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POTENTIAL HAZARDOUS WASTE SITE PRELIMINARY ASSESSMENT FOR SITE 3 TRUMAN ANNEX DICHLORODIPHENYLTRICHLOROETHANE MIXING AREA NAS KEY WEST FL

3/1/1988

NAVAL FACILITIES ENGINEERING COMMAND SOUTHERN DIVISION

TRUMAN ANNEX
DDT MIXING AREA
Site #3

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 1 - SITE INFORMATION AND ASSESSMENT

I. IDENTIFICATION
01 STATE: FL | 02 SITE NUMBER: 6170022952

II. SITE NAME AND LOCATION

01 SITE NAME (Legal, common, or descriptive name of site): Naval Air Station, Key West, Site 3
02 STREET, ROUTE NO., OR SPECIFIC LOCATION IDENTIFIER: [Truman Annex DDT Mixing Area]
03 CITY: Key West
04 STATE: FL | 05 ZIP CODE: 33042 | 06 COUNTY: Monroe | 07 COUNTY CODE: 087 | 08 CONG DIST: 19
09 COORDINATES LATITUDE: 24 35 ___.__ | LONGITUDE: 81 45 ___.__
10 DIRECTIONS TO SITE (Starting from nearest public road): Site 3, DDT Mixing Area, a 0.25 acre, is located at the former site of building 265, surrounded by Dekalb Ave., Truman St., and Fort St.

III. RESPONSIBLE PARTIES

01 OWNER (if known): U.S. Naval Air Station
02 STREET (Business, mailing, residential): N/A
03 CITY: Key West
04 STATE: FL | 05 ZIP CODE: 33042 | 06 TELEPHONE NUMBER: ( )
07 OPERATOR (if known and different from owner): NAS Key West
08 STREET (Business, mailing, residential): N/A
09 CITY: Key West
10 STATE: FL | 11 ZIP CODE: 33042 | 12 TELEPHONE NUMBER: ( )
13 TYPE OF OWNERSHIP (Check one): ☐ A. PRIVATE ☒ B. FEDERAL: U.S. Naval Air Station (Agency name) ☐ C. STATE ☐ D. COUNTY ☐ E. MUNICIPAL ☐ F. OTHER: _____ (Specify) ☐ G. UNKNOWN
14 OWNER OPERATOR NOTIFICATION ON FILE (Check all that apply): ☐ A. RCRA 3001 DATE RECEIVED: / / (MONTH DAY YEAR) ☐ B. UNCONTROLLED WASTE SITE (CERCLA 103 c) DATE RECEIVED: / / (MONTH DAY YEAR) ☐ C. NONE

IV. CHARACTERIZATION OF POTENTIAL HAZARD

01 ON SITE INSPECTION: ☒ YES DATE 8-13-84 (MONTH DAY YEAR) ☐ NO
7/9-8/4/86
BY (Check all that apply): ☐ A. EPA ☐ B. EPA CONTRACTOR ☐ C. STATE ☒ D. OTHER CONTRACTORS ☐ E. LOCAL HEALTH OFFICIAL ☐ F. OTHER: _____ (Specify)
CONTRACTOR NAME(S): Environdyne Engineers, Inc.; Geraghty & Miller, Inc.
02 SITE STATUS (Check one): ☐ A. ACTIVE ☒ B. INACTIVE ☐ C. UNKNOWN
03 YEARS OF OPERATION: 1940s 1970s (BEGINNING YEAR, ENDING YEAR) ☐ UNKNOWN
04 DESCRIPTION OF SUBSTANCES POSSIBLY PRESENT, KNOWN, OR ALLEGED: This is an old used place in which only accidental spillage of the DDT mixed solutions would have occurred. Soil analyses detected low levels of DDT in the upper foot of soil.
05 DESCRIPTION OF POTENTIAL HAZARD TO ENVIRONMENT AND/OR POPULATION: Based on the observed concentrations of pesticides in the ground water sample a possible soil contamination has occurred in the soil and ground water of the site, without imposing a serious threat to the environment and/or population.

