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NAS KEY WEST
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FINAL POLYCHLORINATED BIPHENYL TESTING OF ELECTRICAL TRANSFORMERS AND HYDRAULIC FLUIDS NAS KEY WEST FL

6/1/1992

CH2M HILL

0022

Return to
K. Snodgrass
SoDIV

FINAL

PCB TESTING OF ELECTRICAL TRANSFORMERS AND HYDRAULIC FLUIDS
JUNE 1992

NAVAL AIR STATION
KEY WEST, FLORIDA

N62467-89-D-0317

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SOUTH CAROLINA
29411-0068

RELEASE OF THIS DOCUMENT REQUIRES THE PRIOR
NOTIFICATION OF THE COMMANDING OFFICER OF
NAVAL AIR STATION, KEY WEST, FLORIDA

To: Karen H Snodgrass@Code 18@NAVFAC EFDSOUTH
Cc: Luis A Vazquez@Code 18@NAVFAC EFDSOUTH
Robert J Sample@Code 18@NAVFAC EFDSOUTH

F. .d: Robert A Harrell@Code 18@NAVFAC EFDSOUTH
Subject: PCBS AT NAS KEY WEST
Date: Wednesday, May 10, 1995 14:12:54 EDT
Attach:
Certify: N
Forwarded by:

Karen,

Per your request, I talked to Pete Lashoto at NAS Key West about the PCBs at the Hawk Missle Site (KW65). Mr. Lashoto wants to known how to dispose of the transformer shells that were abandoned by the Army at this site.

I told Mr. Lashoto that SOUTHDIV had tested this location for PCBs as part of the effort to turn this location over to the Air Force. The records should be available from Scot Rogowski, NAS Key West.

When we test the stains arround the transformers, we found PCBs. We did not recover enough oil to test it for PCBs. The actual PCBs in the soil is so low that a clean-up action on the soil would do more damage than good, at the time we tested. With the homeless incamped at this location this evaluation couls change.

A .nat time we assumed that NAS Key West would dispose of the transformer shells. This did not happen, therefore NAS Key West still has the transformer shells. I advised Mr. Lashoto to simply assume that the orginal PCB content of the transformers was greater than 500 ppm and dispose of the shells as if they were PCB transformers.

Rob.

PCB TESTING OF ELECTRICAL TRANSFORMERS AND HYDRAULIC FLUIDS

NAVAL AIR STATION
KEY WEST, FLORIDA

UIC: N00213

JUNE 1992

CONTRACT N62467-89-D-0317

PREPARED BY:

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FOREWORD

In 1976, Congress passed the Toxic Substances Control Act and specifically directed the U.S. Environmental Protection Agency (USEPA) to develop regulations for the management of polychlorinated biphenyls (PCB). The regulations were reduced to a set of rules and procedures by the Code of Federal Regulations Title 40, Part 761, *USEPA Regulations for Maintenance, Production for PCBs under the Toxic Substances Control Act.*

The Navy's PCB Program policy is to comply with all Federal, State, and local regulations pertaining to PCB. This report was prepared to satisfy the requirements of the Florida Administrative Code (FAC) regulations pertaining to PCB contamination in Florida's environment.

Questions regarding this report should be addressed to the Commanding Officer, Naval Air Station Key West, Key West, Florida, or to Southern Division Naval Facilities Engineering Command (SOUTHNAVFACEGCOM), Code 1835, at AUTOVON 563-0551 or 803-743-0551.

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EXECUTIVE SUMMARY

The purpose of this project was to determine the polychlorinated biphenyl (PCB) concentration of oil in electrical equipment and hydraulic fluid in transportation equipment located at the Naval Air Station Key West (NAS Key West), Key West, Florida. PCB concentration was determined from the manufacturer's nameplate, if available, or assessed by collecting oil samples from equipment and analyzing them.

The prime contractor for the project was ABB Environmental Services Inc., Tallahassee, Florida. CH2M HILL, Gainesville, Florida, the principle subcontractor, prepared the Quality Assurance Project Plan (QAPP), Field Sampling Plan (FSP), Health and Safety Plan (HASP), Schedule of Planned Power Outages (SOPPO), and this report. The QAPP, FSP, HASP, and SOPPO were approved in November 1991 and sampling began in December 1991.

Sampling was performed with only minor problems and schedule changes. Any alterations to the SOPPO were coordinated with the environmental specialist from NAS Key West's Public Works Department. Quality control for the field sampling was maintained in accordance with CH2M HILL standard procedures and the requirements in the Statement of Work prepared under Contract Task Order (CTO) 0025.

Ninety-four pieces of transportation/motorized equipment were sampled. Three samples, KW235, KW252, and KW534, exceeded the detection limit of 5 parts per million (ppm). However, their PCB concentrations of 7.6, 10, and 10 ppm, respectively, were still well below the contamination level of 50 ppm established by CTO 0025. Since none of the transportation equipment sampled had PCB concentrations greater than 50 ppm (PCB contaminated), they were labeled with "NON PCB" labels.

Thirteen oil-filled high-voltage switches were sampled. One oil switch exceeded the detection limit of 5 ppm. However, its PCB concentration of 8.5 ppm was still well below the contamination level of 50 ppm. Since none of the oil switches were PCB contaminated, they were labeled with "NON PCB" labels.

Of the 462 transformers inspected, 125 were not sampled because they had manufacturer labels stating that they did or did not contain PCB. The 337 transformers that were sampled had the following PCB concentrations:

- 256 had PCB concentrations less than 5 ppm
- 30 had PCB concentrations between 5 and 50 ppm
- 36 had PCB concentrations between 50 and 500 ppm and are considered PCB-contaminated

- 15 had PCB concentrations greater than 500 ppm and are considered PCB items

All of the inspected and sampled transformers were labeled accordingly.

ACKNOWLEDGEMENTS

The execution of this project required that electric service be disconnected to a large portion of the facilities at NAS Key West, Florida. A detailed Schedule of Planned Power Outages was prepared to minimize the effect on activities. The fast review and turn around of the plan allowed work to begin ahead of the initial schedule. The personnel at NAS Key West did an outstanding job of notifying and coordinating the outages to minimize impact. This is evidenced by the fact that no complaints were received concerning the sampling work. NAS Key West personnel were very supportive of the sampling team. The team effort resulted in a project that met or exceeded all requirements and was completed ahead of schedule and under budget. In particular, the project team gratefully acknowledges the outstanding effort, dedication ,and professionalism provided by the following people in accomplishing this project:

NAME	TITLE	LOCATION
Mr. Robert Harrell	Engineer in Charge	SOUTHNAVFACENGCOM
Mr. Scott Rogowski	Environmental Specialist	NAS Key West, Florida

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ACRONYMS AND ABBREVIATIONS

ACOE	Army Corps of Engineer
ASTM	American Society of Testing Materials
CFR	Code of Federal Regulations
CompQAP	Comprehensive Quality Assurance Plan
CTO	Contract Task Order
dBA	Decibel A-rated
DHSM	District Health and Safety Manager
EC	Environmental Coordinator
EIC	Engineer-in-Charge
FA-CPR	First Aid - Cardiopulmonary Resuscitation
FDER	Florida Department of Environmental Regulation
FSP	Field Sampling Plan
HASP	Health and Safety Plan
kV	Kilovolt
mg/kg	Milligrams per Kilograms
mg/m^3	Milligrams per Cubic Meter
mg/l	Milligrams per Liter
ml	Milliliter
MSDS	Material Safety Data Sheets
NAS	Naval Air Station
NEESA	Naval Energy and Environmental Support Activity
OSHA	Occupational Safety and Health Administration
PCB	Polychlorinated Biphenyls
PPE	Personal Protective Equipment
ppm	Parts per Million
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plan
REA	Rural Electrification Administration
RFP	Request for Proposal
RHM	Radiation Health Manager
RHSM	Regional Health and Safety Manager
RMSF	Rocky Mountain Spotted Fever
SAP	Sampling and Analysis Plan
SOP	Standards of Practice
SOPPO	Schedule of Planned Power Outages
SOUTHNAV-FACENGCOM	Southern Division Naval Facilities Engineering Command
SSC	Site Safety Coordinator
µg/g	Micrograms per Liter
URD	Underground Residential Distribution
USEPA	U.S. Environmental Protection Agency
UST	Underground Storage Tank

CHAPTER 1. BACKGROUND

1.1 HISTORY. In 1976, Congress passed the Toxic Substances Control Act and specifically directed the U.S. Environmental Protection Agency (USEPA) to develop regulations for the management of polychlorinated biphenyls (PCB). These regulations were reduced to a set of rules and procedures by the Code of Federal Regulations (CFR), Title 40, Part 761 (Title 40.CFR761), *USEPA Regulations for Maintenance, Production, Distribution in Commerce and Use Prohibition for PCBs Under the Toxic Substances Control Act.* The regulations require that fluids in equipment expected to contain PCB be sampled. Equipment found to contain PCB or be PCB-contaminated must be labeled as such. PCB contamination is defined as PCB concentration between 50 and 500 parts per million (ppm). Equipment found to be PCB-items must be removed from service. PCB items are defined as having PCB concentrations greater than 500 ppm. The use and disposal of equipment containing PCB is also regulated under Title 40, CFR761.

1.2 PURPOSE. The purpose of this project was to assess the presence or absence of PCB in oil in electrical equipment and in hydraulic fluid in transportation equipment located at the Naval Air Station Key West (NAS Key West), Key West, Florida. PCB content was determined from the manufacturer's nameplate, if available, or by collecting oil samples from equipment for appropriate analysis. The results are described in this report and presented in a LOTUS 1-2-3® spreadsheet format compatible with the Naval Energy and Environmental Support Activity (NEESA) inventory report. The removal of transformers and hydraulic fluid that contain PCB or are PCB-contaminated will be based on the results of this project.

1.3 PROJECT TEAM. The prime contractor for the project was ABB Environmental Services Inc., Tallahassee, Florida. CH2M HILL, Gainesville, Florida, the principle subcontractor, prepared the Quality Assurance Project Plan (QAPP), Field Sampling Plan (FSP), Health and Safety Plan (HASP), and the Schedule of Planned Power Outages (SOPPO). CH2M HILL personnel also supervised the field sampling, performed laboratory analysis, and prepared the final report. Musgrove Construction, Inc., Live Oak, Florida, provided the line crew and equipment used to sample the electrical equipment.

1.4 PROJECT EXECUTION. A meeting was held July 18, 1991, at NAS Key West to discuss the project's request for proposal (RFP). Representatives of Southern Division Naval Facilities Engineering Command (SOUTHNAVFACENGCOM), NAS Key West, ABB Environmental Services, and CH2M HILL attended the meeting. The data necessary to prepare a plan of action and a response to the RFP were provided during this meeting. A response was prepared and submitted to SOUTHNAVFACENGCOM. Negotiation of scope and fee followed and a notice to proceed was issued in late September 1991.

Work began immediately on the QAPP, FSP, HASP, and SOPPO. Drafts of the QAPP, FSP, and HASP were submitted to SOUTHNAVFACENGCOM for review on October 29, 1991. A draft of the SOPPO was submitted for review on October 30, 1991.

The QAPP and FSP were reviewed and approved as submitted. Minor changes to some telephone numbers were required in the HASP. The QAPP, FSP, and HASP were approved on November 1, 1991. The SOPPO was reviewed and approved on November 4, 1991.

The SOPPO called for field sampling to begin on December 11, 1991, and for all field work to be completed by February 21, 1992. The sampling schedule was based on a 6-week time period for review and approval of the various documents. Because approval of the documents took less than a week, field work could be started at an earlier date. After consulting with Public Works Department personnel at NAS Key West, the schedule was changed to begin field sampling on December 2, 1991, and for all field work to be completed by February 14, 1992. All documents were prepared in final form and submitted to SOUTHNAVFACENGCOM. The QAPP, FSP, and HASP are provided in Appendixes A, B, and C, respectively.

Sampling was performed with the transformers de-energized, resulting in 5- to 30-minute outages. The Public Works Department at NAS Key West used the SOPPO to plan for outages.

The SOPPO was created using the list of buildings at NAS Key West, prepared by the Public Works Department in October 1990, the list of transformers (transformer schedule), geographic one line diagrams, and one line diagrams for the electric system. These documents were obtained from the Public Works Department. Because short power outages to the transformer being sampled were necessary, the environmental protection specialist reviewed the list of buildings and indicated where scheduling was required. This scheduling helped to minimize any inconvenience the outages might cause. There were 14 diagrams for Boca Chica Key, Trumbo Point, Truman Annex, Fleming Key, and the Naval Hospital.

Groups of transformers were selected from the geographic one line diagrams on the basis of an estimated day's work for the crews. The transformer schedule was used to determine pole locations and the buildings or facilities served by the transformers. Each transformer number was checked off on the transformer schedule to ensure that every transformer was accounted for and that none were scheduled twice or inadvertently omitted. The one line diagrams were used to determine if a transformer served loads that had standby/emergency generators. The transformer list supplied in the RFP was used to develop a spreadsheet to generate the final schedule. This spreadsheet contained all of the data available about the transformers and allowed easy tracking and schedule changes.

The sampling was scheduled in a manner that minimized traveling time and allowed each site to be completed sequentially. The Christmas holidays fell in the middle of the sampling period, presenting both a problem and an opportunity. For the most part, residential transformers were sampled during the week and military facilities on the weekends. Since most of the transformers to be sampled served military facilities, the sampling crew had days off during the week and worked on the weekends. We anticipated

that military activity would be at a low level the weekends before and after Christmas. For this reason, most of the facilities at Boca Chica were scheduled for those weekends.

1.5 FIELD SAMPLING. Field sampling began as scheduled on December 2, 1991. The SOPPO was followed with only minor changes through December 27, 1991. Minor scheduling changes were coordinated with the NAS Key West Environmental Specialist. Some changes were made to use the sampling crew more efficiently and some were made to better coordinate with NAS Key West activities. No scheduled work was performed on December 28, 1991, because of rain. The planned sampling for that day was rescheduled for January 10, 1992, a planned contingency day. All field sampling was completed on January 13, 1992.

The methodology defined in the QAPP and FSP was rigorously adhered to during sampling. Most of the overhead transformers installed in exposed locations could not be sampled through plugs or ports because of salt air corrosion. These transformers were sampled by drilling a small access hole, collecting a sample, and installing a screw to seal the hole. No leaks or spills occurred during this sampling procedure, and the sampling activities proceeded as planned.

The sampling crew also inspected any high voltage, oil-filled switchgear that was encountered during sampling of the transformers.

A problem was encountered during sampling on December 3, 1991. After an overhead line transformer was sampled, its fuse link broke when it was re-energized. The transformer fuse was temporarily bypassed to restore service and Public Works Department personnel were contacted. They indicated that this was a common problem with fuses at NAS Key West because of salt air corrosion. The Public Works Department provided the sampling crew with a supply of fuses. This problem was encountered on several occasions during sampling, however, it caused only minor delays and did not affect the schedule. The sampling crew simply replaced the fuse link if a fuse broke.

Sampling of transportation equipment proceeded smoothly and essentially according to schedule. Some minor problems were encountered in locating some of the transportation equipment. These problems, resolved by the environmental specialist, had no affect on overall project performance.

The first laboratory results were available to the crew during the week of January 7, 1992. After January 7, labeling of tested transformers was used to fill work days as time became available. Following the completion of sampling activities, the crew worked full-time labeling the tested transformers and transportation equipment.

With the completion of labeling of tested electrical and transportation equipment, field work was completed on February 12, 1992, 9 days a head of schedule. Demobilization occurred on February 13 and 14 followed by the departure of the field sampling crew.

CHAPTER 2. TRANSPORTATION/MOTORIZED EQUIPMENT

The initial data supplied by the NAS Key West Public Works Department indicated that 101 pieces of transportation/motorized equipment would need to be sampled. After further investigation seven pieces of equipment were removed from this list. The seven removed items are provided in Table 2-1.

Table 2-1
Transportation Equipment Removed from the Sampling List

USN No.	Description	Mfg	Serial Number	Reason for Removal from Sampling List
96-41007	TK AMMO	IHC	HTLCHXL8HHA244	Hydraulic arm removed
16-45759	TK PALLET	YALE	N88424	Removed by the Environmental Coordinator
37-00414	AUGER, TK MNTD	TOXEMIA	7080	Hydraulic system removed
48-13240	TRACTOR	IHC	21123	Vehicle located in Miami
96-37285	TK AMMO	GMC	T17DDAV567809	Vehicle has been decommissioned
96-37286	TK AMMO	GMC	T17DDAV567814	Vehicle has been decommissioned
48-14418	"DOZER"	IHC	TD20B9232	Vehicle located in Miami

Samples of hydraulic oil were obtained from the remaining 94 pieces of transportation equipment. The analytical results from the samples are given in Table 2-2, Transportation/Motorized Equipment. Three samples, KW235, KW252, and KW534, had PCB concentrations that exceeded the detection limit of 5 ppm. These samples were 7.6, 10, and 10 ppm, respectively. The three samples were well below the contamination level of 50 ppm. None of the transportation equipment sampled were PCB contaminated. After laboratory analysis was completed, all of the equipment was labeled with "NON PCB" labels.

Table 2.2
Transportation/Motorized Equipment
December 1991
NAS Key West, Key West, Florida

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
1	N 13 37685	FORKLIFT	A/C	118349	KW201	20449	<2	12/13/91	
2	N 13 44173	FORKLIFT	A/C	126377	KW202	20449	<2	12/13/91	
3	N 13 59112	FORKLIFT	A/C	126379	KW203	20449	<2	12/13/91	
4	N 13 77597	FORKLIFT	HYSTER	A177B5273D	KW204	20449	<2	12/13/91	
5	N 13 09034	FORKLIFT	A/C	79698	KW205	20449	<2	12/13/91	
6	N 13 77616	FORKLIFT	HYSTER	A177B5292D	KW206	20449	<2	12/13/91	
7	N 13 14901	FORKLIFT	A/C	116634	KW207	20449	<2	12/13/91	
8	54-08120	VACUUM SWEEPER	GMC	C6X-1-2791101	KW208	20449	<2	12/13/91	
9	N 13 16721	FORKLIFT	A/C	508499	KW209	20449	<2	12/13/91	
10	N 13 10386	FORKLIFT	TOYO	48400645	KW210 KW211	20449	<2 <2	12/13/91	
11	N 13 56065	FORKLIFT	HYSTER	D6D6161-E	KW212	20449	<2	12/13/91	
12	O DL 88409	FORKLIFT	HYSTER	8177B26201J	KW213	20449	<2	12/13/91	
13	48-16614	TRACTOR	DEERE	339447	KW214	20449	<2	12/13/91	
14	N 13 01957	FORKLIFT	YALE	N457914	KW215	20449	<2	12/13/91	
15	45-03429	FT END LOADER	HAUGH	27MC-1124	KW216	20450	<2	12/13/91	
16	58-02345	TK REFUSE	PAKMOR	F825B0688625T	KW217	20450	<2	12/13/91	
17	54-06528	TK VAC SWP	FMC CORP	707-1406	KW218	20450	<2	12/13/91	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

Tab. 2
Transportation/Motorized Equipment
December 1991
NAS Key West, Key West, Florida
(Continued)

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
18	96-38055	TK AERIAL	REACH-ALL	1GDM7D1FXBV577739	KW219 KW220	20450	<2 <2	12/13/91	
19	N 13 44112	FORKLIFT	CLARK		KW222	20450	<2	12/13/91	
20	N 13 67618	FORKLIFT	A/C	508835	KW223	20450	<2	12/13/91	
21	N 13 17114	FORKLIFT	A/C	126068	KW224	20450	<2	12/13/91	
22	95-25144	TK DOMP	IHC	IHTAA17B8DHB12489	KW225	20450	<2	12/13/91	
23	96-37851	TRACTOR TRAILER	CARGOSTAR	BCA16508	KW226	20450	<2	12/13/91	
24	12-00602	CRANE TK 10T	SILENT	19621	KW227	20450	<2	12/13/91	
25	96-36935	TK DUMP	IHC	JHB16213	KW228	20450	<2	12/13/91	
26	56-15261	MOWER LAWN	MOTRIM	MT285R1729	KW229 KW230	20450	<2 <2	12/13/91	
27	96-36937	TK DUMP	IHC	JHB16744	KW231	20451	<2	12/13/91	
28	46-02564	ROLLER	GALION	TH4-6-G-56326	KW232	20451	<2	12/13/91	
29	48-16616	TRACTOR	DEERE	339449	KW233	20451	<4	12/13/91	
30	94-08399	TK TIRE SV	CHEVROLET	CC024J130249	KW234	20451	<4	12/13/91	
31	96-42052	TK DUMP	FORD	1FDNF60H0CVA03996	KW235	20451	7.6	12/13/91	
32	N 13 38596	FORKLIFT	HYSTER	108G08221	KW236	20451	<2	12/13/91	
33	58-02102	TK REFUSE	PERFECTION	1GLT-78/TCE618V612	KW237	20649	<2	12/14/91	
34	12-03081	CRANE 8.5T	GROVE	68745	KW238	20649	<2	12/14/91	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

Table 2.2
Transportation/Motorized Equipment
December, 1991
NAS Key West, Key West, Florida
(Continued)

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
35	12-03078	CRANE TK 5T	GROVE	68933	KW239	20649	<2	12/14/91	
36	97-34657	SEMI-TRAILER	DAKOTA	1DAT2CX66EM00760	KW240 KW249	20649	<2 <2	12/14/91	
37	56-15260	MOWER LAWN	MOTRIM	MT285R1729	KW242	20649	<2	12/14/91	
38	48-17451	TRACTOR	JI CASE	18963	KW243	20649	<2	12/14/91	
39	44-02461	GRADER	GALION	T500-L06317	KW244	20649	<4	12/14/91	
40	48-17835	TRACTOR	DEERE	TO750BH7567?	KW245	20649	<4	12/14/91	
41	58-02346	TK REFUSE	PAKMOR	F825B0688626T	KW246	20649	<2	12/14/91	
42	N 13 55355	FORKLIFT	A/C	507588	KW247	20649	<2	12/14/91	
43	58-02275	TK REFUSE	LODAL	107472	KW248	20649	<2	12/14/91	
44	96-43134	TK DUMP	NAVISTAR	1HTSAZRN9LH2271	KW250 KW251	20649 20649	<2 <2	12/14/91	
45	95-28095	TK STAKE	NAVISTAR	1HTSAZPMXLH227157	KW252	20470	<10	12/14/91	
46	48-16829	TRACTOR	DEERE	357519	KW253	20470	<2	12/14/91	
47	48-17607	TRACTOR	DEERE	RW8850H006572	KW254	20470	<2	12/14/91	
48	54-06656	CLEANER, VAC	FMC CORP	707-1469	KW255	20470	<2	12/14/91	
49	N 13 95451	FORKLIFT	HYSTER	A177B27165J	KW256	20470	<2	12/14/91	
50	N 13 10845	FORKLIFT	CATERPILLAR	70Y00566	KW257	20470	<2	12/15/91	
51	N 13 08937	FORKLIFT	SIL HOIST	19249	KW258	20470	<2	12/15/91	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

Tal. 2
Transportation/Motorized Equipment
December, 1991
NAS Key West, Key West, Florida
(Continued)

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
52	N 13 95373	FORKLIFT	HYSTER	A177B22857	KW259 KW260	20470 20470	<2 <2	12/15/91	
53	N 13 10385	FORKLIFT	TOYO	740936	KW262	20470	<2	12/15/91	
54	N 13 77615	FORKLIFT	HYSTER	A177B5291D	KW263	20470	<2	12/15/91	
55	95-27626	TK STAKE	NAVISTAR	1HTLAZPM9JH59862	KW264	20470	<2	12/15/91	
56	37-00553	AUGER TK MNTD	HWY. MFR	M-011	KW265	20470	<2	12/15/91	
57	96-38475	TK DUMP	IHC	1HTAA1758DHA1370	KW266	20470	<2	12/15/91	
58	N 13 95450	FORKLIFT	HYSTER	A177B27155J	KW267	20472	<2	12/15/91	
59	NO #		BOBCAT	508011608	KW268	20472	<2	12/15/91	
60	82-04615	CRANE TK 60T	GROVE	GH1W19010	KW269 KW270	20472 20472	<2 <2	12/15/91	
61	N 13 59111	FORKLIFT	A/C	126376	KW271	20472	<2	12/15/91	
62	N 13 38594	FORKLIFT	HYSTER	C108G08219K-8001	KW272	20472	<2	12/15/91	
63	N 13 01956	FORKLIFT	YALE	N-457913	KW273	20472	<2	12/15/91	
64	N 13 95452	FORKLIFT	HYSTER	A177B27157J	KW274	20472	<2	12/15/91	
65	96-37051	TK HIGHLIFT	MOORE & SONS	79-5676	KW275	20472	<2	12/15/91	
66	48-16830	TRACTOR	DEERE	358118	KW276	20472	<4	12/15/91	
67	N 13 56064	FORKLIFT	HYSTER	D6D6160-E	KW277	20472	<2	12/15/91	
68	N 13 01959	FORKLIFT	YALE	N457916	KW278	20533	<2	12/20/91	
69	N 13 61287	FORKLIFT	HYSTER	A177B13573G	KW279	20533	<2	12/20/91	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

Table 2.2
Transportation/Motorized Equipment
December, 1991
NAS Key West, Key West, Florida
(Continued)

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
70	N 13 01958	FORKLIFT	YALE	N457915	KW280 KW281	20533 20533	<2 <2	12/20/91	
71	N 13 15183	FORKLIFT	CLARK	PU117	KW282	20533	<2	12/20/91	
72	N 13 16494	FORKLIFT	A/C	130625	KW283	20533	<2	12/20/91	
73	N 13 10387	FORKLIFT	TOYO	48400646	KW284	20533	<2	12/20/91	
74	N 13 97248	FORKLIFT	HYSTER	D6D1733P	KW285	20533	<2	12/20/91	
75	N 13 67619	FORKLIFT	A/C	508836	KW286	20533	<2	12/20/91	
76	N 13 14775	FORKLIFT	A/C	116084	KW287	20533	<2	12/20/91	
77	N 13 77652	FORKLIFT	HYSTER	5328D	KW288	20533	<2	12/20/91	
78	N 13 67617	FORKLIFT	A/C	508834	KW289	20533	<2	12/20/91	
79	95-23045	TK DUMP	IHC	JHB17074	KW290 KW291	20533 20533	<2 <2	12/20/91	
80	N 13 09161	FORKLIFT	ALLIS CHALMERS	79688	KW292	20534	<2	12/20/91	
81	N 13 15152	FORKLIFT	CLARK	PU80	KW293	20534	<2	12/20/91	
82	N 13 47738	FORKLIFT	TOYO	58600585	KW294	20534	<2	12/20/91	
83	96-40892	TK AERIAL	REACH-ALL	1HTLKTVR6LH564337	KW295	20534	<2	12/20/91	
84	95-22190	TK DUMP	FORD	F60DVZ20777	KW296	20534	<2	12/20/91	
85	96-36882	TK AERIAL	REACH-ALL	5145	KW297	20534	<2	12/20/91	
86	82-04371	CRANE TK 15T	GALION	150F-DGAR-7526	KW298	20534	<2	12/20/91	
87	14-16615	TRACTOR	DEERE	339448	KW299 KW300	20534 20534	<2 <2	12/20/91	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

Tab. .2
Transportation/Motorized Equipment
December, 1991
NAS Key West, Key West, Florida
(Continued)

ITEM NO.	USN NO.	DESCRIPTION	MANUFACTURER	SERIAL NO.	SAMPLE NO.	LMG LAB NO.	PPM	SAMPLE DATE	COMMENTS
88	94-25875	TK 3/4t	GMC	1GCGR24K3HJ14705	KW401	20534	<4	12/20/91	
89	N 13 37686	FORKLIFT	ALLIS CHALMERS	118350	KW441 KW442	20609 20609	<2 <2	1/7/92	
90	N 13 37685	FORKLIFT	A/C	118379	KW489 KW490	20647 20647	<2 <4	1/11/92	
91	94-25874	TK STAKE	CHEVROLET	1GCGR24K5HJ145746	KW491	20647	<5	1/11/92	
92	N 13 38595	FORKLIFT	HYSTER	C108G08220	KW492	20647	<2	1/11/92	
93	O DL 87097	FORKLIFT	HYSTER	B138D01883H	KW534	20650	<10	1/13/92	
94	48-16615	TRACTOR	DEERE	339448	KW535	20650	<2	1/13/92	

Notes: FT = Front.
TK = Truck.
PPM = Parts per million.
VAC = Vacuum.

CHAPTER 3. OIL SWITCHES

During sampling of the transformers, the sampling crew also inspected any high voltage, oil-filled switchgear that was encountered. Thirteen oil switches were found, three of which were labeled "NON PCB" by the switchgear manufacturer. By sampling ports, samples were obtained from the remaining oil switches. The analytical results from the samples are provided in Table 3-1, Analytical Results from Oil Switch Samples.

For identification in the field, oil switches were numbered by the sampling crew. The oil switch numbers in Table 3-1 have the following format:

OSTXXX

Where:
OS = Oil switch
T = Transformer
XXX = Transformer number

An oil switch is located immediately electrically upstream from the transformer which it serves. For example, oil switch OST1 serves (is immediately electrically upstream from) transformer T1.

Sampling results established that only oil switch, OST1, exceeded the detection limit of 5 ppm. The PCB content of OST1 was 8.5 ppm, well below the contamination level of 50 ppm. Since none of the oil switches were PCB contaminated, they were labeled with "NON PCB" labels. Sampling and labeling dates are provided in Table 3-1.

Table 3.1
Analytical Results from Oil Switch Samples
December 1991 and January 1992
Boca Chica Key and Truman Annex
NAS Key West, Key West, Florida

OIL SWITCH NO.	DATE SAMPLED	AMPERE SIZE	MANUFACTURER	SERIAL NO.	LOCATION	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
OST1	12/14/91	400	G & W ELECTRIC	751-1117	TRUMAN	KW163	20472	8.5	01/23/88	NON PCB
OST4	12/18/91	100	G&W ELECTRIC	D5020-17	TRUMAN	KW183	20530	<4	02/03/88	NON PCB
	12/18/91		G&W ELECTRIC	7-1958	TRUMAN	KW184	20530	<4	02/03/88	NON PCB
	12/18/91		G&W ELECTRIC	7-1958	TRUMAN	KW185	20530	<4	02/03/88	NON PCB
OST162	01/05/92				BOCA CHICA	KW406	20585	<2	02/09/88	NON PCB
OST189	01/10/92	600	G & W	611-84-0075	BOCA CHICA	KW483	20647	<2	02/10/88	NON PCB
OST193	01/10/92		G & W	FC61 10-19-62	BOCA CHICA	KW477	20646	<2	02/10/88	NON PCB
	01/10/92		G & W	FC61 10-19-62	BOCA CHICA	KW478	20646	<2	02/10/88	NON PCB
	01/10/92		G & W	FC61 10-19-62	BOCA CHICA	KW479	20646	<2	02/10/88	NON PCB
OST170	12/30/91	100	ALLIS CHALMERS	1839778	BOCA CHICA	KW359	20551	23	02/04/92	NON PCB
OSM901	01/10/92	400	G & W	91-667	TRUMAN - OIL SWITCH OUT OF SERVICE	KW487	20647	<2	02/11/88	NON PCB
OST188	01/10/92	200	R.T.E.	881033338	BOCA CHICA			NON PCB MFR	01/09/88	NON PCB
OST191	01/10/92	200	R.T.E.	881033343	BOCA CHICA			NON PCB MFR	01/09/88	NON PCB
OST192	01/10/92	200	R.T.E.	881033340	BOCA CHICA			NON PCB MFR	01/09/88	NON PCB

Notes: PPM = Parts per million.
NON PCB MFR = These oil switches were not sampled because they were labeled "NON PCB" by their manufacturers.

CHAPTER 4. TRANSFORMERS

The field sampling crew inspected 462 transformers, which can be divided into the following categories:

Transformer Category	Number of Transformers
Dry-Type	9
Removed Prior to Inspection	13
Manufacturers' Labeled PCB Content	53
Spares	
Sampled Spares	44
Manufacturers' Labeled PCB Content Spares	50
Sampled Installed Transformers	293
Total Inspected Transformers	462
Total Sampled Transformers	337

Each category of distribution transformer is discussed in detail below.

4.1 DRY-TYPE TRANSFORMERS. Dry-type electrical transformers contain no insulating oil and therefore do not require sampling or labeling. The data on the nine dry-type transformers installed at NAS Key West are provided in Table 4-1, Dry-Type Transformers.

4.2 TRANSFORMERS REMOVED PRIOR TO INSPECTION. The inspection schedule was compiled from data and circuit maps supplied by the NAS Key West Public Works Department. The field inspection revealed that 13 transformers shown on the circuit maps had been removed prior to the inspection. The data on the 13 transformers removed from service before the inspection are provided in Table 4-2, Transformers Removed Prior to Inspection.

4.3 MANUFACTURERS' LABELED PCB CONTENT TRANSFORMERS. By reviewing the transformer manufacturers' labels, the field inspection team identified 53 transformers which contained PCB. No samples were taken from these transformers and appropriate labels were installed on the transformers. The data for the manufacturers' labeled transformers are provided in Table 4-3, Manufacturer Labeled PCB Content Transformers. Fifty-two of these transformers were labeled "NON PCB" and one was labeled "PCB". The

PCB transformer is T192 located at Building A940. The data on this transformer is provided on the last page of Table 4-3.

4.4 SPARE TRANSFORMERS. The field inspection identified 94 spare transformers located in the NAS Key West Public Works Department Transformer Storage Yard. The data on the spare transformers are provided in Table 4-4, Spare Transformers. Forty-four spare transformers were sampled. The PCB concentration of the other 50 transformers was obtained from the manufacturer's label. The samples from five of the spare transformers, KW498 (6 ppm), KW521 (10 ppm), KW522 (9 ppm), KW529 (8 ppm), and KW530 (6 ppm), exceeded the detection limit of 5 ppm. These samples were all well below the contamination limit of 50 ppm. All of the spare transformers were labeled with "NON PCB" labels.

4.5 SAMPLED INSTALLED TRANSFORMERS. Inspection of nameplates showed that 293 transformers required sampling to determine PCB concentration. Samples from these transformers were obtained using the drill and tap method. A small access hole was drilled, a sample was taken, and the hole filled with a screw. The samples were then analyzed. The analytical results are provided in Table 4-5, Sampled Transformers. Of the 293 sampled transformers, 77 exceeded the detection limit of 5 ppm. The samples from the transformers that exceeded the detection limit can be divided into the following categories:

Sample Range (ppm)	Category	Number of Transformers
5 to 50	Detection Limit to Minimum Contamination Level	26
50 to 500	PCB Contaminated	36
>500	PCB Item	15

All of the sampled transformers were labeled appropriately. Sample and label dates are provided in Table 4-5.

4.6 TRANSFORMER T91. Three oil-filled, single-phase distribution transformers are installed in a bank of transformers at Pole 17a on Fleming Key. These transformers are out of service and the high voltage conductors to the pole have been removed. All of the oil has leaked out of one transformer, a General Electric 5-KVA transformer with Serial No. F498966-64P. The other two transformers were sampled. One was below the detection limit and the other was PCB-contaminated.

4.7 PCB-CONTAMINATED TRANSFORMERS. PCB contamination is defined as PCB concentration in the range of 50 to 500 ppm. After analysis of the samples, 36 transformers were identified as PCB contaminated. The data on these transformers are provided in Table 4-6, PCB-Contaminated Transformers.

4.8 PCB-ITEM TRANSFORMERS. PCB items are defined as having PCB concentrations greater than 500 ppm. After analysis of the samples, 15 transformers were identified as

PCB items. Transformer T192, on Boca Chica, was identified as a PCB item from the manufacturer's label. Therefore, 16 PCB items were identified. The data on these transformers are provided in Table 4-7, PCB-Item Transformers.

4.9 TRANSFORMERS WITHOUT NAMEPLATES. Nine transformers did not have nameplates. These transformers were identified during the field sampling and replacement, stamped stainless steel nameplates were installed. The data for these nameplates are provided below.

Transformer Number	Nameplate Number	Date Sampled	PCB Label Type
T81	1883-01	12/03/91	NON PCB
T128.1	1883-02	12/05/91	NON PCB
T139.1	1883-03	12/15/91	PCB
T4	1883-04	12/18/91	NON PCB
T173.2	1883-05	12/20/91	NON PCB
T205.2	1883-08	12/20/91	NON PCB
T165	1883-06	12/30/91	NON PCB
T182.1	1883-09	1/04/92	NON PCB
T197	1883-07	1/10/92	NON PCB

Table 4.1
Dry-Type Transformers
December 1991 and January 1992
Boca Chica Key, Trumbo Point, and Truman Annex
NAS Key West, Key West, Florida

TR. NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME
T254	12/19/91	225	SQD	203292	13.8/480Y/277V	PAD	BOCA CHICA	BLDG A230 MH24	TRANSFORMER VAULT - ELEC. DIST. BUILDING
T2	12/18/91	75	JEFFERSON ELECTRIC POWER FORMER DRY TYPE		208Y/120	PAD	TRUMAN	MH 56 BLDG. 112 FOR NX	EOD MU4 ADMIN/STORAGE
T68	12/05/91	112.8	PENNSYLVANIA - POWER FORMER (DRY)	223-3254	13.8,V - 480KV 280/120 DRY	PAD	TRUMBO	AT MH39, BLDG. C-60	BARRACKS - ARMY
T184	12/31/91	300	DRY TYPE SQUARD - D	197127	4.16KV - 208/120	PAD	BOCA CHICA	BLDG. A626, LIFT STATION	LIFT STATION; DATA PROCESSING CENTER/CONTROLLER
T194	01/10/92	500	MARCUS	20970B	13.2KV - 208Y/120V	PAD	BOCA CHICA	BLDG. A936N	
T195	01/10/92	300	WESTINGHOUSE	7017106	440V		BOCA CHICA	BLDG. A936N	NAVOSH/NAESU/45TH ADVERSARY/ VF101/MWR/GENERAL DYNAMICS/ OPS
T196	01/10/92	500	MARCUS	20970A	208/120V	PAD	BOCA CHICA	BLDG. A936S	NAVOSH/NAESU/45TH ADVERSARY/ VF101/MWR/GENERAL DYNAMICS/ OPS
T197	01/10/92			1883-07		PAD	BOCA CHICA	BLDG. A936S	NAVOSH/NAESU/45TH ADVERSARY/ VF101/MWR/GENERAL DYNAMICS/ OPS
T199	12/27/91	225	MARCUS	38477	13.8KV - 480/277V	PAD	BOCA CHICA	BLDG. A950	VAQ-33 AUDIOVISUAL/FRAMP

Notes: TR. NO. = Transformer number.
KVA = Kilo-volt ampere.

Table 4.2
Transformers Removed Prior to Inspection
December 1991 and January 1992
Boca Chica Key, Fleming Key, and Trumbo Point
NAS Key West, Key West, Florida

TR. NO.	DATE CHECKED	SITE	LOCATION	LOCATION NAME
T238	01/05/92	BOCA CHICA	MAIN SUBSTATION, BLDG. A419	MAIN SWITCHGEAR
T50	12/06/91	TRUMBO		
T84	12/12/91	FLEMING KEY	AT POLE B157	
T156	01/07/92	BOCA CHICA	AT POLE A152, MISSILE RANGE	MISSILE RANGE
T156.1	01/07/92	BOCA CHICA	AT POLE A152, MISSILE RANGE	MISSILE RANGE
T156.2	01/07/92	BOCA CHICA	AT POLE A152, MISSILE RANGE	MISSILE RANGE
T172	01/05/92	BOCA CHICA	POLE A102, BLDG. A224	ADMINISTRATIVE OFFICES
T183	01/04/92	BOCA CHICA	POLE A65, BLDG. A1428	
T183.1	01/04/92	BOCA CHICA	POLE A65, BLDG. A1428	
T183.2	01/04/92	BOCA CHICA	POLE A65, BLDG. A1428	
T207.1	12/19/91	BOCA CHICA	BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE EQUIPMENT BUILDING; SEWAGE EJECTOR
T207.2	12/19/91	BOCA CHICA	BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE EQUIPMENT BUILDING; SEWAGE EJECTOR
T241.2	01/03/92	BOCA CHICA	POLE A90, WATER WELL	WATER WELL

Note: TR. NO. = Transformer number.

