling locations. Four metals were also noted above the residential PRGs in surface soils at AOC I. TPH was not identified above the PREQB criterion in any of the subsurface soil samples collected under this program. Chromium was found above the leachability PRG in subsurface soil at 23 individual locations. A draft workplan for an RI/FS to be completed at this site is scheduled for December 2003.

1.6.14 AOC J – Former Staging Area Disposal Site

AOC J encompasses an area of approximately 1.2 acres by 2 to 4 ft in depth. The area was used as a solid waste disposal site associated with construction staging activities. It was used between the mid-1960s and 1973, after which the waste was removed from the site and placed in a municipal landfill off base.

During a site visit conducted by CH2M HILL at the site on September 14, 2000, 106-millimeter (mm) shell casings and 20-mm ammunition boxes were observed. Previous visits by Environmental Resource Management, Inc. (ERM) indicated visible debris consisting of scrap metal from construction equipment, UXO, shell casings, glass fragments, and wood waste. Previous investigations at the site included the collection of soil samples near the visible disposal areas. The samples were analyzed for VOCs, SVOCs, pesticides, PCBs, and metals. Analytical results of soil samples showed no elevated levels of any constituents of concern for this site.

The Phase II PA/SI field investigation at AOC J included the installation and sampling of four monitoring wells, and the collection of four surface and subsurface soil samples and five sediment and surface water samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, PCBs, and explosives. A UXO avoidance survey was also completed at AOC J prior to any intrusive investigatory activities. Three metals in surface soil were identified above the residential PRGs. No exceedances of any analyte sampled for were noted in subsurface soil at AOC J. No exceedances were noted in site sediments above the ecological comparison criteria for sediments (ECOSD). Eight metals were identified in groundwater above applicable PRGs or MCLs. Perchlorate was also detected above the PRG at one groundwater sampling location. Copper and mercury were detected in surface water above their surface water criteria at two locations and one location, respectively. As part of an RI, additional field investigations at this site were completed during August and September 2003. The draft RI report for this site is scheduled to be completed in December 2003.

1.6.15 AOC K – Water Well at Main Operations Area

AOC K consists of a well located in the public works area of the former NASD. The well was used as a potable water supply for the base from approximately 1941 to 1979. This well is near a number of potentially contaminated sites at the public works area. Past analyses of samples from this well indicated the presence of benzene at a level slightly above the drinking water MCL in this well.

The Phase II PA/SI field investigation at AOC K included the installation and sampling of five monitoring wells. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Groundwater samples collected from these five monitoring points identified six metals above the tap water PRGs and drinking water MCLs. In addition, one semi-volatile organic compound, bis(2-ethylhexyl)phthalate (BEHP), was detected above the tap water PRG. These metal detections are likely attributable to background conditions. Additional background studies for metals were conducted during the PA/SI, and the metals concentrations will be evaluated against the background concentrations. A risk assessment was conducted using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.16 AOC L – Abandoned Septic Tank

AOC L is located on the north side of Route 70 across from the public works area, and consists of a 25-ft by 40-ft concrete vault with separate compartments. It is suspected that the vault was used in the 1940s for the treatment and disposal of installation sewage, and that no drain field was present. No indications exist that this vault was used for any kind of industrial activity. However, disposal of hazardous constituents may have occurred at the septic tank during past operations.

The Phase II PA/SI field investigation at AOC L included the collection of four surface soil and four subsurface soil samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. Results of the soil sampling program at AOC L detected two metals in surface soils above the residential PRGs. A risk assessment was conducted using the data collected during the PA/SI as part of the draft final NFA report (CH2M HILL, May 2003). A summary of the NFA report is included in *Section 2.2.7*.

1.6.17 AOC R – Former Operations/Staging Area

AOC R is located in the public works area of the former NASD and consists of an area used as a construction staging area and public works operational area from about 1965 to 1971. The large concrete pad at the site was present before the Navy owned the area and can be seen in 1937 aerial photographs. In the late 1960s, a carpentry shop and enlisted club were located at the pad. Light vehicle maintenance activities such as oil changes were conducted near the pad to the northwest. Additionally, a large AST was once located near the pad.

The Phase II PA/SI field investigation at AOC R included the collection of 34 surface soil samples. The samples were analyzed for metals, VOCs, SVOCs, pesticides, PCBs, and explosives. Four

metals were consistently identified above the industrial, residential, or leachability criteria at the majority of the sample locations. Several semi-volatile constituent concentrations in site surface soils also exceeded the industrial and residential PRGs. A draft workplan for an RI/FS to completed at this site is scheduled for December 2003.

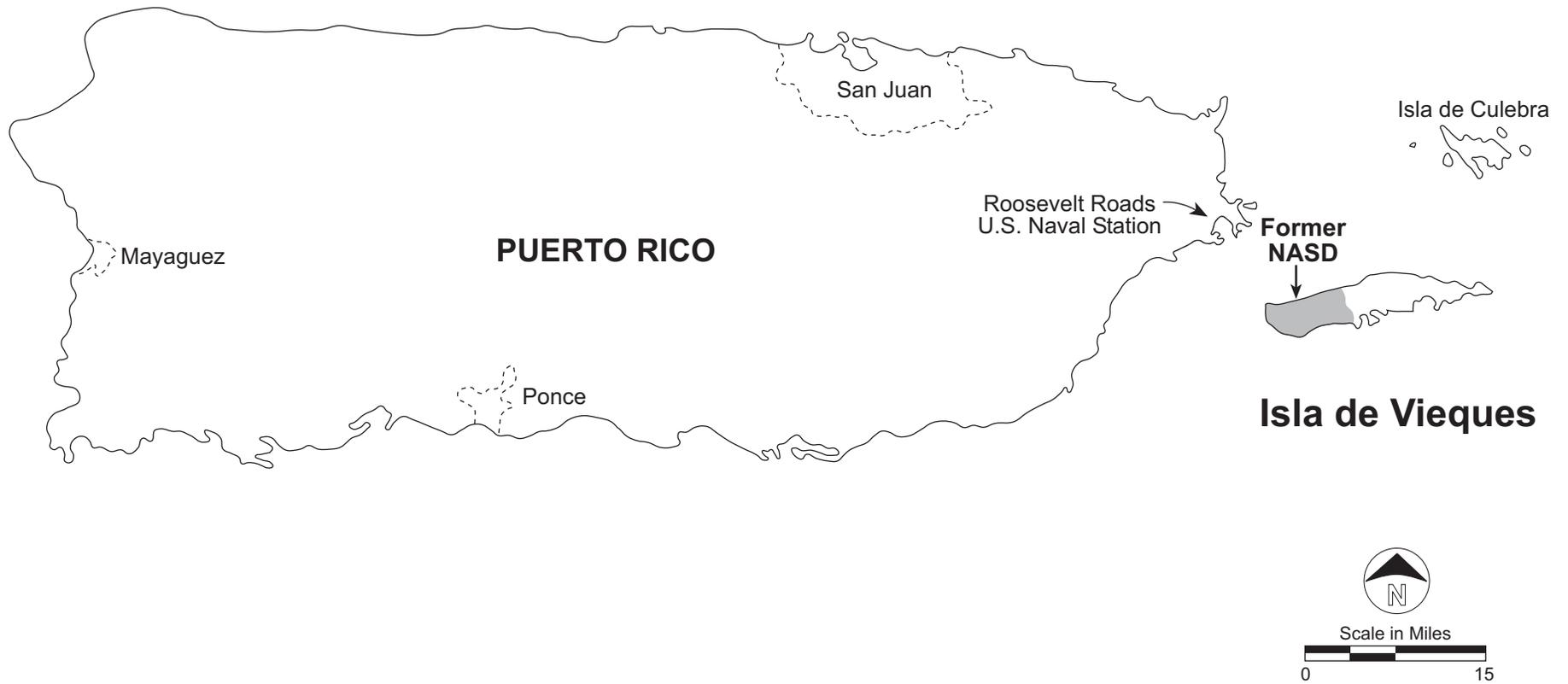


FIGURE 1-1
SITE LOCATION MAP
Site Management Plan

Former NASD, Vieques Island, Puerto Rico



FIGURE 1-3
SITE TOPOGRAPHIC MAP
Site Management Plan
Former NASD, Vieques Island, Puerto Rico **CH2MHILL**



Section 2

Environmental Program Status

The Department of Defense (DoD) IR Program was defined in 1981 as a multi-phase program for investigation of past hazardous waste disposal sites at DoD installations. The DoD IR Program has been revised to provide consistency between the IR Program and current regulatory programs – the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or the Resource Conservation and Recovery Act (RCRA). At the former NASD facility, the IR Program is conducted in accordance with the CERCLA process. The former NASD is not a National Priorities List (NPL) site for which the CERCLA process application is required; however, the Technical Team (represented by the Navy, USEPA and PREQB) agreed to apply a CERCLA process to the sites at the former NASD to maintain consistency and apply a conservative approach to assessment and remediation.

The CERCLA program steps followed at the former NASD facility are agreed-upon guidelines to identify, characterize, and evaluate hazardous constituent releases, and to determine the potential risks to human health and the environment by such releases. The CERCLA program also includes processes (*Figure 2-1*) to evaluate remedial alternatives and to implement the most appropriate remedial alternative to reduce the risks to human health and the environment. Achieving the primary objective of the CERCLA program at the former NASD facility may involve one or more of the following specific activities:

- Preliminary Assessment (PA) (See Section 2.2.3.)
- Site Investigation (SI) (See Section 2.2.4.)
- Remedial Investigation and Risk Assessment (RI/RA) (See Section 3.3.)
- Feasibility Study (FS) (See Section 3.3.)
- Remedial Action (RA) (See Section 3.3.)
- Record of Decision or Decision Document (ROD) (See Section 3.3.)

The implementation of these activities ultimately lead to either implementation of a remedial design/remedial action, or a decision to take no action at the site, as illustrated in *Figure 2-1*.

Initial PAs at the former NASD were conducted under the RCRA process. Therefore, references to RCRA Facility Assessments (RFAs) are found in the earlier documents. The RFA is the same for RCRA as a PA is for CERCLA. In addition, the RFA identified SWMUs and AOCs, which are RCRA terminology; the CERCLA Technical Team has decided to retain this terminology throughout the program.

Currently under CERCLA, a total of 17 sites were identified across the former NASD, as described above. Two phases of PA/SI were conducted at these sites to gather site historical operations-related information and to collect environmental data. The analytical data were evaluated to determine if contamination was indicated at any of the sites and also to assess if the detected chemicals presented human health or ecological exposure concern. At the end of a risk assessment, metals that are commonly present in natural soils and groundwater were evaluated to determine if they were specific to the site or if they were similar to the background in their concentration levels. Sites with no human health or ecological exposure concerns were recommended for no further action (NFA). The sites with chemical levels above screening criteria and the extent of the chemical presence were not fully characterized and therefore were included for an RI. A total of nine sites were proposed for the NFA and eight sites were included for further characterization under an RI.

2.1 Regulatory Agencies and Regulations

Because the investigations associated with the former NASD property transfer have been conducted under the CERCLA process as non-NPL sites, the Navy serves as the lead agency. PREQB has been identified as the primary regulatory agency for review and comment of the CERCLA processes being conducted. The IR Program must follow the regulatory guidelines presented in the following regulations:

- CERCLA, as amended by the Superfund Amendments and Reauthorization Act (SARA)
- National Oil and Hazardous Substance Pollution Contingency Plan (NCP)
- National Environmental Policy Act (NEPA)
- Defense Environmental Restoration Program (DERP)
- Toxic Substance Control Act (TSCA)
- National Pollution Discharge Elimination System (NPDES)
- National Historic Preservation Act
- PREQB Underground Injection Control Regulations
- PREQB Underground Storage Tank Regulations

2.2 Completed IR Program Activities

The Navy has completed the PA/SI process at all the IR sites at the former NASD facility. PA and SI activities performed at the former NASD to date are discussed below. In addition, a draft final NFA report for the nine sites has been released (CH2M HILL, May 2003). A public hearing is scheduled for October 2003 to discuss the results of the draft final NFA report.

2.2.1 Finding of Suitability for Early Transfer

A report was prepared to evaluate the Finding of Suitability for Early Transfer (FOSET) of the property containing potentially contaminated areas within the former NASD to MOV before completion of required environmental investigations and implementation of cleanup actions. (CH2M HILL, October 2000). The CERCLA regulations that govern the FOSET are included under the Early Transfer Authority (ETA).

The purposes of this FOSET were to:

Identify environmental factors of concern associated with the Navy's proposed transfer of the 17 potentially contaminated areas (IR sites).

Demonstrate that the proposed transfer of the IR sites to MOV prior to completion of all remedial actions, and with appropriate institutional controls, is consistent with protection of human health and the environment and will not delay further investigation or remedial activities (USEPA, 1994).

The legislation allowed for less than one year to transfer the former NASD to MOV, making it impractical to complete investigations under the CERCLA process. However, the Navy has conducted many of the CERCLA tasks to preliminarily assess the contamination baseline conditions at most of the identified sites. While all potentially contaminated areas have been identified, the Navy plans to conduct additional investigation activities, and evaluation of risk posed by potential contaminants at these sites will be addressed during future investigations after transfer activities have been completed.

The FOSET included approximately 4,300 acres of NASD property to be transferred to MOV, while the Navy retained the ROTH and Mount Pirata telecommunications sites, which included approximately 100 acres of land for utility and restrictive easements. In addition, 3,100 acres of Conservation Zone were transferred to DOI, and approximately 800 acres of Conservation Zone were transferred to the Puerto Rico Conservation Trust.

Because a risk assessment was not completed at these IR sites prior to completing the FOSET, the Navy took a conservative approach and placed strict land use restrictions and engineering controls on the IR sites to minimize potential risk to human health and the environment until risk on the IR sites can be quantified.

Lands not classified as conservation areas will become subject to the local zoning regulations as implemented and enforced by the Puerto Rico Planning Board (PRPB). These zoning regulations identify various land use classifications and associated allowable uses and restrictions. Under Puerto Rico zoning regulations, land use is defined by Classification and District Land Use Categories. The proposed Classifications and District Land Uses for NASD were developed by MOV (2001) in the land use plan entitled *Memorial General Plan de Ordenación Terretorial de Vieques*.

All the IR sites are currently in various stages of investigation.

2.2.2 Environmental Baseline Survey

According to Navy requirements, LANTDIV conducted an Environmental Baseline Survey (EBS) in anticipation of the property transfer of the former NASD. LANTDIV Environmental Resource Management (ERM), Inc., performed the EBS to disclose the available, factual, and relevant information regarding the environmental condition of the property (October 2000). The EBS was used as a basis for determining the environmental suitability of the property for transfer. The EBS was based on records reviews, site inspections, and investigations including environmental sampling, witness interviews, and other existing environmental information related to operations and the storage, release, treatment, or disposal of hazardous substances or petroleum products on the property. The objective was to determine the presence of or likely presence of a release or threatened release of any hazardous substance or petroleum product.

In addition, the EBS provides documentation and data for the Navy's identification of uncontaminated property at the former NASD in accordance with CERCLA 120 (h)(A), as amended by the Community Environmental Response Facilitation Act (CERFA). To meet its statutory deadline to identify uncontaminated property, the Navy adopted a very conservative approach to the identification and delineation of potentially contaminated areas. Any area with doubtful contamination was identified as "potentially contaminated." The Governor found this property suitable for transfer, and the property was transferred on April 30, 2001. The Navy plans to continue and complete the investigation and remediation of this property under the Navy's IR Program. After the completion of the remedial efforts for these areas, and concurrence from USEPA and PREQB, the Navy will provide a warranty, in accordance with CERCLA 120(A)(3)(A) and (C), stating that all remedial actions are implemented that are necessary to protect human health and the environment with respect to any such substance remaining on the property.

The EBS did not identify any compliance-related issues that might impact the scheduled transfer of the property. Some unresolved issues were identified at the time, relating to the wastewater treatment systems that require followup by NSRR under the Underground Injection Control (UIC) Program. However, those issues with any potential for a release of hazardous substances to the environment have been transferred to the IR Program for a full investigation. A survey for the presence of asbestos-containing material (ACM) identified ACM in four buildings on site (Buildings 243, 2045, 2043, and 4022). All ACM identified is non-friable, and thus does not pose a risk to human health or the environment at the present time. Some of the buildings are suspected of containing lead-based paints (LBP) on the basis of the age of the structures; however, none appear to be an exposure concern to human health or the environment. Both ACM and LBP were not impediments to transfer; however, notification is part of CERCLA requirements (ERM, 2000).

ERM conducted a detailed aerial photographic analysis of the former NASD as part of the EBS (ERM, October 2000). Aerial photographs from 1936, 1937, 1959, 1961, 1962, 1964, 1967, 1973, 1985, 1993, 1994, and 1999 were made into composites and examined with stereoscopic methods. Aerial photographic analyses were used to:

- Track the operational history of previously identified sites of known or suspected contamination.
- Track the history of site operations from pre-Navy occupation (pre-World War II to present).
- Identify anomalies (e.g., ground scars, cleared areas, debris piles, possible disposal areas) for further followup and investigation.

Although aerial photographs are informative, they do not provide conclusive evidence for activities involving hazardous materials. Anomalies may be attributed to a number of causes unrelated to environmental concerns. Therefore, at the former NASD, the EBS incorporated the results of the aerial photographic analyses with the:

- Results of previous/ongoing investigations
- Results of site inspections and sampling conducted for the EBS, including “ground-truthing” (i.e., conducting site inspections solely for the purpose of investigation) potential areas of contamination uncovered by the aerial photographs
- Results of interviews with former NASD Vieques employees. This procedure was particularly useful since the interviews revealed that a number of the suspect areas identified in the aerial photographs were attributable to cattle grazing activities that occurred from time to time throughout the site.

All of the 17 sites within the former NASD identified in the EBS were further investigated as described below.

2.2.3 Preliminary Assessment

The PA is typically the first step in the CERCLA process. The purpose of the PA is to identify, by reviewing environmental records and/or visual evidence, whether potential releases of contaminants occurred from a facility. If no historical practices, current land uses, or visual signs of contamination were noted during the PA that could adversely affect the soil or groundwater at a facility, further assessment may not be warranted. Further action is warranted at facilities at which site contamination is known to exist, or is suspected. If contamination is known or suspected to be present, the Navy will assign a number to the SWMU or AOC. SI activities are recommended if site contamination is suspected but is not confirmed, on the basis of evidence obtained during the PA. For the former NASD Vieques, the Initial Assessment Study (IAS) (Greenleaf, 1984), the RFA, and the EBS were used as the basis for the PA, to determine which sites needed to be investigated as part of the SI.

The Navy used a very conservative approach in site selection, including preparation of:

Initial Assessment Study, Naval Station Roosevelt Roads, Puerto Rico (Greenleaf/Telesca Planners, Engineers, and Architects, Inc., and Ecology and Environment, Inc., September 1984)

Phase II RCRA Facility Assessment of the Naval Ammunition Facility (NASD), Vieques Island, Puerto Rico (A.T. Kearney, Inc., and K.W. Brown & Associates, Inc., October 1988)

PA/SI for SWMU 5, SWMU 6, and SWMU 7 (Environmental Science and Engineering, 1988)

All of the sites recommended for further study in the IAS and RFA were carried forward for further study in the Phase I PA/SI investigation, including SWMU 5, SWMU 6, and SWMU 7 previously evaluated by ESE. No sites were screened away in this process.

The 10 sites recommended for further investigation during the Phase I PA/SI included the following:

1. SWMU 4 - Inactive Waste Explosive Open Burn/Detonation Area
2. SWMU 5 - IRFNA/MAF-4 Disposal Site
3. SWMU 6 - Mangrove Disposal Site
4. SWMU 7 - Quebrada Disposal Site
5. SWMU 10 - Waste Paint and Solvents Disposal Site
6. SWMU 14 - Wash Rack
7. SWMU 15 - Waste Transportation Vehicle Area
8. AOC C - Drainage Ditch in the Vicinity of the Transportation Shop
9. AOC E - UST Site 2016
10. AOC F - Septic Tank Site

As a result of the EBS, an additional seven sites were added to the original 10 sites to be carried forward for a Phase II PA/SI that was completed by CH2M HILL. These additional seven sites include:

1. AOC B - WWTP and Disposal Ground
2. AOC H - Abandoned Power Plant
3. AOC I - Asphalt Plant
4. AOC J - Former Operations Area Disposal Site
5. AOC K - Water Well at Main Operations Area
6. AOC L - Abandoned Septic Vault
7. AOC-R - Former Operation/Staging Area

Figure 1-3 presents the locations of these sites on the former NASD. No additional PAs are planned for the former NASD facility.

2.2.4 Site Investigation

The SI process involves the collection of environmental samples but is generally limited in scope. The goal of the SI is to gather sufficient data to confirm the presence or absence of contamination from a SWMU or AOC identified in the PA. Analytical data obtained during the SI are compared against human health and ecological risk-based screening criteria. Typically, if chemicals do not exceed screening criteria, an SI report with an NFA recommendation is prepared. If contamination at the site is detected above screening criteria, the SI recommends further investigation of the site in an RI/FS.

Because of the accelerated schedule of the transfer, the Navy conducted PA/SIs at all 17 sites identified during the EBS to meet the transfer date. The PA/SIs involved a more detailed sampling scheme than traditional SIs, and in many cases delineated the nature and extent of chemicals at sites at which chemical concentrations exceeded screening criteria. The 17 sites were investigated during the Phase I and Phase II PA/SI field efforts in 2000. Soil, sediment, surface water, and groundwater samples were collected for laboratory analysis. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. At sites at which the potential existed for the presence of ordnance, samples were also analyzed for explosive compounds.

The Final Expanded Phase I PA/SI report detailing the results of the 10 initial sites was submitted to USEPA and PREQB in October 2000 (CH2M HILL). The Final Phase II PA/SI report detailing the results of sampling conducted at the seven additional sites was submitted in November 2002 (CH2M HILL).

No additional PA/SI efforts are planned for the former NASD facility. Additional investigations will be conducted as part of an RI/FS. *Section 3* of this SMP discusses the screening process and proposed future activities at the facility.

2.2.5 Background Study

A background study was conducted for the western portion of Vieques Island (CH2M HILL, November 2002). The primary purpose of this study was to develop a set of background values for inorganic chemicals that occur commonly in environmental media for comparison with sites investigated within the former NASD located in this part of the island. The background inorganic chemical levels from the background study will be used for comparison with soil inorganic chemical levels in samples collected during the site investigations of SWMUs and AOCs.

An approved workplan was used to select the number of background samples and the locations of the background samples. Soil, rock, groundwater, surface water, and sediment samples were proposed. The data collected were validated, and the validated data were evaluated with statistical methods meeting the latest USEPA guidance. The statistical analysis concluded that there were no significant differences between surface and subsurface soil, whereas rock sample chemical levels appeared to have significant differences from soil. Therefore, surface and subsurface soil samples

were combined to develop a background soil data set, whereas rock samples were kept as a separate data set.

According to the USEPA guidance, a single data background value is developed for each chemical for soil for future point comparisons between site and background, as part of the initial site screening analysis. When necessary, future comparisons between site and background may involve additional statistical methods for comparisons to determine if the site concentrations are significantly different from background. Such comparisons will be limited to chemicals and media, when identified as appropriate or necessary, because of the additional level of effort involved for such comparisons.

2.2.6 SWMU 4 – UXO/MEC Remedial Investigations

A UXO/MEC RI has been completed at SWMU 4 to further delineate the extent of OB/OD items at this site. A draft report documenting the activities conducted is scheduled to be submitted for review by the agencies in October 2003.

The primary objective of the UXO/MEC investigation at SWMU 4 was to identify the main areas of historical OB/OD activities and to provide a preliminary assessment of the extent of the UXO fragmentation arc that surrounds the main OB/OD areas.

The UXO/MEC field investigation at SWMU 4 was conducted between March 2002 and July 2003. During the investigation, a geophysical survey was completed to identify the locations of buried metallic anomalies that may be indicative of buried UXO/MEC. Several of the anomalies were selected to be excavated for subsequent removal and disposal by the UXO teams. The investigation provided a better understanding of the extent of UXO/MEC away from the main OB/OD pit areas. Of the metallic items that were excavated and removed, approximately 20 percent were UXO items that required demolition and subsequent disposal.

Results from the UXO/MEC investigation at SWMU 4 have not been fully evaluated as of this SMP update. A UXO/MEC RI/FS report currently being drafted for submittal to reviewers in late October 2003 will present results of the UXO/MEC characterization at SWMU 4. The UXO/MEC RI/FS draft report will include discussions on objectives of the investigation, the RI approach, findings of the RI, UXO/MEC risk evaluations, cleanup standards, screening of remedial alternatives, and recommendations on cleanup actions focused on projected land use scenarios.

2.2.7 No Further Action Report

An NFA report was prepared for the sites that presented no human health or ecological exposure concern after a risk assessment. The majority of the chemicals identified as chemicals of potential concern (COPCs) are inorganic chemicals.

The cancer risks at all nine sites proposed for NFA in this report were either within acceptable limits or were from chemicals present in the background at similar concentrations. The

groundwater samples had high turbidity during sampling. The dissolved metals measurements from the same wells were not elevated.

Only the total metals were included in the risk and hazard estimations, according to the USEPA Region 2 risk assessment guidance for a conservative risk analysis. Elevated metals in groundwater were observed in site-specific upgradient wells, where available.

Based on conservative analysis of the potential for human health risks at each of the nine sites, there are no risks above acceptable limits. Although some hazard indexes (HIs) derived were above a target value of 1.0 from the presence of some of the inorganic chemicals identified in the soil and groundwater, none of these chemicals were above those detected in background soils and groundwater. No ecological or human health impacts were identified from historical activities at these former NASD sites. No further investigation or remedial action for the soils or groundwater is necessary. Therefore, these nine sites are recommended for NFA and subsequent closure.

The NFA report has been updated to include comments from USEPA and PREQB. The draft final report has been submitted to TRC and placed in the repository for public review. An easy-to-understand Summary NFA Document (CH2M HILL, September 2003) has also been prepared to promote public participation in the remedy selection process.

PREQB intends to hold a public hearing to obtain public comments on the NFA report and summary document. A ROD will be prepared for the nine sites after addressing public comments.

2.2.8 Green Beach

CH2M HILL (July 2001) prepared the Preliminary Unexploded Ordnance (OE) Site Assessment Report for the Green Beach Area of NASD, according to the Initial Ordnance and Explosives Site Assessment Workplan for the Green Beach Area (CH2M HILL, March 2001) approved by NOSSA. The objective of the assessment was to determine if the Green Beach Area was contaminated with OE material resulting from Marine training activities in the Western Training Area (WTA) of NASD. An archive records search of NASD did not document the actual boundary and training activities that may have occurred in the WTA. As a result, the OE assessment was conducted along the beach, access roads, and the brush in between these two areas as described in the Workplan (CH2M HILL March, 2001).

The results of the Preliminary Site Assessment indicated that no UXO or OE is present to a depth of 1 ft below land surface (bls) on the beach and road areas of Green Beach. In addition, no ordnance was detected from the surveys conducted in the densely vegetated areas between the beach and the roads. In general, the UXO/OE survey supported historical information for the site, which determined that the site was never used as a range or otherwise exposed to live fire from military munitions.

Most of the anomalies consisted of aluminum cans, aluminum pull tabs, or pieces of foil, including meals ready-to-eat (MRE) ration bags. Most of the many metal pieces found were associated with construction debris, which dates back to the area's sugarcane production days and the railroad that

ran along that area. These metal pieces were mainly found around a molasses tank by the side of the beach access road. Some anomalies included iron-containing rocks that were used as a sub-base for the road.

No UXO/OE items were found. The small arms ammunition detected is from the amphibious assault training exercises and consisted of all blanks with no projectiles. Two 45-caliber slugs were also found along the road. All the items recovered were non-hazardous and were disposed of accordingly at the former NASD.

The Preliminary OE Site Assessment was planned and executed in accordance with the intended land use for the Green Beach Area as the Vieques National Wildlife Refuge. Considering the current and expected future land use, the report recommends that NFA is indicated for this area.

2.2.9 Workplans for Sites Identified for RI/FS

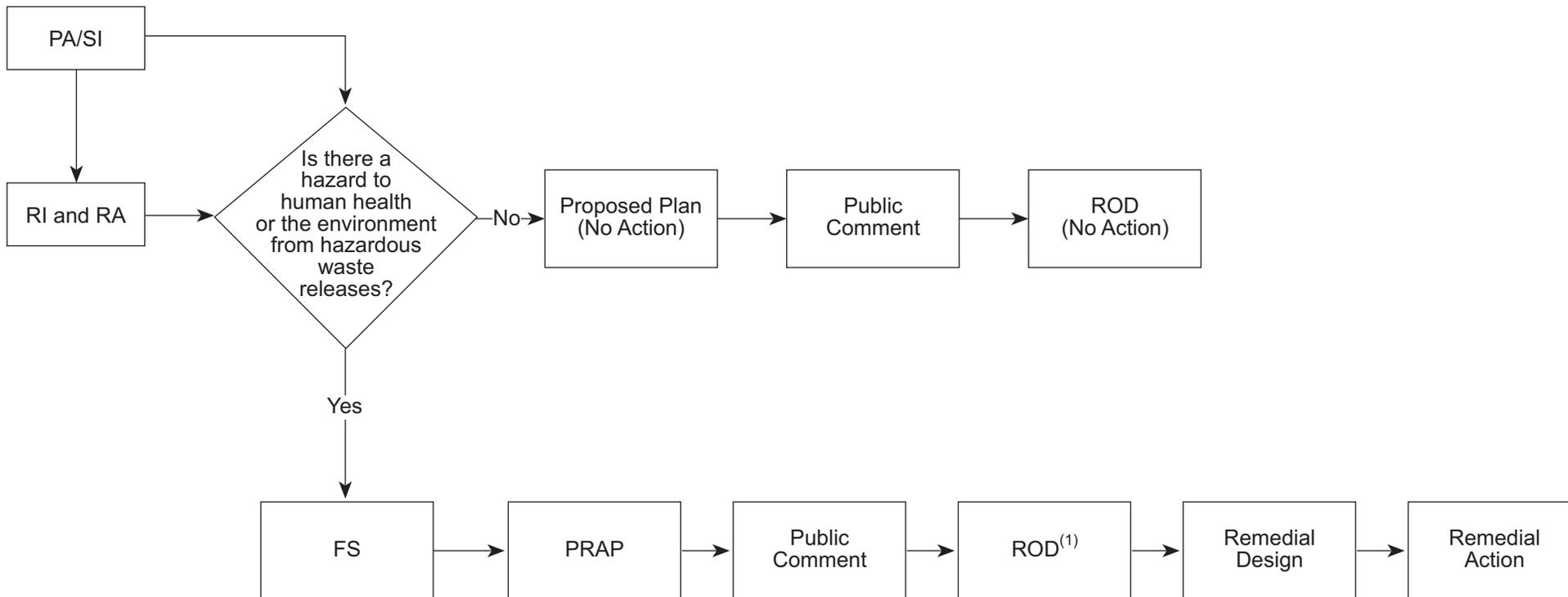
A total of seven of the 17 PA/SI sites require an RI/FS. Of these, four sites (SWMUs 6 and 7 and AOCs H and J) are being investigated together. A master workplan was prepared for issues common to all SIs (CH2M HILL, October 2001). A separate workplan is being prepared for the RI work at SWMU 4, in addition to the UXO/OE investigation already completed (CH2M HILL, March 2001). A workplan for sites AOCs I and R, which will be investigated simultaneously, is scheduled to be completed in October 2003.

A workplan was prepared for sites SWMU 6, SWMU 7, AOC H, and AOC J within the former NASD on the western portion of Vieques (CH2M HILL, August 2003). These four sites were previously investigated as part of the PA/SI, and PA/SI Phase II reports. During these investigations, the site analytical data results indicated a need for further investigation at these four sites. Therefore, additional data collection is proposed as part of this RI/FS effort to further characterize the sites and define the nature and extent of contamination in each of the site media.

On the basis of the sites and media requiring further actions, remedial action objectives will be developed and an alternatives analysis conducted. A recommended action will follow upon review of the proposed alternatives. If the risk assessment results indicate that there is no need for further evaluation, NFA will be recommended for each for these sites at the end of the RI report.

A UXO avoidance survey by a qualified team will be performed at sites SWMUs 6 and 7 and AOC J. A geophysical survey of the waste and rubble areas will also be conducted using magnetic and/or electromagnetic methods (non-intrusive techniques) at SWMU 7 and AOC J. A magnetometer survey was already conducted at SWMU 6.

A draft RI workplan for SWMU 4 is scheduled to be completed at the end of October 2003. A draft workplan for AOCs I and RI is scheduled to be completed in October 2003. AOC E has already been investigated, and a RI report is being prepared for this site.



- RI = Remedial Investigation
- RA = Baseline Risk Assessment (human health and ecological risks)
- FS = Feasibility Study
- PRAP = Proposed Remedial Action Plan
- ROD = Record of Decision or Decision Document

⁽¹⁾Includes summary of any Interim Remedial Actions or Removal Actions

FIGURE 2-1
CERCLA RI/FS PROCESS
 Site Management Plan
 Former NASD, Vieques Island, Puerto Rico **CH2MHILL**



3.1 Screening Criteria

Screening methods have been developed for the former NASD to determine whether a SWMU or AOC will require a full RI/FS or if it can be designated an NFA site if it does not pose a threat to the environment. The originally proposed screening methods have been refined on the basis of the comments received from USEPA and PREQB on the two PA/SI reports and the draft NFA report.

The screening of each site was based upon validated analytical results obtained from these investigations. The screening process provides a systematic method of identifying target analytes present at the site that may require more detailed evaluation. These data provide the rationale for a recommendation of NFA or further investigation (RI/FS or IRA) for each site. The screening of analytical data obtained from the sampling events involves comparing against risk-based screening criteria and established background concentrations. A more recent USEPA policy implemented by USEPA Region 2 recommends conducting a risk assessment to serve as the basis for site management decisions. Also, COPCs to be selected by screening against risk-based criteria only, and no background comparisons are supported by USEPA Region 2. *Appendix A* presents a set of screening criteria used for screening site data in the NFA reports. These criteria are updated by the agencies periodically. The latest criteria will be used for each of the future screening efforts.

3.1.1 Risk-Based Screening Procedure

The 17 sites were investigated during the Phase I and Phase II PA/SI 2000. Additional data will be collected as part of the RI/FS sampling efforts being proposed for 8 of the 17 sites. Soil, sediment, surface water, and groundwater samples were collected for laboratory analysis. The samples were analyzed for metals, VOCs, SVOCs, pesticides, and PCBs. At sites at which the potential existed for the presence of ordnance, samples were also analyzed for explosive compounds.

During preparation of the NFA documents, the site data were screened to the most recent health-based screening criteria and NASD-specific background concentrations for metals from the recently completed background investigation of the former NASD. *Appendix B* includes a set of all the screening criteria used at the former NASD for each media. These criteria will be updated on the basis of the latest published values for each newly prepared report.

3.1.2 Background Screening

The Phase I and Phase II PA/SIs at the former NASD have revealed that detectable levels of metals exist in soil, groundwater, surface water, and sediment at several IR Program sites. Some of these

metals are above the screening criteria. The investigations have not, however, differentiated the degree to which these constituents were attributed to either site-related releases or represent background conditions associated with naturally occurring constituents.

As previously presented in *Section 2*, the background data (CH2M HILL, November 2002) for soil, sediments, and surface water are used for all the site-specific evaluation to determine if a detected, commonly occurring inorganic chemical is elevated specifically at the site or if it is similar to background levels. For groundwater, site-specific wells will be identified to determine if observed inorganic chemicals are similar to upgradient wells. Similarly, for surface water and sediments, upstream sample concentrations will be compared with site/downstream samples to determine if inorganic chemicals are a result of releases specific to the site. If metals concentrations from site data are similar to the naturally occurring background levels, these metals are not considered to be site contaminants requiring further actions. According to USEPA's 2002 policy, a chemical detected in the background should be included in the risk assessment although it is detected in the background media at similar concentrations. Because USEPA Region 2, one of the oversight agencies for the former NASD, has adopted this policy, all detected inorganic chemicals will be retained for risk assessment in both human health and ecological assessments. This approach has already been implemented for the NFA sites.

3.2 Categorizing and Prioritizing Sites

Based on the results of the site screening evaluations conducted during the PA/SI, three categories have been established for moving NASD sites forward in the CERCLA process. These categories include:

- Sites Suitable for NFA: AOC B, AOC C, AOC F, AOC K, AOC L, SWMU 5, SWMU 10, SWMU 14, SWMU 15
- Sites Requiring RI/FS: AOC E, AOC H, AOC I, AOC J, AOC R, SWMU 4, SWMU 6, SWMU 7
- Sites Requiring RI/FS and OE Investigation and Clearance and/or OE Avoidance: SWMU 4, SWMU 6, AOC J

During the PA/SI screening, AOC R was recommended for the NFA category. However, during risk assessment, AOC R was recommended for RI/FS due to the uncertainty associated with historical site activities and detection of PAHs at levels above risk-based acceptable levels.

Table 3-1 presents the latest status of the 17 sites, as well as future activities planned for the sites. As presented in *Section 2*, the draft final NFA report was prepared and submitted for agency review. After being revised to address the agency review comments, a draft final of the report was released for public review (CH2M HILL, May 2003). A *Summary of the NFA Report* was prepared and submitted for PREQB review (CH2M HILL, September 2003). PREQB plans to hold a public hearing on the proposed NFA sites to solicit public comment on the proposed NFA for the nine sites. An RI/FS workplan has been prepared for four of the sites identified for RI/FS. An RI report is being

prepared for site AOC E. Additional workplans will be prepared for the remaining three sites (SWMU 4 and AOCs I and R).

3.3 Future Activities

3.3.1 Sites Requiring Full RI/FS

Eight sites have been identified as requiring full RI/FS activities. The following CERCLA steps will be conducted for these sites.

TABLE 3-1. CURRENT STATUS SUMMARY FOR 8 OF THE 17* PA/SI SITES

Site	Complete Activities			Planned Activities							Comments
	PA	SI	NFA/D D	RI/RA	FS	ROD	RD	RI-C	RI-O	LUC	
SWMU 4 Inactive Waste Explosive Open Burn/Detonation Area – UXO/OE Investigations	NA	NA	NA	Nov 2003	Nov 2003	NA	NA	X	X	X	Separate RI/FS Reports are anticipated to address UXO safety hazards and environmental contamination.
SWMU 4 Inactive Waste Explosive Open Burn/Detonation Area – Hazardous Waste – RI/FS	NA	Apr/ June 2000	NA	May 2005	May 2005	Feb 2006	June 2006	X	X	X	Projected schedule for the RI/FS portion of the report is included. Details are in Figure 5-1 and Table 5-1 in <i>Section 5</i> .
SWMU 6 Mangrove Disposal Site	Apr 1988	Apr/ May 2000	NA	Dec 2004	Sept 2005	Jan2 2006	Aug 2006	X	X	X	RI field activities to collect samples from the site are planned for August 2003. Details on schedules are in Figure 5-1 and Table 5-1.
SWMU 7 Quebrada Disposal Site	Apr 1988	Apr 2000	NA	Dec 2004	Sept 2005	Jan 2006	Aug 2006	X	X	X	RI field activities to collect samples from the site are planned for August 2003 as part of RI/FS. Details on schedules are in Figure 5-1 and Table 5-1.
AOC E UST Site 2016	Apr 1999	Apr/ May 2000	NA	Jan 2004	Jan 2004	June 2004	Oct 2004	X	X	X	Draft RI/FS is scheduled for August 2003. A free-product recovery pilot study was completed as part of the RI/FS workplan. Details on schedules are in Figure 5-1 and Table 5-1.
AOC H Power Plant	June 2000	Nov/ Dec 2000	NA	Dec 2004	Sept 2005	Jan 2006	Aug 2006	X	X	X	Projected schedule for the RI/FS report is included here. Details on schedules are in Figure 5-1 and Table 5-1.
AOC I Asphalt Plant	Apr 2000	Dec 2000	NA	May 2005	May 2005	Nov 2005	June 2006	X	X	X	Projected schedule for the RI/FS report is included here. Details on schedules are in Figure 5-1 and Table 5-1.

TABLE 3-1. CURRENT STATUS SUMMARY FOR 8 OF THE 17* PA/SI SITES

Site	Complete Activities			Planned Activities							Comments
	PA	SI	NFA/DD	RI/RA	FS	ROD	RD	RI-C	RI-O	LUC	
AOC J Former Staging and Disposal Area	June 2000	Nov/Dec 2000	NA	Dec 2004	Sept 2005	Jan 2006	Aug 2006	X	X	X	RI field activities to collect samples from the site are planned for August 2003 as part of RI/FS. Details on schedules are in Figure 5-1 and Table 5-1.
AOC R Former Construction Staging Area	NA	Nov/Dec 2000	NA	May 2005	May 2005	Nov 2005	June 2006	X	X	X	Projected schedule for the RI/FS report is included here. Details on schedules are in Figure 5-1 and Table 5-1.
X	Activity Planned							RI-O		Remedial Implementation-Operations	
PA	Preliminary Assessment							LUC		Land Use Controls	
SI	Site Investigation							HHRA		Human Health Risk Assessment	
NFA/DD	No Further Action/Decision Document							HHERA		Human Health & Ecological Risk Assessment	
RI/RA	Remedial Investigation/Risk Assessment							NA		Not Applicable	
FS	Feasibility Study							* The other nine sites were submitted for NFA in May 2003			
ROD	Record of Decision										
RD	Remedial Design										
RI-C	Remedial Implementation-Construction										

Remedial Investigation

For safety reasons, the RI/FS activities at the three sites determined to contain OE will be conducted only after a UXO visual sweep and UXO avoidance activities have been completed. No live ordnance has been discovered to date at sites SWMU 6, SWMU 7, and AOC J. Only ordnance-related scrap items have been observed at these disposal sites during the PA/SI UXO visual sweep and avoidance investigations. AOC E has already been investigated, and a draft RI/FS report is scheduled to be completed in September 2003. A brief summary of the draft workplan completed for the four sites is included below.

The RI is appropriate when the preceding SI has characterized or identified a release of contaminants. At the former NASD sites, a conservative assessment approach is implemented by including sites for investigation if a suspicion of release is identified. This additional study of the facility will be completed under a preliminary schedule identified in *Section 5* of this SMP.

The purpose of the RI is to characterize the nature and extent of the contamination at the facility and to gather sufficient data to support a risk assessment, FS, NFA decision, or IRA. The objective of the investigation is to characterize the SWMU or AOC, define potential release locations, define the extent of contamination, and identify potentially complete exposure pathways for human and/or ecological receptors for the site-contaminated media in accordance with CERCLA risk assessment guidance (USEPA, 1989).

If the RI reveals a release that poses immediate harm to human health and the environment, an IRA may be required. If there is no immediate threat to human health or the environment, the existence

of contamination above acceptable levels will require an FS to evaluate potential corrective action alternatives. If the contaminants detected do not exceed the screening criteria, or if the risk assessment indicates that no unacceptable risks to human health or the environment exists, then the RI will recommend NFA for the facility.

For sites that do not meet the acceptable risk criteria for unrestricted land use (i.e., residential use), institutional controls and land use restrictions will be put in place to meet the planned land uses and proposed response actions to eliminate or avoid exposure to CERCLA hazardous substances. The institutional controls will remain in place until the previously documented elevated contaminant concentration levels are reduced to levels that will allow unrestricted use, or until the results of a risk assessment indicate that unrestricted land use is appropriate for that IR site. The Institutional Controls placed in the Deed transferring the former NASD property to MOV are presented in *Section 4* of this SMP.

Feasibility Study

An FS may be required when the RI findings show that conditions at the SWMU or AOC pose unacceptable current or future risks to human health or ecological receptors. The FS process involves identification of the multiple remedial action alternatives and of the most suitable alternative, given the site conditions, to remediate the site to acceptable human health and/or ecological risk levels. The primary objective of the FS process is to identify, evaluate, and recommend remedial technologies that are applicable to the site conditions. The FS will be conducted following the RI, and the results will be included in an FS report.

Interim Remedial Action

At anytime during the CERCLA process, an IRA may be conducted if it is determined that an imminent threat exists to human health or the environment from the presence of hazardous materials at a site or medium. An IRA is intended to prevent or minimize the further spread of contamination while long-term remedies are pursued. Additionally, an IRA may be performed at any stage of the investigation to accelerate remediation. IRAs will be conducted at appropriate sites, if applicable, during the investigation process. None of the former NASD sites have thus far been identified as needing an IRA.

No Further Action

At anytime during the CERCLA process, an NFA decision may be obtained if it has been determined that no release has occurred or that the release does not pose an unacceptable risk to human health or the environment. A ROD presenting the selected remedy and rationale will be prepared for public review and approval. NFA status, if and when attained, effectively terminates the site from further requirements. An NFA may be proposed at any stage during site investigation as presented in *Figure 3-1*.

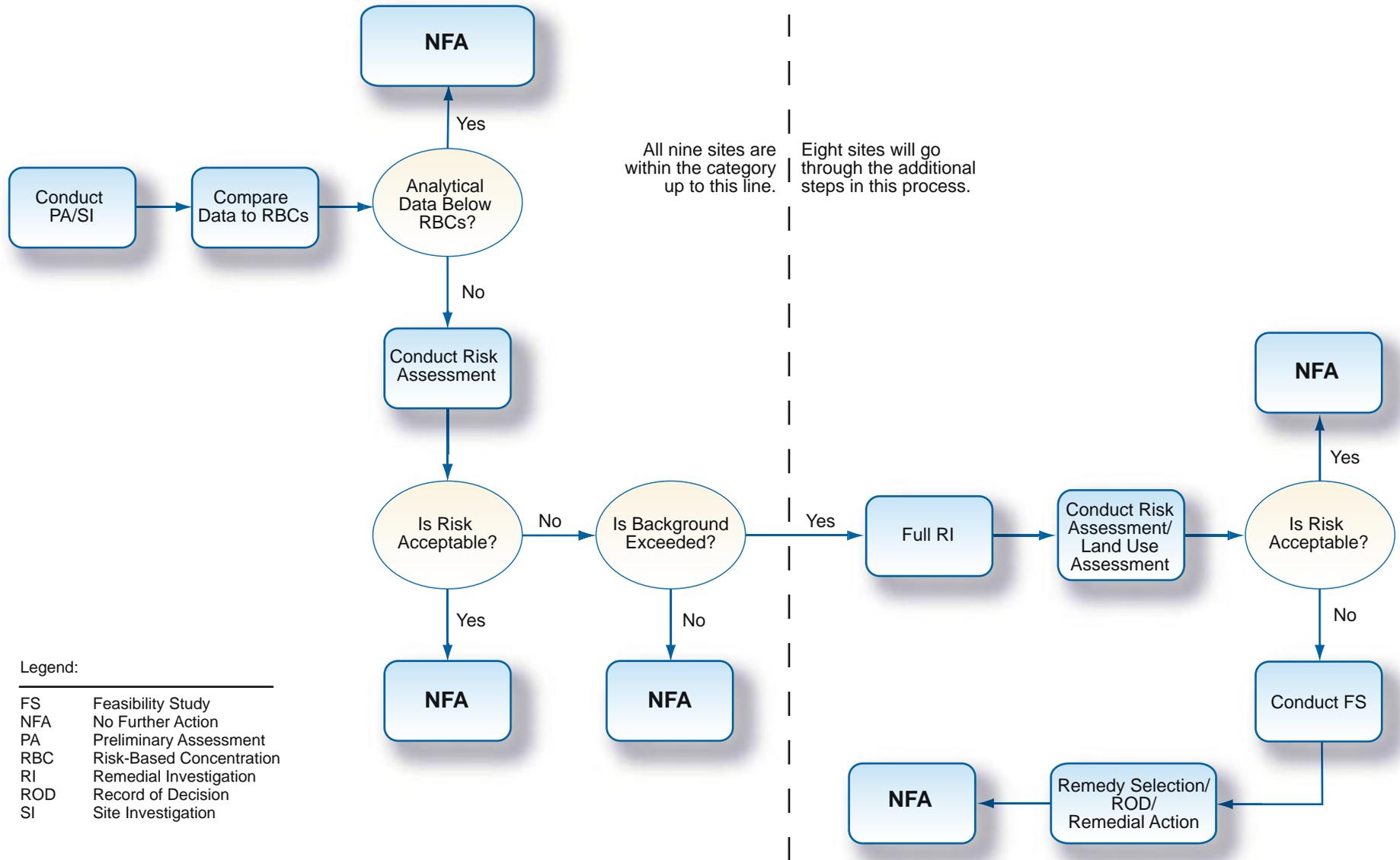


FIGURE 3-1
SITE RISK MANAGEMENT FOR ALL 17 SITES IDENTIFIED

Site Management Plan
 Former NASD, Vieques Island, Puerto Rico



Section 4

Deed Restrictions

On April 30, 2001, the Department of the Navy transferred ownership of the former NASD to MOV. As set forth in the *Quitclaim Deed* for this transfer of ownership, the former NASD property is subject to specific land use restrictions and easements contained in the Deed. These restrictions and easements relate to the Navy's ongoing IRP activities in and around IR Program parcels within the former NASD. A copy of the *Quitclaim Deed* is provided in *Appendix C*.

As previously discussed, RIs are part of the IR Program activities that may be performed by the Navy at the IR parcels within the former NASD. The permitted IR activities include the installation of groundwater monitoring wells, and the collection of groundwater, surface water, soil, and sediment samples. The activities can also involve response or remedial actions, such as the excavation and removal of site soil, as well as the construction, and operation and maintenance of soil and groundwater remediation systems.

4.1 Land Use Restrictions and Easements for IR Sites

The easements and land use restrictions set forth in the Deed that apply to the IR sites are described in the following sections for each of the IR parcels on the former NASD property. These land use restrictions should be honored by the Grantee (i.e., MOV) until the IR sites are released for unrestricted land use. According to the Deed (*Appendix C*), MOV agrees that use of and access to IR sites shall be limited to non-residential use until either:

- A risk assessment in accordance with CERCLA is completed and either PREQB and/or USEPA concur that NFA is required, allowing for unrestricted use, or
- A ROD is signed that sets forth less stringent land use restrictions, or
- The Navy completes remedial actions in accordance with CERCLA and other applicable laws that allow unrestricted use.

The Deed included specific language for prohibiting any types of residential use and any use that includes adults and children (e.g., child care, preschool, playground, or any other form of target residential housing) as defined by the Residential Lead Based Paint Hazard Reduction Act (Title X) and the Toxic Substances Control Act.

4.1.1 AOC I, Asphalt Plant

According to the Deed, access to AOC I shall be limited to non-residential use until one or more of the above-described conditions are met for this site. Further, the Navy retains a 50-ft easement for ingress/egress to AOC I. *Figure 4-1* shows the AOC I boundary and associated ingress/egress easement. AOC I consists of a 1.5-acre parcel, and the associated ingress/egress easement consists of 0.288 acres.

4.1.2 AOC H, Abandoned Power Plant

According to the Deed, access to AOC H is strictly prohibited until acceptable conditions are met as described above for all IR sites. In addition, the Navy retains a 50-ft ingress/egress easement for AOC H. *Figure 4-2* shows the boundary of AOC H, including the 50-ft ingress/egress easement. AOC H comprises an area of 1.7 acres.

4.1.3 AOC L, Former Septic Vault

The land use restrictions that apply to AOC L are the same as those described for other IR sites. There is strict prohibition of access until acceptable conditions are met as described above. The Navy retains a 50-ft ingress/egress easement to AOC L. *Figure 4-3* shows the boundary of AOC L, including the 50-ft ingress/egress easement. AOC L comprises an area of 0.10 acres, and the area of the easement is 0.069 acres.

4.1.4 AOC B, AOC C, AOC E, AOC F, AOC K, SWMU 10, SWMU 14, and SWMU 15 (Main Operational Area)

The land use restrictions that apply to the Main Operational Area are the same as those described above for other IR sites and parcels in which IR sites are located. Also, further waste stream discharges to the WWTP are prohibited by future users of this area until site conditions are fully determined to meet one of the three above-specified conditions in accordance with CERCLA.

The Navy also retains a 50-ft ingress/egress easement to the Main Operational Area. *Figure 4-4* shows the boundary of the Main Operational Area, including the 50-ft ingress/egress easement. In addition, the area in which access and use are prohibited within the Main Operational Area is also shown in *Figure 4-4*. The Main Operational Area comprises an area of 21.7 acres.

4.1.5 SWMU 7, Quebrada Landfill

The land use restrictions that apply to SWMU 7 are the same as those described above for AOC H (strict prohibition of use and access to parcel). *Figure 4-5* shows the boundary of SWMU 7, including the 50-ft ingress/egress easement. SWMU 7 comprises an area of 10.0 acres.

4.1.6 AOC R, Former Staging and Operations Area

The land use restrictions that apply to AOC R are the same as those described above for AOC I (restricted to non-residential use unless risk assessment concludes that unrestricted land use is suitable). MOV agrees that all intrusive activities are prohibited, along with use of and access to this site, until one of the three above-described conditions are met.

Figure 4-6 shows the boundary of AOC R, including the 50-ft ingress/egress easement. In addition, the two areas within AOC R in which access and use are prohibited are also shown in *Figure 4-6*. AOC R comprises an area of 12.0 acres.

4.1.7 SWMU 5, IRFNMAF-4 Site

The land use restrictions that apply to SWMU 5 are the same as those described above for other IR sites (strict prohibition of use and access to parcel). The Navy retains several 50-ft easements to this parcel, until determined otherwise (when one of the three above-specified conditions are met according to CERCLA). *Figure 4-7* shows the boundary of SWMU 5 and the associated easements. SWMU 5 comprises an area of 0.4 acres.

4.1.8 AOC J, Former Staging Area Disposal Site

AOC J is located within the property to be retained by the U.S. Government (to be administered by DOI). According to the Deed, the Government retains an access easement for AOC J of 0.755 acres. *Figure 4-8* shows the location of the access easement.

4.1.9 SWMU 4, Inactive Waste Explosive OBIOD Range

SWMU 4 is located within the property to be retained by the U.S. Government (to be administered by DOI). According to the Deed, the Government retains an access easement for SWMU 4 of 5.465 acres. *Figure 4-9* shows the location of the access easement.

4.1.10 SWMU 6, Mangrove Disposal Site

SWMU 6 is located within the property retained by the U.S. Government (to be administered by DOI). According to the Deed, the Government retains an access easement for SWMU 6 of 7 acres. *Figure 4-10* shows the location of the access easement.

4.2 Other Restrictions of Deed

Other restrictions set forth in the Deed that apply to MOV, its lessees, licensees, successors, or assignees to any interest in any of the IR sites are listed below:

MOV shall not construct or permit to construct any water use well, and shall not extract, utilize, consume, or permit to be extracted any water from the aquifer below the surfaces of the ground at

or within 2,000 feet of the boundary of an IR site for the purpose of human consumption, or other use. This restriction shall remain in force until either:

- A risk assessment in accordance with CERCLA is completed by the Navy, and either PREQB or USEPA concur that NFA is required allowing for unrestricted use, or
- A ROD is signed that sets forth less stringent land use restrictions, or
- The Navy completes remedial actions in accordance with CERCLA and other applicable laws that will allow unrestricted use.

MOV shall not excavate or conduct any other soil-disturbing activities within those areas of known or suspected surface or subsurface soil contamination identified in the PA/SI and EBS provided to MOV, without prior written approval of the Navy.

MOV shall not undertake any alterations, additions, excavations, improvements to, installation upon, or otherwise modify or alter the areas associated with the IR Program without written approval by the Navy Remedial Project Manager for the former NASD Vieques.

MOV shall cooperate in good faith to minimize any conflict between necessary environmental investigation and remediation activities, and the operations and construction activities of MOV.

MOV will allow for the initiation and completion of all necessary response or remedial activities to address contaminated areas.

MOV will comply with the health and safety requirements of Title 29 of the *Code of Federal Regulations* (CFR) 1910.120 regarding the investigation and remediation of the IR sites.

If MOV seeks a response action from the Navy on the former NASD, MOV will:

- Notify the Navy in writing in accordance with *Section 4.3* below.
- Furnish copies of pertinent papers that MOV receives to the Navy.

Notwithstanding any other rights granted in the deed, MOV's use of any portion of an IR site must be consistent with any property use restrictions identified in any CERCLA RODs for the former NASD Vieques issued by PREQB and/or USEPA and the Navy. The Navy will ensure that MOV is provided a copy of all RODs.

4.3 Notification Requirements

The notifications set forth in the Deed that apply to MOV and the Navy are listed below:

If MOV seeks a response action from the Navy on the former NASD, MOV will:

- Notify the Navy in writing within 90 days after learning of any previously unidentified condition at the former NASD that suggests a response action is necessary, or within 90 days after receiving notice of a claim by federal, state, or local regulators, or third parties of any

condition at the former NASD that suggests a response action is necessary. If MOV is served with any complaint or written notice of a claim by the federal, state, or local regulators, the served party shall provide the Navy with a copy of such document no later than 15 days following service of such document.

If the Navy seeks access to MOV property the Navy will:

- Provide a written request to MOV for reasonable access to the records and personnel of MOV for the purposes of defending, or resolving the need for additional response action.
- Provide a written request to MOV for reasonable access to the property of MOV for purposes of performing a response action on the former NASD or on adjoining property.

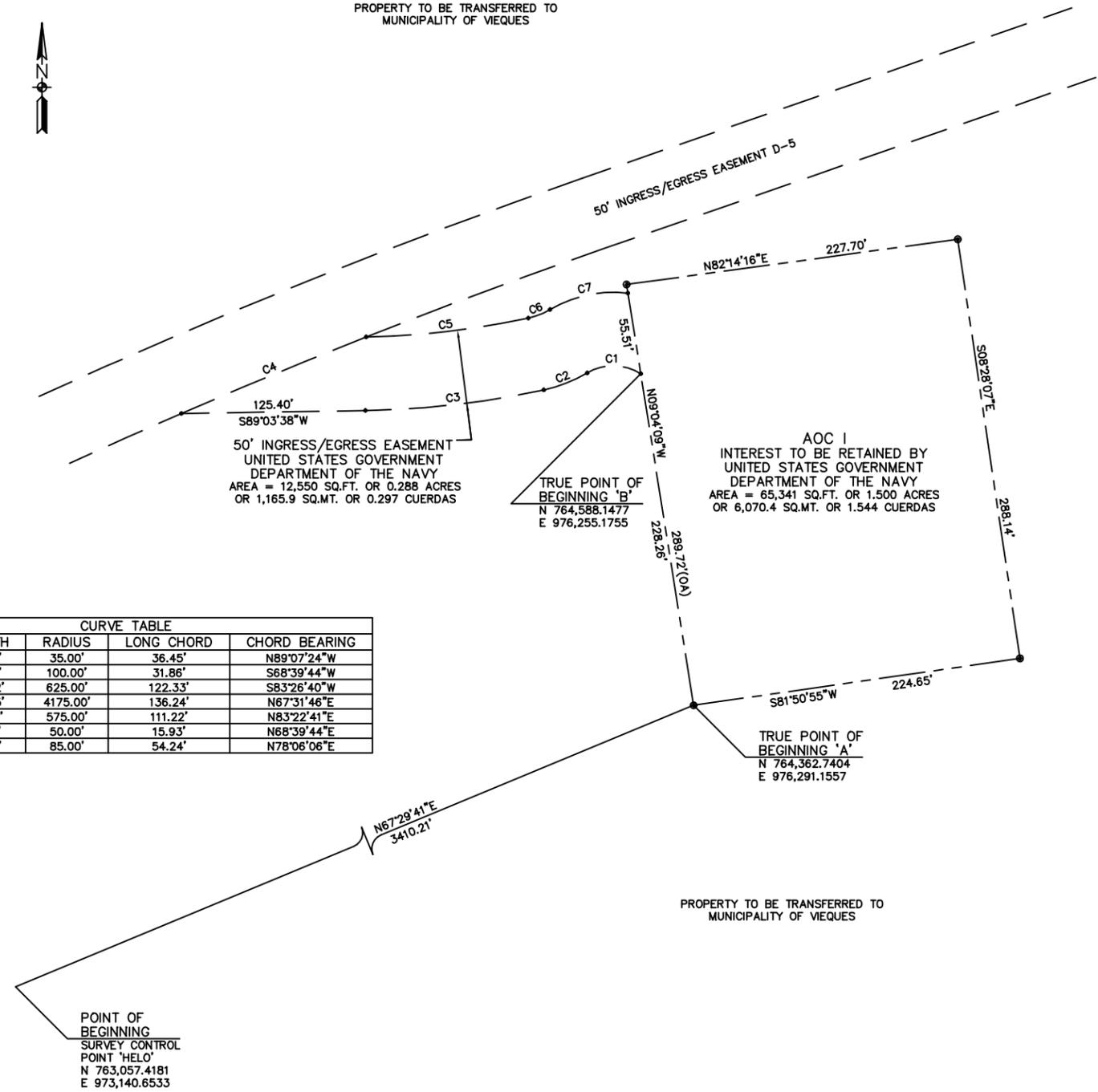
Upon being provided reasonable advance notice by the Navy, MOV will not interfere with the ability of the Navy, its agents, or contractors to establish and maintain, for the purposes of future environmental investigations and response or remedial activities, certain designated areas for, but not limited to, monitoring and response or remediation, well sites and related sampling stations, decontamination facilities, and treatability study sites.

4.4 Property Release Process

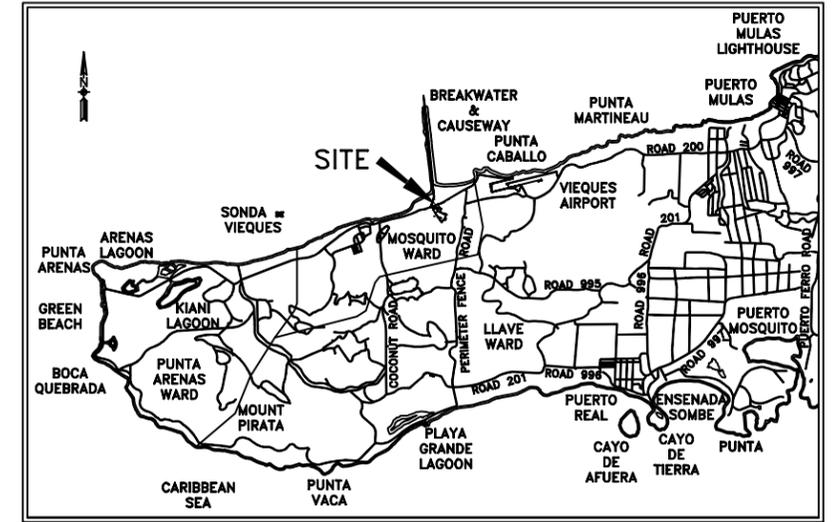
The land use restrictions described above regarding the use of the former NASD property have been determined by the Navy in the *Quitclaim Deed* to be reasonably necessary to protect present or future human health or safety or the environment as provided by CERCLA. These restrictions shall be binding on MOV and its successors and assignees. They shall remain in force until such time that the Navy has obtained written confirmation from the Commonwealth of Puerto Rico that the appropriate regulatory agency has determined that, in view of the selected remedy, the condition of the restricted property is protective of present or future human health or safety or the environment for the use that was formerly prohibited.

When the Navy receives such written confirmation from the Commonwealth of Puerto Rico, the Navy shall deliver to MOV a release, in written form, relating specifically to the environmental use restrictions set forth in the Deed. The Navy's execution of the release will, in effect, remove the subject restrictions relating to the remedy addressed by the restrictions from the title to the MOV parcel (former NASD property). Also, when the Navy has completed all response action necessary to protect human health and the environment with respect to any substance remaining on the property on the date of transfer, the Navy shall execute and deliver to MOV an appropriate document containing a warranty that all such response action has been taken and that the requirements of Section 120(h)(3)(a)(ii)(I) of CERCLA have been satisfied.

The Deed includes an assurance from the Navy that it will take all necessary response action at the former NASD property as provided by Section 120(h)(3)(C)(ii)(II) of CERCLA. The schedule for the planned RIs and necessary response actions is provided in *Section 5* of this SMP, and the Navy will provide updates to this schedule on an annual basis.



CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	38.33'	35.00'	36.45'	N89°07'24"W
C2	32.00'	100.00'	31.86'	S68°39'44"W
C3	122.52'	625.00'	122.33'	S83°26'40"W
C4	136.25'	4175.00'	136.24'	N67°31'46"E
C5	111.39'	575.00'	111.22'	N83°22'41"E
C6	16.00'	50.00'	15.93'	N68°39'44"E
C7	55.20'	85.00'	54.24'	N78°06'06"E



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
- HORIZONTAL COORDINATES SHOWN HEREON ARE IN FEET AND REFER TO THE PUERTO RICO/VIRGIN ISLAND STATE PLANE COORDINATE SYSTEM, NAD 83 (1997 ADJUSTMENT). HORIZONTAL COORDINATES WERE DERIVED USING DUAL FREQUENCY GPS RECEIVERS AND ARE REFERENCED TO NATIONAL GEODETIC SURVEY MONUMENTS VIEQUES (PID AB 9849) AND FRIO (PID 9848).

THIS PLAT MAY NOT SHOW ALL PARCELS OR EASEMENTS THAT COULD AFFECT SUBJECT PLAT. REFER TO "OVERALL LOCATION SURVEY" NAVFAC DRAWING NUMBER 4423030 FOR THE LOCATION OF PARCELS AND EASEMENTS SURVEYED BY GLENN & SADLER OF NORFOLK, VIRGINIA AND LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO DURING THE LAND TRANSFER AND DISPOSAL OF NASD VIEQUES.

LEGEND

- IRON ROD AND CAP SET ●
- PROPERTY LINE ---
- EASEMENT LINE ---
- POINT ON EASEMENT •

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date :

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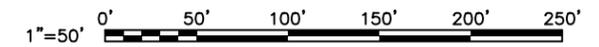
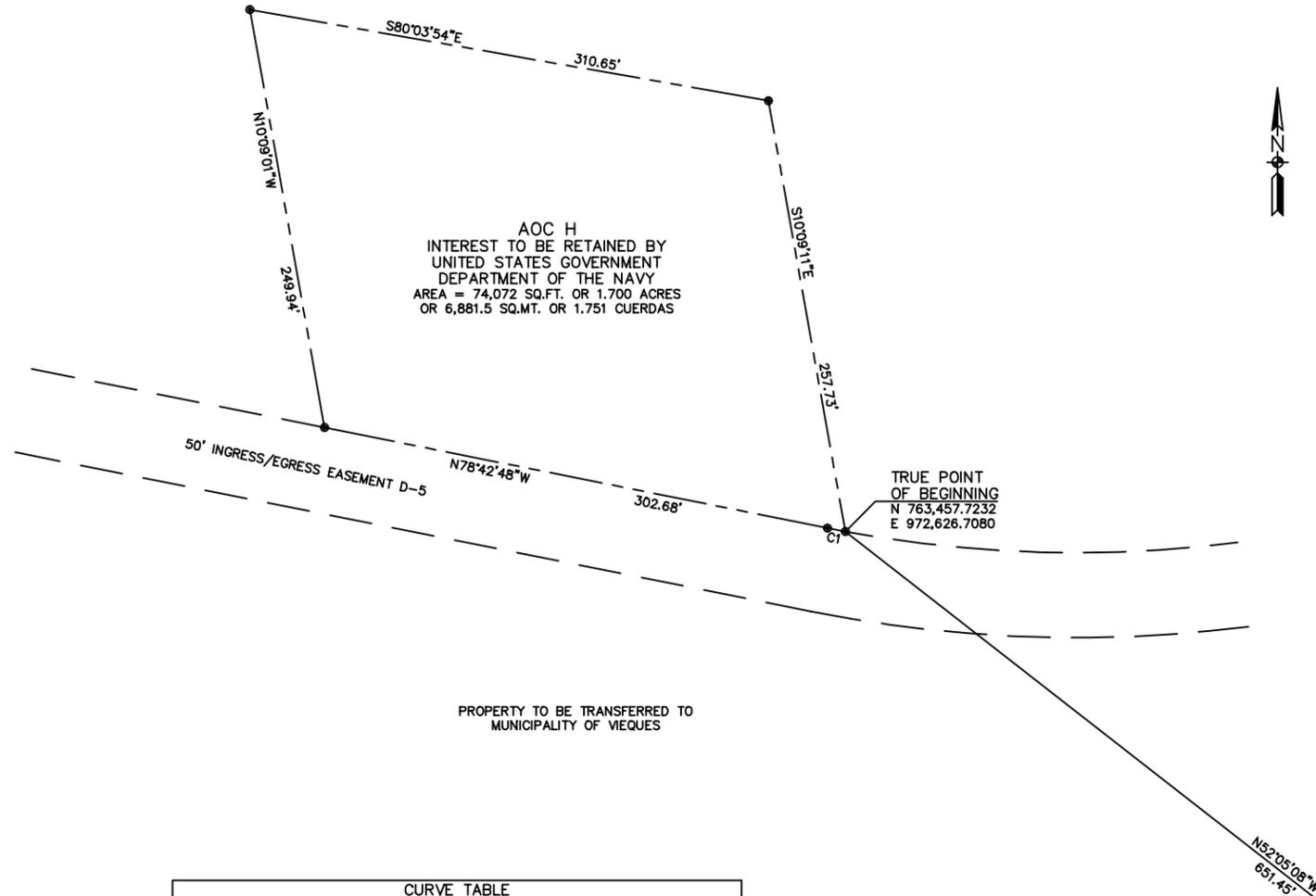


FIGURE 4-1
SITE LOCATION MAP – AOC-I
Site Management Plan
Former NASD, Vieques Island, Puerto Rico **CH2MHILL**

PROPERTY TO BE TRANSFERRED TO
MUNICIPALITY OF VIEQUES



CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	10.75'	750.00'	10.75'	N79°07'27"W

PROPERTY TO BE TRANSFERRED TO
MUNICIPALITY OF VIEQUES

CERTIFICATION

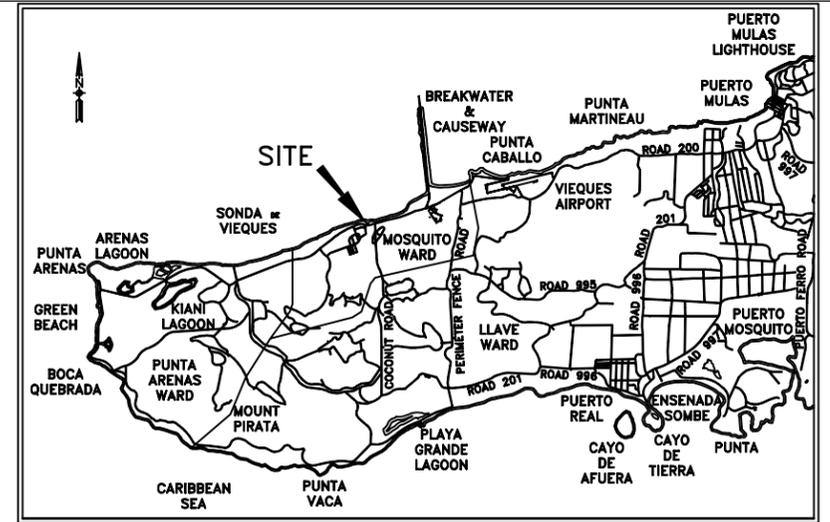
I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

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 P. O. Box 4487 Vega Baja, P. R.



