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LETTER REGARDING THE RECOGNITION OF CLASS 1 PERMIT MODIFICATION FOR MODIFICATION NUMBER 2 A 272 MILLINGTON SUPPACT TN
2/8/1996
NAVAL AIR STATION

Danny - Info Copy

STATE OF TENNESSEE
DEPARTMENT OF ENVIRONMENT AND CONSERVATION
Division of Solid Waste Management
Fifth Floor, L & C Tower
401 Church Street
Nashville, Tennessee 37243 - 1535

February 8, 1996

Mr. L. W. Elkins
Department Of Navy
Naval Air Station Memphis
7800 3rd Avenue
Millington, Tennessee 38054-5045

CERTIFIED MAIL P 315 341 697
RETURN RECEIPT REQUESTED

RE: Recognition of Class 1 Permit Modification
Facility: Naval Air Station Memphis
Modification No. 2 A-272
Units: Container Storage
EPA ID No: TN2 17 002 2600
Tennessee Permit No. TN2 17 002 2600

Dear Mr. Elkins:

Enclosed is a copy of the Class 1 Modification which applies to the above referenced permit. This Modification is in accordance with Tennessee Hazardous Waste Management Rule 1200-1-11-.07(9)(c) .

If you have any questions, please contact Mr. Malek Faradji of my staff at (615) 532-0822.

Sincerely,

Jamie L. Burroughs

Jamie L. Burroughs, Lead Permitting Unit
Treatment and Storage Section
Hazardous Waste Program

cc: Mr. Wayne Gregory, Manager, Treatment and Storage Section
Mr. Mark Thomas, Manager, DSWM-Memphis Field Office
Mr. G. Alan Farmer, US EPA, Chief, RCRA Branch
Ms. Hymelia Craig, DSWM
Mr. Malek Faradji, DSWM

State of Tennessee
Department of Environment and Conservation
Division of Solid Waste Management

Hazardous Waste Management Program
5th Floor L & C Tower
401 Church Street
Nashville, Tennessee 37243-1535

MODIFICATION TO HAZARDOUS WASTE MANAGEMENT FACILITY PERMIT

PERMITTEE:	Naval Air Station Memphis
LOCATION:	Millington, Tennessee 38054-5045
EPA ID NO.:	TN2 17 002 2600
PERMIT NO.:	TN2 17 002 2600
UNITS:	Container Storage
MODIFICATION TYPE:	Class 1
MODIFICATION NO.:	2

Pursuant to the Tennessee Hazardous Waste Management Act of 1977, as amended (Tennessee Code Annotated 68, Chapter 212, Part 1) and the regulations promulgated thereunder by the Tennessee Solid Waste Disposal Control Board (found at Tennessee Rule Chapter 1200-1-11), hazardous waste management facility permit number TN2 17 002 2600 issued to Naval Air Station Memphis of the Navy on September 15, 1986, is hereby modified, pursuant to Rule 1200-1-11-.07(9)(c), as follows:

Class 1 Modification

The name of Permittee is changed from Naval Air Station Memphis, to Naval Support Activity Memphis. This change is made as a results of the 1993 Base Realignment and Closure (BRAC) decisions.

This permit modification is further subject to and conditioned upon the terms, conditions, limitations, standards, and schedules contained in or specified in the attachment which is a part of this modification. This modification is hereby made a part of Permit Number: TN2 17 002 2600, EPA ID Number: TN2 17 002 2600 and is effective as of August 4 1995, unless continued, revoked and reissued, or terminated under Rule 1200-1-11-.07(9). Failure to comply with the terms of this modification shall constitute a violation of the Permit.

2-8-96
Date

Tom Tiesler, Director
Division of Solid Waste Management

Mod No 2

ATTACHMENT 1

WASTE ANALYSIS PLAN

Before the Permittee stores any hazardous waste, he must obtain a detailed chemical and physical analysis of a representative sample of the waste. At a minimum, this analysis must contain all of the information which must be known to store the waste in accordance with the requirements of subparagraph (2)(d) of Rule 1200-1-11-.06 and this permit. The analysis may include data developed under Rule 1200-1-11-.02, and existing published or documented data on the hazardous waste or on hazardous waste generated from similar processes. Material Safety Data Sheets from vendors of raw materials that become waste may be used in lieu of laboratory analyses for portions of the information which must be known about the waste.

Unused materials in unopened containers will not be laboratory tested unless container markings have been destroyed. Characteristics of these materials are known from published data [e.g., Hazardous Material Information System (HMIS) microfiche files]. Partially used material will be analyzed to establish whether material in a container is that represented by the container markings.

The analysis must be repeated at least annually to ensure that it is accurate and up to date, or when the owner or operator is notified, or has reason to believe, that the process or operation generating the hazardous waste has changed.

Analysis Parameters and Rationale:

Waste analysis is used to characterize solid and hazardous wastes to:

1. Determine which waste streams are hazardous wastes and determine hazardous characteristics;

2. Meet the requirements of waste disposal vendors for waste profile data;

3. Collect sufficient information to determine waste incompatibilities, container specifications, and shipping name; and

4. Meet certain state and federal regulatory requirements.

Table C-2 is a list of known hazardous wastes produced at the NAS Memphis showing analytical parameters and rationale for each.

TABLE C-2
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
Adhesives	Flash point	Some adhesives have a flash point of <140 F.
Amalgam	TCLP (Hg)	Waste stream is toxic (D009, and U151).
Ammonium hydroxide	pH	Solution has a pH>12.5 and is corrosive.
Battery Acid	pH TCLP (Pb)	Solution has a pH<2.0 and is corrosive; solutions may contain a toxic level of lead.
Calcium hypochlorite	pH	Solution is corrosive (D002).
Calibrating fluid	Flash point	Fluid has a flash point of <140 F (D001).
Cleaning solvents (Non-Halogenated)	Flash point, xylene, toluene, methyl ethly ketone, methyl isobutyl ketone, methyl alcohol	These paint cleaners have flash points between 0 F and 140 F and are ignitable; they may contain the listed wastes xylene, methyl isobutyl ketone, and methyl alcohol (F003) or toluene and methyl ethyl ketone (F005).
Carbon removing compound	pH Methylene chloride	This material has a pH<2.0 and may contain the listed waste methylene chloride (F001).
Chromic acid (Alodine)	pH TCLP (Cr)	This waste is acidic (corrosive), and contains chrome, (D007).
Chromium crystals	TCLP (Cr)	Contains chrome (D007), and is an oxidizer (D001).
Developers (film) and fixers	TCLP (Ag)	Film developing and fixing chemicals contain silver and are toxic. (Exempt is silver that is reclaimed.)
Dry cleaning solvent (PD-680)	Flash point	This solvent (PD-680) has a flash point ranging from 80 F to 145 F.
Electrostatic Solution	pH	Solution is corrosive (D002).
Ethylene dichloride	Ethylene dichloride	Listed waste (U077) and is flammable (D001).
Hydraulic fluid, contaminated (Skydrol)	TCLP (Cd)	This fluid fails TCLP for cadmium (D006).