V. PRIORITY ASSESSMENT

01 PRIORITY FOR INSPECTION (Check one. If high or medium is checked, complete Part 2 - Waste Information and Part 3 - Description of Hazardous Conditions and Incidents): ☐ A. HIGH (Inspection required promptly) ☒ B. MEDIUM (Inspection required) ☐ C. LOW (Inspect on time available basis) ☐ D. NONE (No further action needed, complete current disposition form)

VI. INFORMATION AVAILABLE FROM

01 CONTACT	02 OF (Agency/Organization)	03 TELEPHONE NUMBER
Mr. Joel Murphy	NAVFAC / SOUTH DIV	(803) 743-0577

04 PERSON RESPONSIBLE FOR ASSESSMENT	05 AGENCY	06 ORGANIZATION	07 TELEPHONE NUMBER	08 DATE
Mr. Joel Murphy	NAVY	NAVFAC-SOUTH DIV	(803) 743-0577	/ / (MONTH DAY YEAR)

EPA FORM 2070-12 (7-81)

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 2 - WASTE INFORMATION

I. IDENTIFICATION

01 STATE	02 SITE NUMBER
FL	6170022952

II. WASTE STATES, QUANTITIES, AND CHARACTERISTICS

01 PHYSICAL STATES (Check all that apply)

- A. SOLID
- B. POWDER, FINES
- C. SLUDGE
- D. OTHER in soil-water (Specify)
- E. SLURRY
- F. LIQUID
- G. GAS

02 WASTE QUANTITY AT SITE (Measures of waste quantities must be independent)

TONS _____
CUBIC YARDS _____
NO. OF DRUMS << 90

03 WASTE CHARACTERISTICS (Check all that apply)

- A. TOXIC
- B. CORROSIVE
- C. RADIOACTIVE
- X D. PERSISTENT
- E. SOLUBLE
- F. INFECTIOUS
- G. FLAMMABLE
- H. IGNITABLE
- I. HIGHLY VOLATILE
- J. EXPLOSIVE
- K. REACTIVE
- L. INCOMPATIBLE
- M. NOT APPLICABLE

III. WASTE TYPE

CATEGORY	SUBSTANCE NAME	01 GROSS AMOUNT	02 UNIT OF MEASURE	03 COMMENTS
SLU	SLUDGE	An estimate of less than 90 drums of hazardous waste was spilled at the site during a 30 year period (≈1940-1970) was made		Estimates are difficult to come by. Today, possibly a small amount of DDT persists in the ground.
OLW	OILY WASTE			
SOL	SOLVENTS			
PSD	PESTICIDES X			
OCC	OTHER ORGANIC CHEMICALS			
IOC	INORGANIC CHEMICALS			
ACD	ACIDS			
BAS	BASES			
MES	HEAVY METALS			

IV. HAZARDOUS SUBSTANCES (See Appendix for most frequently used CAS Numbers)

01 CATEGORY	02 SUBSTANCE NAME	03 CAS NUMBER	04 STORAGE/DISPOSAL METHOD	05 CONCENTRATION	06 MEASURE OF CONCENTRATION
PSD	DDT	50-29-3	OD	0.006-54.2	ppm
PSD	Chlordane	57-74-9	OD	0.41-0.92	ppm
PSD	Dieldrin	60-57-1	OD	0.87-1.40	ppm
PSD	BHC-Lindane	58899	OD	0.00-2.60	ppm

V. FEEDSTOCKS (See Appendix for CAS Numbers)

CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER	CATEGORY	01 FEEDSTOCK NAME	02 CAS NUMBER
FDS			FDS		
FDS			FDS		
FDS			FDS		
FDS			FDS		

VI. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)

- NEESA, Initial Assessment Study of NAS-Key West, FL; Document 13-071 (May 1985).
- Geraghty & Miller, Inc., Verification Study Assessment of Potential Ground-Water Pollution at NAS-Key West, FL (March 1987).

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: FL
02 SITE NUMBER: 6170022952

II. HAZARDOUS CONDITIONS AND INCIDENTS

01 ☐ A. GROUNDWATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
- Ground water has been found to contain low levels (just above lab. detection) of DDT, chlordane and dieldrin (Geraghty and Miller, Inc., 1987). There is no potential for these compounds to reach the aquifer of concern, which is more than 900 ft below the ground surface

01 ☐ B. SURFACE WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
- No evidence of release of contaminants to surface water.
- Site is located a few feet above the sea level and adjacent to Atlantic Ocean.

