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ACRONYMS/ABBREVIATIONS

ACGIH	American Conference of Governmental Industrial Hygienists
ACM	asbestos-containing materials
AEC	Atomic Energy Commission
AIHA	American Industrial Hygiene Association
ASTM	American Society for Testing and Materials
AWQG	agricultural water quality goal
BCRA	Base Closure and Realignment Act, 1988
bgs	below ground surface
Blackhawk Geosciences	Blackhawk Geosciences Division of Coleman Energy and Environmental systems
BNI	Bechtel National, Inc.
BRAC	Base Realignment and Closure
Cal-EPA	California Environmental Protection Agency
CDPR	California Department of Parks and Recreation
c c s	California Coordinate System
CFR	Code of Federal Regulations
CLEAN	Comprehensive Long-Term Environmental Action Navy
CLP	Contract Laboratory Program
cm ²	square centimeters
cm/sec	centimeters per second
CME	Central Mining Equipment
COPC	chemicals of potential concern
cpm	counts per minute
CRDL	contract-required detection limit
CRQL	contract-required quantitation limit
CSF	cancer slope factors
CTO	Contract Task Order
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DOT	Department of Transportation
dpm	disintegrations per minute
DQO	data quality objective
DTSC	Department of Toxic Substances Control
ECD	electron capture detector
ELAP	California State Environmental Laboratory Accreditation Program
EM	electromagnetic induction

ACRONYMS AND ABBREVIATIONS (continued)

f/cc	fibers per cubic centimeter
FID	flame ionization detector
ft/ns	feet per nanosecond
FUDS	Formerly Utilized Defense Sites
GC	gas chromatography
GM	Geiger-Mueller
gpm	gallons per minute
GPR	ground-penetrating radar
GPS	global positioning system
HEPA	high-efficiency particulate air
HWP	hazardous work permit
Hz	hertz
IDW	investigation-derived waste
IID	Imperial Irrigation District
ICP	inductively coupled plasma
IR	Installation Restoration
IRP	Installation Restoration Program
kg	kilogram
kHz	kilohertz
Lc	critical level
LOD	limit of detection
LOQ	limit of quantitation
LPM	liters per minute
LRL	lower reporting limit
µg/g	micrograms per gram
µg/kg	micrograms per kilogram
µg/L	micrograms per liter
µm	micrometer
µR/hr	micro-Roentgen per hour
MCE	mixed cellulose ester
MCL	maximum contaminant level
MDA	minimum detectable activity
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
MGC	Microgeophysics Corporation

ACRONYMS AND ABBREVIATIONS (continued)

M H Z	megahertz
mm ²	square millimeters
mR	millirem
mS/m	millisiemens per meter
MSL	mean sea level
NAD	North American Datum
NAWQC	National Ambient Water Quality Criteria
NBS	National Bureau of Standards
NEESA	Naval Energy and Environmental Support Activity
NETP	Natural Environmental Test Program
NFESC	Naval Facilities Engineering Service Center
Ni/Cd	Nickel/Cadmium
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute for Standards and Technology
NRC	Nuclear Regulatory Commission
nT	nano Teslas
NWC	Naval Weapons Center
PA	Preliminary Assessment
Pb	lead
PCB	polychlorinated biphenyl
PCM	phase contrast microscopy
PFD	personal flotation device
PID	photoionization detector
PPE	personal protective equipment
ppm	parts per million
ppmv	parts per million volume
PRG	Preliminary Remediation Goal
psi	pounds per square inch
PVC	polyvinyl chloride
QA/QC	quality assurance/quality control
QCCS	quality control check samples
RAGS	“Risk Assessment Guidance for Super-fund”
RASO	U.S. Navy, Radiological Affairs Support Office
RBF	Robert Bein , William Frost & Associates
RSE	Removal Site Evaluation
RWQCB	California Regional Water Quality Control Board

ACRONYMS AND ABBREVIATIONS (continued)

SAC	Strategic Air Command
Sandia	Sandia National Laboratory
SHSO	Site Health and Safety Officer
SI	Site Inspection
s/m	siemens per meter
SOP	Standard Operating Procedure
SSTB	Salton Sea Test Base
s v o c	semivolatile organic compound
SWDIV	Southwest Division Naval Facilities Engineering Command
TDS	total dissolved solids
TEG	Transglobal Environmental Geochemistry
TEM	transmission electron microscopy
TIC	tentatively identified compound
TLD	thermoluminescent dosimeters
TLV	threshold limit value
TOC	top of casing
TPH	total petroleum hydrocarbons
TRPH	total recoverable petroleum hydrocarbons
U ²³⁵	Uranium 235
U ²³⁸	Uranium 238
USA	Underground Service Alert
USCS	United Soil Classification System
U.S. EPA	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	underground storage tank
UTL	upper tolerance limit
VOC	volatile organic compound

Section 1

INTRODUCTION

The Southwest Division Naval Facilities Engineering Command (SWDIV) requested Bechtel National, Inc. (BNI) to perform a Site Inspection (SI) at the Salton Sea Test Base (SSTB), Imperial County, California. The SI was performed under the Comprehensive Long-Term Environmental Action Navy (CLEAN) II Program, Contract Task Order (CTO)-0035 of Contract No. N68711-92-D-4670.