TABLE C-2 (continued)
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
JP Fuel	Flash point	Fuel has a flash point <140 F.
Liquid dye	Flash point	This NDT solution has a flash point <140 F and is ignitable.
Mixed paint wastes and thinners	Flash point TCLP (Pb,Cr)	Paint wastes are toxic for lead and chromium and may be ignitable.
Naphtha Aliphatic	Flash point	Flash point is <140 F.
Nicad Batteries	TCLP (Cd)	Batteries are toxic (D006).
Oil	Flash point	Some waste oil has a flash point <140 F.
Paint remover	pH Methylene chloride	Paint removing (stripping) compounds are acidic with pH <2.0. Compound also contains the listed waste methylene chloride (F001).
Paints and paint sludges	Flash point TCLP (Pb,Cr)	Most paint materials are solvent-based with flash points varying from 40 F to 140 F and are ignitable. Some paints contain lead and chromium.
Sodium hydroxide (descaling compound)	pH	Material has a pH >12.5 and is corrosive.
Toluene	Flash point	Material is a listed waste (F005) and is ignitable; flash point <140 F.
Trichloroethane	Trichloroethane	Material is a listed waste (F001, U226) for toxicity.
Trichlorotrifluoro-ethane (Freon)	Freon	Material is a listed waste (F002) for toxicity.
Xylene	Flash point	Xylene has a flash point of 84 F; it is also a listed waste (F003, U239) for ignitability.
Switches, Thermometers containing Mercury	TCLP (Hg)	Listed waste (U151) and is toxic (D009).
Insecticides	Flash Point TCLP (Lindane)	Some insecticides have a flash point <140 F. Some may be toxic (D013).
Herbicides and Pesticides	TCLP (2,4-D) TCLP (As)	Some herbicides are listed (U240) and toxic (D016), (D004).

TABLE C-2 (continued)
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
Zeolite Resin	pH	Waste is corrosive (D002).

Class 2 modification,dated:2-9-94

Test Analysis Methods:

Table C-3 identifies the test methods to be employed in the analysis plan. An asterisk indicates that the test method is from EPA Publication SW-846 or 40 CFR 261.

The laboratory employed to obtain analytical data must certify its use of the procedures in Table C-3 and must be able to provide, on request, documentation of acceptable QA/QC procedures. Acceptable documentation may include compliance with the Quality Control section of each SW-846 procedure, certification under a state or federal public drinking water act for equivalent parameters, and/or the performance and reporting of replicates and percent recovery data.

TABLE C-3
TEST METHODS

PARAMETER	PROCEDURE	REFERENCE
pH	Electrometric	*Method 9040
Flash Point	Pensky-Martens closed cup test	ASTM D-93-80
TCLP	TCLP	*Method 1311
Cadmium	Atomic absorption	*Method 6010
Chromium	Atomic absorption	*Method 7190/7191
Lead	Atomic absorption	*Method 7420/7421
Silver	Atomic absorption	*Method 7760/7761
Mercury	Atomic absorption	*Method 7470/7471
Xylene	GC/PID	*Method 8020
Toluene	GC/PID	*Method 8020
Methyl ethyl ketone	GC/FID	*Method 8015
Methyl isobutyl ketone	GC/FID	*Method 8015
Trichloroethane	GC/HSD	*Method 8010
Trichloroethylene	GC/HSD	*Method 8010
Methylene chloride	GC/HSD	*Method 8010

TABLE C-3 (continued)
TEST METHODS

PARAMETER	PROCEDURE	REFERENCE
Trichlorotri-fluoroethane	GC/HSD	*Method 8010
Ethylene dichloride	GC/HSD	*Method 8010

Sampling Methods:

Many waste streams are heterogeneous; therefore, care must be taken to obtain a representative sample. In sampling wastes, consideration should be given to the uniformity of the waste in a container and to daily variations in production which may cause the waste to vary. Table C-4 is a summary of waste sampling methods for different types of wastes. Liquids and sludges are the most common forms of hazardous waste at the NAS Memphis. However, occasionally, other forms shown on Table C-4 may be encountered. Recommended sampling access points for different waste containers and soil are listed in Table C-5. Recommended numbers of samples to be taken for different types of wastes and soil are given in Table C-6.

For all hazardous wastes that are placed in containers ranging in capacity from 5 gallons to 85 gallons, the sampling method employed is a Coliwasa sampler. This device collects liquid throughout the depth of liquid in a drum, assuring a representative sample. Instructions for drum sampling are presented in Table C-7. For all wastes except mixed paint wastes, a single sample (top to bottom) will be taken from a container, unless the waste is heterogeneous and/or contains one or more layers. In these cases, multiple samples should be taken. Samples from multiple containers of the same waste will be composited for analysis (except for heterogeneous or layered wastes). Samples to be analyzed for volatile organics should be grab samples and should not be composited.

Paint waste containers are sampled by obtaining a composite sample from three grab samples at the top, middle, and bottom of the container. Samples from multiple containers of mixed paint waste are not composited.

TABLE C-4
SAMPLERS RECOMMENDED FOR VARIOUS TYPES OF WASTE

WASTE TYPE	RECOMMENDED SAMPLER (1)	LIMITATIONS
Liquids, sludges, and slurries in drums, vacuum trucks, barrels, and similar containers	Coliwasa	Not for containers 1.5m (5 ft.) deep.
	a) Plastic	Not for wastes containing ketones, nitrobenzene, dimethylformamide, mesityl oxide, or tetrahydrofuran.
	b) Glass	Not for wastes containing hydrofluoric acid and concentrated alkali solutions.
Powdered or granular solids in bags, drums, barrels, and similar containers	a) Grain sampler	Limited application for sampling moist and sticky solids with a diameter 0.6 cm. (1/4 in.).
	b) Sampling trier	May incur difficulty in retaining core sample of very dry granular materials during sampling.
Dry sludges deeper than 8cm (3 in.)	a) Soil auger	Does not collect undisturbed core sample.
	b) Veihmeyer sampler	Difficult to use on stony, rocky, or very wet soil.
Wastes in storage tanks	Weighted bottle sampler	May be difficult to use on very viscose liquids.

(1) Glass sampler and sample container must be used when organics are to be determined.