01 ☐ C. CONTAMINATION OF AIR — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
- No information was found to indicate air contamination from the spilled pesticide solutions at the site.

01 ☐ D. FIRE/EXPLOSIVE CONDITIONS — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
- No hazardous substances that could catch fire or explode are present at the site.

01 ☐ E. DIRECT CONTACT — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
- There is no information of any direct contact incidents. It appears no potential hazards exists at the site.

01 ☒ F. CONTAMINATION OF SOIL — 02 ☐ OBSERVED (DATE: 7/10/86) ☐ POTENTIAL ☒ ALLEGED
03 AREA POTENTIALLY AFFECTED: 0.25 (ACRES) 04 NARRATIVE DESCRIPTION
- Low levels (0.006 - 54.2 ppm) of DDT (and of related pesticides) were found (Geraghty & Miller, Inc., 1987).

01 ☐ G. DRINKING WATER CONTAMINATION — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION
- There is no potential the drinking water to be contaminated from the site's waste compounds. Drinking water at Key West is imported via a 130 mile pipeline from the mainland, or from rainwater catchment and the desalination plant.

01 ☐ H. WORKER EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 WORKERS POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION

01 ☐ I. POPULATION EXPOSURE/INJURY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED _____ 04 NARRATIVE DESCRIPTION

EPA

POTENTIAL HAZARDOUS WASTE SITE
PRELIMINARY ASSESSMENT
PART 3 - DESCRIPTION OF HAZARDOUS CONDITIONS AND INCIDENTS

I. IDENTIFICATION
01 STATE: FL
02 SITE NUMBER: 6170022952

II. HAZARDOUS CONDITIONS AND INCIDENTS (Continued)

01 ☐ J. DAMAGE TO FLORA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
- It has not been detected.

01 ☐ K. DAMAGE TO FAUNA — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION (Include name(s) of species)
- It has not been detected.

01 ☐ L. CONTAMINATION OF FOOD CHAIN — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
—

01 ☐ M. UNSTABLE CONTAINMENT OF WASTES (Spills, runoff, standing liquids, leaking drums) — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
03 POPULATION POTENTIALLY AFFECTED: _____ 04 NARRATIVE DESCRIPTION
—

01 ☐ N. DAMAGE TO OFFSITE PROPERTY — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
—

01 ☐ O. CONTAMINATION OF SEWERS, STORM DRAINS, WWTPs — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
—

01 ☐ P. ILLEGAL/UNAUTHORIZED DUMPING — 02 ☐ OBSERVED (DATE: _____) ☐ POTENTIAL ☐ ALLEGED
04 NARRATIVE DESCRIPTION
—

05 DESCRIPTION OF ANY OTHER KNOWN, POTENTIAL, OR ALLEGED HAZARDS
—

III. TOTAL POPULATION POTENTIALLY AFFECTED: _____

IV. COMMENTS
- Due to the presence of low concentrations of DDT and related pesticides, the site should be further investigated.

V. SOURCES OF INFORMATION (Cite specific references, e.g., state files, sample analysis, reports)
- NEESA, Initial Assessment Study of NAS-Key West, FL; Document 13-071 (May 1985).
- Geraghty & Miller, Inc., Verification Study Assessment of Potential Ground-Water Pollution at NAS-Key West, FL (March 1987).

EPA FORM 2070-12 (7-81)

Facility name: NAS Key West

Location: Key West, FL

EPA Region: 4

Person(s) in charge of the facility:

NAS Key West

Name of Reviewer: A. Antonopoulos Date: 3/1/88

General description of the facility:

(For example: landfill, surface impoundment, pile, container; types of hazardous substances; location of the facility; contamination route of major concern; types of information needed for rating; agency action, etc.)

Truman Annex DDT Mixing Area, Site #1.
A 0.25 acre area was used as a DDT (dichlorophenyl trichloroethane) mixing area from the 1940s to early 1970s. In this area only accidental spillage of the mixed DDT solutions and concentrates would have occurred. The DDT solutions were stored in drums. There is no apparent evidence today of any biological stress. Soil analyses detected presence of DDT mostly in the upper foot of soil.