POINT OF BEGINNING
 SURVEY CONTROL
 POINT 'HELO'
 N 763,057.4181
 E 973,140.6533



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- IRON ROD AND CAP SET

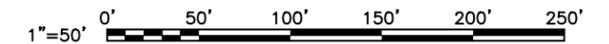
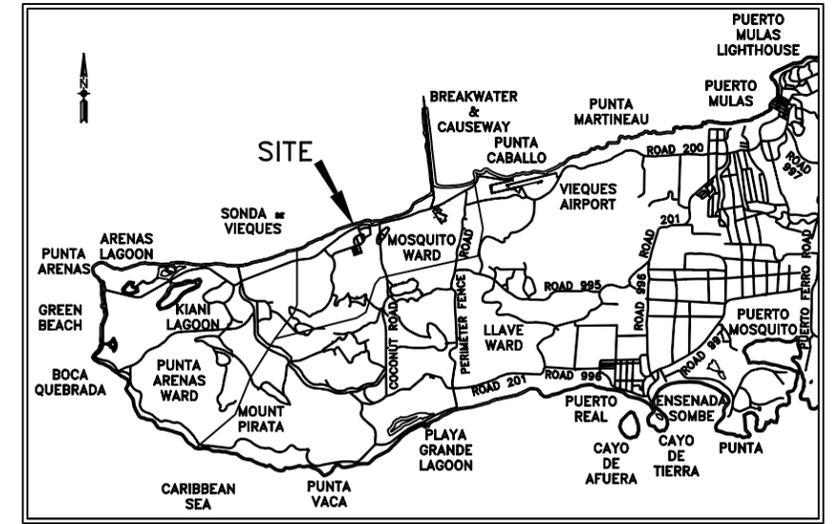
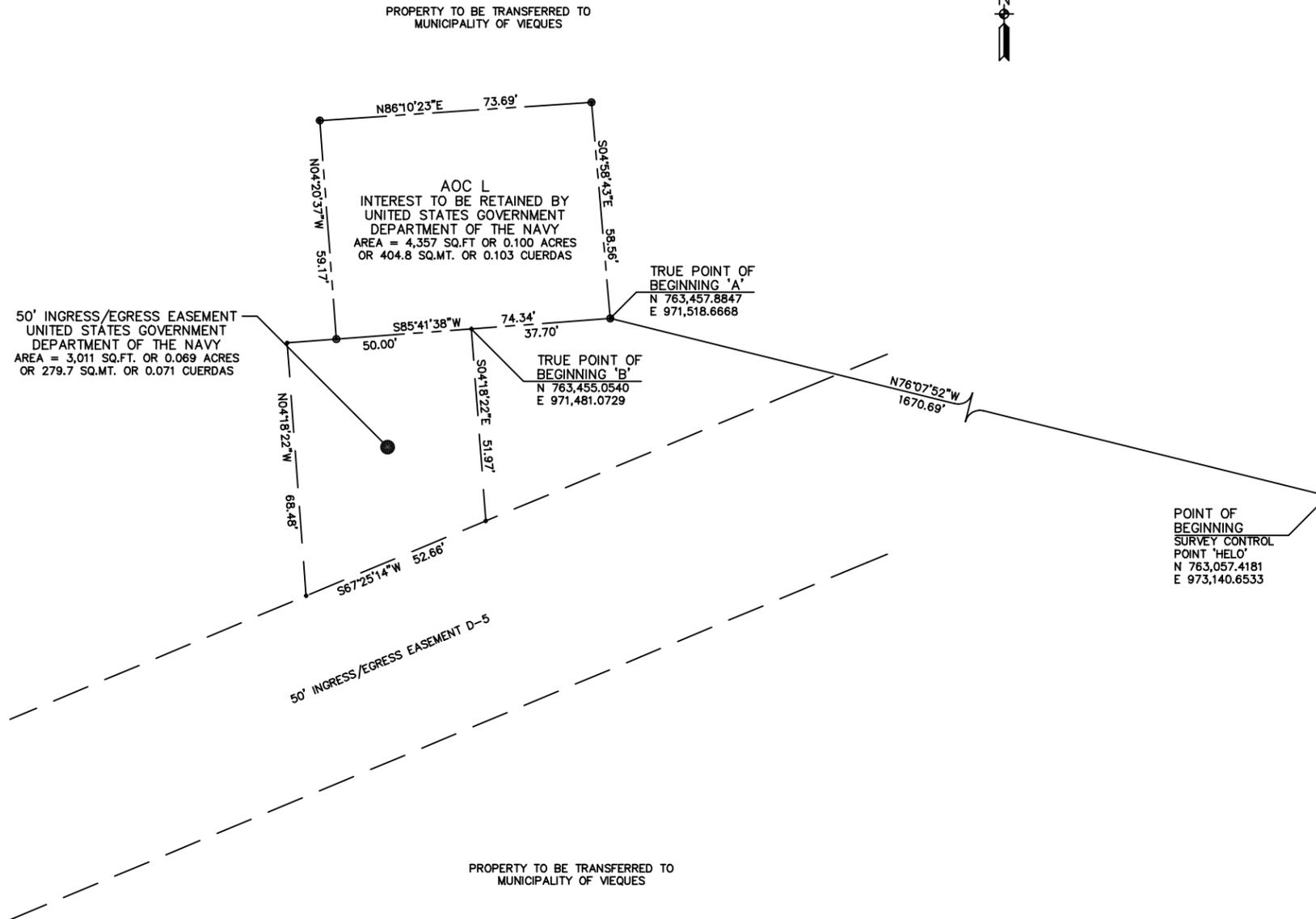


FIGURE 4-2
SITE LOCATION MAP – AOC-H
 Site Management Plan
 Former NASD, Vieques Island, Puerto Rico **CH2MHILL**



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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LEGEND

- IRON ROD AND CAP SET ●
- PROPERTY LINE - - - - -
- EASEMENT LINE - · - · -
- POINT ON EASEMENT •

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date : _____
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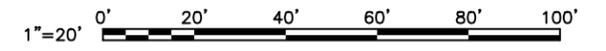
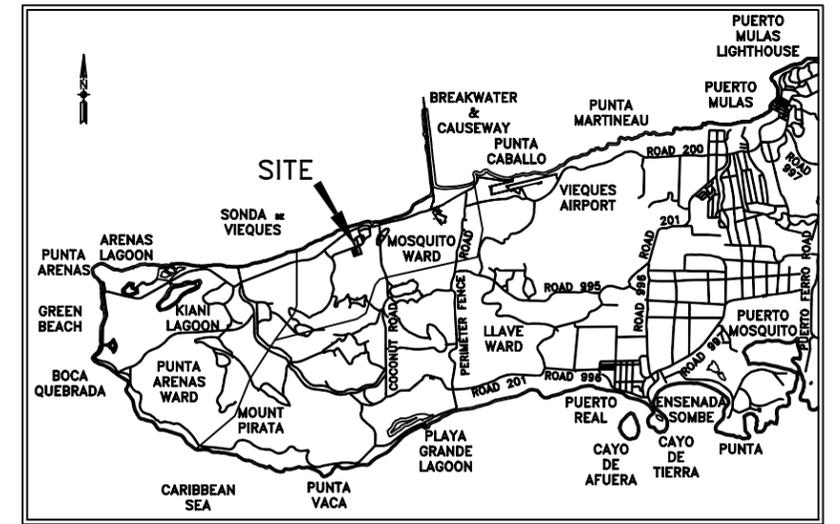
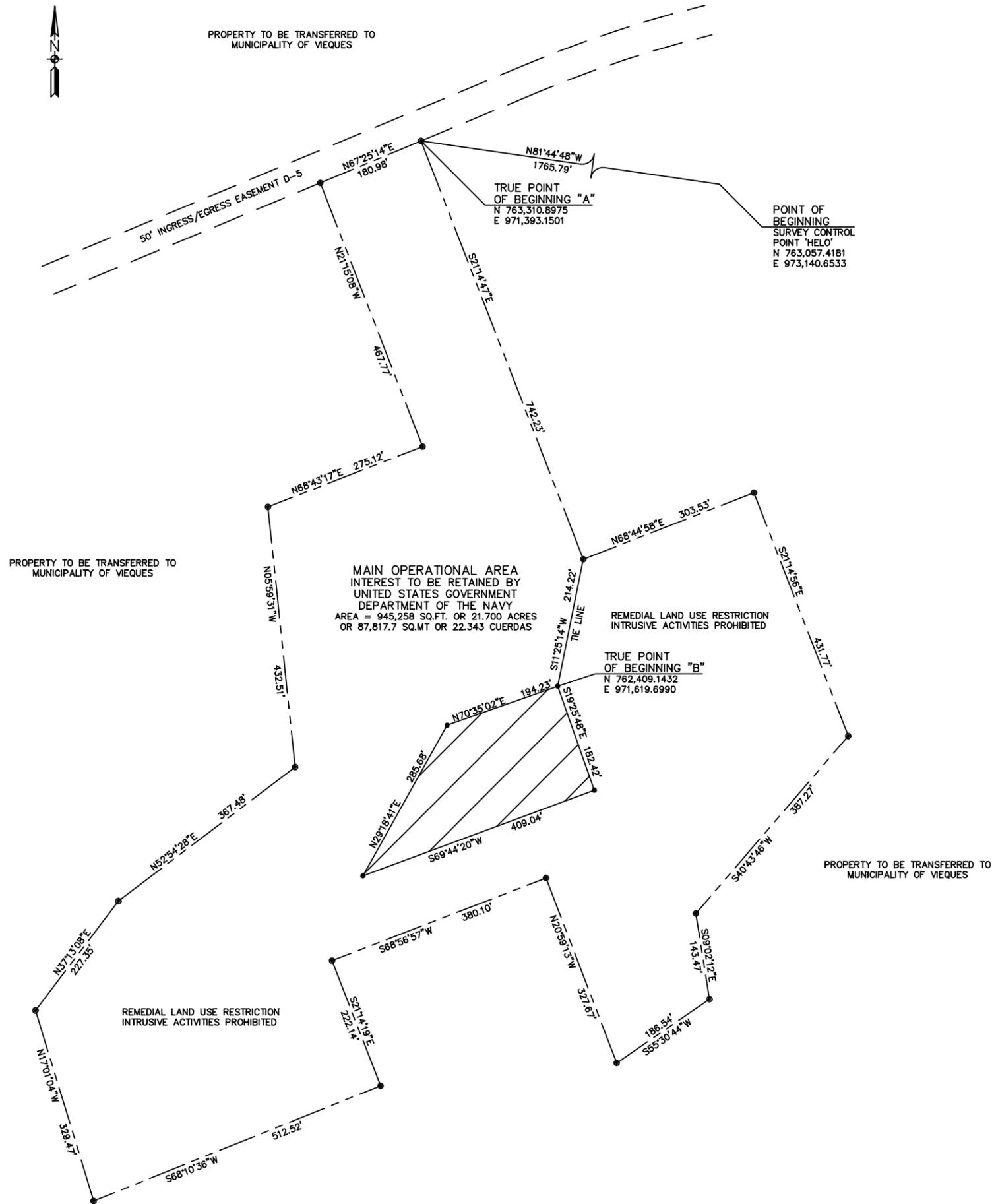


FIGURE 4-3
 SITE LOCATION MAP – AOC-L
 Site Management Plan
 Former NASD, Vieques Island, Puerto Rico **CH2MHILL**



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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LEGEND

- PROPERTY LINE
- EASEMENT LINE
- IRON ROD AND CAP SET
- POINT ON EASEMENT
- REMEDIAL LAND USE RESTRICTION ACCESS AND USE PROHIBITED

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date : _____
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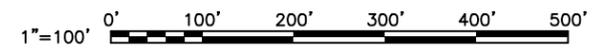
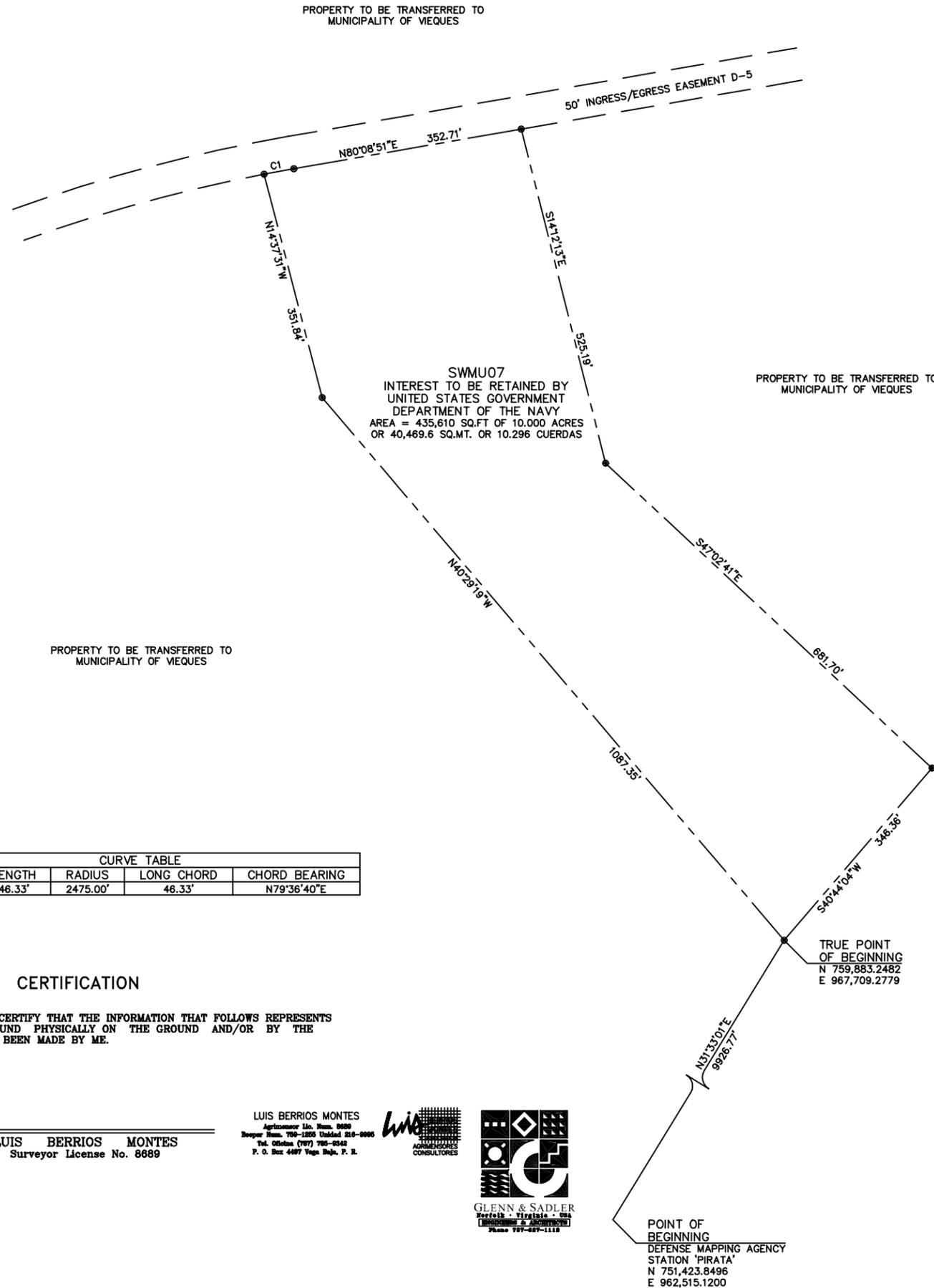


FIGURE 4-4
 SITE LOCATION MAP – AOC-B, C, E, F, K, 10, 14, 15
 Site Management Plan
 Former NASD, Vieques Island, Puerto Rico





CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	46.33'	2475.00'	46.33'	N79°36'40"E

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

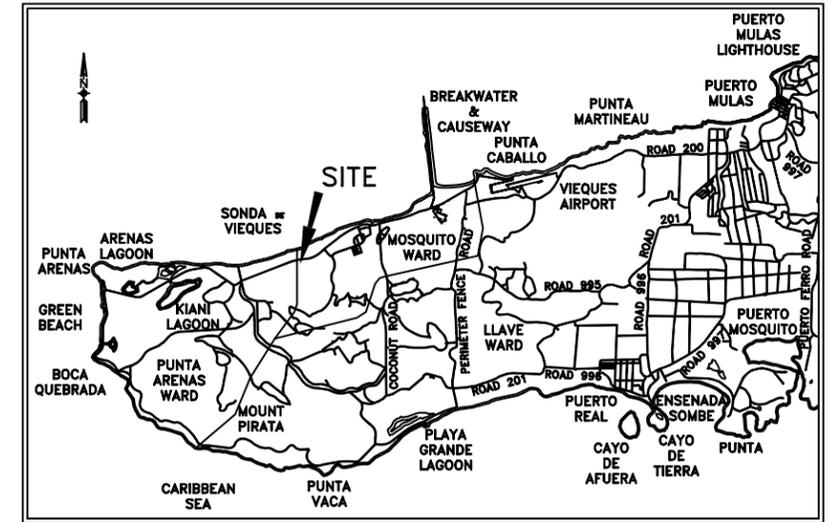
Date :

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Agrimensur Lic. Num. 8689
Boque Num. 700-1850 Unidad 216-0000
Tel. Oficina (787) 790-0548
P. O. Box 4487 Vega Baja, P. R.



POINT OF BEGINNING
DEFENSE MAPPING AGENCY
STATION 'PIRATA'
N 751,423.8496
E 962,515.1200



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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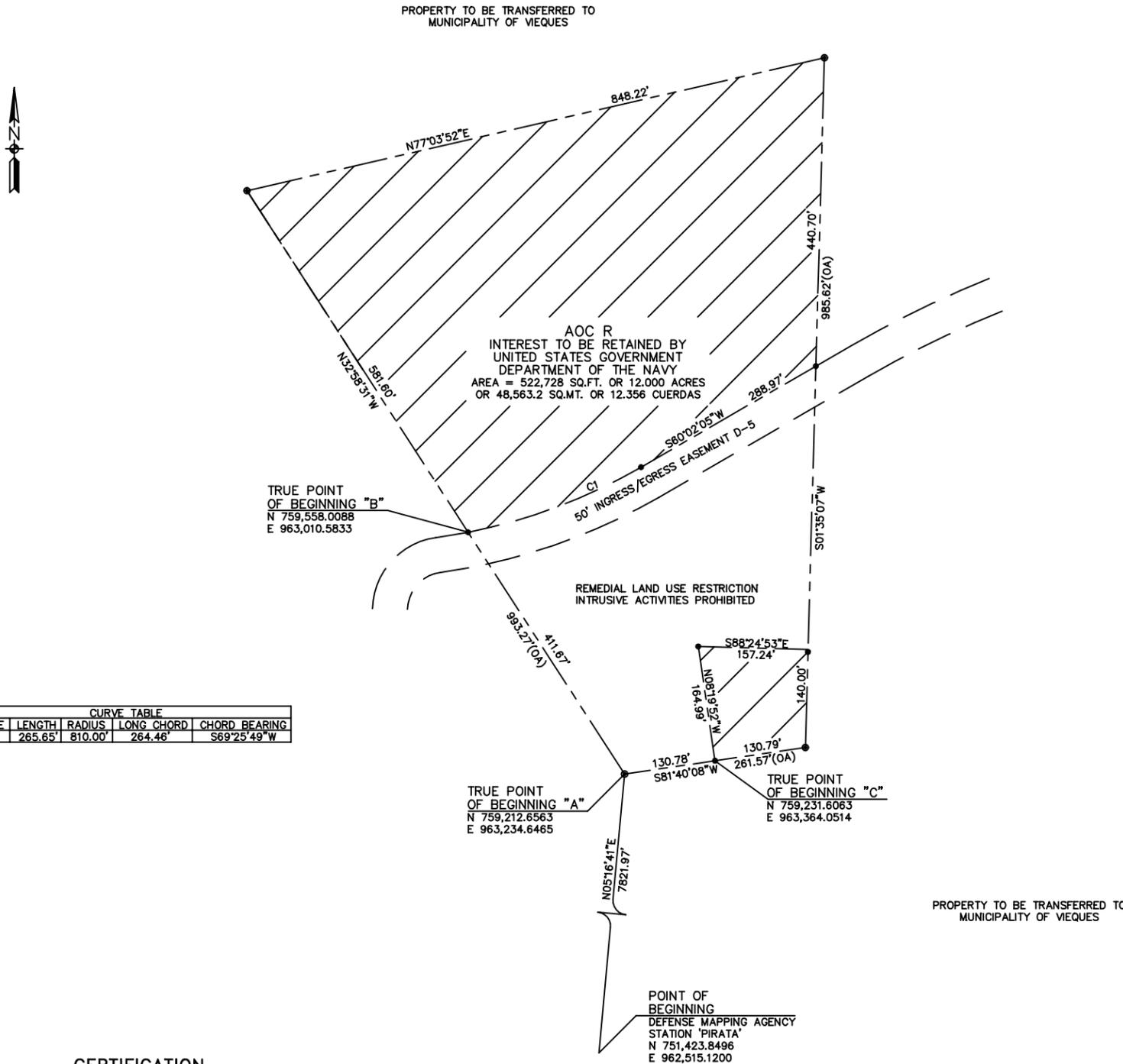
LEGEND

- IRON ROD AND CAP SET
- PROPERTY LINE
- EASEMENT LINE



FIGURE 4-5
SITE LOCATION MAP – SWMU 7
Site Management Plan
Former NASD, Vieques Island, Puerto Rico





CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	265.65'	810.00'	264.46'	S69°25'49"W

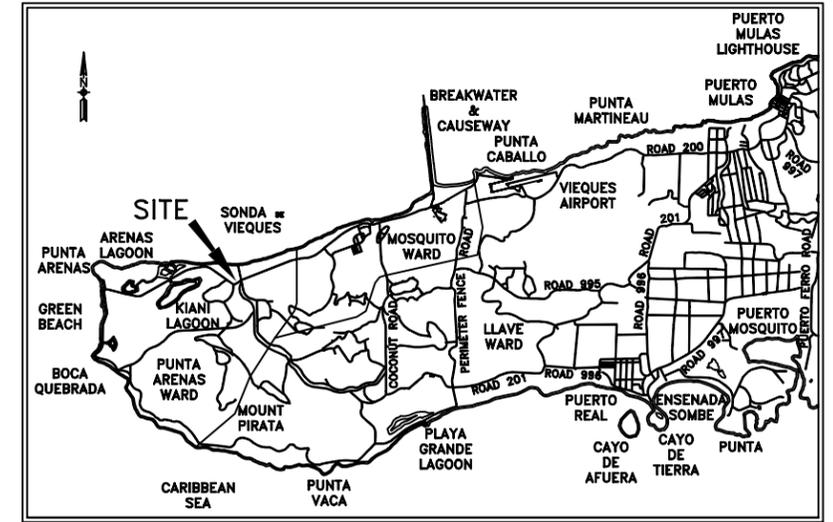
CERTIFICATION

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Date :

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P. O. Box 4497 Vega Baja, P. R.



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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- PROPERTY IS SUBJECT TO 50' INGRESS/EGRESS EASEMENT D-5 AS SHOWN ON PLAT LABELED "50' INGRESS/EGRESS EASEMENT D-5" PREPARED BY GLENN & SADLER ASSOCIATES, INC. OF NORFOLK, VIRGINIA AND LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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LEGEND

PROPERTY LINE	---
EASEMENT LINE	---
IRON ROD AND CAP SET	●
POINT ON EASEMENT	•
OVERALL DISTANCE	(OA)
REMEDIAL LAND USE RESTRICTION ACCESS AND USE PROHIBITED	

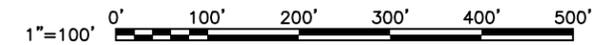
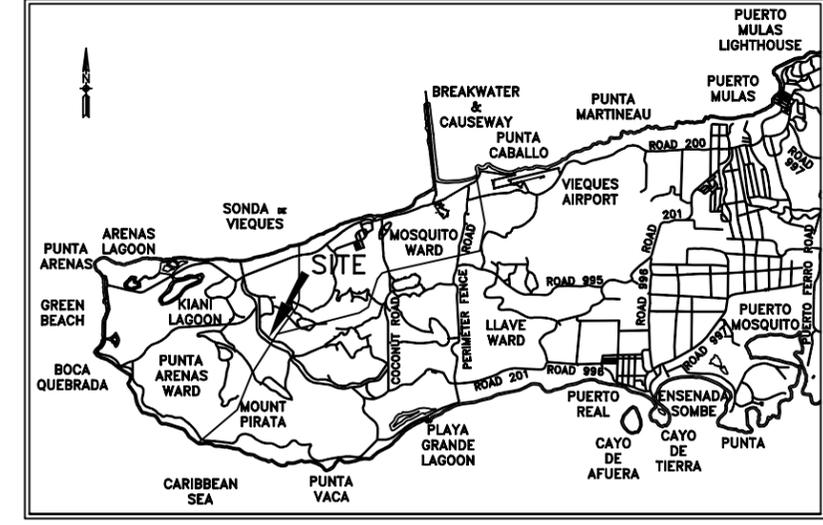
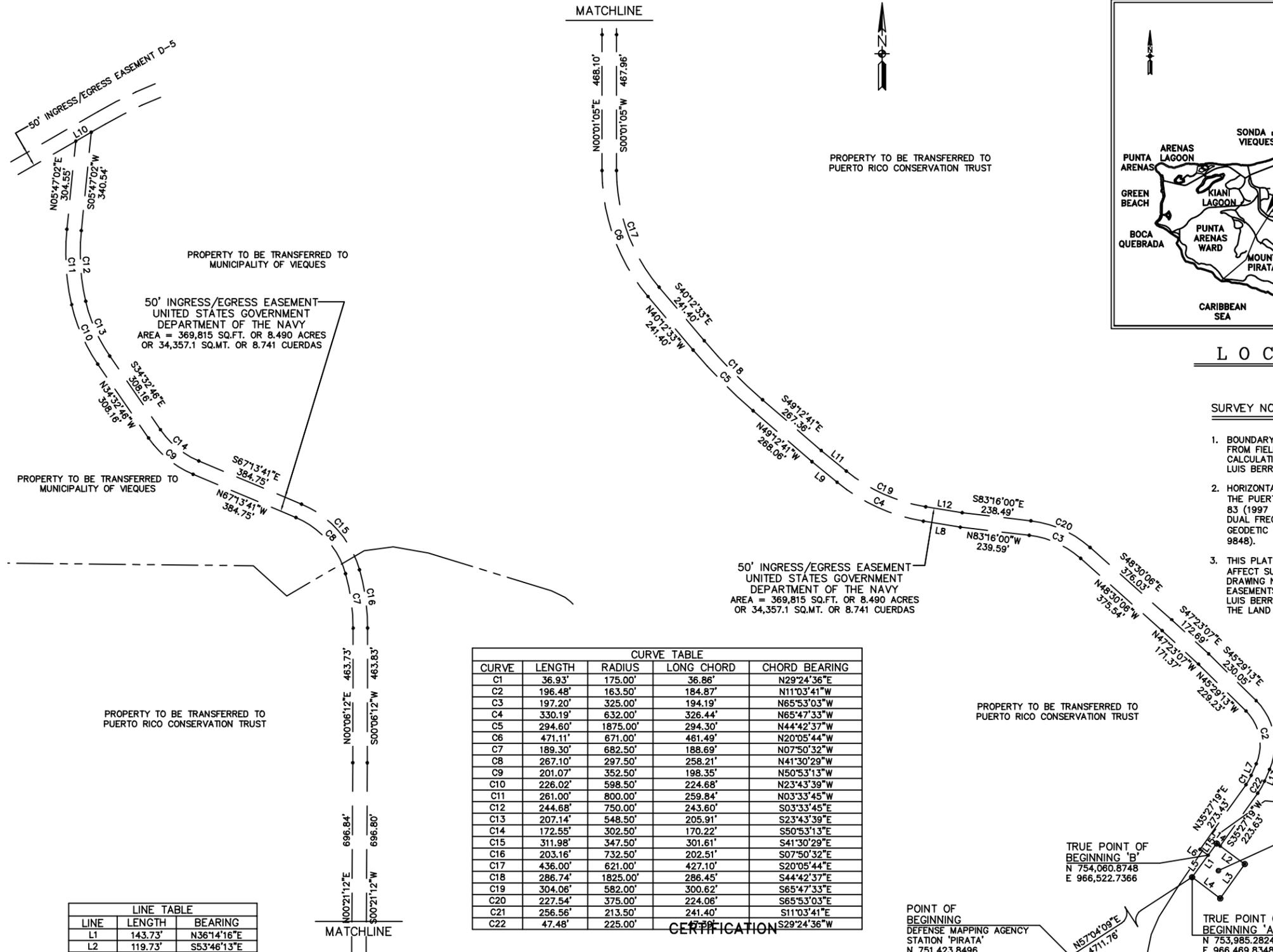


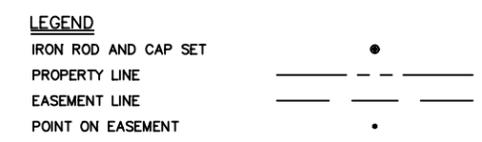
FIGURE 4-6
SITE LOCATION MAP – SWMU R
Site Management Plan
Former NASD, Vieques Island, Puerto Rico





LOCATION MAP
NOT TO SCALE

- SURVEY NOTES:**
- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
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LINE TABLE

LINE	LENGTH	BEARING
L1	143.73'	N36°14'16"E
L2	119.73'	S53°46'13"E
L3	145.42'	S35°36'28"W
L4	121.34'	N52°58'24"W
L5	93.72'	N36°14'16"E
L6	34.58'	N54°32'41"W
L7	43.79'	N23°21'52"E
L8	128.84'	N80°45'34"W
L9	112.07'	N50°49'32"W
L10	61.61'	N60°02'05"E
L11	111.37'	S50°49'32"E
L12	127.75'	S80°45'34"E
L13	43.79'	S23°21'52"W
L14	14.74'	N53°46'13"W
L15	50.00'	S36°14'16"W

CURVE TABLE

CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	36.93'	175.00'	36.86'	N29°24'36"E
C2	196.48'	163.50'	184.87'	N11°03'41"W
C3	197.20'	325.00'	194.19'	N65°53'03"W
C4	330.19'	632.00'	326.44'	N65°47'33"W
C5	294.60'	1875.00'	294.30'	N44°42'37"W
C6	471.11'	671.00'	461.49'	N20°05'44"W
C7	189.30'	682.50'	188.69'	N07°50'32"W
C8	267.10'	297.50'	258.21'	N41°30'29"W
C9	201.07'	352.50'	198.35'	N50°53'13"W
C10	226.02'	598.50'	224.68'	N23°43'39"W
C11	261.00'	800.00'	259.84'	N03°33'45"W
C12	244.68'	750.00'	243.60'	S03°33'45"E
C13	207.14'	548.50'	205.91'	S23°43'39"E
C14	172.55'	302.50'	170.22'	S50°53'13"E
C15	311.98'	347.50'	301.61'	S41°30'29"E
C16	203.16'	732.50'	202.51'	S07°50'32"E
C17	436.00'	621.00'	427.10'	S20°05'44"E
C18	286.74'	1825.00'	286.45'	S44°42'37"E
C19	304.06'	582.00'	300.62'	S65°47'33"E
C20	227.54'	375.00'	224.06'	S65°53'03"E
C21	256.56'	213.50'	241.40'	S11°03'41"E
C22	47.48'	225.00'	47.50'	S29°24'36"W

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date : _____
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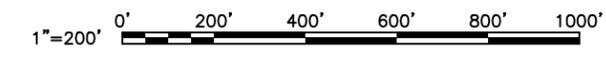
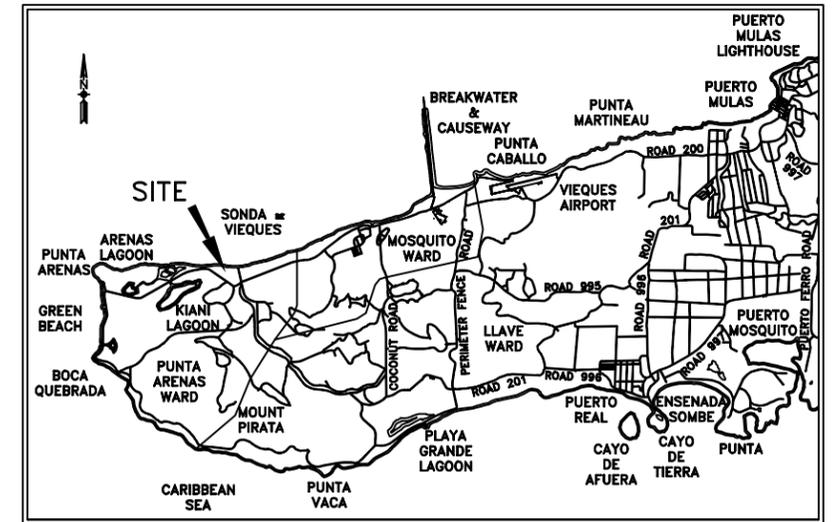
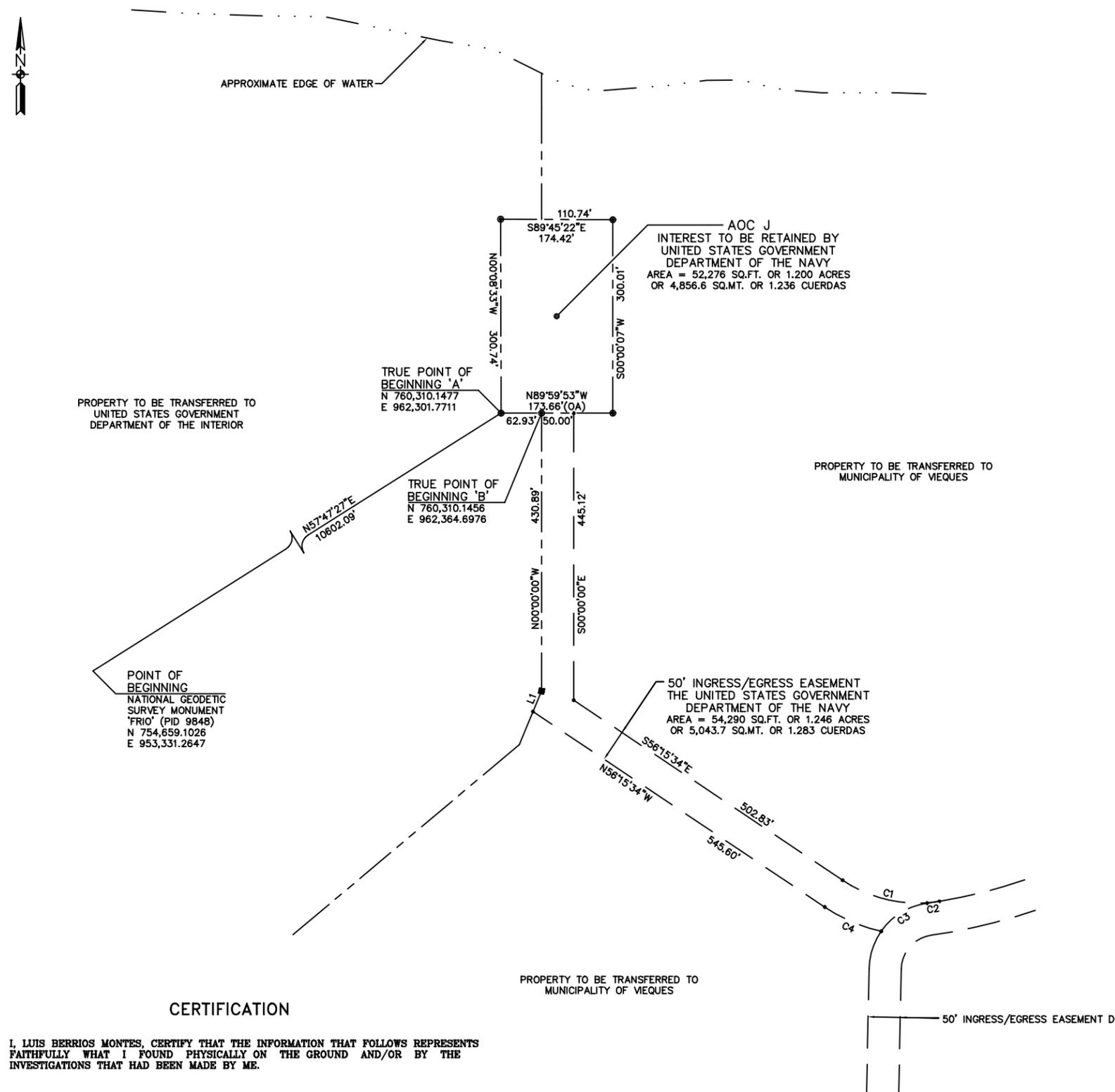


FIGURE 4-7
SITE LOCATION MAP – SWMU 5
 Site Management Plan
 Former NASD, Vieques Island, Puerto Rico



SONDA DE VIEQUES



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

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CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	157.36'	210.00'	153.71'	S77°43'36"E
C2	19.11'	810.00'	19.11'	S81°28'55"W
C3	86.04'	104.51'	83.63'	S58°34'24"W
C4	95.94'	260.00'	95.40'	N66°49'49"W

LINE TABLE		
LINE	LENGTH	BEARING
L1	34.72'	N22°34'45"E

LEGEND

- CONCRETE MONUMENT SET
- IRON ROD AND CAP SET
- POINT ON EASEMENT
- PROPERTY LINE
- EASEMENT LINE
- OVERALL DISTANCE (OA)



PROPERTY TO BE TRANSFERRED TO UNITED STATES GOVERNMENT DEPARTMENT OF THE INTERIOR

PROPERTY TO BE TRANSFERRED TO MUNICIPALITY OF VIEQUES

PROPERTY TO BE TRANSFERRED TO MUNICIPALITY OF VIEQUES

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date :

LUIS BERRIOS MONTES
Surveyor License No. 8689

LUIS BERRIOS MONTES
Agreement Lic. Num. 0000
Reg. Num. 700-1500 Validated 200-0000
Tel. Oficina (787) 765-8848
P. O. Box 4497 Vega Baja, P. R.

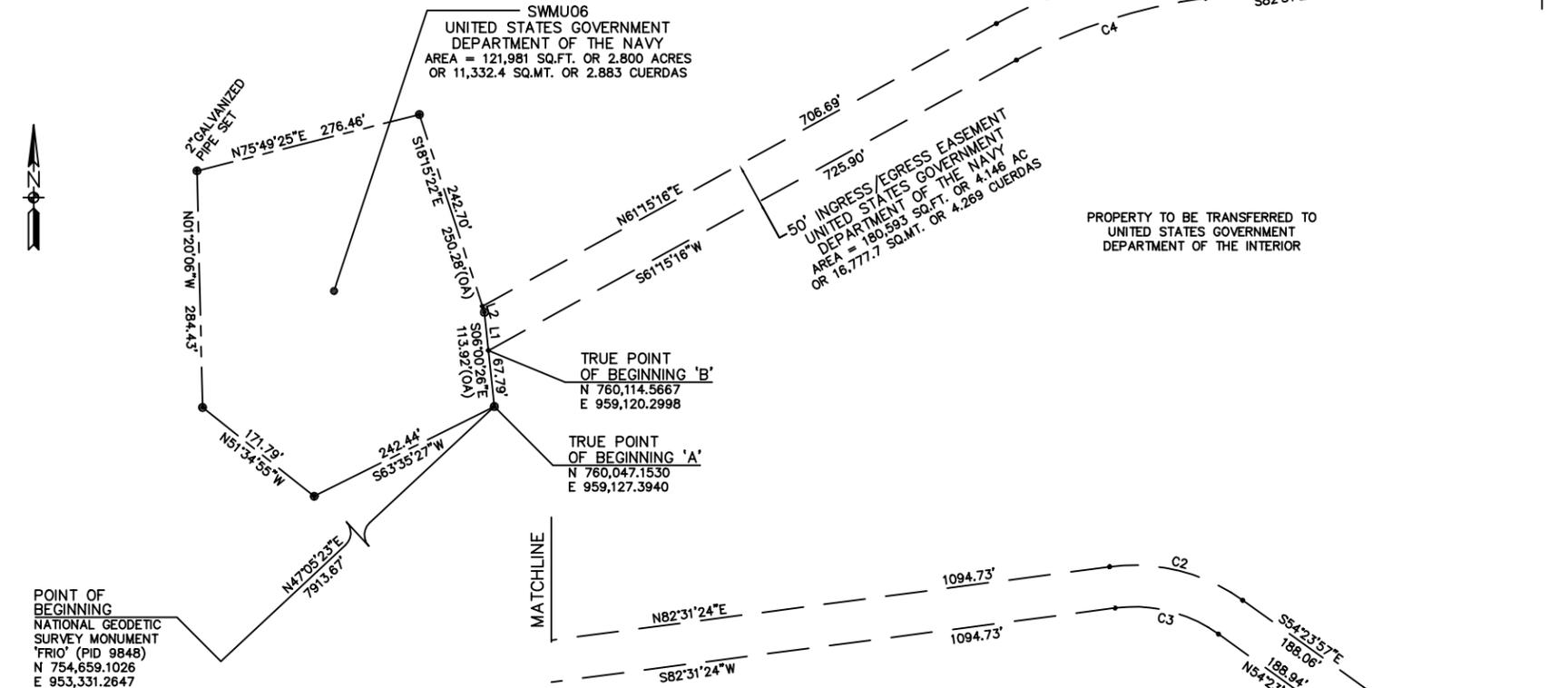


GLENN & SADLER
Surveyors & Architects
Norfolk, Virginia, USA
Phone 757-627-1118

FIGURE 4-8
SITE LOCATION MAP – SWMU J
Site Management Plan
Former NASD, Vieques Island, Puerto Rico



PROPERTY TO BE TRANSFERRED TO
UNITED STATES GOVERNMENT
DEPARTMENT OF THE INTERIOR



POINT OF BEGINNING
NATIONAL GEODETIC
SURVEY MONUMENT
'FRIO' (PID 9848)
N 754,659.1026
E 953,331.2647

SWMU06
UNITED STATES GOVERNMENT
DEPARTMENT OF THE NAVY
AREA = 121,981 SQ.FT. OR 2.800 ACRES
OR 11,332.4 SQ.MT. OR 2.883 CUERDAS

50' INGRESS/EGRESS EASEMENT
UNITED STATES GOVERNMENT
DEPARTMENT OF THE NAVY
AREA = 180,593 SQ.FT. OR 4.146 AC
OR 16,777.7 SQ.MT. OR 4.269 CUERDAS

TRUE POINT
OF BEGINNING 'B'
N 760,114.5667
E 959,120.2998

TRUE POINT
OF BEGINNING 'A'
N 760,047.1530
E 959,127.3940

LINE TABLE		
LINE	LENGTH	BEARING
L1	46.13'	N06°00'26"W
L2	7.58'	N18°15'22"W
L3	19.64'	S00°00'00"W
L4	34.72'	S22°34'45"W

CURVE TABLE				
CURVE	LENGTH	RADIUS	LONG CHORD	CHORD BEARING
C1	259.85'	700.00'	258.36'	N71°53'20"E
C2	169.16'	225.00'	165.21'	S75°56'17"E
C3	131.57'	175.00'	128.50'	N75°56'17"W
C4	241.29'	650.00'	239.90'	S71°53'20"W

CERTIFICATION

I, LUIS BERRIOS MONTES, CERTIFY THAT THE INFORMATION THAT FOLLOWS REPRESENTS FAITHFULLY WHAT I FOUND PHYSICALLY ON THE GROUND AND/OR BY THE INVESTIGATIONS THAT HAD BEEN MADE BY ME.

Date : _____
LUIS BERRIOS MONTES
Surveyor License No. 8689

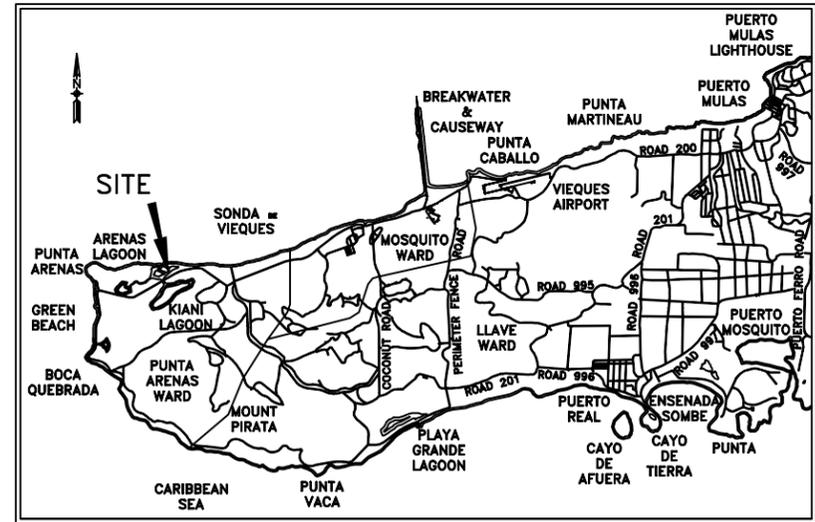
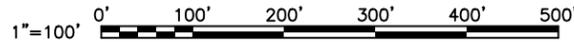
LUIS BERRIOS MONTES
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GLENN & SADLER
Norfolk - Virginia - USA
Surveying & Architecture
Phone 757-637-1112

LEGEND

- PROPERTY LINE
- EASEMENT LINE
- CONCRETE MONUMENT SET
- IRON ROD AND CAP SET
- POINT ON EASEMENT
- OVERALL DISTANCE (OA)



LOCATION MAP
NOT TO SCALE

SURVEY NOTES:

- BOUNDARY SURVEY PREPARED BY GLENN & SADLER ASSOCIATES, INC. FROM FIELD DATA COLLECTED IN SEPTEMBER 2000. FIELD PROCEDURES, CALCULATIONS AND FINAL PLAT HAVE BEEN REVIEWED FOR CONTENT BY LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO.
- HORIZONTAL COORDINATES SHOWN HEREON ARE IN FEET AND REFER TO THE PUERTO RICO/VIRGIN ISLAND STATE PLANE COORDINATE SYSTEM, NAD 83 (1997 ADJUSTMENT). HORIZONTAL COORDINATES WERE DERIVED USING DUAL FREQUENCY GPS RECEIVERS AND ARE REFERENCED TO NATIONAL GEODETIC SURVEY MONUMENTS VIEQUES (PID AB 9849) AND FRIO (PID 9848).

NOTE: THIS PLAT MAY NOT SHOW ALL PARCELS OR EASEMENTS THAT COULD AFFECT SUBJECT PLAT. REFER TO "OVERALL LOCATION SURVEY" NAVFAC DRAWING NUMBER 4423030 FOR THE LOCATION OF PARCELS AND EASEMENTS SURVEYED BY GLENN & SADLER OF NORFOLK, VIRGINIA AND LUIS BERRIOS MONTES & ASSOCIATES OF BAYAMON, PUERTO RICO DURING THE LAND TRANSFER AND DISPOSAL OF NAS

PROPERTY TO BE TRANSFERRED TO
UNITED STATES GOVERNMENT
DEPARTMENT OF THE INTERIOR

PROPERTY TO BE TRANSFERRED TO
UNITED STATES GOVERNMENT
DEPARTMENT OF THE INTERIOR

50' INGRESS/EGRESS EASEMENT
UNITED STATES GOVERNMENT
DEPARTMENT OF THE NAVY
AREA = 180,593 SQ.FT. OR 4.146 AC
OR 16,777.7 SQ.MT. OR 4.269 CUERDAS

PROPERTY TO BE TRANSFERRED TO
MUNICIPALITY OF VIEQUES

FIGURE 4-10
SITE LOCATION MAP - SWMU 6
Site Management Plan
Former NASD, Vieques Island, Puerto Rico



Section 5

Site Management Plan Schedules and Funding

This section presents the SMP schedule and funding requirements for the 17 IR sites at the former NASD under this program. Because the schedules of remedial activities are dependent upon the results of the site investigations, the schedule will be modified to reflect the most updated information to a specific site. In addition, the schedule is also dependent upon the funding that is available to the Navy for completing the tasks. The schedule will be re-evaluated on a semi-annual basis and updated for the SMP annually. Activities to be performed under the SMP are described below.

5.1 Document Review Process

The Navy/DOI and agency review members are identified as the CERCLA Technical Committee (CTC), which includes the representatives shown in *Table 1-1*. Draft versions of technical reports are submitted to the CTC for review. As appropriate, draft final versions of decision documents, (e.g., NFA report and Summary NFA Document) will be released for review by the TRC and the public, after comments from the regulators (DOI, PREQB, and USEPA) have been addressed. Documents that do not require a decision for remediation or NFA may be submitted for review of the Technical Review Committee (TRC), at the discretion of the Navy and PREQB.

The TRC is scheduled to meet at least three times a year or after the submittal of a key project deliverable. The purpose of the meetings is to discuss ongoing cleanup efforts and concerns of the local community, and to obtain feedback from the various interested parties with regard to the documentation presented at these meetings.

5.2 Scheduling Assumptions

To provide a timetable of events for the various IR site investigations from the former NASD, the Navy provided basic assumptions that specified the time allotment necessary for individual tasks. These include field sampling changes/modifications, laboratory analysis, data interpretation, and data validation. In addition, report preparation, review, and submittal are contingent on timely agency review and comments. The actual schedule was included for the sites that have already been through some of these investigations. The projected schedule for the future CERCLA documents (workplans, RI, RS, and ROD) are illustrated in *Figure 5-1*.

5.2.1 Notification to MOV for Site Access

For all IR field activities, MOV will be notified by CH2M HILL at least 72 hours before field personnel access the IR sites.

5.2.2 Field Investigation and Laboratory Analysis/Validation

The general timeframe for a PA/SI and RI field investigations is 45 days, for environmental, non-UXO/OE investigations. For UXO/OE investigations, the schedule depends on the estimated extent of UXO/MEC to be encountered and the size of the site. The UXO/MEC work completed for SWMU 4 was included on the basis of the actual schedule of events.

Of the former NASD's 17 SWMUs and AOCs that have gone through the PA/SI process, nine sites were proposed for NFA due to absence of contamination. The remaining eight sites are in various stages of RI investigations.

Details of the completed tasks per site and future planned tasks are included in *Figure 5-1*.

Nine NFA Sites: A draft final NFA report for SWMUs 5, 10, 14, and 15, and AOCs B, C, F, K, and L was completed in May 2003. A public comment period and public hearing for the report is tentatively scheduled by PREQB for October 2003.

SWMU 4: As described in *Sections 2 and 3*, a UXO/MEC field investigation was completed at SWMU 4. A draft UXO/MEC RI report is scheduled to be completed at the end of October 2003.

SWMUs 6 and 7, and AOCs H and J: A workplan was finalized, and fieldwork for these four RI/FS sites (SWMUs 6 and 7 and AOCs H and J) was completed in August and September 2003. A draft RI/FS report for these sites is scheduled for December 2003.

AOC E: A draft RI/FS report is scheduled to be completed for AOC E at the end of September.

AOCs I and R: An RI/FS workplan for these two sites is scheduled to be completed in December 2003.

5.2.3 Document Preparation and Review

The Phase II PA/SI and the Background Investigation Reports were revised and submitted as final reports in July 2001 (CH2M HILL) and November 2002 (CH2M HILL), respectively. The NFA report was submitted as draft final for public review in May 2003; PREQB has scheduled a public hearing for the public to provide comments on the report prior to finalizing it.

A 90-day period is scheduled to allow for document preparation as a general guideline. Upon receipt by the review committee and agencies, another 90 days are allotted in the schedule for any additional comments and revisions to be included in the final document submittal. Approximately 90 days are allocated for regulatory review, and 30 days for responses to the comments from the regulators. An additional 30 days are allocated for public review.

5.2.3 Remedial Design/Remedial Implementation

The sites expected to require a RI/FS are SWMU 4, SWMU 6, SWMU 7, AOC J, AOC E, AOC H, AOC I, and AOC R. If required, the remedial design (RD) stage for each site will take approximately 120 days to complete.

5.3 IRP Site Project Schedules

The complete NASD project schedule is represented in *Figure 5-1*.

5.4 Projected IR Funding Requirements

The projected funding for the IR Program at the former NASD for fiscal years (FYs) 2001 to 2006 is as follows:

Funding for sites on MOV property:	\$6,749,000
<u>Funding for sites on DOI property:</u>	<u>\$6,864,250</u>
Total funding for all 17 sites:	\$13,613,250

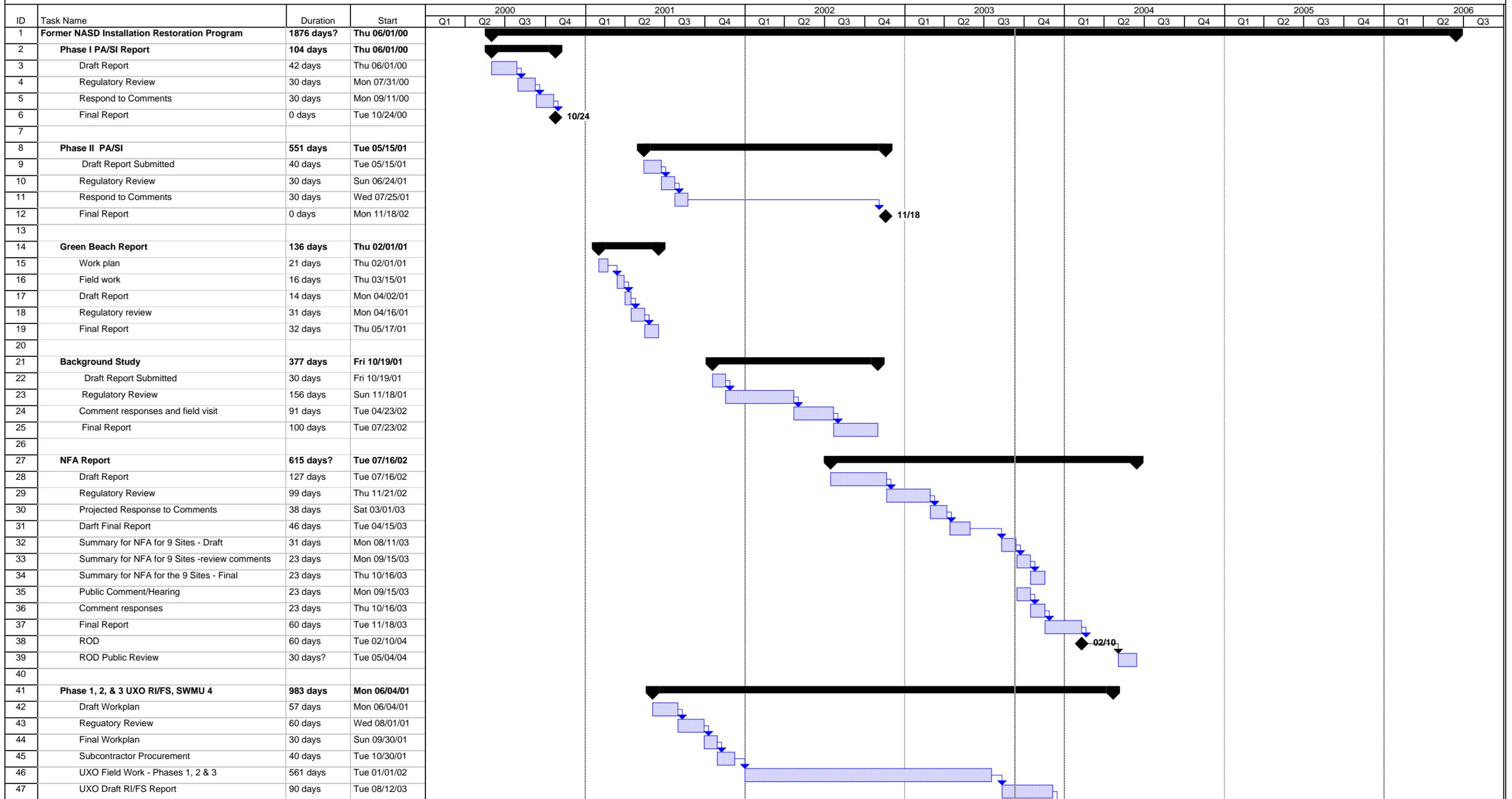
Because the funding breakout in the FOSET only included sites on MOV property and did not include SWMU 4, SWMU 6, and AOC J on DOI property, the total budget of \$13,613,250 is more than presented in the FOSET. SWMU 4 requires investigation of UXO, which is proposed to be addressed before IR activities can be completed. The funding for these three sites includes both UXO removal and RI/FS activities through FY 2006. It should be noted that funding is projected on a 5-year schedule but is only obligated on a year-to-year basis. As a result, the funding may vary each year from what was projected over the 5-year period.

The funding for FYs 2003 to 2004 includes approximately \$3.866 million for all the sites listed for delivery in *Table 5-1*.

The *Quitclaim Deed (Appendix C)* for transfer of the former NASD property from the Navy to MOV includes an agreement between the Navy and MOV that further investigations of the IR sites may reveal site conditions that are more complex than anticipated, which could result in a requirement for additional funding and time to complete the restoration efforts. As part of its periodic budget preparation and submission process for the Environmental Restoration Navy Program Account, the Navy will update the budget submission information for these IR sites, as necessary, to account for any changes resulting from work conducted and changes made to this SMP.

The Deed also provides an assurance that the Navy will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules for the investigation and completion of all necessary response actions, subject to Congressional authorization and appropriations.

FIGURE 5-1
 Installation Restoration Program Schedule
 Former NASD Vieques CERCLA Sites



Project: NASDOverallschedule
 Date: Tue 09/09/03

Task [Blue Box] Milestone [Diamond] Rolled Up Task [Thick Black Bar] Rolled Up Progress [Blue Box] External Tasks [Thin Black Bar] Group By Summary [Thick Black Bar]

Progress [Thick Black Bar] Summary [Thin Black Bar] Rolled Up Milestone [Diamond] Split [Dotted Line] Project Summary [Thin Black Bar]

TABLE 5-1. SCHEDULE OF DELIVERABLES FOR SITES LOCATED WITHIN THE FORMER NASD- FY 2003-2004

Item #	IR Site/SWMU	Document	Author	Submittal Date	Navy - LANTDIV Req. Action/Date	DOI	EPA Req. Action/Date	PREQB Req. Action/Date	TRC Req. Action/Date	Comments
1	SWMUs 6&7, AOCs H&J	Draft RI/FS Work Plan for SWMUs 6&7 and AOCs H&J - Draft	CH2M HILL	11/15/2002	Approved	07/15/2003	Comments received in 120 days 03/16/03	Comments received in 120 days 03/16/03	NA	Comments received on Draft document were discussed with agencies prior to issuing final WP
2	SWMUs 6&7, AOCs H&J	Final RI/FS Work Plan for SWMUs 6&7 and AOCs H&J	CH2M HILL	08/01/2003	NA	NA	NA	NA	NA	Any comments provided by TRC will be considered during site investigations
3	SWMUs 6&7, AOCs H&J	RI/FS Report	CH2M HILL		See attached Gantt charts for tentative project schedule in Figure 5-1					
4	NFA for 9 Sites	Draft NFA Report for 9 Sites	CH2M HILL	11//20/2003	NA	Comments received by 2/24/2003	Comments received on 2/24//2003	Comments received by 2/17/03	NA	
5	NFA for 9 Sites	Responses to Comments on NFA Report for 9 Sites	Comments by EPA/EQB, and Responses by CH2M HILL	04/07//2003	Conference call to discuss comments 4/21/2003	NA	Conference call to discuss comments 4/21/2003	Conference call to discuss comments 4/21/2003	NA	Comments were discussed and resolved prior to updating the report
6	NFA for 9 Sites	Draft Final NFA Report for 9 Sites	CH2M HILL	05/30/2003	EQB is planning public hearing for mid October, 2003					
7	NFA for 9 Sites	Summary of NFA Report for 9 Sites	CH2M HILL	09/12/2003	Comments within 30 days due by 10/15/03	Comments within 30 days due by 10/15/03	Comments within 30 days due by 10/15/03	Comments within 30 days due by 10/15/03	Comments by 11/17/03	A copy is also being submitted to Engineering Society of PR
8	NFA for 9 Sites	Record of Decisions for the NFA for 9 Sites	CH2M HILL	05/03/2004	See attached Gantt charts for tentative project schedule in Figure 5-1					
9	SWMU 4 - RI	Draft RI/FS Work Plan for SWMU 4	CH2M HILL	10/24/2003	NA	Comments within 60 days due by 12/26/03	Comments within 60 days due by 12/26/03	Comments within 60 days due by 12/26/03	NA	
10	SWMU 4 - RI	Final RI/FS Work Plan for SWMU 4	CH2M HILL	01/28/2004	NA				Comments within 30 days due by 2/28/04	
11	SWMU 4 - RI	RI/FS Report for SWMU 4	CH2M HILL		See attached Gantt charts for tentative project schedule in Figure 5-1					
12	SWMU 4 - UXO/OE RI/FS	UXO/OE - Phases I, II, and III - RI/FS	CH2M HILL	12/05/2003	See attached Gantt charts for tentative project schedule in Figure 5-1					
13	AOC E	Draft RI/FS Report for AOC E (RI/RA/FS)	CH2M HILL	09/30/2003	NA	Comments within 60 days due by 12/02/03	Comments within 60 days due by 12/02/03	Comments within 60 days due by 12/02/03	NA	

TABLE 5-1. SCHEDULE OF DELIVERABLES FOR SITES LOCATED WITHIN THE FORMER NASD- FY 2003-2004

Item #	IR Site/SWMU	Document	Author	Submittal Date	Navy - LANTDIV Req. Action/Date	DOI	EPA Req. Action/Date	PREQB Req. Action/Date	TRC Req. Action/Date	Comments
14	AOC E	Comment Responses on RI/FS Report for AOC E	Comments by EPA/EQB, and Responses by CH2M HILL	01/02/2004	Review responses within 15 days	Review responses within 15 days	Review responses within 15 days	Review responses within 15 days	NA	
15	AOC E	Draft Final RI/FS Report for AOC E	CH2M HILL	02/04/2004	NA	NA	NA	NA	Comments within 30 days due by 03/08/04	
		Final RI/FS Report for AOC E	CH2M HILL	04/08/2004	See attached Gantt charts for tentative project schedule in Figure 5-1					
16	SMP	Annual Update to Site Management Plan - Draft Final	CH2M HILL	09/15/2003	Review within 30 days by 10/15/03	Review within 30 days by 10/15/03	Review within 30 days by 10/15/03	Review within 30 days by 10/15/03	NA	
17	AOCs I & R - RI/FS	Draft RI/FS Work Plan for AOCs I & R	CH2M HILL	12/17/2003	NA	Review within 60 days by 2/18/04	Review within 60 days by 2/18/04	Review within 60 days by 2/18/04		
18	AOCs I & R - RI/FS	Final RI/FS Work Plan for AOCs I & R	CH2M HILL	03/22/2004	NA				Comments within 30 days due by 4/30/04	
19	AOCs I & R - RI/FS	RI/FS Report for AOCs I & R	CH2M HILL	10/29/2004	See attached Gantt charts for tentative project schedule in Figure 5-1					
21										



Section 6

Works Cited

CH2M HILL. September 2003. Summary of NFA Report for Nine Sites.

CH2M HILL. August 2003. Final Remedial Investigation/Feasibility Study Workplan for SWMUs 6 and 7 and AOCs H and J.

CH2M HILL. May 2003. Draft Final. No Further Action Report for Nine Sites, Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. November 2002. Final Background Investigation Report, Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. November 2002. Final Expanded Preliminary Assessment/Site Investigation, Phase II Seven Sites, Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. October 16, 2002. Final Soil, Surface Water, and Sediment Background Investigation Report, Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. October 2001. COE Master Workplan for the Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. July 2001. Preliminary OE Site Assessment Report for the Green Beach Area of Former U.S. Naval Ammunition Support Detachment.

CH2M HILL. March 2001. Initial Ordnance and Explosives Site Assessment Workplan for the Green Beach Area.

CH2M HILL. December 2000. Workplan and Sampling and Analysis Plan for Soil, Groundwater, Surface Water, and Sediment Background Investigation. Former U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. October 2000. Finding of Suitability for Early Transfer for U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

CH2M HILL. October 2000. Final Expanded Preliminary Assessment/Site Investigation [Phase I]. U.S. Naval Ammunition Support Detachment, Vieques Island, Puerto Rico.

Environmental Resource Management, Inc. (ERM). October 2000. *Environmental Baseline Survey; Final*.

Environmental Science and Engineering (ESE). 1988. Preliminary Assessment/Site Investigation for SWMU 5, SWMU 6, and SWMU 7.

Environmental Science and Engineering, Inc. (ESE). May 1986. Confirmation Study to Determine Possible Dispersion and Migration of Specific Chemicals – U.S. Naval Station, Roosevelt Roads, Puerto Rico and U.S. Naval Ammunition Facility, Vieques: Evaluation of Data from First and Second Rounds of Verification Sample Collection and Analysis.

Greenleaf/Telesca Planners, Engineers, Architects, Inc. and Ecology and Environment, Inc. September 1984. *Initial Assessment Study, Naval Station Roosevelt Roads, Puerto Rico.*

A.T. Kearney, Inc. and K.W. Brown & Associates, Inc. October 1988. Phase II RCRA Facility Assessment of the Naval Ammunition Facility, Vieques Island, Puerto Rico.

Municipality of Vieques. 2001. Memorial General Plan de Ordenación Terretorial de Vieques

U.S. Environmental Protection Agency (USEPA). 1989. Risk Assessment Guidance for Superfund, Volume I, Human Health Evaluation Manual.

U.S. Environmental Protection Agency (USEPA). 1994. Amended Guidance on Preliminary Risk Evaluations (PREs) for the Purpose of Reaching a Finding of Suitability to Lease.

APPENDIX A
CURRENT LIST OF IR REPORTS FOR
THE FORMER NASD

TABLE A-1. CURRENT LIST OF IR REPORTS FOR THE FORMER NASD AS OF JULY 2001

Date	Title	Sites	Contractor
9/84	Initial Assessment Study, Naval Station Roosevelt Roads, PR	SWMU 5, SWMU 6, SWMU 7	Greenleaf/Telesca Planners, Engineers, Architects, Inc. and Ecology and Environment, Inc.
5/86	Confirmation Study to Determine Possible Dispersion and Migration of Specific Chemicals – US Naval Station, Roosevelt Roads, Puerto Rico and US Naval Ammunition Facility, Vieques: Evaluation of Data from First and Second Rounds of Verification Sample Collection and Analysis	SWMU 5, SWMU 6, SWMU 7	Environmental Science and Engineering, Inc
10/88	Phase II RCRA Facility Assessment of the Naval Ammunition Facility, Vieques Island, PR	AOC C, AOC E, AOC F, SWMU 4, SWMU 5, SWMU 6, SWMU 7, SWMW 10, SWMU 14, SWMU 15	T. Kearney, Inc. and K.W. Brown & Associates, Inc
11/00	Final Environmental Baseline Survey, U.S. Naval Ammunition Support Detachment, Vieques Island, PR	Facility Wide	ERM
11/00	Finding of Suitability for Early Transfer, U.S. Naval Ammunition Support Detachment, Vieques Island, PR	AOC C, AOC E, AOC F, AOC B, AOC H, AOC I, AOC K, AOC L, AOC R, SWMU 5, SWMU 7, SWMW 10, SWMU 14, SWMU 15	CH2M HILL
10/00	Final, Expanded Preliminary Assessment/Site Investigation, Phase II, Seven Sites, U.S. Naval Ammunition Support Detachment, Vieques Island, PR, Volumes I and II	AOC C, AOC E, AOC F, SWMU 4, SWMU 5, SWMU 6, SWMU 7, SWMW 10, SWMU 14, SWMU 15	CH2M HILL
6/01	Draft Preliminary Ordnance and Explosives Site Assessment Report for the Green Beach Area	Green Beach	CH2M HILL
10/02	Final, Soil, Groundwater, Surface Water, and Sediment Background Investigation Report, U.S. Naval Ammunition Support Detachment, Vieques Island, PR	Basewide for former NASD	CH2M HILL
11/02	Final, Expanded Preliminary Assessment/Site Investigation, Phase II, Seven Sites, U.S. Naval Ammunition Support Detachment, Vieques Island, PR	AOC B, AOC H, AOC I, AOC J, AOC K, AOC L, and AOC R	CH2M HILL
5/03	Draft Final, No Further Action Report for the Nine Sites, Former U.S. Naval Ammunition Support Detachment, Vieques Island, PR	Green Beach	CH2M HILL

APPENDIX B

Analytical Data Screening Criteria

2002 Edition of the Drinking Water Standards and Health Advisories



2002 Edition of the Drinking Water Standards and Health Advisories

EPA 822-R-02-038

**Office of Water
U.S. Environmental Protection Agency
Washington, DC**

Summer 2002

Recycled/Recyclable
Printed on paper that contains
at least 50% recycled fiber.



The *Drinking Water Standards and Health Advisories* tables are revised periodically by EPA's Office of Water on an "as needed" basis. The Summer 2002 edition of the tables has retained the content and format changes introduced in the Summer 2000 edition and has added the Chemical Abstracts Service Registry Numbers (CASRN) for the chemical contaminants. The following changes should be kept in mind when using the Tables:

Reference dose (RfD) values have been updated to reflect the values in the Integrated Risk Information System (IRIS), and the Drinking Water Equivalent Level (DWEL) has been calculated accordingly. Thus, both the RfD and DWEL will differ from the values in the Health Advisory document if the IRIS RfD is more recent than the Health Advisory value. The RfD values from IRIS that differ from the values in the Health Advisory documents are given in **BOLD** type. For unregulated chemicals with a new IRIS RfD, the lifetime Health Advisory was calculated from the DWEL using the relative source contribution value published in the Health Advisory. For regulated chemicals, where the revised lifetime value differed from the Maximum Contaminant Level Goal (MCLG), no lifetime value was provided in the Table.

For regulated chemicals, the cancer group designation and 10^{-4} cancer risk reflect the status at the time of regulation. For unregulated chemicals, the cancer group designation and 10^{-4} cancer risk reflect the values presently on IRIS. New cancer group designations and 10^{-4} cancer risk values are given in **BOLD** type.

Several pesticides listed in IRIS have been re-evaluated by the Office of Pesticide Programs (OPP) resulting in an RfD other than that in IRIS. For these pesticides, the IRIS value is listed in the Table, and the newer OPP value is given in a footnote.

In some cases there is a Health Advisory value for a contaminant but there is no reference to a Health Advisory document. These Health Advisory values can be found in the Drinking Water Criteria Document for the contaminant.

With a few exceptions, the Health Advisory values have been rounded to one significant figure.

The *Drinking Water Standards and Health Advisories* tables may be reached from the Water Science home page at

<http://www.epa.gov/waterscience>

The tables are accessed under the Health Advisories heading.

Copies may be ordered free of charge from

SAFE DRINKING WATER HOTLINE
1-800-426-4791
Monday thru Friday, 9:00 AM to 5:30 PM EST

Copies of the supporting technical documentation for the health advisories can be ordered for a fee on the Internet at

<http://www.epa.gov/OST/orderpubs.html>

or from

Educational Resources Information Center (ERIC)
1929 Kenny Road
Columbus, OH 43210-1080
Telephone number 614-292-6717; 1-800-276-0462
FAX 614-292-0263
e-mail ERICSE@osu.edu
Payment by Purchase Order/Check/Visa or Mastercard

For further information regarding the *Drinking Water Standards and Health Advisories*, call the Safe Drinking Water Hotline at 1-800-426-4791 or 703-285-1093.

DEFINITIONS

The following definitions for terms used in the Tables are not all-encompassing, and should not be construed to be “official” definitions. They are intended to assist the user in understanding terms found on the following pages.

Action Level: The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow. For lead or copper it is the level which, if exceeded in over 10% of the homes tested, triggers treatment.

Cancer Group: A qualitative weight-of-evidence judgement as to the likelihood that a chemical may be a carcinogen for humans. Each chemical is placed into one of the following five categories:

Group	Category
A	Human carcinogen
B	Probable human carcinogen: B1 indicates limited human evidence B2 indicates sufficient evidence in animals and inadequate or no evidence in humans
C	Possible human carcinogen
D	Not classifiable as to human carcinogenicity
E	Evidence of noncarcinogenicity for humans

This categorization is based on EPA’s 1986 *Guidelines for Carcinogen Risk Assessment*. The *Proposed Guidelines for Carcinogen Risk Assessment* which were published in 1996, when final, will replace the 1986 cancer guidelines.

10⁻⁴ Cancer Risk: The concentration of a chemical in drinking water corresponding to an excess estimated lifetime cancer risk of 1 in 10,000.

Drinking Water Advisory: A nonregulatory concentration of a contaminant in water that is likely to be without adverse effects on both health and aesthetics.

DWEL: Drinking Water Equivalent Level. A lifetime exposure concentration protective of adverse, non-cancer health effects, that assumes all of the exposure to a contaminant is from drinking water.

HA: Health Advisory. An estimate of acceptable drinking water levels for a chemical substance based on health effects information; a Health Advisory is not a legally enforceable Federal standard, but serves as technical guidance to assist Federal, State, and local officials.

One-Day HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to one day of exposure. The One-Day HA is normally designed to protect a 10-kg child consuming 1 liter of water per day.

Ten-Day HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for up to ten days of exposure. The Ten-Day HA is also normally designed to protect a 10-kg child consuming 1 liter of water per day.

Lifetime HA: The concentration of a chemical in drinking water that is not expected to cause any adverse noncarcinogenic effects for a lifetime of exposure. The Lifetime HA is based on exposure of a 70-kg adult consuming 2 liters of water per day. The Lifetime HA for Group C carcinogens includes an adjustment for possible carcinogenicity.

LED₁₀: Lower Limit on Effective Dose₁₀. The 95% lower confidence limit of the dose of a chemical needed to produce an adverse effect in 10% of those exposed to the chemical, relative to the control.

MCLG: Maximum Contaminant Level Goal. A non-enforceable health goal which is set at a level at which no known or anticipated adverse effect on the health of persons occurs and which allows an adequate margin of safety.

MCL: Maximum Contaminant Level. The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLG as feasible using the best available analytical and treatment technologies and taking cost into consideration. MCLs are enforceable standards.

RfD: Reference Dose. An estimate (with uncertainty spanning perhaps an order of magnitude) of a daily oral exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime.

SDWR: Secondary Drinking Water Regulations. Non-enforceable Federal guidelines regarding cosmetic effects (such as tooth or skin discoloration) or aesthetic effects (such as taste, odor, or color) of drinking water.

TT: Treatment Technique. A required process intended to reduce the level of a contaminant in drinking water.

ABBREVIATIONS

D	Draft
F	Final
NA	Not Applicable
NOAEL	No-Observed-Adverse-Effect Level
OPP	Office of Pesticide Programs
P	Proposed
Reg	Regulation
TT	Treatment Technique

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
ORGANICS												
Acenaphthene	83-32-9	-	-	-	-	-	-	0.06	2	-	-	-
Acifluorfen (sodium)	62476-59-9		-	-	F '88	2	2	0.01	0.4	-	0.1	B2
Acrylamide	79-06-1	F	zero	TT ¹	F '87	1.5	0.3	0.0002	0.007	-	0.0008	B2
Acrylonitrile	107-13-1		-	-	-	-	-	-	-	-	0.006	B1
Alachlor	15972-60-8	F	zero	0.002	F '88	0.1	0.1	0.01	0.4	-	0.04 ²	B2
Aldicarb ³	116-06-3	F ⁴	0.001	0.003	F '95	0.01	0.01	0.001	0.04	-	-	D
Aldicarb sulfone ³	1646-88-4	F ⁴	0.001	0.003	F '95	0.01	0.01	0.001	0.04	-	-	D
Aldicarb sulfoxide ³	1646-87-3	F ⁴	0.001	0.004	F '95	0.01	0.01	0.001	0.04	-	-	D
Aldrin	309-00-2	-	-	-	F '92	0.0003	0.0003	0.00003	0.001	-	0.0002	B2
Ametryn	834-12-8	-	-	-	F '88	9	9	0.009	0.3	0.06	-	D
Ammonium sulfamate	7773-06-0	-	-	-	F '88	20	20	0.2	8	2	-	D
Anthracene (PAH) ⁵	120-12-7	-	-	-	-	-	-	0.3	10	-	-	D
Atrazine ⁶	1912-24-9	F	0.003	0.003	F '88	-	-	0.035	1	-	-	C
Baygon	114-26-1	-	-	-	F '88	0.04	0.04	0.004	0.1	0.003	-	C
Bentazon	25057-89-0	-	-	-	F '99	0.3	0.3	0.03	1	0.2	-	E
Benz[a]anthracene (PAH)	56-55-3	-	-	-	-	-	-	-	-	-	-	B2
Benzene	71-43-2	F	zero	0.005	F '87	0.2	0.2	-	-	-	0.1	A
Benzo[a]pyrene (PAH)	50-32-8	F	zero	0.0002	-	-	-	-	-	-	0.0005	B2
Benzo[b]fluoranthene (PAH)	205-99-2	-	-	-	-	-	-	-	-	-	-	B2
Benzo[g,h,i]perylene (PAH)	191-24-2	-	-	-	-	-	-	-	-	-	-	D
Benzo[k]fluoranthene (PAH)	207-08-9	-	-	-	-	-	-	-	-	-	-	B2
bis-2-Chloroisopropyl ether	39638-32-9	-	-	-	F '89	4	4	0.04	1	0.3	-	D
Bromacil	314-40-9	-	-	-	F '88	5	5	0.1	5	0.09	-	C
Bromobenzene	108-86-1	-	-	-	D '86	4	4	-	-	-	-	D

¹ When acrylamide is used in drinking water systems, the combination (or product) of dose and monomer level shall not exceed that equivalent to a polyacrylamide polymer containing 0.05% monomer dosed at 1 mg/L.