TABLE C-5
SAMPLING POINTS RECOMMENDED FOR MOST WASTE CONTAINERS

CONTAINER TYPE	SAMPLING POINT
Drum, bung on one end	Withdraw sample through the bung opening.
Drum, bung on side	Lay drum on side with bung up. Withdraw sample through the bung opening.
Barrel, fiber drum, buckets, sacks, bags	Withdraw samples through the top of barrels, fiber drums, buckets, and similar containers. Withdraw samples through fill openings of bags and sacks. Withdraw samples through the center of the containers and to different points diagonally opposite the point of entry.
Vacuum truck and similar containers	Withdraw sample through open hatch. Sample all other hatches.
Soil	Divide the surface area into an imaginary grid. (The number of grids is determined by the desired number of samples to be collected which, when combined, should give a representative sample of the wastes). Sample each grid.

TABLE C-6
NUMBER OF SAMPLES TO BE COLLECTED

CASE NO.	INFORMATION DESIRED	WASTE TYPE	CONTAINER TYPE	NUMBER OF SAMPLES TO BE COLLECTED
1	Average concentration	Liquid	Drum, vacuum truck, and similar containers	1 collected with Coliwasa
2	Average concentration	Solid (Powder or granular)	Bag, drum, bin, sack	1 composite sample of several samples collected at different sampling areas
3	Average concentration	Soil	----------	1 composite sample of several samples collected at different sampling areas
4	Concentration range	Liquid	Drum, vacuum truck, storage tank	3 to 10 separate samples, each from a different depth of the liquid
5	Concentration range	Solid (powder or granular)	Bag, drum, bin	3 to 5 samples from different sampling points
6	Concentration range	Soil	----------	3 to 20 separate samples from different sampling areas
7	Average concentration for legal evidence	All types	All containers	3 identical samples or 1 composite sample divided into 3 identical samples if homogeneous
8	Average concentration	Liquid	Storage tank	Same as Case #2
9	Concentration range	Liquid	Storage tank	Same as Case #4

TABLE C-7
PROCEDURE FOR SAMPLING WASTE IN DRUMS

1. Choose the plastic or glass Coliwasa for the liquid waste to be sampled referring to Table C-4.

2. Make sure that the sampler is clean.

3. Check to make sure the sampler is functioning properly. Adjust the locking mechanism if necessary to make sure the neoprene rubber stopper provides a tight closure.

4. Wear necessary protective clothing and gear and observe required sampling precautions.

5. Put the sampler in the open position by placing the stopper rod handle in the Tee-position and pushing the rod down until the handle sits against the sampler's locking block.

6. Slowly lower the sampler into the liquid waste. (Lower the sampler at a rate that permits the levels of the the liquid inside and outside the sampler tube to remain about the same. If the level of the liquid in the sampler tube is lower than that outside the sampler, the sampling rate is too fast and will result in a nonrepresentative sample).

7. When the sampler stopper hits the bottom of the waste container, push the sampler tube downward against the stopper to close the sampler. Lock the sampler in the closed position by turning the Tee handle until it is upright and one end rests tightly on the locking block.

8. Slowly withdraw the sampler from the waste container with one hand while wiping the sampler tube with a disposable cloth or rag with the other hand.

9. Carefully discharge the sample into a suitable sample container by slowly opening the sampler. This is done by slowly pulling the lower end of the Tee handle away from the locking block while the lower end of the sampler is positioned in a sample container.

10. Cap the sample container; attach label and seal; record in field log book; and complete sample analysis request sheet.

11. Unscrew the Tee handle of the sampler and disengage the locking block. Clean sampler on site or store the contaminated parts of the sampler in a plastic storage tube for subsequent cleaning. Store used rags in plastic bags for subsequent disposal.

12. Deliver the sample to the laboratory for analysis.

Strict chain of custody will be maintained for all samples. Each person who handles the sample will, upon receipt, sign and date the identification tag. Section One of EPA Publication SW-846 must be followed to ensure adequate chain-of-custody.
The sample container will be compatible with the waste. Except for some solvents and oils, a plastic (1 quart) bottle is best. Corrosive samples will not be placed in metal containers.

Only all-cargo aircraft, trucks, UPS, or other nonpassenger vehicles will be used to ship hazardous waste samples to laboratories. EPA procedures (SW-846) for sample preservation must be followed and EPA and DOT regulations for transporting hazardous materials/wastes must be met.

C-2(e) Frequency of Analysis:

Frequency of analysis is indicated in Table C-8. Since unused and partially used materials are generated at unpredictable frequencies, the waste analysis plan specifies "as generated" for the frequency of analysis of these types of wastes.

All other wastes should be analyzed either annually or whenever there is a change in the process generating the wastes. Since the painting/cleaning and repairing activities generating these wastes do not change significantly, only a change in products used, or process, is likely to alter the characteristics of the waste.

TABLE C-8
FREQUENCY OF ANALYSIS

WASTE	ANALYSIS	FREQUENCY
Unused and partially used material wastes	Per Table C-2	As generated*
Paint wastes	TCLP Flash point	Annually or on product change
Sludges and slurries	Per Table C-2 for type of material generating waste	Annually

*. Unused materials in unopened containers will not be analyzed unless outside container markings have been destroyed. Characteristics will be determined from HMIS. The frequency of analyses for other wastes is annually or on product change.

C-3 Additional Requirements for Ignitable, Reactive, and Incompatible Wastes

No reactive wastes are generated or stored at NAS Memphis.

Ignitable wastes are identified by reference to the HMIS, vendor Material Safety Data Sheets, and by direct testing, if necessary. Analytical procedure used is per Table C-3.

Table C-9 identifies incompatible materials stored at NAS Memphis. The Table was prepared from Hatayama, H.K., et. al., "A Method for Determining the Compatibility of Hazardous Waste," California DHA, April, 1980 (EPA Pub. 600/2-80-076) and data from the HMIS. (NOTE: Some entries on this Table are applicable only to raw material storage in warehouses, not to the hazardous waste storage facility. Some entries are precautionary only).

TABLE C-9
INCOMPATIBILITY CHART

The mixing of any item identified in Column A with a Column B item in the same group may cause a chemical reaction, fire, or explosive, or generate toxic fumes.