Scores: S_M = 15.2 (S_{gw} = 22.6) S_{sw} = 13.43 S_a = 0 ,
S_{FE} = 0
S_{DC} = 37.5

FIGURE 1
HRS COVER SHEET

DRAFT

Ground Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	3.1
If observed release is given a score of 45, proceed to line 4. If observed release is given a score of 0, proceed to line 2.					
2 Route Characteristics					3.2
Depth to Aquifer of Concern	(0) 1 2 3	2	0	6	
Net Precipitation	0 1 (2) 3	1	2	3	
Permeability of the Unsaturated Zone	0 1 2 (3)	1	3	3	
Physical State	0 1 2 (3)	1	3	3	
	Total Route Characteristics Score		8	15	
3 Containment	0 1 2 (3)	1	3	3	3.3
4 Waste Characteristics					3.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
	Total Waste Characteristics Score		20	26	
5 Targets					3.5
Ground Water Use	0 (1) 2 3	3	3	9	
Distance to Nearest Well/Population Served	0 4 6 8 10 / 12 16 18 20 / (24) 30 32 35 40	1	24	40	
	Total Targets Score		27	49	
6 If line 1 is 45, multiply 1 x 4 x 5; If line 1 is 0, multiply 2 x 3 x 4 x 5			12960	57,330	
7 Divide line 6 by 57,330 and multiply by 100		S_{gw} = 22.61			

FIGURE 2
GROUND WATER ROUTE WORK SHEET

DRAFT

Surface Water Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	4.1
If observed release is given a value of 45, proceed to line 4. If observed release is given a value of 0, proceed to line 2.					
2 Route Characteristics					4.2
Facility Slope and Intervening Terrain	(0) 1 2 3	1	0	3	
1-yr. 24-hr. Rainfall	0 1 2 (3)	1	3	3	
Distance to Nearest Surface Water	0 1 2 (3)	2	6	6	
Physical State	0 1 2 (3)	1	3	3	
	Total Route Characteristics Score		12	15	
3 Containment	0 1 2 (3)	1	3	3	4.3
4 Waste Characteristics					4.4
Toxicity/Persistence	0 3 6 9 12 15 (18)	1	18	18	
Hazardous Waste Quantity	0 1 (2) 3 4 5 6 7 8	1	2	8	
	Total Waste Characteristics Score		20	26	
5 Targets					4.5
Surface Water Use	0 1 (2) 3	3	6	9	
Distance to a Sensitive Environment	0 1 2 (3)	2	6	6	
Population Served/Distance to Water Intake Downstream	(0) 4 6 8 10 / 12 16 18 20 / 24 30 32 35 40	1	0	40	
	Total Targets Score		12	55	
6 If line 1 is 45, multiply 1 x 4 x 5 / If line 1 is 0, multiply 2 x 3 x 4 x 5			8,640	64,350	
7 Divide line 6 by 64,350 and multiply by 100		S_{sw} = 13.43			

FIGURE 7
SURFACE WATER ROUTE WORK SHEET

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Air Route Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Release	(0) 45	1	0	45	5.1
Date and Location:					
Sampling Protocol:					
If line 1 is 0, the S_a = 0. Enter on line 5. If line 1 is 45, then proceed to line 2.					
2 Waste Characteristics					5.2
Reactivity and Incompatibility	0 1 2 3	1		3	
Toxicity	0 1 2 3	3		9	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
	Total Waste Characteristics Score			20	
3 Targets					5.3
Population Within 4-Mile Radius	0 9 12 15 18 21 24 27 30	1		30	
Distance to Sensitive Environment	0 1 2 3	2		6	
Land Use	0 1 2 3	1		3	
	Total Targets Score			39	
4 Multiply 1 x 2 x 3				35,100	
5 Divide line 4 by 35,100 and multiply by 100		S_a = 0			