1.1 PURPOSE

The purpose of the SI was to collect information to evaluate the qualitative potential presence of hazardous substance contamination at the SSTB, not to characterize the magnitude or extent of contamination. Specific objectives were to:

- determine background levels of suspected contaminants in soil, groundwater, sediment, and surface water at the SSTB;
- collect data concerning the presence of suspected contaminants at concentrations exceeding background levels related to past operational and disposal practices at the SSTB; and
- evaluate the data obtained to provide recommendations concerning additional action.

1.2 SCOPE

The scope of the SI was based on the SI Work Plan (JEG 1993) and the SI Work Plan Addendum (BNI 1994a) prepared for the SSTB. The SI included the following tasks: aerial topographic mapping; geophysical, soil gas, and radiological surveys; collection and laboratory analysis of soil, groundwater, sediment, and surface water samples; land surveying; and aquifer testing.

The investigation was concentrated on potential contaminant sources identified in the Preliminary Assessment (PA) (NEESA 1993) prepared for the SSTB. Sampling was conducted in locations estimated to possess the highest potential for contamination

The specific sites evaluated during the SI were:

- Site 1 - Taxiway Landfill
- Site 4 - Shoreline Disposal Area
- Site 6 - Building 4033 - Instrument Laboratory Leach Line
- Site 7 - Building 4070 - Dog Site Leach Field
- Site 8 - Building 4055 - Grease Pit
- Site 9 - Buildings 4026, 4027, and 4070 - Radiological Survey
- Site 10 - SSTB Marine Target Range
- Site 11 - Building 4033 Landfill
- Site 12 - East-West Runway Landfill
- Site 13 - Gully Landfill
- Site 14 - Warehouse Landfill

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Site 15 - Building 4049 - Paint Shop
Site 16 - Building 4009 - Paint Storage
Site 17 - Old Building 5 - Vehicle Maintenance Area
Site 18 - Old Buildings 3 and 4 Shops
Site 19 - Buildings 4006, 4007, 4008, 4050 - Equipment Sheds
Site 20 - Imhoff Tank
Site 21 - Oiled Roads
Site 22 - Small Arms Range
Site 23 - Septic Tanks
Site 25 - Main Leach field
Remote Camera Site B1

The terminology used for site labels in the PA (NEESA 1993) for Sites 1, 4, 11, 12, 13, and 14 have been maintained for the SI, although these sites should be considered as "unregulated waste disposal sites," as defined by the California Regional Water Control Board (RWQCB). Subsequent to preparation of the SI Work Plan Addendum (BNI 1994a), it was determined that alternatives to the geophysical investigation methodology proposed for the Site 10 Land Target should be investigated and implemented. The alternatives currently under consideration include automated (e.g., conducted using a vehicle and/or aircraft) geophysical data collection techniques, which promise cost and time benefits as well as the potential to more completely achieve the goals of the survey. Therefore, the planned geophysical survey of the Site 10 Land Target was excluded from the SI field activities. The Site 10 Land Target will be addressed under a separate phase of work.

Sites 2, 3, 5, and 24 were not included in the SI.

- Action pertaining to underground storage tanks at SSTB (Site 2) was excluded from the SI activities (see Section 2.3.4 for additional information).
- No further action was proposed by Naval Energy and Environmental support Activity ([NEESA] 1993) for the abandoned electrical system (Site 3). However, additional sampling and analysis to evaluate this conclusion will be conducted as part of subsequent field activities (see Section 2.3.2 for additional information).
- Asbestos abatement (Site 5) was conducted by Naval Weapons Center (NWC), China Lake in the fall of 1993.
- Potential contamination related to unexploded ordnance in areas where its presence has been reported (Site 24), and the potential presence of test units at the Site 10 land target will be addressed under a separate phase of work.

This report describes the present conditions at specific sites within the SSTB. The conclusions and recommendations presented are based on government-furnished data, the results of previous contractor investigations, and the collection of new data through limited research and visual inspections as well as limited soil, sediment, water, and radiological sampling. As new information becomes available, it may be necessary to modify the conclusions and recommendations presented in this report. The findings,

Section 1 Introduction

recommendations, and professional opinions in this report were prepared in concurrence with interested regulatory agencies, in accordance with current generally accepted professional environmental practices in California. This report references certain laws, regulations, and procedures, but is not intended to provide legal advice.

1.3 RESPONSES TO REGULATORY AND COMMUNITY REVIEW

Draft and preliminary final versions of this SI Report were reviewed by the California Environmental Protection Agency (Cal-EPA) Department of Toxic Substances Control (DTSC), United States Environmental Protection Agency (U.S. EPA), California RWQCB, and Salton Sea Test Base Restoration Advisory Board. The Restoration Advisory Board comprises members of the public who represent community interests. Comments and responses pertaining to the draft and preliminary final versions of this SI Report are presented in Appendix AA.