² Determined not to be carcinogenic at low doses by OPP.

³ The MCL value for any combination of two or more of these three chemicals should not exceed 0.007 mg/L because of similar mode of action.

⁴ Administrative stay of the effective date.

⁵ PAH = Polycyclic aromatic hydrocarbon.

⁶ Under review.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Bromochloromethane	74-97-5	-	-	-	F '89	50	1	0.01	0.5	0.09	-	D
Bromodichloromethane ¹ (THM)	75-27-4	F	zero	0.08 ²	D '93	6	6	0.02	0.7	-	0.06	B2
Bromoform (THM)	75-25-2	F	zero	0.08 ²	D '93	5	2	0.02	0.7	-	0.4	B2
Bromomethane	74-83-9	-	-	-	D '89	0.1	0.1	0.001	0.05	0.01	-	D
Butyl benzyl phthalate (PAE) ³	85-68-7	-	-	-	-	-	-	0.2	7	-	-	C
Butylate	2008-41-5	-	-	-	F '89	2	2	0.05	2	0.4	-	D
Carbaryl	63-25-2	-	-	-	F '88	1	1	0.1	4	0.7	-	D
Carbofuran ¹	1563-66-2	F	0.04	0.04	F '87	0.05	0.05	0.005	0.2	0.04	-	E
Carbon tetrachloride	56-23-5	F	zero	0.005	F '87	4	0.2	0.0007	0.03	-	0.03	B2
Carboxin	5234-68-4	-	-	-	F '88	1	1	0.1	4	0.7	-	D
Chloramben	133-90-4	-	-	-	F '88	3	3	0.015	0.5	0.1	-	D
Chlordane	57-74-9	F	zero	0.002	F '87	0.06	0.06	0.0005	0.02	-	0.01	B2
Chloroform (THM)	67-66-3	F	zero	0.08 ¹	D '93	4	4	0.01	0.4	-	-	B2 ⁴
Chloromethane	74-87-3	-	-	-	F '89	9	0.4	0.004	0.1	0.03	-	D
Chlorophenol (2-)	95-57-8	-	-	-	D '94	0.5	0.5	0.005	0.2	0.04	-	D
Chlorothalonil	1897-45-6	-	-	-	F '88	0.2	0.2	0.015	0.5	-	0.15	B2
Chlorotoluene o-	95-49-8	-	-	-	F '89	2	2	0.02	0.7	0.1	-	D
Chlorotoluene p-	106-43-4	-	-	-	F '89	2	2	0.02	0.7	0.1	-	D
Chlorpyrifos ⁵	2921-88-2	-	-	-	F '92	0.03	0.03	0.003	0.1	0.02	-	D
Chrysene (PAH)	218-01-9	-	-	-	-	-	-	-	-	-	-	B2
Cyanazine	21725-46-2	-	-	-	D '96	0.1	0.1	0.002	0.07	0.001	-	

¹ Under review.

² 1998 Final Rule for Disinfectants and Disinfection By-products: The total for trihalomethanes is 0.08 mg/L.

³ PAE = phthalate acid ester.

⁴ By the 1999 Draft Guidelines for Carcinogen Risk Assessment, chloroform is *likely to be carcinogenic to humans* by all routes of exposure under high-dose conditions that lead to cytotoxicity and regenerative hyperplasia in susceptible tissues. Chloroform is *not likely to be carcinogenic to humans* by all routes of exposures at a dose level that does not cause cytotoxicity and cell regeneration

⁵ New OPP RfD = 0.0003 mg/kg/day.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Cyanogen chloride ¹	506-77-4	-	-	-	-	0.05	0.05	0.05	2	-	-	D
2,4-D (2,4-dichlorophenoxyacetic acid)	94-75-7	F	0.07	0.07	F '87	1	0.3	0.01	0.4	0.07	-	D
DCPA (Dacthal)	1861-32-1	-	-	-	F '88	80	80	0.01	0.4	0.07	-	D
Dalapon (sodium salt)	75-99-0	F	0.2	0.2	F '89	3	3	0.03	0.9	0.2	-	D
Di(2-ethylhexyl)adipate	103-23-1	F	0.4	0.4	-	20	20	0.6	20	0.4	3	C
Di(2-ethylhexyl)phthalate (PAE)	117-81-7	F	zero	0.006	-	-	-	0.02	0.7	-	0.3	B2
Diazinon	333-41-5	-	-	-	F '88	0.02	0.02	0.00009	0.003	0.0006	-	E
Dibromochloromethane ¹ (THM)	124-48-1	F	0.06	0.08 ²	D '93	6	6	0.02	0.7	0.06	0.04	C
Dibromochloropropane (DBCP)	96-12-8	F	zero	0.0002	F '87	0.2	0.05	-	-	-	0.003	B2
Dibutyl phthalate (PAE)	84-74-2	-	-	-	-	-	-	0.1	4	-	-	D
Dicamba	1918-00-9	-	-	-	F '88	0.3	0.3	0.03	1	0.2	-	D
Dichloroacetic acid ¹	76-43-6	F	zero	0.06 ³	D '95	5	5	0.004	0.1	-	- ⁴	B2
Dichlorobenzene o-	95-50-1	F	0.6	0.6	F '87	9	9	0.09	3	0.6	-	D
Dichlorobenzene m- ⁵	541-73-1	-	-	-	F '87	9	9	0.09	3	0.6	-	D
Dichlorobenzene p-	106-46-7	F	0.075	0.075	F '87	11	11	0.1	4	0.075	-	C
Dichlorodifluoromethane	75-71-8	-	-	-	F '89	40	40	0.2	5	1	-	D
Dichloroethane (1,2-)	107-06-2	F	zero	0.005	F '87	0.7	0.7	-	-	-	0.04	B2
Dichloroethylene (1,1-)	75-35-4	F	0.007	0.007	F '87	2	1	0.009	0.3	0.006	0.006	C
Dichloroethylene (cis-1,2-)	156-59-2	F	0.07	0.07	F '90	4	1	0.01	0.4	0.07	-	D
Dichloroethylene (trans-1,2-)	156-60-5	F	0.1	0.1	F '87	20	1	0.02	0.7	0.1	-	D
Dichloromethane	75-09-2	F	zero	0.005	D '93	10	2	0.06	2	-	0.5	B2
Dichlorophenol (2,4-)	120-83-2	-	-	-	D '94	0.03	0.03	0.003	0.1	0.02	-	E
Dichloropropane (1,2-)	78-87-5	F	zero	0.005	F '87	-	0.09	-	-	-	0.06	B2
Dichloropropene (1,3-)	542-75-6	-	-	-	F '88	0.03	0.03	0.03	1	-	0.04	B2
Dieldrin	60-57-1	-	-	-	F '88	0.0005	0.0005	0.00005	0.002	-	0.0002	B2
Diethyl phthalate (PAE)	84-66-2	-	-	-	-	-	-	0.8	30	-	-	D

¹ Under review.

² 1998 Final Rule for Disinfectants and Disinfection By-products: The total for trihalomethanes is 0.08 mg/L.

³ 1998 Final Rule for Disinfectants and Disinfection By-products: The total for five haloacetic acids is 0.06 mg/L.

⁴ A quantitative risk estimate has not been determined.

⁵ The values for m-dichlorobenzene are based on data for o-dichlorobenzene.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Diisopropyl methylphosphonate	1445-75-6	-	-	-	F '89	8	8	0.08	3	0.6	-	D
Dimethrin	70-38-2	-	-	-	F '88	10	10	0.3	10	2	-	D
Dimethyl methylphosphonate	756-79-6	-	-	-	F '92	2	2	0.2	7	0.1	0.7	C
Dimethyl phthalate (PAE)	131-11-3	-	-	-	-	-	-	-	-	-	-	D
Dinitrobenzene (1,3-)	99-65-0	-	-	-	F '91	0.04	0.04	0.0001	0.005	0.001	-	D
Dinitrotoluene (2,4-)	121-14-2	-	-	-	F '92	0.50	0.50	0.002	0.1	-	0.005	B2
Dinitrotoluene (2,6-)	606-20-2	-	-	-	F '92	0.40	0.40	0.001	0.04	-	0.005	B2
Dinitrotoluene (2,6 & 2,4) ¹		-	-	-	F '92	-	-	-	-	-	0.005	B2
Dinoseb	88-85-7	F	0.007	0.007	F '88	0.3	0.3	0.001	0.04	0.007	-	D
Dioxane p-	123-91-1	-	-	-	F '87	4	0.4	-	-	-	0.3	B2
Diphenamid	957-51-7	-	-	-	F '88	0.3	0.3	0.03	1	0.2	-	D
Diquat	85-00-7	F	0.02	0.02	-	-	-	0.002²	0.07	-	-	D
Disulfoton	298-04-4	-	-	-	F '88	0.01	0.01	0.00004	0.001	0.0003	-	E
Dithiane (1,4-)	505-29-3	-	-	-	F '92	0.4	0.4	0.01	0.4	0.08	-	D
Diuron	330-54-1	-	-	-	F '88	1	1	0.002 ³	0.07	0.01	-	D
Endothall	145-73-3	F	0.1	0.1	F '88	0.8	0.8	0.02	0.7	0.1	-	D
Endrin	72-20-8	F	0.002	0.002	F '87	0.02	0.005	0.0003	0.01	0.002	-	D
Epichlorohydrin	106-89-8	F	zero	TT ⁴	F '87	0.1	0.1	0.002	0.07	-	0.3	B2
Ethylbenzene	100-41-4	F	0.7	0.7	F '87	30	3	0.1	3	0.7	-	D
Ethylene dibromide (EDB) ⁵	106-93-4	F	zero	0.00005	F '87	0.008	0.008	-	-	-	0.00004	B2
Ethylene glycol	107-21-1	-	-	-	F '87	20	6	2	70	14	-	D
Ethylene Thiourea (ETU)	96-45-7	-	-	-	F '88	0.3	0.3	0.00008	0.003	-	0.02	B2
Fenamiphos	22224-92-6	-	-	-	F '88	0.009	0.009	0.00025	0.009	0.002	-	D

¹ Technical grade.

² New OPP RfD = 0.005 mg/kg/day

³ New OPP RfD = 0.003 mg/kg/day.

⁴ When epichlorohydrin is used in drinking water systems, the combination (or product) of dose and monomer level shall not exceed that equivalent to an epichlorohydrin-based polymer containing 0.01% monomer dosed at 20 mg/L.

⁵ 1,2-dibromoethane.

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Chemicals	CAS Number	Standards			Status HA Standards	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Fluometuron	2164-17-2	-	-	-	F '88	2	2	0.01	0.5	0.09	-	D
Fluorene (PAH)	86-73-7	-	-	-	-	-	-	0.04	1	-	-	D
Fonofos	944-22-9	-	-	-	F '88	0.02	0.02	0.002	0.07	0.01	-	D
Formaldehyde	50-00-0	-	-	-	D '93	10	5	0.2	7	1	-	B1 ¹
Glyphosate	1071-83-6	F	0.7	0.7	F '88	20	20	0.1 ²	4	0.7	-	D
Heptachlor	76-44-8	F	zero	0.0004	F '87	0.01	0.01	0.0005	0.02	-	0.0008	B2
Heptachlor epoxide	1024-57-3	F	zero	0.0002	F '87	0.01	-	0.00001	0.0004	-	0.0004	B2
Hexachlorobenzene	118-74-1	F	zero	0.001	F '87	0.05	0.05	0.0008	0.03	-	0.002	B2
Hexachlorobutadiene ³	87-68-3	-	-	-	D '98	0.3	0.3	0.0002⁴	0.007	0.001	0.05	C
Hexachlorocyclopentadiene	77-47-4	F	0.05	0.05	-	-	-	0.006	0.2	-	-	E
Hexachloroethane	67-72-1	-	-	-	F '91	5	5	0.001	0.04	0.001	0.3	C
Hexane (n-)	110-54-3	-	-	-	F '87	10	4	-	-	-	-	D
Hexazinone	51235-04-2	-	-	-	F '96	3	2	0.05 ⁵	2	0.4	-	D
HMX ⁶	2691-41-0	-	-	-	F '88	5	5	0.05	2	0.4	-	D
Indeno[1,2,3,-c,d]pyrene (PAH)	193-39-5	-	-	-	-	-	-	-	-	-	-	B2
Isophorone	78-59-1	-	-	-	F '92	15	15	0.2	7	0.1	4	C
Isopropyl methylphosphonate	1832-54-8	-	-	-	F '92	30	30	0.1	4	0.7	-	D
Isopropylbenzene (cumene)	98-82-8	-	-	-	D '87	11	11	0.1	4	-	-	D
Lindane ⁷	58-89-9	F	0.0002	0.0002	F '87	1	1	0.0003	0.01	0.0002	-	C
Malathion	121-75-5	-	-	-	F '92	0.2	0.2	0.02	0.8	0.1	-	D
Maleic hydrazide	123-33-1	-	-	-	F '88	10	10	0.5	20	4	-	D
MCPA ⁸	94-74-6	-	-	-	F '88	0.1	0.1	0.0005 ⁹	0.02	0.004	-	D
Methomyl	16752-77-5	-	-	-	F '88	0.3	0.3	0.025	0.9	0.2	-	E
Methoxychlor	72-43-5	F	0.04	0.04	F '87	0.05	0.05	0.005	0.2	0.04	-	D
Methyl ethyl ketone	78-93-3	-	-	-	F '87	75	7.5	0.6	20	4	-	D
Methyl parathion	298-00-0	-	-	-	F '88	0.3	0.3	0.00025	0.009	0.002	-	D

¹ Carcinogenicity based on inhalation exposure.

² New OPP RfD = 2 mg/kg/day.

³ Under review.

⁴ Draft Ambient Water Quality Criteria for the protection of human health (EPA 822-R-98-004)

⁵ The Health Advisory is based on a new OPP RfD rather than the IRIS RfD.

⁶ HMX = octahydro-1,3,5,7-tetranitro-1,3,5,7-tetrazocine.

⁷ Lindane = γ - hexachlorocyclohexane.

⁸ MCPA = 4(chloro-2-methoxyphenoxy)acetic acid.

⁹ New OPP RfD = 0.0015 mg/kg/day.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Metolachlor	51218-45-2	-	-	-	F '88	2	2	0.15 ¹	5	0.1	-	C
Metribuzin	21087-64-9	-	-	-	F '88	5	5	0.025 ²	0.9	0.2	-	D
Monochloroacetic acid ³	79-11-8	F	-	0.06 ⁴	-	-	-	-	-	-	-	-
Monochlorobenzene	108-90-7	F	0.1	0.1	F '87	4	4	0.02	0.7	0.1	-	D
Naphthalene	91-20-3	-	-	-	F '90	0.5	0.5	0.02	0.7	0.1	-	C
Nitrocellulose ⁵	9004-70-0	-	-	-	F '88	-	-	-	-	-	-	-
Nitroguanidine	556-88-7	-	-	-	F '90	10	10	0.1	4	0.7	-	D
Nitrophenol p-	100-02-7	-	-	-	F '92	0.8	0.8	0.008	0.3	0.06	-	D
Oxamyl (Vydate)	23135-22-0	F	0.2	0.2	F '87	0.2	0.2	0.025 ⁶	0.9	0.2	-	E
Paraquat	1910-42-5	-	-	-	F '88	0.1	0.1	0.0045	0.2	0.03	-	C
Pentachlorophenol	87-86-5	F	zero	0.001	F '87	1	0.3	0.03	1	-	0.03	B2
Phenanthrene (PAH)	85-01-8	-	-	-	-	-	-	-	-	-	-	D
Phenol	108-95-2	-	-	-	D '92	6	6	0.6	20	4	-	D
Picloram	1918-02-1	F	0.5	0.5	F '88	20	20	0.07 ⁷	2	0.5	-	D
Polychlorinated biphenyls (PCBs)	1336-36-3	F	zero	0.0005	D '93	-	-	-	-	-	0.01	B2
Prometon	1610-18-0	-	-	-	F '88	0.2	0.2	0.015	0.5	0.1	-	D
Pronamide	23950-58-5	-	-	-	F '88	0.8	0.8	0.075	3	0.05	-	C
Propachlor	1918-16-7	-	-	-	F '88	0.5	0.5	0.01	0.5	0.09	-	D
Propazine	139-40-2	-	-	-	F '88	1	1	0.02	0.7	0.01	-	C
Propham	122-42-9	-	-	-	F '88	5	5	0.02	0.6	0.1	-	D
Pyrene (PAH)	129-00-0	-	-	-	-	-	-	0.03	-	-	-	D
RDX ⁸	121-82-4	-	-	-	F '88	0.1	0.1	0.003	0.1	0.002	0.03	C
Simazine	122-34-9	F	0.004	0.004	F '88	0.5	0.5	0.005	0.2	0.004	-	C
Styrene	100-42-5	F	0.1	0.1	F '87	20	2	0.2	7	0.1	-	C
2,4,5-T (Trichlorophenoxy-acetic acid)	93-76-5	-	-	-	F '88	0.8	0.8	0.01	0.4	0.07	-	D

¹ New OPP RfD = 0.1 mg/kg/day.

² New OPP RfD = 0.013 mg/kg/day.

³ Under review.

⁴ 1998 Final Rule for Disinfectants and Disinfection By-products: the total for five haloacetic acids is 0.06mg/L.

⁵ The Health Advisory Document for nitrobenzene does not include HA values and describes this compounds as relatively nontoxic.

⁶ New OPP RfD = 0.001 mg/kg/day.

⁷ New OPP RfD = 0.2 mg/kg/day.

⁸ RDX = hexahydro -1,3,5-trinitro-1,3,5-triazine.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
2,3,7,8-TCDD (Dioxin)	1746-01-6	F	zero	3E-08	F '87	1E-06	1E-07	1E-09	4E-08	-	2E-08	B2
Tebuthiuron	34014-18-1	-	-	-	F '88	3	3	0.07	2	0.5	-	D
Terbacil	5902-51-2	-	-	-	F '88	0.3	0.3	0.01	0.4	0.09	-	E
Terbufos	13071-79-9	-	-	-	F '88	0.005	0.005	0.0001	0.005	0.0009	-	D
Tetrachloroethane (1,1,1,2-)	630-20-6	-	-	-	F '89	2	2	0.03	1	0.07	0.1	C
Tetrachloroethane (1,1,2,2-)	79-34-5	-	-	-	F '89	0.04	0.04	0.00005	0.002	0.0003	0.02	C
Tetrachloroethylene	127-18-4	F	zero	0.005	F '87	2	2	0.01	0.5	0.01	-	-
Trichlorofluoromethane	75-69-4	-	-	-	F '89	7	7	0.3	10	2	-	D
Toluene	108-88-3	F	1	1	D '93	20	2	0.2	7	1	-	D
Toxaphene	8001-35-2	F	zero	0.003	F '96	0.004	0.004	0.0004	0.01	-	0.003	B2
2,4,5-TP (Silvex)	93-72-1	F	0.05	0.05	F '88	0.2	0.2	0.008	0.3	0.05	-	D
Trichloroacetic acid ¹	76-03-9	F	0.3	0.06 ²	D '96	4	4	0.1	4.0	0.3	-	C
Trichlorobenzene (1,2,4-)	120-82-1	F	0.07	0.07	F '89	0.1	0.1	0.01	0.4	0.07	-	D
Trichlorobenzene (1,3,5-)	108-70-3	-	-	-	F '89	0.6	0.6	0.006	0.2	0.04	-	D
Trichloroethane (1,1,1-)	71-55-6	F	0.2	0.2	F '87	100	40	0.035	1	0.2	-	D
Trichloroethane (1,1,2-)	79-00-5	F	0.003	0.005	F '89	0.6	0.4	0.004	0.1	0.003	0.06	C
Trichloroethylene ¹	79-01-6	F	zero	0.005	F '87	-	-	0.007	0.2	-	0.3	B2
Trichlorophenol (2,4,6-)	88-06-2	-	-	-	D '94	0.03	0.03	0.0003	0.01	-	0.3	B2
Trichloropropane (1,2,3-)	96-18-4	-	-	-	F '89	0.6	0.6	0.006	0.2	0.04	-	-
Trifluralin	1582-09-8	-	-	-	F '90	0.08	0.08	0.0075 ³	0.3	0.005	0.5	C
Trimethylbenzene (1,2,4-)	95-63-6	-	-	-	D '87	-	-	-	-	-	-	D
Trimethylbenzene (1,3,5-)	108-67-8	-	-	-	D '87	10	-	-	-	-	-	D
Trinitroglycerol	55-63-0	-	-	-	F '87	0.005	0.005	-	-	0.005	0.2	-
Trinitrotoluene (2,4,6-)	118-96-7	-	-	-	F '89	0.02	0.02	0.0005	0.02	0.002	0.1	C
Vinyl chloride	75-01-4	F	zero	0.002	F '87	3	3	0.003	0.1	-	0.002	A
Xylenes	1330-20-7	F	10	10	D '93	40	40	2	70	10	-	D

¹ Under review.

² 1998 Final Rule for Disinfectants and Disinfection By-products: The total for five haloacetic acids is 0.06 mg/L.

³ New OPP RfD = 0.024 mg/kg/day.

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
INORGANICS												
Ammonia	7664-41-7	-	-	-	D '92	-	-	-	-	30	-	D
Antimony	7440-36-0	F	0.006	0.006	F '92	0.01	0.01	0.0004	0.01	0.006	-	D
Arsenic	7440-38-2	F	zero	0.01	D '95	-	-	0.0003	0.01	-	-	A
Asbestos (fibers/l >10µm length)	1332-21-4	F	7 MFL ¹	7 MFL	-	-	-	-	-	-	700-MFL	A ²
Barium	7440-39-3	F	2	2	D '93	0.7	0.7	0.07	2	2	-	D
Beryllium	7440-41-7	F	0.004	0.004	F '92	30	30	0.002	0.07	-	-	-
Boron ³	7440-42-8	-	-	-	D '92	4	0.9	0.09	3	0.6	-	D
Bromate	7789-38-0	F	zero	0.01	D '98	0.2	-	0.004	0.14	-	0.005	B2
Cadmium	7440-43-9	F	0.005	0.005	F '87	0.04	0.04	0.0005	0.02	0.005	-	D
Chloramine ⁴	10599-90-3	F	4 ⁵	4 ⁵	D '95	1	1	0.1	3.5	3.0	-	-
Chlorine	7782-50-5	F	4 ⁵	4 ⁵	D '95	3	3	0.1	5	4	-	D
Chlorine dioxide	10049-04-4	F	0.8 ⁵	0.8 ⁵	D '98	0.84	0.84	0.03	1	0.8	-	D
Chlorite	7758-19-2	F	0.8	1	D '98	0.84	0.84	0.03	1	0.8	-	D
Chromium (total)	7440-47-3	F	0.1	0.1	F '87	1	1	0.003⁶	0.1	-	-	D
Copper (at tap)	7440-50-8	F	1.3	TT ⁷	D '98	-	-	-	-	-	-	D
Cyanide ³	143-33-9	F	0.2	0.2	F '87	0.2	0.2	0.02 ⁸	0.8	0.2	-	D
Fluoride	7681-49-4	F	4	4	-	-	-	0.06⁹	-	-	-	-
Lead (at tap)	7439-92-1	F	zero	TT ⁷	-	-	-	-	-	-	-	B2
Manganese	7439-96-5	-	-	-	-	-	-	0.14 ¹⁰	-	-	-	D
Mercury (inorganic)	7487-94-7	F	0.002	0.002	F '87	0.002	0.002	0.0003	0.01	0.002	-	D
Molybdenum	7439-98-7	-	-	-	D '93	0.08	0.08	0.005	0.2	0.04	-	D
Nickel	7440-02-0	F	-	-	F '95	1	1	0.02	0.7	0.1	-	-

¹ MFL = million fibers per liter.

² Carcinogenicity based on inhalation exposure.

³ Under review.

⁴ Monochloramine; measured as free chlorine.

⁵ 1998 Final Rule for Disinfectants and Disinfection By-products: MRDLG=Maximum Residual Disinfection Level Goal; and MRDL=Maximum Residual Disinfection Level.

⁶ IRIS value for chromium VI.

⁷ Copper action level 1.3 mg/L; lead action level 0.015 mg/L.

⁸ This RfD is for hydrogen cyanide.

⁹ Based on dental fluorosis in children, a cosmetic effect. MCLG based on skeletal fluorosis.

¹⁰ Dietary manganese.

Drinking Water Standards and Health Advisories

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Chemicals	CASRN Number	Standards			Status HA Document	Health Advisories						Cancer Group
		Status Reg.	MCLG (mg/L)	MCL (mg/L)		10-kg Child		RfD (mg/kg/day)	DWEL (mg/L)	Life-time (mg/L)	mg/L at 10 ⁻⁴ Cancer Risk	
						One-day (mg/L)	Ten-day (mg/L)					
Nitrate (as N)	14797-55-8	F	10	10	D '93	10 ¹	10 ¹	1.6	-	-	-	-
Nitrite (as N)	14797-65-0	F	1	1	D '93	1 ¹	1 ¹	0.16	-	-	-	-
Nitrate + Nitrite (both as N)		F	10	10	D '93	-	-	-	-	-	-	-
Selenium	7782-49-2	F	0.05	0.05	-	-	-	0.005	0.2	0.05	-	D
Silver	7440-22-4	-	-	-	F '92	0.2	0.2	0.005 ²	0.2	0.1	-	D
Strontium	7440-24-6	-	-	-	D '93	25	25	0.6	20	4	-	D
Thallium	7440-28-0	F	0.0005	0.002	F '92	0.007	0.007	0.00007	0.002	0.0005	-	-
White phosphorous	7723-14-0	-	-	-	F '90	-	-	0.00002	0.0005	0.0001	-	D
Zinc	7440-66-6	-	-	-	D '93	6	6	0.3	10	2	-	D
RADIONUCLIDES												
Beta particle and photon activity (formerly man-made radionuclides)		F	zero	4 mrem/yr	-	-	-	-	-	-	4 mrem/yr	A
Gross alpha particle activity		F	zero	15 pCi/L	-	-	-	-	-	-	15 pCi/L	A
Combined Radium 226 & 228	7440-14-4	F	zero	5 pCi/L	-	-	-	-	-	-	-	A
Radon	10043-92-2	P	zero	300 pCi/L AMCL ³	-	-	-	-	-	-	150 pCi/L	A
Uranium	7440-61-1	F	zero	30 µg/L	-	-	-	0.003 ⁴	0.1	-	-	A

¹ These values are calculated for a 4-kg infant and are protective for all age groups.

² Based on a cosmetic effect.

³ AMCL = Alternative Maximum Contaminant Level

⁴ Soluble uranium salts.

Secondary Drinking Water Regulations

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Chemicals	CAS Number	Status	SDWR
Aluminum	7429-90-5	F	0.05 to 0.2 mg/L
Chloride	7647-14-5	F	250 mg/L
Color	NA	F	15 color units
Copper	7440-50-8	F	1.0 mg/L
Corrosivity	NA	F	non-corrosive
Fluoride	7681-49-4	F	2.0 mg/L
Foaming agents	NA	F	0.5 mg/L
Iron	7439-89-6	F	0.3 mg/L
Manganese	7439-96-5	F	0.05 mg/L
Odor	NA	F	3 threshold odor numbers
pH	NA	F	6.5 – 8.5
Silver	7440-22-4	F	0.1 mg/L
Sulfate	7757-82-6	F	250 mg/L
Total dissolved solids (TDS)	NA	F	500 mg/L
Zinc	7440-66-6	F	5 mg/L

Microbiology

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	Status Reg.	Status HA Document	MCLG	MCL	Treatment Technique
<i>Cryptosporidium</i>	F	F 01	-	TT	Systems that filter must remove 99% of <i>Cryptosporidium</i>
<i>Giardia lamblia</i>	F	F 98	-	TT	99.9% killed/inactivated
<i>Legionella</i>	F ¹	F 98	zero	TT	No limit; EPA believes that if <i>Giardia</i> and viruses are inactivated, <i>Legionella</i> will also be controlled
Heterotrophic Plate Count (HPC)	F ¹	-	NA	TT	No more than 500 bacterial colonies per milliliter.
Total Coliforms	F	-	zero	5%	No more than 5.0% samples total coliform-positive in a month. Every sample that has total coliforms must be analyzed for fecal coliforms; no fecal coliforms are allowed.
Turbidity	F	-	NA	TT	At no time can turbidity go above 5 NTU (nephelometric turbidity units)
Viruses	F ¹	-	zero	TT	99.99% killed/inactivated

¹ Final for systems using surface water; also being considered for regulation under groundwater disinfection rule.

Drinking Water Advisory Table

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Chemicals	Status	Health-based Value	Taste Threshold	Odor Threshold
Ammonia	D '92	Not Available	30 mg/L	
Methyl tertiary butyl ether (MtBE)	F '98	Not Available	40 µg/L	20 µg/L
Sodium	D '02	20 mg/L (for individuals on a 500 mg/day restricted sodium diet).	30-60 mg/L	
Sulfate	D '02	500 mg/L	250 mg/L	

Taste Threshold: Concentration at which the majority of consumers do not notice an adverse taste in drinking water; it is recognized that some sensitive individuals may detect a chemical at levels below this threshold.

Odor Threshold: Concentration at which the majority of consumers do not notice an adverse odor in drinking water; it is recognized that some sensitive individuals may detect a chemical at levels below this threshold.

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹				Human Health & Ecological Combined		Human Health	Background ⁴
		Federal				PREQB ³			
		Freshwater		Marine		Freshwater	Marine		
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	(ug/L)	(ug/L)	Consumption of Organisms (ug/L)	Brackish Water (ug/L)
Explosives									
2691-41-0	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE								
121-82-4	HEXAHYDRO-1,3,5-TRINITRO-1,3,5,7-TETRAZOCINE								
99-35-4	1,3,5-TRINITROBENZENE								
99-65-0	1,3-DINITROBENZENE								
479-45-8	METHYL-2,4,6-TRINITROPHENYLNITRAMINE								
118-96-7	2,4,6-TRINITROTOLUENE								
88-72-2	2-NITROTOLUENE								
99-99-0	4-NITROTOLUENE								
99-08-1	3-NITROTOLUENE								
14797-73-0	PERCHLORATE								
Metals									
7429-90-5	ALUMINUM								5000
7440-36-0	ANTIMONY	1300	160			14	4300	4300	18
7440-38-2	ARSENIC	340	150	69	36	0.18	1.4	0.14	33
7440-39-3	BARIUM								1549
7440-41-7	BERYLLIUM	16	0.53						15
7440-43-9	CADMIUM	1.79	0.66	43	9.3	Note 5	9.3		44
7440-70-2	CALCIUM								1544034
7440-47-3	CHROMIUM, TOTAL				50	Note 6	Note 6		170
7440-48-4	COBALT								162
7440-50-8	COPPER	9.22	6.54	2.9	2.9	Note 6	Note 6		1208

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹				Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³		Freshwater	Marine	Consumption of Organisms (ug/L)	Brackish Water (ug/L)
		Freshwater	Marine	Freshwater	Marine				
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	(ug/L)	(ug/L)	Federal ²	
7439-89-6	IRON								488434
7439-95-4	MAGNESIUM								
7439-96-5	MANGANESE								19689
7439-92-1	LEAD	33.78	1.32	210	8.1	Note 7	8.1/15		93
7439-97-6	MERCURY	2.4	0.012	2.1	0.025	0.05	0.051	0.051	0.025
7440-02-0	NICKEL	789	87.71	75	8.3	Note 8	8.2	4600	91
7440-09-7	POTASSIUM								
7782-49-2	SELENIUM	20	5	300	71	5	71	11000	4.6
7440-22-4	SILVER	20	5	2.3	0.23	Note 8	2		1.3
7440-23-5	SODIUM								
7440-28-0	THALLIUM				21.3				9.7
7440-62-2	VANADIUM								951
7440-66-6	ZINC	65.04	58.91	90	81	81	Note 8	69000	2169
Organochlorine Pesticides									
319-84-6	ALPHA BHC (ALPHA HEXACHLOROCYCLOHEXANE)		500		1400			0.013	
319-85-7	BETA BHC (BETA HEXACHLOROCYCLOHEXANE)		5000					0.046	
319-86-8	DELTA BHC (DELTA HEXACHLOROCYCLOHEXANE)								
58-89-9	GAMMA BHC (LINDANE)	2	0.08	0.16	0.016	0.19	0.16	0.063	
76-44-8	HEPTACHLOR	0.52	0.0038	0.053	0.0036	0.0021	0.0021	0.00021	
309-00-2	ALDRIN	3	0.3	1.3	0.13	0.0013	0.0014	0.00014	

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹				Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³		Freshwater	Marine	Consumption of Organisms (ug/L)	Brackish Water (ug/L)
		Freshwater	Marine	Freshwater	Marine				
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	(ug/L)	(ug/L)	Federal ²	
1024-57-3	HEPTACHLOR EPOXIDE	0.52	0.0038	0.053	0.0036			0.00011	
959-98-8	ALPHA ENDOSULFAN (ENDOSULFAN I)	0.22	0.056	0.34	0.0087	0.056	0.087	240	
60-57-1	DIELDRIN	2.5	0.0019	0.71	0.0019	0.0014	0.0014	0.00014	
72-55-9	p,p'-DDE	105	10.5	1.4	0.14	0.001	0.001	0.00059	
72-20-8	ENDRIN	0.18	0.0023	0.037	0.0023	0.036	0.0023	0.81	
33213-65-9	BETA ENDOSULFAN (ENDOSULFAN II)	0.22	0.056					240	
72-54-8	p,p'-DDD	0.064	0.0064	0.25	0.025	0.001	0.001	0.00084	
1031-07-8	ENDOSULFAN SULFATE							240	
50-29-3	p,p'-DDT	1.1	0.001	0.13	0.001	0.001	0.001	0.00059	
72-43-5	METHOXYCHLOR		0.03	-	0.03*	0.03	0.03		
7421-93-4	ENDRIN ALDEHYDE							0.81	
5103-71-9	ALPHA-CHLORDANE					0.0043	0.004		
5103-74-2	GAMMA-CHLORDANE					0.0043	0.004		
53494-70-5	ENDRIN KETONE								
8001-35-2	Toxaphene	0.73	0.0002	0.21	0.0002	0.0002	0.0002	0.00075	
PCBs									
	Total PCBs	0.2	0.014	1.05	0.03			0.000045	
12674-11-2	PCB-1016 (AROCHLOR 1016)	0.2	0.014	1.05	0.03			0.000045	
11104-28-2	PCB-1221 (AROCHLOR 1221)	0.2	0.014	1.05	0.03			0.000045	
11141-16-5	PCB-1232 (AROCHLOR 1232)	0.2	0.014	1.05	0.03			0.000045	
53469-21-9	PCB-1242 (AROCHLOR 1242)	0.2	0.014	1.05	0.03			0.000045	
12672-29-6	PCB-1248 (AROCHLOR 1248)	0.2	0.014	1.05	0.03			0.000045	
11096-82-5	PCB-1260 (AROCHLOR 1260)	0.2	0.014	1.05	0.03			0.000045	

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹		Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³			
		Freshwater	Marine	Freshwater	Marine	Federal ²	
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	Consumption of Organisms (ug/L)	Brackish Water (ug/L)
101-55-3	4-BROMOPHENYL PHENYL ETHER						
118-74-1	HEXACHLOROBENZENE					0.00077	
87-86-5	PENTACHLOROPHENOL	19	13	13	7.9	8.2	
85-01-8	PHENANTHRENE						
120-12-7	ANTHRACENE					110000	
84-74-2	DI-n-BUTYL PHTHALATE	94	9.4		3.4	12000	
206-44-0	FLUORANTHENE	398	39.8	4	1.6		
129-00-0	PYRENE					11000	
85-68-7	BENZYL BUTYL PHTHALATE						
91-94-1	3,3'-DICHLOROBENZIDINE						
56-55-3	BENZO(a)ANTHRACENE					0.049	
218-01-9	CHRYSENE					0.049	
117-81-7	bis(2-ETHYLHEXYL) PHTHALATE	1110	0.3			5.9	
117-84-0	DI-n-OCTYLPHTHALATE						
205-99-2	BENZO(b)FLUORANTHENE					0.049	
207-08-9	BENZO(k)FLUORANTHENE					0.049	
50-32-8	BENZO(a)PYRENE						
193-39-5	INDENO(1,2,3-c,d)PYRENE						
53-70-3	DIBENZ(a,h)ANTHRACENE					0.049	
191-24-2	BENZO(g,h,i)PERYLENE						
86-74-8	CARBAZOLE						
Volatile Organics							

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹		Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³			
		Freshwater	Marine	Freshwater	Marine		Federal ²
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	(ug/L)	(ug/L)
74-87-3	CHLOROMETHANE	55000	5500	27000	2700		1600
74-83-9	BROMOMETHANE	1100	110	1200	120		4000
75-01-4	VINYL CHLORIDE						525
75-00-3	CHLOROETHANE						
75-35-4	1,1-DICHLOROETHENE	3030	303	22400	2240		
75-15-0	CARBON DISULFIDE						
75-34-3	1,1-DICHLOROETHANE						3.2
67-64-1	ACETONE						
67-66-3	CHLOROFORM	2890	289	8150	815		470
75-09-2	METHYLENE CHLORIDE	19300	1930				
56-23-5	CARBON TETRACHLORIDE	3520	352	15000	1500		4.4
71-43-2	BENZENE	530	53	1090	109		71
107-06-2	1,2-DICHLOROETHANE	11800	2000	11300	1130		99
78-93-3	METHYL ETHYL KETONE (2-BUTANONE)						
79-01-6	TRICHLOROETHYLENE (TCE)						81
78-87-5	1,2-DICHLOROPROPANE	5250	525	24000	2400		39
71-55-6	1,1,1-TRICHLOROETHANE	5280	528	3120	312		
75-27-4	BROMODICHLOROMETHANE						46
10061-01-5	cis-1,3-DICHLOROPROPENE						1700
108-88-3	TOLUENE	1750	175	370	37		200000
10061-02-6	trans-1,3-DICHLOROPROPENE	606	24.4	79	7.9		1700
124-48-1	DIBROMOCHLOROMETHANE						34
108-90-7	CHLOROBENZENE	1950	195	1050	105		21000

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹		Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³			
		Freshwater	Marine	Freshwater	Marine		
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	(ug/L)	(ug/L)
100-41-4	ETHYLBENZENE	4530	453	43	4.3		29000
108-10-1	METHYL ISOBUTYL KETONE (4-METHYL-2-PENTANONE)						
511-39-00	M,P-XYLENE (SUM OF ISOMERS)						
95-47-6	O-XYLENE (1,2-DIMETHYLBENZENE)						
79-00-5	1,1,2-TRICHLOROETHANE	3600	940	902	90.2		42
127-18-4	TETRACHLOROETHYLENE(PCE)	528	84	1020	45		8.85
591-78-6	2-HEXANONE						
1330-20-7	XYLENES, TOTAL						
100-42-5	STYRENE						
75-25-2	BROMOFORM	2930	293	1790	640		360
79-34-5	1,1,2,2-TETRACHLOROETHANE	932	240	902	90.2		11

Legend

¹ Ecological Surface Water Criteria: EPA Amended Guidance on Ecological Risk Assessment at Military Bases: Process Considerations, Timing of Activities, and Inclusion of Stakeholders, Region IV Office of Technical Services, June 23, 2000

² Human Health Surface Water Criteria, the lower of:

(1) USEPA, National Recommended Water Quality Criteria, Federal Register, vol. 63, No. 237, Dec. 10, 1998.

(2) Clean Water Act, Sections 303 and 304: 304(a) Criteria and Related Information for Toxic Pollutants. Updated December 1992 Values, January 1995 (Toxic Substance Spreadsheet).

³ Puerto Rico Water Quality Standards Regulation, Number 4282, Commonwealth of Puerto Rico Office of the Governor Environmental Quality Board (PREQB), September 27, 1990.

⁴ Background Values for Surface Water, *Draft Soil, Groundwater, Surface Water, and Sediment Background Investigation Report for U.S. Naval Ammunition Support Detachment*,

Vieques Island, Puerto Rico (CH2M HILL, June 2001)

TABLE B-2. SURFACE WATER SCREENING CRITERIA TABLES

CAS Number	Analyte	Ecological ¹		Human Health & Ecological Combined		Human Health	Background ⁴
		Federal		PREQB ³			
		Freshwater	Marine	Freshwater	Marine	Federal ²	
		Acute (ug/L)	Chronic (ug/L)	Acute (ug/L)	Chronic (ug/L)	Consumption of Organisms (ug/L)	Brackish Water (ug/L)
		⁵ Concentration in ug/L must not exceed the numerical value given by $e^{(0.7852 (\text{Ln Hardness})-3.490)}$					
		⁶ Concentration in ug/L must not exceed the numerical value given by $e^{(0.8545 (\text{Ln Hardness})-1.465)}$					
		⁷ Concentration in ug/L must not exceed the numerical value given by $e^{(1.273 (\text{Ln Hardness})-4.705)}$					
		⁸ Concentration in ug/L must not exceed the numerical value given by $e^{(0.8460 (\text{Ln Hardness})+1.1645)}$					
		⁹ PREQB Criteria for total Endosulfan reported as 0.56 ug/L. The sum of concentrations for Endosulfan I and Endosulfan II may not exceed 0.56 ug/L					

Key : SFO_i=Cancer Slope Factor oral, inhalation RfDo_i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca) +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION										CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS					
SFO	RfDo	SFi	RfDi	V	skin		CAS No.			"Direct Contact Exposure Pathways"				"Migration to Ground Water"							
1/(mg/kg-d)	(mg/kg-d)	1/(mg/kg-d)	(mg/kg-d)	O	abs.			Residential	Industrial	Ambient Air	Tap Water	DAF 20	DAF 1								
				C	soils			Soil (mg/kg)	Soil (mg/kg)	(ug/m ³)	(ug/l)	(mg/kg)	(mg/kg)								
8.7E-03	i	4.0E-03	i	8.7E-03	r	4.0E-03	r	0	0.10	30560-19-1	Acephate	5.6E+01	ca**	2.0E+02	ca*	7.7E-01	ca*	7.7E+00	ca*		
				7.7E-03	i	2.6E-03	i	1		75-07-0	Acetaldehyde	1.1E+01	ca**	2.3E+01	ca**	8.7E-01	ca*	1.7E+00	ca		
		2.0E-02	i			2.0E-02	r	0	0.10	34256-82-1	Acetochlor	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.0E-01	i			1.0E-01	r	1		67-64-1	Acetone	1.6E+03	nc	6.0E+03	nc	3.7E+02	nc	6.1E+02	nc	1.6E+01	8.0E-01
		8.0E-04	h			8.0E-04	r	0	0.10	75-86-5	Acetone cyanohydrin	4.9E+01	nc	4.9E+02	nc	2.9E+00	nc	2.9E+01	nc		
		1.7E-02	r			1.7E-02	i	1		75-05-8	Acetonitrile	4.2E+02	nc	1.8E+03	nc	6.2E+01	nc	1.0E+02	nc		
		2.0E-02	h			5.7E-06	i	1		107-02-8	Acrolein	1.0E-01	nc	3.4E-01	nc	2.1E-02	nc	4.2E-02	nc		
4.5E+00	i	2.0E-04	i	4.5E+00	i	2.0E-04	r	0	0.10	79-06-1	Acrylamide	1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca		
		5.0E-01	i			2.9E-04	i	0	0.10	79-10-7	Acrylic acid	2.9E+04	nc	1.0E+05	max	1.0E+00	nc	1.8E+04	nc		
5.4E-01	i	1.0E-03	h	2.4E-01	i	5.7E-04	i	1		107-13-1	Acrylonitrile	2.1E-01	ca*	4.9E-01	ca*	2.8E-02	ca*	3.9E-02	ca*		
8.1E-02	h	1.0E-02	i	8.0E-02	r	1.0E-02	r	0	0.10	15972-60-8	Alachlor	6.0E+00	ca	2.1E+01	ca	8.4E-02	ca	8.4E-01	ca		
		1.5E-01	i			1.5E-01	r	0	0.10	1596-84-5	Alar	9.2E+03	nc	9.2E+04	nc	5.5E+02	nc	5.5E+03	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	116-06-3	Aldicarb	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		1.0E-03	i			1.0E-03	r	0	0.10	1646-88-4	Aldicarb sulfone	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
1.7E+01	i	3.0E-05	i	1.7E+01	i	3.0E-05	r	0	0.10	309-00-2	Aldrin	2.9E-02	ca*	1.0E-01	ca	3.9E-04	ca	4.0E-03	ca	5.0E-01	2.0E-02
		2.5E-01	i			2.5E-01	r	0	0.10	74223-64-6	Allyl	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc		
		5.0E-03	i			5.0E-03	r	0	0.10	107-18-6	Allyl alcohol	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
		5.0E-02	h			2.9E-04	i	0	0.10	107-05-1	Allyl chloride	3.0E+03	nc	3.0E+04	nc	1.0E+00	nc	1.8E+03	nc		
		1.0E+00	n			1.4E-03	n	0		7429-90-5	Aluminum	7.6E+04	nc	1.0E+05	max	5.1E+00	nc	3.6E+04	nc		
		4.0E-04	i					0		20859-73-8	Aluminum phosphide	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc		
		3.0E-04	i			3.0E-04	r	0	0.10	67485-29-4	Amdro	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
		9.0E-03	i			9.0E-03	r	0	0.10	834-12-8	Ametryn	5.5E+02	nc	5.5E+03	nc	3.3E+01	nc	3.3E+02	nc		
		7.0E-02	h			7.0E-02	r	0	0.10	591-27-5	m-Aminophenol	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
		2.0E-05	h			2.0E-05	r	0	0.10	504-24-5	4-Aminopyridine	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc		
		2.5E-03	i			2.5E-03	r	0	0.10	33089-61-1	Amitraz	1.5E+02	nc	1.5E+03	nc	9.1E+00	nc	9.1E+01	nc		
						2.9E-02	i			7664-41-7	Ammonia					1.0E+02	nc				
		2.0E-01	i					0	0.10	7773-06-0	Ammonium sulfamate	1.2E+04	nc	1.0E+05	max			7.3E+03	nc		
5.7E-03	i	7.0E-03	n	5.7E-03	r	2.9E-04	i	0	0.10	62-53-3	Aniline	8.5E+01	ca**	3.0E+02	ca*	1.0E+00	nc	1.2E+01	ca*	5.0E+00	3.0E-01
		4.0E-04	i					0		7440-36-0	Antimony and compounds	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc		
		5.0E-04	h					0		1314-60-9	Antimony pentoxide	3.9E+01	nc	5.1E+02	nc			1.8E+01	nc		
		9.0E-04	h					0		28300-74-5	Antimony potassium tartrate	7.0E+01	nc	9.2E+02	nc			3.3E+01	nc		
		4.0E-04	h					0		1332-81-6	Antimony tetroxide	3.1E+01	nc	4.1E+02	nc			1.5E+01	nc		
		4.0E-04	h			5.7E-05	i	0		1309-64-4	Antimony trioxide	3.1E+01	nc	4.1E+02	nc	2.1E-01	nc	1.5E+01	nc		
		1.3E-02	i			1.3E-02	r	0	0.10	74115-24-5	Apollo	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
2.5E-02	i	5.0E-02	h	2.5E-02	i	5.0E-02	r	0	0.10	140-57-8	Aramite	1.9E+01	ca	6.9E+01	ca	2.7E-01	ca	2.7E+00	ca		
		3.0E-04	i					0	0.03	7440-38-2	Arsenic (noncancer endpoint)	2.2E+01	nc	2.6E+02	nc						

Key : SFo_i=Cancer Slope Factor oral, inhalation RfDo_i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca)
 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION						CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS	
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"	
								Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)
1.5E+00	i 3.0E-04	i 1.5E+01	i	0	0.03	7440-38-2	Arsenic (cancer endpoint)	3.9E-01	ca* 1.6E+00	ca 4.5E-04	ca 4.5E-02	ca 2.9E+01	1.0E+00
						7784-42-1	Arsine (see arsenic for cancer endpoint)			5.2E-02	nc		
	9.0E-03	i	9.0E-03	r	0.10	76578-12-6	Assure	5.5E+02	nc 5.5E+03	nc 3.3E+01	nc 3.3E+02	nc	
2.2E-01	h 5.0E-02	i	5.0E-02	r	0.10	3337-71-1	Asulam	3.1E+03	nc 3.1E+04	nc 1.8E+02	nc 1.8E+03	nc	
	h 3.5E-02	h 2.2E-01	r 3.5E-02	r	0.10	1912-24-9	Atrazine	2.2E+00	ca 7.8E+00	ca 3.1E-02	ca 3.0E-01	ca	
	i 4.0E-04	i	4.0E-04	r	0.10	71751-41-2	Avermectin B1	2.4E+01	nc 2.5E+02	nc 1.5E+00	nc 1.5E+01	nc	
1.1E-01	i	1.1E-01	i	0	0.10	103-33-3	Azobenzene	4.4E+00	ca 1.6E+01	ca 6.2E-02	ca 6.1E-01	ca	
	7.0E-02	i	1.4E-04	h	0	7440-39-3	Barium and compounds	5.4E+03	nc 6.7E+04	nc 5.2E-01	nc 2.6E+03	nc	1.6E+03
	4.0E-03	i	4.0E-03	r	0.10	114-26-1	Baygon	2.4E+02	nc 2.5E+03	nc 1.5E+01	nc 1.5E+02	nc	8.2E+01
	3.0E-02	i	3.0E-02	r	0.10	43121-43-3	Bayleton	1.8E+03	nc 1.8E+04	nc 1.1E+02	nc 1.1E+03	nc	
	2.5E-02	i	2.5E-02	r	0.10	68359-37-5	Baythroid	1.5E+03	nc 1.5E+04	nc 9.1E+01	nc 9.1E+02	nc	
	3.0E-01	i	3.0E-01	r	0.10	1861-40-1	Benefin	1.8E+04	nc 1.0E+05	max 1.1E+03	nc 1.1E+04	nc	
	5.0E-02	i	5.0E-02	r	0.10	17804-35-2	Benomyl	3.1E+03	nc 3.1E+04	nc 1.8E+02	nc 1.8E+03	nc	
	3.0E-02	i	3.0E-02	r	0.10	25057-89-0	Bentazon	1.8E+03	nc 1.8E+04	nc 1.1E+02	nc 1.1E+03	nc	
	1.0E-01	i	1.0E-01	r	0.10	100-52-7	Benzaldehyde	6.1E+03	nc 6.2E+04	nc 3.7E+02	nc 3.6E+03	nc	
5.5E-02	i 3.0E-03	n 2.9E-02	i 1.7E-03	n	1	71-43-2	Benzene	6.0E-01	ca* 1.3E+00	ca* 2.3E-01	ca* 3.4E-01	ca* 3.0E-02	2.0E-03
2.3E+02	i 3.0E-03	i 2.3E+02	i 3.0E-03	r	0.10	92-87-5	Benzidine	2.1E-03	ca 7.5E-03	ca 2.9E-05	ca 2.9E-04	ca	
	4.0E+00	i	4.0E+00	r	0.10	65-85-0	Benzoic acid	1.0E+05	max 1.0E+05	max 1.5E+04	nc 1.5E+05	nc 4.0E+02	2.0E+01
1.3E+01	i	1.3E+01	r	0	0.10	98-07-7	Benzotrithloride	3.7E-02	ca 1.3E-01	ca 5.2E-04	ca 5.2E-03	ca	
	3.0E-01	h	3.0E-01	r	0.10	100-51-6	Benzyl alcohol	1.8E+04	nc 1.0E+05	max 1.1E+03	nc 1.1E+04	nc	
1.7E-01	i 2.9E-03	r 1.7E-01	r 2.9E-03	n	1	100-44-7	Benzyl chloride	8.9E-01	ca* 2.2E+00	ca 4.0E-02	ca 6.6E-02	ca	
	2.0E-03	i 8.4E+00	i 5.7E-06	i	0	7440-41-7	Beryllium and compounds	1.5E+02	nc 1.9E+03	ca** 8.0E-04	ca* 7.3E+01	nc 6.3E+01	3.0E+00
	1.0E-04	i	1.0E-04	r	0.10	141-66-2	Bidrin	6.1E+00	nc 6.2E+01	nc 3.7E-01	nc 3.6E+00	nc	
	1.5E-02	i	1.5E-02	r	0.10	82657-04-3	Biphenthrin (Talstar)	9.2E+02	nc 9.2E+03	nc 5.5E+01	nc 5.5E+02	nc	
1.1E+00	i 5.0E-02	i 1.2E+00	i 5.0E-02	r	1	92-52-4	1,1-Biphenyl	3.5E+02	sat 3.5E+02	sat 1.8E+02	nc 3.0E+02	nc	
7.0E-02	x 4.0E-02	i 3.5E-02	x 4.0E-02	r	1	111-44-4	Bis(2-chloroethyl)ether	2.1E-01	ca 5.5E-01	ca 5.8E-03	ca 9.8E-03	ca 4.0E-04	2.0E-05
						39638-32-9	Bis(2-chloroisopropyl)ether	2.9E+00	ca 7.4E+00	ca 1.9E-01	ca 2.7E-01	ca	
2.2E+02	i 2.2E+02	i		1		542-88-1	Bis(chloromethyl)ether	1.9E-04	ca 4.3E-04	ca 3.1E-05	ca 5.2E-05	ca	
7.0E-02	x 4.0E-02	i 3.5E-02	x 4.0E-02	r	1	108-60-1	Bis(2-chloro-1-methylethyl)ether	2.9E+00	ca 7.4E+00	ca 1.9E-01	ca 2.7E-01	ca	
1.4E-02	i 2.0E-02	i 1.4E-02	r 2.2E-02	r	0.10	117-81-7	Bis(2-ethylhexyl)phthalate (DEHP)	3.5E+01	ca* 1.2E+02	ca 4.8E-01	ca 4.8E+00	ca	
	5.0E-02	i	5.0E-02	r	0.10	80-05-7	Bisphenol A	3.1E+03	nc 3.1E+04	nc 1.8E+02	nc 1.8E+03	nc	
	2.0E-01	i	5.7E-03	x	0	7440-42-8	Boron	1.6E+04	nc 1.0E+05	max 2.1E+01	nc 7.3E+03	nc	
			2.0E-04	h	0	7637-07-2	Boron trifluoride			7.3E-01	nc		
	4.00E-03	i				15541-45-4	Bromate	3.1E+02	nc 4.1E+03	nc 0.0E+00	1.5E+02	nc	
	2.0E-02	n	2.9E-03	n	1	108-86-1	Bromobenzene	2.8E+01	nc 9.2E+01	nc 1.0E+01	nc 2.0E+01	nc	
6.2E-02	i 2.0E-02	i 6.2E-02	r 2.0E-02	r	1	75-27-4	Bromodichloromethane	8.2E-01	ca 1.8E+00	ca 1.1E-01	ca 1.8E-01	ca 6.0E-01	3.0E-02

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca)
 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION								CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS			
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"					
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)				
7.9E-03	i 2.0E-02	i 3.9E-03	i 2.0E-02	r 0	0.10	75-25-2	6.2E+01	ca*	2.2E+02	ca*	1.7E+00	ca*	8.5E+00	ca*	8.0E-01	4.0E-02
	1.4E-03	i	1.4E-03	i 1		74-83-9	3.9E+00	nc	1.3E+01	nc	5.2E+00	nc	8.7E+00	nc	2.0E-01	1.0E-02
	5.0E-03	h	5.0E-03	r 0	0.10	2104-96-3	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
	2.0E-02	i	2.0E-02	r 0	0.10	1689-84-5	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
	2.0E-02	i	2.0E-02	r 0	0.10	1689-99-2	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
9.8E-01	r	9.8E-01	i			106-99-0	6.5E-03	ca	1.4E-02	ca	6.9E-03	ca	1.1E-02	ca		
	1.0E-01	i	2.6E-03	n 0	0.10	71-36-3	6.1E+03	nc	6.1E+04	nc	9.5E+00	nc	3.6E+03	nc	1.7E+01	9.0E-01
	5.0E-02	i	5.0E-02	r 0	0.10	2008-41-5	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
	4.00E-02	n	4.00E-02	r 1		104-51-8	2.4E+02	sat	2.4E+02	sat	1.5E+02	nc	2.4E+02	nc		
	4.00E-02	n	4.00E-02	r 1		135-9-88	2.2E+02	sat	2.2E+02	sat	1.5E+02	nc	2.4E+02	nc		
	4.00E-02	n	4.00E-02	r 1		98-06-6	3.9E+02	sat	3.9E+02	sat	1.5E+02	nc	2.4E+02	nc		
	2.0E-01	i	2.0E-01	r 0	0.10	85-68-7	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc	9.3E+02	8.1E+02
	1.0E+00	i	1.0E+00	r 0	0.10	85-70-1	6.1E+04	nc	1.0E+05	max	3.7E+03	nc	3.6E+04	nc		
2.5E-01	h 3.0E-04	h 2.5E-01	r 3.0E-04	r 0	0.10	75-60-5	1.9E+00	ca**	6.9E+00	ca*	2.7E-02	ca*	2.7E-01	ca*		
	5.0E-04	i 6.3E+00	i		0.001	7440-43-9	3.7E+01	nc	4.5E+02	nc	1.1E-03	ca	1.8E+01	nc	8.0E+00	4.0E-01
	5.0E-01	i	5.0E-01	r 0	0.10	105-60-2	3.1E+04	nc	1.0E+05	max	1.8E+03	nc	1.8E+04	nc		
8.6E-03	h 2.0E-03	i 8.6E-03	r 2.0E-03	r 0	0.10	2425-06-1	5.7E+01	ca**	2.0E+02	ca**	7.8E-01	ca**	7.8E+00	ca**		
3.5E-03	h 1.3E-01	i 3.5E-03	r 1.3E-01	r 0	0.10	133-06-2	1.4E+02	ca*	4.9E+02	ca	1.9E+00	ca	1.9E+01	ca		
	1.0E-01	i	1.1E-01	r 0	0.10	63-25-2	6.1E+03	nc	6.2E+04	nc	4.0E+02	nc	3.6E+03	nc		
2.0E-02	h	2.0E-02	r		0.10	86-74-8	2.4E+01	ca	8.6E+01	ca	3.4E-01	ca	3.4E+00	ca	6.0E-01	3.0E-02
	5.0E-03	i	5.0E-03	r 0	0.10	1563-66-2	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
	1.0E-01	i	2.0E-01	i 1		75-15-0	3.6E+02	nc	7.2E+02	sat	7.3E+02	nc	1.0E+03	nc	3.2E+01	2.0E+00
1.3E-01	i 7.0E-04	i 5.3E-02	i 7.0E-04	r 1		56-23-5	2.5E-01	ca**	5.5E-01	ca*	1.3E-01	ca*	1.7E-01	ca*	7.0E-02	3.0E-03
	1.0E-02	i	1.0E-02	r 0	0.10	55285-14-8	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc		
	1.0E-01	i	1.0E-01	r 0	0.10	5234-68-4	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
	1.5E-02	i	1.5E-02	r 0	0.10	133-90-4	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc		
4.0E-01	h	4.0E-01	r		0.10	118-75-2	1.2E+00	ca	4.3E+00	ca	1.7E-02	ca	1.7E-01	ca		
3.5E-01	i 5.0E-04	i 3.5E-01	i 2.0E-04	i 0	0.04	12789-03-6	1.6E+00	ca*	6.5E+00	ca*	1.9E-02	ca*	1.9E-01	ca*	1.0E+01	5.0E-01
	2.0E-02	i	2.0E-02	r 0	0.10	90982-32-4	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
	1.0E-01	i	5.71E-05	n		7782-50-5					2.1E-01	nc				
			5.7E-05	i		10049-04-4					2.1E-01	nc				
	2.0E-03	h	2.0E-03	r 0	0.10	79-11-8	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
	8.6E-06	r	8.6E-06	i 1		532-27-4	3.3E-02	nc	1.1E-01	nc	3.1E-02	nc	5.2E-02	nc		
	4.0E-03	i	4.0E-03	r 0	0.10	106-47-8	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc	7.0E-01	3.0E-02
	2.0E-02	i	1.7E-02	n 1		108-90-7	1.5E+02	nc	5.3E+02	nc	6.2E+01	nc	1.1E+02	nc	1.0E+00	7.0E-02

Key : SFO_i=Cancer Slope Factor oral, inhalation RfDo_i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca)
 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION										CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS	
SFO	RfDo	SFi	RfDi	V	skin			CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"		
1/(mg/kg-d)	(mg/kg-d)	1/(mg/kg-d)	(mg/kg-d)	O	abs.					Residential	Industrial	Ambient Air	Tap Water	DAF 20	DAF 1	
				C	soils					Soil (mg/kg)	Soil (mg/kg)	(ug/m ³)	(ug/l)	(mg/kg)	(mg/kg)	
2.7E-01	h 2.0E-02	i 2.7E-01	h 2.0E-02	r 0	0.10			510-15-6	Chlorobenzilate	1.8E+00	ca 6.4E+00	ca 2.5E-02	ca 2.5E-01			
	2.0E-01	h	2.0E-01	r 0	0.10			74-11-3	p-Chlorobenzoic acid	1.2E+04	nc 1.0E+05	max 7.3E+02	nc 7.3E+03			
	2.0E-02	h	2.0E-02	r 0	0.10			98-56-6	4-Chlorobenzotrifluoride	1.2E+03	nc 1.2E+04	nc 7.3E+01	nc 7.3E+02			
	2.0E-02	h	2.0E-03	h 1				126-99-8	2-Chloro-1,3-butadiene	3.6E+00	nc 1.2E+01	nc 7.3E+00	nc 1.4E+01			
	4.0E-01	h	4.0E-01	r 1				109-69-3	1-Chlorobutane	4.8E+02	sat 4.8E+02	sat 1.5E+03	nc 2.4E+03			
	1.4E+01	r	1.4E+01	i 1				75-68-3	1-Chloro-1,1-difluoroethane (HCFC-142b)	3.4E+02	sat 3.4E+02	sat 5.2E+04	nc 8.7E+04			
	1.4E+01	r	1.4E+01	i 1				75-45-6	Chlorodifluoromethane	3.4E+02	sat 3.4E+02	sat 5.1E+04	nc 8.5E+04			
2.9E-03	n 4.0E-01	n 2.9E-03	r 2.9E+00	i 1				75-00-3	Chloroethane	3.0E+00	ca 6.5E+00	ca 2.3E+00	ca 4.6E+00			
	1.0E-02	i	8.6E-04	n 1				67-66-3	Chloroform	3.6E+00	ca/nc 1.2E+01	ca/nc 3.1E+00	ca/nc 6.2E+00	6.0E-01	3.0E-02	
3.1E-02		1.9E-02							Chloroform "CAL-Modified PRG"	9.4E-01	ca 2.0E+00	ca 3.5E-01	ca 5.3E-01			
1.3E-02	h	6.3E-03	h 8.6E-02	n 1				74-87-3	Chloromethane	1.2E+00	ca 2.6E+00	ca 1.1E+00	ca 1.5E+00			
5.8E-01	h	5.8E-01	r		0.10			95-69-2	4-Chloro-2-methylaniline	8.4E-01	ca 3.0E+00	ca 1.2E-02	ca 1.2E-01			
4.6E-01	h	4.6E-01	r		0.10			3165-93-3	4-Chloro-2-methylaniline hydrochloride	1.1E+00	ca 3.7E+00	ca 1.5E-02	ca 1.5E-01			
	8.0E-02	i	8.0E-02	r 1				91-58-7	beta-Chloronaphthalene	4.9E+03	nc 2.3E+04	nc 2.9E+02	nc 4.9E+02			
9.7E-03	h 1.0E-03	h 9.7E-03	r 2.0E-05	h 1				88-73-3	o-Chloronitrobenzene	1.4E+00	nc** 4.5E+00	nc** 7.3E-02	nc** 1.5E-01			
6.7E-03	h 1.0E-03	h 6.7E-03	r 1.7E-04	h 1				100-00-5	p-Chloronitrobenzene	1.0E+01	nc** 3.7E+01	nc** 6.2E-01	nc** 1.2E+00			
	5.0E-03	i	5.0E-03	r 1				95-57-8	2-Chlorophenol	6.3E+01	nc 2.4E+02	nc 1.8E+01	nc 3.0E+01	4.0E+00	2.0E-01	
	2.9E-02	r	2.9E-02	h 1				75-29-6	2-Chloropropane	1.7E+02	nc 5.9E+02	nc 1.0E+02	nc 1.7E+02			
1.1E-02	h 1.5E-02	i 1.1E-02	r 1.5E-02	r 0	0.10			1897-45-6	Chlorothalonil	4.4E+01	ca* 1.6E+02	ca* 6.1E-01	ca* 6.1E+00			
	2.0E-02	i	2.0E-02	r 1				95-49-8	o-Chlorotoluene	1.6E+02	nc 5.6E+02	nc 7.3E+01	nc 1.2E+02			
	2.0E-01	i	2.0E-01	r 0	0.10			101-21-3	Chlorpropham	1.2E+04	nc 1.0E+05	max 7.3E+02	nc 7.3E+03			
	3.0E-03	i	3.0E-03	r 0	0.10			2921-88-2	Chlorpyrifos	1.8E+02	nc 1.8E+03	nc 1.1E+01	nc 1.1E+02			
	1.0E-02	h	1.0E-02	r 0	0.10			5598-13-0	Chlorpyrifos-methyl	6.1E+02	nc 6.2E+03	nc 3.7E+01	nc 3.6E+02			
	5.0E-02	i	5.0E-02	r 0	0.10			64902-72-3	Chlorsulfuron	3.1E+03	nc 3.1E+04	nc 1.8E+02	nc 1.8E+03			
	8.0E-04	h	8.0E-04	r 0	0.10			60238-56-4	Chlorthiophos	4.9E+01	nc 4.9E+02	nc 2.9E+00	nc 2.9E+01			
		4.2E+01	i		0				Total Chromium (1:6 ratio Cr VI:Cr III)+++	2.1E+02	ca 4.5E+02	ca 1.6E-04	ca	3.8E+01	2.0E+00	
	1.5E+00	i						16065-83-1	Chromium III	1.0E+05	max 1.0E+05	max 0.0E+00	5.5E+04			
	3.0E-03	i	2.9E+02	i 2.2E-06	i 0			18540-29-9	Chromium VI+++	3.0E+01	ca** 6.4E+01	ca 2.3E-05	ca 1.1E+02	3.8E+01	2.0E+00	
	2.00E-02	n	9.8E+00	n 5.7E-06	n			7440-48-4	Cobalt	9.0E+02	ca** 1.9E+03	ca* 6.9E-04	ca* 7.3E+02			
		2.2E+00	i		0			8007-45-2	Coke Oven Emissions			3.1E-03	ca			
	4.00E-02	h			0			7440-50-8	Copper and compounds	3.1E+03	nc 4.1E+04	nc	1.5E+03			
1.9E+00	h	1.9E+00	r		1			123-73-9	Crotonaldehyde	5.3E-03	ca 1.1E-02	ca 3.5E-03	ca 5.9E-03			
	1.0E-01	i	1.1E-01	i 1				98-82-8	Cumene (isopropylbenzene)	5.7E+02	nc 2.0E+03	nc 4.0E+02	nc 6.6E+02			
8.4E-01	h 2.0E-03	h 8.4E-01	r 2.0E-03	r 0	0.10			21725-46-2	Cyanazine	5.8E-01	ca 2.1E+00	ca 8.0E-03	ca 8.0E-02			
	2.0E-02	i			0.10			57-12-5	Cyanide (free)	1.2E+03	nc 1.2E+04	nc	7.3E+02			
	2.0E-02	i	8.6E-04	i 1				74-90-8	Cyanide (hydrogen)	1.1E+01	nc 3.5E+01	nc 3.1E+00	nc 6.2E+00			

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TOXICITY INFORMATION						CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS										
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils		CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"									
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)									
	4.0E-02	i	4.0E-02	r	1	460-19-5	Cyanogen	1.3E+02	nc	4.3E+02	nc	1.5E+02	nc	2.4E+02	nc						
	9.0E-02	i	9.0E-02	r	1	506-68-3	Cyanogen bromide	2.9E+02	nc	9.7E+02	nc	3.3E+02	nc	5.5E+02	nc						
	5.0E-02	i	5.0E-02	r	1	506-77-4	Cyanogen chloride	1.6E+02	nc	5.4E+02	nc	1.8E+02	nc	3.0E+02	nc						
	5.7E+00	r	5.7E+00	n	1	110-82-7	Cyclohexane	1.4E+02	sat	1.4E+02	sat	2.1E+04	nc	3.5E+04	nc						
	5.0E+00	i	5.0E+00	r	0	0.10	108-94-1	Cyclohexanone	1.0E+05	max	1.0E+05	max	1.8E+04	nc	1.8E+05	nc					
	2.0E-01	i	2.0E-01	r	0	0.10	108-91-8	Cyclohexylamine	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc					
	5.0E-03	i	5.0E-03	r	0	0.10	68085-85-8	Cyhalothrin/Karate	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc					
	1.0E-02	i	1.0E-02	r	0	0.10	52315-07-8	Cypermethrin	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc					
	7.5E-03	i	7.5E-03	r	0	0.10	66215-27-8	Cyromazine	4.6E+02	nc	4.6E+03	nc	2.7E+01	nc	2.7E+02	nc					
	1.0E-02	i	1.0E-02	r	0	0.10	1861-32-1	Dacthal	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc					
	3.0E-02	i	3.0E-02	r	0	0.10	75-99-0	Dalapon	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc					
	2.5E-02	i	2.5E-02	r	0	0.10	39515-41-8	Danitol	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc					
2.4E-01	i	2.4E-01	r		0	0.03	72-54-8	DDD	2.4E+00	ca	1.0E+01	ca	2.8E-02	ca	2.8E-01	ca	1.6E+01	8.0E-01			
3.4E-01	i	3.4E-01	r		0	0.03	72-55-9	DDE	1.7E+00	ca	7.0E+00	ca	2.0E-02	ca	2.0E-01	ca	5.4E+01	3.0E+00			
3.4E-01	i	5.0E-04	i	3.4E-01	i	5.0E-04	r	0	0.03	50-29-3	DDT	1.7E+00	ca*	7.0E+00	ca*	2.0E-02	ca*	2.0E-01	ca*	3.2E+01	2.0E+00
	1.0E-02	i	1.0E-02	r	0	0.10	1163-19-5	Decabromodiphenyl ether	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc					
	4.0E-05	i	4.0E-05	r	0	0.10	8065-48-3	Demeton	2.4E+00	nc	2.5E+01	nc	1.5E-01	nc	1.5E+00	nc					
6.1E-02	h	6.1E-02	r		0	0.10	2303-16-4	Diallate	8.0E+00	ca	2.8E+01	ca	1.1E-01	ca	1.1E+00	ca					
	9.0E-04	h	9.0E-04	r	0	0.10	333-41-5	Diazinon	5.5E+01	nc	5.5E+02	nc	3.3E+00	nc	3.3E+01	nc					
	4.0E-03	n	4.0E-03	r	1	132-64-9	Dibenzofuran	2.9E+02	nc	3.1E+03	nc	1.5E+01	nc	2.4E+01	nc						
	1.0E-02	i	1.0E-02	r	0	0.10	106-37-6	1,4-Dibromobenzene	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc					
8.4E-02	i	2.0E-02	i	8.4E-02	r	2.0E-02	r	1	124-48-1	Dibromochloromethane	1.1E+00	ca	2.6E+00	ca	8.0E-02	ca	1.3E-01	ca	4.0E-01	2.0E-02	
1.4E+00	h	5.7E-05	r	2.4E-03	x	5.7E-05	i	1	96-12-8	1,2-Dibromo-3-chloropropane	4.5E-01	ca**	2.0E+00	ca**	2.1E-01	nc	4.8E-02	ca**			
7.0E+00		7.0E+00					1	96-12-8	"CAL-Modified PRG"	1.9E-02	ca	4.6E-02	ca	9.6E-04	ca	1.6E-03	ca				
8.5E+01	i	5.7E-05	r	7.7E-01	i	5.7E-05	h	1	106-93-4	1,2-Dibromoethane	6.9E-03	ca	2.8E-02	ca*	8.7E-03	ca*	7.6E-04	ca			
	1.0E-01	i	1.0E-01	r	0	0.10	84-74-2	Dibutyl phthalate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc	2.3E+03	2.7E+02			
	3.0E-02	i	3.0E-02	r	0	0.10	1918-00-9	Dicamba	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc					
	9.0E-02	i	5.7E-02	h	1	95-50-1	1,2-Dichlorobenzene	3.7E+02	sat	3.7E+02	sat	2.1E+02	nc	3.7E+02	nc	1.7E+01	9.0E-01				
	9.00E-04	n	9.00E-04	r	1	541-73-1	1,3-Dichlorobenzene	1.6E+01	nc	6.3E+01	nc	3.3E+00	nc	5.5E+00	nc						
2.4E-02	h	3.00E-02	n	2.2E-02	n	3.00E-02	i	1	106-46-7	1,4-Dichlorobenzene	3.4E+00	ca	7.9E+00	ca	3.1E-01	ca	5.0E-01	ca	2.0E+00	1.0E-01	
4.5E-01	i	4.5E-01	r		0	0.10	91-94-1	3,3-Dichlorobenzidine	1.1E+00	ca	3.8E+00	ca	1.5E-02	ca	1.5E-01	ca	7.0E-03	3.0E-04			
	3.00E-02	n	3.00E-02	r	0.10	90-98-2	4,4'-Dichlorobenzophenone	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc						
9.3E+00	r	9.3E+00	h		1	764-41-0	1,4-Dichloro-2-butene	7.9E-03	ca	1.8E-02	ca	7.2E-04	ca	1.2E-03	ca						
	2.0E-01	i	5.7E-02	h	1	75-71-8	Dichlorodifluoromethane	9.4E+01	nc	3.1E+02	nc	2.1E+02	nc	3.9E+02	nc						
	1.0E-01	h	1.4E-01	h	1	75-34-3	1,1-Dichloroethane	5.1E+02	nc	1.7E+03	nc	5.2E+02	nc	8.1E+02	nc	2.3E+01	1.0E+00				
5.7E-03		5.7E-03			1		"CAL-Modified PRG"	2.8E+00	ca	6.0E+00	ca	1.2E+00	ca	2.0E+00	ca						