FIGURE 9
AIR ROUTE WORK SHEET

DRAFT

	S	S^2
Groundwater Route Score (S_{gw})	22.61	511.21
Surface Water Route Score (S_{sw})	13.43	180.36
Air Route Score (S_a)	0	0
$S_{gw}^2 + S_{sw}^2 + S_a^2$		691.57
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2}$		26.30
$\sqrt{S_{gw}^2 + S_{sw}^2 + S_a^2} / 1.73 = S_M =$		15.20

FIGURE 10
WORKSHEET FOR COMPUTING S_M

DRAFT

Fire and Explosion Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Containment	(1) 3	1	1	3	7.1
2 Waste Characteristics					7.2
Direct Evidence	0 3	1		3	
Ignitability	0 1 2 3	1		3	
Reactivity	0 1 2 3	1		3	
Incompatibility	0 1 2 3	1		3	
Hazardous Waste Quantity	0 1 2 3 4 5 6 7 8	1		8	
Total Waste Characteristics Score				20	
3 Targets					7.3
Distance to Nearest Population	0 1 2 3 4 5	1		5	
Distance to Nearest Building	0 1 2 3	1		3	
Distance to Sensitive Environment	0 1 2 3	1		3	
Land Use	0 1 2 3	1		3	
Population Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Buildings Within 2-Mile Radius	0 1 2 3 4 5	1		5	
Total Targets Score				24	
4 Multiply 1 x 2 x 3				1,440	
5 Divide line 4 by 1,440 and multiply by 100	S_{FE} = 0				

FIGURE 11
FIRE AND EXPLOSION WORK SHEET

DRAFT

Direct Contact Work Sheet					
Rating Factor	Assigned Value (Circle One)	Multi-plier	Score	Max. Score	Ref. (Section)
1 Observed Incident	0 45	1	0	45	8.1
If line 1 is 45, proceed to line 4 If line 1 is 0, proceed to line 2					
2 Accessibility	0 1 2 3	1	3	3	8.2
3 Containment	0 15	1	15	15	8.3
4 Waste Characteristics Toxicity	0 1 2 3	5	15	15	8.4
5 Targets					8.5
Population Within a 1-Mile Radius	0 1 2 3 4 5	4	8	20	
Distance to a Critical Habitat	0 1 2 3	4	4	12	
Total Targets Score			12	32	
6 If line 1 is 45, multiply 1 x 4 x 5 If line 1 is 0, multiply 2 x 3 x 4 x 5			8,100	21,600	
7 Divide line 6 by 21,600 and multiply by 100			S_{DC} = 37.5		

FIGURE 12
DIRECT CONTACT WORK SHEET

DRAFT

DOCUMENTATION RECORDS
FOR
HAZARD RANKING SYSTEM

Facility Name: NAS Key West

Location: Key West, FL

Site #3; Truman Annex DDT Mixing Area

GROUNDWATER ROUTE

1 OBSERVED RELEASE [score = 0]

Contaminants detected (five maximum):

- No evidence of release of a substance of concern to ground water has been recorded.

Rationale for attributing the contaminants to the facility:

- NA *

2 ROUTE CHARACTERISTICS

Depth to Aquifer of Concern [score = 0]

Name or description of aquifer(s) of concern:

- Hawthorn Formation - Suwannee Limestone

Depth(s) from the ground surface to the highest seasonal level of the saturated zone (water table[s]) of the aquifer of concern:

- Deeper than 900 feet.

Depth from the ground surface to the lowest point of waste disposal or storage:

~ 5 feet.

---

*NA = not applicable

Net Precipitation [score = 2]

Mean annual or seasonal precipitation (list months for seasonal):

40"

Mean annual lake or seasonal evaporation (list months for seasonal):

30" (≃ 70% of mean annual precipitation)

Net precipitation (subtract the above figures):

10"

Permeability of Unsaturated Zone [score = 3]

Soil type in unsaturated zone:

- Miami Oolite soil.

Permeability associated with soil type:

- Highly permeable oolite (calcium carbonate and tiny oolids or spherical calcareous grains) soil and subsoil. Soil has been somehow compacted in certain spots and its porosity and permeability has been reduced.

Physical State [score = 3]

Physical state of substances at time of disposal (or at present time for generated gases):

- Liquid accidental spillage; some concentrates spillage, too.