A	B
GROUP 1	
Alkaline sludges	Chromium crystals
Ammonia solutions	Acid sludges
Battery acid	Alodine
Sodium hydroxide	Carbon removing compound
Sodium hydroxide sludges	Conversion coating sludge
	Nitric acid
	Paint remover
	Sulfuric acid
GROUP 2	
Asbestos	Oil
Pesticides	All solvents
	All flammable solvents
GROUP 3	
Alcohols	Any concentrated Group 1A or 1B waste
Water	
GROUP 4	
Alcohols	Any Group 1A waste
Trichloroethane	Any concentrated Group 1B waste
Trichloroethylene	
Trichlorotrifluoroethane	
Ethylene dichloride	
Methylene chloride	

TABLE C-9 (con't)
INCOMPATIBILITY CHART

A	B
GROUP 5	
Cyanides and cyanide solutions	Group 1B wastes
GROUP 6	
Chromic acid (Alodine)	Concentrated mineral acids
Chromic acid sludges	Group 2B wastes
Nitric acid	Group 5A wastes
All oxidizers	All flammable and combustible wastes
Chromium crystals	

ATTACHMENT 3

PERSONNEL TRAINING

Outline of The Training Program

Hazardous waste handling personnel at NAS Memphis must successfully complete a training program that teaches them to perform their duties in a way that ensures compliance with the Hazardous Waste Management Plan and regulations. Personnel should be trained before assignment to a position that includes duties involving hazardous waste and may not work unsupervised until they have completed the training. Additionally, personnel with duties that involve hazardous waste must take part in an annual review of the initial training.

General Training:
The general training program was developed by the U.S. Navy and is normally conducted as a four-day course. The course syllabus is shown in Table H-1. Courses covering the same material with durations of two or three days are authorized at NAS Memphis. The following station personnel are required to receive this training: hazardous waste facility laboratory technicians, hazardous waste handler (fork lift operators) that move hazardous waste, the Hazardous Waste Coordinator, safety officer, generator level hazardous waste coordinators and all full time waste handlers.

Training for Personnel Working at the Storage Facility:
On-the-job training for non-permanently assigned personnel involved in loading/unloading hazardous wastes for the hazardous waste storage building will be conducted by the Hazardous Waste Coordinator. Laborers who load and unload wastes are not assigned permanently to that task, rather they are assigned on an "as needed" basis. These laborers will be familiarized with emergency procedures, emergency equipment, emergency systems and hazards associated with the particular wastes about to be handled prior to handling of the wastes. This training will be documented and kept on file by the Hazardous Waste Coordinator. In addition, no waste is loaded or unloaded except under the direct and close supervision of the Hazardous Waste Coordinator. The close supervision and immediate availability provided will ensure that these functions are performed in compliance with applicable regulations [i.e., Rule 1200-1-11-.06(2)(g)2].

The on-station training director is the Station Hazardous Waste Coordinator. The Hazardous Waste Coordinator must have a BS degree in environmental engineering or a related field of study or, alternatively, have acquired skills through related studies and/or experience. The Hazardous Waste Coordinator must also successfully complete the training program described in Table H-1. The Civilian Personnel Officer will assist in development and presentation of training courses.

Training for Emergency Response

The Hazardous Waste Coordinator is primarily responsible for coordinating response to emergencies. He is responsible for personally instructing other personnel (such as loading crews) in response to emergencies.

The instruction provided will include:

* Emergency communications and alarm systems;
* Procedures for response to liquid spills;
* Power failure response procedures;

* Evacuation routes and procedures;
* Response to fires and explosions; and
* Decontamination procedures.

Training for Hazardous Materials Certifier

The person who has responsibility for certifying shipments of hazardous waste on the Hazardous Waste Manifest will attend the Navy training program, Transportation and Storage of Hazardous Materials, or other appropriate DOT courses.

Training for the Hazardous Waste Coordinator is supplemented by seminars and conferences involving hazardous waste management and Navy training documents.

Fire fighting personnel may have to respond to emergencies at the facility. All fire fighting personnel at the Station receive extensive fire fighting training equivalent to NFPA requirements and continuing training on a monthly basis.

POSITION TITLE: Hazardous Waste Coordinator

RESPONSIBILITIES:

- Coordinator under delegation from Public Works Officer for all hazardous waste activities;
- Liaison with hazardous waste generating units;
- Obtain all necessary permits, licenses, and liaison with federal, state, and local environmental regulatory agencies;
- Initiate purchase of emergency equipment, waste handling equipment, and reference materials;
- Acquire analytical tests of solid wastes and provide liaison with contract laboratory;
- Supervise disposal of hazardous wastes and provide liaison with disposal vendor;
- Coordinate hazardous waste storage facility in accordance with the hazardous waste management plan and appropriate regulations and permit conditions;
- Maintain SPCC plan and Hazardous Waste Contingency Plan; upgrade or modify plan as required; review plan after incidents;
- Train Station personnel in proper handling and storage of hazardous waste;
- Maintain operating log, performs inspections, and schedule maintenance; and
- Supervise on-Station movement of hazardous waste.

POSITION TITLE: Hazardous Waste Handler

RESPONSIBILITIES:

- Move hazardous waste containers under supervision of Hazardous Waste Coordinator;
- Notify Emergency Coordinator in the event of an emergency; and
- Accept instructions of Hazardous Waste Coordinator.

POSITION TITLE: Fire Chief

RESPONSIBILITIES:

The Fire Chief is responsible for maintaining a 24-hour fire fighting team, all fire fighting equipment, and training for fire responders on the Station.

The Station Fire Department will respond to hazardous waste incidents to provide fire protection services. (See Contingency Plan.)

POSITION TITLE: Generator Hazardous Waste Coordinator

RESPONSIBILITIES:

- Maintain inspection records at generating work centers;
- Provide for proper labeling of containers; and
- Maintain storage areas in conformance with HWMP.

POSITION TITLE: Safety Officer

RESPONSIBILITIES:

- Inspect all safety equipment for applicability, conditions, and efficiency;
- Perform safety audits to ensure safe operation of facility and compliance with OSHA standards, ANSI standards, and Navy requirements;
- Recommend facility modifications when required to increase safe handling procedures; and
- Other duties related to hazardous waste.