Key : SFO_i=Cancer Slope Factor oral, inhalation RfDo_i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca) +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION							CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS								
SFO _i 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V	skin	CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"										
				O	abs.		Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)									
9.1E-02	i	3.0E-02	n	9.1E-02	i	1.4E-03	n	1	107-06-2	1,2-Dichloroethane (EDC)	2.8E-01	ca*	6.0E-01	ca*	7.4E-02	ca*	1.2E-01	ca*	2.0E-02	1.0E-03	
		5.0E-02	i			5.7E-02	i	1	75-35-4	1,1-Dichloroethylene	1.2E+02	nc	4.1E+02	nc	2.1E+02	nc	3.4E+02	nc	6.0E-02	3.0E-03	
		1.0E-02	h			1.0E-02	r	1	156-59-2	1,2-Dichloroethylene (cis)	4.3E+01	nc	1.5E+02	nc	3.7E+01	nc	6.1E+01	nc	4.0E-01	2.0E-02	
		2.0E-02	i			2.0E-02	r	1	156-60-5	1,2-Dichloroethylene (trans)	6.9E+01	nc	2.3E+02	nc	7.3E+01	nc	1.2E+02	nc	7.0E-01	3.0E-02	
		3.0E-03	i			3.0E-03	r	0	0.10	120-83-2	2,4-Dichlorophenol	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc	1.0E+00	5.0E-02
		8.0E-03	i			8.0E-03	r	0	0.10	94-82-6	4-(2,4-Dichlorophenoxy)butyric Acid (2,4-DB)	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc		
		1.0E-02	i			1.0E-02	r	0	0.05	94-75-7	2,4-Dichlorophenoxyacetic Acid (2,4-D)	6.9E+02	nc	7.7E+03	nc	3.7E+01	nc	3.6E+02	nc		
6.8E-02	h	1.1E-03	r	6.8E-02	r	1.1E-03	i	1	78-87-5	1,2-Dichloropropane	3.4E-01	ca*	7.4E-01	ca*	9.9E-02	ca*	1.6E-01	ca*	3.0E-02	1.0E-03	
1.0E-01	i	3.00E-02	i	1.4E-02	i	5.7E-03	i	1	542-75-6	1,3-Dichloropropene	7.8E-01	ca	1.8E+00	ca	4.8E-01	ca	4.0E-01	ca	4.0E-03	2.0E-04	
		3.0E-03	i			3.0E-03	r	0	0.10	616-23-9	2,3-Dichloropropanol	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
2.9E-01	i	5.0E-04	i	2.9E-01	r	1.4E-04	i	0	0.10	62-73-7	Dichlorvos	1.7E+00	ca*	5.9E+00	ca*	2.3E-02	ca*	2.3E-01	ca*		
4.4E-01	x			4.4E-01	r			0	0.10	115-32-2	Dicofol	1.1E+00	ca	3.9E+00	ca	1.5E-02	ca	1.5E-01	ca		
		3.0E-02	h			5.7E-05	x	1	77-73-6	Dicyclopentadiene	5.4E-01	nc	1.8E+00	nc	2.1E-01	nc	4.2E-01	nc			
1.6E+01	i	5.0E-05	i	1.6E+01	i	5.0E-05	r	0	0.10	60-57-1	Dieldrin	3.0E-02	ca	1.1E-01	ca	4.2E-04	ca	4.2E-03	ca	4.0E-03	2.0E-04
		1.0E-02	h			5.7E-03	h	0	0.10	112-34-5	Diethylene glycol, monobutyl ether	6.1E+02	nc	6.2E+03	nc	2.1E+01	nc	3.6E+02	nc		
		6.0E-02	h			8.6E-04	h	0	0.10	111-90-0	Diethylene glycol, monomethyl ether	3.7E+03	nc	3.7E+04	nc	3.1E+00	nc	2.2E+03	nc		
		4.0E-03	h			4.0E-03	r	0	0.10	617-84-5	Diethylformamide	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc		
1.2E-03	i	6.0E-01	i	1.2E-03	r	6.0E-01	r	0	0.10	103-23-1	Di(2-ethylhexyl)adipate	4.1E+02	ca	1.4E+03	ca	5.6E+00	ca	5.6E+01	ca		
		8.0E-01	i			8.0E-01	r	0	0.10	84-66-2	Diethyl phthalate	4.9E+04	nc	1.0E+05	max	2.9E+03	nc	2.9E+04	nc		
4.7E+03	h			4.7E+03	r			0	0.10	56-53-1	Diethylstilbestrol	1.0E-04	ca	3.7E-04	ca	1.4E-06	ca	1.4E-05	ca		
		8.0E-02	i			8.0E-02	r	0	0.10	43222-48-6	Difenzoquat (Avenge)	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	35367-38-5	Diflubenzuron	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		1.1E+01	r			1.1E+01	i	1	75-37-6	1,1-Difluoroethane					4.2E+04	nc	6.9E+04	nc			
		2.00E-02	n			2.00E-02	r		0.10	28553-12-0	Diisononyl phthalate	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		8.0E-02	i			8.0E-02	r	0	0.10	1445-75-6	Diisopropyl methylphosphonate	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	55290-64-7	Dimethipin	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc		
		2.0E-04	i			2.0E-04	r	0	0.10	60-51-5	Dimethoate	1.2E+01	nc	1.2E+02	nc	7.3E-01	nc	7.3E+00	nc		
1.4E-02	h			1.4E-02	r			0	0.10	119-90-4	3,3'-Dimethoxybenzidine	3.5E+01	ca	1.2E+02	ca	4.8E-01	ca	4.8E+00	ca		
		5.7E-06	r			5.7E-06	x	1	124-40-3	Dimethylamine	6.7E-02	nc	2.5E-01	nc	2.1E-02	nc	3.5E-02	nc			
		2.0E-03	i			2.0E-03	r	0	0.10	121-69-7	N-N-Dimethylaniline	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
7.5E-01	h			7.5E-01	r			0	0.10	95-68-1	2,4-Dimethylaniline	6.5E-01	ca	2.3E+00	ca	9.0E-03	ca	9.0E-02	ca		
5.8E-01	h			5.8E-01	r			0	0.10	21436-96-4	2,4-Dimethylaniline hydrochloride	8.4E-01	ca	3.0E+00	ca	1.2E-02	ca	1.2E-01	ca		
9.2E+00	h			9.2E+00	r			0	0.10	119-93-7	3,3'-Dimethylbenzidine	5.3E-02	ca	1.9E-01	ca	7.3E-04	ca	7.3E-03	ca		
		1.0E-01	h			8.6E-03	i	0	0.10	68-12-2	N,N-Dimethylformamide	6.1E+03	nc	6.2E+04	nc	3.1E+01	nc	3.6E+03	nc		
		1.0E-03	n			1.0E-03	r	0	0.10	122-09-8	Dimethylphenethylamine	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
		2.0E-02	i			2.0E-02	r	0	0.10	105-67-9	2,4-Dimethylphenol	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc	9.0E+00	4.0E-01

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TOXICITY INFORMATION							CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS							
SFO _i 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"							
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)							
	6.0E-04	i	6.0E-04	r	0	0.10	576-26-1	2,6-Dimethylphenol	3.7E+01	nc	3.7E+02	nc	2.2E+00	nc	2.2E+01	nc			
	1.0E-03	i	1.0E-03	r	0	0.10	95-65-8	3,4-Dimethylphenol	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	1.0E+01	h	1.0E+01	r	0	0.10	131-11-3	Dimethyl phthalate	1.0E+05	max	1.0E+05	max	3.7E+04	nc	3.6E+05	nc			
	1.0E-01	i	1.0E-01	r	0	0.10	120-61-6	Dimethyl terephthalate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc			
	2.0E-03	i	2.0E-03	r	0	0.10	131-89-5	4,6-Dinitro-o-cyclohexyl phenol	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
	1.0E-04	h	1.0E-04	r	0	0.10	528-29-0	1,2-Dinitrobenzene	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc			
	1.0E-04	i	1.0E-04	r	0	0.10	99-65-0	1,3-Dinitrobenzene	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc			
	1.0E-04	h	1.0E-04	r	0	0.10	100-25-4	1,4-Dinitrobenzene	6.1E+00	nc	6.2E+01	nc	3.7E-01	nc	3.6E+00	nc			
	2.0E-03	i	2.0E-03	r	0	0.10	51-28-5	2,4-Dinitrophenol	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc	3.0E-01	1.0E-02	
6.8E-01	i	6.8E-01	r	0	0.10	25321-14-6	Dinitrotoluene mixture	7.2E-01	ca	2.5E+00	ca	9.9E-03	ca	9.9E-02	ca	8.0E-04	4.0E-05		
	2.0E-03	i	2.0E-03	r	0	0.10	121-14-2	2,4-Dinitrotoluene (see DNT mixture for "ca")	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc	8.0E-04	4.0E-05	
	1.0E-03	h	1.0E-03	r	0	0.10	606-20-2	2,6-Dinitrotoluene (see DNT mixture for "ca")	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc	7.0E-04	3.0E-05	
	1.0E-03	i	1.0E-03	r	0	0.10	88-85-7	Dinoseb	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	4.0E-02	h	4.0E-02	r	0	0.10	117-84-0	di-n-Octyl phthalate	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc	1.0E+04	1.0E+04	
1.1E-02	i	1.1E-02	r	0	0.10	123-91-1	1,4-Dioxane	4.4E+01	ca	1.6E+02	ca	6.1E-01	ca	6.1E+00	ca				
1.5E+05	h	1.5E+05	h	0	0.03	1746-01-6	Dioxin (2,3,7,8-TCDD)	3.9E-06	ca	1.6E-05	ca	4.5E-08	ca	4.5E-07	ca				
	3.0E-02	i	3.0E-02	r	0	0.10	957-51-7	Diphenamid	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc			
	2.5E-02	i	2.5E-02	r	0	0.10	122-39-4	Diphenylamine	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc			
8.0E-01	i	7.7E-01	i	0	0.10	74-31-7	N,N-Diphenyl-1,4 benzenediamine (DPPD)	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc				
	3.0E-03	n	3.0E-03	r	0	0.10	122-66-7	1,2-Diphenylhydrazine	6.1E-01	ca	2.2E+00	ca	8.7E-03	ca	8.4E-02	ca			
	3.0E-03	n	3.0E-03	r	0	0.10	127-63-9	Diphenyl sulfone	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc			
8.6E+00	h	8.6E+00	r	0	0.10	85-00-7	Diquat	1.3E+02	nc	1.4E+03	nc	8.0E+00	nc	8.0E+01	nc				
8.1E+00	h	8.1E+00	r	0	0.10	1937-37-7	Direct black 38	5.7E-02	ca	2.0E-01	ca	7.8E-04	ca	7.8E-03	ca				
	8.1E+00	h	8.1E+00	r	0	0.10	2602-46-2	Direct blue 6	6.0E-02	ca	2.1E-01	ca	8.3E-04	ca	8.3E-03	ca			
9.3E+00	h	9.3E+00	r	0	0.10	16071-86-6	Direct brown 95	5.2E-02	ca	1.9E-01	ca	7.2E-04	ca	7.2E-03	ca				
	4.0E-05	i	4.0E-05	r	0	0.10	298-04-4	Disulfoton	2.4E+00	nc	2.5E+01	nc	1.5E-01	nc	1.5E+00	nc			
	1.0E-02	i	1.0E-02	r	0	0.10	505-29-3	1,4-Dithiane	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc			
	2.0E-03	i	2.0E-03	r	0	0.10	330-54-1	Diuron	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
	4.0E-03	i	4.0E-03	r	0	0.10	2439-10-3	Dodine	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc			
	2.0E-01	n	7429-91-6	r	0	0.10	Dysprosium	1.6E+04	nc	1.0E+05	max	7.3E+03	nc						
	6.0E-03	i	6.0E-03	r	0	0.10	115-29-7	Endosulfan	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc	1.8E+01	9.0E-01	
	2.0E-02	i	2.0E-02	r	0	0.10	145-73-3	Endothall	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc			
	3.0E-04	i	3.0E-04	r	0	0.10	72-20-8	Endrin	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc	1.0E+00	5.0E-02	
9.9E-03	i	2.0E-03	h	4.2E-03	h	2.9E-04	i	1	106-89-8	Epichlorohydrin	7.6E+00	nc	2.6E+01	nc	1.0E+00	nc	2.0E+00	nc	
	5.7E-03	r	5.7E-03	i	0	0.10	106-88-7	1,2-Epoxybutane	3.5E+02	nc	3.5E+03	nc	2.1E+01	nc	2.1E+02	nc			
	2.5E-02	i	2.5E-02	r	0	0.10	759-94-4	EPTC (S-Ethyl dipropylthiocarbamate)	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc			

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TOXICITY INFORMATION							CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS									
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"									
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)									
	5.0E-03	i	5.0E-03	r	0	0.10	16672-87-0	Ethephon (2-chloroethyl phosphonic acid)	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc					
	5.0E-04	i	5.0E-04	r	0	0.10	563-12-2	Ethion	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc					
	4.0E-01	h	5.7E-02	i	0	0.10	110-80-5	2-Ethoxyethanol	2.4E+04	nc	1.0E+05	max	2.1E+02	nc	1.5E+04	nc					
	3.0E-01	h	3.0E-01	r	0	0.10	111-15-9	2-Ethoxyethanol acetate	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc					
	9.0E-01	i	9.0E-01	r	1		141-78-6	Ethyl acetate	1.9E+04	nc	3.7E+04	sat	3.3E+03	nc	5.5E+03	nc					
	4.8E-02	h	4.8E-02	r	1		140-88-5	Ethyl acrylate	2.1E-01	ca	4.5E-01	ca	1.4E-01	ca	2.3E-01	ca					
	3.85E-03	r	1.0E-01	i	3.85E-03	n	2.9E-01	i	1	100-41-4	Ethylbenzene	8.9E+00	ca	2.0E+01	ca	1.7E+00	ca	2.9E+00	ca	1.3E+01	7.0E-01
	2.9E-03	n	4.0E-01	n	2.9E-03	r	2.9E+00	i	1	75-00-3	Ethyl chloride	3.0E+00	ca	6.5E+00	ca	2.3E+00	ca	4.6E+00	ca		
	3.0E-01	h	3.0E-01	r	0	0.10	109-78-4	Ethylene cyanohydrin	1.8E+04	nc	1.0E+05	max	1.1E+03	nc	1.1E+04	nc					
	2.0E-02	h	2.0E-02	r	0	0.10	107-15-3	Ethylene diamine	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc					
	2.0E+00	i	2.0E+00	r	0	0.10	107-21-1	Ethylene glycol	1.0E+05	max	1.0E+05	max	7.3E+03	nc	7.3E+04	nc					
	5.0E-01	i	3.7E+00	i	0	0.10	111-76-2	Ethylene glycol, monobutyl ether	3.1E+04	nc	1.0E+05	max	1.4E+04	nc	1.8E+04	nc					
	1.0E+00	h	3.5E-01	h		1	75-21-8	Ethylene oxide	1.4E-01	ca	3.4E-01	ca	1.9E-02	ca	2.4E-02	ca					
	1.1E-01	h	8.0E-05	i	1.1E-01	r	8.0E-05	r	0	96-45-7	Ethylene thiourea (ETU)	4.4E+00	ca**	1.6E+01	ca**	6.1E-02	ca**	6.1E-01	ca**		
	2.0E-01	i	2.0E-01	r	1		60-29-7	Ethyl ether	1.8E+03	sat	1.8E+03	sat	7.3E+02	nc	1.2E+03	nc					
	9.0E-02	h	9.0E-02	r	1		97-63-2	Ethyl methacrylate	1.4E+02	sat	1.4E+02	sat	3.3E+02	nc	5.5E+02	nc					
	1.0E-05	i	1.0E-05	r	0	0.10	2104-64-5	Ethyl p-nitrophenyl phenylphosphorothioate	6.1E-01	nc	6.2E+00	nc	3.7E-02	nc	3.6E-01	nc					
	3.0E+00	i	3.0E+00	r	0	0.10	84-72-0	Ethylphthalyl ethyl glycolate	1.0E+05	max	1.0E+05	max	1.1E+04	nc	1.1E+05	nc					
	8.0E-03	i	8.0E-03	r	0	0.10	101200-48-0	Express	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc					
	2.5E-04	i	2.5E-04	r	0	0.10	22224-92-6	Fenamiphos	1.5E+01	nc	1.5E+02	nc	9.1E-01	nc	9.1E+00	nc					
	1.3E-02	i	1.3E-02	r	0	0.10	2164-17-2	Fluometuron	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc					
	6.0E-02	i			0	0.10	16984-48-8	Flouride	3.7E+03	nc	3.7E+04	nc			2.2E+03	nc					
	8.0E-02	i	8.0E-02	r	0	0.10	59756-60-4	Fluoridone	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc					
	2.0E-02	i	2.0E-02	r	0	0.10	56425-91-3	Flurprimidol	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc					
	6.0E-02	i	6.0E-02	r	0	0.10	66332-96-5	Flutolanil	3.7E+03	nc	3.7E+04	nc	2.2E+02	nc	2.2E+03	nc					
	1.0E-02	i	1.0E-02	r	0	0.10	69409-94-5	Fluvalinate	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc					
	3.5E-03	i	1.0E-01	i	3.5E-03	r	1.0E-01	r	0	133-07-3	Folpet	1.4E+02	ca*	4.9E+02	ca	1.9E+00	ca	1.9E+01	ca		
	1.9E-01	i	1.9E-01	r		0	72178-02-0	Fomesafen	2.6E+00	ca	9.1E+00	ca	3.5E-02	ca	3.5E-01	ca					
	2.0E-03	i	2.0E-03	r	0	0.10	944-22-9	Fonofos	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc					
	1.5E-01	i	4.6E-02	i		0	50-00-0	Formaldehyde	9.2E+03	nc	1.0E+05	nc	1.5E-01	ca	5.5E+03	nc					
	2.0E+00	h	2.0E+00	r	0	0.10	64-18-6	Formic Acid	1.0E+05	max	1.0E+05	max	7.3E+03	nc	7.3E+04	nc					
	3.0E+00	i	3.0E+00	r	0	0.10	39148-24-8	Fosetyl-al	1.0E+05	max	1.0E+05	max	1.1E+04	nc	1.1E+05	nc					
	3.0E+01	i	8.6E+00	h	1		76-13-1	Freon 113	5.6E+03	sat	5.6E+03	sat	3.1E+04	nc	5.9E+04	nc					
	1.0E-03	i	1.0E-03	r	1		110-00-9	Furan	2.5E+00	nc	8.5E+00	nc	3.7E+00	nc	6.1E+00	nc					
	3.8E+00	h	3.8E+00	r		0	67-45-8	Furazolidone	1.3E-01	ca	4.5E-01	ca	1.8E-03	ca	1.8E-02	ca					
	3.0E-03	i	1.4E-02	h	0	0.10	98-01-1	Furfural	1.8E+02	nc	1.8E+03	nc	5.2E+01	nc	1.1E+02	nc					

Key : SFO_i=Cancer Slope Factor oral, inhalation RfDo_i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca) +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION							CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS										
SFO _i 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V	skin O abs. C soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"										
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)										
5.0E+01	h	5.0E+01	r	0	0.10	531-82-8	Furium	9.7E-03	ca	3.4E-02	ca	1.3E-04	ca	1.3E-03	ca							
3.0E-02	i	3.0E-02	r	0	0.10	60568-05-0	Furmecycloz	1.6E+01	ca	5.7E+01	ca	2.2E-01	ca	2.2E+00	ca							
		4.0E-04	i	4.0E-04	r	0	77182-82-2	Glufosinate-ammonium	2.4E+01	nc	2.5E+02	nc	1.5E+00	nc	1.5E+01	nc						
		4.0E-04	i	2.9E-04	h	0	765-34-4	Glycidaldehyde	2.4E+01	nc	2.5E+02	nc	1.0E+00	nc	1.5E+01	nc						
		1.0E-01	i	1.0E-01	r	0	1071-83-6	Glyphosate	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc						
		5.0E-05	i	5.0E-05	r	0	69806-40-2	Haloxypop-methyl	3.1E+00	nc	3.1E+01	nc	1.8E-01	nc	1.8E+00	nc						
		1.3E-02	i	1.3E-02	r	0	79277-27-3	Harmony	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc						
4.5E+00	i	5.0E-04	i	4.6E+00	i	5.0E-04	r	0	0.10	76-44-8	Heptachlor	1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca	2.3E+01	1.0E+00	
9.1E+00	i	1.3E-05	i	9.1E+00	i	1.3E-05	r	0	0.10	1024-57-3	Heptachlor epoxide	5.3E-02	ca*	1.9E-01	ca*	7.4E-04	ca*	7.4E-03	ca*	7.0E-01	3.0E-02	
		2.0E-03	i	2.0E-03	r	0	0.10	87-82-1	Hexabromobenzene	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc					
1.6E+00	i	8.0E-04	i	1.6E+00	i	8.0E-04	r	0	0.10	118-74-1	Hexachlorobenzene	3.0E-01	ca	1.1E+00	ca	4.2E-03	ca	4.2E-02	ca	2.0E+00	1.0E-01	
7.8E-02	i	3.00E-04	n	7.8E-02	i	3.00E-04	r	0	0.10	87-68-3	Hexachlorobutadiene	6.2E+00	ca**	2.2E+01	ca**	8.6E-02	ca*	8.6E-01	ca*	2.0E+00	1.0E-01	
6.3E+00	i	5.0E-04	n	6.3E+00	i	5.0E-04	r	0	0.04	319-84-6	HCH (alpha)	9.0E-02	ca	3.6E-01	ca	1.1E-03	ca	1.1E-02	ca	5.0E-04	3.0E-05	
1.8E+00	i	2.0E-04	n	1.8E+00	i	2.0E-04	r	0	0.04	319-85-7	HCH (beta)	3.2E-01	ca	1.3E+00	ca	3.7E-03	ca	3.7E-02	ca	3.0E-03	1.0E-04	
1.3E+00	h	3.0E-04	i	1.3E+00	r	3.0E-04	r	0	0.04	58-89-9	HCH (gamma) Lindane	4.4E-01	ca*	1.7E+00	ca	5.2E-03	ca	5.2E-02	ca	9.0E-03	5.0E-04	
1.8E+00	i	1.8E+00	i		0	0.04	608-73-1	HCH-technical	3.2E-01	ca	1.3E+00	ca	3.8E-03	ca	3.7E-02	ca	3.0E-03	1.0E-04				
		6.0E-03	i	5.7E-05	i	0	0.10	77-47-4	Hexachlorocyclopentadiene	3.7E+02	nc	3.7E+03	nc	2.1E-01	nc	2.2E+02	nc	4.0E+02	2.0E+01			
1.4E-02	i	1.0E-03	i	1.4E-02	i	1.0E-03	r	0	0.10	67-72-1	Hexachloroethane	3.5E+01	ca**	1.2E+02	ca**	4.8E-01	ca**	4.8E+00	ca**	5.0E-01	2.0E-02	
		3.0E-04	i	3.0E-04	r	0	0.10	70-30-4	Hexachlorophene	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc					
1.1E-01	i	3.0E-03	i	1.1E-01	r	3.0E-03	r	0	0.10	121-82-4	Hexahydro-1,3,5-trinitro-1,3,5-triazine	4.4E+00	ca*	1.6E+01	ca	6.1E-02	ca	6.1E-01	ca			
		2.9E-06	r	2.9E-06	i	0	0.10	822-06-0	1,6-Hexamethylene diisocyanate	1.7E-01	nc	1.8E+00	nc	1.0E-02	nc	1.0E-01	nc					
		6.0E-02	h	5.7E-02	i	1	110-54-3	n-Hexane	1.1E+02	sat	1.1E+02	sat	2.1E+02	nc	3.5E+02	nc						
		3.3E-02	i	3.3E-02	r	0	0.10	51235-04-2	Hexazinone	2.0E+03	nc	2.0E+04	nc	1.2E+02	nc	1.2E+03	nc					
3.0E+00	i	1.7E+01	i		0	0.10	302-01-2	Hydrazine, hydrazine sulfate	1.6E-01	ca	5.7E-01	ca	3.9E-04	ca	2.2E-02	ca						
3.0E+00	n	1.7E+01	n		0.10	60-34-4	Hydrazine, monomethyl	1.6E-01	ca	5.7E-01	ca	4.0E-04	ca	2.2E-02	ca							
3.0E+00	n	1.7E+01	n		0.10	57-14-7	Hydrazine, dimethyl	1.6E-01	ca	5.7E-01	ca	4.0E-04	ca	2.2E-02	ca							
				5.7E-03	i	7647-01-0	Hydrogen chloride					2.1E+01	nc									
		2.0E-02	i	8.6E-04	i	1	74-90-8	Hydrogen cyanide	1.1E+01	nc	3.5E+01	nc	3.1E+00	nc	6.2E+00	nc						
		3.0E-03	i	2.9E-04	i	7783-06-4	Hydrogen sulfide					1.0E+00	nc	1.1E+02	nc							
		4.0E-02	h	4.0E-02	r	0	0.10	123-31-9	p-Hydroquinone	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc					
		1.3E-02	i	1.3E-02	r	0	0.10	35554-44-0	Imazalil	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc					
		2.5E-01	i	2.5E-01	r	0	0.10	81335-37-7	Imazaquin	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc					
		4.0E-02	i	4.0E-02	r	0	0.10	36734-19-7	Iprodione	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc					
		3.0E-01	n		0	7439-89-6	Iron	2.3E+04	nc	1.0E+05	max			1.1E+04	nc							
		3.0E-01	i	3.0E-01	r	1	78-83-1	Isobutanol	1.3E+04	nc	4.0E+04	sat	1.1E+03	nc	1.8E+03	nc						
9.5E-04	i	2.0E-01	i	9.5E-04	r	2.0E-01	r	0	0.10	78-59-1	Isophorone	5.1E+02	ca*	1.8E+03	ca*	7.1E+00	ca	7.1E+01	ca	5.0E-01	3.0E-02	

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 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION								CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS					
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V	skin		CAS No.			"Direct Contact Exposure Pathways"				"Migration to Ground Water"					
				O	abs.			Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m^3)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)						
	1.5E-02	i	1.5E-02	r	0	0.10	33820-53-0	Isopropalin	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc			
	1.0E-01	i	1.1E-01	r	0	0.10	1832-54-8	Isopropyl methyl phosphonic acid	6.1E+03	nc	6.2E+04	nc	4.0E+02	nc	3.6E+03	nc			
	5.0E-02	i	5.0E-02	r	0	0.10	82558-50-7	Isosabten	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc			
8.0E+00	n	3.0E-04	n	8.0E+00	r	3.0E-04	r	0	0.10	143-50-0	Kepone	6.1E-02	ca	2.2E-01	ca	8.4E-04	ca	8.4E-03	ca
	2.0E-03	i	2.0E-03	r	0	0.10	77501-63-4	Lactofen	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
For info see: www.epa.gov/oerrpage/superfund/programs/lead/prods.htm#guidance								7439-92-1	Lead+++	4.0E+02	nc	7.5E+02	nc						
For info see: www.dtsc.ca.gov/ScienceTechnology/leadspred.html									Lead "CAL-Modified PRG"+++	1.5E+02									
	1.0E-07	i			0	0.10	78-00-2	Lead (tetraethyl)	6.1E-03	nc	6.2E-02	nc			3.6E-03	nc			
	2.0E-03	i	2.0E-03	r	0	0.10	330-55-2	Linuron	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
	2.0E-02	x			0		7439-93-2	Lithium	1.6E+03	nc	2.0E+04	nc			7.3E+02	nc			
	2.0E-01	i	2.0E-01	r	0	0.10	83055-99-6	Londax	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc			
	2.0E-02	i	2.0E-02	r	0	0.10	121-75-5	Malathion	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc			
	1.0E-01	i	1.0E-01	r	0	0.10	108-31-6	Maleic anhydride	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc			
	5.0E-01	i	5.0E-01	r	1		123-33-1	Maleic hydrazide	1.7E+03	nc	2.4E+03	sat	1.8E+03	nc	3.0E+03	nc			
	2.0E-05	h	2.0E-05	r	0	0.10	109-77-3	Malononitrile	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc			
	3.0E-02	h	3.0E-02	r	0	0.10	8018-01-7	Mancozeb	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc			
6.0E-02	o	5.0E-03	i	6.0E-02	r	5.0E-03	r	0	0.10	12427-38-2	Maneb	8.1E+00	ca*	2.9E+01	ca	1.1E-01	ca	1.1E+00	ca
	2.4E-02	i	1.4E-05	i	0		7439-96-5	Manganese and compounds+++	1.8E+03	nc	1.9E+04	nc	5.1E-02	nc	8.8E+02	nc			
	9.0E-05	h	9.0E-05	r	0	0.10	950-10-7	Mephosfolan	5.5E+00	nc	5.5E+01	nc	3.3E-01	nc	3.3E+00	nc			
	3.0E-02	i	3.0E-02	r	0	0.10	24307-26-4	Mepiquat chloride	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc			
2.9E-02	n	1.0E-01	n	2.9E-02	r	1.0E-01	r	0	0.10	149-30-4	2-Mercaptobenzothiazole	1.7E+01	ca	5.9E+01	ca	2.3E-01	ca	2.3E+00	ca
	3.0E-04	i			0		7487-94-7	Mercury and compounds	2.3E+01	nc	3.1E+02	nc			1.1E+01	nc			
			8.6E-05	i			7439-97-6	Mercury (elemental)				3.1E-01	nc						
	1.0E-04	i			0	0.10	22967-92-6	Mercury (methyl)	6.1E+00	nc	6.2E+01	nc			3.6E+00	nc			
	3.0E-05	i	3.0E-05	r	0	0.10	150-50-5	Merphos	1.8E+00	nc	1.8E+01	nc	1.1E-01	nc	1.1E+00	nc			
	3.0E-05	i	3.0E-05	r	0	0.10	78-48-8	Merphos oxide	1.8E+00	nc	1.8E+01	nc	1.1E-01	nc	1.1E+00	nc			
	6.0E-02	i	6.0E-02	r	0	0.10	57837-19-1	Metalaxyl	3.7E+03	nc	3.7E+04	nc	2.2E+02	nc	2.2E+03	nc			
	1.0E-04	i	2.0E-04	h	1		126-98-7	Methacrylonitrile	2.1E+00	nc	8.4E+00	nc	7.3E-01	nc	1.0E+00	nc			
	5.0E-05	i	5.0E-05	r	0	0.10	10265-92-6	Methamidophos	3.1E+00	nc	3.1E+01	nc	1.8E-01	nc	1.8E+00	nc			
	5.0E-01	i	5.0E-01	r	0	0.10	67-56-1	Methanol	3.1E+04	nc	1.0E+05	max	1.8E+03	nc	1.8E+04	nc			
	1.0E-03	i	1.0E-03	r	0	0.10	950-37-8	Methidathion	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	2.5E-02	i	2.5E-02	r	1		16752-77-5	Methomyl	4.4E+01	nc	1.5E+02	nc	9.1E+01	nc	1.5E+02	nc			
	5.0E-03	i	5.0E-03	r	0	0.10	72-43-5	Methoxychlor	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc	1.6E+02	8.0E+00	
	1.0E-03	h	5.7E-03	i	0	0.10	109-86-4	2-Methoxyethanol	6.1E+01	nc	6.2E+02	nc	2.1E+01	nc	3.6E+01	nc			
	2.0E-03	h	2.0E-03	r	0	0.10	110-49-6	2-Methoxyethanol acetate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
4.6E-02	h		4.6E-02	r		0.10	99-59-2	2-Methoxy-5-nitroaniline	1.1E+01	ca	3.7E+01	ca	1.5E-01	ca	1.5E+00	ca			

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 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION						CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS								
SFO _i 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"								
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)								
	1.0E+00	h	1.0E+00	r	1	79-20-9	Methyl acetate	2.2E+04	nc	9.2E+04	nc	3.7E+03	nc	6.1E+03	nc					
	3.0E-02	h	3.0E-02	r	1	96-33-3	Methyl acrylate	7.0E+01	nc	2.3E+02	nc	1.1E+02	nc	1.8E+02	nc					
2.4E-01	h	2.4E-01	r	0	0.10	95-53-4	2-Methylaniline (o-toluidine)	2.0E+00	ca	7.2E+00	ca	2.8E-02	ca	2.8E-01	ca					
1.8E-01	h	1.8E-01	r	0	0.10	636-21-5	2-Methylaniline hydrochloride	2.7E+00	ca	9.6E+00	ca	3.7E-02	ca	3.7E-01	ca					
	5.0E-04	i	5.0E-04	r	0	0.10	94-74-6	2-Methyl-4-chlorophenoxyacetic acid	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc				
	1.0E-02	i	1.0E-02	r	0	0.10	94-81-5	4-(2-Methyl-4-chlorophenoxy) butyric acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
	1.0E-03	i	1.0E-03	r	0	0.10	93-65-2	2-(2-Methyl-4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc				
	1.0E-03	i	1.0E-03	r	0	0.10	16484-77-8	2-(2-Methyl-1,4-chlorophenoxy) propionic acid	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc				
	8.6E-01	r	8.6E-01	h	1	108-87-2	Methylcyclohexane	2.6E+03	nc	8.7E+03	nc	3.1E+03	nc	5.2E+03	nc					
2.5E-01	h	2.5E-01	r	0	0.10	101-77-9	4,4'-Methylenebisbenzeneamine	1.9E+00	ca	6.9E+00	ca	2.7E-02	ca	2.7E-01	ca					
1.3E-01	h	7.0E-04	h	1.3E-01	h	7.0E-04	r	0	0.10	101-14-4	4,4'-Methylene bis(2-chloroaniline)	3.7E+00	ca*	1.3E+01	ca*	5.2E-02	ca*	5.2E-01	ca*	
4.6E-02	i	4.6E-02	r	0	0.10	101-61-1	4,4'-Methylene bis(N,N'-dimethyl)aniline	1.1E+01	ca	3.7E+01	ca	1.5E-01	ca	1.5E+00	ca					
	1.0E-02	h	1.0E-02	r	1	74-95-3	Methylene bromide	6.7E+01	nc	2.3E+02	nc	3.7E+01	nc	6.1E+01	nc					
7.5E-03	i	6.0E-02	i	1.6E-03	i	8.6E-01	h	1	75-09-2	Methylene chloride	9.1E+00	ca	2.1E+01	ca	4.1E+00	ca	4.3E+00	ca	2.0E-02	1.0E-03
	1.7E-04	r	1.7E-04	i	0	0.10	101-68-8	4,4'-Methylene diphenyl diisocyanate	1.0E+01	nc	1.0E+02	nc	6.2E-01	nc	6.2E+00	nc				
	6.0E-01	i	2.9E-01	i	1	78-93-3	Methyl ethyl ketone	7.3E+03	nc	2.7E+04	nc	1.0E+03	nc	1.9E+03	nc					
	8.0E-02	h	2.3E-02	h	1	108-10-1	Methyl isobutyl ketone	7.9E+02	nc	2.8E+03	nc	8.3E+01	nc	1.6E+02	nc					
	5.7E-04	r	5.7E-04	n	0	0.10	74-93-1	Methyl Mercaptan	3.5E+01	nc	3.5E+02	nc	2.1E+00	nc	2.1E+01	nc				
	1.4E+00	i	2.0E-01	i	1	80-62-6	Methyl methacrylate	2.2E+03	nc	2.7E+03	sat	7.3E+02	nc	1.4E+03	nc					
3.3E-02	h	3.3E-02	r	0	0.10	99-55-8	2-Methyl-5-nitroaniline	1.5E+01	ca	5.2E+01	ca	2.0E-01	ca	2.0E+00	ca					
	2.5E-04	i	2.5E-04	r	0	0.10	298-00-0	Methyl parathion	1.5E+01	nc	1.5E+02	nc	9.1E-01	nc	9.1E+00	nc				
	5.0E-02	i	5.0E-02	r	0	0.10	95-48-7	2-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc	1.5E+01	8.0E-01		
	5.0E-02	i	5.0E-02	r	0	0.10	108-39-4	3-Methylphenol	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc				
	5.0E-03	h	5.0E-03	r	0	0.10	106-44-5	4-Methylphenol	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
	2.0E-02	n	2.0E-02	r	0	0.10	993-13-5	Methyl phosphonic acid	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc				
	6.0E-03	h	1.1E-02	h	1	25013-15-4	Methyl styrene (mixture)	1.3E+02	nc	5.4E+02	nc	4.2E+01	nc	6.0E+01	nc					
	7.0E-02	h	7.0E-02	r	1	98-83-9	Methyl styrene (alpha)	6.8E+02	sat	6.8E+02	sat	2.6E+02	nc	4.3E+02	nc					
3.3E-03	n	8.6E-01	r	3.5E-04	n	8.6E-01	i	1	1634-04-4	Methyl tertbutyl ether (MTBE)	6.2E+01	ca*	1.6E+02	ca	1.9E+01	ca	1.3E+01	ca		
1.8E-03		1.8E-03			1					"CAL-Modified PRG"	1.7E+01	ca	3.6E+01	ca	3.7E+00	ca	6.2E+00	ca		
	1.5E-01	i	1.5E-01	r	0	0.10	51218-45-2	Metolacolor (Dual)	9.2E+03	nc	9.2E+04	nc	5.5E+02	nc	5.5E+03	nc				
	2.5E-02	i	2.5E-02	r	0	0.10	21087-64-9	Metribuzin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc				
1.8E+00	x	2.0E-04	i	1.8E+00	r	2.0E-04	r	0	0.10	2385-85-5	Mirex	2.7E-01	ca*	9.6E-01	ca	3.7E-03	ca	3.7E-02	ca	
	2.0E-03	i	2.0E-03	r	0	0.10	2212-67-1	Molinatate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc				
	5.0E-03	i			0	7439-98-7	Molybdenum	3.9E+02	nc	5.1E+03	nc			1.8E+02	nc					
	1.0E-01	i	1.0E-01	r	0	0.10	10599-90-3	Monochloramine	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc				
	2.0E-03	i	2.0E-03	r	0	0.10	300-76-5	Naled	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc				

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TOXICITY INFORMATION				CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS							
SFO 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"							
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)						
	1.0E-01	i	1.0E-01	r	0	0.10	15299-99-7	Napropamide	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
	2.0E-02	i			0		7440-02-0	Nickel (soluble salts)	1.6E+03	nc	2.0E+04	nc			7.3E+02	nc	1.3E+02	7.0E+00
		8.4E-01	i		0			Nickel refinery dust					8.0E-03	ca				
		1.7E+00	i		0		12035-72-2	Nickel subsulfide			1.1E+04	ca	4.0E-03	ca				
							14797-55-8	Nitrate+++					1.0E+04	nc				
							14797-65-0	Nitrite+++					1.0E+03	nc				
	2.86E-05	r	2.86E-05	h	0	0.10	88-74-4	2-Nitroaniline	1.7E+00	nc	1.8E+01	nc	1.0E-01	nc	1.0E+00	nc		
	5.0E-04	i	5.7E-04	h	1		98-95-3	Nitrobenzene	2.0E+01	nc	1.0E+02	nc	2.1E+00	nc	3.4E+00	nc	1.0E-01	7.0E-03
	7.0E-02	h	7.0E-02	r	0	0.10	67-20-9	Nitrofurantoin	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc		
	1.5E+00	h	1.5E+00	r	0	0.10	59-87-0	Nitrofurazone	3.2E-01	ca	1.1E+00	ca	4.5E-03	ca	4.5E-02	ca		
	1.4E-02	n	1.4E-02	r	0	0.10	55-63-0	Nitroglycerin	3.5E+01	ca	1.2E+02	ca	4.8E-01	ca	4.8E+00	ca		
	1.0E-01	i	1.0E-01	r	0	0.10	556-88-7	Nitroguanidine	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc		
	9.4E+00	r	5.7E-03	r	9.4E+00	h	5.7E-03	i	1	79-46-9	2-Nitropropane			7.2E-04	ca	1.2E-03	ca	
	5.4E+00	i	5.6E+00	i			924-16-3	N-Nitrosodi-n-butylamine	2.4E-02	ca	5.8E-02	ca	1.2E-03	ca	2.0E-03	ca		
	2.8E+00	i	2.8E+00	r	0	0.10	1116-54-7	N-Nitrosodiethanolamine	1.7E-01	ca	6.2E-01	ca	2.4E-03	ca	2.4E-02	ca		
	1.5E+02	i	1.5E+02	i	0	0.10	55-18-5	N-Nitrosodiethylamine	3.2E-03	ca	1.1E-02	ca	4.5E-05	ca	4.5E-04	ca		
	5.1E+01	i	4.9E+01	i	0	0.10	62-75-9	N-Nitrosodimethylamine	9.5E-03	ca	3.4E-02	ca	1.4E-04	ca	1.3E-03	ca		
	4.9E-03	i	4.9E-03	r	0	0.10	86-30-6	N-Nitrosodiphenylamine	9.9E+01	ca	3.5E+02	ca	1.4E+00	ca	1.4E+01	ca	1.0E+00	6.0E-02
	7.0E+00	i	7.0E+00	r	0	0.10	621-64-7	N-Nitroso di-n-propylamine	6.9E-02	ca	2.5E-01	ca	9.6E-04	ca	9.6E-03	ca	5.0E-05	2.0E-06
	2.2E+01	i	2.2E+01	r	0	0.10	10595-95-6	N-Nitroso-N-methylethylamine	2.2E-02	ca	7.8E-02	ca	3.1E-04	ca	3.1E-03	ca		
	2.1E+00	i	2.1E+00	i	0	0.10	930-55-2	N-Nitrosopyrrolidine	2.3E-01	ca	8.2E-01	ca	3.1E-03	ca	3.2E-02	ca		
	1.0E-02	h	1.0E-02	r	1		99-08-1	m-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
	1.0E-02	h	1.0E-02	r	1		99-08-1	o-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
	1.0E-02	h	1.0E-02	r	1		99-99-0	p-Nitrotoluene	3.7E+02	nc	1.0E+03	sat	3.7E+01	nc	6.1E+01	nc		
	4.0E-02	i	4.0E-02	r	0	0.10	27314-13-2	Norflurazon	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc		
	7.0E-04	i	7.0E-04	r	0	0.10	85509-19-9	NuStar	4.3E+01	nc	4.3E+02	nc	2.6E+00	nc	2.6E+01	nc		
	3.0E-03	i	3.0E-03	r	0	0.10	32536-52-0	Octabromodiphenyl ether	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
	5.0E-02	i	5.0E-02	r	0	0.10	2691-41-0	Octahydro-1357-tetranitro-1357- tetrazocine (HMX)	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
	2.0E-03	h	2.0E-03	r	0	0.10	152-16-9	Octamethylpyrophosphoramidate	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc		
	5.0E-02	i	5.0E-02	r	0	0.10	19044-88-3	Oryzalin	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		
	5.0E-03	i	5.0E-03	r	0	0.10	19666-30-9	Oxadiazon	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
	2.5E-02	i	2.5E-02	r	0	0.10	23135-22-0	Oxamyl	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
	3.0E-03	i	3.0E-03	r	0	0.10	42874-03-3	Oxyfluorfen	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
	1.3E-02	i	1.3E-02	r	0	0.10	76738-62-0	Paclitaxel	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc		
	4.5E-03	i	4.5E-03	r	0	0.10	4685-14-7	Paraquat	2.7E+02	nc	2.8E+03	nc	1.6E+01	nc	1.6E+02	nc		
	6.0E-03	h	6.0E-03	r	0	0.10	56-38-2	Parathion	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc		

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TOXICITY INFORMATION							CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS							
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"							
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)							
	5.0E-02	h	5.0E-02	r	0	0.10	1114-71-2	Pebulate	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc			
	4.0E-02	i	4.0E-02	r	0	0.10	40487-42-1	Pendimethalin	2.4E+03	nc	2.5E+04	nc	1.5E+02	nc	1.5E+03	nc			
2.3E-02	h		2.3E-02	r		0	87-84-3	Pentabromo-6-chloro cyclohexane	2.1E+01	ca	7.5E+01	ca	2.9E-01	ca	2.9E+00	ca			
	2.0E-03	i	2.0E-03	r	0	0.10	32534-81-9	Pentabromodiphenyl ether	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
	8.0E-04	i	8.0E-04	r	0	0.10	608-93-5	Pentachlorobenzene	4.9E+01	nc	4.9E+02	nc	2.9E+00	nc	2.9E+01	nc			
2.6E-01	h	3.0E-03	i	2.6E-01	r	0	82-68-8	Pentachloronitrobenzene	1.9E+00	ca*	6.6E+00	ca	2.6E-02	ca	2.6E-01	ca			
1.2E-01	i	3.0E-02	i	1.2E-01	r	0	87-86-5	Pentachlorophenol	3.0E+00	ca	9.0E+00	ca	5.6E-02	ca	5.6E-01	ca	3.0E-02	1.0E-03	
	1.00E-04	x				0	7601-90-3	Perchlorate	7.8E+00	ca/nc	1.0E+02	ca/nc			3.6E+00	ca/nc			
	5.0E-02	i	5.0E-02	r	0	0.10	52645-53-1	Permethrin	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc			
	2.5E-01	i	2.5E-01	r	0	0.10	13684-63-4	Phenmedipham	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc			
	6.0E-01	i	6.0E-01	r	0	0.10	108-95-2	Phenol	3.7E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc	1.0E+02	5.0E+00	
	2.0E-03	n	2.0E-03	r	0	0.10	92-84-2	Phenothiazine	1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc			
	6.0E-03	i	6.0E-03	r	0	0.10	108-45-2	m-Phenylenediamine	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc			
	1.9E-01	h	1.9E-01	r	0	0.10	106-50-3	p-Phenylenediamine	1.2E+04	nc	1.0E+05	max	6.9E+02	nc	6.9E+03	nc			
	8.0E-05	i	8.0E-05	r	0	0.10	62-38-4	Phenylmercuric acetate	4.9E+00	nc	4.9E+01	nc	2.9E-01	nc	2.9E+00	nc			
1.9E-03	h		1.9E-03	r		0	90-43-7	2-Phenylphenol	2.5E+02	ca	8.9E+02	ca	3.5E+00	ca	3.5E+01	ca			
	2.0E-04	h	2.0E-04	r	0	0.10	298-02-2	Phorate	1.2E+01	nc	1.2E+02	nc	7.3E-01	nc	7.3E+00	nc			
	2.0E-02	i	2.0E-02	r	0	0.10	732-11-6	Phosmet	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc			
	3.0E-04	i	8.6E-05	i	0	0.10	7803-51-2	Phosphine	1.8E+01	nc	1.8E+02	nc	3.1E-01	nc	1.1E+01	nc			
			2.9E-03	i			7664-38-2	Phosphoric acid					1.0E+01	nc					
	2.0E-05	i				0	7723-14-0	Phosphorus (white)	1.6E+00	nc	2.0E+01	nc			7.3E-01	nc			
	1.0E+00	h	1.0E+00	r	0	0.10	100-21-0	p-Phthalic acid	6.1E+04	nc	1.0E+05	max	3.7E+03	nc	3.6E+04	nc			
	2.0E+00	i	3.4E-02	h	0	0.10	85-44-9	Phthalic anhydride	1.0E+05	max	1.0E+05	max	1.2E+02	nc	7.3E+04	nc			
	7.0E-02	i	7.0E-02	r	0	0.10	1918-02-1	Picloram	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc			
	1.0E-02	i	1.0E-02	r	0	0.10	29232-93-7	Pirimiphos-methyl	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc			
8.9E+00	h	7.0E-06	h	8.9E+00	r	0	0.10	Polybrominated biphenyls	5.5E-02	ca**	1.9E-01	ca*	7.6E-04	ca*	7.6E-03	ca*			
2.0E+00	i		2.0E+00	i		0	0.14	1336-36-3	Polychlorinated biphenyls (PCBs)	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
7.0E-02	i	7.0E-05	i	7.0E-02	i	0	0.14	12674-11-2	Aroclor 1016	3.9E+00	nc	2.1E+01	ca**	9.6E-02	ca**	9.6E-01	ca**		
2.0E+00	i		2.0E+00	i		0	0.14	11104-28-2	Aroclor 1221	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i		2.0E+00	i		0	0.14	11141-16-5	Aroclor 1232	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i		2.0E+00	i		0	0.14	53469-21-9	Aroclor 1242	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i		2.0E+00	i		0	0.14	12672-29-6	Aroclor 1248	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		
2.0E+00	i	2.0E-05	i	2.0E+00	i	2.0E-05	0	11097-69-1	Aroclor 1254	2.2E-01	ca**	7.4E-01	ca*	3.4E-03	ca*	3.4E-02	ca*		
2.0E+00	i		2.0E+00	i		0	0.14	11096-82-5	Aroclor 1260	2.2E-01	ca	7.4E-01	ca	3.4E-03	ca	3.4E-02	ca		

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 +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION					CONTAMINANT		PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS								
SFO _i 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"								
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)							
4.5E+00	n	4.5E+00	r			0.10 0.13	61788-33-8	Polychlorinated terphenyls		1.1E-01	ca	3.8E-01	ca	1.5E-03	ca	1.5E-02	ca		
								Polynuclear aromatic hydrocarbons (PAHs)											
	6.0E-02	i	6.0E-02	r	1		83-32-9	3.7E+03	nc	2.9E+04	nc	2.2E+02	nc	3.7E+02	nc	5.7E+02	2.9E+01		
	3.0E-01	i	3.0E-01	r	1		120-12-7	2.2E+04	nc	1.0E+05	max	1.1E+03	nc	1.8E+03	nc	1.2E+04	5.9E+02		
7.3E-01	n	7.3E-01	r		0	0.13	56-55-3	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	2.0E+00	8.0E-02		
7.3E-01	n	7.3E-01	r		0	0.13	205-99-2	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	5.0E+00	2.0E-01		
7.3E-02	n	7.3E-02	r		0	0.13	207-08-9	6.2E+00	ca	2.1E+01	ca	9.2E-02	ca	9.2E-01	ca	4.9E+01	2.0E+00		
1.2E+00		3.9E-01				0.13	207-08-9	3.8E-01	ca	1.3E+00	ca	1.7E-02	ca	5.6E-02	ca				
7.3E+00	i	7.3E+00	r		0	0.13	50-32-8	6.2E-02	ca	2.1E-01	ca	9.2E-04	ca	9.2E-03	ca	8.0E+00	4.0E-01		
7.3E-03	n	7.3E-03	r		0	0.13	218-01-9	6.2E+01	ca	2.1E+02	ca	9.2E-01	ca	9.2E+00	ca	1.6E+02	8.0E+00		
1.2E-01		3.9E-02				0.13		3.8E+00	ca	1.3E+01	ca	1.7E-01	ca	5.6E-01	ca				
7.3E+00	n	7.3E+00	r		0	0.13	53-70-3	6.2E-02	ca	2.1E-01	ca	9.2E-04	ca	9.2E-03	ca	2.0E+00	8.0E-02		
	4.0E-02	i	4.0E-02	r	0	0.13	206-44-0	2.3E+03	nc	2.2E+04	nc	1.5E+02	nc	1.5E+03	nc	4.3E+03	2.1E+02		
	4.0E-02	i	4.0E-02	r	1		86-73-7	2.7E+03	nc	2.6E+04	nc	1.5E+02	nc	2.4E+02	nc	5.6E+02	2.8E+01		
7.3E-01	n	7.3E-01	r		0	0.13	193-39-5	6.2E-01	ca	2.1E+00	ca	9.2E-03	ca	9.2E-02	ca	1.4E+01	7.0E-01		
	2.0E-02	i	8.6E-04	i	1		91-20-3	5.6E+01	nc	1.9E+02	nc	3.1E+00	nc	6.2E+00	nc	8.4E+01	4.0E+00		
	3.0E-02	i	3.0E-02	r	1		129-00-0	2.3E+03	nc	2.9E+04	nc	1.1E+02	nc	1.8E+02	nc	4.2E+03	2.1E+02		
1.5E-01	i	9.0E-03	i	1.5E-01	r	0	0.10	67747-09-5	3.2E+00	ca	1.1E+01	ca	4.5E-02	ca	4.5E-01	ca			
	6.0E-03	h	6.0E-03	r	0	0.10	26399-36-0	3.7E+02	nc	3.7E+03	nc	2.2E+01	nc	2.2E+02	nc				
	1.5E-02	i	1.5E-02	r	0	0.10	1610-18-0	9.2E+02	nc	9.2E+03	nc	5.5E+01	nc	5.5E+02	nc				
4.0E-03	i	4.0E-03	r	0	0.10	7287-19-6		2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc				
7.5E-02	i	7.5E-02	r	0	0.10	23950-58-5		4.6E+03	nc	4.6E+04	nc	2.7E+02	nc	2.7E+03	nc				
1.3E-02	i	1.3E-02	r	0	0.10	1918-16-7		7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc				
5.0E-03	i	5.0E-03	r	0	0.10	709-98-8		3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
2.0E-02	i	2.0E-02	r	0	0.10	2312-35-8		1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc				
2.0E-03	i	2.0E-03	r	0	0.10	107-19-7		1.2E+02	nc	1.2E+03	nc	7.3E+00	nc	7.3E+01	nc				
2.0E-02	i	2.0E-02	r	0	0.10	139-40-2		1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc				
2.0E-02	i	2.0E-02	r	0	0.10	122-42-9		1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc				
1.3E-02	i	1.3E-02	r	0	0.10	60207-90-1		7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc				
4.00E-02	n	4.00E-02	r	1		103-65-1		2.4E+02	sat	2.4E+02	sat	1.5E+02	nc	2.4E+02	nc				
5.0E-01	h	8.6E-04	h	0	0.10	57-55-6		3.0E+04	nc	1.0E+05	max	3.1E+00	nc	1.8E+04	nc				
7.0E-01	h	7.0E-01	r	0	0.10	52125-53-8		4.3E+04	nc	1.0E+05	max	2.6E+03	nc	2.6E+04	nc				
7.0E-01	h	5.7E-01	i	0	0.10	107-98-2		4.3E+04	nc	1.0E+05	max	2.1E+03	nc	2.6E+04	nc				
2.4E-01	i	8.6E-03	r	1.3E-02	i	8.6E-03	i	1	75-56-9		1.9E+00	ca*	6.6E+00	ca*	5.2E-01	ca*	2.2E-01	ca	

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SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.		"Direct Contact Exposure Pathways"				"Migration to Ground Water"							
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)							
	2.5E-01	i	2.5E-01	r	0	0.10	81335-77-5	Pursuit	1.5E+04	nc	1.0E+05	max	9.1E+02	nc	9.1E+03	nc			
	2.5E-02	i	2.5E-02	r	0	0.10	51630-58-1	Pydrin	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc			
	1.0E-03	i	1.0E-03	r	0	0.10	110-86-1	Pyridine	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	5.0E-04	i	5.0E-04	r	0	0.10	13593-03-8	Quinalphos	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc			
3.0E+00	i	3.0E+00	r	0	0.10	91-22-5	Quinoline	1.6E-01	ca	5.7E-01	ca	2.2E-03	ca	2.2E-02	ca				
1.1E-01	i	3.0E-03	i	1.1E-01	r	3.0E-03	r	0	0.10	121-82-4	RDX (Cyclonite)	4.4E+00	ca*	1.6E+01	ca	6.1E-02	ca	6.1E-01	ca
	3.0E-02	i	3.0E-02	r	0	0.10	10453-86-8	Resmethrin	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc			
	5.0E-02	h	5.0E-02	r	0	0.10	299-84-3	Ronnel	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc			
	4.0E-03	i	4.0E-03	r	0	0.10	83-79-4	Rotenone	2.4E+02	nc	2.5E+03	nc	1.5E+01	nc	1.5E+02	nc			
	2.5E-02	i	2.5E-02	r	0	0.10	78587-05-0	Savey	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc			
	5.0E-03	i	5.0E-03	r	0	0.10	7783-00-8	Selenious Acid	3.1E+02	nc	3.1E+03	nc	3.1E+02	nc	1.8E+02	nc			
	5.0E-03	i	5.0E-03	r	0	0.10	7782-49-2	Selenium	3.9E+02	nc	5.1E+03	nc	1.8E+02	nc	5.0E+00	3.0E-01			
	5.0E-03	h	5.0E-03	r	0	0.10	630-10-4	Selenourea	3.1E+02	nc	3.1E+03	nc	1.8E+02	nc					
	9.0E-02	i	9.0E-02	r	0	0.10	74051-80-2	Sethoxydim	5.5E+03	nc	5.5E+04	nc	3.3E+02	nc	3.3E+03	nc			
	5.0E-03	i	5.0E-03	r	0	0.10	7440-22-4	Silver and compounds	3.9E+02	nc	5.1E+03	nc	1.8E+02	nc	3.4E+01	2.0E+00			
1.2E-01	h	5.0E-03	i	1.2E-01	r	2.0E-03	r	0	0.10	122-34-9	Simazine	4.1E+00	ca*	1.4E+01	ca	5.6E-02	ca	5.6E-01	ca
	4.0E-03	i	4.0E-03	r	0	0.10	26628-22-8	Sodium azide	1.8E+00	ca	6.4E+00	ca	2.5E-02	ca	2.5E-01	ca			
2.7E-01	h	3.0E-02	i	2.7E-01	r	3.0E-02	r	0	0.10	148-18-5	Sodium diethyldithiocarbamate	1.8E+00	ca	6.4E+00	ca	2.5E-02	ca	2.5E-01	ca
	2.0E-05	i	2.0E-05	r	0	0.10	62-74-8	Sodium fluoroacetate	1.2E+00	nc	1.2E+01	nc	7.3E-02	nc	7.3E-01	nc			
	1.0E-03	h	1.0E-03	r	0	0.10	13718-26-8	Sodium metavanadate	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	6.0E-01	i	6.0E-01	r	0	0.10	7440-24-6	Strontium, stable	4.7E+04	nc	1.0E+05	max	2.2E+04	nc					
	3.0E-04	i	3.0E-04	r	0	0.10	57-24-9	Strychnine	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc			
	2.0E-01	i	2.9E-01	i	1	0.10	100-42-5	Styrene	1.7E+03	sat	1.7E+03	sat	1.1E+03	nc	1.6E+03	nc	4.0E+00	2.0E-01	
	1.00E-03	n	1.00E-03	r	0	0.10	80-07-9	1,1'-Sulfonylbis (4-chlorobenzene)	7.8E+01	nc	1.0E+03	nc	3.7E+00	nc	3.6E+01	nc			
	2.5E-02	i	2.5E-02	r	0	0.10	88671-89-0	Systhane	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc			
1.5E+05	h	1.5E+05	h	1.5E+05	r	0	0.03	1746-01-6	2,3,7,8-TCDD (dioxin)	3.9E-06	ca	1.6E-05	ca	4.5E-08	ca	4.5E-07	ca		
	7.0E-02	i	7.0E-02	r	0	0.10	34014-18-1	Tebuthiuron	4.3E+03	nc	4.3E+04	nc	2.6E+02	nc	2.6E+03	nc			
	2.0E-02	h	2.0E-02	r	0	0.10	3383-96-8	Temephos	1.2E+03	nc	1.2E+04	nc	7.3E+01	nc	7.3E+02	nc			
	1.3E-02	i	1.3E-02	r	0	0.10	5902-51-2	Terbacil	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc			
	2.5E-05	h	2.5E-05	r	0	0.10	13071-79-9	Terbufos	1.5E+00	nc	1.5E+01	nc	9.1E-02	nc	9.1E-01	nc			
	1.0E-03	i	1.0E-03	r	0	0.10	886-50-0	Terbutryn	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc			
	3.0E-04	i	3.0E-04	r	0	0.10	95-94-3	1,2,4,5-Tetrachlorobenzene	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc			
2.6E-02	i	3.0E-02	i	2.6E-02	i	3.0E-02	r	1	0.10	630-20-6	1,1,1,2-Tetrachloroethane	3.2E+00	ca	7.3E+00	ca	2.6E-01	ca	4.3E-01	ca
2.0E-01	i	6.00E-02	n	2.0E-01	i	6.00E-02	r	1	0.10	79-34-5	1,1,2,2-Tetrachloroethane	4.1E-01	ca	9.3E-01	ca	3.3E-02	ca	5.5E-02	ca
5.2E-02	n	1.0E-02	i	1.00E-02	n	1.7E-01	n	1	0.10	127-18-4	Tetrachloroethylene (PCE)	1.5E+00	ca*	3.4E+00	ca*	6.7E-01	ca	6.6E-01	ca
	3.0E-02	i	3.0E-02	r	0	0.10	58-90-2	2,3,4,6-Tetrachlorophenol	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc			

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca) +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION										CONTAMINANT	PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS						
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.					"Direct Contact Exposure Pathways"				"Migration to Ground Water"						
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m ³)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)									
2.0E+01	h	2.0E+01	r	0	0.10	5216-25-1	p,a,a,a-Tetrachlorotoluene	2.4E-02	ca	8.6E-02	ca	3.4E-04	ca	3.4E-03	ca						
2.4E-02	h	3.0E-02	i	2.4E-02	r	0	0.10	961-11-5	Tetrachlorovinphos	2.0E+01	ca*	7.2E+01	ca	2.8E-01	ca	2.8E+00	ca				
		5.0E-04	i	5.0E-04	r	0	0.10	3689-24-5	Tetraethyldithiopyrophosphate	3.1E+01	nc	3.1E+02	nc	1.8E+00	nc	1.8E+01	nc				
7.6E-03	n	2.1E-01	n	6.8E-03	n	1	109-99-9	Tetrahydrofuran	9.4E+00	ca	2.1E+01	ca	9.9E-01	ca	1.6E+00	ca					
		6.6E-05	i			0	7440-28-0	Thallium and compounds+++	5.2E+00	nc	6.7E+01	nc			2.4E+00	nc					
		1.0E-02	i	1.0E-02	r	0	0.10	28249-77-6	Thiobencarb	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		5.0E-02	n	5.0E-02	r	0	0.10	N/A	Thiocyanate	3.1E+03	nc	1.0E+05	max	1.8E+02	nc	1.8E+03	nc				
		3.0E-04	h	3.0E-04	r	0	0.10	39196-18-4	Thiofanox	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc				
		8.0E-02	i	8.0E-02	r	0	0.10	23564-05-8	Thiophanate-methyl	4.9E+03	nc	4.9E+04	nc	2.9E+02	nc	2.9E+03	nc				
		5.0E-03	i	5.0E-03	r	0	0.10	137-26-8	Thiram	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
		6.0E-01	h			0			Tin (inorganic, see tributyltin oxide for organic tin)	4.7E+04	nc	1.0E+05	max			2.2E+04	nc				
		2.0E-01	i	1.1E-01	i	1	108-88-3	Toluene	5.2E+02	sat	5.2E+02	sat	4.0E+02	nc	7.2E+02	nc	1.2E+01	6.0E-01			
3.2E+00	h	3.2E+00	r		0	0.10	95-80-7	Toluene-2,4-diamine	1.5E-01	ca	5.4E-01	ca	2.1E-03	ca	2.1E-02	ca					
		6.0E-01	h	6.0E-01	r	0	0.10	95-70-5	Toluene-2,5-diamine	3.7E+04	nc	1.0E+05	max	2.2E+03	nc	2.2E+04	nc				
		2.0E-01	h	2.0E-01	r	0	0.10	823-40-5	Toluene-2,6-diamine	1.2E+04	nc	1.0E+05	max	7.3E+02	nc	7.3E+03	nc				
2E-01	i	2E-01	r		0	0.10	106-49-0	p-Toluidine	2.6E+00	ca	9.1E+00	ca	3.5E-02	ca	3.5E-01	ca					
1.1E+00	i	1.1E+00	i		0	0.10	8001-35-2	Toxaphene	4.4E-01	ca	1.6E+00	ca	6.0E-03	ca	6.1E-02	ca	3.1E+01	2.0E+00			
		7.5E-03	i	7.5E-03	r	0	0.10	66841-25-6	Tralometrin	4.6E+02	nc	4.6E+03	nc	2.7E+01	nc	2.7E+02	nc				
		1.3E-02	i	1.3E-02	r	0	0.10	2303-17-5	Triallate	7.9E+02	nc	8.0E+03	nc	4.7E+01	nc	4.7E+02	nc				
		1.0E-02	i	1.0E-02	r	0	0.10	82097-50-5	Triasulfuron	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		5.0E-03	i	5.0E-03	r	0	0.10	615-54-3	1,2,4-Tribromobenzene	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc				
		3.0E-04	i		0	0.10	56-35-9	Tributyltin oxide (TBTO)	1.8E+01	nc	1.8E+02	nc			1.1E+01	nc					
3.4E-02	h	3.4E-02	r		0	0.10	634-93-5	2,4,6-Trichloroaniline	1.4E+01	ca	5.1E+01	ca	2.0E-01	ca	2.0E+00	ca					
2.9E-02	h	2.9E-02	r		0	0.10	33663-50-2	2,4,6-Trichloroaniline hydrochloride	1.7E+01	ca	5.9E+01	ca	2.3E-01	ca	2.3E+00	ca					
		1.0E-02	i	5.7E-02	h	1	120-82-1	1,2,4-Trichlorobenzene	6.5E+02	nc	3.0E+03	sat	2.1E+02	nc	1.9E+02	nc	5.0E+00	3.0E-01			
		2.8E-01	n	6.3E-01	n	1	71-55-6	1,1,1-Trichloroethane	1.2E+03	sat	1.2E+03	sat	2.3E+03	nc	3.2E+03	nc	2.0E+00	1.0E-01			
5.7E-02	i	4.0E-03	i	5.6E-02	i	4.0E-03	r	1	79-00-5	1,1,2-Trichloroethane	7.3E-01	ca*	1.6E+00	ca*	1.2E-01	ca	2.0E-01	ca	2.0E-02	9.0E-04	
4.00E-01	n	3.00E-04	n	4.00E-01	n	1.00E-02	n	1	79-01-6	Trichloroethylene (TCE)	5.3E-02	ca	1.1E-01	ca	1.7E-02	ca	2.8E-02	ca	6.0E-02	3.0E-03	
		3.0E-01	i	2.0E-01	h	1	75-69-4	Trichlorofluoromethane	3.9E+02	nc	2.0E+03	sat	7.3E+02	nc	1.3E+03	nc					
		1.0E-01	i	1.0E-01	r	0	0.10	95-95-4	2,4,5-Trichlorophenol	6.1E+03	nc	6.2E+04	nc	3.7E+02	nc	3.6E+03	nc	2.7E+02	1.4E+01		
1.1E-02	i	1.0E-04	n	1.1E-02	i	1.0E-04	r	0	0.10	88-06-2	2,4,6-Trichlorophenol	6.1E+00	nc**	6.2E+01	nc**	3.7E-01	nc**	3.6E+00	nc**	2.0E-01	8.0E-03
7.0E-02		7.0E-02				0.10	88-06-2	"CAL-Modified PRG"	6.9E+00	ca	2.5E+01	ca	9.6E-02	ca	9.6E-01	ca					
		1.0E-02	i	1.0E-02	r	0	0.10	93-76-5	2,4,5-Trichlorophenoxyacetic Acid	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc				
		8.0E-03	i	8.0E-03	r	0	0.10	93-72-1	2-(2,4,5-Trichlorophenoxy) propionic acid	4.9E+02	nc	4.9E+03	nc	2.9E+01	nc	2.9E+02	nc				
		5.0E-03	i	5.0E-03	r	1	598-77-6	1,1,2-Trichloropropane	1.5E+01	nc	5.1E+01	nc	1.8E+01	nc	3.0E+01	nc					
2.0E+00	n	6.0E-03	i	2.0E+00	r	1.4E-03	n	1	96-18-4	1,2,3-Trichloropropane	5.0E-03	ca	1.1E-02	ca	3.4E-03	ca	5.6E-03	ca			

Key : SFo,i=Cancer Slope Factor oral, inhalation RfDo,i=Reference Dose oral, inhalation i=IRIS h=HEAST n=NCEA x=Withdrawn o=Other EPA Source r=Route-extrapolation ca=Cancer PRG nc=Noncancer PRG ca* (where: nc < 100X ca) ca** (where: nc < 10X ca) +++=Non-Standard Method Applied (See Section 2.3 of the "Region 9 PRGs Table User's Guide") sat=Soil Saturation (See Section 4.5) max=Ceiling limit (See Section 2.1) DAF=Dilution Attenuation Factor (See Section 2.5) CAS=Chemical Abstract Services

TOXICITY INFORMATION				CONTAMINANT			PRELIMINARY REMEDIAL GOALS (PRGs)				SOIL SCREENING LEVELS						
SFo 1/(mg/kg-d)	RfDo (mg/kg-d)	SFi 1/(mg/kg-d)	RfDi (mg/kg-d)	V O C	skin abs. soils	CAS No.	"Direct Contact Exposure Pathways"				"Migration to Ground Water"						
							Residential Soil (mg/kg)	Industrial Soil (mg/kg)	Ambient Air (ug/m^3)	Tap Water (ug/l)	DAF 20 (mg/kg)	DAF 1 (mg/kg)					
	5.0E-03	h	5.0E-03	r	1	96-19-5	1.2E+01	nc	3.8E+01	nc	1.8E+01	nc	3.0E+01	nc			
	3.0E-03	i	3.0E-03	r	0	0.10	58138-08-2	1.8E+02	nc	1.8E+03	nc	1.1E+01	nc	1.1E+02	nc		
	2.0E-03	r	2.0E-03	i	1	121-44-8	2.3E+01	nc	8.6E+01	nc	7.3E+00	nc	1.2E+01	nc			
7.7E-03	i	7.5E-03	i	7.7E-03	r	0	0.10	1582-09-8	6.3E+01	ca**	2.2E+02	ca*	8.7E-01	ca*	8.7E+00	ca*	
	1.400E-04	r	1.400E-04	n	0	0.10	552-30-7	8.6E+00	nc	8.6E+01	nc	5.1E-01	nc	5.1E+00	nc		
	5.0E-02	n	1.7E-03	n	1	95-63-6	5.2E+01	nc	1.7E+02	nc	6.2E+00	nc	1.2E+01	nc			
3.7E-02	h	3.7E-02	r	0	0	0.10	108-67-8	2.1E+01	nc	7.0E+01	nc	6.2E+00	nc	1.2E+01	nc		
	3.0E-02	i	3.0E-02	r	0	0.10	512-56-1	1.3E+01	ca	4.7E+01	ca	1.8E-01	ca	1.8E+00	ca		
	3.0E-02	i	3.0E-02	r	0	0.10	99-35-4	1.8E+03	nc	1.8E+04	nc	1.1E+02	nc	1.1E+03	nc		
3E-02	i	1.0E-02	h	1.0E-02	r	0	0.10	479-45-8	6.1E+02	nc	6.2E+03	nc	3.7E+01	nc	3.6E+02	nc	
	5.0E-04	i	3E-02	r	0	0.10	118-96-7	1.6E+01	ca**	5.7E+01	ca**	2.2E-01	ca**	2.2E+00	ca**		
	5.00E-03	n	5.00E-03	r	0	0.10	791-28-6	3.1E+02	nc	3.1E+03	nc	1.8E+01	nc	1.8E+02	nc		
3.2E-03	n	1.1E-01	n	3.2E-03	r	0	0.10	115-96-8	1.5E+02	ca*	5.4E+02	ca	2.1E+00	ca	2.1E+01	ca	
	2.00E-04	n	7440-61-0	Uranium (chemical toxicity only)			1.6E+01	nc	2.0E+02	nc	7.3E+00	nc					
	7.0E-03	h	7440-62-2	Vanadium and compounds		0	5.5E+02	nc	7.2E+03	nc	2.6E+02	nc	6.0E+03	3.0E+02			
	1.0E-03	i	1.0E-03	r	0	0.10	1929-77-7	6.1E+01	nc	6.2E+02	nc	3.7E+00	nc	3.6E+01	nc		
	2.5E-02	i	2.5E-02	r	0	0.10	50471-44-8	1.5E+03	nc	1.5E+04	nc	9.1E+01	nc	9.1E+02	nc		
	1.0E+00	h	5.7E-02	i	1	108-05-4	4.3E+02	nc	1.4E+03	nc	2.1E+02	nc	4.1E+02	nc	1.7E+02	8.0E+00	
1.1E-01	r	8.6E-04	r	1.1E-01	h	8.6E-04	i	1	593-60-2	1.9E-01	ca*	4.2E-01	ca*	6.1E-02	ca*	1.0E-01	ca*
1.5E+00	i	3.00E-03	i	3.1E-02	i	2.86E-02	i	1	75-01-4	7.9E-02	ca	1.1E-01	ca	2.0E-02	ca	1.0E-02	7.0E-04
7.5E-01	i	3.00E-03	i	1.6E-02	i	2.86E-02	i	1	75-01-4		7.5E-01	ca					
	3.0E-04	i	3.0E-04	r	0	0.10	81-81-2	1.8E+01	nc	1.8E+02	nc	1.1E+00	nc	1.1E+01	nc		
	7.0E-01	i	2.9E-02	i	1	0.10	1330-20-7	2.7E+02	nc	4.2E+02	sat	1.1E+02	nc	2.1E+02	nc	2.1E+02	1.0E+01
	3.0E-01	i	7440-66-6	Zinc		0	2.3E+04	nc	1.0E+05	max	1.1E+04	nc	1.2E+04	6.2E+02			
	3.0E-04	i	1314-84-7	Zinc phosphide		0	2.3E+01	nc	3.1E+02	nc	1.1E+01	nc					
	5.0E-02	i	5.0E-02	r	0	0.10	12122-67-7	3.1E+03	nc	3.1E+04	nc	1.8E+02	nc	1.8E+03	nc		

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Inorganics									
Aluminum									
Antimony									
Arsenic				5.9	17	29	55	9.79	33
Arsenic III			8.2						
Arsenic V									
Barium						200	625		
Beryllium									
Cadmium			1.2	0.596	3.53	0.8	12	0.99	4.98
Calcium									
Chromium			81	37.3	90	100	380	43.44	111
Cobalt						20	240		
Copper			34	35.7	197	36	190	31.6	149
Cyanide (free)						1	20		
Cyanide complex (pH<5)						5	650		
Cyanide complex (pH>5)						5	50		
Iron									
Lead			47	35	91.3	85	530	35.8	128
Magnesium									
Manganese									
Mercury (inorganic)			0.15	0.174	0.486	0.3	10	0.18	1.06
Molybdenum						10	200		

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Nickel			21			35	210	22.7	48.6
Potassium									
Selenium									
Silver									
Sodium									
Thallium									
Thiocyanates (total)							20		
Vanadium									
Zinc			150	123	315	140	720	121	459
Organics									
1,1,1-Trichloroethane		0.17							
1,1,2,2-Tetrachloroethane		0.94							
1,1,2-Trichloroethane									
1,1-Dichloroethane									
1,1-Dichloroethylene									
1,2,4-Trichlorobenzene		9.2							
1,2-Dichlorobenzene		0.34							
1,2-Dichloroethane							4		
1,2-Dichloroethylene (trans)									
1,2-Dichloropropane									
1,3-Dichlorobenzene		1.7							

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
1,3-Dichloropropene									
1,4-Dichlorobenzene		0.35							
2,4,5-Trichlorophenol									
2,4,6-Trichlorophenol									
2,4-Dichlorophenol									
2,4-Dimethylphenol									
2,4-Dinitrophenol									
2,4-Dinitrotoluene									
2,6-Dinitrotoluene									
2-Chloronaphthalene									
2-Chlorophenol									
2-Hexanone									
2-Methyl-4,6-dinitrophenol									
2-Methylnaphthalene				0.02	0.201				
2-Nitrophenol									
3,3'-Dichlorobenzidine									
4-Bromophenyl phenyl ether		1.3							
4-Chloroaniline									
4-Chloro-m-cresol									
4-Chlorophenyl phenyl ether									
4-Nitrophenol									
Acenaphthene	0.62		0.016	0.0067	0.089				

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Bis(2-ethylhexyl)phthalate									
Bromodichloromethane									
Bromoform									
Bromomethane (Methyl bromide)									
Butylbenzyl phthalate		11							
Carbaryl							5		
Carbofuran							2		
Carbon disulfide									
Carbon tetrachloride									
Catechol							20		
Chlordane				0.0045	0.0089			3.24	17.6
Chlorobenzenes (total)		0.82					30		
Chloroethane									
Chloroethene (Vinyl chloride)									
Chloroform									
Chloromethane (Methyl chloride)									
Chloronaphthalene							10		
Chlorophenols (total)							10		
Chrysene				0.057	0.862			166	1290
o-Cresol (2-Methylphenol)									
p-Cresol (4-Methylphenol)									
Cresols (total)							5		

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Cyclohexanone						0.1	270		
DDD				0.0035	0.0085			4.88	28
p,p'-DDD									
DDE				0.0014	0.0068			3.16	31.3
p,p'-DDE									
DDT			0.0016	0.0012	0.0048			4.16	62.9
p,p'-DDT									
DDT (total)								5.28	572
DDT/DDE/DDD (total)						0.0025	4		
Diazinon		0.0019							
Dibenz[a,h] anthracene				0.0062	0.135			33	
Dibenzofuran		2							
Dibromo-chloromethane									
Dichlorobenzene (total)						0.01			
Dichloromethane (Methylene chloride)							20		
Dichlorophenols (total)						0.003			
Dieldrin	0.052			0.0029	0.0067	0.0005		1.9	61.8
Diethyl phthalate		0.36							
Dimethyl phthalate									
Di-n-butyl phthalate		11							
Di-n-octyl phthalate									
Endosulfan I		0.0029							

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Mineral oil						50	5000		
Monochlorophenols (total)						0.0025			
Naphthalene		0.48	0.16	0.035	0.391			176	561
Nitrobenzene									
o-Nitroaniline									
m-Nitroaniline									
N-Nitroso-diphenylamine									
N-Nitroso-dipropylamine									
PAHs (sum of high molecular weight)									
PAHs (sum of low molecular weight)									
PAHs (total)			4			1	40	1610	22800
Parathion									
PCB 1016									
PCB 1221									
PCB 1232									
PCB 1242									
PCB 1248									
PCB 1254									
PCB 1260									
PCBs (total)			0.023	0.034	0.277	0.02	1	59.8	676
Pentachlorobenzene		0.69				0.0025			
Pentachlorophenol						0.002			

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Phenanthrene	0.85		0.24	0.042	0.515			204	1170
Phenol						0.05	40		
Phthalates									
(total)						0.1	60		
p-Nitroaniline									
Pyrene			0.66	0.053	0.875			195	1520
Pyridine						0.1	1		
Resorcinol							10		
Styrene						0.1	1		
Tetrachlorobenzenes (total)						0.01			
Tetrachloroethene		0.53				0.01	4		
Tetrachloromethane		1.2				0.001	1		
Tetrachlorophenols (total)						0.001			
Tetrahydrofuran						0.1	0.4		
Tetrahydrothiophene						0.1	90		
Toluene		0.67							
Toxaphene		0.028		0.0015		0.05	130		
Tribromomethane		0.65							
Trichlorobenzenes (total)						0.01			
Trichloroethene		1.6				0.001	60		
Trichloromethane						0.001	10		
Trichlorophenols (total)						0.001			

TABLE B-4. ECOLOGICAL SCREENING VALUES FOR SEDIMENT (MG/KG)

Constituent	Ecotox Thresholds ^c			Environment Canada ^f		Dutch Ministry Standards ⁱ		Freshwater Sediment Quality Guidelines ^j	
	EPA Sediment Quality ^d	EPA Sediment Quality Benchmark ^e	Effects Range-Low	TEL ^g	PEL ^h	Target Value	Intervention Value	TEC	PEC
Vinyl acetate									
Vinyl chloride							0.1		
m-Xylene		0.025							
Xylenes (total)						0.05	25		

b- USEPA (1995).

c- USEPA (1996).

d- Values assume 1% organic carbon and are the lower limit of the 95% confidence interval.

e- Sediment Quality Benchmarks by equilibrium partitioning (assumes 1% organic carbon).

f- CCME (1998a).

g- Threshold Effects Level.

h- Probable Effects Level.

i- MHSPE (1994).

j - MacDonald (1997), Freshwater Sediment Quality Guidelines

APPENDIX C

Quitclaim Deed

QUITCLAIM DEED

(SEGREGATION, DESCRIPTION OF REMNANT, CONVEYANCE, CONSTITUTION OF EASEMENTS AND CONSTITUTION OF RESTRICTIVE COVENANTS)

THIS INDENTURE, made this 30th day of April, 2001, by and between the United States of America, acting by and through the Department of the Navy, hereinafter called the Government, and the Municipality of Vieques, Puerto Rico, acting by and through its Deputy Mayor, Municipality of Vieques, hereinafter called the Grantee.