3 CONTAINMENT [score = 3]

Method(s) of waste or leachate containment evaluated:

- For the accidental spillage, no containment; open space.

Method with highest score:

- Unsound surface impoundment; highly permeable underground.

4 WASTE CHARACTERISTICS

Toxicity and Persistence [score = 18]

Compound(s) evaluated:

DDT

Compound with highest score:

DDT

Hazardous Waste Quantity [score = 2]

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

≃ 90 drums

Basis of estimating and/or computing waste quantity:

- No record exists regarding accidental spillage of DDT at the site.
- A 3 drum (of 1% DDT) accidental spillage per year was considered for this scoring. Therefore, during the 30 year period (1940 - 1970) perhaps the content of 90 drums was spilled there.

5 TARGETS

Groundwater Use [score = 3]

Use(s) of aquifer(s) of concern within a 3-mile radius of the facility:

- No freshwater wells exist at NAS Key West. The produced water from the well at Key West (which comes from the under the area aquifer) is not potable. It is used for commercial and recreational purposes.

Distance to Nearest Well [score = 24]

Location of nearest well drawing from aquifer of concern of occupied building not served by a public water supply:

- Key West well.

Distance to above well or building:

- Less than one mile from the well.

score=3

Population Served by Groundwater Wells within a 3-Mile Radius

Identified water-supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and populations served by each:

- Key West well; less than 3,000 people.

Computation of land area irrigated by supply well(s) drawing from aquifer(s) of concern within a 3-mile radius and conversion to population (1.5 people per acre):

- NA

Total population served by groundwater within a 3-mile radius:

- Less than 3,000 people.

score=3

SURFACE WATER ROUTE

1 OBSERVED RELEASE [score = 0]

Contaminants detected in surface water at the facility or downhill from it (five maximum):

- No direct evidence of release of contaminants to surface water.

Rationale for attributing the contaminants to the facility:

- Contaminants were spilled at this site.

2 ROUTE CHARACTERISTICS [score = 0]

Facility Slope and Intervening Terrain

Average slope of facility in percent:

- Less than 3%; about flat.

Name or description of nearest downslope surface water:

- Adjacent areas (west and south) are bordered by the Atlantic Ocean (Gulf of Mexico) and their downslope is towards the sea water.

Average slope of terrain between facility and above-cited surface water body in percent:

- Less than 3%.

Is the facility located either totally or partially in surface water?

- It is located a few feet above the sea level.

Is the facility completely surrounded by areas of higher elevation?

- No

1-Year 24-Hour Rainfall in Inches [score = 3]

- Approximately 4".

Distance to Nearest Downslope Surface Water [score = 6]

- Adjacent is the sea water.

Physical State of Waste [score = 3]

- Liquid accidental spillage of DDT solutions.

3 CONTAINMENT [score = 3]

Method(s) of waste or leachate containment evaluated:

- None. The accidental spillage happened in an open area.

Method with highest score:

- Unsound surface impoundment; highly permeable underground.

4 WASTE CHARACTERISTICS

Toxicity and Persistence [score = 18]

Compound(s) evaluated:

- DDT

Compound with highest score:

- DDT

Hazardous Waste Quantity [score = 2]

Total quantity of hazardous substances at the facility, excluding those with a containment score of 0 (give a reasonable estimate even if quantity is above maximum):

≃ 90 drums

Basis of estimating and/or computing waste quantity:

- No record exists regarding accidental spillage of DDT at the site.
- A 3 drum (of 1% DDT) accidental spillage per year was considered for this scoring. Therefore, during the 30 year period (1940-1970) perhaps the content of 90 drums was spilled there.

5 TARGETS

Surface Water Use [score = 6]

Use(s) of surface water within 3 miles downstream of the hazardous substance:

- Locally, the surface run-off water from the site is not used; it goes to the sea, which is used for recreation

Is there tidal influence?

- Yes.

Distance to a Sensitive Environment [score = 6]

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less: <1/2 mi

- In the immediate area are the Great White Heron Wildlife Refuge and the Key West National Wildlife Refuge. The surface waters within these areas are classified as Outstanding Florida Waters and are afforded the highest protection by the State.