Table 4.3
Manufacturer Labeled PCB Content Transformers
December 1991 and January 1992
Boca Chica Key, Fleming Key, Truman Annex, and Trumbo Point
NAS Key West, Key West, Florida

TR. NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL TYPE
T53	12/06/91	50	GENERAL ELECTRIC	P086707-YRA	13.8KV - 480V	POLE	TRUMBO	POLE B.119 BLDG. 48	PHMRON II/VAQ33 FRAMP	NON PCB MFR	12/06/91	NON PCB
T53.1	12/06/91	50	GENERAL ELECTRIC	P086710-YRA	13.8KV - 480V	POLE	TRUMBO	POLE B:119 BLDG. 48	PHMRON II/VAQ33 FRAMP	NON PCB MFR	12/06/91	NON PCB
T53.2	12/06/91	50	GENERAL ELECTRIC	P086709-YRA	13.8KV - 480V	POLE	TRUMBO	POLE B:119 BLDG. 48	PHMRON II/VAQ33 FRAMP	NON PCB MFR	12/06/91	NON PCB
T59	12/05/91	500	WESTINGHOUSE	85JB79012	13.8KV - 480/277V	PAD	TRUMBO	POLE A148 TO BLDG. D26	PUMPHOUSE 1/FUEL	NON PCB MFR	12/05/91	NON PCB
T3	12/18/91	37.5	JIMELCO	AG07140303	2.4KV - 120/240V	POLE	TRUMAN	POLE 93, BLDG. 223	EOD MU4 BOAT MAINTENANCE	NON PCB MFR	12/18/91	NON PCB
T3.1	12/18/91	37.5	JIMELCO	AE01670301	2.4KV - 120/240V	POLE	TRUMAN	POLE 93, BLDG. 223	EOD MU4 BOAT MAINTENANCE	NON PCB MFR	12/18/91	NON PCB
T3.2	12/18/91	37.5	JIMELCO	AO07140302	2.4KV - 120/240V	POLE	TRUMAN	POLE 93, BLDG. 223	EOD MU4 BOAT MAINTENANCE	NON PCB MFR	12/18/91	NON PCB
T4.1	12/18/91	167	GENERAL ELECTRIC	233361TKTA	13.8KV - 120/240V	PAD	TRUMAN	AT PB1, BLDG. 1287	SUPPLY GALLEY	NON PCB MFR	12/18/91	NON PCB
T4.2	12/18/91	167	WESTINGHOUSE	81A365732	13.8KV - 120/240V	PAD	TRUMAN	AT PB1, BLDG. 1287	SUPPLY GALLEY	NON PCB MFR	12/18/91	NON PCB
T48	12/18/91	37.5	MAGNETIC ELECTRIC	HH07468	13.8KV - 120/240V	POLE	TRUMAN	POLE C4(FOR ANTENNA)(AIR FORCE		NON PCB MFR	12/18/91	NON PCB
T48.1	12/18/91	37.5	MAGNETIC ELECTRIC	HH07467	13.8KV - 120/240V	POLE	TRUMAN	POLE C4(FOR ANTENNA)(AIR FORCE)		NON PCB MFR	12/18/91	NON PCB
T48.2	12/18/91	37.5	MAGNETIC ELECTRIC	HH07469	13.8KV - 120/240V	POLE	TRUMAN	POLE C4(FOR ANTENNA)(AIR FORCE)		NON PCB MFR	12/18/91	NON PCB
T58	12/07/91	750	GENERAL ELECTRIC	P015650	13.8KV - 480/277	PAD	TRUMBO	PIER D3	PIER D3	NON PCB MFR	12/07/91	NON PCB
T85	12/12/91	37.5	JIMELCO CORP.	AD01460301	2400/4160Y	POLE	FLEMING KEY	AT POLE B183 FAA BLDG	FAA BUILDING	NON PCB MFR	12/12/91	NON PCB

Notes: TR. NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.
NON PCB MFR = Transformers were labeled "NON PCB" by their manufacturers.
PCB MFR = Transformers were labeled "PCB" by their manufacturers.

Manufacturer Labeled PCB Content Transformers
December 1991 and January 1992
Boca Chica Key, Fleming Key, Truman Annex, and Trumbo Point
NAS Key West, Key West, Florida
(Continued)

TR. NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL TYPE
T85.1	12/12/91	37.5	JIMELCO CORP.	AD01460303	2400/4160Y	POLE	FLEMING KEY	AT POLE B183 FAA BLDG	FAA BUILDING	NON PCB MFR	12/12/91	NON PCB
T85.2	12/12/91	37.5	JIMELCO CORP.	AD01460302	2400/4160Y	POLE	FLEMING KEY	AT POLE B183 FAA BLDG	FAA BUILDING	NON PCB MFR	12/12/91	NON PCB
T159	01/04/92	100	R.T.E	851112890	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A19, BLDG. A-631, 632	ENLISTED MENS BARRACKS PERM PARTY/ CPO/VIP SUITE; ENLISTED MENS BARRACKS/CARIBROC	NON PCB MFR	01/04/92	NON PCB
T159.1	01/04/92	100	R.T.E	851112892	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A19, BLDG. A-631, 632	ENLISTED MENS BARRACKS PERM PARTY/ CPO/VIP SUITE; ENLISTED MENS BARRACKS/CARIBROC	NON PCB MFR	01/04/92	NON PCB
T159.2	01/04/92	100	R.T.E	851112891	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A19, BLDG. A-631, 632	ENLISTED MENS BARRACKS PERM PARTY/ CPO/VIP SUITE; ENLISTED MENS BARRACKS/CARIBROC	NON PCB MFR	01/04/92	NON PCB
T160	01/04/92	100	R.T.E	851054538	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A2, BLDG. A630	ENLISTED MENS BARRACKS MWR/SECURITY	NON PCB MFR	01/04/92	NON PCB
T160.1	01/04/92	100	R.T.E	851054537	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A2, BLDG. A630	ENLISTED MENS BARRACKS MWR/SECURITY	NON PCB MFR	01/04/92	NON PCB
T160.2	01/04/92	100	R.T.E	851054539	13.8KV - 240/120V	POLE	BOCA CHICA	POLE 12, BLDG. A630	ENLISTED MENS BARRACKS MWR/SECURITY	NON PCB MFR	01/04/92	NON PCB
T164	01/06/92	37.5	WESTINGHOUSE	55J15243	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A93, BLDG. A419		NON PCB MFR	01/06/92	NON PCB
T164.1	01/06/92	37.5	WESTINGHOUSE	56G33800	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A93, BLDG. A419		NON PCB MFR	01/06/92	NON PCB
T164.2	01/06/92	37.5	WESTINGHOUSE	56E6104	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A93, BLDG. A419		NON PCB MFR	01/06/92	NON PCB
T166	01/05/92	25	GENERAL ELECTRIC	410956YMTA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A71, BLDG A4012	SUPPLY COLD STORAGE WAREHOUSE	NON PCB MFR	01/05/92	NON PCB
T166.1	01/05/92	25	GENERAL ELECTRIC	410955YMTA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A71, BLDG. A4012	SUPPLY COLD STORAGE WAREHOUSE	NON PCB MFR	01/05/92	NON PCB
T166.2	01/05/92	25	GENERAL ELECTRIC	410957YMTA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A71, BLDG. A4012	SUPPLY COLD STORAGE WAREHOUSE	NON PCB MFR	01/05/92	NON PCB

Notes: TR. NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.
NON PCB MFR = Transformers were labeled "NON PCB" by their manufacturers.
PCB MFR = Transformers were labeled "PCB" by their manufacturers.

Table 4.3
Manufacturer Labeled PCB Content Transformers
December 1991 and January 1992
Boca Chica Key, Fleming Key, Truman Annex, and Trumbo Point
NAS Key West, Key West, Florida
(Continued)

TR. NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL TYPE
T169	12/30/91	50	WESTINGHOUSE	85A180486	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A105, BLDG. A227	MWR GYM	NON PCB MFR	12/30/91	NON PCB
T169.1	12/30/91	50	WESTINGHOUSE	84A352112	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A105, BLDG. A227	MWR GYM	NON PCB MFR	12/30/91	NON PCB
T169.2	12/30/91	50	WESTINGHOUSE	84A352111	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A105, BLDG. A227	MWR GYM	NON PCB MFR	12/30/91	NON PCB
T180	01/06/92	75	GENERAL ELECTRIC	N305141YETA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A84A, BLDG. A314	SUPPLY DEPARTMENT/SECURITY BUILDING	NON PCB MFR	01/06/92	NON PCB
T180.1	01/06/92	75	GENERAL ELECTRIC	N305142YETA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A84A, BLDG. A314	SUPPLY DEPARTMENT/SECURITY BUILDING	NON PCB MFR	01/06/92	NON PCB
T180.2	01/06/92	75	GENERAL ELECTRIC	N225256YETA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A84A, BLDG. A314	SUPPLY DEPARTMENT/SECURITY BUILDING	NON PCB MFR	01/06/92	NON PCB
225	01/04/92	300	WESTINGHOUSE	87JD900250	13.8KV - 208Y/120V	PAD	BOCA CHICA	PB 210A, BLDG. A350	MCDONALDS ADMIN BASE TRAINING CPOA CLUB	NON PCB MFR	01/04/92	NON PCB
226	01/04/92	150	WESTINGHOUSE	87JL042158	13.8KV - 208Y/120V	PAD	BOCA CHICA	PB 210A BLDG A337	MWR BOWLING ALLEY	NON PCB MFR	01/04/92	NON PCB
T260	12/18/91	560	GENERAL ELECTRIC	M163827	480V	PAD	TRUMAN	SHIP POWER PHM	SHIP POWER PHM BERTHING WHARF	NON PCB MFR	12/18/91	NON-PCB
	12/05/91	25	WESTINGHOUSE	88A461814	120/240	POLE	TRUMBO	POLE B23		NON PCB MFR	12/05/91	NON PCB
	01/10/92	15	R.T.E	831043061	277V	PAD	BOCA CHICA		HAWK MISSILE SITE	NON PCB MFR	01/10/92	NON PCB
	01/10/92	15	R.T.E	831043059	277V	PAD	BOCA CHICA		HAWK MISSILE SITE	NON PCB MFR	01/10/92	NON PCB
	01/10/92	15	R.T.E	831043060	277V	PAD	BOCA CHICA		HAWK MISSILE SITE	NON PCB MFR	01/10/92	NON PCB

Notes: TR. NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.
NON PCB MFR = Transformers were labeled "NON PCB" by their manufacturers.
PCB MFR = Transformers were labeled "PCB" by their manufacturers.

Manufacturer Labeled PCB Content Transformers
December 1991 and January 1992
Boca Chica Key, Fleming Key, Truman Annex, and Trumbo Point
NAS Key West, Key West, Florida
(Continued)

TR. NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL TYPE
T162	01/05/92	167	CENTRAL MALONEY	190465302	14.4KV - 240/120V	PAD	BOCA CHICA	POLE A11, BLDG. A515	SUPPLY GALLEY	NON PCB MFR	01/05/92	NON PCB
T162.1	01/05/92	167	CENTRAL MALONEY	190465301	14.4KV - 240/120V	PAD	BOCA CHICA	POLE A11, BLDG. A515	SUPPLY GALLEY	NON PCB MFR	01/05/92	NON PCB
T162.2	01/05/92	167	CENTRAL MALONEY	190465303	14.4KV - 240/120V	PAD	BOCA CHICA	POLE A11, BLDG. A515	SUPPLY GALLEY	NON PCB MFR	01/05/92	NON PCB
T43	12/18/91	112.5	WESTINGHOUSE	85JC386037	13.8KV - 480Y/277	PAD	TRUMAN	OUTERMOLE	OUTERMOLE	NON PCB MFR	12/18/91	NON PCB
T245	01/10/92	150	RTE	876004810	13.8KV - 208Y/120V	PAD	BOCA CHICA	MH8 BLDG. A939	SEWAGE PUMPING STATION	NON PCB MFR	01/10/92	NON PCB
T261	12/18/91	550	GENERAL ELECTRIC	M163826	480V	PAD	TRUMAN	SHORE POWER PHM	SHIP POWER PHM BERTHING WHARF	NON PCB MFR	12/18/91	NON PCB
T262	12/12/91	15	GENERAL ELECTRIC	N407812YMTA	120/240V	POLE	FLEMING KEY			NON PCB MFR	12/18/91	NON PCB
	01/07/92	25	RTE	871092910	120/240V	POLE	BOCA CHICA	POLE A124		NON PCB MFR	01/07/02	NON PCB
	01/07/92	25	WESTINGHOUSE	88A461813	120/240V	POLE	BOCA CHICA	POLE A125		NON PCB MFR	01/07/92	NON PCB
T155	01/07/92	15	GENERAL ELECTRIC	N410810YMTA	120/240V	POLE	BOCA CHICA	POLE A156, SHOOTING RANGE	SHOOTING RANGE	NON PCB MFR	01/07/92	NON PCB
T192	01/10/92	150	CENTRAL TRANSFORMER	2250-1	13.8KV - 277/480V	PAD	BOCA CHICA	PB 940, BLDG. A940	FRESH WATER PUMPHOUSE	PCB MFR	01/10/92	PCB
T247	01/06/92	300	WESTINGHOUSE	88JJ232140	13.8KV - 480/277	PAD	BOCA CHICA	PB4B BLDG. A4082	TACTS	NON PCB LABEL	01/06/92	NON PCB

Notes: TR. NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.
NON PCB MFR = Transformers were labeled "NON PCB" by their manufacturers.
PCB MFR = Transformers were labeled "PCB" by their manufacturers.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	E466480-60Y	100	120/240V	KW443	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	L757404Y74AA	15	120/240V	KW444	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	L803502YBLA	10	120/240V	KW445	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	J503403Y70AA	50	120/240V	KW447	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	841041660	167	120/240V	KW448	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	811143457	167	120/240V	KW449	20609	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	811142375	167	120/240V	KW450 KW451	20609 20610	<2 <2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	J503402Y70AA	50	120/240V	KW453	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	J503404Y70AA	50	120/240V	KW454	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	N042417YBSA	50	120/240V	KW455	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	79A103292	37.5	120/240V	KW456	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	CENTRAL MALONY	1781374-1	75	120/240V	KW457	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	751049662	25	277V	KW459	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	751049664	25	277V	KW460	20610	<2	02/06/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/07/92	STORAGE YARD AT BLDG. 126	MCGRAW EDISON	77ZD147-001	37.5	2400/4160	KW461 KW462	20610 20610	<2 <2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	ALIS CHALMER	7402-6187270	50	120/240V	KW463	20610	<2	02/06/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	79A103293	37.5	120/240V	KW465	20610	<4	02/06/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	N162974YKSA	75	120/240V	KW496	20647	<4	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	CENTRAL MALONEY	2783483-2	15	120/240V	KW497	20647	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	PXB23777		20KW	KW498	20648	6	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	K244920Y71A	50	240/480V	KW499	20648	5	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	K260056Y71A	50	240/480V	KW501 KW502	20648	<4 <4	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	N043676YBSA	50	120/240V	KW503	20648	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G479683-66Y	10	240/480V	KW504	20648	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G488235-65Y	10	240/480V	KW505	20648	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G479082-66Y	10	240/480V	KW507	20648	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	ALIS CHALMERS	5318740	50	120/240V	KW508	20648	<4	02/11/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/11/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	PXB26277		20KW	KW509	20648	<2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	80A171597	100	120/240V	KW510 KW511	20648 20648	<2 <2	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	80A161255	100	120/240V	KW512	20648	<4	02/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	E466479-60Y	100	120/240V	KW514	20649	<4	02/12/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	L & M (NO I.D. PLATE)			120/240V	KW515	20649	<2	02/12/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	82JA632054	75	208/120V	KW516	20649	<2	02/12/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	T & R	11796	112.5	208/120V	KW517	20649	<4	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	E466478-60Y	100	120/240V	KW518	20649	<2	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	ALIS CHALMERS	0129193	37.5	120/240V	KW519	20649	<2	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	JIMELCO	AG07140301	37.5	120/240V	KW521 KW522	20649 20649	10 9	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126		70AE15489	100	120/240V	KW523	20649	<2	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G885375-67Y	15	120/240V	KW524	20649	<4	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G883805-67Y	15	120/240V	KW526	20649	<4	02/12/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	H702113-Y68	15	120/240V	KW527	20649	<2	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	G929120-67Y	15	120/240V	KW528	20650	<4	02/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC - REGULATOR	9976381		2400V	KW529	20650	8	02/12/92	NON PCB
01/12/92	FAA BUILDING BLDG. 126	GENERAL ELECTRIC - REGULATOR	9976382		2400V	KW530	20650	6	02/12/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	83A381930	50	120/240V				01/07/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	MCGRAW EDISON	86ZH051-001	75	2400/4160V				01/07/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	R.T.E.	841065751	5	240V				01/07/92	NON PCB
01/07/92	STORAGE YARD AT BLDG. 126	MCGRAW EDISON	86ZH051-003	75	2400/4160V				01/07/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK178001	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NJ216004	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK178003	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	911003364	75	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	GENERAL ELECTRIC	P785300-YTE	50	120/240V				01/11/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/11/92	STORAGE YARD AT BLDG. A126	GENERAL ELECTRIC	P723043-YAD	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	GENERAL ELECTRIC	P723042-YZD	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	911003365	75	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	WESTINGHOUSE	88A460826	10	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	GENERAL ELECTRIC	P785307-YTE	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082008	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082010	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082004	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082001	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082007	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK169004	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK169006	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082002	50	120/240V				01/11/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK082009	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK081002	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. A126	COOPER	90NK081003	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	MCGRAW EDISON	86ZH051-002	75	2400/4160V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NJ258002	100	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NJ258001	100	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK082003	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK178002	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK082001	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK082006	50	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK169005	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK169014	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK082005	50	120/240V				01/11/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK169002	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK169001	15	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	COOPER	90NK081001	37.5	120/240V				01/11/92	NON PCB
01/11/92	STORAGE YARD AT BLDG. 126	FAYTRAN	86322-01	33	208/120V				01/11/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	84A051134	25	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	84A051132	25	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	WESTINGHOUSE	84A051133	25	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	CENTRAL MALONEY	1822711-2	50	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	P933003-YSF	25	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	GENERAL ELECTRIC	P293642-YTB	37.5	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	JIMELCO	AE01670303	15	120/240V				01/12/92	NON PCB
01/12/92	STORAGE YARD AT BLDG. 126	JIMELCO	AE01670302	15	120/240V				01/12/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.4
Spare Transformers
January/February 1992
Building 126
NAS Key West, Key West, Florida
(Continued)

DATE CHECKED	LOCATION	MANUFACTURER	SERIAL NO.	KVA	VOLTAGE RATING	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
01/13/92	STORAGE YARD AT BLDG. 126	ATLANTIC POWER SYSTEM	DF10254014	150	208/120V				01/13/92	NON PCB
01/13/92	STORAGE YARD AT BLDG. 126	ATLANTIC POWER SYSTEM	DF1025403	500	208/120V				01/13/92	NON PCB
01/13/92	STORAGE YARD AT BLDG. 126	ATLANTIC POWER SYSTEM	DF10024012	500	480/277V				01/13/92	NON PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.

Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T14	12/14/91	100	STANDARD TRANSFORMER CO.	510900	2.4KV - 120/240V	POLE	TRUMAN	POLE 90, BEACH AREA	BEACH AREA	2	01/23/92	NON PCB	
T14.2	12/14/91	100	STANDARD TRANSFORMER CO.	510902	2.4KV - 120/240V	POLE	TRUMAN	POLE 90, BEACH AREA	BEACH AREA	2.2	01/23/92	NON PCB	
T14.1	12/14/91	100	STANDARD TRANSFORMER CO.	510901	2.4KV - 120/240V	POLE	TRUMAN	POLE 90, BEACH AREA	BEACH AREA	2.5	01/23/92	NON PCB	
T66.1	12/05/91	25	ALIS CHALMES	5296019	14.4KV - 120/240V	POLE	TRUMBO	POLE B150, BLDG. C-83	MWR GYM	2.5	01/21/92	NON PCB	
T157.1	12/31/91	50	ALLIS CHALMERS	7330-6103557	13.2KV - 120/240V	POLE	BOCA CHICA	POLE A25, CABLE VISION AMP	CABLE VISION AMPLIFIER	2.5	02/03/92	NON PCB	
T187.1	01/05/92	50	WESTINGHOUSE	73L12819	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A9, BLDG. A523	SUPPLY COLD & DRY STORAGE	3	02/10/92	NON PCB	
T81.1	12/03/91	15	UPTEGRAFF	W-95381	120/240	POLE	TRUMBO	POLE B93		3.4	01/13/92	NON PCB	
T119	12/03/91	50	ALIS CHALMERS	5282689	120/240	POLE	TRUMBO	POLE B84	MOQ	4.1	01/13/92	NON PCB	
T21	12/11/91	15	WESTINGHOUSE	66AA5817	2.4KV - 120/240V	POLE	TRUMAN	POLE 62, STREET LITES	STREET LIGHTS	4.2	01/23/92	NON PCB	
T139	12/15/91	25	WESTINGHOUSE	6008564	2.4KV - 120/240V	POLE	NAVY HOSP.	POLE L3, TENNIS CRTS, BLDG LD	TENNIS COURTS; WATER PUMPS	4.3	01/24/92	NON PCB	
T105	12/03/91	50	ALIS CHALMERS	5282690	120/240	POLE	TRUMBO	POLE B87	JOQ	7.3	01/14/92	NON PCB	
T176.2	01/06/92	75	ALIS CHALMERS	3169351	4.16KV - 120/240V	POLE	BOCA CHICA	A111, BLDG. A1318		7	02/10/92	NON PCB	
T114	12/04/91	50	WESTINGHOUSE	61J12719	120/240	POLE	TRUMBO	POLE B66	MOQ	7.4	01/13/92	NON PCB	LEAKING AT SECONDARY BUSHING
T66	12/05/91	25	ALIS CHALMES	5284352	14.4KV - 120/240V	POLE	TRUMBO	POLE B150, BLDG. C-83	MWR GYM	7.7	01/21/92	NON PCB	
T176	01/06/92	75	ALIS CHALMERS	3169350	4.16KV - 120/240V	POLE	BOCA CHICA	A111, BLDG. A1318		7.9	02/10/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T115	12/04/91	25	WESTINGHOUSE	61J9266	120/240	POLE	TRUMBO	POLE B69	MOQ	8.6	01/13/92	NON PCB	
T15	12/11/91	25	WESTINGHOUSE	6115809	2.4KV - 120/240V	POLE	TRUMAN	POLE L79, BLDG. 292, 1289	NSGA STORAGE BUNKER/NGSA GYM	9.3	01/23/92	NON PCB	XFMR IS RUSTED AT BOTTOM AND LEAKING
T15.2	12/11/91	25	WESTINGHOUSE	6115806	2.4 -120/240V	POLE	TRUMAN	POLE 79, BLDG. 292, 1289	NSGA STORAGE BUNKER/NGSA GYM	9.4	01/23/92	NON PCB	XFMR IS RUSTED AT BOTTOM AND LEAKING
T174	01/06/92	225	ALIS CHALMERS	2253343	4.16KV - 208Y/120V	POLE	BOCA CHICA	POLE A107A, BLDG. A131, 149, 153	OPS MAINTENANCE HANGER; SUPPLY GENERAL	13	02/10/92	NON PCB	LEAKING AT SECONDARY BUSHING
T81	12/03/91			1883-01		POLE	TRUMBO	POLE B93		14	01/13/92	NON PCB	NO NAME PLATE
T20	12/18/91	10	WESTINGHOUSE	309146-6	2.4KV - 120/240V	POLE	TRUMAN	POLE 25, STREET LITES	STREET LIGHTS	20	02/04/92	NON PCB	
T104	12/05/91	50	ALIS CHALMERS	4934632	120/240	POLE	TRUMBO	POLE B33	TENNIS COURTS	20	01/14/92	NON PCB	
T6.1	12/14/91	25	WESTINGHOUSE	3865145	2.4KV - 120/240V	POLE	TRUMAN	POLE 83, BLDG. 230	CHAPEL	22	01/23/92	NON PCB	
T206	12/19/91	500	NIAGARA	31688	13.8KV - 480/277V	PAD	BOCA CHICA	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE	22	02/05/92	NON PCB	
T138	12/15/91	150	WESTINGHOUSE	6367368	2.4KV - 208Y/120V	PAD	NAVY HOSP.	MHPB-L2, WARDS E,F,G,H	WARDS E, F, G, H	23	01/24/92	NON PCB	
T140	12/15/91	112.5	GENERAL ELECTRIC	H271954-70P	2.4KV - 208Y/120V	PAD	NAVY HOSP.	AT POLE L4, BLDG. 47	ATEN HALL	23	01/24/92	NON PCB	
T170	12/30/91	100	ALLIS CHALMERS	1839778	4.16KV - 208Y/120V	PAD	BOCA CHICA	POLE A104, BLDG. A229	SPRINKLER SYSTEM PUMP HOUSE	23	02/04/92	NON PCB	
T190	01/10/92	1.1000	NIKAGARA & G.E.	31579	13.8KV - 480Y/277V	PAD	BOCA CHICA	BLDG A980	AIMD	23	02/11/92	NON PCB	
T204	12/19/91	500	NIAGARA	31689	13.8KV - 480/277V	PAD	BOCA CHICA	BLDG. A-986	AIMD GSE MAINTENANCE BUILDING	24	02/05/92	NON PCB	
T177.2	01/06/92	50	GENERAL ELECTRIC	6585975	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(S)	PUBLIC WORKS STORAGE BUILDING	27	02/10/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T230	12/31/91	1000	F.P.E.	TN-1626	13.8KV - 480V	PAD	BOCA CHICA	PB207, BLDG. A325	CARIBROC ELECTRICAL PLANT	37	02/06/92	NON PCB	
T167	12/30/91	5	GENERAL ELECTRIC	D238358	120/240	POLE	BOCA CHICA	POLE A72 BLDG. A446 & A447	FRESH WATER PUMPING STATION; PUMPING STATION	38	02/04/92	NON PCB	
T139.2	12/15/91	25	WESTINGHOUSE	6032742	2.4KV - 120/240V	POLE	NAVY HOSP.	POLE L3, TENNIS CRTS, BLDG. LD	TENNIS COURTS; WATER PUMPS	44	01/24/92	NON PCB	
T6	12/14/91	25	WESTINGHOUSE	6406314	2.4KV - 120/240V	POLE	TRUMAN	POLE 83, BLDG. 230	CHAPEL	86	01/23/92	PCB	
T73.1	12/05/91	167	GENERAL ELECTRIC	F122658-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO	POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	93	01/14/92	PCB	
T70	12/05/91	75	GENERAL ELECTRIC	F122615-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B21		100	01/23/92	PCB	LEAKING AT BOTTOM
T239	12/27/91	5	GENERAL ELECTRIC	F498968-64P	120/240V	POLE	BOCA CHICA	POLE A87 GUARD STATION	GUARD STATION	100	02/04/92	NON PCB	XFMR CHANGED. REPLACED WITH G.E. L757404Y74AA ON 2/4/92.
T70.2	12/05/91	75	GENERAL ELECTRIC	F122616-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B21		110	01/23/92	PCB	LEAKING AT BOTTOM
T88	12/12/91	167	GENERAL ELECTRIC	F499030-64P	13.8KV - 120/240V	PAD	FLEMING KEY	AT POLE B192 BLDG. 1341		110	02/07/92	PCB	
T88.2	12/12/91	167	GENERAL ELECTRIC	F499027-64P	13.8KV - 120/240V	PAD	FLEMING KEY	AT POLE B192 BLDG. 1341		110	02/07/92	PCB	
T73	12/05/91	167	GENERAL ELECTRIC	F122659-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO	POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	120	01/14/92	PCB	
T88.1	12/12/91	167	GENERAL ELECTRIC	F499025-64P	13.8KV - 120/240V	PAD	FLEMING KEY	AT POLE B192 BLDG. 1341		120	02/07/92	PCB	
T91.2	12/12/91	5	GENERAL ELECTRIC	F498967-64P	120/240V	POLE	FLEMING KEY	POLE B171A	*O.O.S.	120	01/27/92	PCB	XFMR OUT OF SERVICE
T137	12/20/91					PAD	NAVY HOSP.	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	120	02/04/92	PCB	UNABLE TO READ NAME PLATE
T137.1	12/20/91					PAD	NAVY HOSP.	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	120	02/04/92	PCB	UNABLE TO READ NAME PLATE

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T173.1	12/20/91	50	GENERAL ELECTRIC	6874429	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A101, BLDG. A255	OPS QUICK TRANS	120	02/03/92	PCB	
T168	01/05/92	25	GENERAL ELECTRIC	6877264	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A74, BLDG. A227	MWR GYM	130	02/10/92	PCB	LEAKING
T73.2	12/05/91	167	GENERAL ELECTRIC	F122657-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO	POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	150	01/14/92	PCB	
T143.3	12/15/91	50	GENERAL ELECTRIC	6874450	2.4KV - 120/240V	PAD	NAVY HOSP.	MH PB-L9, XRAY	X-RAY	150	01/24/92	PCB	
T181.2	01/04/92	25	GENERAL ELECTRIC	B714665	4.16KV - 120/240V	PAD	BOCA CHICA	BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER	150	02/10/92	PCB	
T181.1	01/04/92	25	GENERAL ELECTRIC	7300038	4.16KV - 120/240V	PAD	BOCA CHICA	BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER	160	02/10/92	PCB	
T150	12/31/91	300	GENERAL ELECTRIC	E694290	13.2KV - 208Y/120V	PAD	BOCA CHICA	AT POLE A31, BLDG. A-727	BARRACKS VAQ-33/SUPPLY/WEAPONS	190	02/03/92	PCB	
T168.2	01/05/92	25	GENERAL ELECTRIC	6880532	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A74, BLDG. A227	MWR GYM	190	02/10/92	PCB	LEAKING
T207	12/19/91	150	GENERAL ELECTRIC	G856447	13.8KV - 208/120V	PAD	BOCA CHICA	BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE	220	02/05/92	PCB	
T190.1	01/10/92	300	GENERAL ELECTRIC	F646359-67P	13.8KV - 208/120V	PAD	BOCA CHICA	BLDG A980	AIMD	230	02/11/92	PCB	
T139.1	12/15/91	50	GENERAL ELECTRIC	1883-03	2.4KV - 120/240V	POLE	NAVY HOSP.	POLE L3, TENNIS CRTS, BLDG. LD	TENNIS COURTS; WATER PUMPS	240	01/24/92	PCB	NO NAME PLATE
T143.2	12/15/91	75	GENERAL ELECTRIC	8674251	2.4KV - 120/240V	PAD	NAVY HOSP.	MH PB-L9, XRAY	X-RAY	260	01/24/92	PCB	
T144	12/15/91	750	GENERAL ELECTRIC	G852379	2.4KV - 208Y/120V	PAD	NAVY HOSP.	MH PB-L8, MAIN BLDG.	MAIN BUILDING OFFICES	280	01/24/92	PCB	
T18	12/18/91	50	GENERAL ELECTRIC	D627551-57Y	2.4KV - 120/240V	POLE	TRUMAN	POLE 107, BLDG. 795, 284, 261, 149	DRMO SURPLUS MATERIAL STORAGE/OFFICE;	290	02/04/92	PCB	
T11	12/14/91	50	GENERAL ELECTRIC	B760752	2.4KV - 120/240V	POLE	TRUMAN	POLE 87, SBALL FIELD	SOUTH BALL FIELD	330	01/23/92	PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T74.1	12/05/91	100	GENERAL ELECTRIC	F122620-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	340	01/14/92	PCB	
T74.2	12/05/91	100	GENERAL ELECTRIC	F122622-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	380	01/14/92	PCB	
T205	12/20/91	100	GENERAL ELECTRIC	F122619-64P	14.4KV - 120/240V	PAD	BOCA CHICA	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE	420	02/05/92	PCB	FUSE BROKEN - POWER WAS NOT RESTORED
T205.1	12/20/91			1883.08		PAD	BOCA CHICA	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE	440	02/05/92	PCB	NO NAME PLATE
T5.2	12/18/91	25	GENERAL ELECTRIC	B721385	2.4KV - 120/240V	POLE	TRUMAN	POLE 96, BLDG. 226	PWD SATELLITE SHOP	450	02/04/92	PCB	
T198.1	12/27/91	50	WESTINGHOUSE	65D18187	14.4KV - 480/240V	PAD	BOCA CHICA	BLDG. A979	LOX PLANT	470	02/04/92	PCB	
T198.2	12/27/91	50	WESTINGHOUSE	65D18179	14.4KV - 480/240V	PAD	BOCA CHICA	BLDG. A979	LOX PLANT	470	02/04/92	PCB	
T198	12/27/91	50	WESTINGHOUSE	65D18178	14.4KV - 480/240V	PAD	BOCA CHICA	BLDG. A979	LOX PLANT	480	02/04/92	PCB	
T5	12/18/91	25	GENERAL ELECTRIC	B721402	2.4KV - 120/240V	POLE	TRUMAN	POLE 96, BLDG. 226	PWD SATELLITE SHOP	490	02/04/92	PCB	
T151	12/31/91	150	GENERAL ELECTRIC	E694289	13.8KV 208Y/120V	PAD	BOCA CHICA	POLE A29, BLDG. A-726	PERSONNEL SUPPORT (ADMIN BLDG.)	530	02/03/92	PCB	
T5.1	12/18/91	25	GENERAL ELECTRIC	B721380	2.4KV - 120/240V	POLE	TRUMAN	POLE 96, BLDG. 226	PWD SATELLITE SHOP	540	02/04/92	PCB	
T181	01/04/92	25	GENERAL ELECTRIC	7301931	4.16KV - 120/240V	PAD	BOCA CHICA	BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER	570	02/10/92	PCB	
T70.1	12/05/91	100	GENERAL ELECTRIC	F122617-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B21		600	01/23/92	PCB	LEAKING AT BOTTOM
T33	12/13/91	37.5	GENERAL ELECTRIC	B457878	2.4KV - 120/240V	POLE	TRUMAN	POLE 38, BLDG. 1370/71, 1364	MARRIED OFFICERS QUARTERS	620	01/23/92	PCB	LEAKING AT BOTTOM
T143.1	12/15/91	75	GENERAL ELECTRIC	8674247	W.RKV - 120/240V	PAD	NAVY HOSP.	MH PB-L9, X-RAY	X-RAY	670	01/24/92	PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T178	01/06/92	75	GENERAL ELECTRIC	B793410	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	750	02/10/92	PCB	
T17	12/18/91	15	WESTINGHOUSE	3390782	120/240V	POLE	TRUMAN	POLE 99, STREET LITES	STREET LIGHTS	770	02/04/92	PCB	
T143	12/15/91	75	GENERAL ELECTRIC	8675086	2.4KV - 120/240V	PAD	NAVY HOSP.	MH PB-L9, X-RAY	X-RAY	860	01/24/92	PCB	
T178.2	01/06/92	75	GENERAL ELECTRIC	B783012	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	910	02/10/92	PCB	
T173	12/20/91	25	WESTINGHOUSE	3394568	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A101, BLDG. A255	OPS QUICK TRANS	5,900	02/03/92	PCB	
T227	12/31/91	500	NIAGARA	35597	13.8KV - 480Y/277Y	PAD	BOCA CHICA	PB 208A, BLDG. A651	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	22,000	02/03/92	PCB	
T7	12/11/91	300	STANDARD	148902	2.4KV - 208Y/130V	PAD	TRUMAN	AT P89, BLDG. 438	E.M. BARRACKS - AIR FORCE 6947TH	360,000	01/23/92	PCB	
T229	12/31/91	500	NIAGARA	31426	13.8KV - 480Y/277V]	PAD	BOCA CHICA	BLDG. A650	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	420,000	02/03/92	PCB	
T236	12/19/91	300	GENERAL ELECTRIC	F956769	4.16KV - 208Y/120V	PAD (G)	BOCA CHICA	PB220, BLDG. 244	OPERATIONS CONTROL TOWER/NAVAL	620,000	02/03/92	PCB	
T11.1	12/14/91					POLE	TRUMAN	POLE 87, SBALL FIELD	SOUTH BALL FIELD	<10	01/23/92	NON PCB	UNABLE TO READ NAME PLATE
T4	12/18/91	167	GENERAL ELECTRIC	1883-04	13.8KV - 120/240V	PAD	TRUMAN	AT PB1, BLDG. 1287	SUPPLY GALLEY	<2	02/04/92	NON PCB	NO NAME PLATE
T9	12/14/91	167	WESTINGHOUSE	64AA2609	2.4KV - 120/240V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<2	01/23/92	NON PCB	
T10.1	12/14/91	250	MCGRAW EDISON	832G525002	2.4KV - 480/277V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<2	01/23/92	NON PCB	
T10.2	12/14/91	250	MCGRAW EDISON	832G525001	2.4KV - 480/277V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<2	01/23/92	NON PCB	
T11.2	12/14/91	50	GENERAL ELECTRIC	L788978YALA	2.4KV - 120/240V	POLE	TRUMAN	POLE 87, SBALL FIELD	SOUTH BALL FIELD	<2	01/23/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T12.1	12/18/91	37.5	ALLIS CHALMERS	139593	13.8KV - 120/240V	POLE	TRUMAN	POLE C113 FORT	FORT	<2	02/04/92	NON PCB	
T12.2	12/18/91	37.5	ALLIS CHALMERS	139592	13.8KV - 120/240V	POLE	TRUMAN	POLE C113 FORT	FORT	<2	02/04/92	NON PCB	
T15.1	12/11/91	25	GENERAL ELECTRIC	1877913-62Y	2.4 - 120/240V	POLE	TRUMAN	POLE 79, BLDG. 292, 1289	NSGA STORAGE BUNKER/NGSA GYM	<2	01/23/92	NON PCB	XFMR IS RUSTED AT BOTTOM AND LEAKING
T16	12/19/91	25	GENERAL ELECTRIC	N462049YDUA	2.4KV - 120/240V	POLE	TRUMAN	POLE 70, BLDG. 1355	FBIS RECEIVER BULDING	<2	02/04/92	NON PCB	LEAKING AT BOTTOM
T16.1	12/19/91	25	GENERAL ELECTRIC	N462050YDUA	2.4KV - 120/240V	POLE	TRUMAN	POLE 70, BLDG. 1355	FBIS RECEIVER BULDING	<2	02/04/92	NON PCB	LEAKING AT BOTTOM
T16.2	12/19/91	25	GENERAL ELECTRIC	N449387YCUA	2.4KV - 120/240V	POLE	TRUMAN	POLE 70, BLDG. 1355	FBIS RECEIVER BULDING	<2	02/04/92	NON PCB	LEAKING AT BOTTOM
T22	12/11/91	75	CENTRAL MALONEY	1822712-1	2.4KV - 120/240V	POLE	TRUM^N	POLE 62, STREET LITES	STREET LIGHTS, MEQ	<2	01/23/92	NON PCB	
T23	12/11/91	75	CENTRAL MALONEY	1822712-3	2.4KV - 120/240V	POLE	TRUMAN	POLE 73, BLDG. 520, 521	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T24	12/11/91	75	CENTRAL MALONEY	1822712-4	2.4KV - 120/240V	POLE	TRUMAN	POLE 75, BLDG. 519, 520	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T26	12/11/91	75	CENTRAL MALONEY	1822712-5	2.4KV - 120/240V	POLE	TRUMAN	POLE 69, BLDG. 515, 517	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T27	12/11/91	75	CENTRAL MALONEY	1822712-7	2.4KV - 120/240V	POLE	TRUMAN	POLE 69, BLDG. 514, 516	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	BAN ON TOP RUSTED (BROKEN)
T28	12/11/91	75	CENTRAL MALONEY	1822712-2	2.4KV - 120/240V	POLE	TRUMAN	POLE 67, BLDG. 510, 511	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T30	12/13/91	75	CENTRAL MAHONEY	1822712-9	2.4KV - 120/240V	POLE	TRUMAN	POLE 31, BLDG. 506, 507	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T32	12/13/91	50	GENERAL ELECTRIC	R723039Y2D	2.4KV - 120/240V	POLE	TRUMAN	POLE 61, BLDG. 502, 503	MARRIED ENLISTED QUARTERS	<2	01/23/92	NON PCB	
T34	12/13/91	37.5	UPTEGRAFF	W-95403	2.4KV - 120/240V	POLE	TRUMAN	POLE 46, BLDG. 1367, 68, 69	MARRIED OFFICERS QUARTERS	<2	01/23/92	NON PCB	

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XFMR = Transformer.

Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T35	01/11/92	37.5	UPTEGRAFF	W95400	2.4KV - 120/240V	POLE	TRUMAN	POLE 50, BLDG. 1365, 66	MARRIED OFFICERS QUARTERS	<2	02/12/92	NON PCB	
T36	12/13/91	37.5	UPTEGRAFF	W-95400	2.4KV - 120/240V	POLE	TRUMAN	POLE 43, BLDG. 1361	MARRIED OFFICERS QUARTERS	<2	01/23/92	NON PCB	BAN BROKEN ON XFMR
T37	12/13/91	37.5	UPTEGRAFF	W-95401	2.4KV - 120/240V	POLE	TRUMAN	POLE 53, BLDG. 1359/60/62/63	MARRIED OFFICERS QUARTERS	<2	01/23/92	NON PCB	
T40	12/18/91	300	RTE CORP	866006161	13.8KV - 208Y/120V	PAD	TRUMAN	MH - 59	MANHOLE 59	<2	02/04/92	NON PCB	
T41	12/18/91	750	GENERAL ELECTRIC	M125588	13.8KV - 480/277V	PAD	TRUMAN	MH - 59	MANHOLE 59	<2	02/04/92	NON PCB	
T42	12/18/91	1500	WESTINGHOUSE	SET 4174-0101	13.8KV - 480/277V	PAD	TRUMAN	OUTERMOLE	OUTERMOLE	<2	02/04/92	NON PCB	
T44	12/18/91	13800	WESTINGHOUSE	SET 4174-0103	13.8KV - 480	PAD	TRUMAN	OUTERMOLE	OUTERMOLE	<2	02/04/92	NON PCB	
T45	12/18/91	13800	WESTINGHOUSE	SET 4174-0102	13.8KV - 480/277Y	PAD	TRUMAN	OUTERMOLE	OUTERMOLE	<2	02/04/92	NON PCB	
T47	12/13/91	75	HOWARD INDUSTRIES	52427-2586	120/240V	POLE	TRUMAN	POLE 58B, BLDG. 1325 & 26	PICNIC SHED	<2	01/23/92	NON PCB	
T49	12/05/91	300	WESTINGHOUSE 3 PHASE	82JJ791033	13.8KV - 208/120V	PAD	TRUMBO	POLE A151 BLDG. 60, 59	ARMY BARRACKS	<2	01/21/92	NON PCB	
T54	12/06/91	37.5	T&R ELECTRIC SUPPLY	053673	120/240	POLE	TRUMBO	POLE B:119, BLDG. 48	PHMRON II/VAQ33 FRAMP	<2	01/21/92	NON PCB	
T54.1	12/06/91	37.5	T&R ELECTRIC SUPPLY	053675	120/240	POLE	TRUMBO	POLE B:119, BLDG. 48	PHMRON II/VAQ33 FRAMP	<2	01/21/92	NON PCB	
T54.2	12/06/91	37.5	T&R ELECTRIC SUPPLY	053677	120/240	POLE	TRUMBO	POLE B:119, BLDG. 48	PHMRON II/VAQ33 FRAMP	<2	01/21/92	NON PCB	
T56	12/07/91	750	WESTINGHOUSE	SBT4314-0101	13.8KV - 480/277	PAD	TRUMBO	MH24 - BLDG. UPH 1619		<2	01/21/92	NON PCB	
T56.1	12/07/91		G & W	621-86-0068	15.5KV	PAD	TRUMBO	MH24 - BLDG. UPH 1619		<2	01/21/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T57.1	12/07/91	167	R.T.E	861048460	138KV - 480/277V	PAD	TRUMBO	D3 - BLDG. B45	COAST GUARD STORAGE BUILDING	<2	01/21/92	NON PCB	
T57.2	12/07/91	167	R.T.E	861048459	138KV - 480/277V	PAD	TRUMBO	D3 - BLDG. B45	COAST GUARD STORAGE BUILDING	<2	01/23/92	NON PCB	
T57.3	12/07/91	167	R.T.E	861048461	138KV - 480/277V	PAD	TRUMBO	D3 - BLDG. B45	COAST GUARD STORAGE BUILDING	<2	01/23/92	NON PCB	
T61	12/07/91	167	R.T.E.	801116548	13.8KV/2.39KV - 6RDY254	PAD	TRUMBO	AT MH8, BLDG. B6		<2	01/23/92	NON PCB	
T61.1	12/07/91	167	R.T.E.	801116549	13.8KV/2.39KV - 6RDY254	PAD	TRUMBO	AT MH8, BLDG. B6		<2	01/23/92	NON PCB	
T61.2	12/07/91	167	R.T.E.	801116550	13.8KV/2.39KV - 6RDY254	PAD	TRUMBO	AT MH8, BLDG. B6		<2	01/23/92	NON PCB	
T62	12/06/91	750	GENERAL ELECTRIC	L245908	208/120	PAD	TRUMBO	AT MH9, BLDG. D1	STORAGE TANK/DIESEL-PHM WORKSHOPS	<2	01/21/92	NON PCB	
T64	12/06/91	300	R.T.E.	886005202	208/120	PAD	TRUMBO	AT MH11, BLDG. B28	NADC WORKSHOPS/ADMIN	<2	01/21/92	NON PCB	
T65	12/06/91	300	R.T.E.	886005660	13.8KV - 480/277V	PAD	TRUMBO	AT MH12, BLDG. B28	NADC WORKSHOPS/ADMIN	<2	01/21/92	NON PCB	
T66.2	12/05/91	25	ALIS CHALMES	5362123	14.4KV - 120/240V	POLE	TRUMBO	POLE B150, BLDG. C-83	MWR GYM	<2	01/21/92	NON PCB	
T72	12/06/91	1500	GENERAL ELECTRIC	L245907	13.8KB - 208Y/480V	PAD	TRUMBO	AT MH9, D-1	PHM WORKSHOPS	<2	01/21/92	NON PCB	
T77	12/04/91	50	GENERAL ELECTRIC	H646218Y68	120/240	POLE	TRUMBO	AT POLE B54	GATEHOUSE, TENNIS COURTS	<2	01/14/92	NON PCB	
T79	12/05/91	550	NIAGARA - VANTRA ELECTRIC	84V5402	13.8KV - 277/480V	PAD	TRUMBO	AT POLE B31, BLDG. C-2076	BOQ WITH MESS	<2	01/14/92	NON PCB	
T79.1	12/05/91	550	NIAGARA - VANTRA ELECTRIC	84V5401	13.8KV - 277/480V	PAD	TRUMBO	AT POLE B31, BLDG. C-2076	BOQ WITH MESS	<2	01/14/92	NON PCB	
T79.2	12/05/91	550	NIAGARA - VANTRA ELECTRIC	84V5403	13.8KV - 277/480V	PAD	TRUMBO	AT POLE B31, BLDG. C-2076	BOQ WITH MESS	<2	01/14/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T81.2	12/03/91	15	UPTEGRAFF	W-95382	120/240	POLE	TRUMBO	POLE B93		<2	01/13/92	NON PCB	
T83	12/12/91	300	R.T.E.	836007097	13.8KV - 480/277V	PAD	FLEMING KEY	AT POLE B159 F-11	ADMIN OFFICE/GARAGE	<2	01/27/92	NON PCB	
T89.1	12/12/91	50	GENERAL ELECTRIC	N412510YMTA	14.4KV - 120/240V	POLE	FLEMING KEY	POLE B15B		<2	01/27/92	NON PCB	
T90	12/12/91	10	GENERAL ELECTRIC	N530516YLUA	120/240V	POLE	FLEMING KEY	POLE B163		<2	01/27/92	NON PCB	
T91.1	12/12/91	10	GENERAL ELECTRIC	F920556-64Y	120/240V	POLE	FLEMING KEY	POLE B171A	*O.O.S.	<2	01/27/92	NON PCB	XFMR OUT OF SERVICE
T92	12/12/91	15	CENTRAL MALONEY	2783483-1	120/240V	POLE	FLEMING KEY	POLE B184		<2	01/27/92	NON PCB	
T94	12/04/91	50	GENERAL ELECTRIC <50PPM	N412498YMTA	120/240	POLE	TRUMBO	POLE B104	MEQ	<2	01/14/92	NON PCB	
T95	12/04/91	50	UPTEGRAFF	1019-70	120/240	POLE	TRUMBO	POLE B105	MEQ	<2	01/14/92	NON PCB	
T96	12/04/91	50	GENERAL ELECTRIC	N145403YJSA	120/240	POLE	TRUMBO	POLE B114	MEQ	<2	01/14/92	NON PCB	LEAKING AT BOTTOM
T97	12/04/91	50	UPTEGRAFF	W-95394	120/240	POLE	TRUMBO	POLE B116	MEQ	<2	01/14/92	NON PCB	BAND HOLDING TOP IS CRUSHED
T98	12/04/91	50	GENERAL ELECTRIC	N145404YJSA	120/240	POLE	TRUMBO	POLE B117	MEQ	<2	01/14/92	NON PCB	
T99	12/04/91	37.5	GENERAL ELECTRIC	N023520YFSA	120/240	POLE	TRUMBO	POLE B107	MEQ	<2	01/14/92	NON PCB	
T100	12/04/91	25	MCGRAW EDISON	74ZL348003	120/240	POLE	TRUMBO	POLE B108	MEQ	<2	01/14/92	NON PCB	PLUG IS LOOSE, NEEDS TO BE REPLACED
T102	12/04/91	50	GENERAL ELECTRIC	C878744-57Y	120/240	POLE	TRUMBO	POLE B109	MEQ	<2	01/14/92	NON PCB	REPLACED BROKEN FUSE
T106	12/03/91	50	UPTEGRAFF	W-95388	120/240	POLE	TRUMBO	POLE B88	JOQ	<2	01/13/92	NON PCB	BAND ON TOP BROKEN, ELECTRICAL CONNECTION ON XFMR LEAKING

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T107	12/03/91	50	UPTEGRAFF	W-95398	120/240	POLE	TRUMBO	POLE B90	JOQ	<2	01/13/92	NON PCB	
T108	12/03/91	50	UPTEGRAFF	W-95393	120/240	POLE	TRUMBO	POLE B91	JOQ	<2	01/13/92	NON PCB	TOP OF XFMR RUSTED
T109	12/03/91	25	UPTEGRAFF	W-95385	120/240	POLE	TRUMBO	POLE B92	JOQ	<2	01/13/92	NON PCB	
T110	12/03/91	50	WESTINGHOUSE	83A381931	120/240	POLE	TRUMBO	POLE B94	MOQ; JOQ	<2	01/13/92	NON PCB	XFMR MOUNTING BOLTS LOOSE
T111	12/03/91	50	UPTEGRAFF	W-95390	120/240	POLE	TRUMBO	POLE B96	JOQ	<2	01/13/92	NON PCB	
T113	12/04/91	50	MCGRAW EDISON	75VF017003	120/240	POLE	TRUMBO	OLE B63	MOQ	<2	01/13/92	NON PCB	
T117	12/03/91	37.5	GENERAL ELECTRIC	M639999YJBA	120/240	POLE	TRUMBO	POLE B79		<2	01/13/92	NON PCB	
T118	12/03/91	37.5	MCGRAW EDISON	78 NK054-004	120/240	POLE	TRUMBO	POLE B81		<2	01/13/92	NON PCB	
T120	12/03/91	50	GENERAL ELECTRIC	H646219Y68	120/240	POLE	TRUMBO	POLE B86	MOQ	<2	01/13/92	NON PCB	
T121	12/04/91	100	GENERAL ELECTRIC	L788398YALA	120/240	POLE	TRUMBO	POLE B101	MOQ	<2	01/13/92	NON PCB	
T122	12/04/91	100	GENERAL ELECTRIC	N160846YKSA	120/240	POLE	TRUMBO	POLE B97	MOQ	<2	01/14/92	NON PCB	
T123	12/07/91	167	R.T.E.	801129850	13.8KV - 440/254V	PAD	TRUMBO	AT MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T123.1	12/07/91	167	R.T.E.	801129849	13.8KV - 440/254V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T123.2	12/07/91	167	R.T.E.	801127918	13.8KV - 440/254V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T123.3	12/07/91	167	R.T.E.	811073457	13.8KV - 440/254V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T123.4	12/07/91	167	R.T.E.	801116551	13.8KV - 440/254V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T123.5	12/07/91	167	R.T.E.	811073458	13.8KV - 440/254V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T124	12/07/91	100	R.T.E.	861067761	13.8KV - 277V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T124.1	12/07/91	100	R.T.E.	861066490	13.8KV - 277V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T126	12/07/91	112.5	G & W	609-85-0086	13.8KV - 120/208V 400 AMPS	PAD	TRUMBO	MH11, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T126.1	12/07/91	112.5	GENERAL ELECTRIC	N227196TETA	208/120	PAD	TRUMBO	MH11, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T126.2	12/07/91	167	R.T.E	811057836	254V	PAD	TRUMBO	MH11, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	LEAKING
T126.3	12/07/91	167	R.T.E	801127916	254V	PAD	TRUMBO	MH11, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T126.4	12/07/91	167	R.T.E	801127915	254V	PAD	TRUMBO	MH11, DOCK 2	DOCK 2	<2	01/23/92	NON PCB	
T128	12/05/91	25	WESTINGHOUSE	84A273329	120/240	POLE	TRUMBO	AT POLE B35	BOQ	<2	01/14/92	NON PCB	
T128.1	12/05/91			1883-02		POLE	TRUMBO	AT POLE B35	BOQ	<2	01/14/92	NON PCB	NO NAME PLATE
T131	12/06/91	300	R.T.E.	886005201	13.8KV/208Y/120V	PAD	TRUMBO	AT MH1, B48	PHMRON II/VAQ33 FRAMP	<2	01/21/92	NON PCB	
T132	12/06/91	500	R.T.E.	886005203	13.8K/480Y/1277V	PAD	TRUMBO	AT MH1, B48	PHMRON II/VAQ33 FRAMP	<2	01/21/92	NON PCB	
T152	12/31/91	100	ALLIS CHALMERS	7412-6319294	4.16KV - 120/240V	PAD	BOCA CHICA	AT POLE A27, BLDG. A-734	AIMD; JET ENGINE SHOP	<2	02/03/92	NON PCB	
T152.1	12/31/91	100	ALLIS CHALMERS	7412-6319292	4.16KV - 120/240V	PAD	BOCA CHICA	AT POLE A27, BLDG. A-734	AIMD; JET ENGINE SHOP	<2	02/03/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T153	01/07/92	37.5	GENERAL ELECTRIC	H715678Y68	14.4KV - 240/480V	POLE	BOCA CHICA	POLE A123, SEWAGE TRMNT.	SEWAGE TREATMENT PLANT	<2	02/06/92	NON PCB	
T153.1	01/07/92	37.5	GENERAL ELECTRIC	H678143Y68	14.4KV - 240/480V	POLE	BOCA CHICA	POLE A123, SEWAGE TRMNT.	SEWAGE TREATMENT PLANT	<2	02/06/92	NON PCB	
T153.2	01/07/92	37.5	GENERAL ELECTRIC	H715681Y68	14.4KV - 240/480V	POLE	BOCA CHICA	POLE A123, SEWAGE TRMNT.	SEWAGE TREATMENT PLANT	<2	02/06/92	NON PCB	
T154	01/07/92	25	GENERAL ELECTRIC	M261870YGNA	120/240V	POLE	BOCA CHICA	POLE A127, ORDNANCE STG.	ORDNANCE STORAGE	<2	02/06/92	NON PCB	
T157	12/31/91	50	GENERAL ELECTRIC	F388730-63Y	13.2KV - 120/240V	POLE	BOCA CHICA	POLE A25, CABLE VISION AMP	CABLE VISION AMPLIFIER	<2	02/03/92	NON PCB	
T158	01/04/92	50	GENERAL ELECTRIC	1828406YDLA	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A22,BLDG.634,6 18,718,BALLFIE	MWR ENLISTED MENS CLUB; CHAPEL; ROICC/EDUCATIONAL	<2	02/10/92	NON PCB	
T158.1	01/04/92	50	GENERAL ELECTRIC	828397YDLA	13.8KV - 240/120V	POLE	BOCA CHICA	POLE 18,718,	MWR ENLISTED MENS CLUB; CHAPEL; ROICC/EDUCATIONAL	<2	02/10/92	NON PCB	
T161	01/04/92	50	GENERAL ELECTRIC	F392347-63Y	14.4KV - 240/120V	POLE	BOCA CHICA	POLE A5, BLDG. A514	MWR THEATER/LIBRARY	<2	02/10/92	NON PCB	
T161.1	01/04/92	50	GENERAL ELECTRIC	F392348-63Y	14.4KV - 240/120V	POLE	BOCA CHICA	POLE A5, BLDG. A514	MWR THEATER/LIBRARY	<2	02/10/92	NON PCB	
T161.2	01/04/92	50	GENERAL ELECTRIC	F387288-63Y	14.4KV - 240/120V	POLE	BOCA CHICA	POLE A5, BLDG. A514	MWR THEATER/LIBRARY	<2	02/10/92	NON PCB	
T163.1	01/06/92	50	GENERAL ELECTRIC	L535093-66Y	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A93, BLDG. A419		<2	02/10/92	NON PCB	
T165.1	12/30/91	25	GENERAL ELECTRIC	G212387-65Y	277/480	POLE	BOCA CHICA	POLE A92, PUMP	PUMP	<2	02/04/92	NON PCB	
T165.2	12/30/91	25	GENERAL ELECTRIC	G212389-65Y	277/480	POLE	BOCA CHICA	BOCA CHICA - POLE A92, PUMP	PUMP	<2	02/04/92	NON PCB	
T168.1	01/05/92	25	GENERAL ELECTRIC	L313580Y74AA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A74, BLDG. A227	MWR GYM	<2	02/10/92	NON PCB	
T171	12/30/91	25	RTE	HF10784	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A96A, BLDG. A225	OPS GROUND ELECTRONICS	<2	02/03/92	NON PCB	

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Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T171.1	12/30/91	25	RTE	HF10786	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A96A, BLDG. A225	OPS GROUND ELECTRONICS	<2	02/03/92	NON PCB	
T171.2	12/30/91	25	RTE	HF10785	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A96A, BLDG. A225	OPS GROUND ELECTRONICS	<2	02/03/92	NON PCB	
T175	01/06/92	50	ALIS CHALMERS	0161291	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A109, BLDG. A132	OPS FIRE/RESCUE STATION & PWD STORAGE LINECREW	<2	02/10/92	NON PCB	
T175.1	01/06/92	50	ALIS CHALMERS	0161290	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A109, BLDG. A132	OPS FIRE/RESCUE STATION & PWD STORAGE LINECREW	<2	02/10/92	NON PCB	
T175.2	01/06/92	50	ALIS CHALMERS	0161292	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A109, BLDG. A132	OPS FIRE/RESCUE STATION & PWD STORAGE LINECREW	<2	02/10/92	NON PCB	
T177.1	01/06/92	75	WESTINGHOUSE	61AB660	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(S)	PUBLIC WORKS STORAGE BUILDING	<2	02/10/92	NON PCB	
T178.1	01/06/92	75	GENERAL ELECTRIC	D629416-58Y	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	<2	02/10/92	NON PCB	
T179	01/06/92	75	GENERAL ELECTRIC	N005153TMRA	4.16KV - 208Y/12OV	PAD	BOCA CHICA	POLE A114, B.DG A126(NE)	PUBLIC WORKS STORAGE BUILDING	<2	02/10/92	NON PCB	
T182	01/04/92	50	R.T.E.	HF10789	41.6KV - 240/120V	POLE	BOCA CHICA	POLE A79A, BLDG A624	BACHELOR ENLISTED QUARTERS - TRANSIENTS	<2	02/10/92	NON PCB	
T182.1	01/04/92			1883-09		POLE	BOCA CHICA	POLE A79A, BLDG A624	BACHELOR ENLISTED QUARTERS - TRANSIENTS	<2	02/10/92	NON PCB	NO NAME PLATE
T182.2	01/04/92	50	R.T.E.	HF10791	41.6KV - 240/120V	POLE	BOCA CHICA	POLE A79A, BLDG A624	BACHELOR ENLISTED QUARTERS - TRANSIENTS	<2	02/10/92	NON PCB	
T187	01/05/92	37.5	GENERAL ELECTRIC	L750401Y74AA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A9, BLDG. A523	SUPPLY COLD & DRY STORAGE	<2	02/10/92	NON PCB	
T187.2	01/05/92	37.5	GENERAL ELECTRIC	K924138Y73AA	4.16KV - 240/120V	POLE	BOCA CHICA	POLE A9, BLDG. A523	SUPPLY COLD & DRY STORAGE	<2	02/10/92	NON PCB	
T188	01/19/92	150	VANTRAM ELECTRIC	88V3442	13.8KV - 208/120V	PAD	BOCA CHICA	BLDG. A931	SUPPLY DEPARTMENT WAREHOUSE	<2	02/11/92	NON PCB	
T193	01/10/92	37.5	ALIS CHALMERS	7306-6000230	14.4KV - 120/240V	PAD	BOCA CHICA	MH6, BLDG. A964	GENERALY DYNAMICS SUPPLY	<2	02/11/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T200	12/19/91	150	RTE	896005944	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB36D, BLDG. A1320	TRANSFORMER VAULT	<2	02/05/92	NON PCB	
T201	12/19/91	750	RTE	846008200	13.8KV - 480Y/277	PAD	BOCA CHICA	MH39, WELLS AIR #1	WELLS AIR START #1	<2	02/05/92	NON PCB	
T202	12/19/91	225	RTE	896005780	13.8/4.16 - 480Y/277	PAD	BOCA CHICA	MH41A WELLS AIR #2	WELLS AIR START #2	<2	02/05/92	NON PCB	
T205.2	12/20/91	100	ALLIS CHALMERS	7412-6319290	14.4KV - 120/240V	PAD	BOCA CHICA	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE	<2	02/05/92	NON PCB	FUSE BROKEN - POWER WAS NOT RESTORED
T208	12/20/91	25	GENERAL ELECTRIC	F88351262Y	4.16KV-244/80	PAD (G)	BOCA CHICA	AT MH 24 OLS VLT R/W 7	OLS VAULT	<2	02/05/92	NON PCB	XFMR OUT OF SERVICE
T209	12/19/91	45	RTE	896005836	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	AT OLS TRANS VLT	OLS VAULT	<2	02/05/92	NON PCB	
T210	12/20/91	112.5	RTE	896005454	13.8/4.16KV - 480Y/277	PAD	BOCA CHICA	BLDG. 1305 F.F.		<2	02/05/92	NON PCB	
T211	12/20/91	45	RTE	896005837	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	OLS TRANS VLT R/W 13	OLS VAULT	<2	02/05/92	NON PCB	
T212	12/27/91	45	RTE	896005834	4.16/13.8KV - 208Y/120	PAD	BOCA CHICA	BLDG. A937	SUPPLY DEPARTMENT FUEL LABS	<2	02/04/92	NON PCB	
T213	12/27/91	112.5	RTE	896005455	4.16/13.8KV - 480/277	PAD	BOCA CHICA	PB10, MARINA - FUEL PIER	MARINA, FUEL PIER	<2	02/04/92	NON PCB	
T215	12/30/91	75	RTE	896005622	4.16KV - 208Y/120V	PAD	BOCA CHICA	PB106G RAPCON	RAPCON (PAR SITE)	<2	02/05/92	NON PCB	
T216	12/30/91	45	RTE	896005156	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB106K BLDG. A1070, A1088, A1089, A1091	WINDSOCK	<2	02/05/92	NON PCB	
T217	12/29/91	112.5	RTE	896005362	13.8/4.16KV - 208Y/120	PAD (G)	BOCA CHICA	PB114, BLDGF. A1019	FUSE AND DETONATOR MAGAZINE	<2	02/05/92	NON PCB	
T218	12/29/91	150	RTE	896005945	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	BLDG. A1025	OPS TRANSMITTER BUILDING	<2	02/05/92	NON PCB	
T219	12/29/91	112.5	RTE	896005363	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB115F, NASRADAR A4053	OPS BEAH SEARCH RADAR	<2	02/05/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T220	12/29/91	300	RTE	896005728	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	BLDG. A1005	NAVCOMMUNIT MULCHER BUILDING	<2	02/05/92	NON PCB	
T221	12/29/91	45	RTE	896005839	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	OLS VAULT MH129A & B	OLS VAULT	<2	02/05/92	NON PCB	
T222	12/29/91	45	RTE	896005835	13.8/4.16KV - 208Y/120V	PAD (G)	BOCA CHICA	PB107A, BLDG. A1020	OPS TACAN BUILDING	<2	02/05/92	NON PCB	
T223	12/29/91	112.5	RTE	896005456	13.8/4.16KV - 480/277V	PAD	BOCA CHICA	ENG TEST STD. 969		<2	02/05/92	NON PCB	
T228.1	12/31/91	50	ALLIS CHALMERS	5337189	13.8KV - 120/240V	PAD	BOCA CHICA	BLDG. A4011	NAVY REGIONAL MEDICAL CLINIC	<2	02/03/92	NON PCB	
T231	12/31/91	75	ALLIS CHALMERS	3150792	4.16KV - 208Y/120V	PAD	BOCA CHICA	MH33, B.DG. A641	GATE HOUSE (PASS & I.D.) NIS	<2	02/03/92	NON PCB	
T232	01/05/92	750	R.T.E./COOPER	906003208	4160Y/2400V	PAD	BOCA CHICA	BLDG. A437	PWD SHOPS	<2	02/10/92	NON PCB	
T233	01/05/92	750	R.T.E./COOPER	906003207	4160Y/2400V	PAD	BOCA CHICA	BLDG. A437	PWD SHOPS	<2	02/10/92	NON PCB	
T235	12/19/91	225	WESTINGHOUSE	62JB634067	4.16KV - 208Y/120V	PAD (G)	BOCA CHICA	MH 26B, BLDG. A4062	OPS RADAR OPERATIONAL FACILITY	<2	02/03/92	NON PCB	
T241	01/03/92					POLE	BOCA CHICA	POLE A90 WATER WELL	WATER WELL	<2	02/11/92	NON PCB	XFMR OUT OF SERVICE UNABLE TO READ NAME PLATE
T241.1	01/03/92					POLE	BOCA CHICA	POLE A90 WATER WELL	WATER WELL	<2	02/11/92	NON PCB	XFMR OUT OF SERVICE UNABLE TO READ NAME PLATE
T242	12/19/91	45	RTE	896005155	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB215C, OLS VAULT R/W 3	OLS VAULT	<2	02/05/92	NON PCB	
T243	12/27/91	225	RTE	896005755	4160Y/2400	POLE	BOCA CHICA	POLE A66B BALLFIELD	BALL FIELD	<2	02/04/92	NON PCB	
T243.2	12/27/91	15	GENERAL ELECTRIC	9948569	4.16/2.4KV	POLE	BOCA CHICA	POLE A66B BALLFIELD	BALL FIELD	<2	02/04/92	NON PCB	XFMR OUT OF SERVICE
T246	01/10/92	150	RTE	876004810	13.8KV - 208Y/120V	PAD	BOCA CHICA	MH8 BLDG. A939	TACTS	<2	02/11/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T250	12/30/91	45	RTE	896005832	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB 106D OLS VAULT R/W 21	OLS VAULT	<2	02/05/92	NON PCB	
T251	12/19/91	45	RTE	896005838	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB218A FOR A935	AVIATION FUEL TRUCK LOADING STATION	<2	02/05/92	NON PCB	
	12/05/91	25	WESTINGHOUSE	88A461815	120/240	POLE	TRUMBO	POLE B191		<2	01/27/92	NON PCB	
T12	12/18/91	37.5	ALLIS CHALMERS	139599	13.8KV - 120/240V	POLE	TRUMAN	POLE C113 FORT	FORT	<2 <2	02/04/92	NON PCB	
T38	12/13/91	37.5	UPTEGRAFF	W-95402	2.4KV - 120/240V	POLE	TRUMAN	POLE 54, BLDG. 1323/58,249,	BEACH HOUSE BATHROOMS BY TENNIS COURS;	<2 <2	01/23/92	NON PCB	BAN BROKEN ON XFMR
T25	12/11/91	75	CENTRAL MALONEY	1822712-6	2.4KV - 120/240V	POLE	TRUMAN	POLE 68, BLDG. 413, 518	MARRIED ENLISTED QUARTERS	<2 4.1	01/23/92	NON PCB	
T10	12/14/91	250	MCGRAW EDISON	832G525003	2.4KV - 480/277V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<2 <2	01/23/92	NON PCB	
T46	12/18/91	750	BALTEAU STANDARD, INC.	PRI0785	138KV - 480/277	PAD	TRUMAN	BLDG. 103	PLANNED - PHM; SUPPLY WAREHOUSE/STORAG	<2 <2	02/04/92	NON PCB	VALVE IS BROKEN AT BOTTOM
T141	12/15/91	50	GENERAL ELECTRIC	D631945-58Y	120/240V	POLE	NAVY HOSP.	POLE L7	SOQ	<2 <2	01/24/92	NON PCB	
T128.2	12/05/91	25	WESTINGHOUSE	84A263189	120/240	POLE	TRUMBO	POLE B35 A	BOQ	<2 <2	01/14/92	NON PCB	
T101	12/04/91	50	UPTEGRAFF	W-95392	120/240	POLE	TRUMBO	POLE B112	MEQ	<2 <2	01/14/92	NON PCB	XFMR LEAKING
T152.2	12/31/91	100	ALLIS CHALMERS	7412-6319293	4.16KV - 120/240V	PAD	BOCA CHICA	AT POLE A27, BLDG. A-734	AIMD; JET ENGINE SHOP	<2 <2	02/03/92	NON PCB	
T157.2	01/04/92	50	GENERAL ELECTRIC	F387286-63Y	13.2KV - 240/120V	POLE	BOCA CHICA	POLE A25, CABLE VISION AMP	CABLE VISION AMPLIFIER	<2 <2	02/03/92	NON PCB	
T158.2	01/04/92	50	GENERAL ELECTRIC	F392350-63Y	13.8KV - 240/120V	POLE	BOCA CHICA	POLE A22,BLDG.634,618,718,BALLFIE	MWR ENLISTED MENS CLUB; CHAPEL; ROICC/EDUCATIONAL	<2 <2	02/10/92	NON PCB	
T124.2	12/07/91	100	R.T.E.	861067760	13.8KV - 277V	PAD	TRUMBO	MH13, DOCK 2	DOCK 2	<2 <2	01/23/92	NON PCB	

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T186	01/05/92	225	GENERAL ELECTRIC	N012859TESA	4.16KV - 208Y/120V	PAD	BOCA CHICA	POLE A13, BLDG. A508	PUBLIC WORKS/MWR/NAVOSH	<2 <2	02/10/92	NON PCB	
T224	12/29/91	45	RTE	896005831	13.8/4.16KV - 208Y/120V	PAD	BOCA CHICA	ENG TEST STD. 969		<2 <2	02/05/92	NON PCB	
T8	12/18/91	750	R.E. UPTEGRAFF	932H84	13.8KV - 480/277V	PAD	TRUMAN	AT PB2, BLDG. 1350/51/52	E.M. BARRACKS - JTF4, EOD MU4; A/C BLDG.	<2 <2	02/06/92	NON PCB	
T252	12/19/91	45	RTE	896005838	13.8/4.16KV - 208Y/120	PAD	BOCA CHICA	PB218A FOR A935	AVIATION FUEL TRUCK LOADING STATION	<2 <2	02/05/92	NON PCB	
T13	12/14/91	750	RTE	886006449	13.8KV - 480Y/277V	PAD (G)	TRUMAN	BLDG. 1280 MN 115		<2 <2	01/23/92	NON PCB	
T165	12/30/91			1883-06		POLE	BOCA CHICA	POLE A92, PUMP	PUMP	<2 <2	02/04/92	NON PCB	NO NAME PLATE
T57	12/07/91	750	G & W	609-86-0021	138KV - 480/277V	PAD	TRUMBO	D3 - BLDG. B45	COAST GUARD STORAGE BUILDING	<25	01/23/92	NON PCB	
T1	12/14/91	3750	ESCO	2941615	13.8 KV - 2.4 KV	PAD	TRUMAN	MAIN SUBSTATION	MAIN SUBSTATION	<4	01/24/92	NON PCB	
T9.2	12/14/91	167	WESTINGHOUSE	64AA1893	2.4KV - 120/240V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<4	01/23/92	NON PCB	
T19	12/18/91	15	WESTINGHOUSE	66AA-4184	2.4KV - 120/240V	POLE	TRUMAN	POLE 16 FOR SB&TEQ	SB & TEQ	<4	02/04/92	NON PCB	
T29	12/13/91	75	CENTRAL MAHONEY	1822712-8	2.4KV - 120/240V	POLE	TRUMAN	POLE 66, BLDG. 504/5, 508/9	MARRIED ENLISTED QUARTERS	<4	01/23/92	NON PCB	
T39	12/18/91	300	T&E ELECTRIC SUPPLY CO.	11997	13.8KV 480/277V	PAD	TRUMAN	MH56, BLDG. 112	EOD MU4 ADMIN/STROAGE	<4	02/04/92	NON PCB	
T142	12/15/91	37.5	ALLIS CHALMERS	1674738	2.4KV - 120/240V	PAD	NAVY HOSP.	MHPB-L9, HOSP. VAULT	HOSPITAL VAULT; *O.O.S.	<4	01/24/92	NON PCB	XFMR OUT OF SERVICE
T142.1	12/15/91	37.5	ALLIS CHALMERS	1731574	2.4KV - 120/240V	PAD	NAVY HOSP.	MHPB-L9, HOSP. VAULT	HOSPITAL VAULT; *O.O.S.	<4	01/24/92	NON PCB	XFMR OUT OF SERVICE
T142.2	12/15/91	37.5	ALLIS CHALMERS	1730861	2.4KV - 120/240V	PAD	NAVY HOSP.	MHPB-L9, HOSP. VAULT	HOSPITAL VAULT; *O.O.S.	<4	01/24/92	NON PCB	XFMR OUT OF SERVICE

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T163	01/06/92	25	GENERAL ELECTRIC	867534YJLA	4.16KV - 120/240V	POLE	BOCA CHICA	POLE A93, BLDG. A419		<4	02/10/92	NON PCB	
T193.1	01/10/92	37.5	ALIS CHALMERS	7306-6000229	14.4KV - 120/240V	PAD	BOCA CHICA	MH6, BLDG. A964	GENERALY DYNAMICS SUPPLY	<4	02/11/92	NON PCB	
T228	12/31/91	300	SQUARE D	47162	13.8KV - 208Y/120V	PAD	BOCA CHICA	BLDG. A4011	NAVY REGIONAL MEDICAL CLINIC	<4	02/03/92	NON PCB	
T191.2	01/10/92	50	G.E.	H645579Y68	14.4KV - 120/240V	PAD	BOCA CHICA	BLDG. A978		<4 <2	02/11/92	NON PCB	
T9.1	12/14/91	167	WESTINGHOUSE		2.4KV - 120/240V	PAD	TRUMAN	SUB AT BLDG. 290	JTF4/CARIBROC	<5	01/23/92	NON PCB	
T31	12/13/91	37.5	CENTRAL MAHONEY	182271810	2.4KV - 120/240V	POLE	TRUMAN	POLE 60, BLDG. 500, 501	MARRIED ENLISTED QUARTERS	<5	01/23/92	NON PCB	SERIAL NUMBER HARD TO READ
T86	12/12/91	1500	R.E. UPTEGRAFF	83892	13.8KV - 480Y/277V	PAD	FLEMING KEY	AT POLE B185, DA ANIMAL CTR	DA ANIMAL CENTER	<5	01/27/92	NON PCB	
T89	12/12/91	37.5	T & R ELECTRIC		14.4KV - 120/240V	POLE	FLEMING KEY	POLE B15B		<5	01/27/92	NON PCB	UNABLE TO READ SERIAL NUMBER
T191.1	01/10/92	75	ALLIS CHALMERS	7351-6180592	14.4KV - 120/240V	PAD	BOCA CHICA	BLDG. A978		<5	02/11/92	NON PCB	
T193.2	01/10/92	37.5	ALIS CHALMERS	7306-6000231	14.4KV - 120/240V	PAD	BOCA CHICA	MH6, BLDG. A964	GENERALY DYNAMICS SUPPLY	<5	02/11/92	NON PCB	
T191	01/10/92	75	ALLIS CHALMERS		14.4KV - 240/120V	PAD	BOCA CHICA	BLDG. A978		<6	02/11/92	NON PCB	
T116	12/04/91	37.5	WESTINGHOUSE	61E2435	120/240	POLE	TRUMBO	POLE B76	MOQ	2.4 2	01/13/92	NON PCB	
T137.2	12/20/91					PAD	NAVY HOSP.	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	220 230	02/04/92	PCB	UNABLE TO READ NAME PLATE
T243.1	12/27/91	15	GENERAL ELECTRIC	9892797	4.16/2.4KV	POLE	BOCA CHICA	POLE A66B BALLFIELD	BALL FIELD	2300 2500	02/04/92	NON PCB	XFMR OUT OF SERVICE
T112	12/04/91	25	WESTINGHOUSE	61C7568	120/240	POLE	TRUMBO	POLE B60	MOQ	3 3.1	01/13/92	NON PCB	REPLACED BROKEN FUSE

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Table 4.5
Sampled Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE CHECKED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	LOCATION	LOCATION NAME	PPM	DATE LABELED	LABEL	COMMENTS
T177	01/06/92	50	GENERAL ELECTRIC	6585251	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A114, BLDG. A126(S)	PUBLIC WORKS STORAGE BUILDING	5.4 5.4	02/10/92	NON PCB	
T173.2	12/20/91	50	UPTEGRAFF	1883-05	4.16KV - 120/240V	PAD	BOCA CHICA	POLE A101, BLDG. A255	OPS QUICK TRANS	51 21 19	02/12/92	NON PCB	NO NAME PLATE
T74	12/05/91	100	GENERAL ELECTRIC	F122621-64P	14.4KV - 120/240V	POLE	TRUMBO	POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	510 520	01/14/92	PCB	
T6.2	12/14/91	25	WESTINGHOUSE	6008644	2.4KV - 120/240V	POLE	TRUMAN	POLE 83, BLDG. 230	CHAPEL	7.3 6.8	01/23/92	NON PCB	LEAKING AT BOTTOM
T176.1	01/06/92	75	ALIS CHALMERS	3169349	4.16KV - 120/240V	POLE	BOCA CHICA	A111, BLDG. A1318		8 8.1	02/10/92	NON PCB	
T91	12/12/91	5	GENERAL ELECTRIC	F498966-64P	120/240V	POLE	FLEMING KEY	POLE B171A	*O.O.S.	NO OIL IN XFMR	01/27/92	NON PCB	XFMR OUT OF SERVICE
T192	01/10/92	150	CENTRAL TRANSFORMER	2250-1	13.8KV - 277/480V	PAD	BOCA CHICA	PB 940, BLDG. A940	FRESH WATER PUMPHOUSE	PCB MFR	01/10/92	PCB	

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.
XFMR = Transformer.