TABLE H-1

COURSE SYLLABUS
HAZARDOUS WASTE FACILITY OPERATIONS COURSE

THE HAZARDOUS WASTE PROBLEM
- A. SAFETY AND IMMEDIATE (ACUTE) HEALTH EFFECTS
- B. LONG-TERM (CHRONIC) HEALTH EFFECTS
- C. ENVIRONMENTAL EFFECTS
- D. LAWS AND REGULATIONS PERTAINING TO MATERIALS/WASTE
  - 1. Occupational Safety and Health Act (OSHA)
  - 2. Transportation of Chemicals (DOT)
  - 3. Environmental and Health Protection
    - a. Clean Air Act (CAA)
    - b. Clean Water Act (CWA)
    - c. Resource Conservation and Recovery Act (RCRA)
    - d. Toxic Substance Control Act (TSCA)
    - e. Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (Superfund)
    - f. Hazardous and Solid Waste Amendments (HSWA)
    - g. Superfund Amendments and Authorization Act (SARA) of 1986 (SARA)
- E. PUBLIC RELATIONS

HAZARDOUS WASTE LAWS AND REGULATIONS
- A. LAWS AFFECTING HAZARDOUS WASTE MANAGEMENT
  - 1. CAA
  - 2. CWA
  - 3. TSCA
  - 4. CERCLA OR Superfund
  - 5. RCRA
  - 6. HSWA
  - 7. SARA
  - 8. OSHA
  - 9. Hazardous Materials Transportation Act (HMTA)
- B. DEFINITIONS
- C. OVERVIEW OF FEDERAL LAWS AND REGULATIONS

NAVY AND FEDERAL HAZARDOUS WASTE POLICIES
- A. LEGAL BASIS FOR COMPLIANCE WITH HAZARDOUS WASTE REQUIREMENTS
- B. FEDERAL POLICY STATEMENTS AND DOCUMENTS CONCERNING HAZARDOUS WASTE
  - 1. Presidential Executive Orders
  - 2. Department of Defense Policy Statement and Documents
  - 3. Navy Documents
  - 4. Marine Corps Orders and Bulletins
  - 5. Military Installation Instructions/Orders and Activity Instructions/Orders
  - 6. Application of Policy Statements and Documents to Activities in Foreign Countries
- C. HAZARDOUS WASTE REQUIREMENTS: ENFORCEMENT AND SANCTIONS

Class 2 modification,dated:2-9-94

TABLE H-1 (continued)

COURSE SYLLABUS
HAZARDOUS WASTE FACILITY OPERATIONS COURSE

HAZARDOUS PROPERTIES
- A. DEFINITIONS OF HAZARDOUS PROPERTIES
- B. HAZARDOUS WASTE; HAZARDOUS SUBSTANCES; HAZARDOUS MATERIALS
- C. SUGGESTED REFERENCE MATERIALS
  1. Material Safety Data Sheets (MSDS)
  2. DOD Hazardous Material Information System (HMIS)
  3. Consolidated Hazardous Items List (CHIL)
  4. Chemical Hazardous Response Information System (CHRIS)
  5. Fire Protection Guide on Hazardous Materials
  6. NIOSH/OSHA Pocket Guide to Chemical Hazards
  7. Dangerous Properties of Industrial Materials
  8. Condensed Chemical Dictionary
  9. The Merck Index
  10. Hazardous Substance Hotlines

HEALTH AND ENVIRONMENTAL EFFECTS
- A. TOXICITY
- B. HEALTH EFFECTS
- C. LONG-RANGE IMPACTS
- D. ECOLOGY
- E. OSHA WORKER RIGHT-TO-KNOW
- F. SUGGESTED REFERENCE MATERIAL

PERSONAL SAFETY
- A. HAZARDOUS WASTE ACCIDENTS
- B. MONITORING EQUIPMENT AND INSTRUMENTATION
- C. EVALUATION OF THE HAZARD
- D. SAFETY EQUIPMENT
- E. HEAD PROTECTION
- F. EYE AND FACE PROTECTION
- G. RESPIRATORY PROTECTION
- H. HAND/ARM PROTECTION
- I. BODY PROTECTION
- J. FEET PROTECTION
- K. SUMMARY OF PROTECTIVE EQUIPMENT
- L. DECONTAMINATION
- M. FIRST AID
- N. SAFETY ATTITUDES
- O. SUGGESTED REFERENCES

HAZARDOUS WASTE IDENTIFICATION
- A. EPA HAZARDOUS WASTE IDENTIFICATION
- B. DEFINITION OF SOLID WASTE
- C. SOLID WASTE EXCLUSIONS
- D. DEFINITION OF HAZARDOUS WASTE
- E. SUBPART D LISTED WASTES
- F. SUBPART C CHARACTERISTIC WASTES
- G. HAZARDOUS/SOLID WASTE MIXTURES
- H. EXEMPTED WASTES

Class 2 modification,dated:2-9-94

TABLE H-1 (continued)

COURSE SYLLABUS
HAZARDOUS WASTE FACILITY OPERATIONS COURSE

I. WHEN DOES A WASTE BECOME A WASTE
J. SMALL QUANTITY GENERATORS
K. PETITIONS TO EXCLUDE OR "DELIST" A WASTE PRODUCED AT A PARTICULAR FACILITY
L. LAND BAN

STANDARDS APPLICABLE TO GENERATORS
A. GENERAL STANDARDS
B. THE MANIFEST
C. PRE-TRANSPORT REQUIREMENTS
D. RECORDKEEPING AND REPORTING
E. SPECIAL CONDITIONS
F. SMALL QUANTITY GENERATORS

DOT IDENTIFICATION
A. THE DOT HAZARD CLASS
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C. IDENTIFICATION OF HAZARDOUS MATERIALS

LABELING
A. DOT SYSTEM
B. OTHER HAZARD IDENTIFICATION SYSTEMS
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HAZARDOUS WASTE PACKAGING
A. POLICY CONSIDERATIONS
B. DOT HAZARDOUS MATERIAL TABLE
C. LABELING AND MARKING
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F. PACKING CONCEPTS
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HAZARDOUS WASTE HANDLING
A. WASTE HANDLING PRINCIPLES
B. WASTE HANDLING SAFETY PRECAUTIONS
C. HAZARDOUS WASTE HANDLING CONSIDERATIONS
D. MATERIALS HANDLING EQUIPMENT (MHE)
E. MHE SELECTION FACTORS
F. GENERAL LOADING PRINCIPLES
G. HAZARDOUS MATERIAL LOADING AND UNLOADING RULES
H. TRANSFER TO THE DEFENSE REUTILIZATION AND MARKETING OFFICE (DRMO)

STORAGE/TREATMENT/DISPOSAL
A. STORAGE
B. STORAGE IN TANKS

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TABLE H-1 (continued)

COURSE SYLLABUS
HAZARDOUS WASTE FACILITY OPERATIONS COURSE

C. STORAGE IN OTHER UNITS
D. TREATMENT
E. DISPOSAL

COMPATIBILITY
A. HAZARDOUS MATERIAL COMPATIBILITY SYSTEMS
B. EPA HAZARDOUS WASTE COMPATIBILITY SYSTEMS

HAZARDOUS WASTE TRANSPORTATION
A. SHIPPING PAPERS
B. MANIFEST
C. SHIPPING NAME
D. PLACARDS
E. DOT HAZARDOUS MATERIALS EMERGENCY RESPONSE GUIDEBOOK
F. CHEMTREC