Distance to 5-acre (minimum) freshwater wetland, if 1 mile or less:

NA

Distance to critical habitat of an endangered species or national wildlife refuge, if 1 mile or less:

- Within a mile.

Population Served by Surface Water [score = 0]

Location(s) of water-supply intake(s) within 3 miles (free-flowing bodies) or 1 mile (static water bodies) downstream of the hazardous substance and population served by each intake:

- No surface water is used.

Computation of land area irrigated by above-cited intake(s) and conversion to population (1.5 people per acre):

NA

Total population served:

NA

Name or description of nearest of above water bodies:

NA

Distance to above-cited intakes, measured in stream miles:

NA

AIR ROUTE

1 OBSERVED RELEASE [score = 0]

Contaminants detected:

- No information was found to indicate that any measurements of air contamination sufficient for HRS scoring purposes have been made.

Date and location of detection of contaminants:

NA

Methods used to detect the contaminants:

NA

Rationale for attributing the contaminants to the site:

NA

2 WASTE CHARACTERISTICS

Reactivity and Incompatibility

Most reactive compound:

NA

Most incompatible pair of compounds:

NA

Toxicity

Most toxic compound:

NA

Hazardous Waste Quantity

Total quantity of hazardous waste:

NA

Basis of estimating and/or computing waste quantity:

NA

3 TARGETS

Population Within 4-Mile Radius

Circle radius used, give population, and indicate how determined:

0-4 mi 0-1 mi 0-1/2 mi 0-1/4 mi

NA

Distance to a Sensitive Environment

Distance to 5-acre (minimum) coastal wetland, if 2 miles or less:

NA

Distance to 5-acre (minimum) freshwater wetland, if 1 mile or less:

NA

Distance to critical habitat of an endangered species, if 1 mile or less:

NA

Land Use

Distance to commercial/industrial area, if 1 mile or less:

NA

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

NA

Distance to residential area, if 2 miles or less:

NA

Distance to agricultural land in production within past 5 years, if 1 mile or less:

NA

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

NA

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

NA

FIRE AND EXPLOSION

1 CONTAINMENT [score = 1]

Hazardous substances present:

- No hazardous substances that could catch fire or explode are present in the site.
- A fire marshal has not certified that the site presents a significant threat.

Type of containment, if applicable:

NA

2 WASTE CHARACTERISTICS

Direct Evidence

Type of instrument and measurements:

NA

Ignitability

Compound used:

NA

Reactivity

Most reactive compound:

NA

Incompatibility

Most incompatible pair of compounds:

NA

Hazardous Waste Quantity

Total quantity of hazardous substances at the facility:

NA

Basis of estimating and/or computing waste quantity:

NA

3 TARGETS

Distance to Nearest Population

NA

Distance to Nearest Building

NA

Distance to Sensitive Environment

Distance to wetlands:

NA

Distance to critical habitat:

NA

Land Use

Distance to commercial/industrial area, if 1 mile or less:

NA

Distance to national or state park, forest, or wildlife reserve, if 2 miles or less:

NA

Distance to residential area, if 2 miles or less:

NA

Distance to agricultural land in production within past 5 years, if 1 mile or less:

NA

Distance to prime agricultural land in production within past 5 years, if 2 miles or less:

NA

Is a historic or landmark site (National Register or Historic Places and National Natural Landmarks) within the view of the site?

NA

Population within 2-Mile Radius

NA

Buildings within 2-Mile Radius

NA

DIRECT CONTACT

1 OBSERVED INCIDENT [score = 0]

Date, location, and pertinent details of incident:

- There is no information of any direct contact incidents.

2 ACCESSIBILITY [score = 3]

Describe type of barrier(s):

Barriers do not surround the site.

3 CONTAINMENT [score = 15]

Type of containment, if applicable:

The site is an old open space where only accidental spillage of the DDT mixed solutions would have occurred. No containment exists there.

4 WASTE CHARACTERISTICS [score = 3]

Toxicity

Compounds evaluated:

DDT

Compound with highest score:

DDT

5 TARGETS

Population within 1-Mile Radius [score = 2]

- Less than 1000.

Distance to Critical Habitat of Endangered Species [score = 1]

- Less than 1 mile.