WITNESSETH:

FIRST: That the Government represents that it is the owner and sole titleholder of certain real property identified as the Naval Ammunition Support Detachment (NASD) on the western portion of the Island of Vieques, Puerto Rico, made up of a parcel of land described as follows:

Rural: Parcel of land situated in the Wards of Mosquito, Florida and Llave, Municipality of Vieques, Puerto Rico, containing an area of seven thousand six hundred twenty six point three hundred ninety two (7,626.392) cuerdas, equivalent to twenty nine million nine hundred seventy four thousand seven hundred forty point three (29,974,740.3) square meters, equivalent to seven thousand four hundred six point eight hundred ninety two (7,406.892) acres; bounded on the North with the Atlantic Ocean and the Puerto Rico Ports Authority, Vieques Airport; on the South by the Caribbean Sea and the Puerto Rico Conservation Trust Fund's Parcel; on the East by lands of the Puerto Rico Land Administration, Wendy Price, Estate of Ambrosio López, Frank Radican, Estate of Juana López Robles, Estate of Rosa Brignoni, Lucrecia Perez Brignoni, Victoria Perez Brignoni, Manuel Pérez, Rosa Pérez Brignoni, Guillermo Carrion, Felipe Quiñones, Norberto Monel, Esteban Díaz; and on the West by the Atlantic Ocean.

The above described Property was formed as the remnant of the Government's property pursuant to a grouping (lot tie) of the remnant of property number one thousand twenty one (1021), recorded at page one hundred eighty one (181) overleaf of volume twenty eight (28) of Vieques, Registry of Property of Fajardo, Puerto Rico, property number one thousand forty two (1042), recorded at page fifty six (56) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico, property number one thousand thirty seven (1037), recorded at page twenty two (22) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Property number one thousand forty seven (1047), recorded at page ninety eight (98) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Property number one thousand thirty eight (1038) recorded at page twenty nine (29) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico and Property number one thousand thirty nine (1039) recorded at page thirty four (34) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico, rectification of area of the joined properties, and the segregation and conveyance of a parcel of land to the Puerto Rico Conservation Trust, which deed was executed on 30 April 2001.

The Government wishes to segregate and herein proceeds to segregate from the Property the following parcel of land hereinafter the "MOV Parcel":

MOV PARCEL

A parcel of land located in the Wards of Mosquito, Llave, and Puntas Arenas, Municipality of Vieques, bounded on the north by the Atlantic Ocean, on the East by the lands of the Puerto Rico Ports Authority, Vieques Airport, by the lands of the Land Administration of Puerto Rico, by lands now or formerly owned by Wendy Price, by lands now or formerly owned by Sucesion Anbriso Lopez, by lands now or formerly owned by Frank Radican, by lands now or formerly owned by Sucesion Anbriso Lopez, by lands now or formerly owned by Sucesion Juana Lopez Robles, by lands now or formerly owned by Sucesion Rosa Brignoni, by lands now or formerly owned by Sucesion Lucrecia Perez Brignoni, by lands now or formerly owned by Victoria Perez Brignoni, by lands now or formerly owned by Manuel Perez Rosa Perez Brignoni, by lands now or formerly owned by Guillermo Carrion, by lands now or formerly owned by Felipe Quinones, by lands now or formerly owned by Norberto Morell, by lands now or formerly owned by Esteban Diaz, on the South by the Caribbean Sea and lands belonging to the United States Government, and on the West by lands belonging to the United States Government, which parcel is more particularly defined in the following metes and bounds description:

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter-landing pad adjacent to Coconut Road. Said point also known as 'HELO' and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat labeled MUNICIPALITY OF VIEQUES BOUNDARY. Thence N61°42'02"E 8,030.97' to an iron rod and cap set at Punta Caballo, the True Point of Beginning, having a northing of 766,864.7478 and an easting of 980,211.7706; thence following a curve to an iron rod and cap set with a long chord of 952.86', chord bearing of S47°02'11"W, Radius=6600.00', Arc Len=953.69'; thence S84°52'40"W 462.90' to an iron rod and cap set; thence continuing S84°52'40"W 1719.02' to an iron rod and cap set; thence S13°39'11"E 1510.00' to an iron rod and cap set; thence N67°48'58"E 1101.00' to an iron rod and cap set; thence N74°00'06"E 235.66' to an iron rod and cap set; thence N74°56'42"E 45.77' to an iron rod and cap set; thence N75°08'04"E 49.96' to an iron rod and cap set; thence N75°06'04"E 50.18' to an iron rod and cap set; thence N76°00'10"E 50.36' to an iron rod and cap set; thence N76°09'34"E 62.50' to an iron rod and cap set; thence N76°16'21"E 37.57' to an iron rod and cap set; thence N76°52'12"E 50.59' to an iron rod and cap set; thence N77°47'04"E 99.93' to an iron rod and cap set; thence N78°19'41"E 250.21' to an iron rod and cap set; thence N78°51'58"E 150.83' to an iron rod and cap set; thence N79°41'04"E 100.34' to an iron rod and cap set; thence N80°38'06"E 107.82' to an iron rod and cap set; thence N81°14'47"E 110.56' to an iron rod and cap set; thence N81°49'37"E 97.64' to an iron rod and cap set; thence N82°28'56"E 83.01' to an iron rod and cap set; thence N83°06'22"E 51.53' to an iron rod and cap set; thence N82°59'30"E 164.02' to an iron rod and cap set; thence N83°54'54"E 89.45' to an iron rod and cap set; thence N85°41'28"E 109.66' to an iron rod and cap set; thence N86°51'51"E 118.84' to an iron rod and cap set; thence N88°23'39"E 76.40' to an iron rod and cap set; thence N89°50'04"E 87.50' to an iron rod and cap set; thence

N87°56'58"E 36.84' to an iron rod and cap set; thence N85°45'41"E 35.66' to an iron rod and cap set; thence N82°12'48"E 35.71' to an iron rod and cap set; thence N79°34'10"E 36.01' to an iron rod and cap set; thence N76°45'54"E 36.04' to an iron rod and cap set; thence N73°32'16"E 36.64' to an iron rod and cap set; thence N72°01'03"E 43.06' to an iron rod and cap set; thence N68°37'39"E 45.02' to an iron rod and cap set; thence N69°00'37"E 283.72' to an iron rod and cap set; thence N69°12'48"E 58.40' to an iron rod and cap set; thence N77°20'58"E 82.08' to an iron rod and cap set; thence N88°01'21"E 71.42' to an iron rod and cap set; thence S84°11'48"E 81.79' to an iron rod and cap set; thence S81°47'32"E 71.39' to an iron rod and cap set; thence S75°51'22"E 57.83' to an iron rod and cap set; thence S68°15'52"E 76.47' to an iron rod and cap set; thence S59°30'00"E 66.20' to an iron rod and cap set; thence S52°34'29"E 53.39' to an iron rod and cap set; thence S49°06'54"E 43.72' to an iron rod and cap set; thence S54°07'40"E 33.01' to an iron rod and cap set; thence N63°11'04"E 297.17' to an iron rod and cap set; thence S29°36'56"E 54.59' to an iron rod and cap set; thence S03°52'39"W 4027.16' to an iron rod and cap set; thence N89°03'27"W 510.68' to an iron rod and cap set; thence N89°36'24"W 1847.01' to a concrete monument found; thence S02°57'08"W 665.28' to a concrete monument found; thence S05°47'53"E 259.54' to an iron rod and cap set; thence S78°55'16"W 580.88' to an iron rod and cap set; thence N71°41'56"W 421.49' to an iron rod and cap set; thence N54°17'25"W 306.96' to a concrete monument found; thence N78°53'53"W 107.01' to an iron rod and cap set; thence N87°36'24"W 182.20' to an iron rod and cap set; thence N87°17'04"W 372.30' to an iron rod and cap set; thence S01°13'53"W 612.59' to an iron rod and cap set; thence S00°29'08"E 612.91' to an iron rod and cap set; thence N76°07'59"E 578.18' to a concrete monument found; thence S03°12'24"W 956.35' to an iron rod and cap set; thence N76°30'20"W 513.72' to a concrete monument found; thence S04°06'47"E 485.80' to an iron rod and cap set; thence S77°54'49"E 305.51' to a concrete monument found; thence S00°19'10"E 822.93' to a concrete monument found; thence N71°52'08"E 389.80' to a concrete monument found; thence S00°26'46"W 1329.07' to a concrete monument found; thence N89°48'55"E 458.46' to an iron rod and cap set; thence N89°01'08"E 86.42' to a concrete monument found; thence N89°59'05"E 517.61' to a concrete monument found; thence S00°04'53"W 1663.20' to a concrete monument found; thence S88°08'55"E 800.25' to an iron rod and cap set; thence S00°41'32"E 558.17' to an iron rod and cap set; thence S00°10'57"E 290.25' to an iron rod and cap set; thence S00°44'32"E 1119.23' to an iron rod and cap set; thence S01°03'55"E 991.90' to an iron rod and cap set, being point "A"; thence continuing S01°03'55"E 143.67' to a point on the approximate edge of water of the Caribbean Sea; thence westerly along the approximate edge of water of said Caribbean Sea to a point; thence departing said Caribbean Sea N11°17'56"W 186.90' to a concrete monument set, being point "B", and having a northing of 751,188.6452 and an easting of 977,903.5306; a tie line from point "A" to point "B" is defined as follows: S80°06'44"W 2675.60'; thence continuing N11°17'56"W 354.00' to a concrete monument set, having a northing of 751,535.7837 and an easting of 977,834.1718; thence S73°08'47"W 669.25' to a concrete monument set; thence N15°39'55"E 349.82' to a concrete monument set; thence N24°58'13"W 466.47' to a concrete monument set; thence N23°40'01"E 202.93' to a concrete monument set; thence N89°18'06"E 103.57' to a concrete monument set; thence S85°50'08"E 158.23' to a concrete monument set; thence N04°11'13"E 144.71' to a concrete monument set; thence N79°08'11"W 162.48' to a concrete monument set; thence N70°43'43"W 233.42' to a concrete monument set; thence N25°13'36"W 698.85' to a concrete monument set; thence N59°58'30"W 151.46' to a concrete monument set; thence

N73°51'34"W 1007.58' to a concrete monument set; thence S59°18'31"W 159.55' to a concrete monument set; thence S48°40'26"W 169.13' to a concrete monument set; thence S25°14'20"W 291.46' to a concrete monument set; thence S49°30'15"W 1127.15' to a concrete monument set; thence S79°45'11"W 91.57' to a concrete monument set; thence S00°01'33"W 61.44' to a concrete monument set; thence S84°18'36"E 97.60' to a concrete monument set; thence S41°43'34"E 60.35' to a concrete monument set; thence S22°38'47"E 75.16' to a concrete monument set; thence S02°41'06"W 129.32' to a concrete monument set; thence S59°14'22"E 675.70' to a concrete monument set; thence S84°16'44"W 3563.34' to a concrete monument set, having a northing of 751,296.6207 and an easting of 971,527.2890; thence N88°30'56"W 4885.98' to a concrete monument set, having a northing of 751,423.1838 and an easting of 966,642.9445; thence N03°37'02"W 86.48' to an iron rod and cap set; thence 33°19'05"W 430.20' to an iron rod and cap set; thence N49°12'04"W 293.06' to an iron rod and cap set; thence N08°36'39"W 136.56' to an iron rod and cap set; thence N21°14'01"W 122.25' to an iron rod and cap set; thence N06°51'14"E 136.00' to an iron rod and cap set; thence N16°44'43"E 185.88' to an iron rod and cap set; thence N21°00'20"E 186.71' to an iron rod and cap set; thence N08°47'40"E 191.49' to an iron rod and cap set; thence N05°27'35"E 149.19' to an iron rod and cap set; thence N22°07'47"E 181.83' to an iron rod and cap set; thence N06°27'23"W 321.05' to an iron rod and cap set; thence N05°26'56"W 108.69' to an iron rod and cap set; thence N11°45'01"E 59.49' to an iron rod and cap set; thence N23°26'56"E 65.68' to an iron rod and cap set; thence N32°28'23"E 134.63' to an iron rod and cap set; thence N34°20'09"E 179.27' to an iron rod and cap set; thence N54°26'31"E 237.07' to a concrete monument set, having a northing of 754,248.1640 and an easting of 966,721.3901; thence S85°22'34"E 74.06' to an iron rod and cap set; thence N79°27'19"E 345.89' to an iron rod and cap set; thence N72°07'19"E 139.53' to an iron rod and cap set; thence N69°58'11"E 746.64' to an iron rod and cap set; thence N72°48'17"E 982.86' to an iron rod and cap set; thence N85°31'17"E 106.19' to an iron rod and cap set; thence S76°07'50"E 79.36' to an iron rod and cap set; thence N65°58'24"E 103.55' to an iron rod and cap set; thence N57°04'25"E 124.99' to an iron rod and cap set; thence N67°17'52"E 132.42' to an iron rod and cap set; thence N83°14'03"E 130.28' to an iron rod and cap set; thence N88°19'05"E 199.33' to an iron rod and cap set; thence N78°57'06"E 74.36' to an iron rod and cap set; thence N61°00'35"E 150.80' to a concrete monument set, having a northing of 755,153.6452 and an easting of 969,946.5314; thence N81°59'42"E 86.21' to an iron rod and cap set; thence S69°32'59"E 73.26' to an iron rod and cap set; thence S50°12'14"E 84.32' to an iron rod and cap set; thence S36°16'36"E 139.76' to an iron rod and cap set; thence S37°49'54"E 453.66' to an iron rod and cap set; thence S34°31'44"E 184.49' to an iron rod and cap set; thence S31°17'37"E 239.71' to an iron rod and cap set; thence S36°15'09"E 75.38' to an iron rod and cap set; thence S74°45'05"E 80.32' to a concrete monument set, having a northing of 754,176.3623 and an easting of 970,877.4243; thence N65°22'10"E 52.43' to an iron rod and cap set; thence N31°47'48"E 57.69' to an iron rod and cap set; thence N10°13'08"E 278.46' to an iron rod and cap set; thence N30°20'11"E 85.14' to an iron rod and cap set; thence N58°18'35"E 63.96' to an iron rod and cap set; thence N81°27'44"E 341.84' to an iron rod and cap set; thence N53°41'01"E 64.67' to an iron rod and cap set; thence N25°40'52"E 158.58' to an iron rod and cap set; thence N63°11'31"E 55.13' to an iron rod and cap set; thence S82°03'52"E 65.54' to an iron rod and cap set; thence S67°06'17"E 90.43' to an iron rod and cap set; thence N88°29'36"E 71.66' to an iron rod and cap set; thence N53°41'09"E 71.19' to an iron rod and cap set; thence N33°28'19"E 150.44' to a concrete monument set, having a

northing of 755,010.5019 and an easting of 971,970.5712; thence N12°36'09"E 65.63' to an iron rod and cap set; thence N30°42'17"W 76.56' to an iron rod and cap set; thence N38°17'34"W 115.28' to an iron rod and cap set; thence N19°33'32"E 160.52' to an iron rod and cap set; thence N05°21'57"E 69.41' to an iron rod and cap set; thence N45°43'01"W 73.82' to an iron rod and cap set; thence S75°39'59"W 64.40' to an iron rod and cap set; thence S61°56'17"W 199.60' to an iron rod and cap set; thence S82°35'02"W 143.19' to an iron rod and cap set; thence N78°59'41"W 134.23' to an iron rod and cap set; thence N54°42'20"W 96.83' to an iron rod and cap set; thence N12°21'39"E 94.25' to an iron rod and cap set; thence N29°09'19"E 145.93' to an iron rod and cap set; thence N16°08'53"W 88.04' to an iron rod and cap set; thence N41°18'04"W 130.50' to an iron rod and cap set; thence N06°21'13"W 130.33' to an iron rod and cap set; thence N34°09'10"W 70.63' to an iron rod and cap set; thence N68°33'47"W 165.20' to a concrete monument set, having a northing of 756,106.4799 and an easting of 971,063.2438; thence N74°27'44"W 130.01' to an iron rod and cap set; thence N35°00'49"W 97.40' to an iron rod and cap set; thence N70°54'44"W 66.10' to an iron rod and cap set; thence S79°02'08"W 77.47' to an iron rod and cap set; thence S70°09'11"W 332.17' to an iron rod and cap set; thence S82°36'22"W 131.62' to an iron rod and cap set; thence N85°21'16"W 82.11' to an iron rod and cap set; thence N79°22'32"W 409.84' to an iron rod and cap set; thence N74°43'15"W 114.76' to an iron rod and cap set; thence N50°37'39"W 118.41' to an iron rod and cap set; thence N33°58'28"W 147.86' to an iron rod and cap set; thence N51°52'35"W 104.50' to an iron rod and cap set; thence N77°37'21"W 110.34' to an iron rod and cap set; thence S88°56'01"W 456.85' to an iron rod and cap set; thence S89°38'39"W 403.83' to an iron rod and cap set; thence N41°29'22"W 127.90' to an iron rod and cap set; thence N47°11'47"W 65.99' to an iron rod and cap set; thence N72°09'11"W 116.58' to an iron rod and cap set; thence N71°48'51"W 266.62' to an iron rod and cap set; thence N65°36'50"W 282.27' to an iron rod and cap set; thence N70°58'50"W 94.64' to an iron rod and cap set; thence N79°06'27"W 156.13' to an iron rod and cap set; thence S67°38'14"W 67.36' to an iron rod and cap set; thence S44°46'30"W 114.02' to an iron rod and cap set; thence S83°39'15"W 125.38' to an iron rod and cap set; thence S47°24'22"W 86.83' to an iron rod and cap set; thence S02°55'52"W 92.03' to an iron rod and cap set; thence S16°10'20"E 80.21' to an iron rod and cap set; thence S28°27'42"E 195.95' to an iron rod and cap set; thence S02°54'10"W 54.17' to a concrete monument set, having a northing of 756,347.5581 and an easting of 967,260.3822; thence S42°20'19"W 57.33' to an iron rod and cap set; thence S86°17'50"W 70.06' to an iron rod and cap set; thence N74°09'53"W 57.50' to an iron rod and cap set; thence N51°17'48"W 81.64' to an iron rod and cap set; thence N43°07'53"W 310.65' to an iron rod and cap set; thence N41°46'28"W 620.72' to an iron rod and cap set; thence N47°58'01"W 116.16' to an iron rod and cap set; thence N54°07'53"W 135.63' to an iron rod and cap set; thence N57°02'17"W 94.45' to an iron rod and cap set; thence N48°01'27"W 98.26' to an iron rod and cap set; thence N44°53'25"W 171.79' to an iron rod and cap set; thence N55°47'16"W 175.57' to an iron rod and cap set; thence N70°52'54"W 259.11' to an iron rod and cap set; thence N80°25'10"W 149.88' to an iron rod and cap set; thence N24°47'42"W 84.41' to an iron rod and cap set; thence N11°57'25"W 232.68' to an iron rod and cap set; thence N32°19'30"W 144.98' to an iron rod and cap set; thence N45°15'43"W 68.57' to an iron rod and cap set; thence N51°14'51"W 24.49' to a concrete monument set, having a northing of 758,151.9788 and an easting of 965,170.4559; thence N64°31'50"W 52.47' to an iron rod and cap set; thence N72°56'47"W 444.17' to an iron rod and cap set; thence N80°03'15"W 122.74' to an iron rod and cap set; thence

S82°16'17"W 100.88' to an iron rod and cap set; thence S59°49'59"W 309.71' to an iron rod and cap set; thence N47°54'59"W 155.13' to an iron rod and cap set; thence N89°23'48"W 1937.66' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 17.51', chord bearing of S12°44'57"E, Radius=50.00', Arc Len=17.60'; thence S22°50'00"E 371.07' to a concrete monument set, having a northing of 757,922.1025 and an easting of 962,304.9974; thence continuing S22°50'00"E 800.52' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 279.26', chord bearing of S00°19'41"W, Radius=355.00', Arc Len=287.01'; thence following a curve to an iron rod and cap set with a long chord of 214.73', chord bearing of S27°48'38"W, Radius=1425.00', Arc Len=214.94'; thence S32°07'54"W 406.25' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 11.32', chord bearing of S31°26'57"W, Radius=475.00', Arc Len=11.32'; thence S30°45'59"W 432.29' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 17.40', chord bearing of S31°42'58"W, Radius=525.00', Arc Len=17.41'; thence S32°39'58"W 130.66' to a concrete monument set, having a northing of 755,865.1991 and an easting of 961,991.0745; thence N52°38'33"W 229.55' to an iron rod and cap set; thence N70°30'29"W 56.92' to an iron rod and cap set; thence N83°38'22"W 461.84' to an iron rod and cap set; thence S80°13'48"W 726.52' to an iron rod and cap set; thence N47°26'26"W 267.20' to an iron rod and cap set; thence N59°19'59"W 82.17' to an iron rod and cap set; thence N75°55'28"W 150.01' to an iron rod and cap set; thence N82°01'26"W 229.40' to an iron rod and cap set; thence N86°30'48"W 188.81' to an iron rod and cap set; thence S76°32'40"W 246.35' to an iron rod and cap set; thence S59°29'19"W 133.25' to a concrete monument set, having a northing of 756,128.8133 and an easting of 959,396.9439; thence S09°02'31"W 385.11' to an iron rod and cap set; thence S19°15'37"W 176.56' to an iron rod and cap set; thence S25°09'34"W 127.99' to an iron rod and cap set; thence S31°57'35"W 437.84' to an iron rod and cap set; thence S38°48'14"W 240.74' to an iron rod and cap set; thence S12°05'36"W 338.28' to an iron rod and cap set; thence S15°52'06"W 233.62' to an iron rod and cap set; thence S53°40'46"W 83.21' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 2642.91', chord bearing of N33°41'22"W, Radius=3000.00', Arc Len=2736.83'; thence N30°02'44"E 530.95' to a concrete monument set, having a northing of 756,960.7567 and an easting of 957,439.1940; thence N78°49'26"E 4908.81' to an iron rod and cap set; thence N22°50'00"W 360.76' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 37.82', chord bearing of N11°55'54"W, Radius=100.00', Arc Len=38.05'; thence N89°23'48"W 19.09' to a concrete monument set, having a northing of 758,281.9015 and an easting of 962,088.0120; thence N62°07'15"W 216.53' to an iron rod and cap set; thence N76°16'02"W 171.91' to an iron rod and cap set; thence S66°48'17"W 248.21' to an iron rod and cap set; thence S83°30'42"W 152.77' to an iron rod and cap set; thence N82°41'20"W 85.25' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord of 609.97', chord bearing of N54°04'54"W, Radius=636.98', Arc Len=636.07'; thence following a curve to an iron rod and cap set with a long chord of 316.54', chord bearing of N16°51'43"E, Radius=235.00', Arc Len=347.29'; thence N59°11'54"E 447.00' to an iron rod and cap set; thence N65°23'04"E 209.35' to an iron rod and cap set; thence N76°48'10"E 370.08; thence N56°21'58"E 216.87' to an iron rod and cap set; thence N50°03'24"E 459.10' to an iron rod and cap set; thence N22°34'45"E 90.16' to a concrete monument set, having a northing of 759,879.2563 and an easting of 962,364.6976; thence due North 430.89' to iron rod and cap set; thence S89°59'53"E 110.73' to an iron rod and cap set;

thence N00°00'07"E 300.01' to an iron rod and cap set; thence N89°45'22"W 110.74' to an iron rod and cap set; thence due North 173.31' to a concrete monument set, having a northing of 760,783.9340 and an easting of 962,364.6970; thence continuing due North 53.34' to a point on the approximate edge of water of Sonda de Vieques; thence northeasterly along the approximate edge of water of said Sonda de Vieques, including the Mosquito Pier Breakwater and Causeway, to an iron rod and cap set at Punta Caballo, the True Point of Beginning; less and except the Relocatable Over the Horizon Radar (ROTHR) electrical substation, herein described as follows:

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter landing pad adjacent to Coconut Road. Said point also known as "HELO" and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat labeled RELOCATABLE OVER THE HORIZON RADAR (ROTHR) ELECTRIC SUBSTATION SITE. Thence S07°01'08"W 1058.88' to a concrete monument, the True Point of Beginning, having a northing of 762,006.4696 and an easting of 973,011.2588:

Thence following a curve with a long chord of 89.19', chord bearing of S03°27'03"W
Radius=1275.00'
Arc Len=89.21'
Thence S05°27'20"W 18.73' to a concrete monument;
Thence N86°41'22"W 65.23' to a concrete monument;
Thence N02°16'47"E 108.10' to a concrete monument;
Thence S86°32'32"E 68.10' to a concrete monument and the True Point of Beginning.

Said parcel containing 7,275 square feet or 0.167 acre which equates to 675.8 square meters or 0.172 cuerdas.

Said MOV parcel containing four thousand, two hundred forty eight and six hundred eighty eight thousandths (4,248.688) acres, which equates to seventeen million, one hundred ninety three thousand, eight hundred ninety three (17,193,893) square meters or four thousand, three hundred seventy four and five hundred ninety six thousandths (4,374.596) cuerdas to the approximate edge of the water.

The MOV parcel is subject to the following constituted easements:

1. In favor of the Puerto Rico Conservation Trust, a strip of land having a length of eight thousand one hundred eighteen point zero (8,118.0) meters and a width of fifteen point twenty four (15.24) meters running from West to East, bounded on the North with land of the United States of America to be conveyed to the Municipality of Vieques and the Puerto Rico Ports Authority's Vieques Airport, on the South with land of the United States of America to be conveyed to the Municipality of Vieques, on the East with the Puerto Rico Conservation Trust Fund's Parcel A and the Puerto Rico Land Administration, and on the West with land of the United States of America, and land of the United States of America to be conveyed to the Municipality of Vieques.

2. In favor of the Puerto Rico Conservation Trust, a strip of land having a length of 4,539.1 meters and a width of 15.24 meters running from North to South, bounded on the North with the Municipality of Vieques, South with the United States Government and the Municipality of Vieques, East with the Municipality of Vieques, and on the West with the Municipality of Vieques.

3. In favor of the Puerto Rico Conservation Trust, a strip of land having a length of one thousand eight hundred ninety two point five (1,892.5) meters and a width of seven point sixty two (7.62) meters running from the Northwest to the Southeast, bounded on the North and East with land of the United States of America to be conveyed to the Municipality of Vieques and on the South and West with land of the United States of America to be conveyed to the Municipality of Vieques and land of the Puerto Rico Conservation Trust Fund.

4. In favor of the Puerto Rico Conservation Trust, Strip of land having a length of five hundred eighty five point three (585.3) meters and a width of fifteen point twenty four (15.24) meters running North to South, bounded on the North, East and West with land of the United States of America to be conveyed to the Municipality of Vieques, and on the South with land of the Puerto Rico Conservation Trust Fund.

For purposes of its recording at the Registry of Property, this parcel of land is valued at one dollar (\$1.00).

After the segregation of the MOV Parcel, the description of the remnant remaining in Federal Government ownership, hereinafter Remnant, is described as follows:

Parcel of land, hereinafter referred to as the Remnant, made of three portions identified as Parcel A, Parcel B, and Parcel C, located in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing 3,251.796 cuerdas which equates to 12,780,847 square meters or 3,158.204 acres, which Remnant is described as follows:

Parcel A. A parcel of land situated in the Wards of Mosquito, Punta Ares, and Llave, Municipality of Vieques, Puerto Rico, containing an area of two thousand, eight hundred twenty one and four hundred and sixty two thousandths (2,821.462) acres, which equates to eleven million, four hundred eighteen thousand, ninety eight and two tenths (11,418,098.2) square meters or two thousand nine hundred and five and seventy six thousandths (2,905.076) cuerdas; bounded on the north by the Municipality of Vieques, the Atlantic Ocean, and the Puerto Rico Conservation Trust, on the East by the Municipality of Vieques and the Puerto Rico Conservation Trust, on the West by the Atlantic Ocean, and on the South, by the Caribbean Sea.

Parcel B. A parcel of land situated in the Wards of Llave, Municipality of Vieques, Puerto Rico, containing an area of three hundred thirty six and five hundred seventy five thousandths (336.575) acres, which equates to one hundred thirty six thousand, two hundred and three (136,203.0) square meters or three hundred forty six and five hundred forty eight thousandths (346.548) cuerdas; bounded on the North by the Municipality of Vieques, on the East by the

Municipality of Vieques, on the South by the Caribbean Sea, and on the West by the Puerto Rico Conservation Trust and the Municipality of Vieques.

Parcel C. Parcel of land situated in the Wards of Mosquito, Municipality of Vieques, Puerto Rico, containing an area of one hundred and sixty seven thousandths (0.167) acres, which equates to six hundred seventy five and eight tenths (675.8) square meters or one hundred and seventy two thousandths (0.172) cuerdas; bounded on the North by the Municipality of Vieques, on the South by the Municipality of Vieques, on the East by the Municipality of Vieques and on the West by the Municipality of Vieques.

SECOND: The MOV Parcel is subject to all recorded and all existing and visible unrecorded reservations, easements, and rights-of-way for public roads, pipelines, drainage ditches and public utilities presently existing and;

THIRD: Pursuant to Section 1508 (b) of Public Law 106-398, the Secretary of the Navy hereby conveys the MOV Parcel to Grantee on the terms and conditions hereinafter stated and such conveyance is not incompatible with the public interest;

FOURTH: That the Grantee herein accepts the conveyance of all of the Government's property interests title and rights on the MOV Parcel; and

FIFTH: The conveyance is authorized pursuant to the authority of U.S. Public Law 106-398.

WHEREFORE, the Government and the Grantee further covenant and agree as follows:

I. Conveyance.

A. The Government hereby remises, releases, and quitclaims, and by these presents does remise, release, and quitclaim unto the Grantee, and its successors and assigns, forever, all right, title, and interest which the Government has in the MOV Parcel subject to the conditions and easements set forth in paragraph FIFTH II and FIFTH III, further subject to all recorded and unrecorded reservations, easements, and rights-of-way for public roads, pipelines, drainage ditches, and public utilities presently existing and visible; further subject to all easements and covenants constituted from their origin.

II. Easements. The MOV parcel is further subject to the following easements:

A. **Retained Land Interests for Navy Operations.** Pursuant to Section of 1506 of U.S. Public Law 106-398, the Government hereby constitutes the following described easements and interests over the MOV parcel necessary for the operation and support of the ROTH and the Mount Pirata Telecommunication Site, as described herein. Government and Grantee further agree that all easements and rights of way retained by the Government or for whose benefit such interests are constituted pursuant to Section 1506(b)(3) of Public Law 106-398, as more particularly described in II.A., subsections 1 to 9 herein, shall cease and terminate upon the occurrence of any of following events, whichever happens first:

1. When the United States permanently ceases operations of the ROTHHR and Mt. Pirata or disposes of the site; or

2. When said easements, rights of way and other interests in property are no longer necessary for:

a. Ensuring access to the site for ROTHHR and the Mount Pirata telecommunications sites;

b. Providing utilities for such properties;

c. Ensuring the security of such properties; and

d. Ensuring effective maintenance and operations of such properties.

Upon termination of any easement herein retained pursuant to section 1506(b)(3) of Public Law 106-398, the Government will deliver to the Grantee in recordable form a release relating specifically to any of the easements retained pursuant to section 1506(b)(3).

1. An easement for ingress and egress constituted in favor of the Government over the MOV Parcel to provide access to the Mount Pirata Telecommunications site to be retained for as long as needed pursuant to Public Law 106-398, section 1506(b)(3).

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N06°43'46"W 4472.16' to a concrete monument, the True Point of Beginning, having a northing of 755,865.1991 and an easting of 961,991.0745:

Thence N52°38'33"W 50.17' to a point;

Thence N32°39'58"E 126.55' to a point;

Thence following a curve to a point with a long chord of 15.75', chord bearing of N31°42'58"E

Radius=475.00'

Arc Len=15.75'

Thence N30°45'59"E 432.29' to a point;

Thence following a curve to a point with a long chord of 12.51', chord bearing of N31°26'57"E

Radius=525.00'

Arc Len=12.51'

Thence N32°07'54"E 406.25' to a point;

Thence following a curve to a point with a long chord of 207.20', chord bearing of N27°48'38"E

Radius=1375.00'

Arc Len=207.39'

Thence following a curve to a point with a long chord of 239.93', chord bearing of N00°19'41"E

Radius=305.00'

Arc Len=246.59'

Thence N22°50'00"W 1171.59' to a point;

Thence following a curve to a point with a long chord of 127.43', chord bearing of N16°44'47"E

Radius=100.00'

Arc Len=138.16'

Thence N56°19'33"E 170.60' to a point;

Thence following a curve to a point with a long chord of 6.32', chord bearing of N55°56'41"E

Radius=475.00'

Arc Len=6.32'

Thence N55°33'49"E 216.10' to a point;

Thence following a curve to a point with a long chord of 323.13', chord bearing of N48°23'48"E

Radius=1295.00'

Arc Len=323.98'

Thence N41°13'46"E 132.07' to a point;

Thence following a curve to a point with a long chord of 165.68', chord bearing of N21°12'44"E

Radius=242.00'

Arc Len=169.09'

Thence N01°11'41"E 393.57' to a point;

Thence following a curve to a point with a long chord of 135.70', chord bearing of N41°40'35"E

Radius=104.51'

Arc Len=147.69'

Thence following a curve to a point with a long chord of 310.82', chord bearing of

N71°05'47"E

Radius=810.00'

Arc Len=312.76'

Thence N60°02'05"E 347.51' to a point;

Thence following a curve to a point with a long chord of 219.30', chord bearing of N64°05'28"E

Radius=1550.00'

Arc Len=219.48'

Thence N68°08'52"E 1975.67' to a point;

Thence following a curve to a point with a long chord of 31.10', chord bearing of N69°01'01"E

Radius=1025.00'

Arc Len=31.10'

Thence N69°53'11"E 454.51' to a point;

Thence following a curve to a point with a long chord of 6.53', chord bearing of N70°04'08"E

Radius=1025.00'

Arc Len=6.53'

Thence N70°15'06"E 508.01' to a point;

Thence following a curve to a point with a long chord of 435.57', chord bearing of N75°11'58"E

Radius=2525.00'

Arc Len=436.11'

Thence N80°08'51"E 1301.38' to a point;

Thence following a curve to a point with a long chord of 253.83', chord bearing of N67°45'55"E

Radius=591.88'

Arc Len=255.82'

Thence N55°22'59"E 279.97' to a point;

Thence following a curve to a point with a long chord of 14.53', chord bearing of N54°30'24"E

Radius=475.00'

Arc Len=14.53'

Thence N53°37'49"E 546.74' to a point;

Thence following a curve to a point with a long chord of 11.52', chord bearing of N52°56'08"E

Radius=475.00'

Arc Len=11.52'

Thence N52°14'28"E 643.36' to a point;

Thence following a curve to a point with a long chord of 6.63', chord bearing of N52°36'11"E

Radius=525.00'

Arc Len=6.63'

Thence N52°57'54"E 456.90' to a point;

Thence following a curve to a point with a long chord of 8.54', chord bearing of N52°26'59"E

Radius=475.00'

Arc Len=8.55'

Thence N51°56'03"E 507.01' to a point;

Thence following a curve to a point with a long chord of 370.52', chord bearing of N59°40'39"E

Radius=1375.00'

Arc Len=371.65'

Thence N67°25'14"E 871.26' to a point;

Thence following a curve to a point with a long chord of 310.16', chord bearing of N71°48'46"E

Radius=2025.00'

Arc Len=310.47'

Thence N76°12'18"E 56.43' to a point;

Thence following a curve to a point with a long chord of 227.99', chord bearing of N88°44'45"E

Radius=525.00'

Arc Len=229.82'

Thence S78°42'48"E 478.89' to a point;

Thence following a curve to a point with a long chord of 478.06', chord bearing of N82°42'07"E

Radius=750.00'

Arc Len=486.55'

Thence N64°07'02"E 561.98' to a point;

Thence following a curve to a point with a long chord of 422.55', chord bearing of N70°06'21"E

Radius=2025.00'

Arc Len=423.31'

Thence N76°05'40"E 585.73' to a point;

Thence following a curve to a point with a long chord of 626.02', chord bearing of N70°46'23"E

Radius=3375.00'

Arc Len=626.91'

Thence N65°27'06"E 761.14' to a point;

Thence following a curve to a point with a long chord of 398.69', chord bearing of N68°09'21"E

Radius=4225.00'

Arc Len=398.83'

Thence N70°51'37"E 352.98' to a point;

Thence following a curve to a point with a long chord of 244.61', chord bearing of N64°53'08"E

Radius=1175.00'

Arc Len=245.05'

Thence N58°54'39"E 391.22' to a point;

Thence following a curve to a point with a long chord of 7.64', chord bearing of N59°19'40"E

Radius=525.00'

Arc Len=7.64'

Thence N59°44'41"E 447.88' to a point;

Thence S13°39'11"E 52.17' to a point;

Thence S59°44'41"W 432.97' to a point;

Thence following a curve to a point with a long chord of 6.91', chord bearing of S59°19'40"W

Radius=475.00'

Arc Len=6.91'

Thence S58°54'39"W 391.22' to a point;

Thence following a curve to a point with a long chord of 20.41', chord bearing of S59°23'18"W

Radius=1225.00'

Arc Len=20.41'

Thence following a curve to a point with a long chord of 156.87', chord bearing of S57°35'31"E

Radius=225.00' Arc Len=160.23'

Thence S37°11'26"E 113.54' to a point;

Thence following a curve to a point with a long chord of 119.95', chord bearing of S30°37'51"E

Radius=525.00'

Arc Len=120.21'

Thence following a curve to a point with a long chord of 229.03', chord bearing of S64°56'32"E

Radius=175.00'

Arc Len=249.67'

Thence N74°11'12"E 343.05' to a point;

Thence following a curve to a point with a long chord of 142.58', chord bearing of S60°20'30"E

Radius=100.00'

Arc Len=158.73'

Thence following a curve to a point with a long chord of 60.97', chord bearing of S52°26'06"E

Radius=50.00'

Arc Len=65.56'

Thence Due East N90°00'00"E 411.09' to a point;

Thence following a curve to a point with a long chord of 97.70', chord bearing of N49°21'27"E

Radius=75.00' Arc Len=106.40'

Thence N08°42'54" 127.15' to a point;

Thence following a curve to a point with a long chord of 123.29', chord bearing of N38°15'52"E

Radius=125.00'

Arc Len=128.93' Thence N67°48'51"E 411.37' to a point;

Thence following a curve to a point with a long chord of 56.51', chord bearing of N70°53'56"E

Radius=525.00' Arc Len=56.53'

Thence N73°59'02"E 96.68' to a point;

Thence following a curve to a point with a long chord of 651.65', chord bearing of N76°22'40"E

Radius=7800.00' Arc Len=651.84'

Thence N78°46'19"E 394.04' to a point;

Thence following a curve to a point with a long chord of 52.26', chord bearing of N80°13'58"E

Radius=1025.00' Arc Len=52.27'

Thence N81°41'37"E 369.76' to a point;

Thence following a curve to a point with a long chord of 634.34', chord bearing of N85°49'39"E

Radius=4400.00' Arc Len=634.89'

Thence following a curve to a point with a long chord of 316.07', chord bearing of N79°33'21"E

Radius=875.00'

Arc Len=317.81' Thence N69°09'01"E 343.56' to a point;

Thence following a curve to a point with a long chord of 274.27', chord bearing of N85°55'52"E

Radius=475.00' Arc Len=278.24'

Thence S77°17'17"E 47.62' to a point;

Thence following a curve to a point with a long chord of 275.72', chord bearing of S62°03'52"E

Radius=525.00'

Arc Len=278.99' Thence following a curve to a point with a long chord of 232.74', chord bearing of S82°25'15"E

Radius=200.00'

Arc Len=248.40' Thence following a curve to a point with a long chord of 104.81', chord bearing of N67°31'00"E

Radius=545.00'

Arc Len=104.97'

Thence S03°52'39"W 53.90' to a point;

Thence following a curve to a point with a long chord of 76.08', chord bearing of S66°24'24"W

Radius=495.00'

Arc Len=76.16'

Thence following a curve to a point with a long chord of 290.92', chord bearing of N82°25'15"W

Radius=250.00' Arc Len=310.50'

Thence following a curve to a point with a long chord of 249.46', chord bearing of N62°03'52"W

Radius=475.00'

Arc Len=252.42' Thence N77°17'17"W 47.62' to a point;

Thence following a curve to a point with a long chord of 245.40', chord bearing of S85°55'52"W

Radius=425.00' Arc Len=248.95'

Thence S69°09'01"W 343.56' to a point;

Thence following a curve to a point with a long chord of 334.13', chord bearing of S79°33'21"W

Radius=925.00'

Arc Len=335.97' Thence following a curve to a point with a long chord of 627.14', chord bearing of S85°49'39"W

Radius=4350.00'

Arc Len=627.68' Thence S81°41'37"W 369.76' to a point;

Thence following a curve to a point with a long chord of 49.71', chord bearing of S80°13'58"W

Radius=975.00'

Arc Len=49.72' Thence S78°46'19"W 394.04' to a point;

Thence following a curve to a point with a long chord of 647.47', chord bearing of S76°22'40"W

Radius=7750.00'

Arc Len=647.66' Thence S73°59'02"W 96.68' to a point;

Thence following a curve to a point with a long chord of 51.12', chord bearing of S70°53'56"W

Radius=475.00' Arc Len=51.15'

Thence S67°48'51"W 411.37' to a point;

Thence following a curve to a point with a long chord of 73.98', chord bearing of S38°15'52"W

Radius=75.00' Arc Len=77.36'

Thence S08°42'54"W 127.15' to a point;

Thence following a curve to a point with a long chord of 162.83', chord bearing of S49°21'27"W

Radius=125.00'

Arc Len=177.34' Thence Due West S90°00'00"W 411.09' to a point;

Thence following a curve to a point with a long chord of 121.93', chord bearing of N52°26'06"W

Radius=100.00'

Arc Len=131.13' Thence following a curve to a point with a long chord of 71.29', chord bearing of N60°20'30"W

Radius=50.00' Arc Len=79.36'

Thence S74°11'12"W 343.05' to a point;

Thence following a curve to a point with a long chord of 294.46', chord bearing of N64°56'32"W

Radius=225.00'

Arc Len=321.00'

Thence following a curve to a point with a long chord of 108.53', chord bearing of N30°37'51"W

Radius=475.00'

Arc Len=108.76'

Thence N37°11'26"W 113.54' to a point;

Thence following a curve to a point with a long chord of 217.29', chord bearing N75°34'02"W

Radius=175.00'

Arc Len=234.43'

Thence following a curve to a point with a long chord of 102.69', chord bearing of S68°27'29"W

Radius=1225.00'

Arc Len=102.72' Thence S70°51'37"W 352.98' to a point;

Thence following a curve to a point with a long chord of 393.97', chord bearing of S68°09'21"W

Radius=4175.00'

Arc Len=394.11'

Thence S65°27'06"W 761.14' to a point;

Thence following a curve to a point with a long chord of 635.30', chord bearing of S70°46'23"W

Radius=3425.00'

Arc Len=636.20'

Thence S76°05'40"W 585.73' to a point;

Thence following a curve to a point with a long chord of 412.11', chord bearing of S70°06'21"W

Radius=1975.00'

Arc Len=412.86'

Thence S64°07'02"W 561.98' to a point;

Thence following a curve to a point with a long chord of 509.93', chord bearing of S82°42'07"W

Radius=800.00'

Arc Len=518.98'

Thence N78°42'48"W 478.89' to a point;

Thence following a curve to a point with a long chord of 206.28', chord bearing of S88°44'45"W

Radius=475.00'

Arc Len=207.93'

Thence S76°12'18"W 56.43' to a point;

Thence following a curve to a point with a long chord of 302.51', chord bearing of S71°48'46"W

Radius=1975.00'

Arc Len=302.80'

Thence S67°25'14"W 871.26' to a point;

Thence following a curve to a point with a long chord of 357.04', chord bearing of S59°40'39"W

Radius=1325.00'

Arc Len=358.13'

Thence S51°56'03"W 507.01' to a point;

Thence following a curve to a point with a long chord of 9.44', chord bearing of S52°26'59"W

Radius=525.00'

Arc Len=9.45'

Thence S52°57'54"W 456.90' to a point;

Thence following a curve to a point with a long chord of 6.00', chord bearing of S52°36'11"W

Radius=475.00'

Arc Len=6.00'

Thence S52°14'28"W 643.36' to a point;

Thence following a curve to a point with a long chord of 12.73', chord bearing of S52°56'08"W

Radius=525.00'

Arc Len=12.73'

Thence S53°37'49"W 546.74' to a point;

Thence following a curve to a point with a long chord of 16.06', chord bearing of S54°30'24"W

Radius=525.00'

Arc Len=16.06'

Thence S55°22'59"W 279.97' to a point;

Thence following a curve to a point with a long chord of 275.28', chord bearing of S67°45'55"W

Radius=641.88'

Arc Len=277.43'

Thence S80°08'51"W 1301.38' to a point;

Thence following a curve to a point with a long chord of 426.94', chord bearing of S75°11'58"W

Radius=2475.00'

Arc Len=427.47'

Thence S70°15'06"W 508.01' to a point;

Thence following a curve to a point with a long chord of 6.22', chord bearing of S70°04'08"W

Radius=975.00'

Arc Len=6.22'

Thence S69°53'11"W 454.51' to a point;

Thence following a curve to a point with a long chord of 29.59', chord bearing of S69°01'01"W

Radius=975.00'

Arc Len=29.59'

Thence S68°08'52"W 1975.67' to a point;

Thence following a curve to a point with a long chord of 212.22', chord bearing of S64°05'28"W

Radius=1500.00'

Arc Len=212.40'

Thence S60°02'05"W 347.51' to a point;

Thence following a curve to a point with a long chord of 330.01', chord bearing of S71°05'47"W

Radius=860.00'

Arc Len=332.07'

Thence following a curve to a point with a long chord of 70.78', chord bearing of S41°40'35"W

Radius=54.51'

Arc Len=77.03'

Thence S01°11'41"W 393.57' to a point;

Thence following a curve to a point with a long chord of 199.91', chord bearing of S21°12'44"W

Radius=292.00'

Arc Len=204.03'

Thence S41°13'46"W 132.07' to a point;

Thence following a curve to a point with a long chord of 335.61', chord bearing of S48°23'48"W

Radius=1345.00'

Arc Len=336.49'

Thence S55°33'49"W 216.10' to a point;

Thence following a curve to a point with a long chord of 6.98', chord bearing of S55°56'41"W

Radius=525.00'

Arc Len=6.98'

Thence S56°19'33"W 170.60' to a point;

Thence following a curve to a point with a long chord of 63.71', chord bearing of S16°44'47"W

Radius=50.00'

Arc Len=69.08'

Thence S22°50'00"E 1171.59' to a point;

Thence following a curve to a point with a long chord of 279.26', chord bearing of S00°19'41"W

Radius=355.00'

Arc Len=287.01'

Thence following a curve to a point with a long chord of 214.73', chord bearing of S27°48'38"W

Radius=1425.00'

Arc Len=214.93'

Thence S32°07'54"W 406.25' to a point;

Thence following a curve to a point with a long chord of 11.32', chord bearing of S31°26'57"W

Radius=475.00'

Arc Len=11.32'

Thence S30°45'59"W 432.29' to a point;

Thence following a curve to a point with a long chord of 17.40', chord bearing of S31°42'58"W

Radius=525.00'

Arc Len=17.41'

Thence S32°39'58"W 130.66' to a concrete monument and the True Point of Beginning;.

Said parcel containing 1,327,080 square feet or 30.466 acres, which equates to 123,290.3 square meters or 31.368 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

A strip of land having a length of eight thousand one hundred eighteen point zero (8,118.0) meters and a width of fifteen point twenty four (15.24) meters running from West to East, bounded on the North with land of the United States of America to be conveyed to the Municipality of Vieques and the Puerto Rico Ports Authority's Vieques Airport, on the South with land of the United States of America to be conveyed to the Municipality of Vieques, on the East with the Puerto Rico Conservation Trust Fund's Parcel A and the Puerto Rico Land

Administration, and on the West with land of the United States of America, and land of the United States of America to be conveyed to the Municipality of Vieques.

2. The ROTH Communication Easement, constituted over the MOV parcel in favor of the Government, is described as follows:

Beginning at a concrete monument in the Mosquito Wards, having a northing of 761,902.5602 and an easting of 972,938.9875 noted as the Point of Beginning on the plat RELOCATABLE OVER THE HORIZION RADAR (ROTHR) COMMUNICATION EASEMENT. Thence N02°16'47"W 108.10' to a concrete monument, the True Point of Beginning, having a northing of 762,010.5765 and an easting of 972,943.2875:

Thence N02°16'47"E 48.24' to a point;

Thence S86°32'32"E 53.62' to a point;

Thence N01°44'43"W 554.86' to a point;

Thence N05°33'49"W 658.21' to a point;

Thence following a curve to a point with a long chord of 164.42', chord bearing of N46°59'27"W

Radius=124.24'

Arc Len=179.67'

Thence following a curve to a point with a long chord of 387.02', chord bearing of N81°06'40"W

Radius=1521.52'

Arc Len=388.07'

Thence following a curve to a point with a long chord of 104.00', chord bearing of S47°43'03"W

Radius=61.00'

Arc Len=124.52'

Thence S10°45'37"E 148.30' to a point;

Thence S08°09'51"E 238.39' to a point;

Thence following a curve to a point with a long chord of 293.44', chord bearing of S26°57'41"W

Radius=255.00'

Arc Len=312.66'

Thence following a curve to a point with a long chord of 285.20', chord bearing of S48°49'44"W

Radius=621.77'

Arc Len=287.76'

Thence S35°34'14"W 153.21' to a point;

Thence S24°59'15"W 172.10' to a point;

Thence following a curve to a point with a long chord of 167.76', chord bearing of S10°01'51"W

Radius=325.00'

Arc Len=169.68'

Thence S04°55'32"E 121.12' to a point;

Thence S09°05'26"E 185.18' to a point;
Thence S73°09'07"W 202.52' to a point;
Thence S70°51'22"W 200.78' to a point;
Thence N19°08'38"W 50.00' to a point;
Thence N70°51'22"E 201.78' to a point;
Thence N73°09'07"E 159.87' to a point;
Thence N09°05'26"W 143.34' to a point;
Thence N04°55'32"W 122.94' to a point;
Thence following a curve to a point with a long chord of 193.56', chord bearing of
N10°01'51"E

Radius=375.00'

Arc Len=195.78'

Thence N24°59'15"E 176.74' to a point;

Thence N35°34'14"E 157.84' to a point;

Thence following a curve to a point with a long chord of 308.13', chord bearing of
N48°49'44"E

Radius=671.77'

Arc Len=310.90'

Thence following a curve to a point with a long chord of 235.90', chord bearing of
N26°57'41"E

Radius=205.00'

Arc Len=251.35'

Thence N08°09'51"W 237.26' to a point;

Thence N10°45'37"W 147.16' to a point;

Thence following a curve to a point with a long chord of 189.24', chord bearing of
N47°43'03"E

Radius=111.00'

Arc Len=226.58'

Thence following a curve to a point with a long chord of 374.30', chord bearing of
S81°06'40"E

Radius=1471.52'

Arc Len=375.32'

Thence following a curve to a point with a long chord of 230.58', chord bearing of
S46°59'27"E

Radius=174.24'

Arc Len=251.97'

Thence S05°33'49"E 659.88' to a point;

Thence S01°44'43"E 609.50' to a point;

Thence N86°32'32"W 107.23' to a concrete monument and the Point of Beginning.

For recordation purposes, this easement can be described as strip of land having a length of one thousand two hundred seventy six point eight (1,276.8) meters and a width of fifteen point twenty four (15.24) meters running from East to West bounded on the North, East, and West by the Municipality of Vieques, and on the South by the lands of the United States.

This easement is for ownership, construction, maintenance, operation, repair, or replacement of any of the existing infrastructure, or future infrastructure that may be required, at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained.

3. The ROTH Electric Easement, constituted over the MOV parcel in favor of the Government, is described as follows:

Beginning at a concrete monument on the northwestern corner of the RELOCATABLE OVER THE HORIZON RADAR (ROTHR) SITE in the Llave Wards, having a northing of 753,324.0192 and an easting of 975,403.6265 noted as the Point of Beginning on the plat RELOCATABLE OVER THE HORIZON RADAR (ROTHR) ELECTRIC EASEMENT. Thence S25°14'20"W 143.32' to a point, the True Point of Beginning, having a northing of 753,194.3838 and an easting of 975,342.5171:

Thence S25°14'20"W 50.41' to a point;
Thence N72°05'23"W 2175.80' to a point;
Thence N01°46'21"E 1821.20' to a point;
Thence N00°25'31"W 179.97' to a point;
Thence N11°21'39"W 179.55' to a point;
Thence N10°39'00"W 216.30' to a point;
Thence N32°33'45"E 219.15' to a point;
Thence N38°23'23"E 184.17' to a point;
Thence N12°07'09"W 184.29' to a point;
Thence N44°17'54"W 184.12' to a point;
Thence N31°38'54"W 210.86' to a point;
Thence N13°53'40"W 169.23' to a point;
Thence N02°45'35"W 385.92' to a point;
Thence N04°22'55"W 356.21' to a point;
Thence S85°37'05"W 8.31' to a point;
Thence N04°22'55"W 12.96' to a point;
Thence N85°37'05"E 8.31' to a point;
Thence N06°27'30"E 188.96' to a point;
Thence N16°59'49"E 184.69' to a point;
Thence N23°47'09"E 183.55' to a point;
Thence N31°25'34"E 176.18' to a point;
Thence N11°41'46"E 173.66' to a point;
Thence N11°47'17"W 190.65' to a point;
Thence N02°48'05"E 222.75' to a point;
Thence N25°14'50"E 213.82' to a point;
Thence N00°47'57"W 158.43' to a point;
Thence N20°58'54"W 216.93' to a point;
Thence N02°11'09"W 201.71' to a point;
Thence N11°23'38"W 191.11' to a point;
Thence N17°52'11"W 434.95' to a point;

Thence N18°19'39"W 712.42' to a point;
Thence N00°18'28"W 216.33' to a point;
Thence N04°11'35"E 444.23' to a point;
Thence S86°41'22"E 18.87' to a point;
Thence N05°27'20"E 18.73' to a point;
Thence following a curve to a point with a long chord of 89.19', chord bearing of
N03°27'03"E

Radius=1275.00'

Arc Len=89.21'

Thence S86°32'32"E 31.88' to a point;
Thence S04°11'35"W 550.87' to a point;
Thence S00°18'28"E 206.44' to a point;
Thence S18°19'39"E 704.69' to a point;
Thence S17°52'11"E 437.98' to a point;
Thence S11°23'38"E 197.97' to a point;
Thence S02°11'09"E 197.47' to a point;
Thence S20°58'54"E 205.97' to a point;
Thence N69°01'06"E 25.43' to a point;
Thence S20°58'54"E 11.58' to a point;
Thence S69°01'06"W 25.43' to a point;
Thence S00°47'57"E 175.75' to a point;
Thence S73°18'31"E 22.98' to a point;
Thence S16°41'29"W 10.00' to a point;
Thence N73°18'31"W 23.09' to a point;
Thence S25°14'50"W 208.39' to a point;
Thence S02°48'05"W 206.43' to a point;
Thence S11°47'17"E 189.31' to a point;
Thence N89°26'26"E 28.89' to a point;
Thence S00°33'34"E 10.00' to a point;
Thence S89°26'26"W 28.88' to a point;
Thence S11°41'46"W 187.86' to a point;
Thence S47°58'06"E 31.40' to a point;
Thence S42°01'54"W 13.87' to a point;
Thence N47°58'06"W 28.81' to a point;
Thence S31°25'34"W 167.42' to a point;
Thence S23°47'09"W 177.25' to a point;
Thence S16°59'49"W 177.11' to a point;
Thence S06°27'30"W 179.60' to a point;
Thence S04°22'55"E 365.13' to a point;
Thence S02°45'35"E 381.75' to a point;
Thence S13°53'40"E 156.55' to a point;
Thence S31°38'54"E 197.51' to a point;
Thence S44°17'54"E 137.30' to a point;
Thence N11°46'05"W 37.07' to a point;
Thence N78°13'55"E 10.00' to a point;
Thence S11°46'05"E 52.75' to a point;

Thence S44°17'54"E 122.10' to a point;
Thence S12°07'09"E 113.06' to a point;
Thence S38°23'23"W 84.39' to a point;
Thence S12°23'38"E 39.45' to a point;
Thence S77°36'22"W 10.00' to a point;
Thence N12°23'38"W 31.29' to a point;
Thence S38°23'23"W 166.56' to a point;
Thence S32°33'45"W 196.81' to a point;
Thence S10°39'00"E 196.19' to a point;
Thence S11°21'39"E 174.57' to a point;
Thence N73°57'24"E 29.85' to a point;
Thence S16°02'36"E 10.00' to a point;
Thence S73°57'24"W 30.78' to a point;
Thence S00°25'31"E 185.12' to a point;
Thence S01°46'21"W 1784.58' to a point;
Thence S72°05'23"E 2144.65' to a point, the True Point of Beginning.

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 2,597.5 meters and a width of 15.24 meters running from North to South, containing 541,155 square feet or 12.423 acres, which equates to 50,275.1 square meters or 12.7910 cuerdas bounded on the North with the United States Government, South with the Property to be conveyed to the Municipality of Vieques, East with the Property to be conveyed to the Municipality of Vieques, and on the West with the Property to be conveyed to the Municipality of Vieques.

4. The ROTHRESTRICTIVE Use Easement and Covenant, constituted over the MOV parcel in favor of the Government, is described as follows:

Parcel A: Beginning at a concrete monument on the western side of the ROTHRESTRICTIVE PARCEL in the Llave Wards, on the plat labeled RELOCATABLE OVER THE HORIZON RADAR (ROTHRESTRICTIVE) RESTRICTIVE USE EASEMENT having a northing of 752,328.4154 and an easting of 974,422.2051:

Thence N15°53'46"E 3001.19' to a concrete monument; thence S85°32'55"E 113.24' to a concrete monument; thence N89°30'34"E 434.46' to a concrete monument; thence S83°55'36"E 213.66' to a concrete monument; thence N70°55'39"E 255.84' to a concrete monument; thence S73°38'47"E 126.22' to a concrete monument; thence N81°47'41"E 236.98' to a concrete monument; thence S85°32'59"E 133.88' to a concrete monument; thence following a curve to a concrete monument with a long chord of 627.24', chord bearing of S69°59'09"E, Radius=409.02', Arc Len=714.79'; thence S81°22'46"E 634.81' to a concrete monument; thence S01°58'35"W 3415.08' to a concrete monument; thence S73°08'47"W 669.25' to a concrete monument; thence N15°39'55"E 349.82' to a concrete monument; thence N24°58'13"W 466.47' to a concrete monument; thence N23°40'01"E 202.93' to a concrete monument; thence N89°18'06"E 103.57' to a concrete monument; thence S85°50'08"E

158.23' to a concrete monument; thence N04°11'12"E 144.71' to a concrete monument; thence N79°08'11"W 162.48' to a concrete monument; thence N70°43'43"W 233.42' to a concrete monument; thence N25°13'36"W 698.85' to a concrete monument; thence N59°58'30"W 151.46' to a concrete monument; thence N73°51'34"W 1007.58' to a concrete monument; thence S59°18'31"W 159.55' to a concrete monument; thence S48°40'26"W 169.13' to a concrete monument; thence S25°14'20"W 291.46' to a concrete monument; thence S49°30'15"W 1127.15' to a concrete monument, the True Point of Beginning.

For recordation purposes, this easement is described as a parcel of land in Llave Ward, Municipality of Vieques, Puerto Rico, containing 7,180,958 square feet or 164.852 acres, which equates to 667,132.8 square meters or 169.738 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the lands of the United States, on the West by the Municipality of Vieques.

Parcel B: Beginning at a point on the western side of the ROTH R PARCEL in the Llave Wards, having a northing of 752,206.0490 and an easting of 974,460.3733:

Thence S41°43'34"E 13.50' to a concrete monument set; thence S22°38'47"E 75.16' to a concrete monument set; thence S02°41'06"W 129.32' to a concrete monument set; thence S59°14'22"E 675.70' to a concrete monument set; thence S84°16'44"W 1442.43' to the intersection with the ROTH R restrictive use easement; thence N49°41'22"W 1078.94' to the Point of Beginning.

For recordation purposes, this easement is described as a parcel of land in Llave Ward, Municipality of Vieques, Puerto Rico, containing 389,545 square feet or 8.943 acres, which equates to 36,189.9 square meters or 9.208 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the lands of the United States, on the South by the lands of the United States, on the West by the Municipality of Vieques.

Which Restrictive Use Easement and covenant shall run with the land and which restricts the use thereof as follows so that the property shall not be used for any of the following uses or structures:

a. Any type of structure, dwelling, building, antenna, tower, pole, line, wire, or other obstruction, permanent or temporary, shall not be permitted.

b. No new construction of highways, arterial roads, expressways, and railroads excluding secondary roads, tertiary roads, or private driveways. All proposed new roads and trails must be planned and developed in consultation with the Government as represented by the Commanding Officer, United States Naval Station, Roosevelt Roads, or his designee to insure electromagnetic interference compatibility. No road or trail that is incompatible with electromagnetic interference requirements may be constructed.

c. No new buildings or structures are permitted.

d. No new overhead power lines of any kind are permitted with the exception of those currently allowed under existing recorded documents prior to the date of this instrument.

e. All new utility lines, including conductors, will be buried, with the exception of those currently allowed under existing recorded documents prior to the date of this instrument.

f. No new airports, heliports, helistops, or grass landing strips including, but not limited to, landing fields used for agricultural purposes.

g. No storage and/or processing of salvage or junk metal scrap yards or collection depots of metal-based material to be recycled.

h. No radio transmitters, radio frequency stabilized welders, or other radio frequency heaters other than residential microwave ovens, relay facilities, new line-of-sight relay devices, for example, microwave towers, electric fences, and lighting systems other than incandescent, fluorescent, and low pressure sodium vapor.

Subject to the restrictions as contained in this covenant excepting existing buildings, structures, and uses already in place, that sub-parcel which is the object of this easement shall not be used for other than agricultural and forestry purposes.

The Government also retains a clearance easement over the aforesaid Parcels A and B which restricts and prohibits the Grantee and its successors and assigns from; erecting, constructing, growing, installing, creating, or permitting, whether public or private, any structure, dwelling, building, antenna, tower, pole, line, wire, tree, or other obstruction, whatever its nature, together with the right of the Government to enter upon the property and remove all obstructions not in conformance with this easement or covenant, including but not limited to, alteration or removal of all structures, buildings, antennas, towers, or other non-vegetative obstructions, whatever their nature, that shall be erected, constructed, or installed on the property from and after the date of this Instrument, which easement shall be constituted in favor of the Remnant for as long as the need exists pursuant to Public Law 106-398. The Grantee, its successors and assigns shall hold the Government harmless for any consequential damages incurred by Government's exercise of the rights described herein.

The Government also retains an easement for ingress and egress at all times and places over the aforesaid Parcels A and B for the purpose of exercising the rights set forth herein; reserving, however to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained, which easement shall be constituted in favor of the Government as long as the need exists pursuant to Public Law 106-398.

5. An access easement in support of the operation of the Relocatable Over The Horizon Radar, constituted over the MOV parcel in favor of the Government, will exist from Relocatable Over the Horizon Radar's eastern boundary through the La Hueca Parcel to public road, Route 201, more fully described as follows:

Beginning at a concrete monument in the Llave Wards, having a northing of 752,421.3946 and an easting of 977,444.6047 noted as the Point of Beginning on the plat 50'INGRESS/EGRESS EASEMENT D-3. Thence S04°11'12"W 68.78' to a point, the True Point of Beginning, having a northing of 752,352.8016 and an easting of 977,439.5834:

Thence following a curve to a point with a long chord of 361.18', chord bearing of N87°30'31"E

Radius=6725.00'
Arc Len=361.23'

Thence N85°58'11"E 1257.75' to a point;

Thence following a curve to a point with a long chord of 420.19', chord bearing of N81°06'01"E

Radius=2475.00'
Arc Len=420.70'

Thence following a curve to a point with a long chord of 200.33', chord bearing of N77°22'22"E

Radius=5025.00'
Arc Len=200.34'

Thence N78°30'54"E 690.50' to a point;

Thence following a curve to a point with a long chord of 187.07', chord bearing of N71°06'09"E

Radius=725.00'
Arc Len=187.59'

Thence S00°44'32"E 55.02' to a point;

Thence following a curve to a point with a long chord of 176.39', chord bearing of S71°58'49"W

Radius=775.00'
Arc Len=176.78'

Thence S78°30'54"W 690.50' to a point;

Thence following a curve to a point with a long chord of 198.34', chord bearing of S77°22'22"W

Radius=4975.00'
Arc Len=198.35'

Thence following a curve to a point with a long chord of 428.68', chord bearing of S81°06'01"W

Radius=2525.00'
Arc Len=429.20'

Thence S85°58'11"W 1257.75' to a point;

Thence following a curve to a point with a long chord of 368.36', chord bearing of S87°31'39"W

Radius=6775.00'
Arc Len=368.41'

Thence N04°11'12"E 50.20' to a point, the True Point of Beginning.

For recordation purposes, said easement can be described as follows: a strip of land having a length of nine hundred forty eight point one (948.1) meters and a width of fifteen

point twenty four (15.24) meters running from West to East , bounded on the North by the Municipality of Vieques, on the East by Public Road 201, on the South by the Municipality of Vieques, and on the West by the lands of the United States.

The Government reserves for itself an easement for ingress and egress at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Grantee any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained, which easement shall be constituted in favor of the Government for as long as the need exists pursuant to Public Law 106-398.

6. The Government reserves an easement for ingress and egress over the property from Relocatable Over the Horizon Radar's western boundary, which easement shall be constituted over the MOV parcel in favor of the Government for as long as the need exists pursuant to Public Law 106-398, north on Coconut Road to the intersection of North Coast Road, more fully described herein.