Table 4.6
PCB-Contaminated Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T6	12/14/91	25	WESTINGHOUSE	6406314	2.4KV - 120/240V	POLE	TRUMAN		POLE 83, BLDG. 230	CHAPEL	KW158	20472	86	01/23/92	PCB
T73.1	12/05/91	167	GENERAL ELECTRIC	F122658-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW049	20379	93	01/14/92	PCB
T70	12/05/91	75	GENERAL ELECTRIC	F122615-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW045	20379	100	01/23/92	PCB
T239	12/27/91	5	GENERAL ELECTRIC	F498968-64P	120/240V	POLE	BOCA CHICA	XFMR CHANGED. REPLACED WITH G.E. L757404Y74AA ON 2/4/92.	POLE A87 GUARD STATION	GUARD STATION	KW336	20550	100	02/04/92	PCB
T70.2	12/05/91	75	GENERAL ELECTRIC	F122616-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW047	20379	110	01/23/92	PCB
T88	12/12/91	167	GENERAL ELECTRIC	F499030-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW125	20441	110	02/07/92	PCB
T88.2	12/12/91	167	GENERAL ELECTRIC	F499027-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW127	20441	110	02/07/92	PCB
T73	12/05/91	167	GENERAL ELECTRIC	F122659-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW048	20379	120	01/14/92	PCB
T88.1	12/12/91	167	GENERAL ELECTRIC	F499025-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW126	20441	120	02/07/92	PCB
T91.2	12/12/91	5	GENERAL ELECTRIC	F498967-64P	120/240V	POLE	FLEMING KEY	XFMR OUT OF SERVICE	POLE B171A	* O.O.S.	KW120	20441	120	01/27/92	PCB
T137	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW329	20534	120	02/04/92	PCB
T137.1	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW330	20534	120	02/04/92	PCB
T173.1	12/20/91	50	GENERAL ELECTRIC	6874429	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW320	20532	120	02/03/92	PCB
T168	01/05/92	25	GENERAL ELECTRIC	6877264	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW411	20585	130	02/10/92	PCB
T73.2	12/05/91	167	GENERAL ELECTRIC	F122657-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW050	20379	150	01/14/92	PCB
T143.3	12/15/91	50	GENERAL ELECTRIC	6874450	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW178	20471	150	01/24/92	PCB
T181.2	01/04/92	25	GENERAL ELECTRIC	B714665	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW399	20585	150	02/10/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

Table
PCB-Contaminated Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T181.1	01/04/92	25	GENERAL ELECTRIC	7300038	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW398	20585	160	02/10/92	PCB
T150	12/31/91	300	GENERAL ELECTRIC	E694290	13.2KV - 208Y/120V	PAD	BOCA CHICA		AT POLE A31, BLDG. A-727	BARRACKS VAQ-33/SUPPLY/WEAPONS	KW377	20583	190	02/03/92	PCB
T168.2	01/05/92	25	GENERAL ELECTRIC	6880532	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW413	20585	190	02/10/92	PCB
T207	12/19/91	150	GENERAL ELECTRIC	G856447	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE EQUIPMENT BUILDING; SEWAGE EJECTOR	KW317	20532	220	02/05/92	PCB
T190.1	01/10/92	300	GENERAL ELECTRIC	F646359-67P	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG A980	AIMD	KW467	20646	230	02/11/92	PCB
T139.1	12/15/91	50	GENERAL ELECTRIC	6948908	2.4KV - 120/240V	POLE	NAVY HOSP.	NO NAME PLATE	POLE L3, TENNIS CRTS, BLDG LD	TENNIS COURTS; BUILDING LD; WATER PUMPS	KW166	20471	240	01/24/92	PCB
T143.2	12/15/91	75	GENERAL ELECTRIC	8674251	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW177	20471	260	01/24/92	PCB
T144	12/15/91	750	GENERAL ELECTRIC	G852379	2.4KV - 208Y/120V	PAD	NAVY HOSP.		MH PB-L8, MAIN BLDG.	MAIN BUILDING OFFICES	KW171	20471	280	01/24/92	PCB
T18	12/18/91	50	GENERAL ELECTRIC	D627551-57Y	2.4KV - 120/240V	POLE	TRUMAN		POLE 107, BLDG. 795, 284, 261, 149	DRMO SURPLUS MATERIAL STORAGE/OFFICE; STOREHOUSE; STOREHOUSE, HAZARDOUS	KW186	20530	290	02/04/92	PCB
T11	12/14/91	50	GENERAL ELECTRIC	B760752	2.4KV - 120/240V	POLE	TRUMAN		POLE 87, SBALL FIELD	SOUTH BALL FIELD	KW155	20468	330	01/23/92	PCB
T74.1	12/05/91	100	GENERAL ELECTRIC	F122620-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW052	20379	340	01/14/92	PCB
T74.2	12/05/91	100	GENERAL ELECTRIC	F122622-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW053	20379	380	01/14/92	PCB
T205	12/20/91	100	GENERAL ELECTRIC	F122619-64P	14.4KV - 120/240V	PAD	BOCA CHICA	FUSE BROKEN - POWER WAS NOT RESTORED	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW323	20532	420	02/05/92	PCB
T205.1	12/20/91					PAD	BOCA CHICA	NO NAME PLATE	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW324	20534	440	02/05/92	PCB
T5.2	12/18/91	25	GENERAL ELECTRIC	B721385	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW198	20531	450	02/04/92	PCB
T198.1	12/27/91	50	WESTINGHOUSE	65D18187	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW334	20550	470	02/04/92	PCB
T198.2	12/27/91	50	WESTINGHOUSE	65D18179	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW335	20550	470	02/04/92	PCB
T198	12/27/91	50	WESTINGHOUSE	65D18178	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW333	20550	480	02/04/92	PCB
T5	12/18/91	25	GENERAL ELECTRIC	B721402	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW196	20531	490	02/04/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

Table 4.7
PCB Item Transformers
January/February 1992
Boca Chica Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR. NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T151	12/31/91	150	GENERAL ELECTRIC	E694289	13.8KV 208Y/120V	PAD	BOCA CHICA		POLE A29, BLDG. A-726	PERSONNEL SUPPORT (ADMIN BLDG.)	KW378	20583	530	02/03/92	PCB
T5.1	12/18/91	25	GENERAL ELECTRIC	B721380	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW197	20531	540	02/04/92	PCB
T181	01/04/92	25	GENERAL ELECTRIC	7301931	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW397	20584	570	02/10/92	PCB
T70.1	12/05/91	100	GENERAL ELECTRIC	F122617-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW046	20379	600	01/23/92	PCB
T33	12/13/91	37.5	GENERAL ELECTRIC	B457878	2.4KV - 120/240V	POLE	TRUMAN	LEAKING AT BOTTOM	POLE 38, BLDG. 1370/71, 1364	MARRIED OFFICERS QUARTERS	KW133	20451	620	01/23/92	PCB
T143.1	12/15/91	75	GENERAL ELECTRIC	8674247	W.RKV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW176	20471	670	01/24/92	PCB
T178	01/06/92	75	GENERAL ELECTRIC	B793410	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW425	20586	750	02/10/92	PCB
T17	12/18/91	15	WESTINGHOUSE	3390782	120/240V	POLE	TRUMAN		POLE 99, STREET LITES	STREET LIGHTS	KW182	20530	770	02/04/92	PCB
T143	12/15/91	75	GENERAL ELECTRIC	8675086	2.4KV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW175	20471	860	01/24/92	PCB
T178.2	01/06/92	75	GENERAL ELECTRIC	B783012	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW427	20586	910	02/10/92	PCB
T173	12/20/91	25	WESTINGHOUSE	3394568	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW319	20532	5,900	02/03/92	PCB
T227	12/31/91	500	NIAGARA	35597	13.8KV - 480Y/277Y	PAD	BOCA CHICA		PB 208A, BLDG. A651	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW374	20583	22,000	02/03/92	PCB
T7	12/11/91	300	STANDARD	148902	2.4KV - 208Y/130V	PAD	TRUMAN		AT P89, BLDG. 438	ENLISTED MENS BARRACKS - AIR FORCE 6947TH	KW108	20440	360,000	01/23/92	PCB
T229	12/31/91	500	NIAGARA	31426	13.8KV - 480Y/277V]	PAD	BOCA CHICA		BLDG. A650	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW376	20583	420,000	02/03/92	PCB
T236	12/19/91	300	GENERAL ELECTRIC	F956769	4.16KV - 208Y/120V	PAD (G)	BOCA CHICA		PB220, BLDG. 244	OPERATIONS CONTROL TOWER/NAVAL OCEANOGRAPHY COMMAND/ TELEPHONE ADMIN	KW308	20531	620,000	02/03/92	PCB
T192	01/10/92	150	CENTRAL TRANSFORMER	2250-1	13.8KV - 277/480V	PAD	BOCA CHICA		PB940, BLDG. A940	FRESH WATER PUMPHOUSE				01/10/92	MFR PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.
TR. NO. = Transformer number.

CHAPTER 5. QUALITY CONTROL

Quality control for the field sampling was maintained in accordance with CH2M HILL standard procedures and the requirements in the Statement of Work issued for CTO 0025. When field samples were taken, each sample container was labeled with the date, time the sample was collected, a unique sample identification number, and the transformer number from which the sample was obtained. The NSA Key West transformer number was written on the transformer at the time of sampling. Nameplate data were checked and recorded at this time. A chain of custody log showing sample and transformer numbers was kept for all samples.

Most samples were obtained using the "drill and tap" method because of corrosion of fill plugs and tap hatches. An access hole was drilled into the equipment or transformers, a sample was collected, and a screw was used to seal the hole. One-time-use disposable syringes and tubing were used to obtain samples. Equipment blank samples were packaged with all laboratory shipments to ensure the integrity of the samples. No contamination was detected in the equipment blanks. Laboratory procedures were in accordance with CH2M HILL standards and American Society for Testing Materials (ASTM) D-4059, *Analysis of PCBs in Insulating Liquids by Gas Chromatography*. Laboratory data were correlated with field notes using the sample and transformer numbers. Labels were installed using the correlated data. Before the transformers were labeled, the sampling crew rechecked the transformer number and serial number.

A duplicate sample was taken every 10 samples. The results of the duplicate sample comparison are provided in Table 5-1, Quality Control Duplicate Samples. Only one quality control problem was encountered during the project, the duplicate samples for transformer T173.2 were out of tolerance. To compound the problem, one sample was below 50 ppm and the other was above 50 ppm, the limit for PCB contamination. A third sample was obtained from this transformer and confirmed that its PCB concentration was below the PCB contamination level.

Table 5-1
Quality Control Duplicate Samples

Transformer Samples

Date	Trans No.	Sample No. 1	No. 1 ppm	Sample No. 2	No. 2 ppm
12/04/91	T112	KW025	3	KW059	3.1
12/04/91	T116	KW029	2.4	KW058	2
12/05/91	T128.1	KWO41	<2	KW060	<2
12/05/91	T74	KW051	510	KW061	520
12/07/91	T124	KWO91	<2	KW092	<2
12/11/91	T25	KWO98	<2	KW099	<2
12/12/91	T92	KW121	<2	KW122	<2
12/13/91	T38	KW131	<2	KW130	<2
12/14/91	T10	KW140	<2	KW141	<2
12/14/91	T13	KW150	<2	KW151	<2
12/14/91	T6.2	KW160	7.3	KW161	6.8
12/15/91	T141	KW169	<2	KW170	<2
12/16/91	T12	KW190	<2	KW191	<2
12/18/91	T46	KW302	<2	KW303	<2
12/18/91	T8	KW180	<2	KW181	<2
12/18/91	T252	KW310	<2	KW311	<2
12/20/91	T137.2	KW331	220	KW332	230
12/20/91	T173.2[a]	KW321	51	KW322	21
12/27/91	T243.1	KW340	2300	KW341	2500
12/29/91	T224	KW350	<2	KW351	<2
12/30/91	T165	KW360	<2	KW361	<2
12/31/91	T152.2	KW381	<2	KW382	<2
12/31/91	T157.2	KW372	<2	KW373	<2
01/04/92	T158.2	KW391	<2	KW392	<2
01/05/92	T186	KW404	<2	KW405	<2
01/06/92	T176.1	KW430	8	KW431	8.1
01/06/92	T177	KW420	5.4	KW421	5.4
01/10/92	T189	KW480	480	KW481	470
01/10/92	T191.2	KW471	<4	KW472	<2

Table 5-1 (Continued)

Transportation Equipment Samples

Date	USN No.	Sample No. 1	No. 1 ppm	Sample No. 2	No. 2 ppm
12/13/91	56-15261	KW229	<2	KW230	<2
12/13/91	96-38055	KW219	<2	KW220	<2
12/13/91	N 13 10386	KW210	<2	KW221	<2
12/14/91	96-43134	KW250	<2	KW251	<2
12/14/91	97-34657	KW240	<2	KW249	<2
12/15/91	82-04615	KW269	<2	KW270	<2
12/15/91	N 13 95373	KW259	<2	KW260	<2
12/20/91	14-16615	KW299	<2	KW300	<2
12/20/91	95-22190	KW290	<2	KW291	<2
12/20/91	N 13 01958	KW280	<2	KW281	<2
01/07/92	N 13 37686	KW441	<2	KW442	<2
01/11/91	N 13 37685	KW489	<2	KW490	<2

Spare Transformers

Date	Trans Serial No.	Sample No. 1	No. 1 ppm	Sample No. 2	No. 2 ppm
01/07/92	811142375	KW450	<2	KW451	<2
01/07/92	77ZD147-001	KW461	<2	KW462	<2
01/11/92	K260056Y71A	KW501	<4	KW502	<4
01/11/92	80A171597	KW510	<2	KW511	<2
01/12/92	AG07140301	KW521	10	KW522	9

Note:

[a]Transformer T173.2 was sampled again on 02/04/92 with sample number KW536 with a result of 19 ppm.

CHAPTER 6. PCB TRANSFORMERS AT NAS KEY WEST - NEESA FORMAT

The data on PCB-contaminated and PCB-item transformers shown in Tables 4-6 and 4-7 were assembled in SOUTHNAVFACENGCOM's standard NEESA format and are presented in Table 6-1, 1992 PCB Inventory. The data in NEESA format is also appended in electronic format to the end of this report. All available data on locations and serial numbers from the inspection and sampling of electrical transformers is included in Table 6-2, 1989 PCB Inventory.

One 5.25" double-sided, high-density diskette and one 3.5" double-sided, high-density diskette are appended to the end of this report. These diskettes are both labeled "1992 PCB SAMPLING-NAS KEY WEST, FLORIDA." The data on these diskettes is in Lotus 123 spreadsheet format. The diskettes contain the following two files:

File Name	Description
KWNEES.WK1	PCB-Contaminated and PCB-Item Transformers in NEESA Format
KWSAM.WK1	Original Sampling Data File

The original sampling data file contains all of the data collected during the sampling activities. It shows sample numbers and laboratory reference numbers. This data also contains comments on the condition of equipment.

Table 6.1
1992 PCB Inventory
NAS Key West, Key West, Florida

UIC:
CONTACT:
PHONE:

ID NUMBER/LOCATION	QTY.	T/C D/O	TYPE S/L	TESTED PPM	XFRMR KVA	KG	GALLONS	CUBIC FT SOLIDS	LOCATION CODE	REG/PROJ CODE	DISP COST ($000)	RESPONSIBLE UIC
6406314 T6 POLE 83, BLDG 230	1	T	L	86	25	49	15					
F122658-64P T73.1 POLE B25	1	T	L	93	167	166	51					
F122615-64P T70 POLE B21	1	T	L	100	75	130	40					
F498968-64P T239 POLE A87 GUARD STATION	1	T	L	100	5	26	8					
F122616-64P T70.2 POLE B21	1	T	L	110	75	130	40					
F499030-64P T88 AT POLE B192 BLDG. 1341	1	T	L	110	167	166	51					
F499027-64P T88.2 AT POLE B192 BLDG. 1341	1	T	L	110	167	166	51					
F122659-64P T73 POLE B25	1	T	L	120	167	166	51					
F499025-64P T88.1 POLE B192 BLDG. 1341	1	T	L	120	167	166	51					
F498967-64P T91.2 POLE B171A	1	T	L	120	5	26	8					
T137 TRANSFORMER VAULT, SERV. BLDG	1	T	L	120	?	?	?					
T137.1 TRANSFORMER VAULT, SERV. BLDG	1	T	L	120	?	?	?					
6874429 T173.1 POLE A101, BLDG. A255	1	T	L	120	50	85	26					
6877264 T168 POLE A74, BLDG. A227	1	T	L	130	25	49	15					
F122657-64P T73.2 POLE B25	1	T	L	150	167	166	51					
6874450 T143.3 MH PB-L9, X-RAY	1	T	L	150	50	85	26					
B714665 T181.2 BLDG A322 & A323	1	T	L	150	25	49	15					
7300038 T181.1 BLDG A322 & A323	1	T	L	160	25	49	15					
E694290 T150 AT POLE A31, BLDG. A727	1	T	L	190	300	273	84					
6880532 T168.2 POLE A74, BLDG. A227	1	T	L	190	25	49	15					
G856447 T207 BLDG. A1112, A1115	1	T	L	220	150	166	51					
F646359-67P T190.1 BLDG A980	1	T	L	230	300	273	84					
6948908 T139.1 POLE L3, TENNIS COURTS, BLDG LD	1	T	L	240	50	85	26					
8674251 T143.2 MH PB-L9, X-RAY	1	T	L	260	75	130	40					
G852379 T144 MH PB-L8, MAIN BLDG.	1	T	L	280	750	326	100					
D627551-57Y T18 POLE 107, BLDG 795, 284, 261, 149	1	T	L	290	50	85	26					
B760752 T11 POLE 87, SBALL FIELD	1	T	L	330	50	85	26					
F122620-64P T74.1 POLE B26	1	T	L	340	100	153	47					
F122620-64P T74.2 POLE B26	1	T	L	380	100	153	47					
F122619-64P T205 BLDG. A994	1	T	L	420	100	153	47					
T205.1 BLDG. A994	1	T	L	440	?	?	?					
B721385 T5.2 POLE 96, BLDG. 226	1	T	L	450	25	49	15					
65D18187 T198.1 BLDG. A979	1	T	L	470	50	85	26					
65D18179 T198.2 BLDG. A979	1	T	L	470	50	85	26					
65D18178 T198 BLDG. A979	1	T	L	480	50	85	26					
B721402 T5 POLE 96, BLDG. 226	1	T	L	490	25	49	15					
E694289 T151 POLE A29 BLDG. A-726	1	T	L	530	150	166	51					
B721380 T5.1 POLE 96 BLDG. 226	1	T	L	540	25	49	15					
7301931 T181 BLDG A322 & A323	1	T	L	570	25	49	15					
F122617-64P T70.1 POLE B21	1	T	L	600	100	153	47					
B457878 T33 POLE 38 BLDG. 1370/7, 1364	1	T	L	620	37.5	55	17					
8674247 T143.1 MH PB-L9 X-RAY	1	T	L	670	75	130	40					

Table 6.1
1992 PCB Inventory
NAS Key West, Key West, Florida
(Continued)

UIC:
CONTACT:
PHONE:

ID NUMBER/LOCATION	QTY.	T/C D/O	TYPE S/L	TESTED PPM	XFRMR KVA	KG	GALLONS	CUBIC FT SOLIDS	LOCATION CODE	REG/PROJ CODE	DISP COST ($000)	RESPONSIBLE UIC
B793410 T178 POLE A114 BLDG. A126(NW)	1	T	L	750	75	130	40					
3390782 T17 POLE 99 STREET LITES	1	T	L	770	15	33	10					
8675086 T143 MH PB-L9 X-RAY	1	T	L	860	75	130	40					
B783012 T178.2 POLE A114 BLDG. A126(NW)	1	T	L	910	75	130	40					
3394568 T173 POLE A101 BLDG. A255	1	T	L	5,900	25	49	15					
35597 T227 PB 208A BLDG. A651	1	T	L	22,000	500	260	80					
148902 T7 P89 BLDG. 438	1	T	L	360,000	300	273	84					
31426 T229 BLDG. A650	1	T	L	420,000	500	260	80					
F956769 T236 PB220 BLDG. 244	1	T	L	620,000	300	273	84					
2250-1 T192 PB940, BLDG. A940	1	T	L		150	166	51					

Table 6.2
1989 PCB INVENTORY

UIC:
CONTACT:
PHONE:

ID NUMBER/LOCATION	UNIT IN SERVICE	DATE REMOVED	STORED FOR: REUSE/	DISPOSAL	DATE STORED	DISPOSED OF	DATE TO HAULER	DRMO A/C/D	COMPANY LIQUID/	CODE SOLID	RETROFILLED Y/N	DATE
6406314 T6 POLE 83, BLDG 230												
F122658-64P T73.1 POLE B25												
F122615-64P T70 POLE B21												
F498968-64P T239 POLE A87 GUARD STATION												
F122616-64P T70.2 POLE B21												
F499030-64P T88 AT POLE B192 BLDG. 1341												
F499027-64P T88.2 AT POLE B192 BLDG. 1341												
F122659-64P T73 POLE B25												
F499025-64P T88.1 POLE B192 BLDG. 1341												
F498967-64P T91.2 POLE B171A												
T137 TRANSFORMER VAULT, SERV. BLDG												
T137.1 TRANSFORMER VAULT, SERV. BLDG												
6874429 T173.1 POLE A101, BLDG. A255												
6877264 T168 POLE A74, BLDG. A227												
F122657-64P T73.2 POLE B25												
6874450 T143.3 MH PB-L9, X-RAY												
B714665 T181.2 BLDG A322 & A323												
7300038 T181.1 BLDG A322 & A323												
E694290 T150 AT POLE A31, BLDG. A727												
6880532 T168.2 POLE A74, BLDG. A227												
G856447 T207 BLDG. A1112, A1115												
F646359-67P T190.1 BLDG A980												
6948908 T139.1 POLE L3, TENNIS COURTS, BLDG LD												
8674251 T143.2 MH PB-L9, X-RAY												
G852379 T144 MH PB-L8, MAIN BLDG.												
D627551-57Y T18 POLE 107, BLDG 795, 284, 261, 149												
B760752 T11 POLE 87, SBALL FIELD												
F122620-64P T74.1 POLE B26												
F122620-64P T74.2 POLE B26												
F122619-64P T205 BLDG. A994												
T205.1 BLDG. A994												
B721385 T5.2 POLE 96, BLDG. 226												
65D18187 T198.1 BLDG. A979												
65D18179 T198.2 BLDG. A979												
65D18178 T198 BLDG. A979												

Table 6.2
1989 PCB INVENTORY
(Continued)

UIC:
CONTACT:
PHONE:

ID NUMBER/LOCATION	UNIT IN SERVICE	DATE REMOVED	STORED FOR: REUSE/	DISPOSAL	DATE STORED	DISPOSED OF	DATE TO HAULER	DRMO A/C/D	COMPANY LIQUID/	CODE SOLID	RETROFILLED Y/N	DATE
B721402 T5 POLE 96, BLDG. 226												
E694289 T151 POLE A29 BLDG. A-726												
B721380 T5.1 POLE 96 BLDG. 226												
7301931 T181 BLDG A322 & A323												
F122617-64P T70.1 POLE B21												
B457878 T33 POLE 38 BLDG. 1370/7, 1364												
8674247 T143.1 MH PB-L9 X-RAY												
B793410 T178 POLE A114 BLDG. A126(NW)												
3390782 T17 POLE 99 STREET LITES												
8675086 T143 MH PB-L9 X-RAY												
B783012 T178.2 POLE A114 BLDG. A126(NW)												
3394568 T173 POLE A101 BLDG. A255												
35597 T227 PB 208A BLDG. A651												
148902 T7 P89 BLDG. 438												
31426 T229 BLDG. A650												
F956769 T236 PB220 BLDG. 244												
2250-1 T192 PB940, BLDG. A940												

Appendix A
Quality Assurance Project Plan

PCB Testing at the Naval Air Station
Key West, Florida

Prepared by:

CH2M HILL
7201 N.W. 11th Place
Gainesville, Florida 32605
904/331-2442

Part 1
Section 1.0

Quality Assurance Project Plan for

PCB Testing at the Naval Air Station, Key West, Florida

Prepared by:

CH2M HILL
7201 N.W. 11th Place
Gainesville, Florida 32605
904/331-2442

Prepared for:

Naval Facilities Engineering Command
(SOUTHNAVFACENGCOM)
2155 Eagle Drive
P. O. Box 10068
Charleston, SC 29411-0068

CH2M HILL Field Manager	Date
CH2M HILL QA/QC Manager	Date
ABB Environmental Services Project Manager	Date
Engineer in Charge	Date

Section 2.0
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Quality Assurance Project Plan

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Section 3.0
Project Description

3.1 Site Identification and History

Site Name: Naval Air Station, Key West, Florida
Site Address: Bldg. A629, Key West, Florida, Monroe County, 33040-5000

3.1.1 Site History

The Naval Complex is located in Key West, Florida, and includes the Naval Air Station (NAS) and the Naval Regional Medical Clinic. Initial Naval operations commenced in 1823 to reduce pirate activities in South Florida. Naval Air Forces have been operating from Key West since the early 1900s, but principally developed during World War II. During the 1970s, a decreased emphasis on a strong military posture brought a tremendous reduction in the use of the facilities and in the military population in Key West. Operations initiated in 1979/1980 and future plans reversed the trend of reduced utilization in Key West. Establishment of the Caribbean Contingency Joint Task Force, the relocation of Tactical Electronics Warfare Squadron 33 and Attack Squadron 45 to Key West, and the planned assignment of the Patrol Hydrofoil Missile Ship squadron to Key West have changed the mission and the need for facilities.

3.1.2 Summary of the Historical Data

No polychlorinated biphenyl (PCB) historical data are available.

3.2 Project Scope and Purpose

3.2.1 Purpose of this Project

The purpose of this project is to collect and analyze oil samples for PCB's from all electrical transformers and transportation equipment with hydraulic fluid reservoirs located at the Naval Air Station, Key West, Florida.

3.2.2 Intended End Use of the Data:

___ Permit compliance
___ Feasibility study
___ Consent order compliance
___ Remedial action
___ Contamination assessment

___ Water quality data base
(Specify which data base)

_____

___ Facility operating report
X Other: The Navy will remove the PCB and PCB contaminated transformers and hydraulic fluids.

3.2.3 Project Schedule and Scope of Work

Beginning Date: October 7, 1991
Projected Ending Date: May 11, 1992

Major Project Tasks		
	Specific Project Activity	Scheduled Date
1.	Preparation of Sample Analysis Plan (SAP), Health and Safety Plan (HASP) and Schedule of Proposed Power Outages (SOPPO)	October 7, 1991 - December 16, 1991
2.	Transportation Equipment and Electrical Transformer Sampling and Analysis	December 16, 1991 - February 28, 1992
3.	Preparation of the Final Report	February 28, 1992 - May 11, 1992

3.3 Project Organization

3.3.1 Field Operations

The field operations for this project are sampling of transformers which will be conducted by an independent electrical subcontractor. CH2M HILL will handle custody of transformer samples and sampling and custody of transportation equipment hydraulic fluids the field Comprehensive QA Plan (CompQAP) No. 910036G (Department of Environmental Regulations [DER] approval pending).

The organization and duties of the field personnel are described in Section 4, pages 1 to 8, of the field CompQAP (DER approval pending).

3.3.2 Laboratory Analytical Work

The Laboratory analytical work will be performed by CH2M HILL, Montgomery, Alabama, using the Laboratory Comprehensive QAP No. 87212G.

The Laboratory organization and personnel duties are described in Section 4, pages 1 to 6 of the laboratory CompQAP No. 87212G, revised October 17, 1990.

3.3.3 Project Organization

Refer to Figure 3.1 for the specific organization of this project.

3.3.4 Modifications or Additions

The following personnel and descriptions of their duties are not included in the referenced laboratory and field CompQAPs:

A. Field Personnel

1. Russell Goff - Lead Sample Technician
2. Gregory Ford - Sample Technician
3. Carl Patterson - Sample Technician

B. Laboratory Personnel:

1. Thomas Emenhiser

3.4 Project Objectives

3.4.1 Data Quality Objectives

The standards criteria outlined in DER Rule 17-160.520 are the detection limit criteria for this project. The detection limits reported for this project shall at least meet, or be lower than, these standards.

___ The data quality objectives for this project are the routine Quality Assurance (QA) targets listed in the laboratory CompQAP.

___ The minimum detection limits to be achieved for this study differ from the routine detection limits specified in the laboratory CompQAP and are included as a part of Table 3.1.

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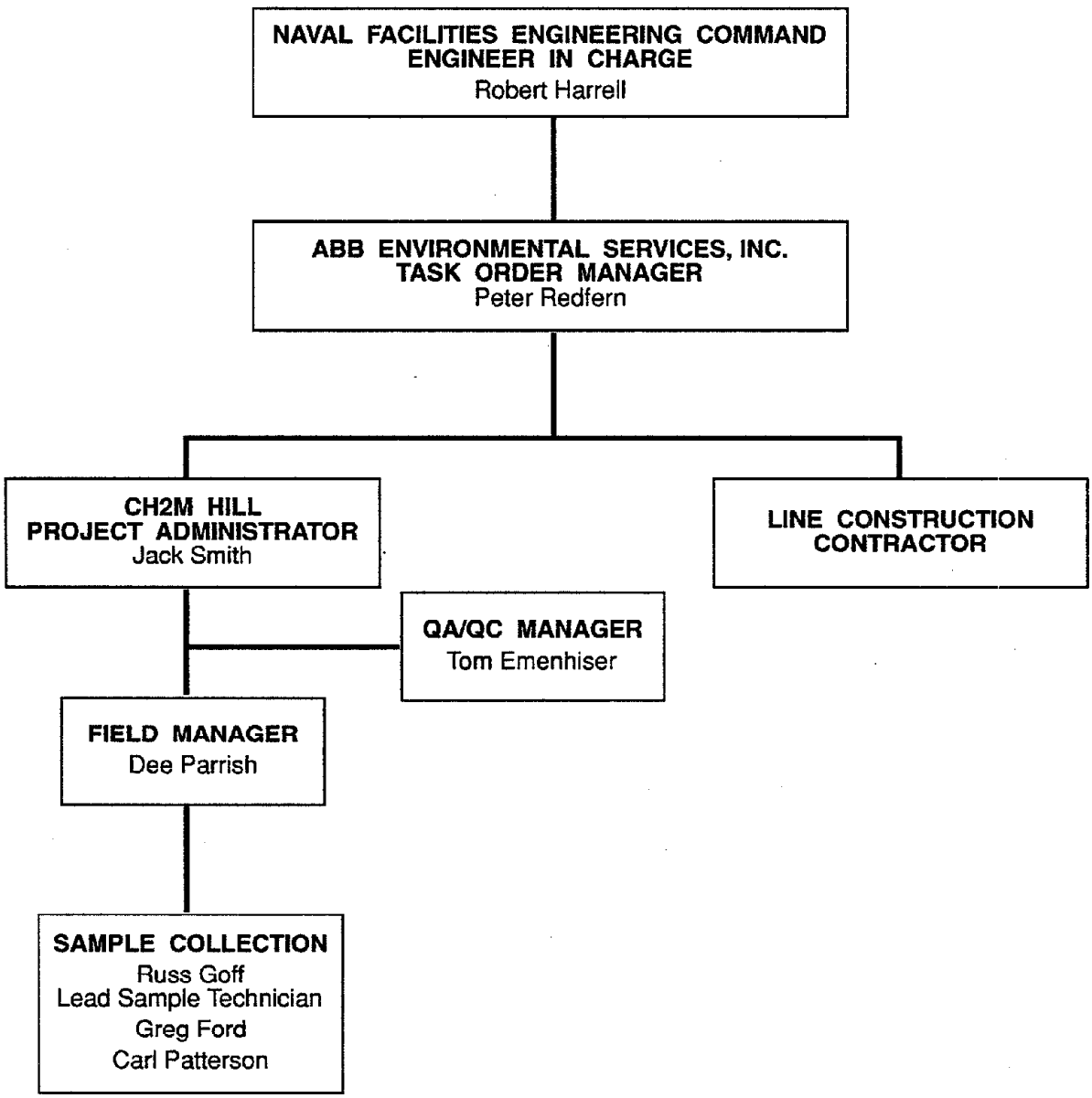

FIGURE 3-1.
Project Organization.

Table 3.1
Method Identification and QA Objectives

Laboratory Name: CH2M HILL, Montgomery, AL CompQAP #: 87212G

Method Number	Matrix	Component	CompQAP Section Number	CompQAP Rev. Date	CompQAP Page Number	Precision*	Accuracy*	RL (ppm)
ASTM D 4059	Oil	PCBs	NA	NA	NA	ID	ID	5

*These values need to be completed if the Data Quality Objectives stated in the project description are different from the routine QA objectives cited in the CompQAP or are not included in the CompQAP.

ID = Insufficient Data--Precision and accuracy data will be generated during project execution; insufficient data exists for Navy specified method.
RL = Reporting Limit
NA = Not Applicable

X The precision and accuracy requirements differ from the routine targets specified in the laboratory CompQAP and are included as a part of Table 3.1.

3.4.2 Proposed Samples for Project

a. See Table 3.2 of this section for a summary of the sampling and analysis activities.

b. See Figures 3.2 and 3.3 for maps of the project site.

3.4.3 QA Targets for Precision, Accuracy, and Minimum Detection Limits

a. Field Analytical Measurements

Not Applicable.

b. Laboratory Analyses

Laboratory analyses to be performed by CH2M HILL, Montgomery, Alabama are listed on Table 3.1 by specific citation.

Table 3.2
Proposed Samples for the Project
(Summary)

Frequency	Sample Matrix	Sample Source	Analytical Method Number[a]	Number of Samples	Quality Control Summary				
					FB	TB	EB	FD	Other
Once	Oil	Transformers	ASTM D 4059	430	NA	NA	22	43	
Once	Oil	Transportation Equipment	ASTM D 4059	80	NA	NA	4	8	

[a]EPA *Methods for Chemical Analysis of Water and Wastes*, Revised March 1983, U.S.EPA.
SM *Standard Methods for the Examination of Water and Waste Water*, 16th Ed., 1985.
EPA procedures modified for Contract Laboratory Program.

FB - Field Blank
TB - Trip Blank
EB - Equipment Blank
FD - Field Duplicate
NA - Not Applicable

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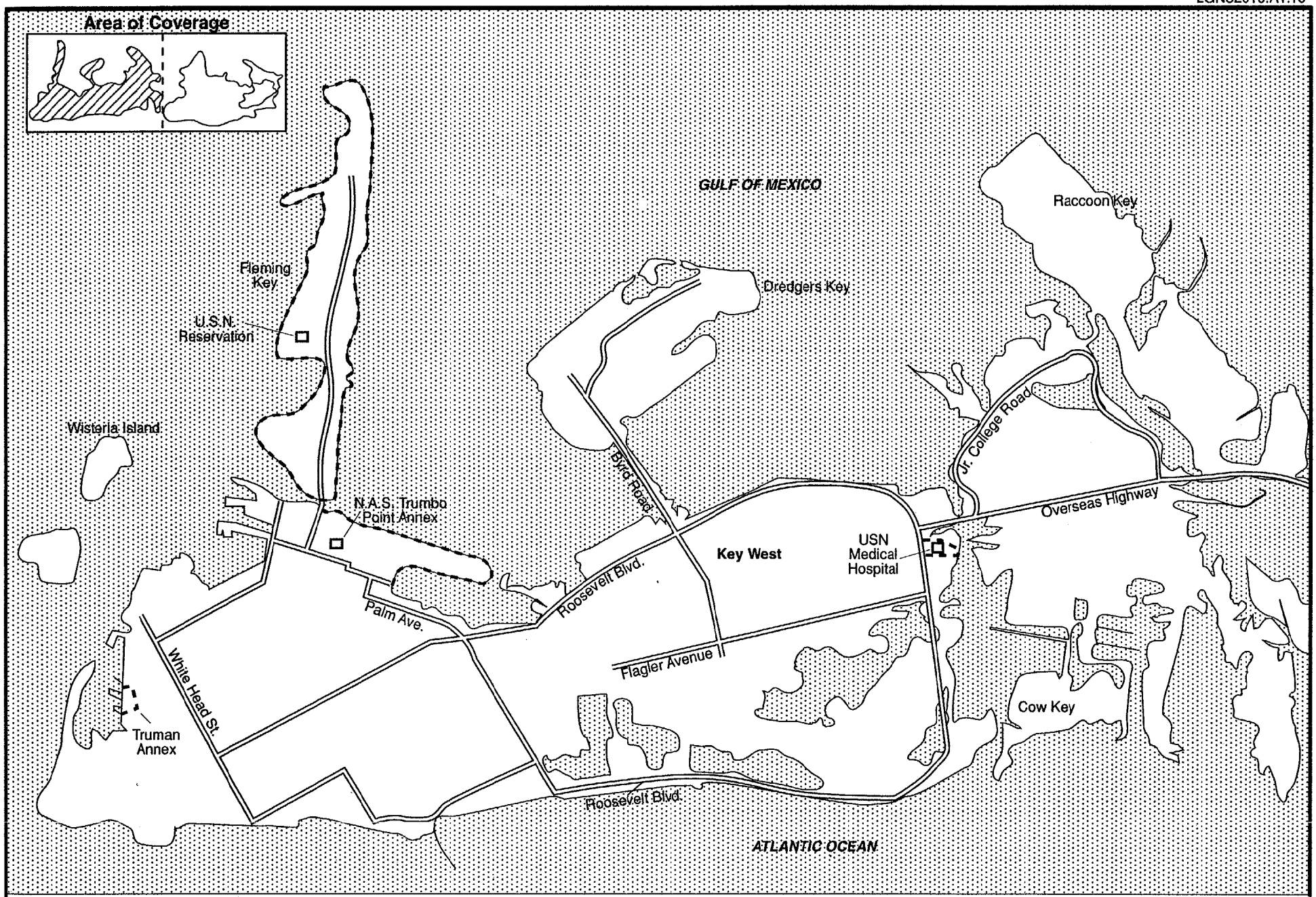

Scale in Feet
0 3,000 6,000

N

Legend
- - - - - Sampling Sites

Figure 3-2.
Sampling Sites, Key West.

CH2M HILL

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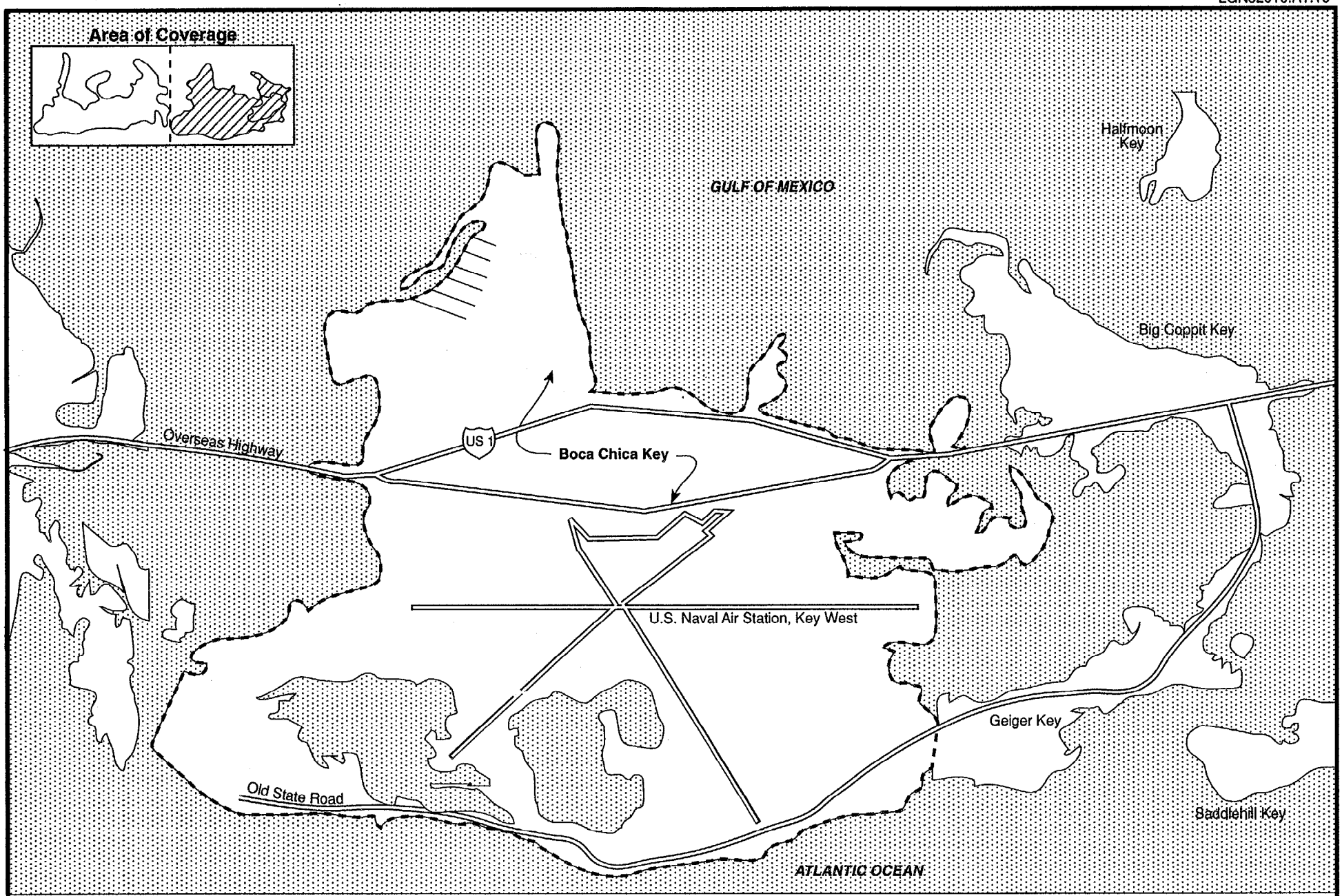

Scale in Feet

0 3,0 6,000

N

Legend

- - - - - Sampling Sites

Figure 3-3.
Sampling Sites, Boca Chica Key

CH2MHILL

Section 4.0
Field Procedures and Quality Control

CompQAP citations in this section refer to field CompQAP No. 910036G (Approval Pending) unless otherwise specified.

4.1 Sampling Equipment

Equipment to be used for this project is not addressed in the field CompQAP and will include:

Equipment Description	Construction Materials	Use
1. Disposable Syringes	Plastic	Sample Collection
2. Sample Collection Tubes	Plastic	Sample Collection

4.2 Sampling Protocols

Procedure for Collecting Oil Samples from Distribution Transformers

General

- All applicable electrical safety standards, including but not limited to the *Army Corps of Engineers Safety* manual and the Rural Electrification Administration (REA) safety requirements for work on high voltage electrical equipment, will be strictly adhered to.

- NO OIL SAMPLES WILL BE TAKEN FROM ENERGIZED TRANSFORMERS OR OTHER ENERGIZED ELECTRICAL EQUIPMENT. In-service electrical equipment (equipment connected to a source of electrical energy) will be considered energized unless and until it is grounded using approved grounding methods and equipment.

- All transformer oil will be considered contaminated by PCBs and will be treated accordingly. Extreme care will be exercised during sampling operations to avoid releasing oil into the environment.

  - For pole mounted equipment extreme care must be exercised in opening the transformer tank. Tap covers, oil fill plugs, or oil level plugs should be opened slowly to determine if the oil level is above the plug. If seeping occurs, **immediately** tighten the plug or secure the cover, and wipe all oil that has seeped from the transformer. Dispose of wiping cloths in the contaminated

rags container. If oil is spilled on the ground, the spill procedure will be implemented immediately.

- For pole mounted transformers, if the sample is taken by drilling a hole into the tank, care must be taken to drill into the air space above the oil. The air space will be above the secondary bushings and below the top sealing ring on the transformer. The oil level can often be determined by lightly tapping on the tank. The hole should be drilled as close as is practical to the top sealing ring. If a hole is to be drilled in a transformer, a power screw driver with the sealing screw installed will be readily available to the person drilling the hole. If a hole is inadvertently drilled below the oil level, the sealing screw will be **immediately** installed in the hole to stop the leak. All oil will be cleaned from the transformer and wiping cloths will be placed in the contaminated rags container. If oil is spilled on the ground, the spill procedure will be implemented immediately.