CONTINGENCY PLANNING
A. COORDINATION OF CONTINGENCY PLANS
B. ACTIVITY CONTINGENCY PLANNING REQUIREMENTS
C. SITE-SPECIFIC EMERGENCY PROCEDURES
D. PREPAREDNESS AND PREVENTION
E. TRAINING AVAILABLE
F. SUGGESTED REFERENCE MATERIALS

SPILL RESPONSE, CLEANUP, AND DECONTAMINATION
A. HAZARDOUS WASTE ACCIDENTS
B. CONTAINMENT AND CLEANUP
C. DECONTAMINATION
D. EMERGENCY GUIDES
E. NOTIFICATION OF SPILLS OF HAZARDOUS SUBSTANCES

FIRE/EXPLOSION RESPONSE
A. FIRE HAZARDS
B. FIRE DETECTION SYSTEMS AND DEVICES
C. CLASSES OF FIRES
D. FIRE EXTINGUISHING AGENTS
E. PORTABLE FIRE EXTINGUISHERS
F. FIRE/EXPLOSION RESPONSE
G. FIRE PREVENTION GUIDANCE AND INFORMATION

ATTACHMENT 4

CONTINGENCY PLAN

G-1 Overview

This Contingency Plan presents procedures and equipment maintained by the Naval Air Station - Memphis, Millington, TN to respond to hazardous situations related to the generation and storage of hazardous wastes.

Responses to emergencies involving hazardous wastes will be supervised by an Emergency Coordinator. The Emergency Coordinator will have the ultimate authority and responsibility for the following:

1. Determining if the emergency involves a spill of a reportable quantity of material (per 40 CFR 117).
2. Assessing the immediate threat to the environment or human health.
3. Determining when to initiate notification procedures to other agencies.
4. Ensuring that proper clean-up equipment and procedures are available.
5. Providing assistance, personnel, and equipment to generators for spill response.

Specific individuals responsible for emergency response are identified in this plan. Specific methods of response to spills, fires, and flood emergencies involving hazardous waste are given. Emergency and protective equipment is also described.

G-2 General Information

The Naval Air Station hazardous waste storage facility is owned and operated by the U.S. Navy.

The Naval Air Station (NAS) is located on Navy Road east of the City of Millington, Tennessee. Figure 1 is a regional map showing the location of the NAS. Figure 2 shows the location of the NAS relative to the City of Millington. Figure 3 depicts the location of the proposed building site.

Hazardous waste temporary storage areas are located throughout the Station.

G-3 Emergency Coordinators

In an emergency, contact the emergency coordinators listed below (primary first, then alternate):

Primary	Alternate
P.M. Motolenich, CDR, CEC, USN Public Works Officer Office Tel: 873-5207 Home Tel: 371-0805 Home Address: 6625 Woodpark Lane Bartlett, TN 38135	Don Litton Assistant Public Works Officer Office Tel: 873-5207 Home Tel: 377-2634 Home Address: 2782 Stagecoach Drive Memphis, TN 38134

The individuals listed as Emergency Coordinators have authority to commit necessary NAS Memphis resources and have been trained in emergency response. Their authority to commit resources is delegated from the Commanding Officer.