-- Beginning at a concrete monument in the Llave ward, having a northing of 752,312.1268 and an easting of 974,332.1004 noted as the Point of Beginning on the plat labeled 50' INGRESS /EGRESS EASEMENT D-4. -----

-- Thence $S00^{\circ}01'33''W$ 61.44' to a concrete monument, the True Point of Beginning, having a northing of 752,250.6872 and an easting of 974,332.0727; thence $S85^{\circ}07'22''W$ 116.55' to a point; thence $N89^{\circ}48'19''W$ 200.00' to a point; thence following a curve to a point with a long chord of 162.00', chord bearing of $S81^{\circ}03'22''W$, Radius=510.00', Arc Len=162.69'; thence $S71^{\circ}55'02''W$ 228.47' to a point; thence following a curve to a point with a long chord of 193.39', chord bearing of $S80^{\circ}03'21''W$, Radius=683.00', Arc Len=194.04'; thence $S88^{\circ}11'41''W$ 138.01' to a point; thence following a curve to a point with a long chord of 157.43', chord bearing of $N43^{\circ}14'32''W$, Radius=105.00', Arc Len=177.99'; thence $N05^{\circ}19'15''E$ 173.88' to a point; thence following a curve to a point with a long chord of 344.92', chord bearing of $N03^{\circ}02'19''E$, Radius=4331.00', Arc Len=345.01'; thence $N00^{\circ}45'24''E$ 194.87' to a point; thence following a curve to a point with a long chord of 15.18', chord bearing of $N01^{\circ}35'07''E$, Radius=525.00', Arc Len=15.18'; thence $N02^{\circ}24'49''E$ 211.56' to a point; thence following a curve to a point with a long chord of 9.72', chord bearing of $N01^{\circ}49'39''E$, Radius=475.00', Arc Len=9.72'; thence $N01^{\circ}14'29''E$ 652.51' to a point; thence following a curve to a point with a long chord of 17.15', chord bearing of $N02^{\circ}10'38''E$, Radius=525.00', Arc Len=17.15'; thence $N03^{\circ}06'47''E$ 131.20' to a point; thence following a curve to a point with a long chord of 11.98', chord bearing of $N02^{\circ}23'25''E$, Radius=475.00', Arc Len=11.98'; thence $N01^{\circ}40'03''E$ 1800.55' to a point; thence following a curve to a point with a long chord of 168.66', chord bearing of $N08^{\circ}33'31''W$, Radius=475.00', Arc Len=169.56'; thence $N18^{\circ}47'06''W$ 111.18' to a point; thence following a curve to a point with a long chord of 179.71', chord bearing of $N00^{\circ}17'11''E$, Radius=275.00', Arc Len=183.07'; thence following a curve to a point with a long chord of 138.47', chord bearing of $N29^{\circ}39'20''E$, Radius=387.31', Arc Len=139.22'; thence $N39^{\circ}57'12''E$ 229.20' to a point; thence following a curve to a point with a long chord of 73.68', chord bearing of $N17^{\circ}08'10''E$, Radius=95.00', Arc Len=75.66'; thence following a curve to a point with a long chord of 127.98', chord bearing of $N25^{\circ}00'13''W$, Radius=193.39', Arc Len=130.44'; thence

N44°19'35"W 128.57' to a point; thence following a curve to a point with a long chord of 257.12', chord bearing of N35°21'32"W, Radius=824.78', Arc Len=258.18'; thence following a curve to a point with a long chord of 188.65', chord bearing of N14°41'16"W, Radius=465.00', Arc Len=189.97'; thence N02°59'04"W 359.68' to a point; thence following a curve to a point with a long chord of 15.09', chord bearing of N03°53'41"W, Radius=475.00', Arc Len=15.09'; thence N04°48'18"W 286.71' to a point; thence following a curve to a point with a long chord of 399.68', chord bearing of N07°40'18"E, Radius=925.00', Arc Len=402.86'; thence N20°08'54"E 88.07' to a point; thence following a curve to a point with a long chord of 182.26', chord bearing of N26°07'36"E, Radius=875.00', Arc Len=182.59'; thence N32°06'18"E 100.02' to a point; thence following a curve to a point with a long chord of 302.88', chord bearing of N08°17'10"E, Radius=375.00', Arc Len=311.79'; thence N15°31'57"W 90.86' to a point; thence following a curve to a point with a long chord of 277.11', chord bearing of N05°33'39"E, Radius=385.00', Arc Len=283.47'; thence N26°39'15"E 128.24' to a point; thence following a curve to a point with a long chord of 241.12', chord bearing of N01°33'41"W, Radius=255.00', Arc Len=251.15'; thence following a curve to a point with a long chord of 289.35', chord bearing of N13°46'51"W, Radius=525.00', Arc Len=293.15'; thence N02°12'56"E 47.02' to a point; thence following a curve to a point with a long chord of 151.76', chord bearing of N06°58'36"W, Radius=475.00', Arc Len=152.41'; thence N16°10'07"W 201.80' to a point; thence following a curve to a point with a long chord of 43.57', chord bearing of N17°26'57"W, Radius=975.00', Arc Len=43.58'; thence N18°43'46"W 893.56' to a point; thence following a curve to a point with a long chord of 174.89', chord bearing of N08°07'16"W, Radius=475.00', Arc Len=175.90'; thence N02°29'15"E 241.71' to a point; thence following a curve to a point with a long chord of 53.09', chord bearing of N03°58'17"E, Radius=1025.00', Arc Len=53.09'; thence N05°27'20"E 283.48' to a point; thence following a curve to a point with a long chord of 148.61', chord bearing of N02°06'52"E, Radius=1275.00', Arc Len=148.70'; thence N01°13'36"W 158.81' to a point; thence following a curve to a point with a long chord of 4.39', chord bearing of N01°29'30"W, Radius=475.00', Arc Len=4.39'; thence N01°45'24"W 289.11' to a point; thence following a curve to a point with a long chord of 354.49', chord bearing of N03°42'25"W, Radius=5208.00', Arc Len=354.56'; thence N05°39'27"W 268.76' to a point; thence following a curve to a point with a long chord of 49.60', chord bearing of N04°16'15"W, Radius=1025.00', Arc Len=49.61'; thence N02°53'03"W 255.44' to a point; thence N87°06'57"E 50.00' to a point; thence S02°53'03"E 255.44' to a point; thence following a curve to a point with a long chord of 47.18', chord bearing of S04°16'15"E, Radius=975.00', Arc Len=47.19'; thence S05°39'27"E 268.76' to a point; thence following a curve to a point with a long chord of 357.90', chord bearing of S03°42'25"E, Radius=5258.00', Arc Len=357.96'; thence S01°45'24"E 289.11' to a point; thence following a curve to a point with a long chord of 4.86', chord bearing of S01°29'30"E, Radius=525.00', Arc Len=4.86'; thence S01°13'36"E 158.81' to a point; thence following a curve to a point with a long chord of 154.44', chord bearing of S02°06'52"W, Radius=1325.00', Arc Len=154.53'; thence S05°27'20"W 283.48' to a point; thence following a curve to a point with a long chord of 50.50', chord bearing of S03°58'17"W, Radius=975.00', Arc Len=50.50'; thence S02°29'15"W 241.71' to a point; thence following a curve to a point with a long chord of 156.48', chord bearing of S08°07'16"E, Radius=425.00', Arc Len=157.38'; thence S18°43'46"E 893.56' to a point; thence following a curve to a point with a long chord of 45.81', chord bearing of S17°26'57"E, Radius=1025.00', Arc Len=45.81'; thence S16°10'07"E

201.80' to a point; thence following a curve to a point with a long chord of 167.73', chord bearing of S06°58'36"E, Radius=525.00', Arc Len=168.45'; thence S02°12'56"W 47.02' to a point; thence following a curve to a point with a long chord of 261.80', chord bearing of S13°46'51"E, Radius=475.00', Arc Len=265.23'; thence following a curve to a point with a long chord of 288.40', chord bearing of S01°33'41"E, Radius=305.00', Arc Len=300.40'; thence S26°39'15"W 128.24' to a point; thence following a curve to a point with a long chord of 241.13', chord bearing of S05°33'39"W, Radius=335.00', Arc Len=246.66'; thence S15°31'57"E 90.86' to a point; thence following a curve to a point with a long chord of 343.27', chord bearing of S08°17'10"W, Radius=425.00', Arc Len=353.36'; thence S32°06'18"W 100.02' to a point; thence following a curve to a point with a long chord of 171.85', chord bearing of S26°07'36"W, Radius=825.00', Arc Len=172.16'; thence S20°08'54"W 88.07' to a point; thence following a curve to a point with a long chord of 378.07', chord bearing of S07°40'18"W, Radius=875.00', Arc Len=381.08'; thence S04°48'18"E 286.71' to a point; thence following a curve to a point with a long chord of 16.68', chord bearing of S03°53'41"E, Radius=525.00', Arc Len=16.68'; thence S02°59'04"E 359.68' to a point; thence following a curve to a point with a long chord of 168.36', chord bearing of S14°41'16"E, Radius=415.00', Arc Len=169.54'; thence following a curve to a point with a long chord of 241.54', chord bearing of S35°21'32"E, Radius=774.78', Arc Len=242.53'; thence S44°19'35"E 128.57' to a point; thence following a curve to a point with a long chord of 161.07', chord bearing of S25°00'13"E, Radius=243.39', Arc Len=164.16'; thence following a curve to a point with a long chord of 112.46', chord bearing of S17°08'10"W, Radius=145.00', Arc Len=115.49'; thence S39°57'12"W 229.20' to a point; thence following a curve to a point with a long chord of 120.60', chord bearing of S29°39'20"W, Radius=337.31', Arc Len=121.25'; thence following a curve to a point with a long chord of 147.04', chord bearing of S00°17'11"W, Radius=225.00', Arc Len=149.79'; thence S18°47'06"E 111.18' to a point; thence following a curve to a point with a long chord of 186.41', chord bearing of S08°33'31"E, Radius=525.00', Arc Len=187.41'; thence S01°40'03"W 1800.55' to a point; thence following a curve to a point with a long chord of 13.24', chord bearing of S02°23'25"W, Radius=525.00', Arc Len=13.24'; thence S03°06'47"W 131.20' to a point; thence following a curve to a point with a long chord of 15.52', chord bearing of S02°10'38"W, Radius=475.00', Arc Len=15.52'; thence S01°14'29"W 652.51' to a point; thence following a curve to a point with a long chord of 10.74', chord bearing of S01°49'39"W, Radius=525.00', Arc Len=10.74'; thence S02°24'49"W 211.56' to a point; thence following a curve to a point with a long chord of 13.74', chord bearing of S01°35'07"W, Radius=475.00', Arc Len=13.74'; thence S00°45'24"W 194.87' to a point; thence following a curve to a point with a long chord of 348.90', chord bearing of S03°02'19"W, Radius=4381.00', Arc Len=348.99'; thence S05°19'15"W 173.88' to a point; thence following a curve to a point with a long chord of 82.47', chord bearing of S43°14'32"E, Radius=55.00', Arc Len=93.23'; thence N88°14'41"E 138.01' to a point; thence following a curve to a point with a long chord of 179.23', chord bearing of N80°03'21"E, Radius=633.00', Arc Len=179.83'; thence N71°55'02"E 228.47' to a point; thence following a curve to a point with a long chord of 177.88', chord bearing of N81°03'22"E, Radius=560.00', Arc Len=178.64'; thence S89°48'19"E 315.97' to a concrete monument; thence S00°01'33"W 39.70' to a concrete monument and the True Point of Beginning.-----

-- Said parcel containing 638,081 square feet or 14.648 acres, which equates to 63460.5 square meters or 16.146 cuerdas. -----

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 3,893.4 meters and a width of 15.24 meters running from North to South, bounded on the North with the Property to be conveyed to the Municipality of Vieques, South with the Property to be conveyed to the Municipality of Vieques, East with the United States Government, and on the West with the Property to be conveyed to the Municipality of Vieques.

This easement is at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained.

7. The Mount Pirata Electric Easement, constituted over the MOV parcel in favor of the Government which easement shall be constituted in favor of the Government for as long as the need exists pursuant to Public Law 106-398, that encumbers the MOV parcel is described as follows:

Beginning on the plat labeled MOUNT PIRATA 50' ELECTRIC EASEMENT at a point having a northing of 758,263.034 and an easting of 963,879.672:

Thence N89°23'48"W 220.50' to a point; thence N78°25'10"E 196.51' to a point; thence N62°12'24"E 119.01' to a point; thence N06°21'07"E 54.92' to a point; thence S83°41'39"E 82.19' to a point; thence S06°25'40"W 82.50' to a point; thence N83°26'59"W 33.38' to a point; thence S62°12'24"W 138.66' to a point, the Point of Beginning.

For recordation purposes, this easement is described as a strip of land having a length of seventy two point six (72.6) meters and a width of fifteen point twenty four (15.24) meters running from West to East bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the lands of the Puerto Rico Conservation Trust Fund, on the West by the Municipality of Vieques.

This easement is for ownership, construction, maintenance, operation, repair, or replacement of any of the existing infrastructure, or future infrastructure that may be required, at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained.

8. Pursuant to Section 1506(b)(3) and (4) of Public Law 106-398 and in furtherance of the public purposes set forth therein, the Government retains an easement for ingress and egress

over the property from the entrance to the Mosquito Pier to the intersection of the North Coast Road, more fully described as follows:

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter landing pad adjacent to Coconut Road. Said point also known as "HELO" and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat labeled 50' INGRESS/EGRESS EASEMENT D-7. Thence N60°47'32"E 3133.61' to a point, the True Point of Beginning, having a northing of 764,586.5431 and an easting of 975,875.8428:

Thence following a curve to a point with a long chord of 85.58', chord bearing of N40°34'20"E

Radius=100.00'

Arc Len=88.43'

Thence N15°14'16"E 75.38' to a point;

Thence following a curve to a point with a long chord of 11.77', chord bearing of N17°09'57"E

Radius=175.00'

Arc Len=11.78'

Thence N19°05'37"E 459.98' to a point;

Thence following a curve to a point with a long chord of 230.57', chord bearing of N05°45'47"E

Radius=500.00'

Arc Len=232.66'

Thence N07°34'03"W 390.17' to a point;

Thence N77°24'35"E 50.19' to a point;

Thence S07°34'03"E 394.57' to a point;

Thence following a curve to a point with a long chord of 253.63', chord bearing of S05°45'47"W

Radius=550.00'

Arc Len=255.93'

Thence S19°05'37"W 459.98' to a point;

Thence following a curve to a point with a long chord of 8.41', chord bearing of S17°09'57"W

Radius=125.00'

Arc Len=8.41'

Thence S15°14'16"W 75.38' to a point;

Thence following a curve to a point with a long chord of 128.37', chord bearing of S40°34'20"W

Radius=150.00'

Arc Len=132.65'

Thence N24°05'37"W 50.00' to a point, the True Point of Beginning.

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 394.0 meters and a width of 15.24 meters running from North to South, containing 64,632 square feet or 1.484 acres, which equates to 6,004.6 square meters or 1.523 cuerdas bounded on the North with the Atlantic Ocean, South with the Property to be conveyed to the Municipality of Vieques, East with the Property to be conveyed to the Municipality of Vieques, and on the West with the Property to be conveyed to the Municipality of Vieques.

The Government covenants and agrees to coordinate use of the Mosquito Pier with the Commonwealth, Municipality or its designee. Grantee covenants and agrees that it will not hinder, bar, or otherwise impede the access of the Government to the pier for any public purpose.

This easement is at all times and places for the purposes of exercising the rights set forth herein; reserving, however, to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained.

B. Retained Land Interests for Cleanup Actions Pursuant to Sections of 1502(c) and 1506(b) of U.S. Law 106-398, the Navy has identified certain Installation Restoration (IR) parcels and for the purpose of imposing, and does hereby impose, necessary land use restrictions and other requirements, constituted over the MOV parcel, to include groundwater, in favor of the Government as set forth in paragraph IV.B.4. of this Deed, which parcels are further described as follows:

1. Area of Contamination (AOC) I, Asphalt Plant:

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter-landing pad adjacent to Coconut Road. Said point also known as 'HELO' and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat labeled AOC I BOUNDARY & 50' I/E EASEMENT.

Thence N67°29'41"E 3410.21' to an iron rod and cap set, the True Point of Beginning 'A', having a northing of 764,362.7404 and an easting of 976,291.1557; thence N09°04'09"W 289.72' to an iron rod and cap set; thence N82°14'16"E 227.70' to an iron rod and cap set; thence S08°28'07"E 288.14' to an iron rod and cap set; thence S81°50'55"W 224.65' to an iron rod and cap set, the True Point of Beginning 'A'.

For recordation purposes, said parcel is described as a parcel of land containing 65,341 square feet or 1.500 acres, which equates to 6,070.4 square meters or 1.544 cuerdas, bounded on the north by the Municipality of Vieques, on the East by the Municipality of Vieques, on the south by the Municipality of Vieques, and on the west by the Municipality of Vieques.

Upon which parcel the Grantee covenants and agrees for itself and its lessees, licensees, successors, or assignees that use of and access to AOC-I as described herein or parts thereof, shall be limited to nonresidential land use, until either (a) a risk assessment in accordance with CERCLA is completed and either the Puerto Rico Environmental Quality Board (PR EQB) or the Environmental Protection Agency (EPA) concur that no further remedial action is required

allowing for unrestricted use, (b) a Record of Decision (ROD) is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use. Prohibited residential uses include, but are not limited to, any child care, preschool, playground, or any form of target residential housing purposes as defined by the Residential Lead Based Paint Hazard Reduction Act (Title X) and the Toxic Substances Control Act. The Government retains the following 50' ingress/egress easement herein described as follows:

Beginning at said True Point of Beginning 'A', having a northing of 764,362.7404 and an easting of 976,291.1557. Thence N09°04'09"W 228.26' to a point, the True Point of Beginning 'B', having a northing of 764,588.1477 and an easting of 976,255.1755; thence following a curve to a point with a long chord of 36.45', chord bearing of N89°07'24"W, Radius=35.00', Arc Len=38.33'; thence following a curve to a point with a long chord of 31.86', chord bearing of S68°39'44"W, Radius=100.00', Arc Len=32.00'; thence following a curve to a point with a long chord of 122.33', chord bearing of S83°26'40"W, Radius=625.00', Arc Len=122.52'; thence S89°03'38"W 125.40' to a point on the southern line of the 50' INGRESS/EGRESS EASEMENT D-5; thence following said 50' INGRESS/EGRESS EASEMENT D-5 along a curve to a point with a long chord of 136.24', chord bearing of N67°31'46"E, Radius=4175.00', Arc Len=136.25'; thence departing said 50' INGRESS/EGRESS EASEMENT D-5 along a curve to a point with a long chord of 111.22', chord bearing of N83°22'41"E, Radius=575.00', Arc Len=111.39'; thence following a curve to a point with a long chord of 15.93', chord bearing of N68°39'44"E, Radius=50.00', Arc Len=16.00'; thence following a curve to a point with a long chord of 54.24', chord bearing of N78°06'06"E, Radius=85.00', Arc Len=55.20'; thence S09°04'09"E 55.51' to a point, the True Point of Beginning 'B'.

For recordation purposes, said easement is described as a strip of land containing 12,550 square feet or 0.288 acres, which equates to 1,165.9 square meters or 0.297 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

2. AOC-H; Abandoned Power Plant:

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter-landing pad adjacent to Coconut Road. Said point also known as 'HELO' and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat AOC H BOUNDARY.

Thence N52°05'08"W 651.45' to an iron rod and cap set on the northern line of the 50' INGRESS/EGRESS EASEMENT D-5, the True Point of Beginning, having a northing of 763,457.7232 and an easting of 972,626.7080; thence following the 50' INGRESS/EGRESS EASEMENT D-5 along a curve to an iron rod and cap set with a long chord of 10.75', chord bearing of N79°07'27"W, Radius=750.00', Arc Len=10.75'; thence N78°42'48"W 302.68' to an iron rod and cap set; thence departing said 50' INGRESS/EGRESS EASEMENT D-5, N10°09'01"W 249.94' to an iron rod and cap set; thence S80°03'54"E 310.65' to an iron rod

and cap set; thence $S10^{\circ}09'11''E$ 257.73' to an iron rod and cap set, the True Point of Beginning.

For recordation purposes, said parcel is described as a parcel of land containing 74,072 square feet or 1.700 acres, which equates to 6,881.5 square meters or 1.751 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

Upon which parcel the Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use of, and access to AOC-H is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or the EPA concur that no further remedial action is required allowing for unrestricted use, or (b) a Record of Decision is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use.

3. AOC-L; Former Septic Vault

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter-landing pad adjacent to Coconut Road. Said point also known as 'HELO' and having a northing of 763,057.4181 and an easting of 973,140.6533 noted as the Point of Beginning on the plat labeled AOC L BOUNDARY & 50' I/E EASEMENT.

Thence $N76^{\circ}07'52''W$ 1670.69' to an iron rod and cap set, the True Point of Beginning 'A', having a northing of 763,457.8847 and an easting of 971,518.6668; thence $S85^{\circ}41'38''W$ 74.34' to an iron rod and cap set; thence $N04^{\circ}20'37''W$ 59.17' to an iron rod and cap set; thence $N86^{\circ}10'23''E$ 73.69' to an iron rod and cap set; thence $S04^{\circ}58'43''E$ 58.56' to an iron rod and cap set, the True Point of Beginning 'A'.

For recordation purposes, said parcel is described as a parcel of land containing 4,357 square feet or 0.100 acres, which equates to 404.8 square meters or 0.103 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

Upon which parcel Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use of, and access to AOC-L is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or EPA concur that no further remedial action is required allowing for unrestricted use, (b) a Record of Decision is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use. The Government retains the following 50' Ingress/Egress easement herein described as follows:

Beginning at said True Point of Beginning 'A', having a northing of 763,457.8847 and an easting of 971,518.6668. Thence $S85^{\circ}41'38''W$ 37.70' to a point, the True Point of Beginning 'B', having a northing of 763,455.0540 and an easting of 971,481.0729; thence $S04^{\circ}18'22''E$

51.97' to a point on the northern line of the 50' INGRESS/EGRESS EASEMENT D-5; thence S67°25'14"W 52.66' to a point; thence departing said 50' INGRESS/EGRESS EASEMENT D-5 N04°18'22"W 68.48' to a point; thence N85°41'38"E 50.00' to a point, the True Point of Beginning 'B'.

For recordation purposes, said easement is described as containing 3,011 square feet or 0.069 acres, which equates to 279.7 square meters or 0.071 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

4. AOCs B, C, E, F, K and Solid Waste Management Units (SWMUs) 10, 14, and 15; hereinafter referred to as the Main Operational Area.

Beginning at a survey control point in the Mosquito Wards, said point being a cross cut in the center of the helicopter-landing pad adjacent to Coconut Road. Said point also known as 'HELO' and having a northing of 763,057.4181 and an easting of 973,140.6533 noted at the Point of Beginning on the plat labeled MAIN OPERATIONAL AREA BOUNDARY.

Thence N81°44'48"W 1765.79' to an iron rod and cap set on the southern line of the 50' INGRESS/EGRESS EASEMENT D-5, the True Point of Beginning "A", having a northing of 763,310.8975 and an easting of 971,393.1501; thence S21°14'47"E 742.23' to an iron rod and cap set; thence N68°44'58"E 303.53' to an iron rod and cap set; thence S21°14'56"E 431.77' to an iron rod and cap set; thence S40°43'46"W 387.27' to an iron rod and cap set; thence S09°02'12"E 143.47' to an iron rod and cap set; thence S55°30'44"W 186.54' to an iron rod and cap set; thence N20°59'13"W 327.67' to an iron rod and cap set; thence S68°56'57"W 380.10' to an iron rod and cap set; thence S21°14'19"E 222.14' to an iron rod and cap set; thence S68°10'36"W 512.52' to an iron rod and cap set; thence N17°01'04"W 329.47' to an iron rod and cap set; thence N37°13'08"E 227.35' to an iron rod and cap set; thence N52°54'28"E 367.48' to an iron rod and cap set; thence N05°59'31"W 432.51' to an iron rod and cap set; thence N68°43'17"E 275.12' to an iron rod and cap set; thence N21°15'08"W 467.77' to an iron rod and cap set on the southern line of said 50' INGRESS/EGRESS EASEMENT D-5; thence N67°25'14"E 180.98' to an iron rod and cap set, the True Point of Beginning.

For recordation purposes, said parcel is described as a parcel of land containing 945,258 square feet or 21.700 acres, which equates to 87,817.7 square meters or 22.343 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

Upon which parcel the Grantee covenants and agrees for itself and its lessees, licensees, successors, or assignees that use of and access to the Main Compound or parts thereof, except as further described herein, shall be limited to nonresidential land use, until either (a) a risk assessment in accordance with CERCLA is completed and either the Puerto Rico Environmental Quality Board (PR EQB) or the Environmental Protection Agency (EPA) concur that no further remedial action is required allowing for unrestricted use, (b) a Record of Decision is signed that sets forth less stringent land use restrictions, or (c) the Navy completes

remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use; prohibited residential uses include, but are not limited to, any child care, preschool, playground, or any form of target residential housing purposes as defined by the Residential Lead Based Paint Hazard Reduction Act (Title X) and the Toxic Substances Control Act; Grantee further covenants and agrees for itself and its lessees, licensees, successors, or assigns that there shall be no discharge of waste streams to the Wastewater Treatment Plant (WWTP), except for those facilities with a direct connection, until a risk assessment in accordance with CERCLA is completed and either the PR EQB and/or EPA concur that no further remedial action is required for the WWTP allowing for unrestricted use, a ROD is signed that sets forth less stringent use restrictions, or the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use. Prohibited waste stream discharge sources include but are not limited to any septic tank systems present on the land being conveyed in this Deed, except for the following described area where Access and Use are Prohibited.

Beginning at said True Point of Beginning "A", having a northing of 763,310.8975 and an easting of 971,393.1501. Thence $S21^{\circ}14'47''E$ 742.23' to a point. Thence, along a tie line, $S11^{\circ}25'14''W$ 214.22' to a point, the True Point of Beginning "B", having a northing of 762,409.1432 and an easting of 971,619.6990; thence $S19^{\circ}25'48''E$ 182.42' to a point; thence $S69^{\circ}44'20''W$ 409.04' to a point; thence $N29^{\circ}18'41''E$ 285.68' to a point; thence $N70^{\circ}35'02''E$ 194.23' to a point, the True Point of Beginning "B".

Upon which parcel, Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use and access is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or EPA concur that no further remedial action is required allowing for unrestricted use, (b) a ROD is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use.

5. SWMU-7, Quebrada Landfill:

Beginning at a survey control point in the Punta Arenas Wards, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter-landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200 noted as the Point of Beginning on the plat labeled SWMU07 BOUNDARY.

Thence $N31^{\circ}33'01''E$ 9,926.77' to an iron rod and cap set, the True Point of Beginning; having a northing of 759,883.2482 and an easting of 967,709.2779; thence $N40^{\circ}29'19''W$ 1087.35' to an iron rod and cap set; thence $N14^{\circ}37'31''W$ 351.84' to an iron rod and cap set on the southern line of the 50' INGRESS/EGRESS EASEMENT D-5; thence following a curve a curve to an iron rod and cap set with a long chord of 46.33', chord bearing of $N79^{\circ}36'40''E$, Radius=2475.00', Arc Len=46.33'; thence $N80^{\circ}08'51''E$ 352.71' to an iron rod and cap set; thence departing said 50' INGRESS/EGRESS EASEMENT D-5 $S14^{\circ}12'13''E$ 525.19' to an

iron rod and cap set; thence S47°02'41"E 681.70' to an iron rod and cap set; thence S40°44'04"W 346.36' to an iron rod and cap set, the True Point of Beginning.

For recordation purposes, said parcel is described as a parcel of land containing 435,610 square feet or 10.000 acres, which equates to 40,469.6 square meters or 10.296 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

Upon which parcel Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use of, and access to SWMU-7 is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or EPA concur that no further remedial action is required allowing for unrestricted use, (b) a ROD is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use.

6. AOC-R, Former Staging and Operations Area:

Beginning at a survey control point in the Punta Arenas Wards, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter-landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200 noted as the Point of Beginning on the plat labeled AOC R BOUNDARY.

Thence N05°16'41"E 7821.97' to an iron rod and cap set, the True Point of Beginning "A", having a northing of 759,212.6563 and an easting of 963,234.6465; thence N32°58'31"W 993.27' to an iron rod and cap set; thence N77°03'52"E 848.22' to an iron rod and cap set; thence S01°35'07"W 985.62' to an iron rod and cap set; thence S81°40'08"W 261.57' to an iron rod and cap set, the True Point of Beginning "A".

For recordation purposes, said parcel is described as a parcel of land containing 522,728 square feet or 12.000 acres, which equates to 48,563.2 square meters or 12.356 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

This property is made subject to the 50' Ingress/Egress Easement D-5 as shown on plat labeled 50' INGRESS/EGRESS EASEMENT D-5 prepared by Glenn & Sadler Associates, Inc. of Norfolk, Virginia and Luis Berrios Montes & Associates of Bayamon, Puerto Rico.

This property is also subject to Remedial Land Use Restrictions where as all Intrusive Activities are Prohibited, upon which parcel the Grantee covenants and agrees for itself and its lessees, licensees, successors, or assignees that use of and access to the AOC-R or parts thereof, except as further described herein, shall be limited to nonresidential land use, until either (a) a risk assessment in accordance with CERCLA is completed and either the Puerto Rico Environmental Quality Board (PR EQB) or the Environmental Protection Agency (EPA) concur that no further remedial action is required allowing for unrestricted use, (b) a Record of

Decision is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use. Prohibited residential uses include, but are not limited to, any child care, preschool, playground, or any form of target residential housing purposes as defined by the Residential Lead Based Paint Hazard Reduction Act (Title X) and the Toxic Substances Control Act, except for the following described areas where Access and Use are Prohibited.

Beginning at said True Point of Beginning "A", having a northing of 759,212.6563 and an easting of 963,234.6465. Thence N32°58'31"W 411.67' to a point, the True Point of Beginning "B", having a northing of 759,558.0088 and an easting of 963,010.5833; thence N32°58'31"W 581.60' to a point; thence N77°03'52"E 848.22' to a point; thence S01°35'07"W 440.70' to a point on the northern line of the 50' INGRESS/EGRESS EASEMENT D-5; thence S60°02'05"E 288.97' to a point; thence following a curve to the True Point of Beginning "B" with a long chord 264.46', chord bearing of S69°25'49"W, Radius=810.00', Arc Len=265.65'.

Beginning at said True Point of Beginning "A", having a northing of 759,212.6563 and an easting of 963,234.6465. Thence N81°40'08"E 130.78' to a point, the True Point of Beginning "C", having a northing of 759,231.6063 and an easting of 963,364.0514; thence N08°19'52"W 164.99' to a point; thence S88°24'53"E 157.24' to a point; thence S01°35'07"W 140.00' to a point; thence S81°40'08"W 130.79' to a point, the True Point of Beginning "C".

Upon which parcels, Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use and access is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or EPA concur that no further remedial action is required allowing for unrestricted use, (b) a ROD is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use.

7. SWMU-5, Inhibiting Red Fuming Nitric Acid/Mixed Amine Fuel-4 Site:

Beginning at a survey control point in the Punta Arenas Wards, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter-landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200 noted as the Point of Beginning on the plat labeled SWMU05 BOUNDARY & 50' I/E EASEMENT.

Thence N57°04'09"E 4711.76' to an iron rod and cap set, the True Point of Beginning 'A', having a northing of 753,985.2824 and an easting of 966,469.8348; thence N36°14'16"E 143.73' to an iron rod and cap set; thence S53°46'13"E 119.73' to an iron rod and cap set; thence S35°36'28"W 145.42' to an iron rod and cap set; thence N52°58'24"W 121.34' to an iron rod and cap set, the True Point of Beginning 'A'.

For recordation purposes, said parcel is described as a parcel of land containing 17,424 square feet or 0.400 acres, which equates to 1,618.7 square meters or 0.412 cuerdas, bounded on the

North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the Municipality of Vieques.

Upon which parcel, the Grantee covenants and agrees for itself and its lessees, licensees, successors, or assigns that use of, and access to SWMU-5 is strictly prohibited until either (a) a risk assessment in accordance with CERCLA is completed, and either the PR EQB and/or EPA concur that no further remedial action is required allowing for unrestricted use, (b) a ROD is signed that sets forth less stringent land use restrictions, or (c) the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow unrestricted use. The Government retains the following 50' ingress/egress easements herein described as follows:

Beginning at a survey control point in the Punta Arenas Wards, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N56°22'56"E 4790.89' to the True Point of Beginning having a northing of 754,075.4729 and an easting of 966,504.7370:

Thence N34°20'09"E 42.18' to a point;
Thence N54°26'31"E 127.28' to a point;
Thence S35°27'19"E 112.72' to a point;
Thence N53°46'13"W 14.74' to a point;
Thence S36°14'16"W 50.00' to a point; the True Point of Beginning.

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 49.5 meters and a width of 15.24 meters running from North to South, containing 3,468 square feet or 0.080 acres, which equates to 322.2 square meters or 0.082 cuerdas bounded on the North with the PRCT Parcel A, South with the United States Government, East with the Property to be conveyed to the Municipality of Vieques, and on the West with the PRCT Parcel A.

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N15°24'18"E 7099.06' to the True Point of Beginning having a northing of 758,267.8565 and an easting of 964,400.8999.

Thence following a curve to a point with a long chord of 224.76', chord bearing of N45°02'00"W

Radius=297.50'

Arc Len=230.49'

Thence N67°13'41"W 384.75' to a point;

Thence following a curve to a point with a long chord of 198.35', chord bearing of N50°53'13"W

Radius=352.50'

Arc Len=201.07'

Thence N34°32'46"W 308.16' to a point;

Thence following a curve to a point with a long chord of 224.68', chord bearing of N23°43'39"W

Radius=598.50'

Arc Len=226.02'

Thence following a curve to a point with a long chord of 259.84', chord bearing of N03°33'45"W

Radius=800.00'

Arc Len=261.00'

Thence N05°47'02"E 304.55' to a point on the southern line of the INGRESS/EGRESS EASEMENT NUMBER 1;

Thence N60°02'05"E 61.61' to a point;

Thence departing said INGRESS/EGRESS EASEMENT S05°47'02"W 340.54' to a point;

Thence following a curve to a point with a long chord of 243.60', chord bearing of S03°33'45"E

Radius=750.00'

Arc Len=244.68'

Thence following a curve to a point with a long chord of 205.91', chord bearing of S23°43'39"E

Radius=548.50'

Arc Len=207.14'

Thence S34°32'46"E 308.16' to a point;

Thence following a curve to a point with a long chord of 170.22', chord bearing of S50°53'13"E

Radius=302.50'

Arc Len=172.55'

Thence S67°13'41"E 384.75' to a point;

Thence following a curve to a point with a long chord of 256.58', chord bearing of S45°33'46"E

Radius=347.50'

Arc Len=262.80'

Thence S59°49'59"W 50.35' to a point and the True Point of Beginning.

Said easement containing 95,916 square feet or 2.202 acres, which equates to 8,910.9 square meters or 2.267 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of five hundred eighty five point three (585.3) meters and a width of fifteen point twenty four (15.24) meters running North to South, bounded on the North, East

and West with land of the United States of America to be conveyed to the Municipality of Vieques, and on the South with land of the Puerto Rico Conservation Trust Fund.

8. The Government retains two access easements to its IR sites located within property retained by the United States (to be administered by the Department of Interior), which easements are constituted in favor of the Government over the MOV parcel for so long as they are necessary pursuant to Public Law 106-398 section 1506(b)(4).

a. AOC J access easement. Beginning at National Geodetic Survey Monument 'FRIO' (PID 9848) in the Punta Arenas Wards, said point being a brass disk stamped PUERTO RICO GPS CONTROL C.R.I.M. FRIO and having a northing of 754,659.1026 and an easting of 953,331.2647 noted as the Point of Beginning. Thence N59°58'40"E 10,433.26' to a point, the True Beginning having a northing of 759,879.2563 and an easting of 962,364.6976:

Thence Due North N00°00'00"E 19.17' to a point;

Thence S56°15'34"E 502.83' to a point;

Thence following a curve to a point with a long chord of 153.71', chord bearing of S77°43'36"E

Radius=210.00'

Arc Len=157.36'

Thence following a curve to a point with a long chord of 19.11', chord bearing of S81°28'55"W

Radius=810.00'

Arc Len=19.11'

Thence following a curve to a point with a long chord of 83.63', chord bearing of S58°34'24"W

Radius=104.51'

Arc Len=86.04'

Thence following a curve to a point with a long chord of 95.40', chord bearing of N66°49'49"W

Radius=260.00'

Arc Len=95.94'

Thence N56°15'34"W 545.60' to a point;

Thence N22°34'45"E 34.72' to a point, the True Point of Beginning.

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 198.8 meters and a width of 15.24 meters, containing 32,868 square feet or 0.755 acres, which equates to 3,053.6 square meters or 0.777 cuerdas, bounded on the North by the Municipality of Vieques, on the East by the Municipality of Vieques, on the South by the Municipality of Vieques, and on the West by the lands of the United States.

b. SWMU-4 access easement. Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located

in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200 noted as the Point of Beginning on the plat labeled SWMU04 50' I/E EASEMENT. -----

--Thence N53°24'05"W 4,827.62' to an iron rod and cap set, the True Point of Beginning, having a northing of 754,302.1064 and an easting of 958,639.3536; thence following a curve to a point with a long chord of 56.75', chord bearing of N08°05'48"W, Radius=3000.00', ArcLen=56.75'; thence N53°40'46"E 39.25' to a point; thence N15°52'06"E 214.85' to a point; thence N12°05'36"E 348.50' to a point; thence N38°48'14"E 249.62' to a point; thence N31°57'35"E 431.88' to a point; thence N25°09'34"E 122.44' to a point; thence N19°15'37"E 169.51' to a point; thence N09°02'31"E 404.19' to a point; thence N59°29'19"E 164.30' to a point; thence N76°32'40"E 261.29' to a point; thence S86°30'48"E 198.22' to a point; thence S82°01'26"E 234.02' to a point; thence S75°55'28"E 159.97' to a point; thence S59°19'59"E 94.67' to a point; thence S47°26'26"E 247.84' to a point; thence N80°13'48"E 709.04' to a point; thence S83°38'22"E 474.68' to a point; thence S70°30'29"E 70.53' to a point; thence S52°38'33"E 183.13' to a point on the 50' INGRESS/EGRESS EASEMENT D-5; thence S32°39'58"W 50.17' to a point; thence departing said 50' INGRESS/EGRESS EASEMENT D-5 N52°38'33"W 179.38' to an iron rod and cap set; thence N70°30'29"W 56.92' to an iron rod and cap set; thence N83°38'22"W 461.84' to an iron rod and cap set; thence S80°13'48"W 726.52' to an iron rod and cap set; thence N47°26'26"W 267.20' to an iron rod and cap set; thence N59°19'59"W 82.17' to an iron rod and cap set; thence N75°55'28"W 150.01' to an iron rod and cap set; thence N82°01'26"W 229.40' to an iron rod and cap set; thence N86°30'48"W 188.81' to an iron rod and cap set; thence S76°32'40"W 246.35' to an iron rod and cap set; thence S59°29'19"W 133.25' to a concrete monument set; thence S09°02'31"W 385.11' to an iron rod and cap set; thence S19°15'37"W 176.56' to an iron rod and cap set; thence S25°09'34"W 127.99' to an iron rod and cap set; thence S31°57'35"W 437.84' to an iron rod and cap set; thence S38°48'14"W 240.74' to an iron rod and cap set; thence S12°05'36"W 338.28' to an iron rod and cap set; thence S15°52'06"W 233.62' to an iron rod and cap set; thence S53°40'46"W 83.21' to an iron rod and cap set, the True Point of Beginning.

--Said easement containing 238,074 square feet or 5.465 acres, which equates to 22,117.9 square meters or 5.627 cuerdas. -----

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 1,450.7 meters and a width of 15.24 meters running from West to East bounded on the North by the Municipality of Vieques, on the East by the Puerto Rico Conservation Trust Fund, on the South and West by the lands of the United States. "

9. Further, the Grantee, its lessees, licensees, successors, or assignees to any interest in any of the IR sites, or part thereof, described in this deed shall not engage in intrusive activities, which intrusive activities are further described as follows:

a. Construct or permit to be constructed any well, and shall not extract, utilize, consume, or permit to be extracted any water from the aquifer below the surfaces of the ground at or within 2,000 feet of the boundary of an IR Site for the purpose of human consumption, or other

use, until the Navy completes a risk assessment in accordance with CERCLA and either the PR EQB and/or EPA concur that no further remedial action is required for a particular site allowing for unrestricted use, or a ROD is signed that sets forth less stringent land use restrictions, or the Navy completes remedial action in accordance with CERCLA, the National Contingency Plan and applicable law that will allow groundwater use.

b. Excavate or conduct any other soil disturbing activities within those areas of known or suspected surface or subsurface soil contamination identified in the Expanded Preliminary Assessment/Site Investigation (PA/SI) and Environmental Baseline Survey (EBS) provided to the Grantee, without prior written approval of the Navy.

c. Undertake any alterations, additions, excavations, improvements to, installations upon, or otherwise modify or alter the areas associated with the Installation Restoration Program without written approval by the Navy Remedial Project Manager for Naval Ammunition Support Detachment, Vieques. Such approval will not be unreasonably withheld.

10. The Grantee, for itself and its lessees, licensees, successors, or assignees to any interest to the IR sites, or part thereof, further covenants and agrees that it shall:

a. Cooperate in good faith to minimize any conflict between necessary environmental investigation and remediation activities, and the operations and construction activities of the Grantee, and successors, lessees, and contractors of the Grantee;

b. Upon being provided reasonable advance notice by the Navy, the Grantee and its lessees, licenses, successors, or assignees will not interfere with the ability of the Navy, its agents, or contractors to establish and maintain for the purposes of future environmental investigations and response, or remedial activities certain designated areas for, but not limited to, monitoring and response or remediation, well sites and related sampling stations, decontamination facilities and treatability study sites;

c. Allow for the initiation and completion of all necessary response or remedial activities to address contaminated areas;

d. Will comply with the health and safety requirements of 29 CFR 1910.120 regarding the investigation and remediation of the IR sites; and

e. Will comply with the requirements set forth in Section IV.A.2.c of this Deed.

11. Notwithstanding any other rights granted in this deed, the Grantee's use of any portion of an IR Site must be consistent with any property use restrictions identified in any CERCLA Records of Decision (RODs) for NAVAL AMMUNITION SUPPORT DETACHMENT

Vieques issued by PR EQB and the Navy. The Navy shall ensure that the Grantee is provided a copy of all RODs.

12. The Navy hereby reserves the right to establish secured areas to allow for the initiation and completion of all necessary response or remedial actions to address installation restoration areas as described in this Deed. The Navy covenants and agrees that it will use its best efforts to establish such designated or secured areas in non-intrusive areas where practicable; and further covenants and agrees that it will use its best efforts not to interfere with the Grantees and its lessees, licenses, successors, or assignees use of contaminated areas. The Navy will attempt to develop remedies which do not employ permanent land use restrictions, and will consult with EPA and EQB in remedy development.

13. The Navy hereby reserves temporary ingress and egress easements and covenants for the continual environmental remediation of the Naval Ammunition Support Detachment Installation Restoration Sites (hereinafter "IR") as described and identified in paragraphs II.B.1. - 8. and IV.B.4. of this Deed and on the metes and bounds surveys. The aforementioned easements with respect to a particular IR site shall terminate upon written notification from the Navy that environmental remediation at that particular IR site is complete.

The Government and the Grantee request the Registry of the Property to record the hereinbefore constituted easements in its Registry books.

III. Existing Easements. The property described and conveyed above are hereinafter known as the MOV parcel. MOV parcel is also conveyed subject to the following described easements:

1. That portion of an easement of approximately forty three point seven hundredths (43.07) acres to Puerto Rico Electric Power Authority dated September twelfth, nineteen hundred and sixty two (1962) for an electric power line crossing Green Beach and terminating at Isabel Segunda, that is located on the Naval Ammunition Support Detachment, described as follows:

TRACT "A" - (PORTION OF NAVAL AMMUNITION SUPPORT DETACHMENT) Strip of land forty (40) feet wide, or twelve and one hundred ninety two thousands (12.192) meters, by approximately thirty nine thousand seven hundred and seventy (39,770) feet long, or twelve thousand one hundred and fifty-six hundredths (12,100.56) meters, or thirty six and fifty two hundredth (36.52) acres beginning twenty (20) feet or six and ninety six thousandths (6.096) meters on either side of a center line described as follows:

"Beginning at point on the westernmost tip of Vieques Island (Punta Arenas) at Latitude eighteen degrees, seven minutes and fifteen seconds, Longitude sixty five degrees, thirty four minutes and forty seconds thence south forty degrees two minutes east, five thousand six hundred eighty five feet (5,685), or one thousand seven hundred thirty two and seven hundred and eighty eight thousandths (1,732.788) meters to a point; thence north eighty seven degrees east, six thousand three hundred eighty five (6,385) feet, or one thousand nine hundred forty six and one hundred and forty eight thousandths (1,946.148) meters to a point; thence north seventy six degrees, fifty four minutes east, fifteen thousand six hundred forty (15,640) feet to a

point; thence, north seventy eight degrees, fourteen minutes east, ten thousand eight hundred (10,800) feet or three thousand two hundred ninety one and eighty four hundredths (3,291.84) meters to a point on the east boundary of the Naval Ammunition Depot-Martineau Area of the United States Navy at approximately one thousand five hundred (1,500) feet or four hundred fifty seven and two tenths (457.2) meters south three degrees, thirteen minutes and ten seconds east from Point C-1 on said boundary."

Being a portion of four (4) contiguous parcels of land acquired by the United States of America and recorded in its favor in the Registry of Property of Humacao as follows:

PARCEL ONE - ten thousand two hundred eight and eighty five hundredth acres acquired by Declaration of Taking in Condemnation proceedings number two thousand three hundred (2300) Civil filed in the United States District Court for Puerto Rico November twelfth, nineteen hundred forty one. Recorded at Page one hundred and eighty one, Volume twenty-eight of Vieques, property number one thousand twenty one, third inscription.

PARCEL TWO - ninety seven and thirty three hundredth acres acquired by Condemnation proceedings number two thousand four hundred and forty three Civil filed February seventeen, nineteen hundred and forty two. Recorded at Page twenty-two, Volume twenty-nine of Vieques, property number one thousand thirty seven, first inscription.

PARCEL THREE - six hundred eighty six and ninety six hundredth acres acquired by condemnation proceedings number two thousand four hundred and eighty seven Civil filed April sixth, nineteen hundred forty two. Recorded at page forty, Volume twenty-nine of Vieques, property number one thousand forty, first inscription.

PARCEL FOUR - one thousand two hundred thirty four and three hundredth acres acquired by condemnation proceedings number two thousand six hundred four Civil, filed May eleven, nineteen hundred forty two. Recorded at page fifty-seven, Volume twenty-nine of Vieques, property number one thousand forty two, first inscription.

2. An easement of approximately three hundred ninety four thousandths (0.3940) of an acre to the Puerto Rico Aqueduct and Sewer Authority dated January tenth, nineteen hundred and seventy seven (1977) for an electric power line to serve Puerto Rico Aqueduct and Sewer Authority's water pump station located on Naval Ammunition Support Detachment, described as follows:

All that certain parcel of land lying and being situated in the former Naval Ammunition Depot, Vieques Island, Puerto Rico, containing three hundred and ninety four thousandths (0.3940) acre, more or less, and being more particularly described as follows:

BEGINNING at Point A, said point having coordinates Y equals thirty one thousand seven hundred seventy three and forty seven hundredths (31,773.470) and X equals forty five thousand nine hundred fifty five and seventy eight hundredths (45,955.78); thence north fifty nine degrees, fifty five minutes and forty three seconds east, eighty two hundredths (0.82) meters to Point B; thence south thirty degrees, seventeen minutes and twelve seconds east,

twenty three and eighty six hundredths (23.86) meters to Point C; thence north fifty nine degrees, forty two minutes and forty eight seconds east, two and twenty three hundredths (2.23) meters to Point D; thence south thirty two degrees, forty seven minutes and six seconds east, five and twenty eight hundredths (5.28) meters to Point E; thence north seventy one degrees, forty nine minutes and thirteen seconds east, nine and thirty four hundredth (9.34) meters to Point F; thence south nineteen degrees, forty five minutes and fifteen seconds east, three and five hundredths (3.05) meters to Point G; thence south seventy one degrees, forty nine minutes and thirteen seconds west, nine and twenty seven hundredths (9.27) meters to Point H; thence south eight degrees, four minutes and thirty one seconds east, one hundred ninety and fifty seven hundredths (190.57) meters to Point I; thence south twenty eight degrees, forty four minutes and twelve seconds east, fifty five (55.00) meters to Point J; thence south forty one degrees, thirty three minutes and twenty two seconds east, one hundred sixty and fifty two hundredths (160.52) meters to Point K; thence south forty five degrees, fifty eight minutes and sixteen seconds east, fifty three and sixty eight hundredths (53.68) meters to Point L; thence north fifty three degrees, forty three minutes and twenty four seconds east, eleven and six hundredths (11.06) meters to Point M.; thence south eight degrees, twenty five minutes and sixteen seconds west, one and seventy one hundredths (1.71) meters to Point N; thence south sixty six degrees, two minutes fifteen seconds east, one and thirty four hundredths (1.34) meters to Point O; thence south fifty three degrees, forty two minutes and twenty three seconds west, ten and three tenths (10.30) meters to Point P; thence south forty five degrees, thirty five minutes and forty four seconds east, nine and fourteen hundredths (9.14) meters to Point Q; thence south forty four degrees, twenty four minutes and sixteen seconds west, three and five hundredths (3.05) meters to Point R; thence north forty five degrees, thirty three minutes and forty four seconds west, sixty five and eighty eight hundredths (65.88) meters to Point S; thence north forty one degrees, thirty three minutes and twenty two seconds west, one hundred sixty and thirty five hundredths (160.35) meters to Point T; thence south sixty one degrees, thirty seven minutes and fifty eight seconds west, nine and fifteen hundredths (9.15) meters to Point U; thence north twenty eight degrees, twenty two minutes and thirty two seconds west, three and five hundredths (3.05) meters to Point V; thence north sixty one degrees, thirty seven minutes and fifty eight seconds east, nine and fifteen hundredths (9.15) meters to Point W; thence north twenty eight degrees, forty four minutes and twenty two seconds west, fifty one and ninety four hundredths (51.94) meters to Point W-one; thence south sixty one degrees, fifteen minutes and thirty eight seconds west, nine and twenty seven hundredths (9.27) meters to Point W-two; thence north eighteen degrees, twenty four minutes and two seconds, three and five hundredths (3.05) meters to Point W-three; thence north sixty one degrees, fifteen minutes and thirty eight seconds east, nine and twenty seven hundredths (9.27) meters to Point W-four; thence north eight degrees, four minutes and thirty one seconds west, one hundred ninety and forty two hundredths (190.42) meters to Point W-five; and thence north thirty degrees, seventeen minutes and twelve seconds west, thirty and sixty nine hundredths (30.69) meters to Point A, the POINT OF BEGINNING, as shown on Roe and Associates, Engineering Consultants, San Juan, Puerto Rico Drawing Sheet number LA-two of LA-three, dated August seventh, nineteen hundred and seventy four, last revised November sixteenth, nineteen seventy six entitled "Puerto Rico Aqueduct and Sewer Authority Vieques Water Pipeline, Arcadia Easement Rights."

IV. Environmental Conditions.

The following provisions govern responsibility for addressing environmental conditions on the MOV parcel, to include groundwater:

A. Uncontaminated Property Conveyance – CERCLA 120(h)(4)

1. Pursuant to Section 42 U.S.C. Section 9620 (h)(4) of the Comprehensive Environmental Response, Compensation and Liability Act, as amended and the Comprehensive Environmental Response, Compensation and Liability Act lead agent authority of the Department of Defense created by 42 U.S.C. Section 9604 and Section 9615 of Comprehensive Environmental Response, Compensation and Liability Act, Section 2.d. of Executive Order 12580 (52 F.R. 2923; January 29, 1987), and the National Contingency Plan (40 C.F.R. Section 300.5), the Department of Defense, having obtained the required concurrences, has determined that, with the exception of those specific parcels addressed in sections II.B. and IV.B. of this Deed, the MOV parcel, to include groundwater, are uncontaminated, based on the review of available information indicating that no hazardous substance and no petroleum products or their derivatives are known to have been released or disposed of at the MOV parcel. The parties agree that the Government's obligations pursuant to CERCLA and this section extend to groundwater.

2. Further, the Government hereby covenants and agrees pursuant to section 120(h)(4)(D) of CERCLA (42 USC 9620(h)(4)(D)) that, in accordance with, and to the extent required at the MOV parcel, to include groundwater, by the applicable federal, state, and local laws, the Government shall timely:

a. Undertake any response action or corrective action found to be necessary after the date of such sale or transfer in connection with any release or threatened release of a hazardous substance, pollutant or contaminant, petroleum or a petroleum derivative, from or on the MOV parcel, to include groundwater, caused by Department of Defense activities; and

b. Settle or defend any claim, demand, or order made by federal, state or local regulators or third parties in connection with any release or threatened release of a hazardous substance, pollutant or contaminant, petroleum or a petroleum derivative, from or on the MOV parcel, to include groundwater, caused by Department of Defense activities, and found to be necessary after the date of the transfer.

c. The Grantee or any successors in interest seeking from the Government a response action as described above, shall:

i. Notify the Government in writing within ninety (90) days after the learning of any previously unidentified condition at the MOV parcel that suggests a response action is necessary, or within ninety (90) days after receiving notice of a claim by federal, state or local regulators, or other third parties of any condition at the MOV parcel that suggests a response action is necessary. If the Grantee or any successor(s) in interest is served with a complaint or written notice of a claim by the federal, state, or local regulators, the served party shall provide

the Government with a copy of such document no later than fifteen (15) days following service of such document;

ii. Furnish the Government copies of pertinent papers the Grantee or successors in interest receive;

iii. Provide, upon request of the Government, reasonable access to the records and personnel of the Grantee or successors in interest for purposes of defending, or resolving the need for additional response action; and

iv. Provide, upon request of the Government, reasonable access to the property of the Grantee or its successors in interest for purposes of performing a response action on the MOV parcel or on adjoining property.

3. So that the Government may fulfill responsibilities established herein, the Government reserves a right of access to the MOV parcel for any case, whenever occurring, in which the Government is obligated to undertake a response action or corrective action after the date of the Deed at the MOV parcel, or if such access is necessary to carry out a response action or corrective action on any adjoining property. Such right of access shall run with the land and be binding on all future owners of the MOV parcel. The Grantee also shall include in any real property instrument or contractual agreement with any other party governing use or possession of the MOV parcel, a provision clearly providing the Government a right of access to the MOV parcel for any case in which the Government is obligated to undertake a response action or corrective action after the date of the Deed at the MOV parcel or such access is necessary to carry out any response action or corrective action on any adjoining property.

B. Notice of Covenant Deferral. Pursuant to the requirements for "covenant deferral" of Section 120 (h)(3)(C) of the Comprehensive Environmental Response, Compensation and Liability Act, amended by Section 334 of the National Defense Authorization Act for Fiscal Year 1997 [Pub. L. No. 104-201; 42 U.S.C. 9620(h)(3)(C)], the following notices, assurances, covenants and declarations apply, to the Installation Restoration Sites located within the MOV parcel and described in this Deed. The Installation Restoration Sites within the MOV parcel, to include groundwater, subject to this section IV.B. are as set out in section II.B.1. - 12.

1. **Hazardous Substance Notification.** Pursuant to Section 120(h)(3)(A)(i) of the Comprehensive Environmental Response, Compensation and Liability Act, notice is hereby provided that the information set out hereinafter identifies hazardous substances that were stored for one year or more, known to have been released, or disposed of on the MOV parcel. The Government has made a complete search of its files and records concerning the MOV parcel and found that the following list provides: (a) notice of the type and quantity of such hazardous substances, (b) notice of the time the storage, release, or disposal took place, and (c) a description of the remedial action taken, if any.

Site	Bldg or Lot. No.	Facility Name	Hazardous Substances	Quantity	Date(s) Storage known)	of (if	Stored (S), Released (R), or Disposed of (D)
SWMU 05	Near 422	IRFNA/M AF-4 Disposal Site	Drone Fuels	~ 7,000 lbs.	1975		R & D
SWMU 07	NA	Quebrada Disposal Site	Lubricants, oils	>1,500 cubic yards	1960s-1970s		D
			Paint	>1,500 cubic yards	1960s-1970s		D
			Solvents	>1,500 cubic yards	1960s-1970s		D
SWMU 10	Near 4001	Waste Paint and Solvents Disposal Site	Paint	Unknown	1970s-1990s		R
			Solvents	Unknown	1970s-1990s		R
SWMU 14	Near 2016	Wash Rack	Degreasing solvents	Unknown	Late 1970s-1990s		R
SWMU 15	NA	Waste Transportation Vehicle Area	Corrosive waste (e.g. napalm)	Unknown	Unknown		S & R
AOC B	NA	Wastewater Treatment Plant	Potential Hazardous Constituents	Unknown	Since 1983		R
AOC C	NA	Drainage Ditch in the Vicinity of the Transportation Shop	Unknown	Unknown	Unknown		Unk; known
AOC E	2016	UST Site 2016	Waste Oil	550-gallon	1970-1990		S & R

				UST		
AOC F	NA	UIC Septic Tank Site	Septic waste	Max 1,500 gallons	Unknown	S
AOC K	NA	Water Well at Main Operations Area	Benzene	Unknown	1941-1979	R
AOC I		Asphalt Plant	Fuel	Unknown	1960s-1998	S & R
AOC H		Abandoned Power Plant	Fuel	2,000-3,000 gallons	1941-1980s	S & R
AOC L		Abandoned Septic Vault	Sewage	Unknown	Unknown	S
AOC R		Former Operations/ Staging Area	Oils	Unknown	1965-1971	S

2. Additional Remediation Obligation [Section 120(h)(3)(A)(ii)(II) of the Comprehensive Environmental Response, Compensation and Liability Act]. The Government covenants and warrants that Government shall conduct any additional remedial action necessary after the effective date of the warranty granted under paragraph 5. below for any hazardous substance, pollutant, contaminant, petroleum or petroleum derivative existing on the Installation Restoration sites described in this Deed prior to the date of this Deed. This covenant shall not apply to the extent that any release or threatened release of any hazardous substance, pollutant, contaminant, petroleum or petroleum derivative is a result of the Grantee's actions.

3. Access [Section 120 (h)(3)(A)(iii) of the Comprehensive Environmental Response, Compensation and Liability Act]. Government reserves access to and the right to use the MOV parcel in any case in which a remedial or corrective action is found to be necessary after the date of the conveyance of the MOV parcel. In exercising this right of access, except in the case of imminent and substantial endangerment to human health or the environment, the Government; (a) shall give the Grantee reasonable prior written notice of actions to be taken related to such remedial or corrective actions on the MOV parcel and (b) make reasonable efforts to minimize interference with the ongoing use of the MOV parcel. Furthermore, the Government and Grantee agree to cooperate in good faith to minimize any conflict between necessary environmental investigation and remediation activities and the Grantee's use of the MOV parcel. Any inspection, survey, investigation or other response, corrective or remedial action undertaken by the Government will, to the maximum extent practicable, be coordinated with representatives designated by the Grantee.

4. Response Action Assurance [Section 120(h)(3)(C)(ii) of the Comprehensive Environmental Response, Compensation and Liability Act]:

a. Necessary Restrictions to Protect Human Health and the Environment [Section 120(h)(3)(C)(ii)(I) of the Comprehensive Environmental Response, Compensation and Liability Act]. The environmental covenants, conditions and restrictions (hereinafter "environmental restrictions") set forth in paragraph II.B.1. - 12 above regarding the use of the MOV parcel have been determined by the Government in this Covenant to be reasonably necessary to protect present or future human health or safety or the environment as provided by the Comprehensive Environmental Response, Compensation and Liability Act. The environmental restrictions made and accepted herein by Grantee shall be for the benefit of and enforceable by the Government herein, shall run with the land, and shall be binding on the Grantee, its successors and assigns. These environmental restrictions shall be released at such time as the Government has obtained written confirmation from Commonwealth of Puerto Rico that the appropriate regulatory agency has determined that in view of the selected remedy the condition of the restricted Property is protective of present or future human health or safety or the environment for the use that was formerly prohibited. Upon receipt of such written confirmation, the Government shall deliver to the Grantee in recordable form, a release (hereinafter the "Release") relating specifically to the environmental use restrictions set forth in this deed. The execution of the Release by the Government shall remove subject notices and restrictions relating to the remedy addressed by the restrictions from the title to the MOV parcel. Grantee further covenants and agrees that should it desire remediation beyond that provided by a remedy selected by the Government in consultation with the Grantee pursuant to CERCLA, funding and execution of that additional remediation shall be the responsibility of the Grantee.

b. Disruption of Remedies [Section 120(h)(3)(C)(ii)(II) of the Comprehensive Environmental Response, Compensation and Liability Act]. The Grantee covenants not to engage in activities that will disrupt required remedial investigations, remedial, or oversight activities, should any be required of the Government on the MOV parcel. The Government and Grantee agree to cooperate in good faith to minimize any conflict between necessary environmental investigation and remediation activities at the MOV parcel, and the operations and construction activities of the Grantee, and successors, lessees and contractors of the Grantee.

c. Response Action Assurance and Schedules for Investigation and Completion of all Necessary Response Action [Section 120 (h)(3)(C)(ii)(III) of the Comprehensive Environmental Response, Compensation and Liability Act]. The Government hereby provides assurance that it will take all necessary response action at the MOV parcel as provided by Section 120(h)(3)(C)(ii)(II) of the Comprehensive Environmental Response, Compensation and Liability Act. Schedule entitled planned remedial or corrective actions for investigation and completion of all necessary response action have been identified and separately provided to the Commonwealth of Puerto Rico. The Government will provide the current schedule to the Grantee within ninety (90) days of the effective date of this deed. The Government further agrees it will provide updates to the current schedule as they occur. The Government agrees

that it will make best efforts to accomplish the necessary remedial actions in a timely manner. The Government anticipates that restoration efforts will be complete for these sites by approximately September 2005. Government and Grantee agree that further investigations may reveal site conditions that are more complex than those currently anticipated, which could result in a requirement for additional funding and time to complete restoration efforts. As part of its periodic budget preparation and submission process for the Environmental Restoration Navy program account, the Navy will update the budget submission information for these IR sites as necessary to account for any changes as a result of work conducted and changes made to the site Management Plan.

d. Budget Requests [Section 120(h)(3)(C)(ii)(IV) of the Comprehensive Environmental Response, Compensation and Liability Act]. The Government hereby provides assurances that it will submit a budget request to the Director of the Office of Management and Budget that adequately addresses schedules for investigation and completion of all necessary response actions subject to Congressional authorization and appropriations.

5. Grant of Covenant [Section 120(h)(3)(C)(iii) of the Comprehensive Environmental Response, Compensation and Liability Act]. When all response action necessary to protect human health and the environment with respect to any substance remaining on the property on the date of transfer has been taken, the Government shall execute and deliver to the Grantee an appropriate document containing a warranty that all such response action has been taken and that the requirements of Section 120(h)(3)(a)(ii)(I) of the Comprehensive Environmental Response, Compensation and Liability Act have been satisfied.

C. Property/Injury Indemnification

1. Pursuant to Public Law 106-398, Title XV, as amended, and subject to the provisions of this Section III of the Deed, Government shall hold harmless, defend and indemnify, in full, the following:

i. The Commonwealth of Puerto Rico (including any officer, agent, or employee of the Commonwealth of Puerto Rico).

ii. The Municipality of Vieques, Puerto Rico, and any other political subdivision of the Commonwealth of Puerto Rico that acquires such ownership or control (including any officer, agent, or employee of that Municipality or other political subdivision).

iii. Any other person or entity that acquires such ownership or control.

iv. Any successor, assignee, transferee, lender, or lessee of a person or entity described in clauses (i) through (iii), (collectively and individually "Indemnitee(s)"), from and against any suit, claim, demand, action, liability, judgment, cost or fee, arising out of any claim for personal injury or property damage (including death, illness, loss of or damage to property or economic loss) that results from, or is in any manner predicated upon, the release or threatened release of any hazardous substance, pollutant, contaminant, petroleum or petroleum derivative from or on the MOV parcel, as a result of Department of Defense activities at Naval Ammunition Support

2. In any case in which Government determines that it may be required to indemnify an Indemnitee(s) for any suit, claim, demand, action, liability, judgment, cost or other fee arising out of any claim for personal injury or property damage, Government may settle or defend on behalf of that Indemnitee(s), the claim for personal injury or property damage.

3. If any Indemnitee(s) does not allow Government to settle or defend the claim, such Indemnitee(s) will not be afforded indemnification with respect to that claim. Government will not indemnify the Indemnitee(s) unless such Indemnitee(s):

a. Notifies Government in writing within 90 days after after the Grantee has actual knowledge of such an indemnification claim. If Indemnitee(s) is served with a complaint or written notice of a claim by federal, state or local regulators, Indemnitee(s) will provide Government with a copy of such document no later than 15 days following service of the complaint. Indemnitee(s) right to indemnification shall not expire due to late notice unless Government's ability to defend or to settle is materially and adversely affected;

b. Furnishes Government copies of pertinent papers the Indemnitee(s) receives; and

c. Furnishes, to the extent it is in the possession or control of Indemnitee(s), evidence or proof of any claim, loss, or damage covered by subparagraph a.; and

d. Provides, upon request of Government, reasonable access to the records and personnel of the Indemnitee(s) for purposes of defending or settling the claim or claims.

4. Government will not indemnify an Indemnitee(s) to the extent that any such release or threatened release of any hazardous substance, pollutant, contaminant, petroleum or petroleum derivative from or on the MOV parcel occurred as the result of such Indemnitee(s) actions. Government is entitled to contribution from Indemnitee(s) to the extent Government shows that such release was a result of the Indemnitee(s) actions. However, the availability of contribution shall not affect the requirement of Government to defend an Indemnitee(s), unless such Indemnitee(s) is solely responsible for the release or threatened release giving rise to the claim for indemnity, in which case the Government's duty to defend will not exist as to that claim.

D. Responsibilities of the Grantee.

1. Grantee covenants and agrees that for any release or threatened release of any hazardous substance, pollutant, contaminant, petroleum or petroleum derivative found on the MOV parcel following the date of transfer that is determined to be a result of the Grantee's actions, the Grantee assumes responsibility for all remedial work determined to be necessary. The Grantee further covenants that to the extent any remedy includes land use restrictions agreed to by PR EQB and/or EPA, that the Grantee will enforce those restrictions. This covenant is binding on all of the Grantee's successors in interest and shall run with the land.

2. Nothing in the Deed shall be interpreted as waiving any rights that the Government may have under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) or any other Federal, Puerto Rico or local law, regulation or ordinance, including any cost recovery authorized by law, against the Grantee, or the Grantee's successors and assigns, that may arise on account of or in any way connected with operations of the Grantee or the Grantee's successors and assigns, on the MOV parcel after the date of the Deed, or on account of any condition at the MOV parcel or other properties, including without limitation to adjacent real property owned by the Government.

E. Unexploded Ordnance. Government and Grantee recognize that there is a potential for unexploded ordnance to be found on the MOV parcel. The Government hereby agrees that it will remove and dispose of discovered unexploded ordnance to the extent required by then-applicable federal laws and regulations and pursuant to Navy and Department of Defense policies, and subject to Congressional authorizations and the availability of appropriated funds.

F. Lead Based Paint Notification. The Grantee is hereby informed and does acknowledge that the MOV parcel include buildings and structures that are presumed to contain Lead Based Paint. Lead from paint, paint chips, and dust can pose health hazards if not managed properly. The Government and Grantee agree that the MOV parcel does not include any "target housing" as that term is defined in the Residential Lead-Based Paint Hazard Reduction Act of 1992.

G. Asbestos Containing Materials Notification

1. The Grantee is hereby informed and does acknowledge that asbestos or asbestos-containing materials (ACM) have been found and are otherwise presumed to exist in buildings and structures on the Property. The Grantee acknowledges receipt of documentation disclosing the presence of any known ACM hazards in the buildings and structures on the Property. The Grantee covenants that it will prohibit occupancy of buildings and structures, or portions thereof, containing known ACM hazards prior to abatement of the hazards or demolition of the building or structure.

2. The Grantee covenants and agrees that in its use and occupancy of the Property, including but not limited to demolition of buildings containing ACM, it will comply with all applicable Federal, State, and local laws relating to ACM. The Grantee acknowledges that the Grantor assumes no liability for damages for personal injury, illness, disability, or death to the Grantee, or to any other person, including members of the general public, arising from or incident to the purchase, transportation, removal, handling, use, disposition, or other activity causing or leading to contact of any kind whatsoever with ACM in the structures on the Property, whether the Grantee has properly warned, or failed to properly warn the persons injured.

H. Definitions and General Provisions.

1. For the purpose of the provisions of this Section IV, the following terms have the meanings indicated below:

a. "Release", "threatened release", "hazardous substance", "pollutant", "contaminant", "removal," "remedial action", and "response" have the meanings given such terms under CERCLA and U.S. Environmental Protection Agency regulations implementing CERCLA.

b. "Department of Defense activities" means the Department of Defense's construction, installation, placement, operation, maintenance, misuse, abandonment or failure to maintain the buildings and equipment and land on the MOV parcel, or failure to satisfy any otherwise legally applicable obligation to investigate or remediate any environmental conditions existing at the MOV parcel. "Department of Defense activities" does not mean the release or threatened release of a hazardous substance, pollutant, contaminant, petroleum or a petroleum derivative, to the extent that Government shows that the release or threatened release is caused or contributed to by the Grantee or successor in interest.

c. "Action arising out of any claim for property damage" includes, but is not limited to, any judicial, administrative or private cost recovery proceeding brought against the Grantee or Grantee's successors in interest (i) for response costs arising under CERCLA, (ii) for costs incurred to enjoin or abate the presence or migration of contamination from or on the MOV parcel under RCRA, or (iii) for costs incurred to comply with the requirements of similar federal or state laws and regulations (or the laws of any political subdivision of the Commonwealth) which arise from the environmental conditions on the MOV parcel.

d. "Environmental condition(s)" means any hazardous substance, pollutant or contaminant, including hazardous waste or hazardous constituent, petroleum or petroleum derivative disposed of, released or existing in environmental media such as soil, subsurface soil, air, groundwater, surface water or subsurface geological formations at levels above background.

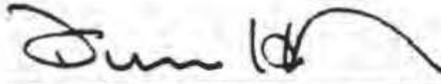
2. Prior to taking any action or reaching any final settlement under this Section IV. that could adversely impact Grantee or Grantee's successors in interests use of the MOV parcel, Government shall consult with Grantee or its successors in interest to minimize any such impact.

3. Nothing in this Section IV. creates rights of any kind in any person or entity other than: (i) the Government and (ii) the Grantee and the Grantee's successors in interest.

TO HAVE AND TO HOLD the MOV parcel herein granted with all the privileges and appurtenances thereto belonging, to the GRANTEE and its successors and assigns forever, subject to the conditions set forth in the DEED.

IN WITNESS WHEREOF, the GOVERNMENT, acting by and through its Deputy Assistant Secretary of the Navy (Installation and Facilities), has hereunto subscribed its name and affixed the seal of the United States Department of the Navy.

UNITED STATES OF AMERICA



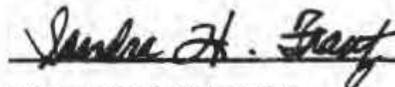
Duncan Holaday
Deputy Assistant Secretary
Installations and Facilities

COUNTY OF ARLINGTON
COMMONWEALTH OF VIRGINIA

() to-wit:

I, Jandra H. Grant, a Notary Public in and for the State of Virginia, do hereby certify that Mr. Duncan Holaday, whose name is signed to the foregoing DEED, has this day, acknowledged the same before me in the County and State aforesaid.

Given under my hand this 30th day of April, 2001.


NOTARY PUBLIC

My Commission expires 30 September 2002

(SEAL)

IN WITNESS WHEREOF, the Municipality of Vieques hereby accepts the terms and conditions herein provided by this conveyance document, and has hereunto subscribed its name and affixed the seal of the Municipality of Vieques.

Henry M. Gonzalez Vega

Authorized Representative, Municipality of
Vieques,
Commonwealth of Puerto Rico

I, Sandra H. Faust, a Notary Public in and for the Commonwealth of Virginia, do hereby certify that HENRY M. GONZALEZ VEGA whose name is signed to the foregoing Deed, has this day acknowledged the same before me in the County and State aforesaid.

Given under my hand this 30th day of April, 2001.

Sandra H. Faust

NOTARY PUBLIC

My Commission expires 30 September 2002

(SEAL)

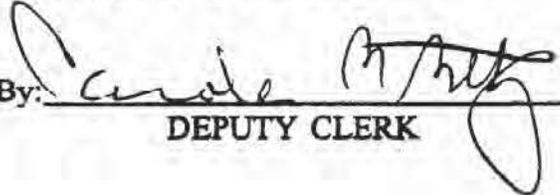
VIRGINIA: IN THE VIRGINIA BEACH CIRCUIT COURT CLERK'S OFFICE
CERTIFICATION OF A NOTARY

I, J. CURTIS FRUIT, Clerk of the Virginia Beach Circuit Court, CERTIFY that:

1. Sandra H Frantz, who performed a notarial act to the attached document or writing, took an oath of notary and was issued his or her commission as notary public by this court pursuant to § 47.1-9.
2. At the time of performing such notarial act, the term of office of such notary public had not expired.