- For transformers mounted at ground level, drip pans and containers will be placed to collect any spilled oil during sampling. Plastic sheeting will be taped to the transformer below oil fill plugs, oil level plugs or bayonet fuses to channel any seeping oil into the oil containers. All plugs shall be removed **slowly** to check for seepage. If seepage occurs, immediately tighten the plug and wipe the oil clean. Dispose of wiping cloths in the contaminated rags container.

- To prevent a release of oil when withdrawing a bayonet fuse from a padmounted transformer, **slowly** withdraw the fuse. A suitable container shall be in place before removing the fuse. A sheet of plastic shall also be taped to the transformer below the fuse to channel any oil into the container. The fuse shall be placed in the container in a fashion to prevent any oil from being released into the environment during sampling.

- Place a drip pan under the sampling valve when sampling transformers. The valve cover cap or plug is then removed and checked for seepage. **Immediately** re-install the cover if the valve leaks with it removed. After ensuring that the cover is tight and no leakage is occurring, wipe any oil that seeped from the transformers, dispose of the wiping cloths in the contaminated rags container, note the location and proceed to the next transformer. If the valve is still leaking, leave the drip pan in place and **immediately** report the transformer to the public works officer. If no seepage is detected, **slowly** open the valve and re-install the cover. The valve stem must also be inspected

for seepage after the valve is closed. If seepage occurs, carefully tighten the valve to try to minimize the seepage. Leave the drip pan in place and **immediately** report the transformer to the public works officer.

Overhead Distribution Transformers

1. Position the overhead bucket truck next to the nameplate. Read and record the manufacturer, size, voltage and **manufacturer's serial number.**

   - Attach a PCB label to the transformer if the manufacturer's nameplate says that it contains ASKERAL, INERTINE or PCBs. The pole number and location will be recorded on the data sheet. No sample will be taken.

   - If the manufacturer's nameplate says that the transformer contains no PCB's OR NON PCB, record the pole number and location on the data sheet. Attach a NON PCB label to the transformer. No sample will be taken.

2. De-energize the transformer using the transformer.

3. Visually inspect the outside of the transformer for corrosion or leaks.

4. Install any electrical coverup equipment needed to ensure the safety of the work area around the transformer.

5. Test the transformer **secondary** for voltage.

6. Install grounds on the primary (high voltage) side of the transformer.

7. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third.

   - If the transformer has a "tap" cover on the top of the transformer, remove it for sampling.

   - If a fill plug or oil level plug is available, remove it if possible. Proper tools such as proper sized combination wrench, adjustable end wrench, or a ratchet and socket, will be used. If necessary, tools will be decontaminated by wiping all oil from them and placing the wiping cloth in the contaminated rags container.

- If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

- If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

8. Insert the sampling tube into the transformer and draw a 20 to 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container. Install the cap on the sample container. Place the syringe and tube in the contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

9. Close the transformer. Replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil from the transformer and place the wiping cloth in the contaminated rags container.

10. Remove electrical grounds for equipment.

11. Remove electrical coverup equipment.

12. Energize the transformer.

13. Record the pole number and the location on the data sheet.

14. Place the sample in the sample containment container.

Overhead Transformers Installed in Vaults, Electrical Equipment Room, and Ground Mounted Unit Substations

1. Unlock the vault or substation area and note the location of bare energized conductors. Before de-energizing the transformer(s), using care to remain a safe distance from energized parts, read and record the nameplate data from the transformer. Manufacturer, size, voltage and **manufacturer's serial number** will be recorded.

   - If the manufacturer's nameplate says that the transformer/transformers contain ASKERAL or INERTINE, attach a PCB label to the transformer(s). The pole number and location will be recorded on the data sheet. No sample will be taken.

- If the manufacturer's nameplate says that the transformer contains no PCB's NON PCB, record the number and location on the data sheet. Place a NON, PCB label on the transformer. No sample will be taken.

- If no sample is taken, lock the vault or substation enclosure and proceed to the next location.

2. Visually inspect the outside of the transformer for signs of corrosion or leaks.

3. De-energize the transformer.

4. Test the transformer **secondary** for voltage.

5. Ground the transformer(s).

6. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third. Place containers or drip pans around the area to be sampled to catch any oil that inadvertently escapes during sampling.

   - If the transformer has a sampling valve, use a funnel and the sample container to obtain the sample. If the valve is leaking or shows evidence of prior leaking, **do not open it.**

   - If the transformer has a "tap" cover on the top of the transformer, remove it for sampling.

   - If a fill plug or oil level plug is available, remove it if possible. Proper tools, such as proper sized combination wrench, adjustable end wrench, or a ratchet and socket will be used. If necessary, tools will be decontaminated by wiping all oil from them and placing the wiping cloth in the contaminated rags container.

   - If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

   - If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

7. If the transformer does not have a sampling valve, insert the sampling tube into the transformer and draw a 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container and install the cap on the sample container. Place the syringe and tube in the

contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

8. Close the transformer. Close the sampling valve, replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil clean and place the wiping cloth in the contaminated rags container.

9. Remove electrical grounds from the transformer.

10. Remove electrical coverup equipment.

11. Energize the transformer.

12. Record the pole number and the location on the data sheet.

13. Place the sample in the sample containment container.

Padmounted or Underground Residential Distribution (URD) Transformers

1. Open the access door and note the location of bare energized conductors. Before de-energizing the transformer(s), using care to remain a safe distance from energized parts, read and record the nameplate data from the transformer. Manufacturer, size, voltage and **manufacturer's serial number** will be recorded.

   - If the manufacturer's nameplate says that the transformer/transformers contain ASKERAL or INERTINE, attach a PCB label to the transformer. The pole number and location will be recorded on the data sheet. No sample will be taken.

   - If the manufacturer's nameplate says that the transformer contains no PCBs or NON PCB, record the number and location on the data sheet. Attach a NON PCB label to the transformer. No sample will be taken.

   - If no sample is taken, record the pole number and the location on the data sheet. Lock the vault or substation enclosure and proceed to the next location.

2. Visually inspect the outside of the transformer for signs of corrosion or leaks.

3. De-energize the transformer.

4. Test the transformer **secondary** for voltage.

5. Ground the transformer.

6. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third. Place containers or drip pans around the area to be sampled to catch any oil that inadvertently escapes during sampling.

   - If the transformer has a sampling valve, use a funnel and the sample container to obtain the sample.

   - If the transformer has a bayonet fuse, **slowly** remove it with a container held under the fuse to catch any oil escapes. Place the fuse in a container to prevent any oil from escaping. The sample can be taken through the fuse holder using the tube and syringe.

   - If the transformer has a "tap" cover on the top of the transformer, remove it for sampling.

   - If a fill plug or oil level plug is available, remove it if possible. Proper tools, such as a proper sized combination wrench, adjustable end wrench, or a ratchet and socket will be used. If necessary, tools will be decontaminated by wiping all oil from them and placing the wiping cloth in the contaminated rags container.

   - If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

   - If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

7. If the transformer does not have a sampling valve, insert the sampling tube into the transformer and draw a 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container and install the cap on the sample container. Place the syringe and tube in the contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

8. Close the transformer. Close the sampling valve, replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil clean and place the wiping cloth in the contaminated rags container.

9. Remove electrical grounds from the transformer.

10. Remove electrical coverup equipment.

11. Energize the transformer.

12. Record the pole number and the location on the data sheet.

13. Place the sample in the sample containment container.

Procedure for Collecting Oil Samples from Transportation Equipment

1. A mechanic (to be supplied by the Navy) will first open the hydraulic fluid reservoir on the vehicle to be sampled.

2. The sampling technician will insert the sampling tube into the reservoir and draw a 40 ml sample with the disposable syringe. Holding the tube with a disposable paper towel, place the sample into the sample container. Place the syringe and tube in the contaminated equipment container and place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

3. The mechanic supplied by the Navy will then close the hydraulic fluid reservoir, wipe any oil clean, and place the wiping cloth in the contaminated rags container.

4. Record the Navy vehicle identification number on the data sheet.

5. Place the sample in the sample containment container.

4.3 Field Equipment Cleaning and Decontamination Procedures

Not Applicable.

4.4 Sample Containers

Sample containers will be provided by CH2M HILL Laboratories. Container preparation procedures are found in the laboratory CompQAP No. 87212G, Section 6, pages 1 to 13, revised October 17, 1990.

4.5 Preservation Protocols

None for PCBs in oil.

4.6 Sample Dispatch

Procedures for transporting the samples to the laboratory are listed in the field CompQAP Section 6, page 87 (Approval Pending).

4.7 Waste Disposal

After sampling has been completed, all generated wastes will be properly disposed of as PCB contaminated wastes by the Naval Air Station, Key West, Florida.

4.8 Sample Custody

Procedures for sample custody are found in the field CompQAP Section 7, pages 1 to 8, (Approval Pending).

Further discussions on field documentation and notebooks are included in the field CompQAP Section 7, pages 1 to 8.

4.9 Field Measurements

Not Applicable.

4.10 Field Calibration Procedures

Not Applicable.

4.11 Preventive Maintenance

Not Applicable.

4.12 Field Quality Control Checks and Routines to Assess Precision and Accuracy

The proposed schedule of field QC checks are summarized on Table 3.2 of Section 3.4.

4.13 Data Reduction, Validation, and Reporting

Field activities relative to this section are found in the field CompQAP Section 12, pages 1 to 4, (Approval Pending).

Section 5.0
Laboratory Procedures and Quality Control

References in this section refer to CH2M HILL Montgomery, AL, Laboratory CompQAP No. 87212G.

5.1 Laboratory Custody Procedures

Laboratory sample custody procedures and documentation are found in the laboratory CompQAP Section 7, pages 1 to 14, revised October 17, 1990.

5.2 Laboratory Analytical Procedures

5.2.1 Laboratory Glassware Cleaning Protocols

Refer to the laboratory CompQAP Section 8, pages 4 to 6, revised October 17, 1990.

5.3 Waste Disposal

Waste disposal practices in the laboratory are listed in the laboratory CompQAP Section 8, pages 6 to 7, revised October 17, 1990.

5.4 Calibration Procedures and Frequency

Laboratory calibration protocols are listed in the laboratory CompQAP Section 9, pages 1 to 33, revised October 17, 1990.

Project specific measurement and/or analytical equipment not mentioned in the above reference are as follows:

1. ASTM D 4059: Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography

Calibration procedures for the above measurement are outlined on Table 5.1.

5.5 Preventive Maintenance

Laboratory instrument preventative maintenance protocols are discussed in the laboratory CompQAP Section 10, pages 1 to 4, revised October 17, 1990.

5.6 Quality Control Checks, Routines to Assess Precision and Accuracy, and Calculation of Method Detection Limits

Table 5.1
Calibration for ASTM D 4059

Initial Calibration Summary

A. A mixture of Dicapthon (0.6 ng) and p,p'-DDE is injected at the beginning of initial calibration to demonstrate instrument sensitivity and establish relative retention times. A full scale Dicapthon peak must produce less than 4 percent detector baseline noise.

B. PCB 1242 is injected at the 50 ug/g equivalent level. Response factors will be developed for the PCB chromatographic peaks with RRT 11 to 146.

C. PCB 1254 is injected at the 50 ug/g equivalent level. Response factors will be developed for the PCB chromatographic peaks with RRT 47 to 232.

D. PCB 1260 is injected at the 50 ug/g equivalent level. Response factors will be developed for the PCB chromatographic peaks with RRT 70 to 528.

E. A mixture of PCB 1242, PCB 1254, and PCB 1260 at the 20 ug/g equivalent level each is injected. Total PCB is calculated for this sample using specific response factors previously developed:

from PCB 1242 (RRT 11 to 78),
from PCB 1254 (RRT 84 to 74),
and from PCB 1260 (RRT 203 to 528).

The PCB contribution provided by each chromatographic peak is tabulated and delivered. Future injections of this sample is used to evaluate continuing calibration.

Continuing Calibration Summary

The mixture of PCBs described above in the initial calibration is reinjected and reanalyzed after each ten samples and at the end of the analysis sequence. The total PCB calculated must be within 15 percent of the original value determined during initial calibration. The PCB contribution provided by each chromatographic peak is tabulated for inspection.

5.6.1 Laboratory Quality Control Measures

The types of laboratory control checks outlined on Table 5.2 will be used when analyzing samples for this project.

5.6.2 Routine Procedures to Assess Precision and Accuracy

Routine procedures to assess the Precision and Accuracy of laboratory parameters are found in the laboratory CompQAP Section 11, pages 7 to 9.

5.6.3 Method Detection Limits

Method Detection Limit determinations are discussed in the laboratory CompQAP Section 11, pages 10 to 12, revised September 21, 1990.

5.7 Data Reduction, Validation, and Reporting

Laboratory activities relative to this section are found in the laboratory CompQAP Section 12, pages 1 to 13, revised September 21, 1990.

Table 5.2
Laboratory QC Checks

Refer to Laboratory CompQAP No. 87212G for frequency and description of laboratory QC checks.

QC Check	Section No.	Page No.	Revision Date
1. Method Blanks	11	1	September 21, 1990
2. Matrix Spikes/Matrix Spikes Duplicates	11	3	September 21, 1990
4. QC Check Standards	11	5	September 21, 1990

Section 6.0
Quality Assurance Management

6.1 Corrective Actions

6.1.1 Field Corrective Action

When any spill occurs, CH2M HILL will minimize the spill and immediately notify Naval Air Station personnel. Naval Air Station personnel will be responsible for corrective action.

6.1.2 Laboratory Corrective Action

Protocols to initiate corrective actions by laboratory personnel are listed in the laboratory CompQAP No. 87212G, Section 13, pages 1 to 7, revised September 21, 1990.

ALL INVOLVED PARTIES WILL INITIATE ANY CORRECTIVE ACTION DEEMED NECESSARY BY DER.

6.2 Performance and Systems Audits

6.2.1 Field Activities

a. Routine performance and systems audits are discussed in the field CompQAP No. 910036G, Section 14, pages 1 to 17, (Approval Pending).

6.2.2 Laboratory Activities

a. Routine performance and systems audits are discussed in the laboratory CompQAP No. 87212G, Section 14, pages 1 to 5, revised September 21, 1990.

ALL INVOLVED PARTIES WILL CONSENT TO AUDITS BY DER IF DEEMED NECESSARY.

6.3 Quality Assurance Reports

6.3.1 Field Activities

Not Applicable.

6.3.2 Laboratory Activities

Routine laboratory QA reports are submitted to the laboratory manager quarterly.

Section 7.0
Resumes

7.1. Field Activities

Refer to CompQAP No. 910036G, Section 16, Approval Pending.

Additional (or new) resumes are as follows:

1. Russell Goff
2. Gregory Ford
3. Carl Patterson

7.2 Laboratory Activities

Refer to CompQAP No. 87212G, Section 16, pages 1 to 50, revised October 17, 1990.

Additional (or new) resumes are as follows:

1. Thomas Emenhiser

RUSSELL W. GOFF
Associate Chemist

Education

B.S., Chemistry, Emory University
(M.S., Environmental Engineering, University of Florida, in progress; projected date of completion, 1992)

Experience

Mr. Goff is a chemist in the Inorganic Department of Gainesville's Environmental Laboratory. He is responsible for the tracking and analysis of alkalinity, conductivity, calcium and total hardness, chloride, fluoride, ortho- and total phosphorus, phenols, silicas, hexavalent chromium, chlorine, and oil and grease. He has a working knowledge of the TrAACS 800 auto analyzer, the AAII, and the Dohrman DC 80 total organic carbon analyzer.

Special projects that Mr. Goff has worked on involved phosphorus characterization of soils, trihalomethane formation potentials, and purgeable organic carbon analysis.

As a laboratory assistant in the Department of Pharmacology, Emory University, Mr. Goff ordered products and equipment, handled and disposed of radioactive materials, and monitored levels of radioactivity in the lab.

Mr. Goff worked as a laboratory technician II at Akzo Pharmaceutical in Raleigh, North Carolina, where he conducted microtiter experiments on two coagulation protein projects. He was responsible for the inception and experimentation of the studies and for the statistical interpretation and reduction of the data. He also constructed graphs and charts for data presentation.

Membership in Professional Organizations

American Chemical Society
Florida Society of Environmental Analysts
Society of Environmental Engineers, Student Chapter

Honors

Dean's List
Gardner B. Allen Scholarship Recipient
Outstanding College Students of America

GREGORY A. FORD
Field Technician

Education

Sante Fe Community College

Experience

Mr. Ford has 4 years of experience in field activities to monitor hazardous and nonhazardous waste sites. He is an approved Level-D Site Safety Coordinator for all field activities such as groundwater monitoring; surface water, soil, and sediment sampling; and monitor well installation.

Mr. Ford has assisted in various stages of groundwater and soil monitoring. He was the field team leader for the monitoring program for McDill Air Force base and assisted in field activities for Robins Air Force Base. At a U.S. Department of Energy (DOE) site, he performed biota sampling and electroshocking of streams and ponds to identify the species of marine life that were present. In Florida, he was involved in the Peace River project for General Development Utilities, the Manatee County deep injection well project, and projects for the Englewood Water District, the Florida Sugar Cane League, Lake Worth Utilities, and the City of Delray Beach. He also assisted in surveying activities for the Florida Keys Aqueduct Authority.

Before joining CH2M HILL, Mr. Ford was employed with another major engineering firm in Florida. As a drilling rig operator, he was responsible for all phases of monitor well installation and completion. Major projects in which he was involved include monitoring sites at Patrick Air Force Base, Cape Canaveral, and Tyndall Air Force Base, Florida.

Mr. Ford also worked in the area of groundwater maintenance. His responsibilities encompassed well development, sampling for hazardous and nonhazardous contaminants, and well elevation surveys. He was involved in an ongoing soil sampling program for a major chemical manufacturer, and in an intensive statewide soil and groundwater sampling project for the University of Florida Institute of Food and Agricultural Sciences. For a major circuit board manufacturer, he assisted in writing quarterly monitoring reports and in preparing site plans.

Membership in Professional Organizations

Florida Society of Environmental Analysts

GREGORY A. FORD
Field Technician

Education

Sante Fe Community College

Experience

Mr. Ford has 4 years of experience in field activities to monitor hazardous and nonhazardous waste sites. He is an approved Level-D Site Safety Coordinator for all field activities such as groundwater monitoring; surface water, soil, and sediment sampling; and monitor well installation.

Mr. Ford has assisted in various stages of groundwater and soil monitoring. He was the field team leader for the monitoring program for McDill Air Force base and assisted in field activities for Robins Air Force Base. At a U.S. Department of Energy (DOE) site, he performed biota sampling and electroshocking of streams and ponds to identify the species of marine life that were present. In Florida, he was involved in the Peace River project for General Development Utilities, the Manatee County deep injection well project, and projects for the Englewood Water District, the Florida Sugar Cane League, Lake Worth Utilities, and the City of Delray Beach. He also assisted in surveying activities for the Florida Keys Aqueduct Authority.

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Membership in Professional Organizations

Florida Society of Environmental Analysts

CARL B. PATTERSON
Field Technician

Experience

Mr. Patterson is experienced in field activities to monitor hazardous and nonhazardous waste sites.

He has assisted in various stages of groundwater and soil monitoring. He assisted in field activities for Robins Air Force Base.

Before joining CH2M HILL, Mr. Patterson was in the U.S. Air Force where he was a security specialist with the 92nd Bomb Wing at Fairchild Air Force Base in Spokane, Washington. While in the military, Mr. Patterson received supervisory safety training and security system training. As a civilian, he has worked as a security officer, a nurseryman, and a general laborer.

THOMAS C. EMENHISER
Client Services Manager

Education

B.S., Chemistry, University of Florida

Experience

Mr. Emenhiser is the client services manager of the full-service environmental laboratory operating from CH2M HILL's Gainesville, Florida, office. Mr. Emenhiser is responsible for client interface and marketing for the Gainesville Environmental Laboratory. He has more than 17 years of experience in industrial wastewater treatment, hazardous waste assessments, and water quality investigations.

Mr. Emenhiser established the Gainesville laboratory test procedures for analyzing samples for benzene, toluene, and xylenes, the typical indicator parameters for petroleum hydrocarbon contamination studies. Mr. Emenhiser also is knowledgeable in the interpretation of data sets assessing the extent and source (e.g., gasoline, kerosene, diesel fuel) of contamination.

Mr. Emenhiser has been involved in several projects associated with EPA RCRA and Superfund programs. He was the project team leader for the Biscayne Aquifer groundwater sampling project, which required sampling of 120 wells in the Miami, Florida, area in accordance with EPA protocols. Mr. Emenhiser maintained field notebooks, chain-of-custody records, and organic/inorganic traffic reports.

Mr. Emenhiser was the field manager for several industrial wastewater characterization and treatability studies, including those conducted for Engelhard Industries at Attapulgus, Georgia, and Hercules, Inc., at their Gibbstown, New Jersey, and Brunswick, Georgia, facilities. His responsibilities on these projects included the characterization of the strength and quantity of wastewater streams to determine their overall pollutant load. Mr. Emenhiser also evaluated alternative experimental techniques (e.g., dissolved air flotation, activated carbon adsorption, jar test coagulation, and bench-scale biological reactors) for development of the optimum treatment/disposal system for the facilities.

Mr. Emenhiser has been involved in several process designs for industrial wastewater treatment facilities and spent 6 months in Caracas, Venezuela, completing a preliminary design for the treatment of upgrader and produced wastewaters for the Lagoven Oil Company.

Mr. Emenhiser also has extensive experience in surface water quality investigations. He has been involved in limiting nutrient investigations and non-point source water quality and quantity studies in Florida for the Florida Sugar Cane League, Deseret Ranches, and Jacksonville Suburban Utilities.

Publications

With U.P. Singh, J.I. Garcia-Bengochea, and J.E. Orban. Cleanup of Miami Drum Hazardous Waste Site. *Journal of Environmental Engineering.* 1984.

With U.P. Singh. Innovative Sampling Techniques for Ground Water Monitoring at Hazardous Waste Sites. *Ground Water Monitoring Review.* 1984.

With U.P. Singh, N.N. Hatch, J.I. Garcia-Bengochea, and J.E. Orban. Remedial Investigations at Biscayne Aquifer Hazardous Waste Sites. Presented at the American Society of Civil Engineers Specialty Conference on Environmental Engineering, Los Angeles, California. 1984.

With R.J. Bruner, N.N. Hatch, and U.P. Singh. Sampling Procedures for the Biscayne Aquifer Protection Study. Presented at the National Water Well Association's Fourth National Symposium and Exposition on Aquifer Restoration and Ground Water Modeling, Columbus, Ohio. 1984.

With R. Sproul. Effects of Hydrogen Sulfide in Florida Groundwaters. Presented at the Third Annual Groundwater Symposium of the Northwest Florida Water Management District. 1983.

With E.E. Shannon, and J.J. Smith, Jr. Anaerobic-Aerobic Biopond Treatment of Sugarcane Mill Process Wastewaters. Presented at the 52nd Annual Conference of the Water Pollution Control Federation, Houston, Texas. 1979.

Appendix B
Field Sampling Plan

Part 2
Field Sampling Plan

Section 1.0
Contents

Section		No. of Pages	Page No.	Rev. Date
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2.0	**Introduction and Background**	3	2-1	
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	2.2 Scope of Work		2-1	
	2.3 Investigation Schedule		2-1	
	2.4 Data Quality Objectives		2-3	
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APPENDIX

A	Transformer Listing and Equipment Identifications	A-1

FIGURES

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Section 2.0
Introduction and Background

2.1 Site History

The Naval Complex is located in Key West, Florida, and includes the Naval Air Station (NAS) and the Naval Regional Medical Clinic. Initial Naval operations commenced in 1823 to reduce pirate activities in South Florida. Naval Air Forces have been operating from Key West since the early 1900s, but principally developed during World War II. During the 1970s, a decreased emphasis on a strong military posture brought a tremendous reduction in the use of the facilities and in the military population in Key West. Operations initiated in 1979/1980 and future plans reversed the trend of reduced utilization in Key West. Establishment of the Caribbean Contingency Joint Task Force, the relocation of Tactical Electronics Warfare Squadron 33 and Attack Squadron 45 to Key West, and the planned assignment of the Patrol Hydrofoil Missile Ship squadron to Key West have changed the mission and the need for facilities.

2.2 Scope of Work

The purpose of this project is to collect and analyze oil samples for PCBs from all electrical transformers and transportation equipment with hydraulic fluid reservoirs located at the Naval Air Station, Key West, Florida. The results will be reported in a LOTUS 123 computer spreadsheet format compatible with the Naval Energy and Environmental Support Activity (NEESA) inventory report. The scope of work includes five tasks:

1. Project Management
2. Preparation of SAP, HASP, and SOPPO
3. Transportation Equipment Sampling
4. Electrical Transformer Sampling
5. Preparation of the Final Report

The government will remove the PCB and PCB contaminated transformers and hydraulic fluids.

2.3 Investigation Schedule

A detailed schedule for the investigation and sampling activities is provided in Figure 2.1. The schedule shows the estimated total duration of the project to be 7.5 months, beginning with authorization to proceed on October 1, 1991, and ending on May 11, 1992.

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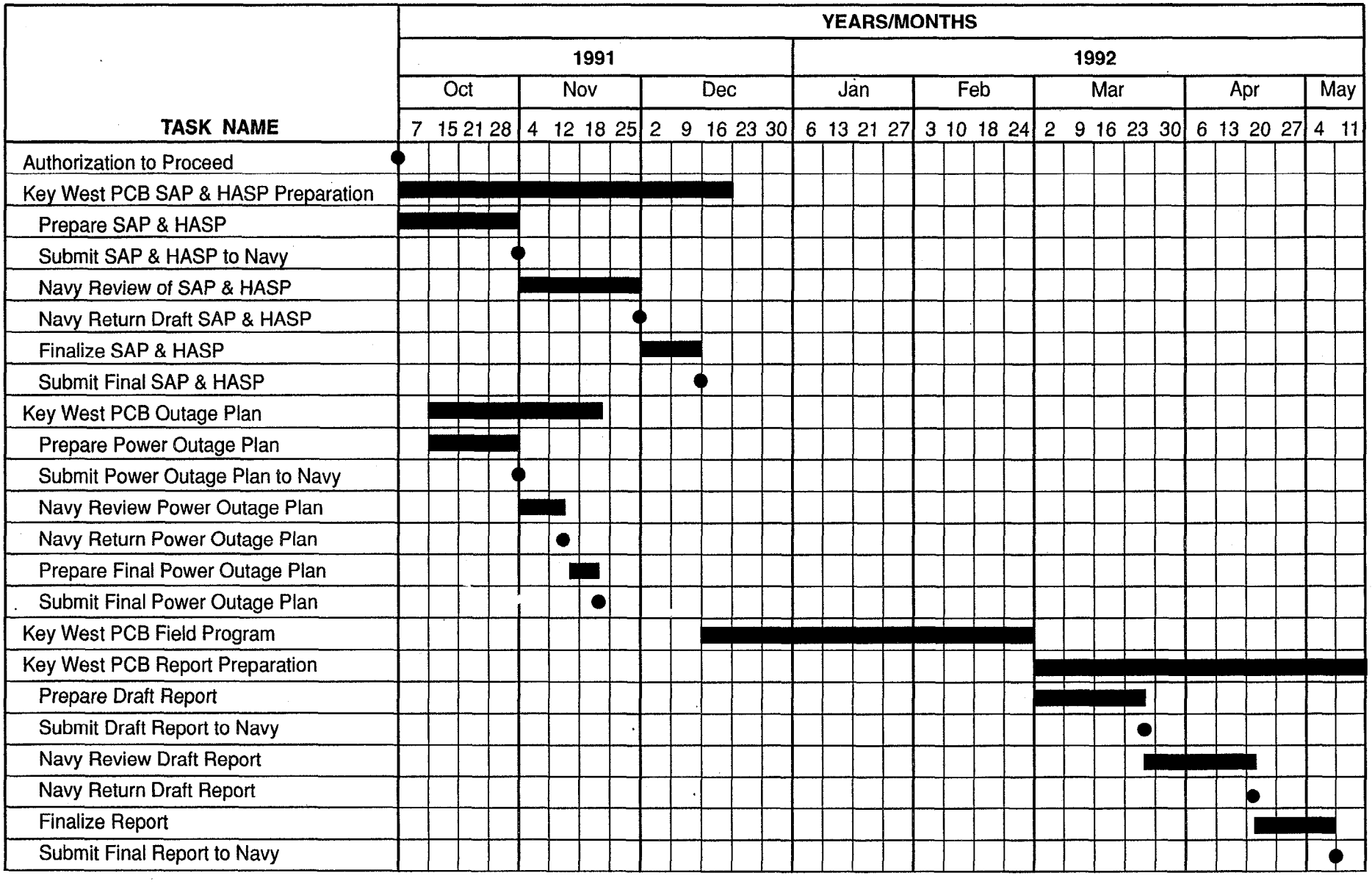

● Required Milestone

FIGURE 2-1.
Site Investigation Schedule

CH2MHILL

2.4 Data Quality Objectives

Laboratory QC will be implemented at CH2M HILL level 1 for this project. The data will be of sufficient quality to accurately assess which transformers and hydraulic fluids are PCB or PCB contaminated. Analysis will be made to indicate the presence or absence of PCB, but not to quantify contaminant concentration. Further specific information on data quality objectives, analytical QC, and data validation is provided in the Quality Assurance Project Plan (QAPP).

Section 3.0
Site Investigation

3.1 Sampling Locations

Sampling will occur at five sites in Key West, Florida. A table showing the site location names and the number of samples to be taken is provided below. A site map provided in Figures 3.1 and 3.2 gives the geographical locations of the sites. A detailed listing of the transformer locations and equipment identifications supplied in the original request for proposal is shown in Appendix A.

PCB Sampling at the NAS, Key West, Florida

Location	Estimated Number of Samples
Site 1 Truman Annex, Key West, Florida	73
Site 2 Trumbo Point, Key West, Florida	116
Site 3 Naval Hospital, Key West, Florida	27
Site 4 Boca Chica, Key West, Florida	179
Site 5 Fleming Key, Key West, Florida	15

The transportation equipment will be available at either the public works maintenance shop or the warehouse at NAS Key West. A total of 80 transportation vehicles will be sampled.

3.2 Sample Collection

Procedure for Collecting Oil Samples from Distribution Transformers

Objective

The objective of this procedure is to obtain a 20 to 40 ml oil sample from each distribution transformer using a methodology to minimize the risk of expose to energized electrical parts and minimizes the potential for releasing transformer oil into the environment.

General

1. All applicable electrical safety standards including but not limited to the ACOE Safety manual and REA safety requirements for work on high voltage electrical equipment will be strictly adhered to.

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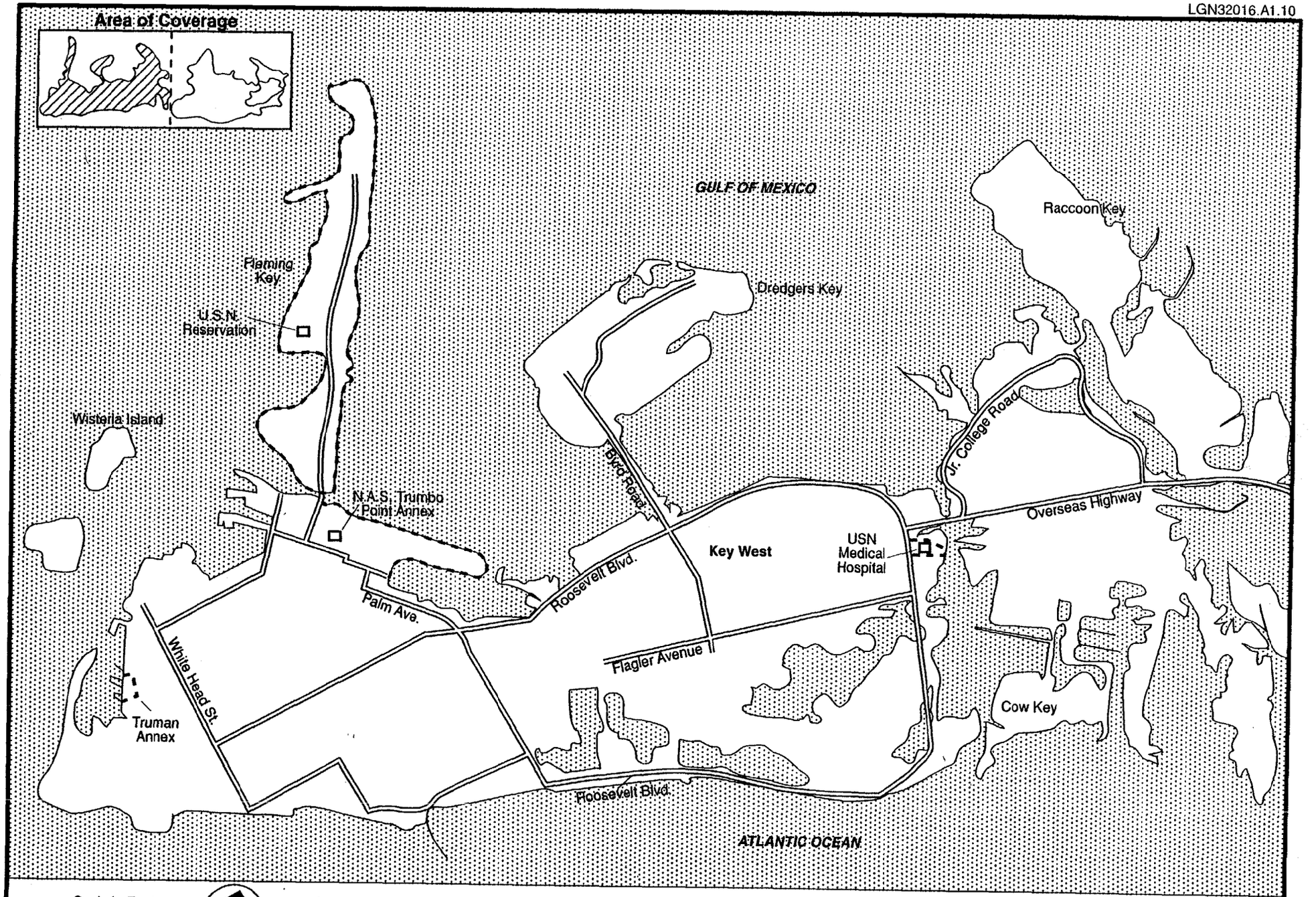

Scale in Feet
0 3,000 6,000

N

Legend
- - - - Sampling Sites

Figure 3-2.
Sampling Sites, Key West.

CH2M HILL

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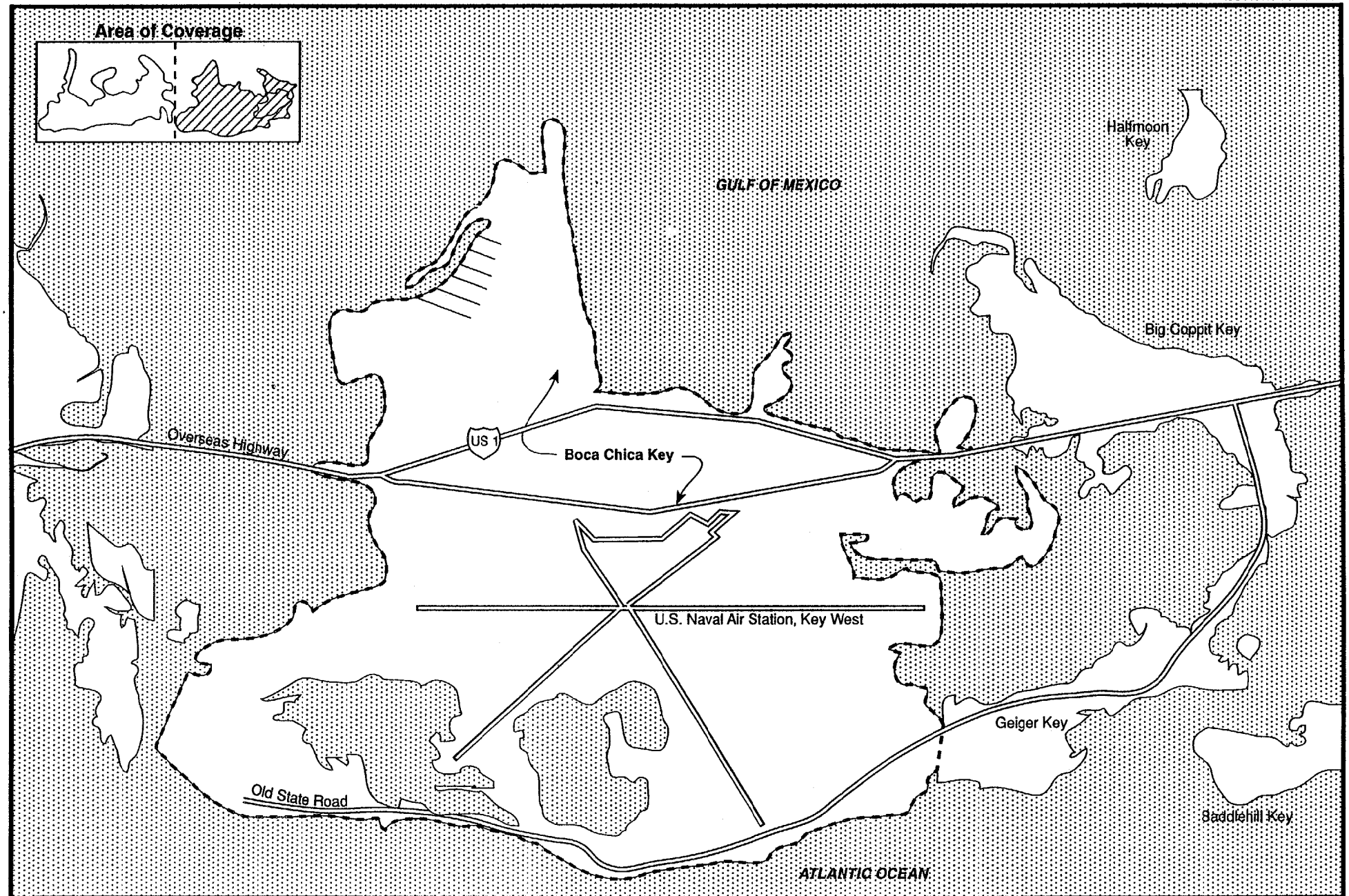


Scale in Feet
0 3,000 6,000

N

Legend
- - - - · Sampling Sites

Figure 3-3.
Sampling Sites, Boca Chica Key.

2. NO OIL SAMPLES WILL BE TAKEN FROM ENERGIZED TRANSFORMERS OR OTHER ENERGIZED ELECTRICAL EQUIPMENT. In-service electrical equipment (equipment connected to a source of electrical energy) will be considered to be energized unless and until it is grounded using approved grounding methods and equipment.

3. All transformer oil will be considered to be PCB contaminated and will be treated accordingly. Extreme care will be exercised during sampling operations to avoid releasing oil into the environment.

- For pole mounted equipment extreme care must be exercised in opening the transformer tank. When tap covers, oil fill plugs, or oil level plugs are opened, they should be opened slowly to determine if the oil level is above the plug. If the oil level is above the plug, seeping will occur as the plug or cover is loosened. If seeping occurs, **immediately** tighten the plug or secure the cover. Wipe clean all oil that seeped. Dispose of wiping cloths in the contaminated rags container. If oil is spilled on the ground, the spill procedure will be implemented immediately.

- For pole mounted transformers, if the sample is taken by drilling a hole into the tank, care must be taken to drill into the air space above the oil. The air space will be above the secondary bushings and below the top sealing ring on the transformer. The oil level can often be determined by lightly tapping on the tank. The hole should be drilled as close as is practical to the top sealing ring. If a hole is to be drilled in a transformer, a power screw driver with the a sealing screw installed will be readily available to the person drilling the hole. If a hole is inadvertently drilled below the oil level, the sealing screw will be **immediately** installed in the hole to stop the leak. All oil will be cleaned from the transformer and cleaning cloths will be placed in the contaminated rags container. If oil is spilled on the ground, the spill procedure will be implemented immediately.

- For transformers mounted at ground level, drip pans and containers will be placed to collect any spilled oil during sampling. Plastic sheeting will be taped to the transformer below oil fill plugs, oil level plugs or bayonet fuses to channel any seeping oil into the oil containers. All plugs shall be removed **slowly** to check for seepage. If seepage occurs, immediately tighten the plug and wipe the oil clean. Dispose of wiping cloths in the contaminated rags container.

- To prevent a release when withdrawing a bayonet fuse from a padmounted transformer, **slowly** withdraw the fuse. A suitable container shall be in place before removing the fuse. A sheet of plastic shall also be taped to the transformer below the fuse to channel any oil into the container. The fuse shall be placed in the container in a fashion to prevent any oil from being released into the environment during sampling.

- When sampling transformers with a sampling valve, place a drip pan under the valve. The valve cover cap or plug is then removed and checked for seepage. If the valve leaks with the cover removed **immediately** re-install the cover. After ensuring that the cover is tight and no leakage is occurring, wipe any oil that seeped, dispose of the wiping cloths in the contaminated rags container, note the location and proceed to the next transformer. If the valve is still leaking, leave the drip pan in place and **immediately** report the transformer to the Public Works Officer. If no seepage is detected, **slowly** open the valve and draw the sample into the sample container. Close the valve and re-install the cover. Check for seepage. The valve stem must also be inspected for seepage after the valve is closed. If seepage occurs carefully tighten the valve to try to minimize the seepage. Leave the drip pan in place and **immediately** report the transformer to the public works officer.