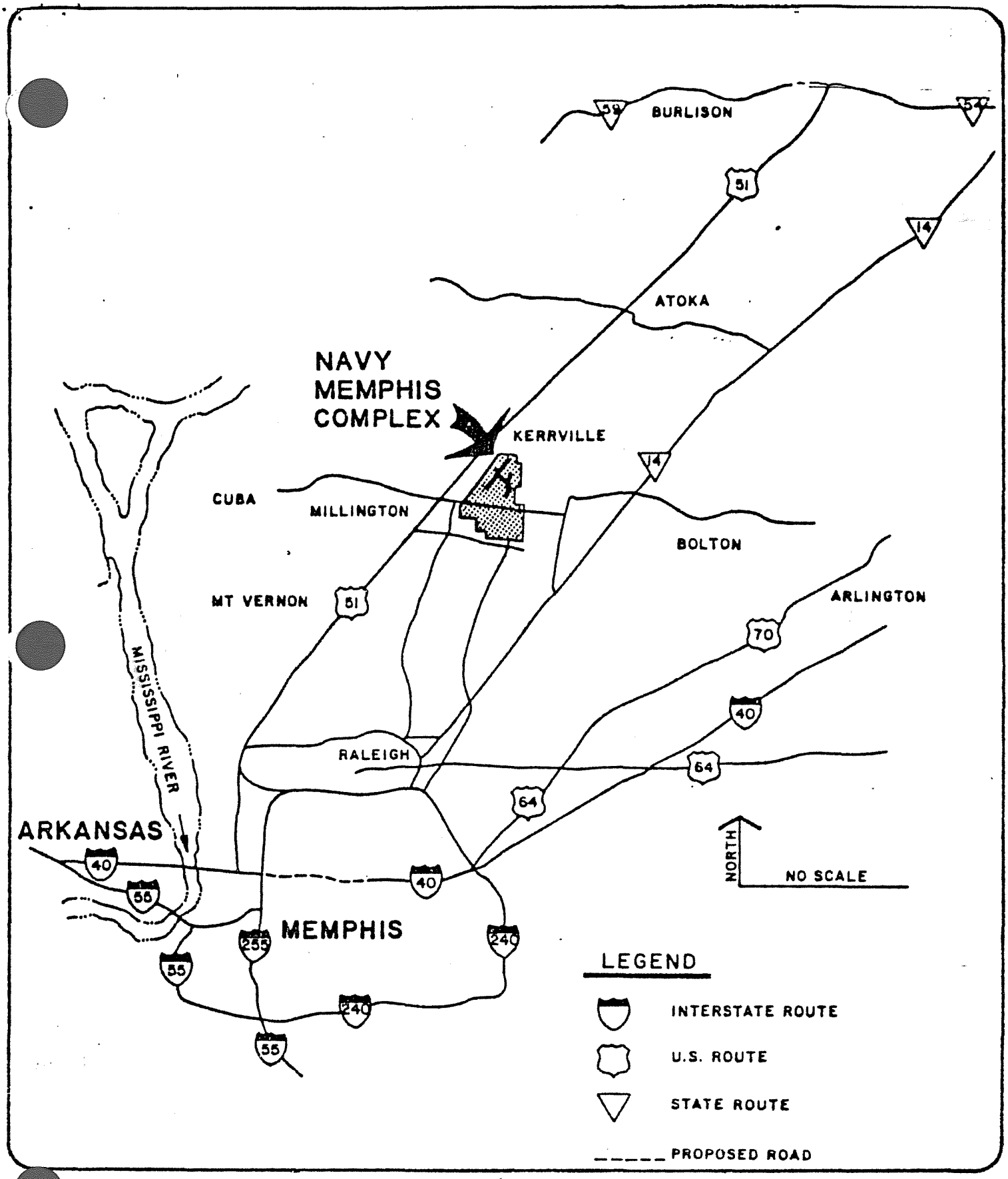

FIGURE 1

REGIONAL MAP
NAS MEMPHIS

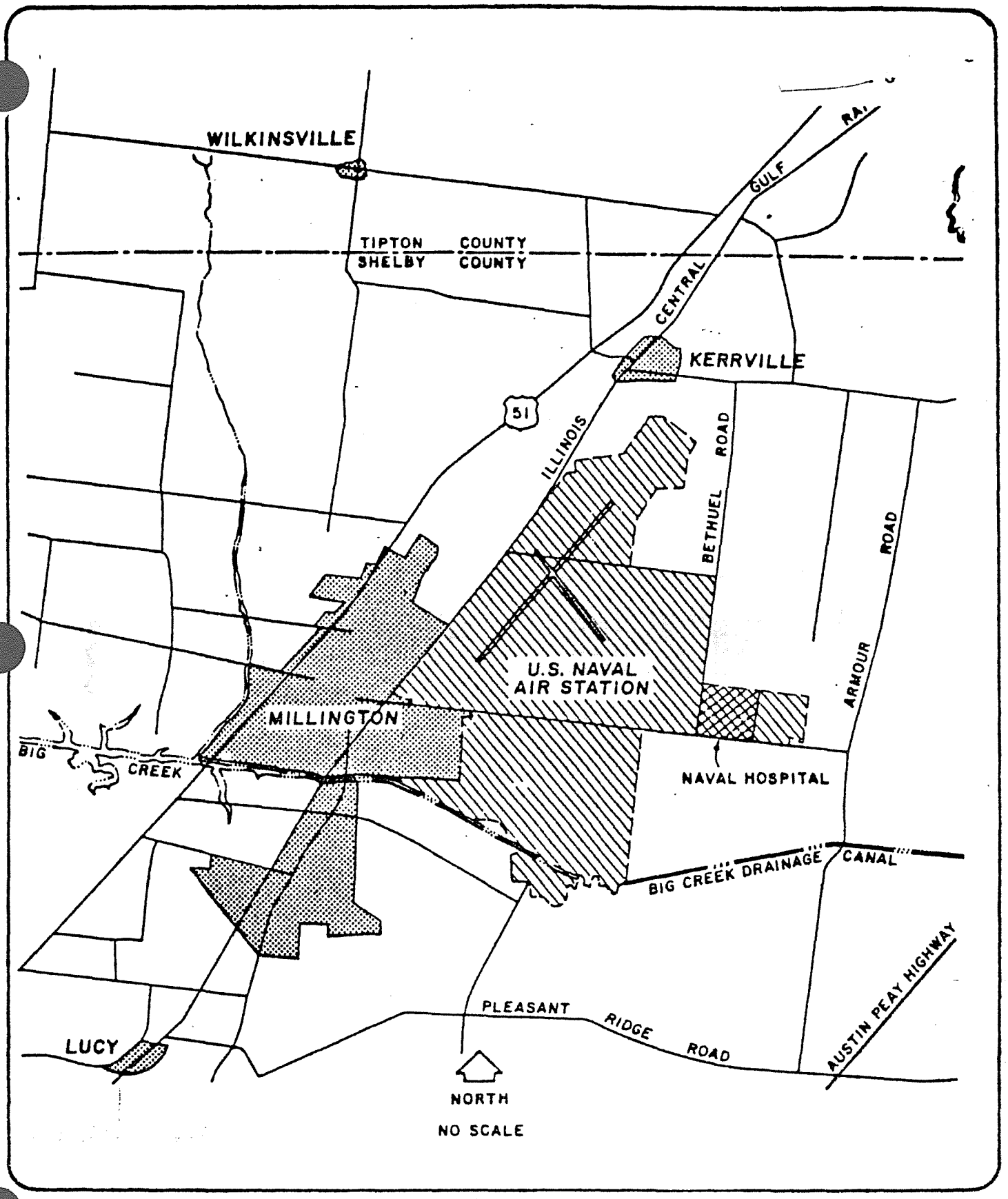

FIGURE 2

VICINITY MAP

NAS MEMPHIS

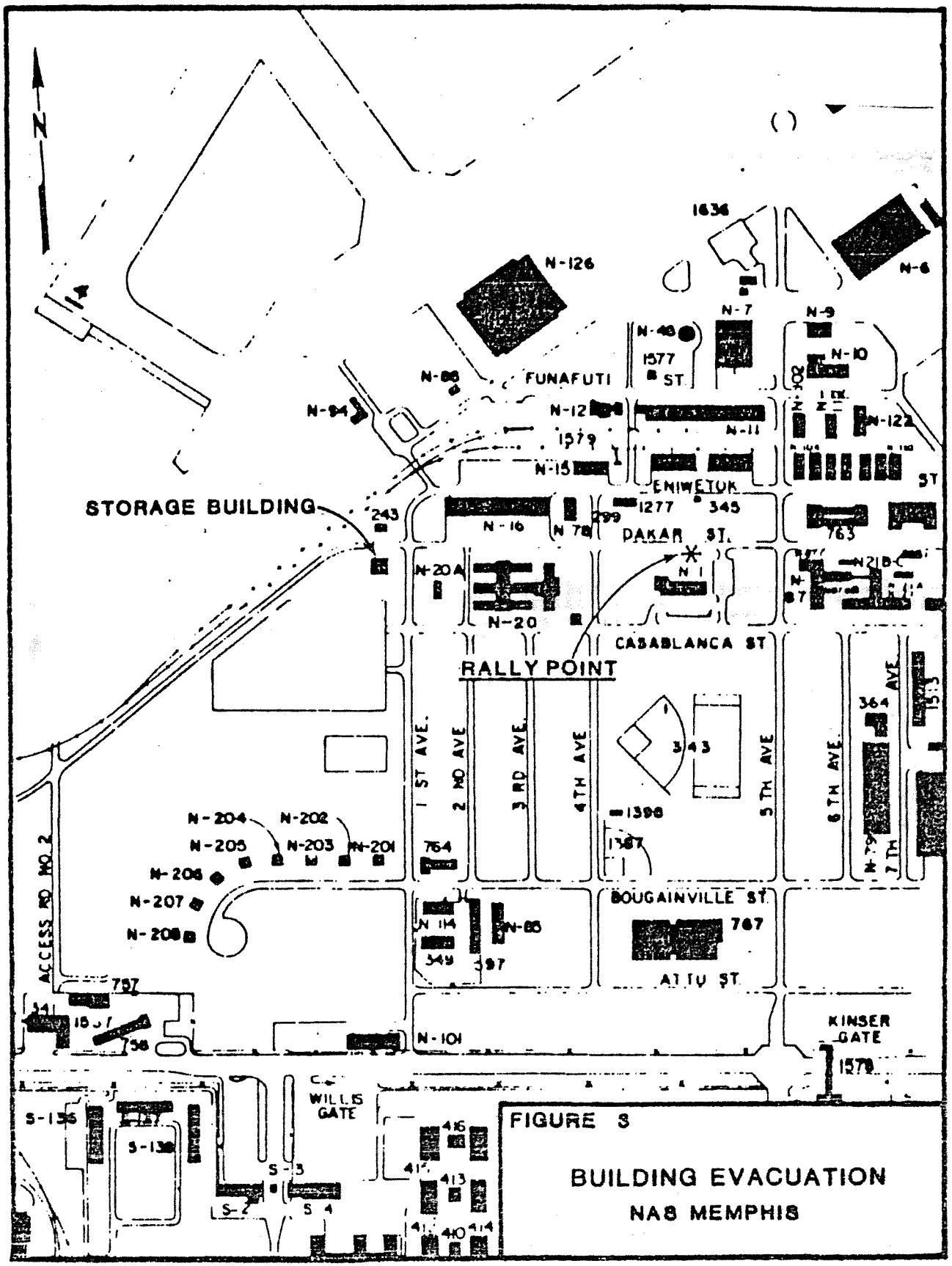

FIGURE 3

BUILDING EVACUATION

NAS MEMPHIS

G-4 Implementation Criteria

The Contingency Plan must be implemented under the following circumstances:

1. Fire/Explosion
   a. Fire causes release of toxic fumes;
   b. Fire spread beyond area of ignition;
   c. Fire threatens off-site areas;
   d. Fire fighting agents result in contaminated runoff; or
   e. Imminent threat of explosion.
2. Spills/Leaks
   a. Fire hazard exists due to spilled material;
   b. Toxic fume hazard exists;
   c. Groundwater may be threatened;
   d. Spill threatens property other than hazardous waste storage building; or
   e. Spill threatens navigable water.
3. Destructive Weather
   a. Destructive weather threatens storage building; or
   b. Potential for surface water contamination.

G-5 Emergency Response Procedures

G-5(a) Notification:

In the event of a potential emergency situation involving hazardous waste, the Emergency Coordinator must be notified by the discoverer. The Emergency Coordinator will make federal, state, local, and Navy required official notificatons, if necessary, after assessing the situation. The Emergency Coordinator will also notify the NAS Security Office, Fire Department, and hospital, as necessary. Other emergency response organizations with telephone numbers are listed in Table 1.

TABLE 1

EMERGENCY ORGANIZATIONS

EMERGENCY	ORGANIZATION	TELEPHONE
INJURY/CHEMICAL EXPOSURE	Naval Hospital	873-5801; 9-911
	Poison Control Center	528-6048
	Ambulance	873-5444
FIRE/EXPLOSION	NAS Fire Department	873-5333; 9-911
HAZARDOUS MATERIAL SPILL	NAS Fire Department	873-5333
	TN Emergency Operations Center	800/342-1328
	TN Dept of Environment & Conservation (Memphis)	543-6877
	Southern Division, Naval Facilities Engineering Command	803/743-0600 DSN 563-0600
SPILL IN WATERWAY	Nat'l Response Center	800/424-8802
	EPA Region IV	404/881-4062
	Coast Guard (Memphis)	529-3941
NATURAL DISASTER	NAS Security	873-5533
	Emergency Management Agency	528-2780

* All area codes are 901 unless otherwise specified.

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G-5(b) Identifying Type of Waste:

The Emergency Coordinator will determine the types of waste involved, or threatened, in the emergency by reference to the area storage log. If the containers can be approached safely, this identification will be made from the labels on the containers. Appendix I lists all hazardous wastes generated at the Navy Memphis Complex and potentially stored at the facility.

G-5(c) Assessment:

The Emergency Coordinator will determine whether the emergency poses a major threat sufficient to activate the Contingency Plan. Appendix II presents limited general guidance for assessing hazards associated with fires and spills of specific hazardous wastes used at the NAS.