DATE: May 2, 2001
SEAL OF COURT AFFIXED

J. CURTIS FRUIT, CLERK

By: 
DEPUTY CLERK



QUITCLAIM DEED

(GROUP (LOT TIE), RECTIFICATION OF AREA, SEGREGATION, DESCRIPTION OF REMNANT, CONVEYANCE, CONSTITUTION OF EASEMENTS AND CONSTITUTION OF RESTRICTIVE COVENANTS)

THIS INDENTURE, made this thirtieth (30th) day of April, 2001, by and between the United States of America, acting by and through the Department of the Navy, herein represented by Duncan Holaday, of legal age, married and resident of the Commonwealth of Virginia, United States of America, hereinafter called the "Government", and the Puerto Rico Conservation Trust, also known as the Puerto Rico Conservation Trust Fund and known in Spanish as "El Fideicomiso de Conservación de Puerto Rico", Federal Employer Identification Number ("E.I.N.") 66-0288581, a charitable non-profit perpetual Trust, organized under the laws of the Commonwealth of Puerto Rico, pursuant to Deed Number five (5) executed on January twenty third (23) Nineteen seventy (1970) before Notary Public Luis Felipe Sánchez Vilella, whose trustees are Thomas Lovejoy Paige, also known as Thomas E. Lovejoy Paige, with Social Security Number 132-34-3947, of legal age, single, executive and resident of Washington, District of Columbia; Arleen Pabón Charneco, with Social Security Number 583-26-3898, of legal age, single, architect and resident of Guaynabo, Puerto Rico and Kate Donnelly de Romero, also known as Kate Romero, with Social Security Number 060-30-8027, of legal age, married, property owner and resident of Dorado, Puerto Rico; all are hereby represented in this act by the Executive Director of the Puerto Rico Conservation Trust, Francisco Javier Blanco Cestero, also known as Javier Blanco, with Social Security Number 580-82-2438, of legal age, married, architect and resident of San Juan, Puerto Rico, hereinafter called the "Grantee".

WITNESSETH:

FIRST: That the Government represents that it is the owner and sole title holder of certain real properties which together are identified as the Naval Ammunition Support Detachment on the western portion of the Island of Vieques, Puerto Rico, made of several parcels of land described in the Registry of Property as follows:

PARCEL NUMBER ONE (1)

Rural: Parcel of land indicated as Parcel number one (1) on P.W. Drawing No. one hundred sixty-six (166) attached to the declaration of taking filed as Exhibit A, situated in the Wards of Mosquito, Florida and Llave, Municipality of Vieques, Puerto Rico, containing an area of two thousand six hundred sixteen (2,616) hectares, forty-eight (48) ares and sixty-nine (69) centiares, more or less, equivalent to six thousand six hundred and fifty-seven and five hundredths (6,657.05) cuerdas, equivalent to six thousand four hundred and sixty-five (6,465) acres, bounded by the North by the Atlantic Ocean, and by the lands of María Ceferino, Elaudio Colón, Estate of Quiñones, Estate of Benito Martínez; on the East by Just Haristoy, Estate of Dubois, Eulogio Cruz, Engracia Ortiz, Pablo Burgos, Estate of Monserrate Ortiz, Evaristo Morales, Jobo González, Pascasio Rosa, Estate of Morales, Estate of López, Francisco Pérez, Tomás Ramírez, Ines Brignoni, Rosa Pérez, Felipe

Quiñones, Norberto Monell, Esteban Díaz, and others; on the South by the Caribbean Sea and by the lands of Ana Rieckhoff, on the West by the Caribbean Sea.

Property number one thousand twenty one (1,021) recorded at page one hundred eighty one (181) overleaf of volume twenty eight (28) of Vieques, Registry of Property of Fajardo, Puerto Rico.

The Government acquired Property one thousand twenty one (1021) by condemnation, as per judgment issued on November twelve (12) nineteen hundred forty (1940), Civil Case Number two thousand three hundred (2300) of the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said Property is free from liens and encumbrances.

A parcel of land with an area of one hundred fourteen point eight thousand three hundred thirty one (114.8331) cuerdas equivalent to four hundred fifty one thousand three hundred thirty nine point five thousand one hundred thirty eight (451,339.5138) square meters and equivalent to one hundred eleven point fifty three (111.53) acres, was segregated from property number one thousand twenty one (1021). Said segregated parcel was lot tied (grouped) to other properties to form property number one thousand seven hundred fifty seven (1757), recorded at page one hundred twenty (120) of volume forty six (46) of Vieques, Registry of Property of Fajardo, Puerto Rico. After the segregation of said parcel, the description of the remnant of property one thousand twenty one (1021) is as follows:

Rural: Parcel of land situated in the Wards of Mosquito, Florida and Llave, Municipality of Vieques, Puerto Rico, containing an area of six thousand five hundred forty two point two thousand one hundred sixty nine (6542.2169) cuerdas, equivalent to twenty five million seven hundred thirteen thousand five hundred point six thousand eight hundred sixteen (25,713,500.6816) square meters, equivalent to six thousand three hundred fifty three point forty seven (6,353.47) acres; bounded by the North by the Atlantic Ocean, and by the lands of María Ceferino, Elaudio Colón, Estate of Quiñones, Estate of Benito Martínez; on the East by Just Haristoy, Estate of Dubois, Eulogio Cruz, Engracia Ortiz, Pablo Burgos, Estate of Monserrate Ortiz, Evaristo Morales, Jobo González, Pascasio Rosa, Estate of Morales, Estate of López, Francisco Pérez, Tomás Ramírez, Ines Brignoni, Rosa Pérez, Felipe Quiñones, Norberto Monell, Esteban Díaz, and others; on the South by the Caribbean Sea and by the lands of Ana Rieckhoff, on the West by the Caribbean Sea.

PARCELS A, B, C, D, E, AND F

Rural: one thousand two hundred thirty-four and three centimeters (1,234.03) acres of land, equal to one thousand two hundred seventy point fifty eight (1,270.58) cuerdas, more or less, located at the Wards of Punta Arenas and La Llave, of the Municipality of Vieques, containing six parcels in the title as presented and in the English language described as follows:

Parcel A. Parcel of land shown as Parcel A on P.W. Drawing number one hundred and sixty-six (166) attached to the declaration of taking on file on this proceeding situated in the Wards of Punta Arenas and La Llave, Municipality of Vieques, Puerto Rico, having an area of five hundred thirty-five and fifty-two hundredths (535.52) acres, more or less, equivalent to five hundred fifty-one and

thirty-nine hundredths (551.39) cuerdas, equivalent to two hundred sixteen (216) hectares, seventy-one (71) ares, seventy-eight (78) centiares, bounded on the North, South, and West by lands of the United States acquired from Juan Angel Tió and on the East by lands of Lola Benítez. Parcel B. Parcel of land shown as Parcel B on P.W. Drawing number one hundred and sixty-six (166), hereinbefore referred to, situated in the Wards of Punta Arenas and La Llave, having an area of thirty-five and fifty-four hundredths (35.54) acres, more or less, equivalent to thirty-six and fifty-nine hundredths (36.59) cuerdas, equivalent to fourteen (14) hectares, thirty-eight (38) ares, sixteen (16) centiares bounded on the North and South by lands of the United States acquired from Juan Angel Tió, on the East, by land of Georgina Benítez and on the West by land of Carmen Amelia Benítez Bithorn. Parcel C. Parcel of land shown as Parcel C on P.W. Drawing number one hundred and sixty-six (166) hereinbefore referred to, situated in the Wards of Punta Arenas and La Llave, Municipality of Vieques, Puerto Rico having an area of thirty-five and fifty-four hundredths (35.54) acres, more or less, equivalent to thirty-six and fifty-nine hundredths (36.59) cuerdas, equivalent to fourteen (14) hectares, thirty-eight (38) ares, sixteen (16) centiares bounded on the North and South by lands of the United States, acquired from Juan Angel Tió; on the East by lands of Francisca Carlota and Carlos Arturo Benítez Santiago and on the West by land of Lola Benítez. Parcel D. Parcel of land shown as Parcel D on P.W. Drawing number one hundred and sixty-six (166) hereinbefore referred to, situated in the Wards of Punta Arenas and La Llave, Municipality of Vieques, having an area of one hundred twenty-six and nine tenths (126.90) acres, more or less, equivalent to one hundred thirty and sixty-six hundredths (130.66) cuerdas, equivalent to fifty-one (51) hectares, thirty-five (35) ares, forty-six (46) centiares, bounded on the North and South by lands of the United States acquired from Juan Angel Tió, on the East by lands of Julio Benítez Vázquez, and on the West by lands of Georgina Benítez. Parcel E. Parcel of land shown as Parcel E on P.W. Drawing number one hundred and sixty-six (166) hereinbefore referred to, situated in the Wards of Punta Arena and La Llave, Municipality of Vieques, Puerto Rico consisting of thirty-five and fifty-four hundredths (35.54) acres, more or less equivalent to thirty-six and fifty-nine hundredths (36.59) cuerdas, equivalent to fourteen (14) hectares, thirty-eight (38) ares, eighteen (18) centiares, bounded on the North, South and East by lands of the United States acquired from Juan Angel Tió, and on the West by land of Francisca, Carlota and Carlos Arturo Benitez Santiago. Parcel F. Parcel of land shown as Parcel F on P.W. Drawing number one hundred and sixty-six (166) hereinbefore referred to, situated in the Wards of Punta Arenas, Municipality of Vieques, having an area of four hundred sixty-four and ninety-nine hundredths (464.99) acres, more or less, equivalent to four hundred seventy-eight and seventy-six hundredths (478.76) cuerdas equivalent to one hundred eighty-eight (188) hectares, seventeen (17) ares, thirty-eight (38) centiares, bounded on the North and East by lands of the United States, acquired from Juan Angel Tió and on the South and West by the Caribbean Sea.

All of the above are recorded under Property number one thousand forty two (1,042) at page fifty six (56) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico.

The Government acquired Property one thousand forty two (1042) by condemnation, as per judgment issued on May twelve (12) nineteen hundred forty two (1942), Civil Case Number two thousand six hundred four (2604) of the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said Property is free from liens and encumbrances.

PARCEL OF LAND

RURAL: Parcel of land situated in the Ward of Llave Municipality of Vieques, Puerto Rico, consisting of three hundred sixteen point forty-five (316.45) acres equivalent to three hundred twenty five point eighty three (325.83) cuerdas, equivalent to one hundred and twenty eight (128) hectares, six (6) ares and thirty one (31) centiares, bounds on the North, by lands of the United States of America, acquired from Juan Angel Tió and lands of Tomás Ramírez; on the East, by lands of Manuel Pérez and on the South and West, by lands of the United States of America.

Property number 1047, recorded at page 98 of volume 29 of Vieques, Registry of Property of Fajardo.

The Government acquired Property number 1047 by condemnation, as per judgment issued on February 24, 1943 by the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said property is free from liens and encumbrances.

PARCEL OF LAND

RURAL: Parcel of land shown as Parcels number nine (9) so and number fourteen (14) to twenty four (24) inclusive, situated in the Ward of Mosquito, Municipality of Vieques, Puerto Rico, containing an area of eighty three point sixty seven (83.67) acres of land more or less, equivalent to eighty six point fifteen (86.15) cuerdas equivalent to thirty three (33) hectares, eighty six (86) ares, one (1) centiare, bounded on the North by the Atlantic Ocean; on the East, South and West by land of the United States formerly of Juan Angel Tió and described by metes and bounds as follows; Beginning at point number nine dash two (9-2) as shown on Exhibit A, said point being the most Southerly corner of land of the Estate of Epigmenis Quiñones shown as parcel number nine (9) North, zero degrees eight minutes thirty eight seconds ($0^{\circ} 08' 38''$) East, a distance of three thousand four hundred two point thirty nine (3402.39) feet to point nine dash two (9-2), thence North, five degrees thirty one minutes five seconds ($5^{\circ} 31' 05''$) West, a distance of fifty six point eighty (56.80) feet to point number one dash five (1-5) which is in the Southeasterly corner of land of Eladio Pérez Rodríguez shown as Parcel number five (5) thence along the Southerly line of said Parcel number five (5), South seventy seven degrees and twenty one minutes ($77^{\circ} 21'$) West a distance of one hundred seventy seven point sixty three (177.63) feet to point number one dash six (1-6) thence South seventy four degrees forty five minutes seven seconds ($74^{\circ} 45' 07''$) West a distance of ninety eight point eighteen (98.18) feet to point one dash seven (1-7) thence South eighty two degrees fifty six minutes nine seconds ($82^{\circ} 56' 09''$) West a distance of five hundred sixty five point eighty seven (565.87) feet to point number one dash eight (1-8) thence North forty nine degrees sixteen minutes zero eight seconds ($49^{\circ} 16' 08''$) West, a distance of twenty four point eighty nine (24.89) feet to point one dash nine (1-9) which is in the center of Insular Highway number eight (8) at the Southeasterly corner of Parcel number fifteen (15) thence along the Westerly line of Parcel fifteen (15) and fourteen (14) North, four degrees zero seven minutes fifty seven seconds ($4^{\circ} 07' 57''$) West, a distance of one hundred thirty nine point forty six (139.46) feet more or less to point one dash ten (1-10) which is on the ordinary high tide line of the Atlantic

Ocean; thence along said ordinary high tide line in a general Northeasterly direction a distance of two thousand four hundred eighty two point twenty five (2482.25) feet more or less to point twenty four dash six (24-6) which is the Northeasterly corner of land of the Estate of Benito Martinez, shown as parcel twenty four (24); thence along the Easterly line of said parcel, number twenty four (24), South one degree forty minutes twenty six seconds ($1^{\circ} 40' 26''$) East, a distance of five hundred sixty seven point zero two (567.02) feet more or less to point number twenty four dash five (24-5) which is in insular Highway number thirty eight (38) and adjacent to the Southerly line there of thence South two degrees forty two minutes three seconds ($2^{\circ} 42' 03''$) East, a distance of one hundred and fifty five point ninety eight (155.98) feet to point number twenty four dash four (24-4) which is the Southeasterly corner of said parcel number fifteen (15) thence South sixty five degrees fifty four minutes twelve seconds ($65^{\circ} 54' 12''$) West a distance of four hundred ninety eight point twelve (498.12) feet to point number ten dash three (10-3) which is in the Easterly line of land of Felipe Quiñones shown as parcel number ten (10); thence along the Easterly line of said Parcel number ten (10) South zero degrees forty three minutes zero two seconds ($0^{\circ} 43' 02''$) West, a distance of three thousand five hundred ninety five point thirty four (3595.34) feet to point number ten dash two (10-2) which is the Southeasterly corner thereof; thence South eighty two degrees twenty two minutes twenty six seconds ($82^{\circ} 22' 26''$) a distance of four hundred five point sixty three (405.63) feet to point number nine dash four (9-4) which is the Southwesterly corner of said parcel number ten (10); thence South eighty three degrees zero five minutes seventeen seconds ($83^{\circ} 05' 17''$) West a distance of three hundred seventy one point nineteen (371.19) feet to point number nine dash three (9-3) which is the point of beginning."

Property number 1037, recorded at page 22 of volume 29 of Vieques, Registry of Property of Fajardo.

The Government acquired Property number 1037 by condemnation, as per judgment issued on February 17, 1942, Civil Case number two thousand four hundred forty three (2443) of the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said Property is free from liens and encumbrances.

PARCEL OF LAND

TRACT B: RURAL PARCEL of land shown as parcel Number eight (8) on exhibit A situated in the ward of Mosquito Municipality of Vieques, containing an area of one point fifty eight (1.58) acres of land, more or less to one point sixty-three (1.63) cuerdas, equivalent to sixty-three (63) areas ninety-four (94) centiares bounded on the NORTH by the Atlantic Ocean; on the EAST, SOUTH and WEST by land of United States formerly owned by Juan Angel Tió and described by metes and bounds as follows, beginning at point A as shown on Exhibit A said point being the Southwesterly corner of the parcel herein described and is in Insular Highway Number Seventy (70) adjacent to the Southerly line of said Highway; thence South eighty-five degrees (85°) twenty-eight minutes (28') fifty-nine seconds (59"), East in a distance of ninety-eight point ninety-nine (98.99) feet to point B, thence SOUTH fifty-eight degrees (58°) twenty-nine minutes (29') fifty-eight seconds (58"), East a distance of ninety-seven point thirty six (97.36) feet to point C, thence North sixteen degrees (16) thirty-three minutes (33') fifty-nine seconds (59"), East a distance of one

hundred seventy four point seventy-eight (174.78) feet more or less to point E which is an the ordinary high tide line of the Atlantic Ocean, thence along said ordinary high tide line North eighty-one degrees (81°) fifteen minutes (15') twenty-nine seconds (29"), West a distance of fifty-six point thirty-two (56.32) feet more or less to point F, thence continuing along said ordinary high tide line; South seventy-five degrees (75°) twenty minutes (20') fifty seconds (50"), West a distance of two hundred seventy three point eighty-eight (273.88) feet more or less to point G; thence South eleven degrees (11°) five minutes (5') twelve seconds (12"), East in distance of two hundred eight point thirteen (208.13) feet more or less to a point which is the point of beginning.

Property number one thousand thirty eight (1038) recorded at page twenty nine (29) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico.

The Government acquired Property number one thousand thirty eight (1038) by condemnation, as per judgment issued on February seven (7), nineteen forty two (1942) of the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said Property is free from liens and encumbrances.

PARCEL OF LAND

TRACT A: Rural: Parcel of land shown as Parcels Number seven (7), eleven (11), twelve (12), and thirteen (13) on P.W. Drawing Number one hundred thirty seven (137), shown on Exhibit 'A' situated in the Ward of Mosquito, Municipality of Vieques, containing an area of twelve point zero eight (12.08) acres of land more or less, equivalent to twelve point forty four (12.44) cuerdas, equivalent to four (4) hectares, eighty eight (88) ares, 86 centiares, bounded on the North, East, South and West by land of the United States, formerly of Juan Angel Tió and described by metes and bounds as follows: Beginning at point number twelve dash nine (12-9) as shown on Exhibit 'A' hereinbefore referred to, said point being the Northeasterly corner of the parcel herein described; thence South seventy five degrees forty one minutes and fifty three seconds (75° 41' 53") West, a distance of two hundred five point fifty two (205.52) feet to point number two dash twenty (2-20); thence South seventy six degrees thirty one minutes and nineteen seconds (76° 31' 19") West, a distance of two hundred forty three point ninety six (243.96) feet to point number two dash twenty one (2-21) which is the Northwesterly corner of the parcel herein described; thence along the Westerly boundary of said parcel the following courses and distances: South twelve degrees twenty seven minutes and twenty two seconds (12° 27' 22") East, a distance of two hundred five (205.52) feet to point number two dash one (2-1); thence North eighty five degrees twenty one minutes twenty seconds (85° 21' 20") East, a distance of twenty nine point fifty two (29.52) feet to point number two dash two (2-2); thence South twenty seven degrees ten minutes and eight seconds (27° 10' 08") East, a distance of seventeen point eighty three (17.83) feet to point number two dash three (2-3); thence South forty five degrees fifteen minutes fifty six seconds (45° 15' 56") West, a distance of twelve point eighty four (12.84) feet to point number two dash four (2-4); thence South nineteen degrees twenty six minutes twenty three seconds (19° 26' 23") West, a distance of one hundred thirty seven point sixty five (137.65) feet to point number two dash five (2-5); thence South fifty eight degrees fifty nine minutes twenty one seconds (58° 59' 21") West, a distance of sixteen point sixty nine (16.69) feet to point number two dash six (2-6); thence South

seven degrees fifty minutes twenty two seconds ($7^{\circ} 50' 22''$) East, a distance of one hundred eighteen point thirty nine (118.39) feet to point number two dash seven (2-7), thence South seventy degrees ten minutes twenty four seconds ($70^{\circ} 10' 24''$) East, a distance of twenty three point eighteen (23.18) feet to point number two dash eight (2-8); thence South twenty nine degrees twenty three minutes twenty two seconds ($29^{\circ} 23' 22''$) East, a distance of two hundred twenty three point ninety one (223.91) feet to point number two dash seven (2-7); thence South fifty eight degrees zero minutes thirteen seconds ($58^{\circ} 0' 13''$) East, a distance of thirteen point sixty one (13.61) feet to point number two dash ten (2-10); thence North sixty two degrees forty seven minutes thirty three seconds ($62^{\circ} 47' 33''$) East, a distance of ten point thirty seven (10.37) feet to point number two dash eleven (2-11); thence South twenty three degrees twenty four minutes fourteen seconds ($23^{\circ} 24' 14''$) East, a distance of two hundred ten point twenty one (210.21) feet to point number two dash twelve (2-12); thence South thirty seven degrees twenty seven minutes fifty eight seconds ($37^{\circ} 27' 58''$) East, a distance of two hundred forty seven point twelve (247.12) feet to point number two dash thirteen (2-13); thence South eighteen degrees eighteen minutes sixteen seconds ($18^{\circ} 18' 16''$) East, a distance of seventy six point forty two (76.42) feet to point number two dash fourteen (2-14); thence South three degrees thirty two minutes twenty five seconds ($3^{\circ} 32' 25''$) East, a distance of one hundred thirty nine point sixty (139.60) feet to point number two dash fifteen (2-15) which is the Southwesterly corner of the parcel herein described; thence South eighty four degrees nineteen minutes eighteen seconds ($84^{\circ} 19' 18''$) East, a distance of one hundred four point thirty (104.30) feet to point number two dash sixteen (2-16); thence South eighty seven degrees seventeen minutes fifty seven seconds ($87^{\circ} 17' 57''$) East, a distance of one hundred three point forty (103.40) feet to point number two dash seventeen (2-17) which is the Southeasterly corner of said parcel; thence South one degree forty three minutes eleven seconds ($1^{\circ} 43' 11''$) West, a distance of one thousand one hundred sixty six point forty (1166.40) feet to point number two dash eighteen (2-18); thence North twenty nine degrees thirty minutes sixteen seconds ($29^{\circ} 30' 16''$) West, a distance of one hundred forty five point forty six (145.46) feet to point number two dash nineteen (2-19) which is the point of beginning.

Parcel Number Seven (7): Rural: Parcel of land shown as parcel number seven (7) on P.W. Drawing number one hundred thirty seven (137) of Fleet Operating Facilities Roosevelt Roads, Puerto Rico, approved December twelve (12) nineteen forty one (1941), situated in the Ward of Mosquito, Municipality of Vieques, containing an area of eleven point thirty five (11.35) acres, equivalent to eleven point sixty nine (11.69) cuerdas, equivalent to four (4) hectares, fifty nine (59) ares, thirty two (32) centiares, bounded on the North, East, South and West by land of the United States formerly owned by Juan Angel Tió.

Parcel Number Eleven (11): Rural: Parcel of land shown as parcel number eleven (11) on P.W. Drawing number one hundred thirty seven (137) of Fleet Operating Facilities Roosevelt Roads, Municipality of Vieques, containing an area of zero point zero eight (0.08) acres, equivalent to three hundred twenty four (324) square meters, bounded on the North, East, South and West by land of the Estate of María Ceferino.

Parcel Number Twelve (12): Rural: Parcel of land shown as parcel number twelve (12) on P.W. Drawing number one hundred thirty seven (137) of Fleet Operating Facilities Roosevelt Roads, Puerto Rico approved on December twelve (12), nineteen forty one (1941), situated in the Ward of

Mosquito, Municipality of Vieques, containing an area of zero point thirteen (0.13) acres, equivalent to five hundred twenty six (526) square meters, bounded on the North, East, South and West by land of the Estate of María Ceferino.

Parcel Number Thirteen (13): Rural: Parcel of land shown as parcel number thirteen (13) on P.W. Drawing number one hundred thirty seven (137) of Fleet Operating Facilities Roosevelt Roads, Puerto Rico approved on December twelve (12), nineteen forty one (1941), situated in the Ward of Mosquito, Municipality of Vieques, containing an area of zero point fifty two (0.52) acres, equivalent to two thousand one hundred four (2104) square meters, bounded on the North, East, South and West by land of the Estate of María Ceferino.

The above is recorded as property number one thousand thirty nine (1039) recorded at page thirty four (34) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico.

The Government acquired Property number one thousand thirty nine (1039) by condemnation, as per judgment issued on February seventeen (17), nineteen forty two (1942), of the United States District Court for the District of Puerto Rico.

As stated in the Registry of Property, said Property is free from liens and encumbrances.

That the remnant of property one thousand twenty one (1021), and properties one thousand thirty seven (1037), one thousand forty seven (1047), one thousand thirty eight (1038), one thousand thirty nine (1039) and one thousand forty two (1042) are adjoining properties and form one physical property. The Government wishes to lot tie (group) said properties and by the present document lot ties (group) them to form one separate and independent property and as such be recorded at the Registry of Property with the following description:

Rural: Parcel of land identified as the LAND JOINDER BOUNDARY situated in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing an area of eight thousand two hundred thirty eight point eight thousand four hundred sixty nine (8,238.8469) cuerdas, equivalent to thirty two million three hundred eighty one thousand nine hundred twenty seven point nine thousand one hundred eight (32,381,927.9108) square meters and equivalent to eight thousand one point twenty eight (8,001.28) acres, more or less, bounded on the North by the Atlantic Ocean, Puerto Rico Ports Authority, Vieques Airport; on the East by lands of the Puerto Rico Land Administration, Wendy Price, Estate of Ambrosio López, Frank Radican, Estate of Juana López Robles, Estate of Rosa Brignoni, Lucrecia Perez Brignoni, Victoria Perez Brignoni, Manuel Pérez, Rosa Pérez Brignoni, Guillermo Carrión, Felipe Quiñones, Norberto Monel, Esteban Díaz; on the South by the Caribbean Sea; and on the West by the Atlantic Ocean.

Only for purposes of its recording at the Registry of Property, the lot tied (grouped) property is assigned a value of one dollar (\$1.00).

The Government requests the Registry of Property to record the lot tied (grouped) property on its books.

That the Government requested Surveyor Luis Salvador Berríos Montes, also known as Luis S. Berríos Montes ("the Surveyor"), with license number 8689, to measure said lot tied (grouped) property to precisely determine its present real area and boundaries.

That the Government delivers to the Notary Public a document prepared by the Surveyor, titled Certificate of Rectification of Area ("Certificación de Rectificación de Area"), which reads as follows:

**CERTIFICATE OF RECTIFICATION OF AREA
(CERTIFICACION DE RECTIFICACION DE AREA)**

I, Luis Salvador Berríos Montes, also known as Luis S. Berríos Montes, of legal age, married, surveyor with license number 8689 and resident of Vega Baja, Puerto Rico, with social security number 583-30-6736, under oath DECLARE:

1. That my name and personal circumstances are as hereinbefore stated.
2. That on April 6, 2000, the United States of America by and through the Department of the Navy requested me to survey a property that results from the lot tie (grouping) of the remnant of property number one thousand twenty one (1021), recorded at page one hundred eighty one (181) overleaf of volume twenty eight (28) of Vieques, Registry of Property of Fajardo, Puerto Rico, property number one thousand forty two (1042), recorded at page fifty six (56) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico, property number one thousand thirty seven (1037), recorded at page twenty two (22) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Property number one thousand forty seven (1047), recorded at page ninety eight (98) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Property number one thousand thirty eight (1038) recorded at page twenty nine (29) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico and Property number one thousand thirty nine (1039) recorded at page thirty four (34) of volume twenty nine (29) of Vieques, Registry of Property of Fajardo, Puerto Rico, which has the following description:

Rural: Parcel of land identified as the LAND JOINDER BOUNDARY situated in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing an area of eight thousand two hundred thirty eight point eight thousand four hundred sixty nine (8,238.8469) cuerdas, equivalent to thirty two million three hundred eighty one thousand nine hundred twenty seven point nine thousand one hundred eight (32,381,927.9108) square meters and equivalent to eight thousand one point twenty eight (8,001.28) acres, more or less, bounded on the North by the Atlantic Ocean, Puerto Rico Ports Authority, Vieques Airport; on the East by lands of the Puerto Rico Land Administration, Wendy Price, Estate of Ambrosio López, Frank Radican, Estate of Juana López Robles, Estate of Rosa Brignoni, Lucrecia Perez Brignoni, Victoria Perez Brignoni, Manuel Pérez, Rosa

That the actual physical and correct area of said property is as follows:

Rural: Parcel of land situated in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing an area of eight thousand two hundred six point eight hundred ninety two (8,206.892) acres equivalent to eight thousand four hundred fifty point zero ninety nine (8,450.099) cuerdas equivalent to thirty three million two hundred twelve thousand two hundred thirty six point four (33,212,236.4) square meters, more or less, bounded on the North by the Atlantic Ocean, Puerto Rico Ports Authority, Vieques Airport; on the East by lands of the Puerto Rico Land Administration, Wendy Price, Estate of Ambrosio López, Frank Radican, Estate of Juana López Robles, Estate of Rosa Brignoni, Lucrecia Perez Brignoni, Victoria Perez Brignoni, Manuel Pérez, Rosa Pérez Brignoni, Guillermo Carrión, Felipe Quiñones, Norberto Monel, Esteban Díaz; on the South by the Caribbean Sea; and on the West by the Atlantic Ocean.

The Government wishes to segregate and herein proceeds to segregate from the lot tied (grouped) Property the following parcel of land hereinafter the "PRCT Parcel":

PRCT PARCEL

Rural: Parcel of land, made of two portions identified as Parcel A and Parcel B, located in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing a total of 34,847,987 square feet or 800 acres, which equates to 3,237,496.1 square meters or 823.707 cuerdas which is described as follows:

Parcel A: A parcel of land located in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing 29,627,762 square feet or 680.160 acres, which equates to 2,752,519.5 square meters or 700.316 cuerdas, bounded on the North, East, and South by lands presently owned by the United States of America and to be conveyed to the Municipality of Vieques pursuant to Public Law 106-398 of October 30, 2000, and on the West by lands of the United States Government, which parcel is more particularly described by metes and bounds as follows:

Beginning at National Geodetic Survey Monument 'FRIO' (PID 9848) in the Punta Arenas Ward, said point being a brass disk stamped PUERTO RICO GPS CONTROL C.R.I.M. FRIO and having a northing of 754,659.1026 and an easting of 953,331.2647 noted as the Point of Beginning on the plat labeled PUERTO RICO CONSERVATION TRUST BOUNDARY.

Thence N67°41'14"E 9540.20' to an iron rod and cap set, the True Point of Beginning, having a northing of 758,281.1736 and an easting of 962,157.1387; thence S89°23'48"E 1937.66' to an iron rod and cap set; thence S47°54'59"E 155.13' to an iron rod and cap set; thence N59°49'59"E 309.71' to an iron rod and cap set; thence N82°16'17"E 100.88' to an iron rod and cap set; thence S80°03'15"E 122.74' to an iron rod and cap set; thence S72°56'47"E 444.17' to an iron rod and cap set; thence S64°31'50"E 52.47' to a concrete monument set, having a northing of 758,151.9788 and an easting of 965,170.4559; thence S51°14'51"E 24.49' to an iron rod and cap set; thence

S45°15'43"E 68.57' to an iron rod and cap set; thence S32°19'30"E 144.98' to an iron rod and cap set; thence S11°57'25"E 232.68' to an iron rod and cap set; thence S24°47'42"E 84.41' to an iron rod and cap set; thence S80°25'10"E 149.88' to an iron rod and cap set; thence S70°52'54"E 259.11' to an iron rod and cap set; thence S55°47'16"E 175.57' to an iron rod and cap set; thence S44°53'25"E 171.79' to an iron rod and cap set; thence S48°01'27"E 98.26' to an iron rod and cap set; thence S57°02'17"E 94.45' to an iron rod and cap set; thence S54°07'53"E 135.63' to an iron rod and cap set; thence S47°58'01"E 116.16' to an iron rod and cap set; thence S41°46'28"E 620.72' to an iron rod and cap set; thence S43°07'53"E 310.65' to an iron rod and cap set; thence S51°17'48"E 81.64' to an iron rod and cap set; thence S74°09'53"E 57.50' to an iron rod and cap set; thence N86°17'50"E 70.06' to an iron rod and cap set; thence N42°20'19"E 57.33' to a concrete monument set, having a northing of 756,347.5581 and an easting of 967,260.3822; thence N02°54'10"E 54.17' to an iron rod and cap set; thence N28°27'42"W 195.95' to an iron rod and cap set; thence N16°10'20"W 80.21' to an iron rod and cap set; thence N02°55'52"E 92.03' to an iron rod and cap set; thence N47°24'22"E 86.83' to an iron rod and cap set; thence N83°39'15"E 125.38' to an iron rod and cap set; thence N44°46'30"E 114.02' to an iron rod and cap set; thence N67°38'14"E 67.36' to an iron rod and cap set; thence S79°06'27"E 156.13' to an iron rod and cap set; thence S70°58'50"E 94.64' to an iron rod and cap set; thence S65°36'50"E 282.27' to an iron rod and cap set; thence S71°48'51"E 266.62' to an iron rod and cap set; thence S72°09'11"E 116.58' to an iron rod and cap set; thence S47°11'47"E 65.99' to an iron rod and cap set; thence S41°29'22"E 127.90' to an iron rod and cap set; thence N89°38'39"E 403.83' to an iron rod and cap set; thence N88°56'01"E 456.85' to an iron rod and cap set; thence S77°37'21"E 110.34' to an iron rod and cap set; thence S51°52'35"E 104.50' to an iron rod and cap set; thence S33°58'28"E 147.86' to an iron rod and cap set; thence S50°37'39"E 118.41' to an iron rod and cap set; thence S74°43'15"E 114.76' to an iron rod and cap set; thence S79°22'32"E 409.84' to an iron rod and cap set; thence S85°21'16"E 82.11' to an iron rod and cap set; thence N82°36'22"E 131.62' to an iron rod and cap set; thence N70°09'11"E 332.17' to an iron rod and cap set; thence N79°02'08"E 77.47' to an iron rod and cap set; thence S70°54'44"E 66.10' to an iron rod and cap set; thence S35°00'49"E 97.40' to an iron rod and cap set; thence S74°27'44"E 130.01' to a concrete monument set, having a northing of 756,106.4799 and an easting of 971,063.2438; thence S68°33'47"E 165.20' to an iron rod and cap set; thence S34°09'10"E 70.63' to an iron rod and cap set; thence S06°21'13"E 130.33' to an iron rod and cap set; thence S41°18'04"E 130.50' to an iron rod and cap set; thence S16°08'53"E 88.04' to an iron rod and cap set; thence S29°09'19"W 145.93' to an iron rod and cap set; thence S12°21'39"W 94.25' to an iron rod and cap set; thence S54°42'20"E 96.83' to an iron rod and cap set; thence S78°59'41"E 134.23' to an iron rod and cap set; thence N82°35'02"E 143.19' to an iron rod and cap set; thence N61°56'17"E 199.60' to an iron rod and cap set; thence N75°39'59"E 64.40' to an iron rod and cap set; thence S45°43'01"E 73.82' to an iron rod and cap set; thence S05°21'57"W 69.41' to an iron rod and cap set; thence S19°33'32"W 160.52' to an iron rod and cap set; thence S38°17'34"E 115.28' to an iron rod and cap set; thence S30°42'17"E 76.56' to an iron rod and cap set; thence S12°36'09"W 65.63' to a concrete monument set, having a northing of 755,010.5019 and an easting of 971,970.5712; thence S33°28'19"W 150.44' to an iron rod and cap set; thence S53°41'09"W 71.19' to an iron rod and cap set; thence S88°29'36"W 71.66' to an iron rod and cap set; thence N67°06'17"W 90.43' to an iron rod and cap set; thence N82°03'52"W 65.54' to an iron rod and cap set; thence S63°11'31"W 55.13' to an iron rod and cap set; thence S25°40'52"W 158.58' to an iron rod and cap set; thence S53°41'01"W 64.67' to an iron rod and cap set; thence S81°27'44"W 341.84' to an iron rod and cap set; thence S58°18'35"W 63.96' to an iron

rod and cap set; thence S30°20'11"W 85.14' to an iron rod and cap set; thence S10°13'08"W 278.46' to an iron rod and cap set; thence S31°47'48"W 57.69' to an iron rod and cap set; thence S65°22'10"W 52.43' to a concrete monument set, having a northing of 754,176.3623 and an easting of 970,877.4243; thence N74°45'05"W 80.32' to an iron rod and cap set; thence N36°15'09"W 75.38' to an iron rod and cap set; thence N31°17'37"W 239.71' to an iron rod and cap set; thence N34°31'44"W 184.49' to an iron rod and cap set; thence N37°49'54"W 453.66' to an iron rod and cap set; thence N36°16'36"W 139.76' to an iron rod and cap set; thence N50°12'14"W 84.32' to an iron rod and cap set; thence N69°32'59"W 73.26' to an iron rod and cap set; thence S81°59'42"W 86.21' to a concrete monument set, having a northing of 755,153.6452 and an easting of 969,946.5314; thence S61°00'35"W 150.80' to an iron rod and cap set; thence S78°57'06"W 74.36' to an iron rod and cap set; thence S88°19'05"W 199.33' to an iron rod and cap set; thence S83°14'03"W 130.28' to an iron rod and cap set; thence S67°17'52"W 132.42' to an iron rod and cap set; thence S57°04'25"W 124.99' to an iron rod and cap set; thence S65°58'24"W 103.55' to an iron rod and cap set; thence N76°07'50"W 79.36' to an iron rod and cap set; thence S85°31'17"W 106.19' to an iron rod and cap set; thence S72°48'17"W 982.86' to an iron rod and cap set; thence S69°58'11"W 746.64' to an iron rod and cap set; thence S72°07'19"W 139.53' to an iron rod and cap set; thence S79°27'19"W 345.89' to an iron rod and cap set; thence N85°22'34"W 74.06' to a concrete monument set, having a northing of 754,248.1640 and an easting of 966,721.3901; thence S54°26'31"W 237.07' to an iron rod and cap set; thence S34°20'09"W 179.27' to an iron rod and cap set; thence S32°28'23"W 134.63' to an iron rod and cap set; thence S23°26'56"W 65.68' to an iron rod and cap set; thence S11°45'01"W 59.49' to an iron rod and cap set; thence S05°26'56"E 108.69' to an iron rod and cap set; thence S06°27'23"E 321.05' to an iron rod and cap set; thence S22°07'47"W 181.83' to an iron rod and cap set; thence S05°27'35"W 149.19' to an iron rod and cap set; thence S08°47'40"W 191.49' to an iron rod and cap set; thence S21°00'20"W 186.71' to an iron rod and cap set; thence S16°44'43"W 185.88' to an iron rod and cap set; thence S06°51'14"W 136.00' to an iron rod and cap set; thence S21°14'01"E 122.25' to an iron rod and cap set; thence S08°36'39"E 136.56' to an iron rod and cap set; thence S49°12'04"E 293.06' to an iron rod and cap set; thence S33°19'05"E 430.20' to an iron rod and cap set; thence S03°37'02"E 86.48' to a concrete monument set, having a northing of 751,423.1838 and an easting of 966,642.9445; thence S64°45'40"W 101.82' to an iron rod and cap set; thence S89°19'20"W 66.62' to an iron rod and cap set; thence N77°37'21"W 60.35' to an iron rod and cap set; thence N67°26'35"W 137.82' to an iron rod and cap set; thence N56°50'50"W 150.91' to an iron rod and cap set; thence N58°43'39"W 244.47' to an iron rod and cap set; thence N59°08'17"W 299.97' to an iron rod and cap set; thence N52°04'37"W 128.50' to an iron rod and cap set; thence N52°12'08"W 180.06' to an iron rod and cap set; thence N74°03'17"W 181.46' to an iron rod and cap set; thence N64°04'05"W 152.35' to an iron rod and cap set; thence N44°51'15"W 106.78' to an iron rod and cap set; thence N49°21'53"W 209.70' to an iron rod and cap set; thence N59°50'36"W 60.64' to an iron rod and cap set; thence N63°34'34"W 100.65' to an iron rod and cap set; thence N50°46'52"W 128.40' to an iron rod and cap set; thence S85°59'08"W 69.55' to an iron rod and cap set; thence N79°28'21"W 95.26' to an iron rod and cap set; thence N65°19'39"W 89.55' to an iron rod and cap set; thence N27°41'40"W 417.42' to an iron rod and cap set; thence N22°16'59"W 111.86' to an iron rod and cap set; thence N23°51'34"W 253.24' to an iron rod and cap set; thence N32°51'24"W 325.01' to an iron rod and cap set; thence N31°17'54"W 177.07' to an iron rod and cap set; thence N34°03'33"W 318.40' to an iron rod and cap set; thence N31°43'49"W 283.55' to an iron rod and cap set; thence N40°51'37"W 319.25' to an iron rod and cap set; thence N54°14'02"W 270.56' to an iron rod and cap set; thence

N59°23'30"W 200.67' to an iron rod and cap set; thence N55°15'19"W 138.79' to an iron rod and cap set; thence N58°06'12"W 157.93' to an iron rod and cap set; thence N56°13'57"W 183.47' to an iron rod and cap set; thence N64°38'51"W 110.58' to an iron rod and cap set; thence N67°45'16"W 187.16' to an iron rod and cap set; thence N70°55'49"W 99.24' to an iron rod and cap set; thence N79°47'59"W 179.26' to an iron rod and cap set; thence N68°03'49"W 151.31' to an iron rod and cap set; thence N77°00'08"W 182.56' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 166.66', chord bearing of N07°16'40"E, Radius=325.00', Arc Len=168.54'; thence following a curve to an iron rod and cap set with a long chord 200.96', chord bearing of N26°23'46"E, Radius=1352.00', Arc Len=201.15'; thence N30°39'30"E 157.24' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 18.39', chord bearing of N31°39'44"E, Radius=525.00', Arc Len=18.39'; thence N32°39'58"E 221.74' to an iron rod and cap set; thence S52°38'33"E 50.17' to a concrete monument set, having a northing of 755,865.1991 and an easting of 961,991.0745; thence N32°39'58"E 130.66' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 17.40', chord bearing of N31°42'58"E, Radius=525.00', Arc Len=17.41'; thence N30°45'59"E 432.29' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 11.32', chord bearing of N31°26'57"E, Radius=475.00', Arc Len=11.32'; thence N32°07'54"E 406.25' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 214.73', chord bearing of N27°48'38"E, Radius=1425.00', Arc Len=214.94'; thence following a curve to an iron rod and cap set with a long chord 279.26', chord bearing of N00°19'41"E, Radius=355.00', Arc Len=287.01'; thence N22°50'00"W 800.52' to a concrete monument set, having a northing of 757,922.1025 and an easting of 962,304.9974; thence continuing N22°50'00"W 371.07' to an iron rod and cap set; thence following a curve to an iron rod and cap set, the True Point of Beginning, with a long chord 17.51', chord bearing of N12°44'57"W, Radius=50.00', Arc Len=17.60'.

Parcel B: A parcel of land located in the Ward of Llave, Municipality of Vieques, Puerto Rico, containing 5,220,225 square feet or 119.840 acres, which equates to 484,976.6 square meters or 123.391 cuerdas to the approximate edge of the water, bounded on the North by lands belonging to the United States of America to be conveyed to the Municipality of Vieques pursuant to Public Law 106-398 of October 30, 2000, on the East and West by lands of the United States Government, and on the South by the Caribbean Sea, more particularly described by metes and bounds as follows:

Beginning at a concrete monument in the Llave Ward, said concrete monument being stamped 'V1' and having a northing of 753,134.1705 and an easting of 975,319.7511 noted as the Point of Beginning '2' on the plat labeled D.O.I./P.R.C.T. BOUNDARY & 50' I/E EASEMENT. Thence S67° 33'56"W 4772.98' to an iron rod and cap set, the True Point of Beginning 'B', having a northing of 751,312.6675 and an easting of 970,908.0050:

Thence S88°30'56"E 619.49' to a concrete monument set, having a northing of 751,296.6207 and an easting of 971,527.2890; thence N84°16'44"E 22.91' to an iron rod and cap set; thence S05° 59'09"W 69.89' to an iron rod and cap set; thence S05°59'28"E 101.90' to an iron rod and cap set; thence S18°13'21"E 83.61' to an iron rod and cap set; thence S12°36'26"E 111.28' to an iron rod and cap set; thence S12°14'27"E 231.09' to an iron rod and cap set; thence S21°04'55"E 199.90' to an iron rod and cap set; thence S34°30'45"E 86.99' to an iron rod and cap set; thence S48°00'59"E

106.18' to an iron rod and cap set; thence S55°31'15"E 124.24' to an iron rod and cap set; thence S48°11'28"E 154.45' to an iron rod and cap set; thence S65°28'57"E 117.38' to an iron rod and cap set; thence S47°38'47"E 180.25' to an iron rod and cap set; thence S39°22'29"E 62.73' to an iron rod and cap set; thence S36°19'05"E 402.83' to an iron rod and cap set; thence S25°51'07"E 74.75' to an iron rod and cap set; thence S10°11'30"E 92.27' to an iron rod and cap set; thence S00°13'36"E 61.76' to an iron rod and cap set; thence S02°39'23"W 245.30' to an iron rod and cap set; thence S03°58'48"E 93.43' to an iron rod and cap set; thence S05°33'56"E 224.30' to an iron rod and cap set; thence S24°50'22"E 53.12' to an iron rod and cap set; thence due South 788.93' to an iron rod and cap set; thence continuing due South 100.00' to an iron rod and cap set on the approximate edge of water of the Caribbean Sea; thence S55°51'29"W 878.25' on a tie line along the approximate edge of water of said Caribbean Sea to an iron rod and cap set; thence departing the approximate edge of water of said Caribbean Sea N43°10'27"W 120.00' to an iron rod and cap set; thence continuing N43°10'27"W 1880.01' to an iron rod and cap set; thence N07°44'48"E 2419.10' to an iron rod and cap set, the True Point of Beginning 'B'.

For purposes of its recording at the Registry of Property, this parcel of land is valued at one dollar (\$1.00).

After the segregation of the PRCT Parcel, which includes the portions identified as Parcels A and B, the description of the remnant of the lot tied (grouped) parcel hereinafter "Remnant" is described as follows:

Rural: Parcel of land situated in the Wards of Mosquito, Florida and Llave, Municipality of Vieques, Puerto Rico, containing an area of seven thousand six hundred twenty six point three hundred ninety two (7,626.392) cuerdas, equivalent to twenty nine million nine hundred seventy four thousand seven

hundred forty point three (29,974,740.3) square meters, equivalent to seven thousand four hundred six point eight hundred ninety two (7,406.892) acres; bounded on the North with the Atlantic Ocean and the Puerto Rico Ports Authority, Vieques Airport; on the South by the Caribbean Sea and the Puerto Rico Conservation Trust Fund's Parcel; on the East by lands of the Puerto Rico Land Administration, Wendy Price, Estate of Ambrosio López, Frank Radican, Estate of Juana López Robles, Estate of Rosa Brignoni, Lucrecia Perez Brignoni, Victoria Perez Brignoni, Manuel Pérez, Rosa Pérez Brignoni, Guillermo Carrión, Felipe Quiñones, Norberto Monel, Esteban Díaz; and on the West by the Atlantic Ocean.

SECOND: The PRCT Parcel is subject to all recorded and all existing and visible unrecorded reservations, easements, and rights-of-way for public roads, pipelines, drainage ditches, and public utilities presently existing and;

THIRD: Pursuant to Section 1508 (b) of Public Law 106-398, the Secretary of the Navy hereby conveys the PRCT Parcel to Grantee on the terms and conditions hereinafter stated and such conveyance is not incompatible with the public interest;

FOURTH: That the Grantee herein accepts the conveyance of all of the Government's property interests title and rights on the PRCT Parcel; and

FIFTH: The conveyance is authorized pursuant to the authority of Public Law 106-398.

WHEREFORE, the Government and the Grantee further covenant and agree as follows:

I. Conveyance.

A. The Government hereby remises, releases, and quitclaims, and by these presents does remise, release, and quitclaim unto the Grantee, its successors and assigns, forever, all right, title, and interest which the Government has in the PRCT Parcel subject to the conditions and easements set forth in Sections II A (1) (2) (3) (4), B (1) (2), C (1), and further subject to the restrictive covenants set forth in Section III and to the retained interests set forth in Section IV; further subject to all recorded and unrecorded reservations, easements, and rights-of-way for public roads, pipelines, drainage ditches, and public utilities presently existing and visible.

II. Easements

A. In addition to the PRCT Parcel, the Government also hereby grants to the Grantee the following easements:

1. A perpetual easement for ingress and egress on and over the Remnant in favor of the PRCT Parcel to provide access to Parcel A of the PRCT Parcel more fully described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N06°43'46"W 4472.16' to a concrete monument, the True Point of Beginning, having a northing of 755,865.1991 and an easting of 961,991.0745:

Thence N52°38'33"W 50.17' to a point;

Thence N32°39'58"E 126.55' to a point;

Thence following a curve to a point with a long chord of 15.75', chord bearing of N31°42'58"E

Radius=475.00'

Arc Len=15.75'

Thence N30°45'59"E 432.29' to a point;

Thence following a curve to a point with a long chord of 12.51', chord bearing of N31°26'57"E

Radius=525.00'

Arc Len=12.51'

Thence N32°07'54"E 406.25' to a point;

Thence following a curve to a point with a long chord of 207.20', chord bearing of N27°48'38"E

Radius=1375.00'

Arc Len=207.39'

Thence following a curve to a point with a long chord of 239.93', chord bearing of N00°19'41"E

Radius=305.00'

Arc Len=246.59'

Thence N22°50'00"W 1171.59' to a point;

Thence following a curve to a point with a long chord of 127.43', chord bearing of N16°44'47"E

Radius=100.00'

Arc Len=138.16'

Thence N56°19'33"E 170.60' to a point;

Thence following a curve to a point with a long chord of 6.32', chord bearing of N55°56'41"E

Radius=475.00'

Arc Len=6.32'

Thence N55°33'49"E 216.10' to a point;

Thence following a curve to a point with a long chord of 323.13', chord bearing of N48°23'48"E

Radius=1295.00'

Arc Len=323.98'

Thence N41°13'46"E 132.07' to a point;

Thence following a curve to a point with a long chord of 165.68', chord bearing of N21°12'44"E

Radius=242.00'

Arc Len=169.09'

Thence N01°11'41"E 393.57' to a point;

Thence following a curve to a point with a long chord of 135.70', chord bearing of N41°40'35"E

Radius=104.51'

Arc Len=147.69'

Thence following a curve to a point with a long chord of 310.82', chord bearing of

N71°05'47"E

Radius=810.00'

Arc Len=312.76'

Thence N60°02'05"E 347.51' to a point;

Thence following a curve to a point with a long chord of 219.30', chord bearing of N64°05'28"E

Radius=1550.00'

Arc Len=219.48'

Thence N68°08'52"E 1975.67' to a point;

Thence following a curve to a point with a long chord of 31.10', chord bearing of N69°01'01"E

Radius=1025.00'

Arc Len=31.10'

Thence N69°53'11"E 454.51' to a point;

Thence following a curve to a point with a long chord of 6.53', chord bearing of N70°04'08"E

Radius=1025.00'

Arc Len=6.53'

Thence N70°15'06"E 508.01' to a point;

Thence following a curve to a point with a long chord of 435.57', chord bearing of N75°11'58"E

Radius=2525.00'

Arc Len=436.11'

Thence N80°08'51"E 1301.38' to a point;

Thence following a curve to a point with a long chord of 253.83', chord bearing of N67°45'55"E

Radius=591.88'

Arc Len=255.82'

Thence N55°22'59"E 279.97' to a point;

Thence following a curve to a point with a long chord of 14.53', chord bearing of N54°30'24"E

Radius=475.00'

Arc Len=14.53'

Thence N53°37'49"E 546.74' to a point;

Thence following a curve to a point with a long chord of 11.52', chord bearing of N52°56'08"E

Radius=475.00'

Arc Len=11.52'

Thence N52°14'28"E 643.36' to a point;

Thence following a curve to a point with a long chord of 6.63', chord bearing of N52°36'11"E

Radius=525.00'

Arc Len=6.63'

Thence N52°57'54"E 456.90' to a point;

Thence following a curve to a point with a long chord of 8.54', chord bearing of N52°26'59"E

Radius=475.00'

Arc Len=8.55'

Thence N51°56'03"E 507.01' to a point;

Thence following a curve to a point with a long chord of 370.52', chord bearing of N59°40'39"E

Radius=1375.00'

Arc Len=371.65'

Thence N67°25'14"E 871.26' to a point;

Thence following a curve to a point with a long chord of 310.16', chord bearing of N71°48'46"E

Radius=2025.00'

Arc Len=310.47'

Thence N76°12'18"E 56.43' to a point;

Thence following a curve to a point with a long chord of 227.99', chord bearing of N88°44'45"E

Radius=525.00'

Arc Len=229.82'

Thence S78°42'48"E 478.89' to a point;

Thence following a curve to a point with a long chord of 478.06', chord bearing of N82°42'07"E

Radius=750.00'

Arc Len=486.55'

Thence N64°07'02"E 561.98' to a point;

Thence following a curve to a point with a long chord of 422.55', chord bearing of N70°06'21"E

Radius=2025.00'

Arc Len=423.31'

Thence N76°05'40"E 585.73' to a point;

Thence following a curve to a point with a long chord of 626.02', chord bearing of N70°46'23"E

Radius=3375.00'

Arc Len=626.91'

Thence N65°27'06"E 761.14' to a point;

Thence following a curve to a point with a long chord of 398.69', chord bearing of N68°09'21"E

Radius=4225.00'

Arc Len=398.83'

Thence N70°51'37"E 352.98' to a point;

Thence following a curve to a point with a long chord of 244.61', chord bearing of N64°53'08"E

Radius=1175.00'

Arc Len=245.05'

Thence N58°54'39"E 391.22' to a point;

Thence following a curve to a point with a long chord of 7.64', chord bearing of N59°19'40"E

Radius=525.00'

Arc Len=7.64'

Thence N59°44'41"E 447.88' to a point;

Thence S13°39'11"E 52.17' to a point;

Thence S59°44'41"W 432.97' to a point;

Thence following a curve to a point with a long chord of 6.91', chord bearing of S59°19'40"W

Radius=475.00'

Arc Len=6.91'

Thence S58°54'39"W 391.22' to a point;

Thence following a curve to a point with a long chord of 20.41', chord bearing of S59°23'18"W

Radius=1225.00'

Arc Len=20.41'

Thence following a curve to a point with a long chord of 156.87', chord bearing of S57°35'31"E

Radius=225.00' Arc Len=160.23'

Thence S37°11'26"E 113.54' to a point;

Thence following a curve to a point with a long chord of 119.95', chord bearing of S30°37'51"E

Radius=525.00'

Arc Len=120.21'

Thence following a curve to a point with a long chord of 229.03', chord bearing of S64°56'32"E

Radius=175.00'

Arc Len=249.67'

Thence N74°11'12"E 343.05' to a point;

Thence following a curve to a point with a long chord of 142.58', chord bearing of S60°20'30"E

Radius=100.00'

Arc Len=158.73'

Thence following a curve to a point with a long chord of 60.97', chord bearing of S52°26'06"E

Radius=50.00'

Arc Len=65.56'

Thence Due East N90°00'00"E 411.09' to a point;

Thence following a curve to a point with a long chord of 97.70', chord bearing of N49°21'27"E

Radius=75.00' Arc Len=106.40'

Thence N08°42'54" 127.15' to a point;

Thence following a curve to a point with a long chord of 123.29', chord bearing of N38°15'52"E

Radius=125.00'

Arc Len=128.93' Thence N67°48'51"E 411.37' to a point;

Thence following a curve to a point with a long chord of 56.51', chord bearing of N70°53'56"E

Radius=525.00' Arc Len=56.53'

Thence N73°59'02"E 96.68' to a point;

Thence following a curve to a point with a long chord of 651.65', chord bearing of N76°22'40"E

Radius=7800.00' Arc Len=651.84'

Thence N78°46'19"E 394.04' to a point;

Thence following a curve to a point with a long chord of 52.26', chord bearing of N80°13'58"E

Radius=1025.00' Arc Len=52.27'

Thence N81°41'37"E 369.76' to a point;

Thence following a curve to a point with a long chord of 634.34', chord bearing of N85°49'39"E

Radius=4400.00' Arc Len=634.89'

Thence following a curve to a point with a long chord of 316.07', chord bearing of N79°33'21"E

Radius=875.00'

Arc Len=317.81' Thence N69°09'01"E 343.56' to a point;

Thence following a curve to a point with a long chord of 274.27', chord bearing of N85°55'52"E

Radius=475.00' Arc Len=278.24'

Thence S77°17'17"E 47.62' to a point;

Thence following a curve to a point with a long chord of 275.72', chord bearing of S62°03'52"E

Radius=525.00'

Arc Len=278.99' Thence following a curve to a point with a long chord of 232.74', chord bearing of S82°25'15"E

Radius=200.00'

Arc Len=248.40' Thence following a curve to a point with a long chord of 104.81', chord bearing of N67°31'00"E

Radius=545.00'

Arc Len=104.97'

Thence S03°52'39"W 53.90' to a point;

Thence following a curve to a point with a long chord of 76.08', chord bearing of S66°24'24"W

Radius=495.00'

Arc Len=76.16'

Thence following a curve to a point with a long chord of 290.92', chord bearing of N82°25'15"W

Radius=250.00' Arc Len=310.50'

Thence following a curve to a point with a long chord of 249.46', chord bearing of N62°03'52"W

Radius=475.00'

Arc Len=252.42' Thence N77°17'17"W 47.62' to a point;

Thence following a curve to a point with a long chord of 245.40', chord bearing of S85°55'52"W

Radius=425.00' Arc Len=248.95'

Thence S69°09'01"W 343.56' to a point;

Thence following a curve to a point with a long chord of 334.13', chord bearing of S79°33'21"W

Radius=925.00'

Arc Len=335.97' Thence following a curve to a point with a long chord of 627.14', chord bearing of S85°49'39"W

Radius=4350.00'

Arc Len=627.68' Thence S81°41'37"W 369.76' to a point;

Thence following a curve to a point with a long chord of 49.71', chord bearing of S80°13'58"W

Radius=975.00'

Arc Len=49.72' Thence S78°46'19"W 394.04' to a point;

Thence following a curve to a point with a long chord of 647.47', chord bearing of S76°22'40"W

Radius=7750.00'
 Arc Len=647.66' Thence S73°59'02"W 96.68' to a point;
 Thence following a curve to a point with a long chord of 51.12', chord bearing of
 S70°53'56"W
 Radius=475.00' Arc Len=51.15'
 Thence S67°48'51"W 411.37' to a point;
 Thence following a curve to a point with a long chord of 73.98', chord bearing of
 S38°15'52"W
 Radius=75.00' Arc Len=77.36'
 Thence S08°42'54"W 127.15' to a point;
 Thence following a curve to a point with a long chord of 162.83', chord bearing of
 S49°21'27"W
 Radius=125.00'
 Arc Len=177.34' Thence Due West S90°00'00"W 411.09' to a point;
 Thence following a curve to a point with a long chord of 121.93', chord bearing of
 N52°26'06"W
 Radius=100.00'
 Arc Len=131.13' Thence following a curve to a point with a long chord of 71.29',
 chord bearing of N60°20'30"W
 Radius=50.00' Arc Len=79.36'
 Thence S74°11'12"W 343.05' to a point;
 Thence following a curve to a point with a long chord of 294.46', chord bearing of
 N64°56'32"W
 Radius=225.00'
 Arc Len=321.00'
 Thence following a curve to a point with a long chord of 108.53', chord bearing of
 N30°37'51"W
 Radius=475.00'
 Arc Len=108.76'
 Thence N37°11'26"W 113.54' to a point;
 Thence following a curve to a point with a long chord of 217.29', chord bearing
 N75°34'02"W
 Radius=175.00'
 Arc Len=234.43'
 Thence following a curve to a point with a long chord of 102.69', chord bearing of
 S68°27'29"W
 Radius=1225.00'
 Arc Len=102.72' Thence S70°51'37"W 352.98' to a point;
 Thence following a curve to a point with a long chord of 393.97', chord bearing of
 S68°09'21"W
 Radius=4175.00'
 Arc Len=394.11'
 Thence S65°27'06"W 761.14' to a point;
 Thence following a curve to a point with a long chord of 635.30', chord bearing of
 S70°46'23"W

Radius=3425.00'

Arc Len=636.20'

Thence S76°05'40"W 585.73' to a point;

Thence following a curve to a point with a long chord of 412.11', chord bearing of S70°06'21"W

Radius=1975.00'

Arc Len=412.86'

Thence S64°07'02"W 561.98' to a point;

Thence following a curve to a point with a long chord of 509.93', chord bearing of S82°42'07"W

Radius=800.00'

Arc Len=518.98'

Thence N78°42'48"W 478.89' to a point;

Thence following a curve to a point with a long chord of 206.28', chord bearing of S88°44'45"W

Radius=475.00'

Arc Len=207.93'

Thence S76°12'18"W 56.43' to a point;

Thence following a curve to a point with a long chord of 302.51', chord bearing of S71°48'46"W

Radius=1975.00'

Arc Len=302.80'

Thence S67°25'14"W 871.26' to a point;

Thence following a curve to a point with a long chord of 357.04', chord bearing of S59°40'39"W

Radius=1325.00'

Arc Len=358.13'

Thence S51°56'03"W 507.01' to a point;

Thence following a curve to a point with a long chord of 9.44', chord bearing of S52°26'59"W

Radius=525.00'

Arc Len=9.45'

Thence S52°57'54"W 456.90' to a point;

Thence following a curve to a point with a long chord of 6.00', chord bearing of S52°36'11"W

Radius=475.00'

Arc Len=6.00'

Thence S52°14'28"W 643.36' to a point;

Thence following a curve to a point with a long chord of 12.73', chord bearing of S52°56'08"W

Radius=525.00'

Arc Len=12.73'

Thence S53°37'49"W 546.74' to a point;

Thence following a curve to a point with a long chord of 16.06', chord bearing of S54°30'24"W

Radius=525.00'

Arc Len=16.06'

Thence S55°22'59"W 279.97' to a point;

Thence following a curve to a point with a long chord of 275.28', chord bearing of S67°45'55"W

Radius=641.88'

Arc Len=277.43'

Thence S80°08'51"W 1301.38' to a point;

Thence following a curve to a point with a long chord of 426.94', chord bearing of S75°11'58"W

Radius=2475.00'

Arc Len=427.47'

Thence S70°15'06"W 508.01' to a point;

Thence following a curve to a point with a long chord of 6.22', chord bearing of S70°04'08"W

Radius=975.00'

Arc Len=6.22'

Thence S69°53'11"W 454.51' to a point;

Thence following a curve to a point with a long chord of 29.59', chord bearing of S69°01'01"W

Radius=975.00'

Arc Len=29.59'

Thence S68°08'52"W 1975.67' to a point;

Thence following a curve to a point with a long chord of 212.22', chord bearing of S64°05'28"W

Radius=1500.00'

Arc Len=212.40'

Thence S60°02'05"W 347.51' to a point;

Thence following a curve to a point with a long chord of 330.01', chord bearing of S71°05'47"W

Radius=860.00'

Arc Len=332.07'

Thence following a curve to a point with a long chord of 70.78', chord bearing of S41°40'35"W

Radius=54.51'

Arc Len=77.03'

Thence S01°11'41"W 393.57' to a point;

Thence following a curve to a point with a long chord of 199.91', chord bearing of S21°12'44"W

Radius=292.00'

Arc Len=204.03'

Thence S41°13'46"W 132.07' to a point;

Thence following a curve to a point with a long chord of 335.61', chord bearing of S48°23'48"W

Radius=1345.00'

Arc Len=336.49'

Thence S55°33'49"W 216.10' to a point;

Thence following a curve to a point with a long chord of 6.98', chord bearing of S55°56'41"W

Radius=525.00'

Arc Len=6.98'

Thence S56°19'33"W 170.60' to a point;

Thence following a curve to a point with a long chord of 63.71', chord bearing of S16°44'47"W

Radius=50.00'

Arc Len=69.08'

Thence S22°50'00"E 1171.59' to a point;

Thence following a curve to a point with a long chord of 279.26', chord bearing of S00°19'41"W

Radius=355.00'

Arc Len=287.01'

Thence following a curve to a point with a long chord of 214.73', chord bearing of S27°48'38"W

Radius=1425.00'

Arc Len=214.93'

Thence S32°07'54"W 406.25' to a point;

Thence following a curve to a point with a long chord of 11.32', chord bearing of S31°26'57"W

Radius=475.00'

Arc Len=11.32'

Thence S30°45'59"W 432.29' to a point;

Thence following a curve to a point with a long chord of 17.40', chord bearing of S31°42'58"W

Radius=525.00'

Arc Len=17.41'

Thence S32°39'58"W 130.66' to a concrete monument and the True Point of Beginning;

Said parcel containing 1,327,080 square feet or 30.466 acres, which equates to 123,290.3 square meters or 31.368 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of eight thousand one hundred eighteen point zero (8,118.0) meters and a width of fifteen point twenty four (15.24) meters running from West to East, bounded on the North with land of the United States of America to be conveyed to the Municipality of Vieques and the Puerto Rico Ports Authority's Vieques Airport, South with land of the United States of America to be conveyed to the Municipality of Vieques, East with the Puerto Rico Conservation Trust Fund's Parcel A and the Puerto Rico Land Administration, West with land of the United States of America, and land of the United States of America to be conveyed to the Municipality of Vieques.

This easement also provides access to Parcel B, of the PRTC Parcel, through the use of the easement hereinafter constituted in the next paragraph (2).

This easement is at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Government any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Grantee's rights herein granted.

2. A perpetual easement for ingress and egress on and over the Remnant in favor of PRCT Parcel's Parcel B more fully described as follows:

Beginning at a concrete monument in the Llave ward, said concrete monument being stamped "V1" and having a northing of 753,134.1705 and an easting of 975,319.7511. Thence S68°08'55"W 4214.19' to a concrete monument, the True Point of Beginning, having a northing of 751,296.6207 and an easting of 971,527.2890:

Thence N88°30'56"W 17.08' to a point;

Thence N06°25'48"E 126.64' to a point;

Thence N00°22'18"W 33.18' to a point;

Thence S76°27'39"E 214.00' to a point;

Thence S87°35'56"E 90.54' to a point;

Thence S84°55'42"E 170.22' to a point;

Thence following a curve to a point with a long chord of 66.12', chord bearing of N68°54'59"E

Radius=75.00'

Arc Len=68.47'

Thence N42°45'40"E 172.05' to a point;

Thence N48°23'53"E 117.85' to a point;

Thence N44°11'57"E 173.19' to a point;

Thence N42°41'08"E 232.72' to a point;

Thence following a curve to a point with a long chord of 334.34', chord bearing of N74°44'18"E

Radius=315.00'

Arc Len=352.44'

Thence S73°12'33"E 71.60' to a point;

Thence following a curve to a point with a long chord of 214.35', chord bearing of N73°27'01"E

Radius=195.00'

Arc Len=226.94'

Thence N40°06'36"E 66.27' to a point;

Thence following a curve to a point with a long chord of 44.84', chord bearing of N22°42'55"E

Radius=75.00'

Arc Len=45.54'

Thence N05°19'15"E 254.17' to a point;

Thence following a curve to a point with a long chord of 344.92', chord bearing of N03°02'19"E

Radius=4331.00'

Arc Len=345.01'

Thence N00°45'24"E 194.87' to a point;

Thence following a curve to a point with a long chord of 15.18', chord bearing of N01°35'07"E

Radius=525.00'

Arc Len=15.18'

Thence N02°24'49"E 211.56' to a point;

Thence following a curve to a point with a long chord of 9.72', chord bearing of N01°49'39"E

Radius=475.00'

Arc Len=9.72'

Thence N01°14'29"E 652.51' to a point;

Thence following a curve to a point with a long chord of 17.15', chord bearing of N02°10'38"E

Radius=525.00'

Arc Len=17.15'

Thence N03°06'47"E 131.20' to a point;

Thence following a curve to a point with a long chord of 11.98', chord bearing of N02°23'25"E

Radius=475.00'

Arc Len=11.98'

Thence N01°40'03"E 1800.55' to a point;

Thence following a curve to a point with a long chord of 168.66', chord bearing of N08°33'31"W

Radius=475.00'

Arc Len=169.56'

Thence N18°47'06"W 111.18' to a point;

Thence following a curve to a point with a long chord of 179.71', chord bearing of N00°17'11"E

Radius=275.00'

Arc Len=183.07'

Thence following a curve to a point with a long chord of 138.47', chord bearing of N29°39'20"E

Radius=387.31'

Arc Len=139.22'

Thence N39°57'12"E 229.20' to a point;

Thence following a curve to a point with a long chord of 73.68', chord bearing of N17°08'10"E

Radius=95.00'

Arc Len=75.66'

Thence following a curve to a point with a long chord of 127.98', chord bearing of N25°00'13"W

Radius=193.39'
Arc Len=130.44'

Thence N44°19'35"W 128.57' to a point;

Thence following a curve to a point with a long chord of 257.12', chord bearing of N35°21'32"W

Radius=824.78'
Arc Len=258.18'

Thence following a curve to a point with a long chord of 188.65', chord bearing of N14°41'16"W

Radius=465.00'
Arc Len=189.97'

Thence N02°59'04"W 359.68' to a point;

Thence following a curve to a point with a long chord of 15.09', chord bearing of N03°53'41"W

Radius=475.00'
Arc Len=15.09'

Thence N04°48'18"W 286.71' to a point;

Thence following a curve to a point with a long chord of 399.68', chord bearing of N07°40'18"E

Radius=925.00'
Arc Len=402.86'

Thence N20°08'54"E 88.07' to a point;

Thence following a curve to a point with a long chord of 182.26', chord bearing of N26°07'36"E

Radius=875.00'
Arc Len=182.59'

Thence N32°06'18"E 100.02' to a point;

Thence following a curve to a point with a long chord of 302.88', chord bearing of N08°17'10"E

Radius=375.00'
Arc Len=311.79'

Thence N15°31'57"W 90.86' to a point;

Thence following a curve to a point with a long chord of 277.11', chord bearing of N05°33'39"E

Radius=385.00'
Arc Len=283.47'

Thence N26°39'15"E 128.24' to a point;

Thence following a curve to a point with a long chord of 241.12', chord bearing of N01°33'41"W

Radius=255.00'
Arc Len=251.15'

Thence following a curve to a point with a long chord of 289.35', chord bearing of N13°46'51"W

Radius=525.00'
Arc Len=293.15'

Thence N02°12'56"E 47.02' to a point;

Thence following a curve to a point with a long chord of 151.76', chord bearing of N06°58'36"W

Radius=475.00'

Arc Len=152.41'

Thence N16°10'07"W 201.80' to a point;

Thence following a curve to a point with a long chord of 43.57', chord bearing of N17°26'57"W

Radius=975.00'

Arc Len=43.58'

Thence N18°43'46"W 893.56' to a point;

Thence following a curve to a point with a long chord of 174.89', chord bearing of N08°07'16"W

Radius=475.00'

Arc Len=175.90'

Thence N02°29'15"E 241.71' to a point;

Thence following a curve to a point with a long chord of 53.09', chord bearing of N03°58'17"E

Radius=1025.00'

Arc Len=53.09'

Thence N05°27'20"E 283.48' to a point;

Thence following a curve to a point with a long chord of 148.61', chord bearing of N02°06'52"E

Radius=1275.00'

Arc Len=148.70'

Thence N01°13'36"W 158.81' to a point;

Thence following a curve to a point with a long chord of 4.39', chord bearing of N01°29'30"W

Radius=475.00'

Arc Len=4.39'

Thence N01°45'24"W 289.11' to a point;

Thence following a curve to a point with a long chord of 354.49', chord bearing of N03°42'25"W

Radius=5208.00'

Arc Len=354.56'

Thence N05°39'27"W 268.76' to a point;

Thence following a curve to a point with a long chord of 49.60', chord bearing of N04°16'15"W

Radius=1025.00'

Arc Len=49.61'

Thence N02°53'03"W 255.44' to a point;

Thence N87°06'57"E 50.00' to a point;

Thence S02°53'03"E 255.44' to a point;

Thence following a curve to a point with a long chord of 47.18', chord bearing of S04°16'15"E

Radius=975.00'

Arc Len=47.19'

Thence S05°39'27"E 268.76' to a point;

Thence following a curve to a point with a long chord of 357.90', chord bearing of S03°42'25"E

Radius=5258.00'

Arc Len=357.96'

Thence S01°45'24"E 289.11' to a point;

Thence following a curve to a point with a long chord of 4.86', chord bearing of S01°29'30"E

Radius=525.00'

Arc Len=4.86'

Thence S01°13'36"E 158.81' to a point;

Thence following a curve to a point with a long chord of 154.44', chord bearing of S02°06'52"W

Radius=1325.00'

Arc Len=154.53'

Thence S05°27'20"W 283.48' to a point;

Thence following a curve to a point with a long chord of 50.50', chord bearing of S03°58'17"W

Radius=975.00'

Arc Len=50.50'

Thence S02°29'15"W 241.71' to a point;

Thence following a curve to a point with a long chord of 156.48', chord bearing of S08°07'16"E

Radius=425.00'

Arc Len=157.38'

Thence S18°43'46"E 893.56' to a point;

Thence following a curve to a point with a long chord of 45.81', chord bearing of S17°26'57"E

Radius=1025.00'

Arc Len=45.81'

Thence S16°10'07"E 201.80' to a point;

Thence following a curve to a point with a long chord of 167.73', chord bearing of S06°58'36"E

Radius=525.00'

Arc Len=168.45'

Thence S02°12'56"W 47.02' to a point;

Thence following a curve to a point with a long chord of 261.80', chord bearing of S13°46'51"E

Radius=475.00'

Arc Len=265.23'

Thence following a curve to a point with a long chord of 288.40', chord bearing of S01°33'41"E

Radius=305.00'

Arc Len=300.40'

Thence S26°39'15"W 128.24' to a point;

Thence following a curve to a point with a long chord of 241.13', chord bearing of S05°33'39"W

Radius=335.00'

Arc Len=246.66'

Thence S15°31'57"E 90.86' to a point;

Thence following a curve to a point with a long chord of 343.27', chord bearing of S08°17'10"W

Radius=425.00'

Arc Len=353.36'

Thence S32°06'18"W 100.02' to a point;

Thence following a curve to a point with a long chord of 171.85', chord bearing of S26°07'36"W

Radius=825.00'

Arc Len=172.16'

Thence S20°08'54"W 88.07' to a point;

Thence following a curve to a point with a long chord of 378.07', chord bearing of S07°40'18"W

Radius=875.00'

Arc Len=381.08'

Thence S04°48'18"E 286.71' to a point;

Thence following a curve to a point with a long chord of 16.68', chord bearing of S03°53'41"E

Radius=525.00'

Arc Len=16.68'

Thence S02°59'04"E 359.68' to a point;

Thence following a curve to a point with a long chord of 168.36', chord bearing of S14°41'16"E

Radius=415.00'

Arc Len=169.54'

Thence following a curve to a point with a long chord of 241.54', chord bearing of S35°21'32"E

Radius=774.78'

Arc Len=242.53'

Thence S44°19'35"E 128.57' to a point;

Thence following a curve to a point with a long chord of 161.07', chord bearing of S25°00'13"E

Radius=243.39'

Arc Len=164.16'

Thence following a curve to a point with a long chord of 112.46', chord bearing of S17°08'10"W

Radius=145.00'

Arc Len=115.49'

Thence S39°57'12"W 229.20' to a point;

Thence following a curve to a point with a long chord of 120.60', chord bearing of S29°39'20"W

Radius=337.31'

Arc Len=121.25'

Thence following a curve to a point with a long chord of 147.04', chord bearing of S00°17'11"W

Radius=225.00'

Arc Len=149.79'

Thence S18°47'06"E 111.18' to a point;

Thence following a curve to a point with a long chord of 186.41', chord bearing of S08°33'31"E

Radius=525.00'

Arc Len=187.41'

Thence S01°40'03"W 1800.55' to a point;

Thence following a curve to a point with a long chord of 13.24', chord bearing of S02°23'25"W

Radius=525.00'

Arc Len=13.24'

Thence S03°06'47"W 131.20' to a point;

Thence following a curve to a point with a long chord of 15.52', chord bearing of S02°10'38"W

Radius=475.00'

Arc Len=15.52'

Thence S01°14'29"W 652.51' to a point;

Thence following a curve to a point with a long chord of 10.74', chord bearing of S01°49'39"W

Radius=525.00'

Arc Len=10.74'

Thence S02°24'49"W 211.56' to a point;

Thence following a curve to a point with a long chord of 13.74', chord bearing of S01°35'07"W

Radius=475.00'

Arc Len=13.74'

Thence S00°45'24"W 194.87' to a point;

Thence following a curve to a point with a long chord of 348.90', chord bearing of S03°02'19"W

Radius=4381.00'

Arc Len=348.99'

Thence S05°19'15"W 265.43' to a point;

Thence following a curve to a point with a long chord of 74.74', chord bearing of S22°42'55"W

Radius=125.00'

Arc Len=75.90'

Thence S40°06'36"W 66.26' to a point;

Thence following a curve to a point with a long chord of 269.31', chord bearing of

S73°27'01"W

Radius=245.00'

Arc Len=285.13'

Thence N73°12'33"W 71.60' to a point;

Thence following a curve to a point with a long chord of 281.27', chord bearing of S74°44'18"W

Radius=265.00'

Arc Len=296.49'

Thence S42°41'08"W 233.38' to a point;

Thence S44°11'57"W 175.68' to a point;

Thence S48°23'53"W 117.22' to a point;

Thence S42°45'40"W 169.59' to a point;

Thence following a curve to a point with a long chord of 46.48', chord bearing of S53°28'33"W

Radius=125.00'

Arc Len=46.75'

Thence S84°16'44"W 94.63' to a point;

Thence N84°55'42"W 140.25' to a point;

Thence N87°35'56"W 94.25' to a point;

Thence N76°27'39"W 158.29' to a point;

Thence S06°25'48"W 93.90' to a point;

Thence S84°16'44"W 33.74' to a concrete monument and the True Point of Beginning.