Overhead Distribution Transformers

1. While the crew is preparing to take the sample, the sample technician will notify any electrical users in the immediate vicinity that an outage is about to take place. This will include knocking on doors in residential areas and notifying duty personnel in effected buildings on base.

2. Visually inspect the transformer from the ground. Pay particular attention to the **bottom** of the transformer tank. Look for signs of oil leaks and/or corrosion. Note the location of the manufacturers nameplate. Note whether the transformer has a fill plug. Look for obstructions and determine the best location for the bucket truck to read the nameplate, de-energize the transformer and collect the sample.

3. Position the bucket and go up to the nameplate. Read and record the nameplate data from the transformer. Manufacturer, size, voltage and **manufacturer's serial number** will be recorded.

   - If the **manufacturer's nameplate** says that the transformer contains ASKERAL or INERTINE, or that it contains PCB oils,

attach a PCB label to the transformer. The pole number and location will be recorded on the data sheet. No sample will be taken.

- If the manufacturer's nameplate says that the transformer contains no PCB's OR NON PCB, record the pole number and location on the data sheet. Attach a NON-PCB label on the transformer. No sample will be taken.

4. De-energize the transformer using the transformer fuse holder (Cutout, Jack, etc). If the transformer is banked with other transformers (two transformer three phase bank or three transformer three phase bank) **all** transformers at the location must be de-energized and grounded before sampling begins.

5. Check the transformer for corrosion. Carefully check the sealing ring at the top of the transformer. Check the bottom of the transformer for rust and evidence of leaking oil. Leaks should be noted on the data sheet. Tank integrity can be determined by **lightly** tapping on the tank with a **small** hammer. Tapping can also be used to determine the oil level in the transformer. If corrosion is found or suspected **stop.** Notify the environmental coordination (EC), re-energize the transformer and go on to the next location. Do not sample transformers that have significant corrosion or the potential to leak without the EC present.

6. Install any electrical coverup equipment needed to ensure the safety of the work area around the transformer. This may include rubber blankets, line hoses, insulator covers or any other insulating equipment. Site conditions will dictate the amount of coverup required.

7. Test the transformer **secondary** for voltage. Some buildings have emergency generators and the possibility exists that transformer secondaries could have been inadvertently connected. If voltage is detected **stop** and notify the EC. **Do not proceed with the sampling.** Follow instructions from the EC or the Public Works personnel as to whether to re-energize the transformer. If no voltage is detected, proceed with grounding the transformer.

8. Install grounds on the primary (high voltage) side of the transformer. Grounds **will** be connected to the neutral first and then connected to the transformer high voltage leads. If more than one transformer is banked together, all transformers must be grounded before proceeding.

9. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the

method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third.

- If the transformer has a "tap" cover on the top of the transformer, remove the cover for sampling.

- If a fill plug or oil level plug is available, remove the plug if possible. Proper tools will be used. A proper sized combination wrench, adjustable end wrench, or a ratchet and socket will be used. If necessary, tools will be decontaminated by wiping any oil clean and placing the wiping cloth in the contaminated rags container.

- If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

- If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

10. Insert the sampling tube into the transformer and draw a 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container and install the cap on the sample container. Place the syringe and tube in the contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

11. Close the transformer. Replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil clean and place the wiping cloth in the contaminated rags container.

12. Remove electrical grounds from transformer.

13. Remove electrical coverup equipment.

14. Energize the transformer.

15. Record the manufacturers name, serial number, pole number, substation number, transformer number, and the location on the data sheet.

16. Place the sample in the sample containment container.

Overhead Transformers Installed in Vaults, Electrical Equipment Room and Ground Mounted Unit Substations

1. While the crew is preparing to take the sample, the sample technician will notify any electrical users in the immediate vicinity that an outage is about to take place. This will include notifying duty personnel in effected buildings.

2. Unlock the vault or substation area and note the location of bare energized conductors. Before de-energizing the transformer/ transformers, using care to remain a safe distance from energized parts, read and record the nameplate data from the transformer. Manufacturer, size, voltage and **manufacturer's serial number** will be recorded.

   - If the manufacturer's nameplate says that the transformer/ transformers contain ASKERAL or INERTINE, attach a PCB label to the transformer/transformers. The pole number and location will be recorded on the data sheet. No sample will be taken.

   - If the manufacturer's nameplate says that the transformer contains no PCB's OR NON PCB, record the number and location on the data sheet. Attach a NON-PCB label. No sample will be taken.

   - If no sample is taken, lock the vault or substation enclosure and proceed to the next location.

3. Visually inspect the transformer for signs of corrosion or leaks. Pay particular attention to the **bottom** of the transformer tank. If corrosion is found or suspected **stop.** Notify the EC and go on to the next transformer. Do not sample transformers that have significant corrosion or the potential to leak without the EC being present.

4. De-energize the transformer. If the transformer is banked with other transformers (two transformer three phase bank or three transformer three phase bank) **all** transformers at the location must be de-energized before sampling begins. Most vaults and unit substations are served by a radially feed underground cable. Some are served from the overhead distribution system.

   - If the transformer is served by a radial cable, the transformer should be de-energized at the source end of the cable. The source end will normally be the overhead line feeding the cable or a padmounted switchgear. The source cable can be de-

energized by removing the fuses or operating the disconnect switches to the cable. **TAG THE SWITCH WITH A HOLD OPEN TAG.** This will de-energize all electrical equipment in the vault or unit substation.

- If the transformer/transformers are located in a unit substation served from the overhead system de-energize the transformer using the transformer fuse holder (Cutout, Jack, etc) located in the substation. Install any electrical coverup equipment needed to ensure the safety of the work area around the transformer. This may include rubber blankets, line hoses, insulator covers or any other insulating equipment. Site conditions will dictate the amount of coverup required.

5. Test the transformer **secondary** for voltage. Some buildings have emergency generators and the possibility exists that transformer secondaries could have been inadvertently connected. If voltage is detected **stop** and notify the EC. **Do not proceed with the sampling.** Follow instructions from the EC or the Public Works personnel as to whether to re-energize the transformer. If no voltage is detected, proceed with grounding the transformer.

6. Ground the transformer/transformers. Install grounds on the primary (high voltage) side of the transformer. Grounds **will** be connected to the neutral first and then connected to the transformer high voltage leads. If more than one transformer is banked together, all transformers must be grounded before proceeding. Install grounds as close as is practical to the transformer. Ground conductors installed at the high voltage bushings are the most desirable. When ground conductors can not be installed at the high voltage bushings, they should be installed as close as practical to the bushings.

7. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third. Place containers or drip pans around the area to be sampled to catch any oil that inadvertently escapes during sampling.

   - If the transformer has a sampling valve, obtain the sample from the valve using a funnel and the sample container. If the valve is leaking or shows evidence of prior leaking, **do not open the valve.**

   - If the transformer has a "tap" cover on the top of the transformer, remove the cover for sampling.

- If a fill plug or oil level plug is available, remove the plug if possible. Proper tools will be used. A proper sized combination wrench, adjustable end wrench, or a ratchet and socket will be used. If necessary, tools will be decontaminated by wiping any oil clean and placing the wiping cloth in the contaminated rags container.

- If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

- If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

8. If the transformer does not have a sampling valve, insert the sampling tube into the transformer and draw a 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container and install the cap on the sample container. Place the syringe and tube in the contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

9. Close the transformer. Close the sampling valve, replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil clean and place the wiping cloth in the contaminated rags container.

10. Remove electrical grounds from transformer.

11. Remove electrical coverup equipment.

12. Energize the transformer.

13. Record the manufacturers name, serial number, pole number, substation number, transformer name, and the location on the data sheet.

14. Place the sample in the sample containment container.

Padmounted or Underground Residential Distribution Transformers

1. While the crew is preparing to take the sample, the sample technician will notify any electrical users in the immediate vicinity that an outage is

about to take place. This will include knocking on doors in residential areas and notifying duty personnel in effected buildings on base.

2. Open the access door and note the location of bare energized conductors. Before de-energizing the transformer/transformers, using care to remain a safe distance from energized parts, read and record the nameplate data from the transformer. Manufacturer, size, voltage and **manufacturer's serial number** will be recorded.

   - If the **manufacturer's nameplate** says that the transformer/ transformers contain ASKERAL or INERTINE, or that it contains PCB oils, attach a PCB label to the transformer. The pole number and location will be recorded on the data sheet. No sample will be taken.

   - If the manufacturer's nameplate says that the transformer contains no PCB's OR NON PCB, record the number and location on the data sheet. Attach a NON-PCB label. No sample will be taken.

   - If no sample is taken, record the transformer number and the location on the data sheet. Lock the vault or substation enclosure and proceed to the next location.

3. Visually inspect the transformer for signs of corrosion or leaks. Pay particular attention to the **bottom** of the transformer tank. If corrosion is found or suspected **stop.** Notify the EIC and go on to the next transformer. Do not sample transformers that have significant corrosion or the potential to leak without the EIC being present.

4. De-energize the transformer. If the transformer is banked with other transformers (two transformer three phase bank or three transformer three phase bank) **all** transformers at the location must be de-energized before sampling begins. Some transformers will a radially feed underground cable. Some are served by a looped underground cable system.

   - If the transformer is served by a radial cable, the transformer should be de-energized at the source end of the cable. The source end will normally be the overhead line feeding the cable or a set of padmounted switchgear. The source cable can be de-energized by removing the fuses or operating the disconnect switches to the cable. **TAG THE SWITCH WITH A HOLD OPEN TAG.** This will de-energize the transformer. If the transformer has a load break elbow, remove the elbow and place it on the parking stand.

- If transformer is served by a looped cable system, follow the written switching procedure to de-energize the transformer. The procedure will require that both elbows be removed in the case of single phase transformers and placed on a parking stand. Written procedures for sampling large three phase padmounts will be prepared and used.

- For live front padmounts install any electrical coverup equipment needed to ensure the safety of the work area around the transformer. This may include rubber blankets, line hoses, insulator covers or any other insulating equipment. Site conditions will dictate the amount of coverup required.

5. Test the transformer **secondary** for voltage. Some buildings have emergency generators and the possibility exists that transformer secondaries could have been inadvertently connected. If voltage is detected **stop** and notify the EC. **Do not proceed with the sampling.** Follow instructions from the EC or the Public Works personnel as to whether to re-energize the transformer. If no voltage is detected, proceed with grounding the transformer.

6. Ground the transformer. Install grounds on the primary (high voltage) side of the transformer. Grounds **will** be connected to the neutral first and then connected to the transformer high voltage leads. If more than one transformer is banked together, all transformers must be grounded before proceeding.

   - On dead front transformers with load break elbows, ground the transformer using grounding elbows.

   - On live front transformers, install grounds as close as is practical to the transformer. Ground conductors installed at the high voltage bushings are the most desirable. When ground conductors can not be installed at the high voltage bushings, they should be installed as close as practical to the bushings.

7. Determine the best access to the transformer tank. Each transformer will be different and a field determination of the sampling method must be made. The criteria for selecting the method is **safety** first, the method that is least likely to result in a spill second, and the method that will result in the minimum sampling time is third. Place containers or drip pans around the area to be sampled to catch any oil that inadvertently escapes during sampling.

   - If the transformer has a sampling valve, obtain the sample from the valve using a funnel and the sample container.

- If the transformer has a bayonet fuse, **slowly** remove the fuse with a container to catch any oil that escapes held under the fuse. Place the fuse in a container to prevent any oil from escaping. The sample can be taken through the fuse holder using the tube and syringe.

- If the transformer has a "tap" cover on the top of the transformer, remove the cover for sampling.

- If a fill plug or oil level plug is available, remove the plug if possible. Proper tools will be used. A proper sized combination wrench, adjustable end wrench, or a ratchet and socket will be used. If necessary, tools will be decontaminated by wiping any oil clean and placing the wiping cloth in the contaminated rags container.

- If the transformer top is installed with "dogging" bolts, the best way to sample may be to loosen the bolts and take the sample through the top of the transformer.

- If no other option is available, drill a hole just below the sealing ring into the air space at the top of the transformer tank.

8. If the transformer does not have a sampling valve, insert the sampling tube into the transformer and draw a 20 to 40 ml sample with the syringe. Holding the tube with a disposable paper towel, place the sample into the sample container and install the cap on the sample container. Place the syringe and tube in the contaminated equipment container. If a drill bit was used to obtain the sample, place the bit in the contaminated equipment bag. Place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

9. Close the transformer. Close the sampling valve, replace the cover, replace the fill plug or install the sealing screw in the hole drilled for sampling. Wipe any oil clean and place the wiping cloth in the contaminated rags container.

10. Remove electrical grounds from transformer.

11. Remove electrical coverup equipment.

12. Energize the transformer.

13. Record the manufacturers name, serial number, pole number, sub-station number, transformer number, and the location on the data sheet.

14. Place the sample in the sample containment container.

Procedure for Collecting Oil Samples from Transportation Equipment

1. A mechanic (to be supplied by the Navy) will first open the hydraulic fluid reservoir on the vehicle to be sampled.

   - Do not sample the hydraulic brake fluid reservoir unless it is integral with the hydraulic lift, crane, or dump reservoir.

2. The sample technician will insert the sampling tube into the reservoir and draw a 20 to 40 ml sample with the disposable syringe. Holding the tube with a disposable paper towel, place the sample into the sample container. Place the syringe and tube in the contaminated equipment container and place the paper towel in the contaminated rags container. Record the sample number from the sample container on the data sheet.

3. The mechanic supplied by the Navy will then close the hydraulic fluid reservoir and wipe any oil clean, and place the wiping cloth in the contaminated rags container.

4. Record the equipment type, manufacturers name, serial number, and U.S. Navy vehicle identification number on the data sheet.

5. Place the sample in the sample containment container.

3.3 Sample Shipping

All collected samples will be shipped to the CH2M HILL, Montgomery, Alabama, laboratory at a frequency of every other day. **The samples will be identified and shipped as hazardous waste material by Federal Express Second Day Air.**

3.4 Waste Handling

After sampling is completed, all generated wastes will be turned over to the Navy for proper disposal by the NAS, Key West, Florida.

In the unlikely event that a spill occurs, the sampling team will immediately notify the appropriate Naval spill team or the NAS environmental coordinator. The sampling team will make every effort to contain and minimize any spill until the Navy spill

team arrives on site and takes over the containment effort. The Navy will be responsible for decontamination of the site if a spill occurs as required by 40 CFR 761 and local and state laws.

3.5 Field Organization

The CH2M HILL sample collection team consists of Russell Goff, Gregory Ford, and Carl Patterson. The lead sample technician is Russell Goff. The sample collection team will sample all of the transportation equipment in accordance with the instructions given in the Sample Collection section. After a sample has been taken the sample technician will handle the sample in accordance with the Sample Analysis Plan (SAP). For the sampling of the transformers, the CH2M HILL sampling technician will coordinate the scheduling of the work of the electrical sampling crew, and after the sample has been taken the sample technician will be responsible for sample custody and sample handling in accordance with the SAP.

Section 4.0
Data Evaluation and Reporting

All transformer and hydraulic fluid samples will be analyzed by ASTM D 4059, Analysis of Polychlorinated Biphenyls in Insulating Liquids by Gas Chromatography. Specific quality control information can be found in the project QAPP.

A summary of all data will be provided in the Draft Report and in the Final Report. Data will be reported in a LOTUS 123 computer spreadsheet format comparable with the NEESA inventory report. Three copies of the draft report will be sent to the Naval Facilities Engineering Command, and three copies of the draft report sent to the Public Works Officer at the Naval Air Station, Key West. Four printed hard copies of the final report and two copies on magnetic media, one on 5.25-inch and one on 3.5-inch, will be sent to the Naval Facilities Engineering Command.

Appendix A
Transformer Listing and Equipment Identifications

APPENDIX A

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T1	1	3750	ESCO	13.8 KV – 2.4 KV	PAD	TRUMAN – MAIN SUBSTATION
T2	1	75	POWERFORMER DRY TYPE	480/120	PAD	TRUMAN MH 56 BLDG. 112 FOR NX
T3	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 93, BLDG. 223
T3.1	1	10	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 93, BLDG. 223
T3.2	1	10	*	2.4KV – 120/240V	POLE	TRUMAN –POLE 93, BLDG. 223
T4	1	167	G.E.	13.8KV – 120/240V	PAD	TRUMAN – ATPB1, BLDG. 1287
T4.1	1	167	G.E.	13.8KV – 120/240V	PAD	TRUMAN – ATPB1, BLDG. 1287
T4.2	1	167	G.E.	13.8KV – 120/240V	PAD	TRUMAN – ATPB1, BLDG. 1287
T5	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 96, BLDG. 226
T5.1	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 96, BLDG. 226
T5.2	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 96, BLDG. 226
T6	1	25	*	2.4KV – 120/240V	POLE	TRUMAN –POLE 83, BLDG. 230
T6.1	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 83, BLDG. 230
T6.2	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 83, BLDG. 230
T7	1	300	STANDARD	2.4KV – 208Y/120V	PAD	TRUMAN – AT P89, BLDG. 438
T8	1	750	R.E. UPTEGRAFF	13.8KV – 480/277V	PAD	TRUMAN – AT P82, BLDG. 1350/51/52
T9	1	167	WESTINGHOUSE	2.4KV – 120/240V	PAD	TRUMAN – SUB AT BLDG. 290
T9.1	1	167	WESTINGHOUSE	2.4KV – 120/240V	PAD	TRUMAN – SUB AT BLDG. 290
T9.2	1	167	WESTINGHOUSE	2.4KV – 120/240V	PAD	TRUMAN – SUB AT BLDG. 290
T10	1	250	MCGRAW EDISON	2.4KV – 480/277V	PAD	TRUMAN – SUB AT BLDG. 290
T10.1	1	250	MCGRAW EDISON	2.4KV – 480/277V	PAD	TRUMAN – SUB AT BLDG. 290
T10.2	1	250	MCGRAW EDISON	2.4KV – 480/277V	PAD	TRUMAN – SUB AT BLDG. 290
T11	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 87, SBALL FIELD
T11.1	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 87, SBALL FIELD
T11.2	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 87, SBALL FIELD
T12	1	*	*	13.8KV – 120/240V	POLE	TRUMAN – POLE C113 FORT
T12.1	1	*	*	13.8KV – 120/240V	POLE	TRUMAN – POLE C113 FORT
T12.2	1	*	*	13.8KV – 120/240V	POLE	TRUMAN – POLE C113 FORT
T13	1	750	RTE	13.8KV – 480Y/277V	PAD	TRUMAN – BLDG. 1280 MN 116
T14	1	100	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 90, BEACH AREA
T14.1	1	100	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 90, BEACH AREA
T14.2	1	100	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 90, BEACH AREA
T15	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE L79, BLDG. 292, 1289
T15.1	1	25	*	2.4 – 120/240V	POLE	TRUMAN – POLE 79, BLDG. 292, 1289
T15.2	1	25	*	2.4 –120/240V	POLE	TRUMAN – POLE 79, BLDG. 292, 1289
T16	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 70, BLDG. 1355
T16.1	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 70, BLDG. 1355
T16.2	1	25	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 70, BLDG. 1355
T17	1	15	*	*	POLE	TRUMAN – POLE 99, STREET LITES
T18	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 107, BLDG. 795, 284, 28
T19	1	15	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 16 FOR SS&TEQ
T20	1	5	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 25, STREET LITES
T21	1	15	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 62, STREET LITES
T22	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 62, STREET LITES
T23	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 73, BLDG. 520, 521
T24	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 75, BLDG. 519, 520
T25	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 68, BLDG. 413, 518
T26	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 69, BLDG. 515, 517
T27	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 69, BLDG. 514, 518
T28	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 67, BLDG. 510, 511
T29	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 68, BLDG. 504/5, 508/9
T30	1	75	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 31, BLDG. 506, 507
T31	1	37.5	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 60, BLDG. 500, 501
T32	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 61, BLDG. 502, 503
T33	1	37.5	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 38, BLDG. 1370/71, 138
T34	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 48, BLDG. 1367, 68, 69
T35	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 50, BLDG. 1365, 66
T36	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 43, BLDG. 1361
T37	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 53, BLDG. 1359/60/62/6
T38	1	50	*	2.4KV – 120/240V	POLE	TRUMAN – POLE 54, BLDG. 1323/58.249.
T39	1	300	T&E ELECTRIC SUPPLY CO.	13.8KV 480/277V	PAD	TRUMAN – MH56, BLDG. 112
T40	1	300	RTE CORP	13.8KV – 208Y/120V	PAD	TRUMAN – MH – 59
T41	1	750	GENERAL ELECTRIC	13.8KV – 480/277V	PAD	TRUMAN – MH – 59
T42	1	1500	WESTINGHOUSE	13.8KV – 480/277V	PAD	TRUMAN – OUTERMOLE
T43	1	112.5	*	13.8KV – 480Y/277	PAD	TRUMAN – OUTERMOLE

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T44	1	1500	WESTINGHOUSE	13.8KV – 480	PAD	TRUMAN – OUTERMOLE
T45	1	1500	*	13.8KV – 480/277Y	PAD	TRUMAN – OUTERMOLE
T46	1	750	BALTEAU STANDARD. INC.	138KV – 480/277	PAD	TRUMAN – BLDG. 103
T47		*	*		POLE	TRUMAN – POLE 58B. BLDG. 1325 & 26
T48	1	37.5	*	13.8KV – 208/120V	POLE	TRUMAN – POLE C4(FOR ANTENNA)(AIRFOR
T48.1	1	37.5	*	13.8KV – 108/120V	POLE	TRUMAN – POLE C4(FOR ANTENNA)(AIRFOR
T48.2	1	37.5	*	13.8KV – 108/120V	POLE	TRUMAN – POLE C4(FOR ANTENNA)AIRFOR
T49	1	300	WESTINGHOUSE	13.8KV – 208/120V	PAD	TRUMBO – POLE A151 BLDG. 60, 59
T50	1	10	*	13.8KV – 240/120V		TRUMBO – MAIN SWITCH GEAR FOR HEATEI
T51						TRUMBO –
T52						TRUMBO –
T53	1	50	*	13.8KV – 480V	POLE	TRUMBO – POLE B.119 BLDG. 48
T53.1	1	50	*	13.8KV – 480V	POLE	TRUMBO – POLE B:119 BLDG. 48
T53.2	1	50	*	13.8KV – 480V	POLE	TRUMBO – POLE B:119 BLDG. 48
T54	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B:120, BLDG. 48
T54.1	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B:120, BLDG. 48
T54.2	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B:120, BLDG. 48
T55						TRUMBO –
T56	1	750	*	13.8KV – 480/277	PAD	TRUMBO – MH24 – BLDG. UPH 1619
T57	1	750	*	138KV – 480/277	PAD	TRUMAO – D3 – BLDG. B45
T58	1	750	GENERAL ELECTRIC	13.8KV – 480/277	PAD	TRUMBO – PIER D3
T59	1	500	WESTINGHOUSE	13.8KV – 480/277V	PAD	TRUMBO – POLE A148 TO BLDG. D26
T60	1	100	*	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B138 BLDG. B40
T60.1	1	100	*	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B138 BLDG. B40
T60.2	1	100	*	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B138 BLDG. B40
T61	1	167	R.T.E.	13.8KV/2.39KV – 6RDY254	PAD	TRUMBO – AT MH8, BLDG. B6
T61.1	1	167	R.T.E.	13.8KV/2.39KV – 6RDY254	PAD	TRUMBO – AT MH8, BLDG. B6
T61.2	1	167	R.T.E.	13.8KV/2.39KV – 6RDY254	PAD	TRUMBO – AT MH8, BLDG. B6
T62	1	1500	G.E.	13.8KV –480V	PAD	TRUMBO – AT MH9, BLDG. D1
T63	1	75	*	13.8KV – 208/120V	PAD	TRUMBO – AT MH10, BLDG. B27
T63.1	1	75	*	13.8KV – 208/120V	PAD	TRUMBO – AT MH10, BLDG. B27
T63.2	1	75	*	13.8KV – 208/120V	PAD	TRUMBO – AT MH10, BLDG. B27
T64	1	300	R.T.E.	13.8KV – 208/120V	PAD	TRUMBO – AT MH11, BLDG. B28
T65	1	300	R.T.E.	13.8KV – 480/177	PAD	TRUMBO – AT MH12, BLDG. B28
T66	1	25	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B150, BLDG. C–83
T66.1	1	25	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B150, BLDG. C–83
T66.2	1	25	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B150, BLDG. C–83
T67						TRUMBO –
T68	1	100	PENNSYLVANIA	13.8,V – 480KV	PAD	TRUMBO – AT MH39, BLDG. C–60
T69						TRUMBO –
T70	1	75	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B21
T70.1	1	75	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B21
T70.2	1	100	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B21
T71	1	25	*	*	POLE	TRUMBO – POLE B15
T71.1	1	25	*	*	POLE	TRUMBO – POLE B15
T71.2	1	25	*	*	POLE	TRUMBO – POLE B15
T72	1	750	G.E.	13.8KB – 208Y/120V	PAD	TRUMBO – AT MH9, D–1
T73	1	167	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B25
T73.1	1	167	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B25
T73.2	1	167	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B25
T74	1	100	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B26
T74.1	1	100	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B26
T74.2	1	100	*	14.4KV – 120/240V	POLE	TRUMBO – POLE B26
T75						TRUMBO
T76					POLE	TRUMBO
T77	1	50	X	13.8KV – 120/240	POLE	TRUMBO – AT POLE B54 ???
T78	1	2/15&1/1!	*	*	POLE	TRUMBO – POLE B51
T78.1	1	2/15&1/1!	*	*	POLE	TRUMBO – POLE B51
T78.2	1	2/15&1/1!	*	*	POLE	TRUMBO – POLE B51
T79	1	333	NIAGARA	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B31, BLDG. C–2076
T79.1	1	333	NIAGARA	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B31, BLDG. C–2076
T79.2	1	333	NIAGARA	13.8KV – 277/480V	PAD	TRUMBO – AT POLE B31, BLDG. C–2076
T80						TRUMBO
T81	1	15	*	*	POLE	TRUMBO – POLE B93
T81.1	1	15	*	*	POLE	TRUMBO – POLE B93
T81.2	1	15	*	*	POLE	TRUMBO – POLE B93

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T82	1	15	*	*	POLE	TRUMBO – POLE B72
T82.1	1	15	*	*	POLE	TRUMBO – POLE B72
T82.2	1	25	*	*	POLE	TRUMBO – POLE B72
T83	1	300	R.T.E.	13.8KV – 480/277V	PAD	FLEMING KEY – AT POLE B159 F–11
T84	1	750	WESTINGHOUSE	13.2KV – 480/277V	PAD	FLEMING KEY – AT POLE B157
T85	1	37.5	*	*	POLE	FLEMING KEY – AT POLE B183 FAA BLDG
T85.1	1	37.5	*	*	POLE	FLEMING KEY – AT POLE B183 FAA BLDG
T85.2	1	37.5	*	*	POLE	FLEMING KEY – AT POLE B183 FAA BLDG
T86	1	1500	R.E. UPTEGRAFF	13.8KV – 480Y/277V	PAD	FLEMING KEY – AT POLE B185, DA ANIMAL C
T87						FLEMING KEY
T88	1	167	*	13.8KV – 120/240V	PAD	FLEMING KEY – AT POLE B192 BLDG. 1341
T88.1	1	167	*	13.8KV – 120/240V	PAD	FLEMING KEY – AT POLE B192 BLDG. 1341
T88.2	1	167	*	13.8KV – 120/240V	PAD	FLEMING KEY – AT POLE B192 BLDG. 1341
T89	2	15	*	14.4KV – 120/240V	POLE	FLEMING KEY – POLE B158
T89.1	2	15	*	14.4KV – 120/240V	POLE	FLEMING KEY – POLE B158
T90	1	10	*	*	POLE	FLEMING KEY – POLE B163
T91	1	*	*	*	POLE	FLEMING KEY – POLE B171A
T92	1	25	*	*	POLE	FLEMING KEY – POLE B164
T93	1	7.5?	*	*	POLE	TRUMBO – POLE B130
T93.1	1	A–*??	*	*	POLE	TRUMBO – POLE B130
T94	1	50	*	*	POLE	TRUMBO – POLE B104
T95	1	50	*	*	POLE	TRUMBO – POLE B105
T96	1	50	*	*	POLE	TRUMBO – POLE B114
T97	1	50	*	*	POLE	TRUMBO – POLE B116
T98	1	50	*	*	POLE	TRUMBO – POLE B117
T99	1	25	*	*	POLE	TRUMBO – POLE B107
T100	1	25	*	*	POLE	TRUMBO – POLE B108
T101	1	37.5	*	*	POLE	TRUMBO – POLE B112
T102	1	50	*	*	POLE	TRUMBO – POLE B109
T103	1					
T104	1	50	*	*	POLE	TRUMBO – POLE B33
T105	1	50	*	*	POLE	TRUMBO – POLE B87
T106	1	50	*	*	POLE	TRUMBO – POLE B88
T107	1	50	*	*	POLE	TRUMBO – POLE B90
T108	1	50	*	*	POLE	TRUMBO – POLE B91
T109	1	25	*	*	POLE	TRUMBO – POLE B92
T110	1	75	*	*	POLE	TRUMBO – POLE B94
T111	1	50	*	*	POLE	TRUMBO – POLE B96
T112	1	25	*	*	POLE	TRUMBO – POLE B60
T113	1	50	*	*	POLE	TRUMBO – POLE B63
T114	1	50	*	*	POLE	TRUMBO – POLE B66
T115	1	25	*	*	POLE	TRUMBO – POLE B69
T116	1	37.5	*	*	POLE	TRUMBO – POLE B76
T117	1	25	*	*	POLE	TRUMBO – POLE B79
T118	1	37.5	*	*	POLE	TRUMBO – POLE B81
T119	1	37.5	*	*	POLE	TRUMBO – POLE B84
T120	1	37.5	*	*	POLE	TRUMBO – POLE B86
T121	1	100	*	*	POLE	TRUMBO – POLE B101
T122	1	100	*	*	POLE	TRUMBO – POLE B97
T123	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – AT MH13, DOCK 2
T123.1	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – 15 MH13, DOCK 2
T123.2	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – 15 MH13, DOCK 2
T123.3	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – 15 MH13, DOCK 2
T123.4	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – 15 MH13, DOCK 2
T123.5	1	167	*	13.8KV – 440/254V	PAD	TRUMBO – 15 MH13, DOCK 2
T124	1	300	*	13.8KV – 480V	PAD	TRUMBO – AT MH13, DOCK 2
T125	1	167	*	13.8KV – 254/440V	PAD	TRUMBO – AT MH11, DOCK 2
T125.1	1	167	*	13.8KV – 254/440V	PAD	TRUMBO – AT MH11, DOCK 2
T125.2	1	167	*	13.8KV – 254/440V	PAD	TRUMBO – AT MH11, DOCK 2
T126	1	112.5	*	13.8KV – 120/208V	PAD	TRUMBO – AT MH11, DOCK 2
T127				*		
T128	1	25	*	13.8KV – 2.4KV	POLE	TRUMBO – AT POLE B35
T128.1	1	25	*	13.8KV – 2.4KV	POLE	TRUMBO – AT POLE B35
T128.2	1	100	*	13.8KV – 2.4KV	POLE	
T129	1	50	*	*	POLE	TRUMBO – AT POLE B54
T130	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B119

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T130.1	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B119
T130.2	1	37.5	*	13.8KV – 480V	POLE	TRUMBO – AT POLE B119
T131	1	300	R.T.E.	13.8KV/208Y/120V	PAD	TRUMBO – AT MH1, B48
T132	1	500	R.T.E.	13.8K/480Y/1277V		TRUMBO – AT MH1, B48
T133						
T134						
T135	1	333	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T135.1	1	333	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T135.2	1	333	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T136	1	200	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T136.1	1	200	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T136.2	1	200	*	13.8KV – 2.4KV	PAD	NAVHOSP – CITY ELECTRIC SUBSTATION
T137	1	25	*	2.4KV – 120/240V	PAD	NAVHOSP – TRANSFORMER VAULT, SERV. B
T137.1	1	25	*	2.4KV – 120/240V	PAD	NAVHOSP – TRANSFORMER VAULT, SERV. B
T137.2	1	37.5	*	2.4KV – 120/240V	PAD	HAVHOSP – TRANSFORMER VAULT, SERV. B
T138	1	150	WESTINGHOUSE	2.4KV – 208Y/120V	PAD	NAVHOSP – MHPB–L2, WARDS E,F,G,H
T139	1	25	*	2.4KV – 120/240V	POLE	NAVHOSP – POLE L3, TENNIS CRTS, BLDG L
T139.1	1	25	*	2.4KV – 120/240V	POLE	NAVHOSP – POLE L3, TENNIS CRTS, BLDG. L
T132.2	1	50	*	2.4KV – 120/240V	POLE	NAVHOSP – POLE L3, TENNIS CRTS, BLDG. L
T140	1	112.5	G.E.	2.4KV – 208Y/120V	PAD	NAVHOSP – AT POLE L4, BLDG. 47
T141	1	50	*	*	POLE	NAVHOSP – POLE L7
T142	1	37.5	ALLIS CHALMERS	2.4KV – 120/240V	PAD	NAVHOSP – MHPB–L9, HOSP. VAULT
T142.1	1	37.5	ALLIS CHALMERS	2.4KV – 120/240V	PAD	NAVHOSP – MHPB–L9, HOSP. VAULT
T142.2	1	37.5	ALLIS CHALMERS	2.4KV – 120/240V	PAD	NAVHOSP – MHPB–L9, HOSP. VAULT
T143	1	75	G.E.	2.4KV – 120/240V	PAD	NAVHOSP – MH PB–L9, X–RAY
T143.1	1	75	G.E.	W.RKV – 120/240V	PAD	NAVHOSP – MH PB–L9, X–RAY
T143.2	1	75	G.E.	2.4KV – 120/240V	PAD	NAVHOSP – MH PB–L9, XRAY
T143.3	1	50	G.E.	2.4KV – 120/240V	PAD	NAVHOSP – MH PB–L9, XRAY
T144	1	750	G.E.	2.4KV – 208Y/120V	PAD	NAVHOSP – MH PB–L8, MAIN BLDG.
T145						
T146						
T147						
T148						
T149						
T150	1	300	G.E.	13.2KV – 208Y/120V	PAD	BOCA CHICA – AT POLE A31, BLDG. A–727
T151	1	150	G.E.	13.8KV	PAD	BOCA CHICA – POLE A29, BLDG. A–726
T152	1	100	ALLIS CHALMERS	14.4 – 240/120V	PAD	BOCA CHICA – AT POLE A27, BLDG. A–734
T152.1	1	100	ALLIS CHALMERS	14.4 – 240/120V	PAD	BOCA CHICA – AT POLE A27, BLDG. A–734
T152.2	1	100	ALLIS CHALMERS	14.4 – 240/120V	PAD	BOCA CHICA – AT POLE A27, BLDG. A–734
T153	1	37.5	*	14.4KV – 480/240V	POLE	BOCA CHICA – POLE A123, SEWAGE TRMNT
T153.1	1	37.5	*	14.4KV – 480/240V	POLE	BOCA CHICA – POLE A123, SEWAGE TRMNT
T153.2	1	37.5	*	14.4KV – 480/240V	POLE	BOCA CHICA – POLE A123, SEWAGE TRMNT
T154	1	*	*	*	POLE	BOCA CHICA – POLE A127, ORDNANCE STG
T155	1	50	*	*	POLE	BOCA CHICA – POLE A156, SHOOTING RANC
T156	1	167	G.E.	13.2KV – 240/120V	PAD	BOCA CHICA – AT POLE A152, MISSILE RANC
T156.1	1	167	G.E.	13.2KV – 240/120V	PAD	BOCA CHICA – AT POLE A152, MISSILE RANC
T156.2	1	167	G.E.	13.2KV – 240/120V	PAD	BOCA CHICA – AT POLE A152, MISSILE RANC
T157	1	50	*	13.2KV – 240/120V	POLE	BOCA CHICA – POLE A25, CABLE VISION AM
T157.1	1	50	*	13.2KV – 240/120V	POLE	BOCA CHICA – POLE A25, CABLE VISION AM
T157.2	1	50	*	13.2KV – 240/120V	POLE	BOCA CHICA – POLE A25, CABLE VISION AM
T158	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A22,BLDG.634,618,718,
T158.1	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A22,BLDG.634,618,718,
T158.2	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A22,BLDG.634,618,718,
T159	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A19, BLDG. A–631, 632
T159.1	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A19, BLDG. A–631, 632
T159.2	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A19, BLDG. A–631, 632
T160	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A2, BLDG. A630
T160.1	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE A2, BLDG. A630
T160.2	1	50	*	13.8KV – 240/120V	POLE	BOCA CHICA – POLE 12, BLDG. A630
T161	1	50	*	14.4KV – 240/120V	POLE	BOCA CHICA – POLE A5, BLDG. A514
T161.1	1	50	*	14.4KV – 240/120V	POLE	BOCA CHICA – POLE A5, BLDG. A514
T161.2	1	50	*	14.4KV – 240/120V	POLE	BOCA CHICA – POLE A5, BLDG. A514
T162	1	167	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – POLE A11, BLDG. A515
T162.1	1	167	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – POLE A11, BLDG. A515
T162.2	1	167	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – POLE A11, BLDG. A515
T163	1	15	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A93, BLDG. A419

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T163.1	1	15	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A93, BLDG. A419
T163.2	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A93, BLDG. A419
T164	1	75	ALLIS CHALMERS	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A93, BLDG. A419
T165	1	25	*	*	POLE	BOCA CHICA – POLE A92, PUMP
T165.1	1	25	*	*	POLE	BOCA CHICA – POLE A92, PUMP
T165.2	1	25	*	*	POLE	BOCA CHICA – POLE A92, PUMP
T166	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A71, BLDG A4012
T166.1	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A71, BLDG. A4012
T166.2	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A71, BLDG. A4012
T167	1	10	*	*	POLE	BOCA CHICA – POLE A72
T168	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A74, BLDG. A227
T168.1	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A74, BLDG. A227
T168.2	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A74, BLDG. A227
T169	1	50	WESTINGHOUSE	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A105, BLDG. A227
T169.1	1	50	WESTINGHOUSE	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A105, BLDG. A227
T169.2	1	50	WESTINGHOUSE	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A105, BLDG. A227
T170	1	100	ALLIS CHALMERS	4.16KV – 208Y/120V	PAD	BOCA CHICA – POLE A104, BLDG. A229
T171	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A96A, BLDG. A225
T171.1	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A96A, BLDG. A225
T171.2	1	25	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A96A, BLDG. A225
T172	1	112.5	WESTINGHOUSE	4.16KV – 208/120V	PAD	BOCA CHICA – POLE A102, BLDG. A224
T173	1	25	UPTEGRAFF	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A101, BLDG. A255
T173.1	1	25	UPTEGRAFF	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A101, BLDG. A255
T173.2	1	50	UPTEGRAFF	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A101, BLDG. A255
T174	1	225	*	4.16KV – 208Y/120V	POLE	BOCA CHICA – POLE A107A, BLDG. A131, 14
T175	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A109, BLDG. A132
T175.1	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A109, BLDG. A132.
T175.2	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A109, BLDG. A132
T176	1	75	ALLIS CHALMERS	4.16KV – 240/120V	POLE	BOCA CHICA – A111, BLDG. A1318
T176.1	1	75	ALLIS CHALMERS	4.16KV – 240/120V	POLE	BOCA CHICA – A111, BLDG. A1318
T176.2	1	75	ALLIS CHALMERS	4.16KV – 240/120V	POLE	BOCA CHICA – A111, BLDG. A1318
T177	1	50	G.E. WH	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(S)
T177.1	1	50	G.E. WH	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(S)
T177.2	1	50	G.E. WH	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(S)
T178	1	2.1	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(NW)
T178.1	1	2.1	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(NW)
T178.2	1	2.1	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – POLE A114, BLDG. A126(NW)
T179	1	75	G.E.	4.16KV – 208Y/120V	PAD	BOCA CHICA – POLE A114, B.DG A126(NE)
T180	1	75	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A84A, BLDG. A314
T180.1	1	75	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A84A, BLDG. A314
T180.2	1	75	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A84A, BLDG. A314
T181	*	*	G.E.	4.16KV –	PAD	BOCA CHICA – BLDG A322 & A323
T182	1	50	*	41.6KV – 240/120V	POLE	BOCA CHICA – POLE A79A, BLDG A624
T182.1	1	50	*	41.6KV – 240/120V	POLE	BOCA CHICA – POLE A79A, BLDG A624
T182.2	1	50	*	41.6KV – 240/120V	POLE	BOCA CHICA – POLE A79A, BLDG A624
T183	1	25	*	4.16KV – 208/120V	POLE	BOCA CHICA – POLE A65, BLDG. A1428
T183.1	1	25	*	4.16KV – 208/120V	POLE	BOCA CHICA – POLE A65, BLDG. A1428
T183.2	1	25	*	4.16KV – 208/120V	POLE	BOCA CHICA – POLE A65, BLDG. A1428
T184	1	300	DRY TYPE SQUARD – D	4.16KV – /120V	PAD	BOCA CHICA – BLDG. A626, LIFT STA
T185						BOCA CHICA –
T186	1	225	G.E.	4.16KV – 208Y/120V	PAD	BOCA CHICA – POLE A13, BLDG. A508
T187	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A9, BLDG. A523
T187.1	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A9, BLDG. A523
T187.2	1	50	*	4.16KV – 240/120V	POLE	BOCA CHICA – POLE A9, BLDG. A523
T188	1	150	VANTRAM ELECTRIC	13.8KV – 208/120V	PAD	BOCA CHICA – BLDG. A931
T189	1	1500	G.E.	13.8KV – 480Y/277V	PAD	BOCA CHICA – MH 8B, BLDG. A981
T190	1	1.1000	NIAGARA & G.E.	13.8KV – 480Y/277V	PAD	BOCA CHICA – BLDG A980
T190.1	1	300	NIAGARA & G.E.	13.8KV – 480Y/277V	PAD	BOCA CHICA – BLDG A980
T191	1	75	ALLIS CHALMERS	14.4KV – 240/120V	PAD	BOCA CHICA – BLDG. A978
T191.1	1	75	ALLIS CHALMERS	14.4KV – 240/120V	PAD	BOCA CHICA – BLDG. A978
T191.2	1	50	G.E.	14.4KV – 240/120V	PAD	BOCA CHICA – BLDG. A978
T192	1	150	CENTRAL TRANSFORMER	13.8KV – 480Y/277V	PAD	BOCA CHICA – PB 940, BLDG. A940
T193	1	37.5	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – MH6, BLDG. A964
T193.1	1	37.5	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – MH6, BLDG. A964
T193.2	1	37.5	WESTINGHOUSE	14.4KV – 240/120V	PAD	BOCA CHICA – MH6, BLDG. A964
T195	1	300	WESTINGHOUSE	13.2KV – 440V	PAD	BOCA CHICA – BLDG. A936N

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T196	1	500	MARCUS	13.2KV – 208Y/120V	PAD	BOCA CHICA – BLDG. A936S
T197	1	300	WESTINGHOUSE	13.2KV – 440V	PAD	BOCA CHICA – BLDG. A936S
T198	1	50	WESTINGHOUSE	14.4KV – 480/240V	PAD	BOCA CHICA – BLDG. A979
T198.1	1	50	WESTINGHOUSE	14.4KV – 480/240V	PAD	BOCA CHICA – BLDG. A979
T198.2	1	50	WESTINGHOUSE	14.4KV – 480/240V	PAD	BOCA CHICA – BLDG. A979
T199	1	225	MARCUS	13.8KV – 480/277V	PAD	BOCA CHICA – BLDG. A950
T200	1	150	RTE	13.8/416KV – 208Y/120	PAD	BOCA CHICA – PB36D, BLDG. A1320
T201	1	750	RTE	13.8KV – 480Y/277	PAD	BOCA CHICA – MH39, WELLS AIR #1
T202	1	225	RTE	13.8/4.16 – 480Y/277	PAD	BOCA CHICA – MH41A WELLS AIR #2
T203						BOCA CHICA –
T204	1	500	NIAGARA	13.8KV – 480/277V	PAD	BOCA CHICA – BLDG. A–986
T205	1	100	*	14.4KV – 208/120V	PAD	BOCA CHICA – BLDG. A994
T205.1	1	100	*	14.4KV – 208/120V	PAD	BOCA CHICA – BLDG. A994
T205.2	1	100	*	14.4KV – 208/120V	PAD	BOCA CHICA – BLDG. A994
T206	1	500	NIAGARA	13.8KV – 480/277V	PAD	BOCA CHICA – BLDG. A994
T207	1	50	G.E.	13.8KV – 208/120V	PAD	BOCA CHICA – BLDG. A1112, A1115
T207.1	1	50	G.E.	13.8KV – 208/120V	PAD	BOCA CHICA – BLDG. A1112, A1115
T207.2	1	50	G.E.	13.8KV – 208/120V	PAD	BOCA CHICA – BLDG. A1112, A1115
T208	1	10	G.E.	4.16KV	PAD	BOCA CHICA – AT MH 24 OLS VLT R/W 7
T209	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – AT OLS TRANS VLT
T210	1	112.5	RTE	13.8/4.16KV – 480Y/277	PAD	BOCA CHICA – BLDG. 1305 F.F.
T211	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – OLS TRANS VLT R/W 13
T212	1	45	RTE	4.16/13.8KV – 208Y/120	PAD	BOCA CHICA – BLDG. A937
T213	1	112.5	RTE	4.16/13.8KV – 4805/120	PAD	BOCA CHICA – PB10, MARINA – FUEL PIER
T214	1				PAD	BOCA CHICA –
T215	1	75	RTE	4.16KV – 208Y/120V	PAD	BOCA CHICA – PB106G RAPCON
T216	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB106K WINDSOCK
T217	1	112.5	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB114, BLDGF. A1019
T218	1	150	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – BLDG. A1025
T219	1	112.5	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB115F, NASRADAR A4053
T220	1	300	RTE CORP	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – BLDG. A1005
T221	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – OLS VAULT MH129A & B
T222	1	45	RTE	13.8/4.16KV – 208Y/120V	PAD	BOCA CHICA – PB107A, BLDG. A1020
T223	1	112.5	RTE	13.8/4.16KV – 480/277V	PAD	BOCA CHICA – ENG TEST STD. 969
T224	1	45	RTE	13.8/4.16KV – 208Y/120V	PAD	BOCA CHICA – ENG TEST STD. 969
T225	1	300	WESTINGHOUSE	13.8KV – 208Y/120V	PAD	BOCA CHICA – PB 210A, BLDG. A350
T226	1	150	ESCO	13.8KV – 208Y/120V	PAD	BOCA CHICA – PB 210A BLDG A337
T227	1	500	NIAGARA	13.8KV – 480Y/277Y	PAD	BOCA CHICA – PB 208A, BLDG. A651
T228	1	300	SQUARE D	13.8KV – 208Y/120V	PAD	BOCA CHICA – BLDG. A4011
T229	1	500	NIAGARA	13.8KV – 480Y/277V	PAD	BOCA CHICA – BLDG. A650
T230	1	1000	F.P.E.	13.8KV – 480V	PAD	BOCA CHICA – PB207, BLDG. A325
T231	1	75	ALLIS CHALMERS	4.16KV – 208Y/120V	PAD	BOCA CHICA – MH33, B.DG. A641
T232	1	225	STANDARD	4.16KV – 208Y/120V	PAD	BOCA CHICA – BLDG. A437
T233	1	50	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – BLDG. A437
T233.1	1	50	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – BLDG. A437
T233.2	1	50	G.E.	4.16KV – 240/120V	PAD	BOCA CHICA – BLDG. A437
T234A	1	*	*	4.16/2.4KV	PAD	BOCA CHICA – BLDG A230, OLS
T234A.1	1	*	*	4.16/2.4KV	PAD	BOCA CHICA – BLDG A230, OLS
T234A.2	1	*	*	4.16/2.4KV	PAD	BOCA CHICA – BLDG A230, OLS
T234B	1	25	*	480V – 2.4KV	PAD	BOCA CHICA – BLDG. A230 EMER PWR
T234B.1	1	25	*	480V – 2.4KV	PAD	BOCA CHICA – BLDG. A230 EMER PWR
T234B.2	1	25	*	480V – 2.4KV	PAD	BOCA CHICA – BLDG. A230 EMER PWR
T235	1	225	WESTINGHOUSE	4.16KV – 208Y/120V	PAD	BOCA CHICA – MH 26B, BLDG. A4062
T236	1	300	G.E.	4.16KV – 208Y/120V	PAD	BOCA CHICA – PB220, BLDG. 244
T237	1	333	SPIRAKORE	13.2KV – 4.16/2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T237.1	1	333	SPIRAKORE	13.2KV – 4.16/2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T237.2	1	333	SPIRAKORE	13.2KV – 4.16/2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T238	1	333	WESTINGHOUSE	13.2KV – 2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T238.1	1	333	WESTINGHOUSE	13.2KV – 2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T238.2	1	333	WESTINGHOUSE	13.2KV – 2.4KV	PAD	BOCA CHICA – MAIN SUBSTA. BLDG. A419
T239	1	25	*	*	POLE	BOCA CHICA – POLE A87 GUARD STATION
T240						
T241	1	*	*	*	POLE	BOCA CHICA – POLE A90 WATER WELL
T241.1	1	*	*	*	POLE	BOCA CHICA – POLE A90 WATER WELL
T241.2	1	*	*	*	POLE	BOCA CHICA – POLE A90 WATER WELL
T242	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB215C, OLS VAULT R/W 3

NO.	QUAN	KVA	MANUFACTURER	VOLTAGE RATING	TYPE	LOCATION
T243	1	15	*	4.16/2.4KV	POLE	BOCA CHICA – POLE A66B BALLFIELD
T243.1	1	15	*	4.16/2.4KV	POLE	BOCA CHICA – POLE A66B BALLFIELD
T243.2	1	15	*	4.16/2.4KV	POLE	BOCA CHICA – POLE A66B BALLFIELD
T244						BOCA CHICA –
T245	1	500	WESTINGHOUSE	13.8KV – 208Y/120V	PAD	BOCA CHICA – VAQ MOBILE FACILITY
T246	1	150	RTE	13.8KV – 208Y/120V	PAD	BOCA CHICA – MH8 BLDG. A939
T247	1	300	WESTINGHOUSE	13.8KV – 480/277	PAD	BOCA CHICA – PB4B BLDG. A4082
T248						
T249						
T250	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB112 OLS LIGHT VAULT R/W
T251	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB 106D OLS VAULT R/W 21
T252	1	45	RTE	13.8/4.16KV – 208Y/120	PAD	BOCA CHICA – PB218A FOR A935
T253	1	225	RTE	??????????????????????	PAD	BOCA CHICA – BLDG A1382 PB21
T254	1	225	SQD	13.8/480Y/277V	PAD	BOCA CHICA – BLDG A230 MH24
T255						
T256						

No.	USN NUMBER	DESCRIPTION	MFG	SERIAL NUMBER
1	N 13 01956	forklift	Yale	
2	N 13 01957	forklift	Yale	
3	N 13 01958	forklift	Yale	
4	N 13 01959	forklift	Yale	
5	N 13 08937	forklift	Sil Hoist	
6	N 13 09034	forklift	A/C	
7	N 13 09161	forklift	Allis Chamber	
8	N 13 10385	Forklift	Toyo	
9	N 13 10386	forklift	Toyo	
10	N 13 10387	forklift	Toyo	
11	N 13 10845	forklift	Caterpiller	
12	N 13 14775	forklift	A/C	
13	N 13 14901	forklift	A/C	
14	N 13 15152	forklift	Clark	
15	N 13 15183	forklift	Clark	
16	N 13 16494	forklift	A/C	
17	N 13 16721	forklift	A/C	
18	N 13 17114	forklift	A/C	
19	N 13 37685	forklift	A/C	
20	N 13 37586	forklift	A/C	
21	N 13 38594	forklift	Hyster	
22	N 13 38595	forklift	Hyster	
23	N 13 38596	forklift	Hyster	
24	N 13 44112	forklift	Clark	
25	N 13 44173	forklift	A/C	
26	N 13 47738	forklift	Toyo	
27	N 13 55355	forklift	A/C	
28	N 13 56064	forklift	Hyster	
29	N 13 56065	forklift	Hyster	
30	N 13 59111	forklift	A/C	
31	N 13 59112	forklift	A/C	
32	N 13 61287	forklift	Hyster	
33	N 13 67617	forklift	A/C	
34	N 13 67618	forklift	A/C	
35	N 13 67619	forklift	A/C	
36	N 13 77597	forklift	Hyster	
37	N 13 77615	forklift	Hyster	
38	N 13 77616	forklift	Hyster	
39	N 13 77652	forklift	Hyster	
40	N 13 95373	forklift	Hyster	
41	N 13 95450	forklift	Hyster	
42	N 13 95451	forklift	Hyster	
43	N 13 95452	forklift	Hyster	
44	N 13 97248	forklift	Hyster	
45	O DL 87079	forklift	Hyster	
46	O DL 88409	forklift	Hyster	
47	94-25875	TK 3/4t	GMC	1GCGR24K3HJ14705
48	96-37285	TK AMMO	GMC	T17DDAV567809

No.	USN NUMBER	DESCRIPTION	MFG	SERIAL NUMBER
49	96-37286	TK AMMO	GMC	T17DDAV567814
50	96-38055	TK AERIAL	REACH-ALL	1GDM7D1FXBV577739
51	96-38475	TK DUMP	IHC	1HTAA1758DHA1370
52	96-40892	TK AERIAL	REACH-ALL	1HTLKTVR6LH564337
53	96-41007	TK AMMO	IHC	1HTLCHXL8HHA2440
54	96-42052	TK DUMP	FORD	1FDNF60H0CVA03996
55	96-43134	TK DUMP	NAVISTAR	1HTSAZRN9LH2271
56	97-34657	SEMI-TRAILER	DAKOTA	1DAT2CX66EM00760
57	95-22190	TK DUMP	FORD	F60DVZ20777
58	95-23045	TK DUMP	IHC	JNB17074
59	95-25144	TK DOMP	IHC	IHTAA17B8DHB12489
60	95-27626	TK STAKE	NAVISTAR	1HTLAZPM9JH59862
61	95-28095	TK STAKE	NAVISTAR	1HTSAZPMXLH227157
62	96-36882	TK AERIAL	REACH-ALL	5145
63	96-36935	TK DUMP	IHC	JHB16213
64	96-36937	TK DUMP	IHC	JHB16744
65	96-37051	TK HIGHLIFT	MOORE & SONS	79-5676
66	94-25874	TK STAKE	CHEVROLET	1GCGR24K5HJ145746
67	82-04615	CRANE TK 60T	GROVE	GH1W19010
68	54-06656	CLEANER, VAC	FMC CORP	707-1469
69	54-06528	TK VAC SWP	FMC CORP	707-1406
70	56-15260	MOWER LAWN	MOTRIM	MT285R1729
71	56-15261	MOWER LAWN	MOTRIM	MT285R1729
72	58-02102	TK REFUSE	PERFECTION	1GLT-78/TCE618V612
73	58-02275	TK REFUSE	LODAL	107472
74	58-02345	TK REFUSE	PAKMOR	F825B0688625T
75	58-02346	TK REFUSE	PAKMOR	F825B0688626T
76	94-08399	TK TIRE SV	CHEVROLET	CC024J130249
77	48-14418	"DOZER"	IHC	TD20B9232
78	48-16614	TRACTOR	DEERE	339447
79	48-16615	TRACTOR	DEERE	339448
80	48-16616	TRACTOR	DEERE	339449
81	48-16829	TRACTOR	DEERE	357519
82	48-16830	TRACTOR	DEERE	358118
83	48-17451	TRACTOR	JI CASE	18963
84	48-17607	TRACTOR	DEERE	RW8850H006572
85	48-17835	TRACTOR	DEERE	TO750BH7567?
86	82-04371	CRANE TK 15T	GALION	150F-DGAR-7526
87	12-00602	CRANE TK 10T	SILENT	19621
88	12-03078	CRANE TK 5T	GROVE	68933
89	12-03081	CRANE 8.5T	GROVE	68745
90	16-45759	TK PALLET	YALE	N488424
91	37-00414	AUGER,TK MNTD	TEXOMA	7080
92	37-00553	AUGER TK MNTD	HWY. MFR	M-011
93	44-02461	GRADER	GALION	T500-L06317
94	45-03429	FT END LOADER	HAUGH	27MC-1124
95	46-02564	ROLLER	GALION	TH4-6-G-56326
96	48-13240	TRACTOR	IHC	21123

Appendix C
Health and Safety Plan

CH2M HILL HEALTH AND SAFETY PLAN

This plan will be kept onsite during field activities and will be reviewed and updated as necessary. This plan adopts, by reference, the standards of practice (SOP) contained in the CH2M HILL *Waste Management and Industrial Processes Discipline Health and Safety Manual, Volumes 1 and 2,* and other applicable CH2M HILL SOPs as appropriate. The Site Safety Coordinator (SSC) is to be familiar with these SOPs. In addition, this plan adopts procedures contained in the work plan for the project.

1.0 PROJECT INFORMATION AND DESCRIPTION

CLIENT OR OWNER: ABB Environmental Services **PROJECT NO:** LGN32016.A1.20

PROJECT MANAGER: Dee Parrish **OFFICE:** GNV

SITE NAME: Naval Air Station, Key West, Florida

SITE ADDRESS: Bldg. A629; Key West, Florida 33040-5000

DATE HEALTH AND SAFETY PLAN PREPARED: November 15, 1991

DATE(S) OF INITIAL VISIT: December 16, 1991

DATE(S) OF SITE WORK: December 16, 1991 - March 31, 1992

SITE ACCESS:

All project personnel will be issued Tradesman Badges. Tradesman Badge application forms will be filled out in advance and sent to the Public Works Officer for signature. When personnel arrive onsite, they will take proper identification to Building 641, Pass and I.D. Building, and be photographed so that badges can be issued. Tradesman Badges will allow access to all sites except security or restricted areas that will require military escort. Tradesman Badges must be worn at all times while on Navy facilities. Requests for escort into restricted or security areas must be made at least one week in advance to Scott Rogowski, Environmental Protection Specialist, (305) 292-2151.

Company marked vehicles do not require a pass when driven by a person with a Tradesman Badge. Vehicles must have registration with the vehicle. Unmarked vehicles can get a pass at Building 641 if vehicle registration, drivers license, and Tradesman Badge are on-hand.

Any questions can be directed to John Conroy of the Naval Air Station at (305) 292-2921.

SITE SIZE: Property holdings for the complex are located in 16 areas. The Naval Training Center and Bombing Range is 13,300 acres, the Naval Air Station is 3,250 acres, Saddlebunch Key is 615 acres, and all other areas are 2 acres or less.

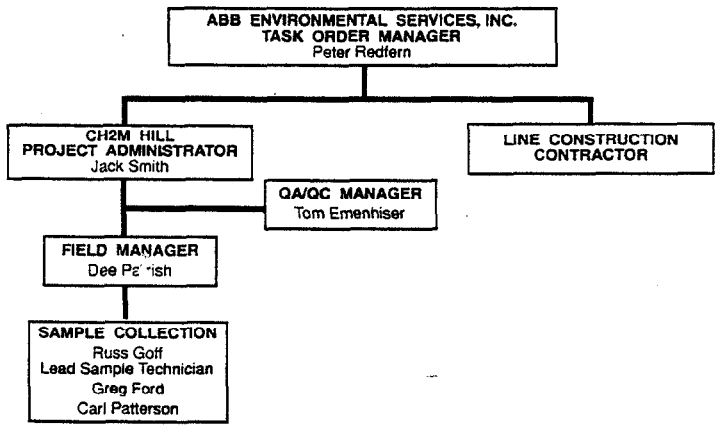
SITE TOPOGRAPHY: The sampling locations are in Key West, Florida. The topography is generally flat with little relief.

SITE DESCRIPTION AND HISTORY:

The Naval Complex is located in Key West, Florida, and includes the Naval Air Station and the Naval Regional Medical Clinic. Initial Naval operations commenced in 1823 to reduce pirate activities in South Florida. Naval Air Forces have been operating from Key West since the early 1900s, but principally developed during World War II. During the 1970s a decreased emphasis on a strong military posture brought a tremendous reduction in the use of the facilities and in the military population in Key West. Operations initiated in 1979/1980 and future plans reversed the trend of reduced utilization in Key West. Establishment of the Caribbean Contingency Joint Task Force, the relocation of Tactical Electronics Warfare Squadron 33 and Attack Squadron 45 to Key West, and the planned assignment of the Patrol Hydrofoil Missile Ship Squadron to Key West have changed the mission and the need for facilities.

2.0 PROJECT ORGANIZATION AND TASKS TO BE PERFORMED UNDER THIS PLAN

2.1 PROJECT ORGANIZATION



2.2 DESCRIPTION OF TASKS

Management Activities

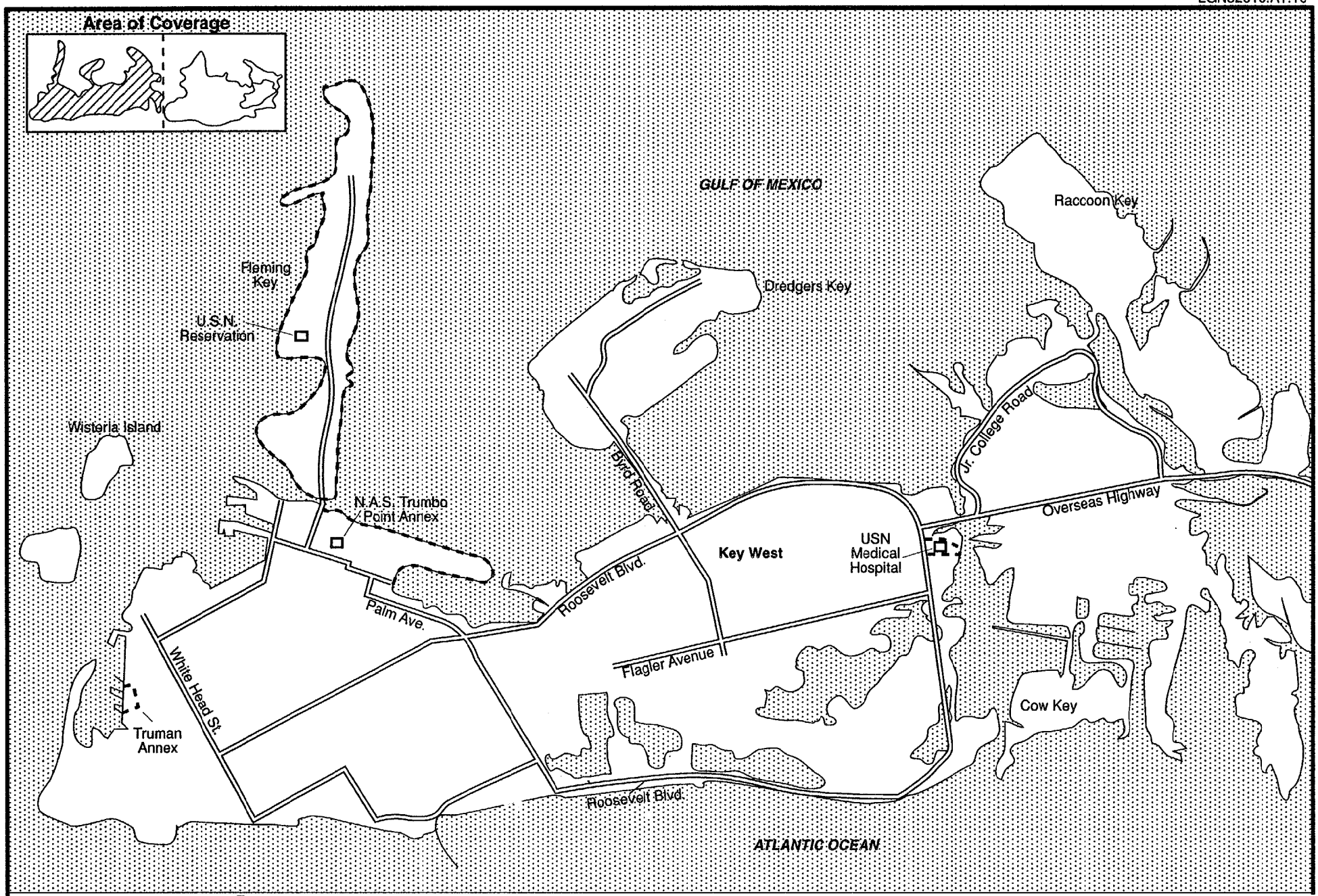
Task 1 - Project Management

Technical Activities

Task 2 - Preparation of Sample Analysis Plan (SAP), Health and Safety Plan (HASP) and Schedule of Proposed Power Outages (SOPPO)

Task 3 - Transportation Equipment Sampling

LGN32016.A1.10



Scale in Feet

0 3,000 6,000

N

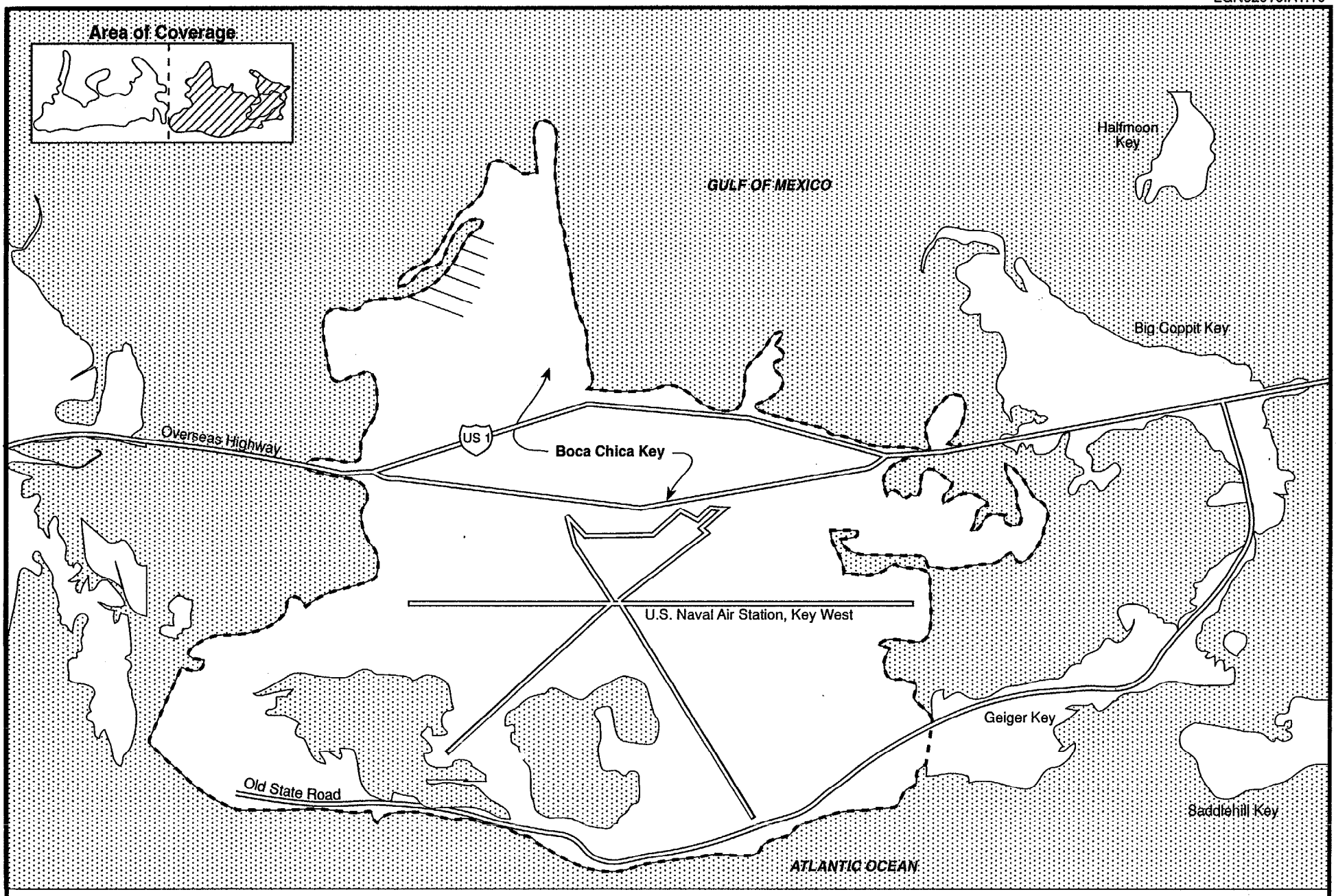
Legend

- - - - - Sampling Sites

Sampling Sites, Key West

CH2M HILL

LGN32016.A1.10



Scale in Feet

0 3,000 6,000

N

Legend

- - - - - Sampling Sites

Sampling Sites, Boca Chica Key.

CH2M HILL

Task 4 - Electrical Transformer Sampling

Task 5 - Preparation of the Final Report

2.3 DESCRIPTION OF SUBCONTRACTORS

An electrical line construction contractor will be a subcontractor to ABB Environmental Services to provide electrical linemen and equipment to accomplish the field sampling of electrical transformers.

CH2M HILL will be a subcontractor to ABB Environmental Services to plan and schedule the work, observe transformer sampling, perform sampling of transportation equipment, take custody of all samples, and analyze and report results.

3.0 HAZARD EVALUATION AND CONTROL

3.1 HEAT AND COLD STRESS (REFERENCE CH2M HILL SOP HS-09)

3.1.1 GUIDELINES FOR WORKING IN TEMPERATURE EXTREMES WHILE WEARING PERSONAL PROTECTIVE EQUIPMENT (PPE)

Temperature	Work Cycle	Rest Cycle	Control Measures
<32° F or <55° F & raining	2 hrs	15 min	Review cold stress in safety meeting. Rest in a warm area. Drink at least 8 ounces of warm non-caffeinated, non-alcoholic beverage at each rest break. Schedule a mid-day lunch break of at least 30 minutes in a warm area to begin not later than 5 hours after startup.
72° to 77° F	2 hrs	5 min	Review heat stress in safety meeting. Take resting pulse rate before beginning work. Drink 8 ounces of cool water before beginning work, and 4 ounces at rest break. Have ice available.
77° to 82° F	2 hrs	5 min	As above, but seated rest break. Monitor pulse rate. (See below.)
82° to 87° F	60 min	15 min	As above, but rest area to be shaded.
87° to 90° F	30 min	15 min	As above. Try to provide a shaded work area.
>90° F	15 min	15 min	As above. Provide a shaded area with seats in the work area for team members to use as needed. Try to reschedule work to avoid mid-day heat.

PULSE CRITERIA. Take resting radial (wrist) pulse at start of work day; record it. Measure radial pulse for 30 seconds as rest period begins. Pulse not to exceed 110 beats per minute (bpm), or 20 bpm above resting pulse. If pulse exceeds this criteria, reduce work load and/or shorten the work cycle by one third, and observe for signs of heat stress. No team member is to return to work until his/her pulse has returned to <110 bpm, or resting pulse +20 bpm.

3.1.2 SYMPTOMS AND TREATMENT OF HEAT AND COLD STRESS

Heat Stroke	Heat Exhaustion	Frostbite	Hypothermia
Red, hot, dry skin; dizziness; confusion; rapid breathing and pulse; high body temperature.	Pale, clammy, moist skin; profuse sweating; weakness; normal temperature; headache; dizzy; vomiting.	Blanched, white, waxy skin, but tissue resilient; tissue cold and pale.	Shivering, apathy, sleepiness; rapid drop in body temperature; glassy stare; slow pulse; slow respiration.
Cool victim rapidly by soaking in cool (not cold) water. Get medical attention immediately!!	Remove victim to a cool, air conditioned place. Loosen clothing, place in head low position. Have victim drink cool (not cold) water.	Remove victim to a warm place. Rewarm area quickly in warm (not hot) water. Have victim drink warm fluids--not coffee or alcohol. Do not break any blisters. Elevate the injured area and get medical attention.	Remove victim to a warm place. Have victim drink warm fluids--not coffee or alcohol. Get medical attention.

3.2 PHYSICAL (SAFETY) HAZARDS AND CONTROLS (REFERENCE CH2M HILL SOP HS-03)

Note: hazards listed may not be inherent to the tasks to be performed on site; They are included here for information only.

Hazard	Engineering or Administrative Controls
Flying debris/objects	Provide shielding and PPE.
Noise > 85 dBA	Noise protection and monitoring required.
Steep terrain/unstable surface	Brace and shore equipment.
Build-up of explosive gases	Provide 20 lb A,B,C fire extinguisher and ventilation.
Build-up of static electricity	No spark sources within 50 feet of an excavation, heavy equipment, or UST removal. Ground as appropriate.
Gas cylinders	Make certain gas cylinders are properly anchored and chained. Keep cylinders away from ignition sources.
High pressure hose rupture	Check to see that fitting and pressurized lines are in good repair before using.
Electrical shock	Make certain third wire is properly grounded. Do not this tamper with electrical wiring unless qualified to do so.
Suspended loads	Work not permitted under suspended loads.
Moving vehicles	Back-up alarm required for heavy equipment. Observer remains in contact with operator and signals safe back-up. Personnel to remain outside of turning radius.
Overhead electrical wires	Heavy equipment (e.g. drill rig) to remain at least 15 feet from overhead powerline for powerlines of 50 kV or less. For each Kv > 50 increase distance 1/2 foot.
Buried utilities, drums, tanks, and so forth.	Locate buried utilities, drums, tanks, etc. prior to digging or drilling and mark location.
Slip, trip, fall hazards due to muddy work areas	Use wood pallets or similar devices in muddy work areas.
Back injury	Use proper lifting techniques, or provide mechanical lifting aids.
Confined space entry	Permit and safety plan required (reference CH2M HILL SOP HS-17).
Trenches/excavations	Make certain trench meets OSHA standard before entering. All excavations > 5 feet deep must be sloped or shored. Excavations > 4 feet deep must have a ladder every 25 feet. If not entering trench, remain 2 feet from edge of trench at all times.
Protruding objects	Flag visible objects.

3.3 PROCEDURES TO LOCATE BURIED UTILITIES

Not Applicable.

3.4 BIOLOGICAL HAZARDS AND CONTROLS

Hazards	Location and Control Measures
Not Applicable.	

3.5 TICK BITES, LYME DISEASE, AND ROCKY MOUNTAIN SPOTTED FEVER (RMSF)

Check often for tick bites. If bitten, carefully remove tick with tweezers, making certain to remove pincers, being careful not to crush the tick. After removing the tick, wash your hands. Disinfect area, and dress. If the tick resists or cannot be completely removed, seek medical attention.

Look for symptoms of lyme disease or RMSF. Lyme: rash that looks like a "bulls-eye", with small welt in center, several days to weeks after tick bite. RMSF: Rash comprising red spots under skin, 3 to 10 days after tick bite. For both, chills, fever, headache, fatigue, stiff neck, bone pain. If symptoms appear, seek medical attention.

3.6 RADIOLOGICAL HAZARDS AND CONTROLS

Not Applicable.

Hazards	Controls
Not Applicable.	

3.7 HAZARDS POSED BY CHEMICALS BROUGHT ONSITE

Refer to CH2M HILL *Hazard Communication Program Manual* which is available from the Corporate Human Resources Department in Denver. The Project Manager is to request Material Safety Data Sheets (MSDSs) from the client, or contractors and subcontractors for chemicals that CH2M HILL employees are potentially exposed to.

Chemical	Location
Not Applicable.	

3.8 KNOWN CONTAMINANTS OF CONCERN

Contaminant	Location and Highest Concentration (solid media: mg/kg or liquid media: ug/l)	PEL (mg/m^3)	IDLH (ppm)	Symptoms and Effects of Exposure	PIP
Polychlorinated Biphenyls	Unknown	0.5	--	Irritation of eyes, nose and throat, and an acne-like skin rash. May injure the liver resulting in fatigue, dark urine, and yellow jaundice. Repeated skin contact with the liquid may cause skin irritation.	NL

Note 1: Lower value of PEL, REL, or TLV listed.
Note 2: NL = no limit found in reference materials.
Note 3: PIP = photoionization potential
Note 4: Location refers to physical location. Abbreviations specify media:
A (AIR) D (DRUMS) F (FLYASH) GW (GROUNDWATER) L (LAGOON) TK (TANK)
S (SOIL) SL (SLUDGE) SW (SURFACE WATER)

3.9 POTENTIAL ROUTES OF EXPOSURE	
DERMAL: Skins or Eyes	**OTHER:** Injestion

4.0 PERSONNEL

4.1 CH2M HILL EMPLOYEES (REFERENCE CH2M HILL SOP HS-01 AND HS-02)

Employees listed below are enrolled in the CH2M HILL chemical protection program (CPP) and meet the medical surveillance, 40-hour initial training, 3-day on-the-job experience, and 8-hour annual refresher training requirements of OSHA 29CFR1910.120. Employees designated "SSC" have received 8 hours of supervisor and 8 hours of instrument training and can serve as site safety coordinator (SSC) for the level of protection indicated. There must be one SSC present during any task performed in exclusion or decontamination zones with the potential for exposure to safety and health hazards. Employees designated "FA-CPR" are currently certified by the American Red Cross, or equivalent, in first aid and CPR. There must be one FA-CPR designated employee present during any task performed in exclusion or decontamination zones with the potential for exposure to safety and health hazards. The "buddy system" requirements of OSHA 29CFR1910.120 are to be met at all times.

Employee Name	Office	Responsibility	SSC/FA-CPR
Russell Goff	GNV	Field Team Leader	FA-CPR
Gregory Ford	DFB	Site Safety Coordinator	Level (C) SSC; FA-CPR
Carl Patterson	DFB	Sample Technician	Level (D) SSC; FA-CPR
Curtis Willis	DFB	Sample Technician	Level (D) SSC; FA-CPR

4.2 HEALTH AND SAFETY AND FIELD TEAM CHAIN OF COMMAND AND PROCEDURES

4.2.1 CLIENT

ABB Environmental Services, Inc./Naval Facilities Engineering Command

4.2.2 CH2M HILL

Subcontractor to ABB Environmental Services, Inc.

4.2.3 SUBCONTRACTOR

Electrical Line Construction Contractor as Subcontractor to ABB Environmental Services, Inc.

5.0 PERSONAL PROTECTIVE EQUIPMENT (PPE) SPECIFICATION[1] (REFERENCE CH2M HILL SOP HS-07 and HS-08)

Task	Level	Body	Foot	Head[2]	Eye	Hand	Respirator
Maintenance of transformer samples and sampling of transportation equipment	D	Saranex Tyvek disposable suits (disposed of daily or when contaminated)	Disposable boot covers (disposed of daily or when contaminated)	Hardhat	Safety glasses with eye shields	Silver shield gloves (disposed of when contaminated or when removed)	None required.
	C			Hardhat			APR, full face, MSA Ultratwin or equivalent, cartridges:
	B			Hardhat			Positive pressure demand SCBA: MSA Ultralite or equivalent

Note 1: Modifications:
Note 2: The SSC shall specify hardhat areas.

5.1 REASONS TO UPGRADE OR DOWNGRADE LEVEL OF PROTECTION

Upgrade	Downgrade
• Request of individual performing task. • Change in work task that will increase contact or potential contact with hazardous materials. • Occurence or likely occurence of gas or vapor emission. • Known or suspected presence of dermal hazards. • Instrument action levels (Section 6.0) exceeded.	• New information indicating that situation is less hazardous than originally thought. • Change in site conditions that decreases the hazard. • Change in work task that will reduce contact with hazardous materials.

6.0	**AIR MONITORING EQUIPMENT**	Not Applicable.
6.1	**CALIBRATION SPECIFICATION**	Not Applicable.
6.2	**AIR SAMPLING**	Not Applicable.

7.0 DECONTAMINATION SPECIFICATION (REFERENCE CH2M HILL SOP HS-13)

Personnel	Sample Equipment	Heavy Equipment
• Dispose of gloves whenever removed or when contaminated	• All sample equipment will be disposed of after each use	• Not Applicable
• Dispose of body suit at end of each day or when contaminated		
• Dispose of boot covers at end of day or when contaminated		

8.0 SPILL CONTAINMENT PROCEDURES

When any spill occurs, contractor will immediately notify Naval Air Station personnel. The sampling team will make every effort to contain and minimize the spill. Naval Air Station personnel will be responsible for spill containment.

9.0 CONFINED SPACE ENTRY Not Applicable

Confined space entry requires an additional health and safety plan and a permit. Refer to CH2M HILL SOP HS-17, contained in the *Waste Management and Industrial Processes Discipline Health and Safety Manual, Volume 1.*

10.0 WORK PROCEDURES

10.1 WORK PRACTICES

- No spark sources within exclusion or decontamination zones.
- Avoid visibly contaminated areas.
- No eating, drinking, or smoking in contaminated areas, or exclusion or decontamination zones.
- Site Safety Coordinator (SSC) to establish areas for eating, drinking, smoking.

- No contact lenses in exclusion or decontamination zones.
- No facial hair that would interfere with respirator fit if Level C or B is anticipated.
- Site work will be performed during daylight hours whenever possible. Any work conducted during hours of darkness will require enough illumination intensity "to read a newspaper without difficulty."