Said parcel containing 691,849 square feet or 15.883 acres, which equates to 64,275.1 square meters or 16.353 cuerdas.

For recordation purposes, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of 4,539.1 meters and a width of 15.24 meters running from North to South, bounded on the North with the Municipality of Vieques, South with the United States Government and the Municipality of Vieques, East with the Municipality of Vieques, and on the West with the Municipality of Vieques.

This easement is accessed through the easement previously described in paragraph one (1).

This easement is at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Government any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Grantee's rights herein granted.

3. A perpetual easement for ingress and egress on and over the Remnant in favor of the PRCT Parcel, more fully described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the

top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N56°17'08"E 4787.07' to a point having a northing of 754,080.9337 and an easting of 966,497.0687:

Thence N35°27'19"E 278' more or less to the centerline of an asphalt road, the True Point of Beginning;

Thence following the centerline of the asphalt road in a Southeast direction 4907' more or less to the intersection with a gravel road;

Thence following the centerline of the gravel road in a Southeast direction 192' more or less to the intersection with a asphalt road;

Thence following the centerline of the asphalt road in a Easterly direction 110' more or less to the intersection with a dirt road;

Thence following the centerline of the dirt road in a Southeast direction 1000' more or less to the intersection with the northern line of Puerto Rico Conservation Trust Parcel B;

Said easement being 25' wide (12.5' on either side of the above described centerlines).

Said easement containing approximately 155,225 square feet or 3.563 acres, which equates to 14,420.9 square meters or 3.669 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of one thousand eight hundred ninety two point five (1,892.5) meters and a width of seven point sixty two (7.62) meters running from the Northwest to the Southeast, bounded on the North and East with land of the United States of America to be conveyed to the Municipality of Vieques and on the South and West with land of the United States of America to be conveyed to the Municipality of Vieques and land of the Puerto Rico Conservation Trust Fund.

This easement is at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Government any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Grantee's rights herein granted.

4. A perpetual easement for ingress and egress on and over the Remnant in favor of the PRCT Parcel, more fully described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N15°24'18"E 7099.06' to the True Point of Beginning having a northing of 758,267.8565 and an easting of 964,400.8999.

Thence following a curve to a point with a long chord of 224.76', chord bearing of N45°02'00"W

Radius=297.50'

Arc Len=230.49'

Thence N67°13'41"W 384.75' to a point;

Thence following a curve to a point with a long chord of 198.35', chord bearing of N50°53'13"W

Radius=352.50'

Arc Len=201.07'

Thence N34°32'46"W 308.16' to a point;

Thence following a curve to a point with a long chord of 224.68', chord bearing of N23°43'39"W

Radius=598.50'

Arc Len=226.02'

Thence following a curve to a point with a long chord of 259.84', chord bearing of N03°33'45"W

Radius=800.00'

Arc Len=261.00'

Thence N05°47'02"E 304.55' to a point on the southern line of the INGRESS/EGRESS EASEMENT NUMBER 1;

Thence N60°02'05"E 61.61' to a point;

Thence departing said INGRESS/EGRESS EASEMENT S05°47'02"W 340.54' to a point;

Thence following a curve to a point with a long chord of 243.60', chord bearing of S03°33'45"E

Radius=750.00'

Arc Len=244.68'

Thence following a curve to a point with a long chord of 205.91', chord bearing of S23°43'39"E

Radius=548.50'

Arc Len=207.14'

Thence S34°32'46"E 308.16' to a point;

Thence following a curve to a point with a long chord of 170.22', chord bearing of S50°53'13"E

Radius=302.50'

Arc Len=172.55'

Thence S67°13'41"E 384.75' to a point;

Thence following a curve to a point with a long chord of 256.58', chord bearing of S45°33'46"E

Radius=347.50'

Arc Len=262.80'

Thence S59°49'59"W 50.35' to a point and the True Point of Beginning.

Said easement containing 95,916 square feet or 2.202 acres, which equates to 8,910.9 square meters or 2.267 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of five hundred eighty five point three (585.3) meters and a width of fifteen point twenty four (15.24) meters running North to South, bounded on the North, East and

West with land of the United States of America to be conveyed to the Municipality of Vieques, and on the South with land of the Puerto Rico Conservation Trust Fund.

This easement is at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Government any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Grantee's rights herein granted.

B. Pursuant to Section 1506 (b)(3) of Public Law 106-398, the Grantee hereby grants to the Government the easements hereinafter mentioned in paragraphs II B (1) and (2) which shall cease and terminate upon the occurrence of the following events, whichever happens first:

- (i). When the United States permanently ceases operations at Mount Pirata or disposes of the site; or
- (ii). When said easements, rights of way and other interests in property are no longer necessary for:
 - a. Ensuring access to the Mount Pirata telecommunications site;
 - b. Providing utilities for such property;
 - c. Ensuring the security of such property; and
 - d. Ensuring effective maintenance and operations of such property:

Upon the termination pursuant to the events hereinbefore mentioned, the Government shall execute all necessary documents to cancel such easements at the Registry of Property.

1. An exclusive easement for ingress and egress on and over the Parcel A of the PRCT parcel in favor of the Government more fully described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N06°43'46"W 4472.16' to a concrete monument, the True Point of Beginning, having a northing of 755,865.1991 and an easting of 961,991.0745:

Thence S32°39'58"W 217.64' to a point;

Thence following a curve to a point with a long chord of 16.64', chord bearing of S31°39'44"W

Radius=475.00'

Arc Len=16.64'

Thence S30°39'30"W 157.24' to a point;

Thence following a curve to a point with a long chord of 193.53', chord bearing of S26°23'46"W

Radius=1302.00'

Arc Len=193.71'

Thence following a curve to a point with a long chord of 159.32', chord bearing of S05°17'43"W

Radius=275.00'

Arc Len=161.64'

Thence N77°00'08"W 54.11' to a point;

Thence following a curve to a point with a long chord of 166.66', chord bearing of N07°16'40"E

Radius=325.00'

Arc Len=168.54'

Thence following a curve to a point with a long chord of 200.96', chord bearing of N26°23'46"E

Radius=1352.00'

Arc Len=201.15'

Thence N30°39'30"E 157.24' to a point;

Thence following a curve to a point with a long chord of 18.39', chord bearing of N31°39'44"E

Radius=525.00'

Arc Len=18.39'

Thence N32°39'58"E 221.74' to a point;

Thence S52°38'33"E 50.17' to a concrete monument, the True Point of Beginning.

Said parcel containing 37,845 square feet or 0.869 acres, which equates to 3,516.0 square meters or 0.895 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of two hundred thirty one point two (231.2) meters and a width of fifteen point twenty four (15.24) meters running from North to South, bounded on the North with land of the United States of America to be conveyed to the Municipality of Vieques, on the South and West with land of the United States of America and on the East with land of the Puerto Rico Conservation Trust Fund.

2. An exclusive easement on and over the Parcel A of the PRCT Parcel in favor of the Government, identified as the Mount Pirata Electric Easement, more fully described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N04°44'15"W 3641.40' to the True Point of Beginning having a northing of 755,052.8094 and an easting of 962,214.3784:

Thence N25°46'16"E 2096.11' to a point;

Thence N01°40'32"W 1179.72' to a point;

Thence S88°19'28"W 7.33' to a point;

Thence N01°40'32"W 10.00' to a point;

Thence N88°19'28"E 7.33' to a point;

Thence N01°40'32"W 19.16' to a point;

Thence N78°25'10"E 580.63' to a point;

Thence S89°23'48"E 220.50' to a point;

Thence S62°12'24"W 2.49' to a point;
Thence S30°51'42"E 12.51' to a point;
Thence S59°08'18"W 10.00' to a point;
Thence N30°51'42"W 13.08' to a point;
Thence S78°25'10"W 742.12' to a point;
Thence S01°40'32"E 1170.89' to a point;
Thence S84°53'54"E 14.26' to a point;
Thence S05°06'06"W 10.00' to a point;
Thence N84°53'54"W 14.01' to a point;
Thence S25°46'16"W 2102.91' to a point;
Thence N67°45'16"W 44.51' to a point;
Thence N70°55'49"W 5.61' to a point, the True Point of Beginning.

Said easement containing 198,778 square feet or 4.563 acres, which equates to 18,467.1 square meters or 4.699 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of one thousand two hundred and ten (1,210) meters and a width of fifteen point twenty four (15.24) meters running from North to South, bounded on the North with land of the United States of America to be conveyed to the Municipality of Vieques and with land of the Puerto Rico Conservation Trust Fund, on the South with land of the United States of America, on the East and West with land of the Puerto Rico Conservation Trust Fund.

This easement is for construction, maintenance, operation, repair, or replacement of any of the existing infrastructure, or future infrastructure that may be required, at all times and places for the purpose of exercising the rights set forth herein; reserving, however, to the Grantee, any and all rights and privileges as may be used and enjoyed without interfering with or abridging the Government's rights herein retained.

C. Pursuant to Section 1506 (b) (4) of Public Law 106-398, the Grantee also hereby grants the Government the following easement for as long as such easement is required by the Government:

1. An exclusive easement on and over Parcel A of the PRCT Parcel in favor of the Government, for access to and from the Navy's Installation Restoration Program site SWMU 5, located on property belonging to the United States of America to be conveyed to the Municipality of Vieques pursuant to Public Law 106-398 of October 30, 2000, described as follows:

Beginning at a survey control point in the Punta Arenas ward, said point being a brass disk stamped Defense Mapping Agency 'PIRATA' and located in the center of the helicopter landing pad at the top of Mt. Pirata. Said point having a northing of 751,423.8496 and an easting of 962,515.1200. Thence N56°17'08"E 4787.07' to the True Point of Beginning having a northing of 754,080.9337 and an easting of 966,497.0687:

Thence N35°27'19"E 273.43' to a point;

Thence following a curve to a point with a long chord of 36.86', chord bearing of N29°24'36"E

Radius=175.00'

Arc Len=36.93'

Thence N23°21'52"E 43.79' to a point;

Thence following a curve to a point with a long chord of 184.87', chord bearing of N11°03'41"W

Radius=163.50'

Arc Len=196.48'

Thence N45°29'13"W 229.23' to a point;

Thence N47°23'07"W 171.37' to a point;

Thence N48°30'06"W 375.54' to a point;

Thence following a curve to a point with a long chord of 194.19', chord bearing of N65°53'03"W

Radius=325.00'

Arc Len=197.20'

Thence N83°16'00"W 239.59' to a point;

Thence N80°45'34"W 128.84' to a point;

Thence following a curve to a point with a long chord of 326.44', chord bearing of N65°47'33"W

Radius=632.00'

Arc Len=330.19'

Thence N50°49'32"W 112.07' to a point;

Thence N49°12'41"W 268.06' to a point;

Thence following a curve to a point with a long chord of 294.30', chord bearing of N44°42'37"W

Radius=1875.00'

Arc Len=294.60'

Thence N40°12'33"W 241.40' to a point;

Thence following a curve to a point with a long chord of 461.49', chord bearing of N20°05'44"W

Radius=671.00'

Arc Len=471.11'

Thence N00°01'05"E 468.10' to a point;

Thence N00°21'12"E 696.84' to a point;

Thence N00°06'12"E 463.73' to a point;

Thence following a curve to a point with a long chord of 188.69', chord bearing of N07°50'32"W

Radius=682.50'

Arc Len=189.30'

Thence following a curve to a point with a long chord of 36.59', chord bearing of N19°18'48"W

Radius=297.50'

Arc Len=36.61'

Thence N59°49'59"W 50.35' to a point;

Thence following a curve to a point with a long chord of 49.14', chord bearing of S19°50'34"E

Radius=347.50'

Arc Len=49.19'

Thence following a curve to a point with a long chord of 202.51', chord bearing of S07°50'32"E

Radius=732.50'

Arc Len=203.16'

Thence S00°06'12"W 463.83' to a point;

Thence S00°21'12"W 696.80' to a point;

Thence S00°01'05"W 467.96' to a point;

Thence following a curve to a point with a long chord of 427.10', chord bearing of S20°05'44"E

Radius=621.00'

Arc Len=436.00'

Thence S40°12'33"E 241.40' to a point;

Thence following a curve to a point with a long chord of 286.45', chord bearing of S44°42'37"E

Radius=1825.00'

Arc Len=286.74'

Thence S49°12'41"E 267.36' to a point;

Thence S50°49'32"E 111.37' to a point;

Thence following a curve to a point with a long chord of 300.62', chord bearing of S65°47'33"E

Radius=582.00'

Arc Len=304.06'

Thence S80°45'34"E 127.75' to a point;

Thence S83°16'00"E 238.49' to a point;

Thence following a curve to a point with a long chord of 224.06', chord bearing of S65°53'03"E

Radius=375.00'

Arc Len=227.54'

Thence S48°30'06"E 376.03' to a point;

Thence S47°23'07"E 172.69' to a point;

Thence S45°29'13"E 230.05' to a point;

Thence following a curve to a point with a long chord of 241.40', chord bearing of S11°03'41"E

Radius=213.50'

Arc Len=256.56'

Thence S23°21'52"W 43.79' to a point;

Thence following a curve to a point with a long chord of 47.39', chord bearing of S29°24'36"W

Radius=225.00'

Arc Len=47.48'

Thence S35°27'19"W 110.90 to a point;

Thence S54°26'31"W 127.28' to a point;
Thence S34°20'09"W 42.18' to a point;
Thence N54°32'41"W 9.41' to a point, the True Point of Beginning.

Said easement containing 270,430 square feet or 6.208 acres, which equates to 25,123.9 square meters or 6.392 cuerdas.

For recordation at the Registry of Property, the legal description for the easement hereinabove described is as follows:

Strip of land having a length of one thousand six hundred forty seven point seventy (1,647.70) meters and a width of fifteen point twenty four (15.24) meters running from North to South, bounded on the North and South with land of the United States of America to be conveyed to the Municipality of Vieques, on the East and West with land of the Puerto Rico Conservation Trust Fund.

The Government and the Grantee request the Registry of the Property to record the hereinbefore constituted easements mentioned in Section II A, B, and C in its Registry books.

III. Restrictive Covenants

The Grantee constitutes the restrictive covenants hereinafter mentioned, on the PRCT Parcel, to affect only a partial area of its portion identified as Parcel B, hereinafter "Partial area of Parcel B", which partial area is described as follows: Beginning at a point on the eastern side of the PRCT Parcel B in the Llave Ward, having a northing of 750200.0978 and an easting of 972095.9250; thence S65°28'57"E 89.46' to an iron rod and cap set; thence S47°38'47"E 180.25' to an iron rod and cap set; thence S39°22'29"E 62.73' to an iron rod and cap set; thence S36°19'05"E 402.83' to an iron rod and cap set; thence S25°51'07"E 74.75' to an iron rod and cap set; thence S10°11'30"E 92.27' to an iron rod and cap set; thence S00°13'36"E 61.76' to an iron rod and cap set; thence S02°39'23"W 245.30' to an iron rod and cap set; thence S03°58'48"E 93.43' to an iron rod and cap set; thence S05°33'56"E 224.30' to an iron rod and cap set; thence S24°50'22"E 53.12' to an iron rod and cap set; thence due South 788.93' to an iron rod and cap set; thence continuing due South 100.00' to an iron rod and cap set on the approximate edge of water of the Caribbean Sea; thence S55°51'29"W 878.25' on a tie line along the approximate edge of water of said Caribbean Sea to an iron rod and cap set; thence departing the approximate edge of water of said Caribbean Sea N43°10'27"W 120.00' to an iron rod and cap set; thence continuing N43°10'27"W 1880.01' to an iron rod and cap set; thence N49°41'22"E 1985.45' to the point of beginning. Said overall parcel containing 3,406,198 square feet or 78.196 acres, which equates to 316446.1 square meters or 80.513 cuerdas.

The restrictive covenants shall run with the land and restrict the use thereof so that said portion of PRCT PARCEL's Parcel B shall not be used for any of the following uses or structures:

a. Any type of structure, dwelling, building, antenna, tower, pole, line, wire, or other obstruction, permanent or temporary, shall not be permitted.

b. No new construction of highways, arterial roads, expressways, and railroads excluding secondary roads, tertiary roads, or private driveways. All proposed new roads and trails must be reviewed by the Commanding Officer, United States Naval Station Roosevelt Roads, representing the Government, for electromagnetic interference compatibility during the preliminary planning phase and approved or disapproved. Government disapproved roads or trails may not be constructed.

c. No new buildings or structures are permitted.

d. No new overhead power lines of any kind are permitted with the exception of those currently allowed under existing recorded documents prior to the date of this instrument.

e. All new utility lines, including conductors, will be buried, with the exception of those currently allowed under existing recorded documents prior to the date of this instrument.

f. No new airports, heliports, helistops, or grass landing strips including, but not limited to, landing fields used for agricultural purposes.

g. No storage and/or processing of salvage or junk metal scrap yards or collection depots of metal-based material to be recycled.

h. No radio transmitters, radio frequency stabilized welders, or other radio frequency heaters other than residential microwave ovens, relay facilities, new line-of-sight relay devices, for example, microwave towers, electric fences, and lighting systems other than incandescent, fluorescent, and low pressure sodium vapor.

i. Except for existing buildings, structures, and uses already in place, the Partial area of Parcel B, which is subject to said restrictive covenant, shall not be used for other than wildlife management, conservation, conservation education, ecological restoration, agricultural, and forestry purposes.

j. A restriction on the Partial area of Parcel B prohibits the Grantee, its successors and assigns from; erecting, constructing, growing, installing, creating, or permitting, whether public or private, any structure, dwelling, building, antenna, tower, pole, line, wire, tree, or other obstruction, whatever its nature, together with the right of the Government to enter upon the property and remove all obstructions not in conformance with this restrictive covenant, including but not limited to alteration or removal of all structures, buildings, antennas, towers, or other non-vegetative obstructions, whatever their nature, that shall be erected, constructed, or installed on the Partial Area of Parcel B from and after the date of the execution of this Deed.

Any exception to the hereinbefore mentioned restrictive covenants shall be requested in writing by Grantee to the Government and the Government shall approve or disapprove of the exception requested within 45 days from the date the Government is notified.

In the event Grantee does not comply with said restrictive covenants, the Government shall notify the Grantee in writing of Grantee's violation to said covenants. Upon receipt of said notice, Grantee shall cure the violation and ensure compliance with the restrictive covenants hereinbefore mentioned.

In the event that, within reasonable time, the violation is not cured or has not commenced to be cured by Grantee, the Government shall have the option to commence court proceedings or enter the PRCT Parcel to cure the violation.

In the event that the Government exercises the self-help remedies provided herein, it shall use reasonable efforts to minimize and/or mitigate damages suffered by the PRCT Parcel B as a consequence of the exercise of said remedies.

The restrictions described herein shall have full force and effect for as long as the Government conducts operations at the Relocatable Over the Horizon Radar Site (ROTHR) or disposes of the site. In the event the Government removes all installations at the aforementioned site with the intent of permanently ceasing operations, Government shall notify Grantee of such removal. Upon receipt of such notice, the restrictions described herein above shall cease to have any effect. The Government shall execute all necessary documents for presentation to the Registry to remove the restrictive covenants herein constituted.

IV. Existing Easement.

The Government represents that the PRCT Parcel is conveyed subject to the following physically existing easement described as follows:

A. Easement of approximately forty three point seven hundredths (43.07) acres equivalent to one hundred seventy four thousand two hundred fifty four point fifty three (174,254.53) square meters and equivalent to forty four point three thousand three hundred fifty one (44.3351) cuerdas for the Puerto Rico Electric Power Authority dated September twelfth, nineteen hundred and sixty two (1962) for an electric power line crossing Green Beach and terminating at Isabel Segunda, that is located on the Naval Ammunition Support Detachment, described as follows:

TRACT "A" - (PORTION OF NAVAL AMMUNITION SUPPORT DETACHMENT) Strip of land forty (40) feet wide, or twelve and one hundred ninety two thousands (12.192) meters, by approximately thirty nine thousand seven hundred and seventy (39,770) feet long, or twelve thousand one hundred and fifty-six hundredths (12,100.56) meters, or thirty six and fifty two hundredth (36.52) acres beginning twenty (20) feet or six and ninety six thousandths (6.096) meters on either side of a center line described as follows:

"Beginning at point on the westernmost tip of Vieques Island (Punta Arenas) at Latitude eighteen degrees, seven minutes and fifteen seconds, Longitude sixty five degrees, thirty four minutes and forty seconds thence south forty degrees two minutes east, five thousand six hundred eighty five feet (5,685), or one thousand seven hundred thirty two and seven hundred and eighty eight thousandths (1,732.788) meters to a point; thence north eighty seven degrees east, six thousand

three hundred eighty five (6,385) feet, or one thousand nine hundred forty six and one hundred and forty eight thousandths (1,946.148) meters to a point; thence north seventy six degrees, fifty four minutes east, fifteen thousand six hundred forty (15,640) feet to a point; thence, north seventy eight degrees, fourteen feet east, ten thousand eight hundred (10,800) feet or three thousand two hundred ninety one and eighty four hundredths (3,291.84) meters to a point on the east boundary of the Naval Ammunition Depot-Martineau Area of the United States Navy at approximately one thousand five hundred (1,500) feet or four hundred fifty seven and two tenths (457.2) meters south three degrees, thirteen minutes and ten seconds east from Point C-1 on said boundary.”

Although said easement affects the PRCT Parcel, as of the date of this Deed, the easement has not been recorded at the corresponding Registry of Property.

V. Environmental Representations

The following provisions address environmental responsibilities on the PRCT Parcel:

As provided in Public Law 106-398, the Comprehensive Environmental Response, Compensation and Liability Act, as amended (CERCLA), the National Contingency Plan, and existing Navy and legal requirements, the Secretary of the Navy shall remain responsible for the environmental condition of the PRCT Parcel and neither the Grantee nor its successors in interest shall be responsible for such condition existing at the time of the conveyance. All response actions with respect to the PRCT Parcel shall take place in compliance with current law.

A. Uncontaminated Property Conveyance as per CERCLA Section 120(h)(4)

1. Pursuant to Section 120 (h)(4) of CERCLA, 42 U.S.C. Section 9620(h)(4), and the CERCLA lead agent authority of the Department of Defense created by Sections 103 and 115 of CERCLA, 42 U.S.C. Sections 9604 and 9615, CERCLA Section 2.d. of Executive Order 12580 (52) Federal Register 2923 of January 29, 1987), and the National Contingency Plan (40) Code of Federal Regulations Section 300.5), the Department of Defense, having obtained the required concurrence from the Governor of the Commonwealth of Puerto Rico as of June 30, 2000, has determined that the PRCT Parcel is uncontaminated, based on the review of available information indicating that no hazardous substance, pollutant or contaminant and no petroleum products or their derivatives, including aviation oil and motor oil are known to have been released, threatened to be released or disposed of at the PRCT Parcel.

2. Pursuant to section 120(h)(4)(D) of CERCLA (42 U.S.C. 9620(h)(4)(D)) to the extent required at the PRCT Parcel and in accordance with the applicable federal, state, and local laws and regulations, the Government further covenants and warrants to promptly:

a. Undertake any response action, remedial action or corrective action found to be necessary after the date of this transfer in connection with any release or threatened release of a hazardous substance, pollutant or contaminant, petroleum or petroleum products or their derivatives, including aviation oil and motor oil from or on the PRCT Parcel caused by Department of Defense activities; and

b. Settle or defend any claim, demand, or order made by federal, state and/or local regulators or third parties in connection with any release or threatened release of a hazardous substance, pollutant or contaminant, or petroleum products or their derivatives, including aviation oil and motor oil from or on the PRCT Parcel caused by Department of Defense activities, and found to be necessary after the date of the transfer.

c. The Grantee or its successors in interest seeking from the Government a response action as described above, shall

i. Notify the Government in writing within ninety (90) days after the learning of any previously unidentified condition at the PRCT Parcel that suggests a response action, a remedial action or corrective action is necessary, or within ninety (90) days after receiving notice of a claim by federal, state or local regulators, or other third parties of any condition at the PRCT Parcel that suggests a response action, remedial action or corrective action is necessary. If the Grantee or its successor(s) in interest is served with a complaint or written notice of a claim by the federal, state, or local regulators, or served with any court document, complaint, claim, suit and/or demand, by any other third party the Grantee shall provide the Government with a copy of such document no later than fifteen (15) days following service of such document;

ii. Furnish the Government copies of pertinent papers the Grantee or its successors in interest receive;

iii. Provide, upon request of the Government, reasonable access to the records and personnel of the Grantee or its successors in interest for purposes of defending, or resolving the need for additional response action; and

iv. Provide, upon request of the Government, reasonable access to the PRCT Parcel for purposes of performing a response action on the PRCT Parcel or on adjoining properties.

3. So that the Government may fulfill responsibilities established herein, the Government reserves a perpetual right of access to the PRCT Parcel for any case in which the Government is obligated to undertake a response action, a remedial action or a corrective action after the date of the Deed at the PRCT Parcel, or if such access is necessary to carry out a response action or a remedial action or corrective action on any adjoining property. Such perpetual right of access shall run with the land and be binding to all future owners of the PRCT Parcel. The Grantee shall also include in any real property instrument or contractual agreement with any other party governing use or possession of the PRCT Parcel, a provision clearly providing the Government a right of access to the PRCT Parcel for any case in which the Government is obligated to undertake a response action, a remedial action or a corrective action at the PRCT Parcel after the date of the Deed or such access is necessary to carry out any response action, remedial action or corrective action on any adjoining property.

B. Property/Injury Indemnification

1. Pursuant to Public Law 106-398, and subject to the provisions of this Section V of the Deed, Government shall hold harmless, defend and indemnify, in full, Grantee and any successor, assignee, transferee, lender, or lessee of Grantee, (collectively and individually "Indemnitee(s)"), from and against any suit, claim, demand, action, liabilities, judgments, costs or other fee arising out of any claim for property damages or personal injury (including death, illness, loss of or damage to property or economic loss) that results from, or is in any manner predicated upon, the release or threatened release of any hazardous substance, pollutant, contaminant, petroleum products or petroleum derivatives, including aviation oil and motor oil from or on the PRCT Parcel as a result of Department of Defense activities at Naval Ammunition Storage Detachment Vieques Island, Puerto Rico.

2. In any case in which Government may be required to indemnify the Indemnitee(s) for any suit, claim, demand, action, liability, judgment, cost or fee arising out of any claim for property damage, or personal injury Government shall defend or may settle on behalf of that Indemnitee(s), the claim for personal injury or property damage.

3. If any Indemnitee(s) does not allow Government to settle or defend the claim, such Indemnitee(s) will not be afforded indemnification with respect to that claim. Government will not indemnify the Indemnitee(s) unless such Indemnitee(s):

a. Notifies Government in writing within ninety (90) days after the Grantee has actual knowledge of such an indemnification claim. If Indemnitee(s) is served with a complaint or written notice of a suit, claim, demand, or action by federal, state or local regulators, Indemnitee(s) will provide Government with a copy of such document no later than fifteen (15) days following service of the suit, claim, demand, action. Indemnitee(s) right to indemnification shall not expire due to late notice unless Government's ability to defend or to settle is materially and adversely affected;

b. Furnishes Government copies of pertinent papers the Indemnitee(s) receives; and

c. Furnishes, to the extent it is in the possession or control of Indemnitee(s), evidence or proof of any claim, loss, or damage covered by subparagraph (a); and

d. Provides, upon request of Government, reasonable access to the records and personnel of the Indemnitee(s) for purposes of defending or settling the claim or claims.

4. Government will not indemnify Indemnitee(s) to the extent that any release or threatened release of any hazardous substance, pollutant, contaminant, petroleum products or petroleum derivatives, including aviation oil or motor oil from or on the PRCT Parcel occurred as the result of such Indemnitee(s) actions. Government is entitled to contribution from Indemnitee(s) to the extent Government shows that such release was a result of the Indemnitee(s) actions. However, the availability of contribution shall not affect the requirement of Government to defend an Indemnitee(s), unless such Indemnitee(s) is solely responsible for the release or threatened release giving rise to the claim for indemnity, in which case the Government's duty to defend will not exist as to that claim.

C. Responsibilities of the Grantee

1. Grantee covenants and agrees to manage the PRCT Parcel as a wildlife refuge under standards consistent with the National Refuge System Administration Act of 1966 (16 U.S.C. Section 668 *et seq*) and pursuant to a cooperative management agreement among the Commonwealth of Puerto Rico, the Grantee, and the Secretary of Interior executed on April 26, 2001, a copy of which is attached hereto as Exhibit A. This covenant is binding on all of the Grantee's successors in interest and shall run with the land.

2. Grantee does not use, handle, produce or otherwise use hazardous substances, pollutants or contaminants, petroleum products or its derivatives including aviation oil and motor oil. Should Grantee handle such substances, it shall do so in accordance with the applicable federal or local statutes and regulations. Grantee releases and hold harmless the Government from any response action or corrective action necessary for any release or threatened release occurred in the PRCT Parcel following the date of transfer that is determined to be the result of Grantee's actions or of the actions of a third party, which actions are not related to the Department of Defense activities.

D. Unexploded Ordnance. Government represents that it has conducted an environmental baseline survey of the PRCT Parcel, that it has removed all ordnance from the magazines, and that it is unaware of the presence of unexploded ordnance on the PRCT Parcel. In the event that unexploded ordnance is found on the PRCT Parcel, the Government hereby agrees that it will remove and dispose of discovered unexploded ordnance, at its own cost and responsibility according to federal laws and regulations and then applicable Navy and Department of Defense policies. The Government will seek appropriation of funds to conduct such removal of unexploded ordnance, if necessary.

E. Definitions and General Provisions.

1. For the purpose of the provisions of this Section, the following terms have the meanings indicated below:

a. "release", "threatened release", "hazardous substance", "pollutant", "contaminant", "removal," "remedial action", and "response" have the meanings given to such terms under CERCLA and United States Environmental Protection Agency regulations implementing CERCLA. For purposes of this Deed the Government agrees that petroleum products or their derivatives will not be excluded from any CERCLA remedial, response or corrective action.

b. "Department of Defense activities" means the Department of Defense's construction, installation, placement, operation, maintenance, misuse, abandonment or failure to maintain the buildings and equipment on land comprising the PRCT Parcel; or failure to satisfy any otherwise legally applicable obligation to investigate or remediate any environmental conditions existing at the PRCT Parcel. "Department of Defense activities" does not mean the release or threatened release of a hazardous substance, pollutant, contaminant, petroleum or a petroleum derivative, to the extent that Government shows that the release or threatened release is caused or contributed to by the Grantee or its successor in interest.

c. "Action arising out of any claim for property damage" includes, but is not limited to, any judicial, administrative or private cost recovery proceeding brought against the Grantee or grantee's successors in interest (i) for remedial and/or response and/or corrective action costs arising under CERCLA, (ii) for costs incurred to enjoin or abate the presence or migration of contamination from or on the PRCT Parcel under the Resource Conservation and Recovery Act, as amended (RCRA), or (iii) for costs incurred to comply with the requirements of similar federal or state laws and regulations (or the laws of any political subdivision of the Commonwealth) which arise from the environmental conditions on the PRCT Parcel.

d. "Environmental condition(s)" means the presence of any hazardous substance, pollutant or contaminant, including hazardous waste or hazardous constituent, petroleum or petroleum derivative disposed of, released or existing in environmental media such as soil, subsurface soil, air, groundwater, surface water or subsurface geological formations at levels above background.

2. Prior to taking any action or reaching any final settlement under this Section V that could adversely impact Grantee or its successors in interest's use of the premises, Government shall consult with Grantee or its successors in interest to minimize any such impact.

3. Nothing in this Section V creates rights of any kind in any person or entity other than: (i) the Government and (ii) the Grantee and the Grantee's successors in interest.

VI. Additional Documents

The Government and the Grantee shall execute and provide all necessary documents to record the present deed in the corresponding Registry of Property of Puerto Rico.

TO HAVE AND TO HOLD the PRCT Parcel herein granted with all the privileges and appurtenances thereto belonging, to the Grantee and its successors and assigns forever, subject to the conditions set forth in the Deed.

IN WITNESS WHEREOF, the Government, acting by and through its Deputy Assistant Secretary of the Navy (Installations and Facilities), has hereunto subscribed its name and affixed the seal of the United States Department of the Navy.

UNITED STATES OF AMERICA

Duncan Holaday

Duncan Holaday
Deputy Assistant Secretary of the Navy
(Installations and Facilities)

COMMONWEALTH OF VIRGINIA
COUNTY OF ARLINGTON

() to-wit:

I, *Sandra H. Frantz*, a Notary Public in and for the Commonwealth of Virginia, do hereby certify that Mr. Duncan Holaday, of legal age, married, Deputy Assistant Secretary of the Navy, and resident of the Commonwealth of Virginia, United States of America, whose name is signed to the foregoing DEED, has this day, acknowledged the same before me in the County and State aforesaid.

Given under my hand this *30th* day of April, 2001.

Sandra H. Frantz

NOTARY PUBLIC

My Commission expires *30 September 2002*

(SEAL)

IN WITNESS WHEREOF, the Trustees of the Puerto Rico Conservation Trust, also known as the Puerto Rico Conservation Trust Fund and known in Spanish as "El Fideicomiso de Conservación de Puerto Rico", Thomas Lovejoy, Arleen Pabón and Kate Romero herein represented by the Trust's Executive Director, Francisco Javier Blanco, of legal age, married, architect and resident of San Juan, Puerto Rico, hereby accepts the terms and conditions herein provided by this conveyance document, and has hereunto subscribed its name and affixed the seal of the Puerto Rico Conservation Trust.



Francisco Javier Blanco
Executive Director
Puerto Rico Conservation Trust

I, Sandra H. Grant, a Notary Public in and for the Commonwealth of Virginia, do hereby certify that Francisco Javier Blanco whose name is signed to the foregoing Deed, has this day acknowledged the same before me in the County and State aforesaid.

Given under my hand this 30th day of April, 2001.

Sandra H. Grant
NOTARY PUBLIC

My Commission expires 30 September 2002

(SEAL)
#289042.1

VIRGINIA: IN THE VIRGINIA BEACH CIRCUIT COURT CLERK'S OFFICE

CERTIFICATION OF A NOTARY

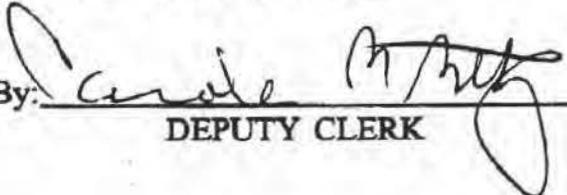
I, J. CURTIS FRUIT, Clerk of the Virginia Beach Circuit Court, CERTIFY that:

1. Sandra H Frantz, who performed a notarial act to the attached document or writing, took an oath of notary and was issued his or her commission as notary public by this court pursuant to § 47.1-9.
2. At the time of performing such notarial act, the term of office of such notary public had not expired.

DATE: May 2, 2001
SEAL OF COURT AFFIXED



J. CURTIS FRUIT, CLERK

By: 
DEPUTY CLERK

**COOPERATIVE MANAGEMENT AGREEMENT AMONG
THE COMMONWEALTH OF PUERTO RICO,
THE PUERTO RICO CONSERVATION TRUST, AND
THE U.S. DEPARTMENT OF THE INTERIOR
TO MANAGE LANDS ON THE ISLAND OF VIEQUES**

I. PURPOSE

This Cooperative Management Agreement ("Agreement"), is made this 26th day of April, 2001, by and among the Commonwealth of Puerto Rico ("the Commonwealth"), acting through the Department of Natural and Environmental Resources ("DNER"); the Puerto Rico Conservation Trust, also known as the Puerto Rico Conservation Trust Fund ("the Trust"), a charitable non-profit perpetual Trust, organized under the laws of the Commonwealth of Puerto Rico, pursuant to Deed Number five (5) executed January twenty-third (23), nineteen hundred and seventy (1970) before Notary Public Luis Felipe Sánchez Vilella, whose trustees are Thomas Lovejoy Paige, also known as Thomas B. Lovejoy Paige, of legal age, single, executive and resident of Washington, District of Columbia, Arleen Fabón Charneco, of legal age, single, architect and resident of Guaynabo, Puerto Rico, and Kate Donnelly de Romero, also known as Kate Romero, of legal age, married, property owner and resident of Dorado, Puerto Rico, all are hereby represented in this act by the Executive Director of the Puerto Rico Conservation Trust, Francisco Javier Blanco Cestero, also known as Javier Blanco, of legal age, married, architect and resident of San Juan, Puerto Rico; and the U.S. Department of the Interior, acting through the U.S. Fish and Wildlife Service ("USFWS") (hereinafter collectively referred to as "the Parties"), to satisfy the requirements of Section 1508 of P. L. 106-398, The Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Oct. 30, 2000) ("the Spence Act") to include certain lands on the Island of Vieques in a cooperative agreement among the Parties, and to provide general management principles for the protection of those lands and their natural resources.

II. BACKGROUND

WHEREAS, section 1508 (a) (1) of the Spence Act directs the Secretary of the Navy to transfer 3,100 acres of land (described in Attachment A) designated as Conservation Zones in the western end of the Island of Vieques to the administrative jurisdiction of the Secretary of Interior, to be managed as a wildlife refuge under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668d et seq.) ("Refuge Act"), and pursuant to this Agreement; and

WHEREAS, section 1508 (b) (1) of the Spence Act also directs the Secretary of the Navy to convey to the Trust, without consideration, certain real properties (approximately 800

Parties' Initials:


Trust


DNER


USFWS

acres, described in Attachment B) that are designated as additional Conservation Zones in the western end of the Island of Vieques and are included in this Agreement; and

WHEREAS, the Spence Act provides that the lands transferred to the administrative jurisdiction of the Secretary of the Interior and those conveyed to the Trust pursuant to section 1508 shall be managed pursuant to a cooperative management agreement among the Parties; and

WHEREAS, the Spence Act requires that all lands covered by the Agreement shall be managed to protect and preserve the natural resources of the lands in perpetuity; and

WHEREAS, the Parties, pursuant to their respective authorities, have the authority to enter into this Agreement to fulfill the purposes and requirements of section 1508 of the Spence Act;

AND WHEREAS, the Secretary of the Department of Natural and Environmental Resources has authority to execute this agreement on behalf of the Commonwealth under Organic Act, Law No. 23 of June 20, 1972, as amended, has authority to establish agreements under Section 155 with United States agencies, and is responsible for implementing the public policy on the conservation and utilization of Puerto Rico's natural resources; the Regional Director of Region 4 of the USFWS, has authority to execute this agreement on behalf of the Secretary of the Interior under authorities delegated through 209 Departmental Manual (DM) 6.1, 242 DM 1.1, and 031 Fish and Wildlife Manual 2.1; and the Executive Director of the Trust has authority to execute this agreement on behalf of and representing the Trustees of the Trust pursuant to a resolution dated December 8, 2000;

NOW, THEREFORE, the Parties agree upon the terms and conditions as described herein.

III. TERMS AND CONDITIONS

A. The Parties agree to include within this agreement the 3,100 acres of Conservation Zone lands required to be transferred to the administrative jurisdiction of the Secretary of the Interior pursuant to Section 1508(a) of the Spence Act, and agree to include within this agreement the 200 acres of additional Conservation Zone lands to be conveyed to the Trust pursuant to Section 1508(b) of the Spence Act.

Parties' Initials:


Trust

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B. The lands transferred to the administrative jurisdiction of the Secretary of the Interior shall be administered as a wildlife refuge under the Refuge Act and pursuant to this Agreement and related subsequent agreements among the Parties.

C. The lands conveyed to the Trust shall be managed under standards consistent with the Refuge Act and pursuant to this Agreement and related subsequent agreements among the Parties.

D. As provided in section 1508(d)(3) of the Spence Act, the Sea Grass Area west of Mosquito Pier, as identified in the 1983 Memorandum of Understanding between the Commonwealth of Puerto Rico and the Secretary of the Navy, is also subject to and covered by this Agreement, to be protected under the laws of the United States and the laws of the Commonwealth of Puerto Rico. The Parties agree to further delineate a description of the boundaries of this area in the management plan prepared pursuant to paragraph F.

E. The Parties recognize the natural and cultural importance and sensitivity of the diverse tropical ecosystems located on the western end of Vieques and agree that these must and shall be managed to insure their protection and preservation in perpetuity for the benefit of the general public, and in particular those living on the Island of Vieques.

F. Subject to available funding, and consistent with all applicable federal and Puerto Rico laws, policies and regulations, the Parties agree to prepare within nine (9) months of the effective date of this Agreement, a resource management plan ("management plan") to protect and preserve the diverse coastal, terrestrial, cultural archeological and historic resources of the lands subject to this Agreement. This management plan shall incorporate the requirements of section 1508 of the Spence Act, and shall incorporate, as appropriate, provisions addressing science and research, education, outreach, enforcement, funding, land use, and such other provisions as deemed appropriate by the Parties. With respect to the 3,100 acres transferred to the U.S. Department of the Interior, the management plan will be subject to final review and approval by the USFWS.

G. The management plan shall not require the Trust to permit within any of its properties destructive sampling or research, or any other activities that may contravene the rules, norms, or policies of the Trust, to the extent consistent with section 1508 of the Spence Act.

H. The United States Department of the Interior and the Trust agree to cooperate to provide each other with appropriate, compatible access to the lands that are subject to this Agreement, including visitor access.

Parties' Initials:


Trust


DNER


USFWS

I. Law Enforcement. The USFWS and the DNER agree to cooperate in the enforcement of applicable laws and regulations in furtherance of the purposes of this Agreement.

J. Coordination among the Parties. The Parties agree to meet periodically and not less than three (3) times per year, to discuss the progress and implementation of this Agreement. The meetings shall be set for mutually agreeable times, and an agenda for all meetings circulated in advance.

K. Funding. The Parties agree, consistent with and subject to their own respective budgetary policies and means, to obtain or make available funding to implement this Agreement. The Parties further agree, to the extent appropriate, to cooperate fully in supporting their individual or joint initiatives for obtaining funding for preparation of the management plan. The Parties also agree that the Trust's share of the cost and expense of preparing the management plan shall not exceed an amount proportional to the Trust's acreage included within this Agreement. Nothing in this Agreement shall be construed as obligating funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341.

L. Relationship to Other Federal Laws. As provided in the Spence Act, the Commonwealth of Puerto Rico, the Trust, and the Secretary of the Interior shall follow all applicable Federal environmental laws during the creation and any subsequent amendment of this Agreement, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and the National Historic Preservation Act (16 U.S.C. 470 et seq.).

M. Integration and Relationship to Other Agreements. This Agreement integrates all prior discussions among the Parties. This Agreement replaces the "Cooperative Management Agreement between the Commonwealth and the U.S. Fish and Wildlife Service, entered into on November 3, 2000, which shall no longer be effective.

N. Modification of this Agreement. Neither this Cooperative Agreement nor any provisions hereof shall be modified, or amended, except by an instrument in writing signed by the Parties. Modification of this Agreement may be proposed at any time by any party, and upon agreement by all the Parties, shall become effective pursuant to the terms of such modification.

O. Assignment. The Trust may assign its duties and obligations pursuant to this Agreement to an entity or entities controlled by the trustees of the Trust or their designated authorized representatives. Prior to any such assignment, the Trust shall notify the other Parties in writing.

Parties' Initials:

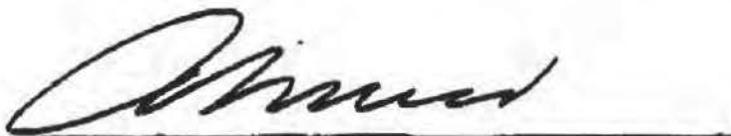

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P. Governing Law. This Agreement shall be enforced and construed according to the laws of the United States and the laws of the Commonwealth of Puerto Rico, as applicable.

Q. Effective Date. This Agreement will become effective upon execution for purposes of satisfying the requirements of Section 1508(b)(2) of the Act, and will become effective for purposes of implementation upon the transfer of the subject lands to the administrative jurisdiction of the Secretary of the Interior and conveyance to the Trust.



Francisco Javier Blanco
Executive Director
Puerto Rico Conservation Trust

26 / 11 / 01
Date

Carlos Padín
Secretary
Department of Natural and
Environmental Resources
Commonwealth of Puerto Rico

Date



Sam D. Hamilton
Regional Director, Region 4
U.S. Fish and Wildlife Service
U.S. Department of the Interior

4 / 26 / 01
Date

**COOPERATIVE MANAGEMENT AGREEMENT AMONG
THE COMMONWEALTH OF PUERTO RICO,
THE PUERTO RICO CONSERVATION TRUST, AND
THE U.S. DEPARTMENT OF THE INTERIOR
TO MANAGE LANDS ON THE ISLAND OF VIEQUES**

I. PURPOSE

This Cooperative Management Agreement ("Agreement"), is made this 26th day of April, 2001, by and among the Commonwealth of Puerto Rico ("the Commonwealth"), acting through the Department of Natural and Environmental Resources ("DNER"); the Puerto Rico Conservation Trust, also known as the Puerto Rico Conservation Trust Fund ("the Trust"), a charitable non-profit perpetual Trust, organized under the laws of the Commonwealth of Puerto Rico, pursuant to Deed Number five (5) executed January twenty-third (23), nineteen hundred and seventy (1970) before Notary Public Luis Felipe Sánchez Vilella, whose trustees are Thomas Lovejoy Paige, also known as Thomas M. Lovejoy Paige, of legal age, single, executive and resident of Washington, District of Columbia, Arleen Fabón Charneco, of legal age, single, architect and resident of Guaynabo, Puerto Rico, and Kate Donnelly de Romero, also known as Kate Romero, of legal age, married, property owner and resident of Dorado, Puerto Rico, all are hereby represented in this act by the Executive Director of the Puerto Rico Conservation Trust, Francisco Javier Blanco Castro, also known as Javier Blanco, of legal age, married, architect and resident of San Juan, Puerto Rico; and the U.S. Department of the Interior, acting through the U.S. Fish and Wildlife Service ("USFWS") (hereinafter collectively referred to as "the Parties"), to satisfy the requirements of Section 1508 of P. L. 106-398, The Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001 (Oct. 10, 2000) ("the Spence Act") to include certain lands on the Island of Vieques in a cooperative agreement among the Parties, and to provide general management principles for the protection of those lands and their natural resources.

II. BACKGROUND

WHEREAS, section 1508 (a) (1) of the Spence Act directs the Secretary of the Navy to transfer 3,100 acres of land (described in Attachment A) designated as Conservation Zones in the western end of the Island of Vieques to the administrative jurisdiction of the Secretary of Interior, to be managed as a wildlife refuge under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 663d et seq.) ("Refuge Act"), and pursuant to this Agreement; and

WHEREAS, section 1508 (b) (1) of the Spence Act also directs the Secretary of the Navy to convey to the Trust, without consideration, certain real properties (approximately 300

Parties' Initials:

Trust

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DNER

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areas, described in Attachment B) that are designated as additional Conservation Zones in the western end of the Island of Vieques and are included in this Agreement; and

WHEREAS, the Spence Act provides that the lands transferred to the administrative jurisdiction of the Secretary of the Interior and those conveyed to the Trust pursuant to section 1508 shall be managed pursuant to a cooperative management agreement among the Parties; and

WHEREAS, the Spence Act requires that all lands covered by the Agreement shall be managed to protect and preserve the natural resources of the lands in perpetuity; and

WHEREAS, the Parties, pursuant to their respective authorities, have the authority to enter into this Agreement to fulfill the purposes and requirements of section 1508 of the Spence Act;

AND WHEREAS, the Secretary of the Department of Natural and Environmental Resources has authority to execute this agreement on behalf of the Commonwealth under Organic Act, Law No. 23 of June 30, 1972, as amended, has authority to establish agreements under Section 155 with United States agencies, and is responsible for implementing the public policy on the conservation and utilization of Puerto Rico's natural resources; the Regional Director of Region 4 of the USFWS, has authority to execute this agreement on behalf of the Secretary of the Interior under authorities delegated through 209 Departmental Manual (DM) 6.1, 242 DM 1.1, and 031 Fish and Wildlife Manual 2.1; and the Executive Director of the Trust has authority to execute this agreement on behalf of and representing the Trustees of the Trust pursuant to a resolution dated December 8, 2000;

NOW, THEREFORE, the Parties agree upon the terms and conditions as described herein.

III. TERMS AND CONDITIONS

A. The Parties agree to include within this agreement the 3,100 acres of Conservation Zone lands required to be transferred to the administrative jurisdiction of the Secretary of the Interior pursuant to Section 1508(a) of the Spence Act, and agree to include within this agreement the 800 acres of additional Conservation Zone lands to be conveyed to the Trust pursuant to Section 1508(b) of the Spence Act.

Parties' initials:

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B. The lands transferred to the administrative jurisdiction of the Secretary of the Interior shall be administered as a wildlife refuge under the Refuge Act and pursuant to this Agreement and related subsequent agreements among the Parties.

C. The lands conveyed to the Trust shall be managed under standards consistent with the Refuge Act and pursuant to this Agreement and related subsequent agreements among the Parties.

D. As provided in section 1508(d)(3) of the Spence Act, the Sea Grass Area west of Mosquito Pier, as identified in the 1989 Memorandum of Understanding between the Commonwealth of Puerto Rico and the Secretary of the Navy, is also subject to and covered by this Agreement, to be protected under the laws of the United States and the laws of the Commonwealth of Puerto Rico. The Parties agree to further delineate a description of the boundaries of this area in the management plan prepared pursuant to paragraph F.

E. The Parties recognize the natural and cultural importance and sensitivity of the diverse tropical ecosystems located on the western end of Vieques and agree that these must and shall be managed to insure their protection and preservation in perpetuity for the benefit of the general public, and in particular those living on the Island of Vieques.

F. Subject to available funding, and consistent with all applicable federal and Puerto Rico laws, policies and regulations, the Parties agree to prepare within nine (9) months of the effective date of this Agreement, a resource management plan ("management plan") to protect and preserve the diverse coastal, terrestrial, cultural, archaeological and historic resources of the lands subject to this Agreement. This management plan shall incorporate the requirements of section 1508 of the Spence Act, and shall incorporate, as appropriate, provisions addressing science and research, education, outreach, enforcement, funding, land use, and such other provisions as deemed appropriate by the Parties. With respect to the 3,100 acres transferred to the U.S. Department of the Interior, the management plan will be subject to final review and approval by the USFWS.

G. The management plan shall not require the Trust to permit within any of its properties destructive sampling or research, or any other activities that may contravene the rules, norms, or policies of the Trust, to the extent consistent with section 1508 of the Spence Act.

II. The United States Department of the Interior and the Trust agree to cooperate to provide each other with appropriate, compatible access to the lands that are subject to this Agreement, including visitor access.

Parties' Initials:

Trust

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Trust

USFWS

I. Law Enforcement. The USFWS and the DNER agree to cooperate in the enforcement of applicable laws and regulations in furtherance of the purpose of this Agreement.

J. Coordination among the Parties. The Parties agree to meet periodically and not less than three (3) times per year, to discuss the progress and implementation of this Agreement. The meetings shall be set for mutually agreeable times, and an agenda for all meetings circulated in advance.

K. Funding. The Parties agree, consistent with and subject to their own respective budgetary policies and means, to obtain or make available funding to implement this Agreement. The Parties further agree, to the extent appropriate, to cooperate fully in supporting their individual or joint initiatives for obtaining funding for preparation of the management plan. The Parties also agree that the Trust's share of the cost and expense of preparing the management plan shall not exceed an amount proportional to the Trust's acreage included within this Agreement. Nothing in this Agreement shall be construed as obligating funds in violation of the Anti-Deficiency Act, 31 U.S.C. 1341.

L. Relationship to Other Federal Laws. As provided in the Space Act, the Commonwealth of Puerto Rico, the Trust, and the Secretary of the Interior shall follow all applicable Federal environmental laws during the creation and any subsequent amendment of this Agreement, including the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.), the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), and the National Historic Preservation Act (16 U.S.C. 470 et seq.).

M. Integration and Relationship to Other Agreements. This Agreement integrates all prior discussions among the Parties. This Agreement replaces the "Cooperative Management Agreement between the Commonwealth and the U.S. Fish and Wildlife Service, entered into on November 3, 2000, which shall no longer be effective.

N. Modification of this Agreement. Neither this Cooperative Agreement nor any provisions hereof shall be modified, or amended, except by an instrument in writing signed by the Parties. Modification of this Agreement may be proposed at any time by any party, and upon agreement by all the Parties, shall become effective pursuant to the terms of such modification.

O. Assignment. The Trust may assign its duties and obligations pursuant to this Agreement to an entity or entities controlled by the trustees of the Trust or their designated authorized representatives. Prior to any such assignment, the Trust shall notify the Other Parties in writing.

Parties' Initials:

Trust

CP
DNER

SAK
USFWS

F. Governing Law. This Agreement shall be enforced and construed according to the laws of the United States and the laws of the Commonwealth of Puerto Rico, as applicable.

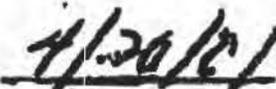
G. Effective Date. This Agreement will become effective upon execution for purposes of satisfying the requirements of Section 1508(h)(2) of the Act, and will become effective for purposes of implementation upon the transfer of the subject lands to the administrative jurisdiction of the Secretary of the Interior and conveyance to the Trust.

Francisco Javier Blanco
Executive Director
Puerto Rico Conservation Trust

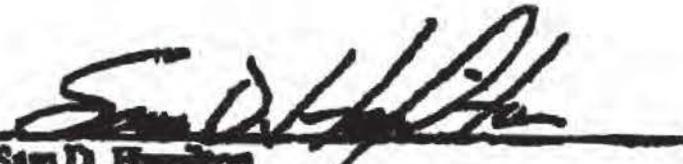
Date



Carlos Padín
Secretary
Department of Natural and
Environmental Resources
Commonwealth of Puerto Rico



Date



Sam D. Hamilton
Regional Director, Region 4
U.S. Fish and Wildlife Service
U.S. Department of the Interior



Date

ATTACHMENT B

Puerto Rico Conservation Trust Fund Parcel (PRCT Parcel)

Parcel of land, made of two portions identified as Parcel A and Parcel B, located in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing 34,847,987 square feet or 800 acres, which equates to 3,237,496.1 square meters or 823.707 cuerdas is described as follows:

Parcel A: A parcel of land located in the Wards of Punta Arenas, Mosquito, and Llave, Municipality of Vieques, Puerto Rico, containing 29,627,762 square feet or 680.160 acres, which equates to 2,752,519.5 square meters or 700.316 cuerdas, bounded on the North, East, and South by lands presently owned by the United States of America and to be conveyed to the Municipality of Vieques pursuant to Public Law 106-398 of October 30, 2000, and on the West by lands of the United States Government, which parcel is more particularly described by metes and bounds as follows:

Beginning at National Geodetic Survey Monument 'FRIO' (PID 9848) in the Punta Arenas Ward, said point being a brass disk stamped PUERTO RICO GPS CONTROL C.R.I.M. FRIO and having a northing of 754,659.1026 and an easting of 953,331.2647 noted as the Point of Beginning on the plat labeled PUERTO RICO CONSERVATION TRUST BOUNDARY.

Thence N67°41'14"E 9540.20' to an iron rod and cap set, the True Point of Beginning, having a northing of 758,281.1736 and an easting of 962,157.1387; thence S89°23'48"E 1937.66' to an iron rod and cap set; thence S47°54'59"E 155.13' to an iron rod and cap set; thence N59°49'59"E 309.71' to an iron rod and cap set; thence N82°16'17"E 100.88' to an iron rod and cap set; thence S80°03'15"E 122.74' to an iron rod and cap set; thence S72°56'47"E 444.17' to an iron rod and cap set; thence S64°31'50"E 52.47' to a concrete monument set, having a northing of 758,151.9788 and an easting of 965,170.4559; thence S51°14'51"E 24.49' to an iron rod and cap set; thence S45°15'43"E 68.57' to an iron rod and cap set; thence S32°19'30"E 144.98' to an iron rod and cap set; thence S11°57'25"E 232.68' to an iron rod and cap set; thence S24°47'42"E 84.41' to an iron rod and cap set; thence S80°25'10"E 149.88' to an iron rod and cap set; thence S70°52'54"E 259.11' to an iron rod and cap set; thence S55°47'16"E 175.57' to an iron rod and cap set; thence S44°53'25"E 171.79' to an iron rod and cap set; thence S48°01'27"E 98.26' to an iron rod and cap set; thence S57°02'17"E 94.45' to an iron rod and cap set; thence S54°07'53"E 135.63' to an iron rod and cap set; thence S47°58'01"E 116.16' to an iron rod and cap set; thence S41°46'28"E 620.72' to an iron rod and cap set; thence S43°07'53"E 310.65' to an iron rod and cap set; thence S51°17'48"E 81.64' to an iron rod and cap set; thence S74°09'53"E 57.50' to an iron rod and cap set; thence N86°17'50"E 70.06' to an iron rod and cap set; thence N42°20'19"E 57.33' to a concrete monument set, having a northing of 756,347.5581 and an easting of 967,260.3822; thence N02°34'10"E 54.17' to an iron rod and cap set; thence N28°27'42"W 195.95' to an iron rod and cap set; thence N16°10'20"W 80.21' to an iron rod and cap set; thence N02°55'52"E 92.03' to an iron rod and cap set; thence N47°24'22"E 86.83' to an iron rod and cap set; thence N83°39'15"E 125.38' to an iron rod and cap set; thence N44°46'30"E 114.02' to an iron rod and cap set; thence N67°38'14"E 67.36' to an iron rod and cap set; thence S79°06'27"E 156.13' to an iron rod and cap set; thence S70°58'50"E 94.64' to an iron rod and cap set; thence S65°36'50"E 282.27' to an iron rod and cap set; thence S71°48'51"E 266.62' to an iron rod and

cap set; thence S72°09'11"E 116.58' to an iron rod and cap set; thence S47°11'47"E 65.99' to an iron rod and cap set; thence S41°29'22"E 127.90' to an iron rod and cap set; thence N89°38'39"E 403.83' to an iron rod and cap set; thence N88°56'01"E 456.85' to an iron rod and cap set; thence S77°37'21"E 110.34' to an iron rod and cap set; thence S51°52'35"E 104.50' to an iron rod and cap set; thence S33°58'28"E 147.86' to an iron rod and cap set; thence S50°37'39"E 118.41' to an iron rod and cap set; thence S74°43'15"E 114.76' to an iron rod and cap set; thence S79°22'32"E 409.84' to an iron rod and cap set; thence S85°21'16"E 82.11' to an iron rod and cap set; thence N82°36'22"E 131.62' to an iron rod and cap set; thence N70°09'11"E 332.17' to an iron rod and cap set; thence N79°02'08"E 77.47' to an iron rod and cap set; thence S70°54'44"E 66.10' to an iron rod and cap set; thence S35°00'49"E 97.40' to an iron rod and cap set; thence S74°27'44"E 130.01' to a concrete monument set, having a northing of 756,106.4799 and an easting of 971,063.2438; thence S68°33'47"E 165.20' to an iron rod and cap set; thence S34°09'10"E 70.63' to an iron rod and cap set; thence S06°21'13"E 130.33' to an iron rod and cap set; thence S41°18'04"E 130.50' to an iron rod and cap set; thence S16°08'53"E 88.04' to an iron rod and cap set; thence S29°09'19"W 145.93' to an iron rod and cap set; thence S12°21'39"W 94.25' to an iron rod and cap set; thence S54°42'20"E 96.83' to an iron rod and cap set; thence S78°59'41"E 134.23' to an iron rod and cap set; thence N82°35'02"E 143.19' to an iron rod and cap set; thence N61°56'17"E 199.60' to an iron rod and cap set; thence N75°39'59"E 64.40' to an iron rod and cap set; thence S45°43'01"E 73.82' to an iron rod and cap set; thence S05°21'57"W 69.41' to an iron rod and cap set; thence S19°33'32"W 160.52' to an iron rod and cap set; thence S38°17'34"E 115.28' to an iron rod and cap set; thence S30°42'17"E 76.56' to an iron rod and cap set; thence S12°36'09"W 65.63' to a concrete monument set, having a northing of 755,010.5019 and an easting of 971,970.5712; thence S33°28'19"W 150.44' to an iron rod and cap set; thence S53°41'09"W 71.19' to an iron rod and cap set; thence S88°29'36"W 71.66' to an iron rod and cap set; thence N67°06'17"W 90.43' to an iron rod and cap set; thence N82°03'52"W 65.54' to an iron rod and cap set; thence S63°11'31"W 55.13' to an iron rod and cap set; thence S25°47'52"W 158.58' to an iron rod and cap set; thence S53°41'01"W 64.67' to an iron rod and cap set; thence S81°27'44"W 341.84' to an iron rod and cap set; thence S58°18'35"W 63.96' to an iron rod and cap set; thence S30°20'11"W 85.14' to an iron rod and cap set; thence S10°13'08"W 278.46' to an iron rod and cap set; thence S31°47'48"W 57.69' to an iron rod and cap set; thence S65°21'10"W 52.43' to a concrete monument set, having a northing of 754,176.3623 and an easting of 970,877.4243; thence N74°45'03"W 80.32' to an iron rod and cap set; thence N36°15'09"W 75.38' to an iron rod and cap set; thence N31°17'17"W 239.71' to an iron rod and cap set; thence N34°31'44"W 184.49' to an iron rod and cap set; thence N37°49'54"W 453.68' to an iron rod and cap set; thence N36°16'36"W 139.76' to an iron rod and cap set; thence N50°12'14"W 84.32' to an iron rod and cap set; thence N69°32'59"W 73.26' to an iron rod and cap set; thence S81°59'42"W 86.21' to a concrete monument set, having a northing of 755,153.6452 and an easting of 969,946.5814; thence S61°00'35"W 150.80' to an iron rod and cap set; thence S78°57'06"W 74.36' to an iron rod and cap set; thence S88°19'05"W 199.33' to an iron rod and cap set; thence S83°14'03"W 130.28' to an iron rod and cap set; thence S67°17'52"W 132.42' to an iron rod and cap set; thence S57°04'25"W 124.99' to an iron rod and cap set; thence S65°58'24"W 103.35' to an iron rod and cap set; thence N76°07'50"W 79.36' to an iron rod and cap set; thence S85°31'17"W 106.19' to an iron rod and cap set; thence S72°48'17"W 982.86' to an iron rod and cap set; thence S69°58'11"W 746.64' to an iron rod and cap set; thence S72°07'19"W 139.53' to an iron rod and cap set; thence S79°27'19"W 345.89' to an iron rod and cap set; thence N85°22'34"W 74.06' to a concrete monument set, having a northing of 754,248.1640 and an easting of 966,721.3901; thence

S54°26'31"W 237.07' to an iron rod and cap set; thence S34°20'09"W 179.27' to an iron rod and cap set; thence S32°28'23"W 134.63' to an iron rod and cap set; thence S23°26'56"W 65.68' to an iron rod and cap set; thence S11°45'01"W 59.49' to an iron rod and cap set; thence S05°26'56"E 108.69' to an iron rod and cap set; thence S06°27'23"E 321.05' to an iron rod and cap set; thence S22°07'47"W 181.83' to an iron rod and cap set; thence S05°27'35"W 149.19' to an iron rod and cap set; thence S08°47'40"W 191.49' to an iron rod and cap set; thence S21°00'20"W 186.71' to an iron rod and cap set; thence S16°44'43"W 185.85' to an iron rod and cap set; thence S06°51'14"W 136.00' to an iron rod and cap set; thence S21°14'01"E 122.25' to an iron rod and cap set; thence S08°36'39"E 136.56' to an iron rod and cap set; thence S49°12'04"E 293.06' to an iron rod and cap set; thence S33°19'05"E 430.20' to an iron rod and cap set; thence S03°37'02"E 86.48' to a concrete monument set, having a northing of 751,423.1838 and an easting of 966,642.9445; thence S64°45'40"W 101.82' to an iron rod and cap set; thence S89°19'20"W 66.62' to an iron rod and cap set; thence N77°37'21"W 60.35' to an iron rod and cap set; thence N67°26'35"W 137.82' to an iron rod and cap set; thence N56°50'50"W 150.91' to an iron rod and cap set; thence N58°43'39"W 244.47' to an iron rod and cap set; thence N59°08'17"W 299.97' to an iron rod and cap set; thence N52°04'37"W 128.50' to an iron rod and cap set; thence N52°12'08"W 180.06' to an iron rod and cap set; thence N74°03'17"W 181.46' to an iron rod and cap set; thence N64°04'05"W 152.35' to an iron rod and cap set; thence N44°51'15"W 106.78' to an iron rod and cap set; thence N49°21'53"W 209.70' to an iron rod and cap set; thence N59°50'36"W 60.64' to an iron rod and cap set; thence N63°34'34"W 100.65' to an iron rod and cap set; thence N30°46'52"W 128.40' to an iron rod and cap set; thence S85°59'08"W 69.55' to an iron rod and cap set; thence N79°28'21"W 95.26' to an iron rod and cap set; thence N65°19'39"W 89.55' to an iron rod and cap set; thence N27°41'40"W 417.42' to an iron rod and cap set; thence N22°16'59"W 111.86' to an iron rod and cap set; thence N23°51'34"W 253.24' to an iron rod and cap set; thence N32°51'24"W 325.01' to an iron rod and cap set; thence N31°17'54"W 177.07' to an iron rod and cap set; thence N34°03'33"W 318.40' to an iron rod and cap set; thence N31°43'49"W 283.55' to an iron rod and cap set; thence N40°51'37"W 319.25' to an iron rod and cap set; thence N54°14'02"W 270.56' to an iron rod and cap set; thence N59°23'30"W 200.67' to an iron rod and cap set; thence N55°15'19"W 138.79' to an iron rod and cap set; thence N58°06'12"W 157.93' to an iron rod and cap set; thence N56°13'57"W 183.47' to an iron rod and cap set; thence N64°38'51"W 110.58' to an iron rod and cap set; thence N67°45'16"W 187.16' to an iron rod and cap set; thence N70°55'49"W 99.24' to an iron rod and cap set; thence N79°47'59"W 179.26' to an iron rod and cap set; thence N68°03'49"W 151.31' to an iron rod and cap set; thence N77°00'08"W 182.56' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 166.66', chord bearing of N07°16'40"E, Radius=325.00', ArcLen=168.54'; thence following a curve to an iron rod and cap set with a long chord 200.96', chord bearing of N26°23'46"E, Radius=1352.00', ArcLen=201.15'; thence N30°39'30"E 157.24' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 18.39', chord bearing of N31°39'44"E, Radius=525.00', ArcLen=18.39'; thence N32°39'58"E 221.74' to an iron rod and cap set; thence S52°58'33"E 50.17' to a concrete monument set, having a northing of 755,865.1991 and an easting of 961,991.0745; thence N32°39'58"E 130.66' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 17.40', chord bearing of N31°43'53"E, Radius=525.00', ArcLen=17.41'; thence N30°45'59"E 432.29' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 11.32', chord bearing of N31°28'57"E, Radius=475.00', ArcLen=11.32'; thence N32°07'54"E 406.25' to an iron rod and cap set; thence following a curve to an iron rod and cap set with a long chord 214.73', chord bearing of

N27°48'38"E, Radius=1425.00', ArcLen=214.94'; thence following a curve to an iron rod and cap set with a long chord 279.26', chord bearing of N00°19'41"E, Radius=355.00', ArcLen=287.01'; thence N22°50'00"W 800.52' to a concrete monument set, having a northing of 757,922.1025 and an easting of 962,304.9974; thence continuing N22°50'00"W 371.07' to an iron rod and cap set; thence following a curve to an iron rod and cap set, the True Point of Beginning, with a long chord 17.51', chord bearing of N12°44'57"W, Radius=50.00', ArcLen=17.60'.

Parcel B: A parcel of land located in the Ward of Llave, Municipality of Vieques, Puerto Rico, containing 5,220,225 square feet or 119.840 acres, which equates to 484,976.6 square meters or 123,391 cuerdas to the approximate edge of the water, bounded on the North by lands belonging to the United States of America to be conveyed to the Municipality of Vieques pursuant to Public Law 106-398 of October 30, 2000, on the East and West by lands of the United States Government, and on the South by the Caribbean Sea, more particularly described by notes and bounds as follows:

Beginning at a concrete monument in the Llave Ward, said concrete monument being stamped 'V1' and having a northing of 753,134.1705 and an easting of 975,319.7511 noted as the Point of Beginning '2' on the plat labeled D.O.L/P.R.C.T. BOUNDARY & 50' I/E EASEMENT. Thence S67°33'56"W 4772.98' to an iron rod and cap set, the True Point of Beginning 'B', having a northing of 751,312.6675 and an easting of 970,908.0050:

Thence S88°30'56"E 619.49' to a concrete monument set, having a northing of 751,296.6207 and an easting of 971,527.2890; thence N84°16'44"E 22.91' to an iron rod and cap set; thence S05°59'05"W 69.89' to an iron rod and cap set; thence S05°59'28"E 101.90' to an iron rod and cap set; thence S18°13'21"E 83.61' to an iron rod and cap set; thence S12°36'25"E 111.28' to an iron rod and cap set; thence S12°14'27"E 231.09' to an iron rod and cap set; thence S21°04'55"E 199.90' to an iron rod and cap set; thence S34°30'45"E 86.99' to an iron rod and cap set; thence S48°00'59"E 106.18' to an iron rod and cap set; thence S55°31'15"E 124.24' to an iron rod and cap set; thence S48°11'28"E 154.45' to an iron rod and cap set; thence S65°28'57"E 117.38' to an iron rod and cap set; thence S47°38'47"E 180.25' to an iron rod and cap set; thence S39°22'29"E 62.73' to an iron rod and cap set; thence S36°19'05"E 402.83' to an iron rod and cap set; thence S25°51'07"E 74.75' to an iron rod and cap set; thence S10°11'30"E 92.27' to an iron rod and cap set; thence S00°13'36"E 61.76' to an iron rod and cap set; thence S02°39'23"W 245.30' to an iron rod and cap set; thence S03°58'48"E 99.43' to an iron rod and cap set; thence S05°33'56"E 224.30' to an iron rod and cap set; thence S24°50'22"E 53.12' to an iron rod and cap set; thence due South 788.93' to an iron rod and cap set; thence continuing due South 100.00' to an iron rod and cap set on the approximate edge of water of the Caribbean Sea; thence S55°51'29"W 878.25' on a tie line along the approximate edge of water of said Caribbean Sea to an iron rod and cap set; thence departing the approximate edge of water of said Caribbean Sea N43°10'27"W 120.00' to an iron rod and cap set; thence continuing N43°10'27"W 1880.01' to an iron rod and cap set; thence N07°44'48"E 2419.10' to an iron rod and cap set, the True Point of Beginning 'B'.