10.2 SITE CONTROL MEASURES

- SSC to conduct site safety briefing (see below) before starting field activities, or as tasks and site conditions change.
- SSC records safety briefing attendance in logbook, and documents topics discussed.
- Post OSHA job site poster in a central and conspicuous location at the site.
- Determine wind direction.
- Establish work zones: support, decontamination, and exclusion zones, and delineate work zones with flagging or cones as appropriate. Support zone upwind of site.
- Establish decontamination procedures, including respirator decontamination procedures, and test.
- Utilize access control at the entry and exit from each work zone.
- Chemicals to be stored in proper containers.
- MSDSs are available for onsite chemicals employees exposed to.
- Establish onsite communications. These should consist of:
  - Line of sight/hand signals
  - Air horn
  - Two-way radio or cellular phone if available
- Establish emergency signals. For example:
  - Grasping throat with hand--EMERGENCY--HELP ME
  - Grasping buddy wrist--LEAVE AREA NOW
  - Thumbs up--OK, UNDERSTOOD
  - Two short blasts on air horn--ALL CLEAR
  - Continuous air horn--EMERGENCY--EVACUATE
- Establish offsite communications.
- Establish "buddy" system.
- Establish procedures for disposal of material generated onsite.
- Initial air monitoring conducted by SSC in appropriate level of protection.
- SSC to conduct periodic inspections of work practices to determine effectiveness of this plan. Deficiencies to be noted, reported to DHSM or RHSM, and corrected.
- Site safety briefing topics: general discussion of health and safety plan; site specific hazards; location of work zones; PPE requirements; equipment; special procedures; emergencies.

11.0 EMERGENCY RESPONSE PLAN (REFERENCE CH2M HILL SOP HS-12)

11.1 PRE-EMERGENCY PLANNING

The SSC performs the applicable pre-emergency planning tasks before starting field activities and coordinates emergency response with the facility and local emergency service providers as appropriate.

- Locate nearest telephone to the site and inspect onsite communications.
- Locate chemical, safety, radiological, biological hazards.
- Confirm and post emergency telephone numbers and route to hospital.
- Post site map marked with location of emergency equipment and supplies.
- Review emergency response plan for applicability to any changed site conditions, alterations in onsite operations, or personnel availability.
- Evaluate capabilities of local response teams.
- Where appropriate and acceptable to the client, inform emergency room/ambulance service and emergency response teams of anticipated types of site emergencies.
- Designate one vehicle as the emergency vehicle; place hospital directions and map inside; keep keys in ignition during field activities.
- Inventory and check site emergency equipment and supplies.
- Review emergency procedures for personnel injury, exposures, fires, explosions, chemical and vapor releases with field personnel.
- Locate onsite emergency equipment and supplies of clean water.
- Verify local emergency contacts, hospital routes, evacuation routes, and assembly points.
- Drive route to hospital.
- Review names of onsite personnel trained in first aid and CPR.
- Review notification procedures for contacting CH2M HILL's medical consultant and team member's occupational physician.
- Rehearse the emergency response plan once prior to site activities.
- Brief new workers on the emergency response plan.

11.2 EMERGENCY EQUIPMENT AND SUPPLIES

The SSC marks the locations of emergency equipment on the site map and posts the map in the support zone.

- 20 lb ABC fire extinguisher
- Industrial first aid kit
- Facility emergency equipment:
- Additional emergency equipment:

11.3 EMERGENCY MEDICAL TREATMENT

- The SSC will assume charge during a medical emergency until the ambulance arrives, or the injured person is admitted to the emergency room.
- Prevent further injury.
- Initiate first aid and CPR.
- Call the ambulance and hospital.
- Determine if decontamination will make injury worse. Yes--seek medical treatment immediately.
- Make certain that injured person is accompanied to emergency room.
- Notify the Project Manager of the injury.
- Notify the District or Regional Health and Safety Manager.
- Notify the injured person's human resources department.
- Prepare an incident report. Submit this to the Corporate Director Health and Safety (WDC) and Corporate Human Resources Department (DEN) within 48 hours.

11.4 EVACUATION

- Evacuation routes will be designated by SSC prior to beginning of work.
- Onsite and offsite assembly points will be designated prior to beginning of work.
- Personnel will exit the exclusion zone and assemble at the onsite assembly point upon hearing the emergency signal for evacuation of the exclusion zone.
- Personnel will assemble at the offsite point upon hearing the emergency signal for a site evacuation.
- The SSC and a "buddy" will remain onsite after the site has been evacuated (if possible) to assist local responders and advise them of the nature and location of the incident.
- SSC accounts for all personnel in the onsite assembly zone.
- A person designated by the SSC (prior to work) will account for personnel at the offsite assembly area.
- The SSC is to write up the incident as soon as possible after it occurs, and submit a report to the Corporate Director Health and Safety.

11.5 EVACUATION ROUTES AND ASSEMBLY POINTS

If a release occurs, field team will minimize the spill and standby onsite until the Navy spill team arrives. Should site evacuation be deemed necessary, the assembly point will be CH2M HILL's Key West office:

3154 Northside Drive
Key West, Florida 33040
(305) 294-1645

The evacuation route will be the most direct route to the office from any one site. In the event that evacuation of the Key's is necessary, Highway US 1 will be the evacuation route and assembly will be at CH2M HILL's Deerfield Beach office:

800 Fairway Drive, Suite 350
Deerfield Beach, FL 33441
(305) 426-4008

11.6 EVACUATION SIGNALS

Exclusion Zone	Site
Not Applicable.	

12.0 EMERGENCY RESPONSE TELEPHONE NUMBERS

Note: The emergency response telephone number at **all** locations is **9-911**. The prefix 9 **must** be dialed.

SITE ADDRESS:	NAS Key West Scott Rogowski Bldg. A629 Key West, FL 33040-5000	**Phone:**	(305) 292-2151
Police: **Address:**	Security Department Naval Air Station Bldg. A-314	**Phone:**	9-911 or (305) 292-2114
Fire: **Address:**	Fire Department Naval Air Station Bldg. A-132	**Phone:**	9-911 or Boca Chica Key 3333 Truman Annex 3333 Trumbo Point (305) 293-4333
Ambulance:	Atlantic Key West Ambulance Service	**Phone:**	9-911 or (305) 292-2401

Note: If medical help is summoned, please notify the Security Department to prevent a delay at the entrance.

Address:	709 Eisenhower Blvd.		
Water:	Florida Keys Aqueduct Authority	**Phone:**	(305) 296-2454 M-F 9am - 5pm (305) 296-3722 After hours, weekends, and holidays
Gas:	Not Applicable	**Phone:**	
Electric:	Florida Keys Electric Co-Op Association	**Phone:**	(305) 292-2245

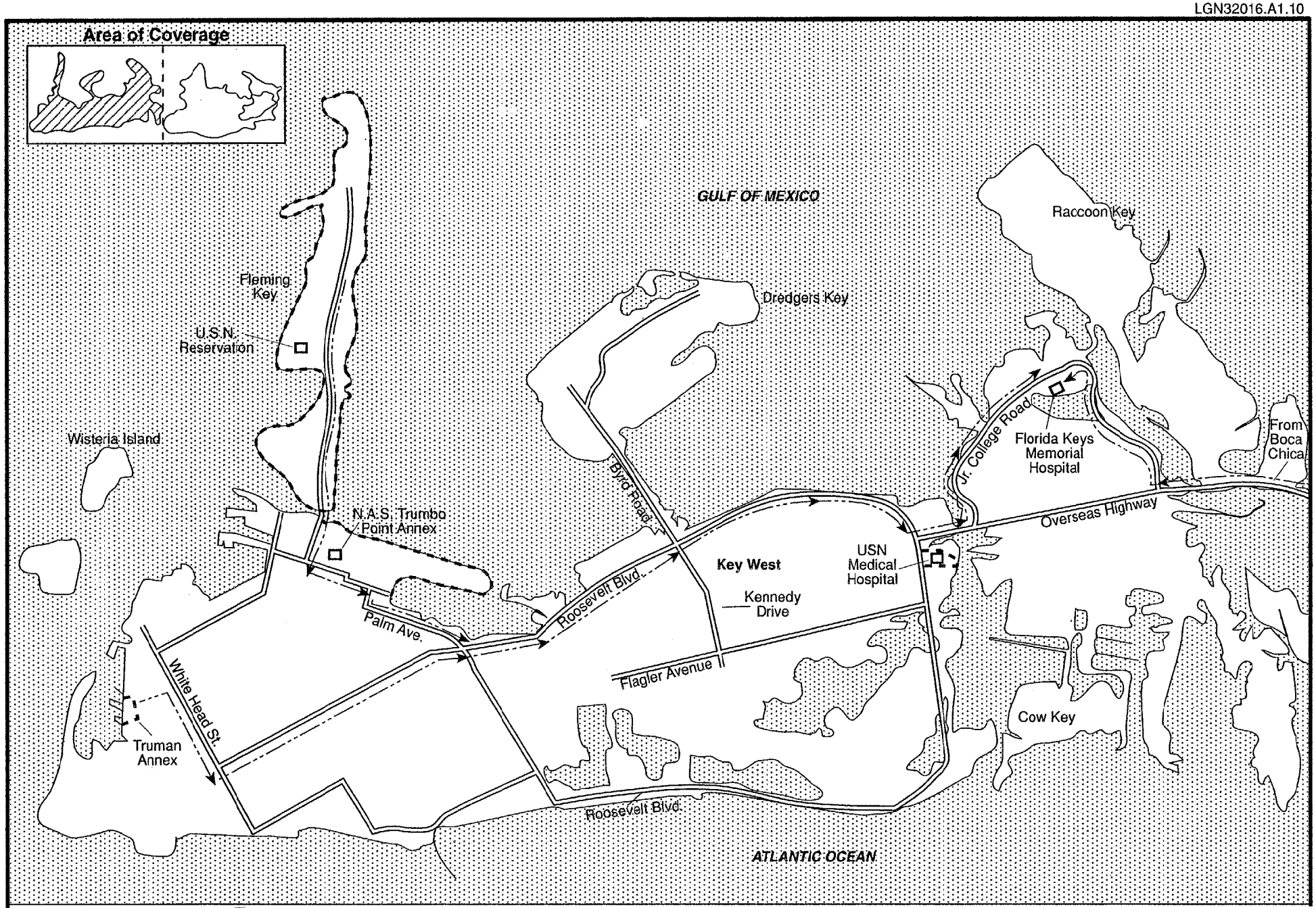
Hospital:	Florida Keys Memorial Hospital	**Phone:**	(305) 294-5531
Address:	5900 Junior College Road Key West, FL 33040		

Route To Hospital: (Refer to map on page 17.)

12.1 GOVERNMENT AGENCIES INVOLVED IN PROJECT

Not Applicable.

LGN32016.A1.10



Scale in Feet

0 3,0 6,000

N

Legend

Sampling Sites

Route

Route to Hospita

CH2MHILL

13.0 EMERGENCY CONTACTS

CH2M HILL Medical Consultant Dr. Kenneth Chase Washington Occupational Health Associates 202/463-6698 (8 AM to 5 PM EST) 202/463-6440 (after hours answering service; physician will return call within 30 minutes)	**Occupational Physician (Regional or Local)** Alachua Urgent Care Center 3925 N.W. 43rd Street Gainesville, FL 32606 (904) 371-1777
Corporate Director Health and Safety Name: Marty Mathamel/WDC Phone: 703/471-1441	**Site Safety Coordinator (SSC)** Name: Gregory Ford Phone: (305) 426-4008
District Health and Safety Manager (DHSM) Name: Not Applicable Phone:	**Regional Manager** Name: Steve Aasheim Phone: (904) 331-2442
Regional Health and Safety Manager (RHSM) Name: Tom Richardson Phone: (904) 331-2442	**Project Manager** Name: Dee Parrish Phone: (904) 331-2442
Radiation Health Manager (RHM) Name: George Stephens/ORO Phone: 615/483-9032	**Regional Human Resources Department** Name: Mary Jo Jordan Phone: (904) 331-2442
Client ABB Environmental Services, Inc. Peter Redfern 2571 Executive Center Circle East Suite 100 Tallahassee, FL 32301 (904) 656-1293 Naval Facilities Engineering Command Robert Harrell 2155 Eagle Drive P. O. Box 10068 Charleston, SC 29411-0068 Site: Naval Air Station, Key West, Florida William G. Hunt Bldg. A629 Key West, Florida 33040-5000 (305) 292-2030	**Corporate Human Resources Department** Name: Beth Brown/DEN Phone: 303/771-0952 If an injury occurs, notify the injured person's personnel office as soon as possible after obtaining medical attention for the injured. Notification MUST be made within 24 hours of the injury.

14.0 PLAN APPROVAL

This site safety plan has been written for use by CH2M HILL. CH2M HILL claims no responsibility for its use by others, unless specified and defined in project or contract documents. The plan is written for the specific site conditions, purposes, dates, and personnel specified and must be amended if these conditions change.

PLAN WRITTEN BY: John Arnett, III **DATE:**

PLAN APPROVED BY: Curt Poutsch **DATE:**

14.1 PLAN AMENDMENTS

DATE: CHANGES MADE BY:

CHANGES TO PLAN:

APPROVED: **DATE:**

14.2 PLAN AMENDMENTS

DATE: CHANGES MADE BY:

CHANGES TO PLAN:

APPROVED: **DATE:**

15.0 ATTACHMENTS TO PLAN

Attachment 1: Employee signoff

Attachment 2: Form 533

Attachment 3:
Applicable MSDSs

Note: Once approved, a copy of this plan should be forwarded to Marty Mathamel/WDC.

ATTACHMENT 1

EMPLOYEE SIGNOFF

The employees listed below have been provided a copy of this health and safety plan, have read and understood it, and agree to abide by its provisions.

EMPLOYEE NAME	EMPLOYEE SIGNATURE / DATE
Russell Goff	
Gregory Ford	
Carl Patterson	
Curtis Willis	

ATTACHMENT 2

FORM 533
RECORD OF HAZARDOUS WASTE FIELD ACTIVITY

SITE NAME:
SITE SAFETY COORDINATOR:
PROJECT NUMBER:
RECORD OF ACTIVITIES FOR (DATES):

EMPLOYEE NAME / NUMBER	TOTAL DAYS ONSITE	DAYS IN LEVEL B	DAYS IN LEVEL C	DAYS IN LEVEL D	DAYS AS SSC LEVEL B	DAYS AS SSC LEVEL C	DAYS AS SSC LEVEL D	ACTIVITIES PERFORMED

Table 4.7
PCB Item Transformers
January/February 1992
Boca Chica Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR. NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T151	12/31/91	150	GENERAL ELECTRIC	E694289	13.8KV 208Y/120V	PAD	BOCA CHICA		POLE A29, BLDG. A-726	PERSONNEL SUPPORT (ADMIN BLDG.)	KW378	20583	530	02/03/92	PCB
T5.1	12/18/91	25	GENERAL ELECTRIC	B721380	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW197	20531	540	02/04/92	PCB
T181	01/04/92	25	GENERAL ELECTRIC	7301931	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW397	20584	570	02/10/92	PCB
X T70.1	12/05/91	100	GENERAL ELECTRIC	F122617-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW046	20379	600	01/23/92	PCB
X T33	12/13/91	37.5	GENERAL ELECTRIC	B457878	2.4KV - 120/240V	POLE	TRUMAN	LEAKING AT BOTTOM Shoreline	POLE 38, BLDG. 1370/71, 1364	MARRIED OFFICERS QUARTERS	KW133	20451	620	01/23/92	PCB
T143.1	12/15/91	75	GENERAL ELECTRIC	8674247	W.RKV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW176	20471	670	01/24/92	PCB
T178	01/06/92	75	GENERAL ELECTRIC	B793410	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW425	20586	750	02/10/92	PCB
T17	12/18/91	15	WESTINGHOUSE	3390782	120/240V	POLE	TRUMAN	Bldg. 1287	POLE 99, STREET LITES	STREET LIGHTS	KW182	20530	770	02/04/92	PCB
T143	12/15/91	75	GENERAL ELECTRIC	8675086	2.4KV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW175	20471	860	01/24/92	PCB
T178.2	01/06/92	75	GENERAL ELECTRIC	B783012	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW427	20586	910	02/10/92	PCB
T173	12/20/91	25	WESTINGHOUSE	3394568	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW319	20532	5,900	02/03/92	PCB
T227	12/31/91	500	NIAGARA	35597	13.8KV - 480Y/277Y	PAD	BOCA CHICA		PB 208A, BLDG. A651	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW374	20583	22,000	02/03/92	PCB
X T7	12/11/91	300	STANDARD	148902	2.4KV - 208Y/130V	PAD	TRUMAN	South Zone C	AT P89, BLDG. 438	ENLISTED MENS BARRACKS - AIR FORCE 6947TH	KW108	20440	360,000	01/23/92	PCB
T229	12/31/91	500	NIAGARA	31426	13.8KV - 480Y/277V]	PAD	BOCA CHICA	A of	BLDG. A650	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW376	20583	420,000	02/03/92	PCB
T236	12/19/91	300	GENERAL ELECTRIC	F956769	4.16KV - 208Y/120V	PAD (G)	BOCA CHICA		PB220, BLDG. 244	OPERATIONS CONTROL TOWER/NAVAL OCEANOGRAPHY COMMAND/ TELEPHONE ADMIN	KW308	20531	620,000	02/03/92	PCB
T192	01/10/92	150	CENTRAL TRANSFORMER	2250-1	13.8KV - 277/480V	PAD	BOCA CHICA		PB940, BLDG. A940	FRESH WATER PUMPHOUSE				01/10/92	MFR PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.
TR. NO. = Transformer number.

X out of Subzone

0213HB1Y

Ta[illegible]
PCB-Contamin[illegible] ransformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T6	12/14/91	25	WESTINGHOUSE	6406314	2.4KV - 120/240V	POLE	TRUMAN	Fringe of Seminole Battery	POLE 83, BLDG. 230	CHAPEL	KW158	20472	86	01/23/92	PCB
T73.1	12/05/91	167	GENERAL ELECTRIC	F122658-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW049	20379	93	01/14/92	PCB
T70	12/05/91	75	GENERAL ELECTRIC	F122615-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW045	20379	100	01/23/92	PCB
T239	12/27/91	5	GENERAL ELECTRIC	F498968-64P	120/240V	POLE	BOCA CHICA	XFMR CHANGED. REPLACED WITH G.E. L757404Y74AA ON 2/4/92.	POLE A87 GUARD STATION	GUARD STATION	KW336	20550	100	02/04/92	PCB
T70.2	12/05/91	75	GENERAL ELECTRIC	F122616-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW047	20379	110	01/23/92	PCB
T88	12/12/91	167	GENERAL ELECTRIC	F499030-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW125	20441	110	02/07/92	PCB
T88.2	12/12/91	167	GENERAL ELECTRIC	F499027-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW127	20441	110	02/07/92	PCB
T73	12/05/91	167	GENERAL ELECTRIC	F122659-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW048	20379	120	01/14/92	PCB
T88.1	12/12/91	167	GENERAL ELECTRIC	F499025-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW126	20441	120	02/07/92	PCB
T91.2	12/12/91	5	GENERAL ELECTRIC	F498967-64P	120/240V	POLE	FLEMING KEY	XFMR OUT OF SERVICE	POLE B171A	* O.O.S.	KW120	20441	120	01/27/92	PCB
T137	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW329	20534	120	02/04/92	PCB
T137.1	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW330	20534	120	02/04/92	PCB
T173.1	12/20/91	50	GENERAL ELECTRIC	6874429	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW320	20532	120	02/03/92	PCB
T168	01/05/92	25	GENERAL ELECTRIC	6877264	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW411	20585	130	02/10/92	PCB
T73.2	12/05/91	167	GENERAL ELECTRIC	F122657-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW050	20379	150	01/14/92	PCB
T143.3	12/15/91	50	GENERAL ELECTRIC	6874450	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW178	20471	150	01/24/92	PCB
T181.2	01/04/92	25	GENERAL ELECTRIC	B714665	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW399	20585	150	02/10/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

4-38

4.6

PCB-Contaminated Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T181.1	01/04/92	25	GENERAL ELECTRIC	7300038	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW398	20585	160	02/10/92	PCB
T150	12/31/91	300	GENERAL ELECTRIC	E694290	13.2KV - 208Y/120V	PAD	BOCA CHICA		AT POLE A31, BLDG. A-727	BARRACKS VAQ-33/SUPPLY/WEAPONS	KW377	20583	190	02/03/92	PCB
T168.2	01/05/92	25	GENERAL ELECTRIC	6880532	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW413	20585	190	02/10/92	PCB
T207	12/19/91	150	GENERAL ELECTRIC	G856447	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE EQUIPMENT BUILDING; SEWAGE EJECTOR	KW317	20532	220	02/05/92	PCB
T190.1	01/10/92	300	GENERAL ELECTRIC	F646359-67P	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG A980	AIMD	KW467	20646	230	02/11/92	PCB
T139.1	12/15/91	50	GENERAL ELECTRIC	6948908	2.4KV - 120/240V	POLE	NAVY HOSP.	NO NAME PLATE	POLE L3, TENNIS CRTS, BLDG LD	TENNIS COURTS; BUILDING LD; WATER PUMPS	KW166	20471	240	01/24/92	PCB
T143.2	12/15/91	75	GENERAL ELECTRIC	8674251	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW177	20471	260	01/24/92	PCB
T144	12/15/91	750	GENERAL ELECTRIC	G852379	2.4KV - 208Y/120V	PAD	NAVY HOSP.		MH PB-L8, MAIN BLDG.	MAIN BUILDING OFFICES	KW171	20471	280	01/24/92	PCB
T18	12/18/91	50	GENERAL ELECTRIC	D627551-57Y	2.4KV - 120/240V	POLE	TRUMAN	Zone C	POLE 107, BLDG. 795, 284, 261, 149	DRMO SURPLUS MATERIAL STORAGE/OFFICE; STOREHOUSE; STOREHOUSE, HAZARDOUS	KW186	20530	290	02/04/92	PCB
T11	12/14/91	50	GENERAL ELECTRIC	B760752	2.4KV - 120/240V	POLE	TRUMAN		POLE 87, SBALL FIELD	SOUTH BALL FIELD	KW155	20468	330	01/23/92	PCB
T74.1	12/05/91	100	GENERAL ELECTRIC	F122620-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW052	20379	340	01/14/92	PCB
T74.2	12/05/91	100	GENERAL ELECTRIC	F122622-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW053	20379	380	01/14/92	PCB
T205	12/20/91	100	GENERAL ELECTRIC	F122619-64P	14.4KV - 120/240V	PAD	BOCA CHICA	FUSE BROKEN - POWER WAS NOT RESTORED	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW323	20532	420	02/05/92	PCB
T205.1	12/20/91					PAD	BOCA CHICA	NO NAME PLATE	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW324	20534	440	02/05/92	PCB
T5.2	12/18/91	25	GENERAL ELECTRIC	B721385	2.4KV - 120/240V	POLE	TRUMAN	Across from Zone D	POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW198	20531	450	02/04/92	PCB
T198.1	12/27/91	50	WESTINGHOUSE	65D18187	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW334	20550	470	02/04/92	PCB
T198.2	12/27/91	50	WESTINGHOUSE	65D18179	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW335	20550	470	02/04/92	PCB
T198	12/27/91	50	WESTINGHOUSE	65D18178	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW333	20550	480	02/04/92	PCB
T5	12/18/91	25	GENERAL ELECTRIC	B721402	2.4KV - 120/240V	POLE	TRUMAN	Across from Zone D	POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW196	20531	490	02/04/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

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4/20/92 3:14 PM

REVISIONS	
DATE	NAME

LEGEND

- DISTANCE IN FEET
- 1Ø TRANSFORMER LOCATION
- 3Ø TRANS. OR 3-1Ø TRANS.
- NORMALLY OPEN FUSED SWITCH
- NORMALLY CLOSED FUSED SWITCH
- NORMALLY OPEN SWITCH
- NUMBER OF OVHD. LINES W/STATIC NEUTRAL
- CABLE TERMINATION TRANSITION FROM OVERHEAD TO UNDERGROUND
- T1 TRANSFORMER IDENTIFICATION (SEQUENTIAL)
- MANHOLE
- UNDERGROUND LINES
- LIGHTNING ARRESTOR

EMTEC Corporation
CONSULTING ENGINEERS
240 PLANT AVENUE
SUITE A210
TAMPA, FLORIDA 33606
(813) 254-8500

C-2

PW DWG 5085412

DESIGN	
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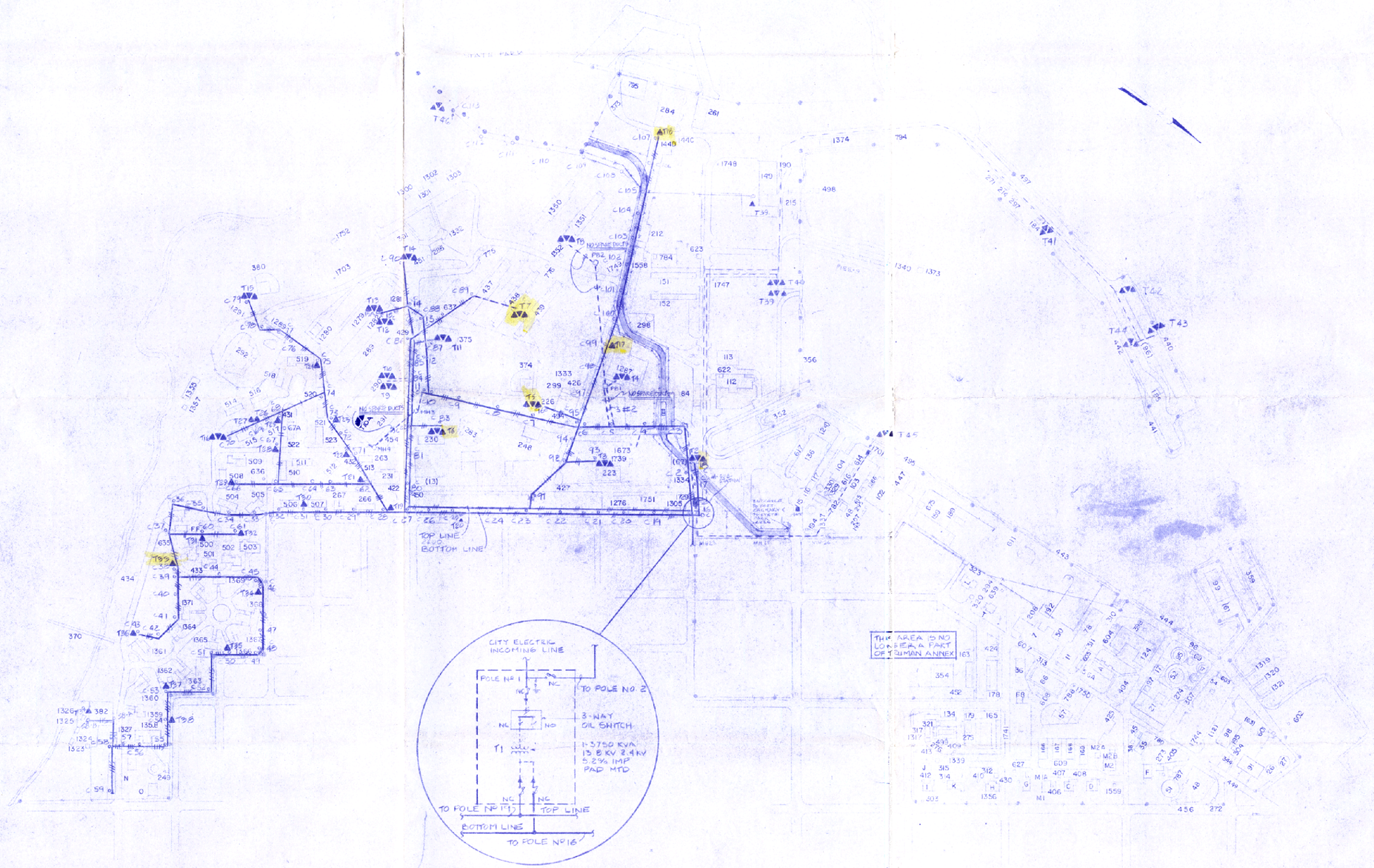
PUBLIC WORKS OFFICER	
SATISFACTORY TO	

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAVAL AIR STATION — KEY WEST, FLORIDA

PAINT/REPAIR TRANSFORMERS
TRANSFORMER LOCATIONS
TRUMBO POINT ANNEX

SIZE	CODE IDENT.	NAVFAC DRAWING NO.
		5165910
		CONST. CONT. NO. N62467-88-C-2743
SCALE AS NOTED		SPEC. 06-88-2743 SHEET 2 OF 15



REVISIONS	
DATE	NAME

LEGEND

- DISTANCE IN FEET
- 1Ø TRANSFORMER LOCATION
- 3Ø TRANS. OR 3-1Ø TRANS.
- NORMALLY OPEN FUSED SWITCH
- NORMALLY CLOSED FUSED SWITCH
- NORMALLY OPEN SWITCH
- NUMBER OF LINES W/STATIC NEUTRAL
- CABLE TERMINATION ON TRANSITION FROM UNDERGROUND TO OVERHEAD
- T1 TRANSFORMER IDENTIFICATION (SEQUENTIAL)
- MANHOLE
- UNDERGROUND LINES
- LIGHTNING ARRESTER

EMTEC Corporation
CONSULTING ENGINEERS
240 PLANT AVENUE
SUITE A210
TAMPA, FLORIDA 33606
(813) 254-2999

C-3

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APPROVED		
PUBLIC WORKS OFFICER		
SATISFACTORY TO		

DEPARTMENT OF THE NAVY — NAVAL FACILITIES ENGINEERING COMMAND

NAVAL AIR STATION — KEY WEST, FLORIDA

PAINT/REPAIR TRANSFORMERS
TRANSFORMER LOCATIONS
TRUMAN ANNEX

SIZE	CODE IDENT.	NAVFAC DRAWING NO.
		5165911
		CONST. CONT. NO. N62467-88-C-2743
SCALE: AS NOTED		SPEC. 06-88-2743 SHEET 3 of 15

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PCB-Contaminated Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T6	12/14/91	25	WESTINGHOUSE	6406314	2.4KV - 120/240V	POLE	TRUMAN		POLE 83, BLDG. 230	CHAPEL	KW158	20472	86	01/23/92	PCB
T73.1	12/05/91	167	GENERAL ELECTRIC	F122658-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW049	20379	93	01/14/92	PCB
T70	12/05/91	75	GENERAL ELECTRIC	F122615-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW045	20379	100	01/23/92	PCB
T239	12/27/91	5	GENERAL ELECTRIC	F498968-64P	120/240V	POLE	BOCA CHICA	XFMR CHANGED. REPLACED WITH G.E. L757404Y74AA ON 2/4/92.	POLE A87 GUARD STATION	GUARD STATION	KW336	20550	100	02/04/92	PCB
T70.2	12/05/91	75	GENERAL ELECTRIC	F122616-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW047	20379	110	01/23/92	PCB
T88	12/12/91	167	GENERAL ELECTRIC	F499030-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW125	20441	110	02/07/92	PCB
T88.2	12/12/91	167	GENERAL ELECTRIC	F499027-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW127	20441	110	02/07/92	PCB
T73	12/05/91	167	GENERAL ELECTRIC	F122659-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW048	20379	120	01/14/92	PCB
T88.1	12/12/91	167	GENERAL ELECTRIC	F499025-64P	13.8KV - 120/240V	PAD	FLEMING KEY		AT POLE B192 BLDG. 1341		KW126	20441	120	02/07/92	PCB
T91.2	12/12/91	5	GENERAL ELECTRIC	F498967-64P	120/240V	POLE	FLEMING KEY	XFMR OUT OF SERVICE	POLE B171A	* O.O.S.	KW120	20441	120	01/27/92	PCB
T137	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW329	20534	120	02/04/92	PCB
T137.1	12/20/91					PAD	NAVY HOSP.	UNABLE TO READ NAME PLATE	TRANSFORMER VAULT, SERV. BLDG.	TRANSFORMER VAULT, SERV. BLDG.; *O.O.S.	KW330	20534	120	02/04/92	PCB
T173.1	12/20/91	50	GENERAL ELECTRIC	6874429	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW320	20532	120	02/03/92	PCB
T168	01/05/92	25	GENERAL ELECTRIC	6877264	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW411	20585	130	02/10/92	PCB
T73.2	12/05/91	167	GENERAL ELECTRIC	F122657-64P	14.4KV - 120/240 277 VOLTS	POLE	TRUMBO		POLE B25	NADC; ARMY; PHM BOEING; CG; MWR	KW050	20379	150	01/14/92	PCB
T143.3	12/15/91	50	GENERAL ELECTRIC	6874450	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW178	20471	150	01/24/92	PCB
T181.2	01/04/92	25	GENERAL ELECTRIC	B714665	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW399	20585	150	02/10/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

TRUMAN

TRUMBO

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4.6 continued

PCB-Contaminated Transformers
January/February 1992
Boca Chica Key, Fleming Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida
(Continued)

TR NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	LOCATION	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T181.1	01/04/92	25	GENERAL ELECTRIC	7300038	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW398	20585	160	02/10/92	PCB
T150	12/31/91	300	GENERAL ELECTRIC	E694290	13.2KV - 208Y/120V	PAD	BOCA CHICA		AT POLE A31, BLDG. A-727	BARRACKS VAQ-33/SUPPLY/WEAPONS	KW377	20583	190	02/03/92	PCB
T168.2	01/05/92	25	GENERAL ELECTRIC	6880532	4.16KV - 240/120V	POLE	BOCA CHICA	LEAKING	POLE A74, BLDG. A227	MWR GYM	KW413	20585	190	02/10/92	PCB
T207	12/19/91	150	GENERAL ELECTRIC	G856447	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG. A1112, A1115	WEAPONS ADMINISTRATION BUILDING; ORDNANCE EQUIPMENT BUILDING; SEWAGE EJECTOR	KW317	20532	220	02/05/92	PCB
T190.1	01/10/92	300	GENERAL ELECTRIC	F646359-67P	13.8KV - 208/120V	PAD	BOCA CHICA		BLDG A980	AIMD	KW467	20646	230	02/11/92	PCB
T139.1	12/15/91	50	GENERAL ELECTRIC	6948908	2.4KV - 120/240V	POLE	NAVY HOSP.	NO NAME PLATE	POLE L3, TENNIS CRTS, BLDG LD	TENNIS COURTS; BUILDING LD; WATER PUMPS	KW166	20471	240	01/24/92	PCB
T143.2	12/15/91	75	GENERAL ELECTRIC	8674251	2.4KV - 120/240V	PAD	NAVY HOSP.		MH PB-L9, X-RAY	X-RAY	KW177	20471	260	01/24/92	PCB
T144	12/15/91	750	GENERAL ELECTRIC	G852379	2.4KV - 208Y/120V	PAD	NAVY HOSP.		MH PB-L8, MAIN BLDG.	MAIN BUILDING OFFICES	KW171	20471	280	01/24/92	PCB
T18	12/18/91	50	GENERAL ELECTRIC	D627551-57Y	2.4KV - 120/240V	POLE	TRUMAN		POLE 107, BLDG. 795, 284, 261, 149	DRMO SURPLUS MATERIAL STORAGE/OFFICE; STOREHOUSE; STOREHOUSE, HAZARDOUS	KW186	20530	290	02/04/92	PCB
T11	12/14/91	50	GENERAL ELECTRIC	B760752	2.4KV - 120/240V	POLE	TRUMAN		POLE 87, SBALL FIELD	SOUTH BALL FIELD	KW155	20468	330	01/23/92	PCB
T74.1	12/05/91	100	GENERAL ELECTRIC	F122620-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW052	20379	340	01/14/92	PCB
T74.2	12/05/91	100	GENERAL ELECTRIC	F122622-64P	14.4KV - 120/240V	POLE	TRUMBO		POLE B26	NADC; ARMY; PHM BOEING; CG; MWR	KW053	20379	380	01/14/92	PCB
T205	12/20/91	100	GENERAL ELECTRIC	F122619-64P	14.4KV - 120/240V	PAD	BOCA CHICA	FUSE BROKEN - POWER WAS NOT RESTORED	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW323	20532	420	02/05/92	PCB
T205.1	12/20/91					PAD	BOCA CHICA	NO NAME PLATE	BLDG. A994	AUXILIARY SECURITY DEPT./AIMD STORAGE/HURRICANE SHELTER	KW324	20534	440	02/05/92	PCB
T5.2	12/18/91	25	GENERAL ELECTRIC	B721385	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW198	20531	450	02/04/92	PCB
T198.1	12/27/91	50	WESTINGHOUSE	65D18187	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW334	20550	470	02/04/92	PCB
T198.2	12/27/91	50	WESTINGHOUSE	65D18179	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW335	20550	470	02/04/92	PCB
T198	12/27/91	50	WESTINGHOUSE	65D18178	14.4KV - 480/240V	PAD	BOCA CHICA		BLDG. A979	LOX PLANT	KW333	20550	480	02/04/92	PCB
T5	12/18/91	25	GENERAL ELECTRIC	B721402	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW196	20531	490	02/04/92	PCB

Notes: TR NO. = Transformer number.
KVA = Kilo-volt ampere.
PPM = Parts per million.

PCBCONT.XLS

TRUMAN

TRUMBO

4/20/92 3:14 PM

Table 4.7
PCB Item Transformers
January/February 1992
Boca Chica Key, Truman Annex, Trumbo Point, and Navy Hospital
NAS Key West, Key West, Florida

TR. NO.	DATE SAMPLED	KVA	MANUFACTURER	SERIAL NO.	VOLTAGE RATING	TYPE	SITE	COMMENTS	LOCATION	LOCATION NAME	SAMPLE NO.	LMG LAB NO.	PPM	DATE LABELED	LABEL TYPE
T151	12/31/91	150	GENERAL ELECTRIC	E694289	13.8KV 208Y/120V	PAD	BOCA CHICA		POLE A29, BLDG. A-726	PERSONNEL SUPPORT (ADMIN BLDG.)	KW378	20583	530	02/03/92	PCB
T5.1	12/18/91	25	GENERAL ELECTRIC	B721380	2.4KV - 120/240V	POLE	TRUMAN		POLE 96, BLDG. 226	PWD SATELLITE SHOP	KW197	20531	540	02/04/92	PCB
T181	01/04/92	25	GENERAL ELECTRIC	7301931	4.16KV - 120/240V	PAD	BOCA CHICA		BLDG A322 & A323	NAVY EXCHANGE SERVICE STATION; TRANSFORMER STATION	KW397	20584	570	02/10/92	PCB
T70.1	12/05/91	100	GENERAL ELECTRIC	F122617-64P	14.4KV - 120/240V	POLE	TRUMBO	LEAKING AT BOTTOM	POLE B21		KW046	20379	600	01/23/92	PCB
T33	12/13/91	37.5	GENERAL ELECTRIC	B457878	2.4KV - 120/240V	POLE	TRUMAN	LEAKING AT BOTTOM	POLE 38, BLDG. 1370/71, 1364	MARRIED OFFICERS QUARTERS	KW133	20451	620	01/23/92	PCB
T143.1	12/15/91	75	GENERAL ELECTRIC	8674247	W.RKV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW176	20471	670	01/24/92	PCB
T178	01/06/92	75	GENERAL ELECTRIC	B793410	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW425	20586	750	02/10/92	PCB
T17	12/18/91	15	WESTINGHOUSE	3390782	120/240V	POLE	TRUMAN		POLE 99, STREET LITES	STREET LIGHTS	KW182	20530	770	02/04/92	PCB
T143	12/15/91	75	GENERAL ELECTRIC	8675086	2.4KV - 120/240V	PAD	NAVY HOSPITAL		MH PB-L9, X-RAY	X-RAY	KW175	20471	860	01/24/92	PCB
T178.2	01/06/92	75	GENERAL ELECTRIC	B783012	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A114, BLDG. A126(NW)	PUBLIC WORKS STORAGE BUILDING	KW427	20586	910	02/10/92	PCB
T173	12/20/91	25	WESTINGHOUSE	3394568	4.16KV - 120/240V	PAD	BOCA CHICA		POLE A101, BLDG. A255	OPS QUICK TRANS	KW319	20532	5,900	02/03/92	PCB
T227	12/31/91	500	NIAGARA	35597	13.8KV - 480Y/277Y	PAD	BOCA CHICA		PB 208A, BLDG. A651	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW374	20583	22,000	02/03/92	PCB
T7	12/11/91	300	STANDARD	148902	2.4KV - 208Y/130V	PAD	TRUMAN		AT P89, BLDG. 438	ENLISTED MENS BARRACKS - AIR FORCE 6947TH	KW108	20440	360,000	01/23/92	PCB
T229	12/31/91	500	NIAGARA	31426	13.8KV - 480Y/277V]	PAD	BOCA CHICA		BLDG. A650	REFRIGERATION/AIR CONDITIONING PLANT BUILDING	KW376	20583	420,000	02/03/92	PCB
T236	12/19/91	300	GENERAL ELECTRIC	F956769	4.16KV - 208Y/120V	PAD (G)	BOCA CHICA		PB220, BLDG. 244	OPERATIONS CONTROL TOWER/NAVAL OCEANOGRAPHY COMMAND/ TELEPHONE ADMIN	KW308	20531	620,000	02/03/92	PCB
T192	01/10/92	150	CENTRAL TRANSFORMER	2250-1	13.8KV - 277/480V	PAD	BOCA CHICA		PB940, BLDG. A940	FRESH WATER PUMPHOUSE				01/10/92	MFR PCB

Notes: PPM = Parts per million.
KVA = Kilo-volt ampere.
TR. NO. = Transformer number.

TRUMAN

TRUMBO