G-6 Control Procedures

Potential emergency incidents may be classified under one of the following: (1) fire/explosion, (2) spills/leaks, or (3) flood/hurricane. Appendix II gives limited guidance for controlling fires and spills of hazardous waste used at the Station. Additional guidance relating to fires, spills, and floods is contained in the following paragraphs.

G-6(a) Fire/Explosion:

The hazardous waste storage area has one class 80B fire extinguisher mounted not more than 60 inches from the ground. The lab area has one class 5B extinguisher. In the event of a small fire, the extinguishers should be used. Instructions for use are mounted on the fire extinguishers.

Notify the Emergency Coordinator. If the fire cannot be extinguished with these extinguishers, the Station Fire Department

should be telephoned. Notify the Fire Department dispatcher that a fire has been seen in a hazardous waste storage area.

All storage areas are easily accessed from paved drives which are kept clear at all times.

The Station Fire Department will initiate immediate response as follows:

1. Ensure that all personnel have evacuated the storage building. Give first aid to injured personnel.
2. Evacuate any loading/unloading vehicles if they are present.
3. If the Fire Commander orders a limited evacuation, the Emergency Coordinator will request Station Security to evacuate all personnel within a 1,000-foot radius of the area.
4. Fire Department will conduct fire extinguishing efforts.
5. An "all-clear" signal will be given when the Fire Commander and the Emergency Coordinator agree that the emergency is over.

G-6(b) Spills/Leaks:

The most probable emergencies involving spills or leaks of hazardous waste from containers are:

1. Spills caused by accidents during loading of waste at generating units;
2. Spills as a result of a vehicular accident during movement of waste;
3. Spills caused by accidents during unloading operations at the storage building; or

4. Leaks from stored containers that are large enough to require implementation of the Contingency Plan.

All loading, transfer, and unloading operations are conducted under the close and direct supervision of the Hazardous Waste Coordinator. This employee is trained in emergency response. Therefore, a trained and qualified person will always be immediately available under the most probable spill scenarios.

In the event of a spill or leak from one or more containers, the discoverer will notify the Emergency Coordinator. The Emergency Coordinator will make an immediate assessment of the degree of hazard posed by the spill. This assessment will include the type of material spilled, location of the spill, quantity spilled or likely to spill before containment is achieved, direction of spill and associated vapors if any, potential for injury, and the threat of fire or explosion. Based on this assessment, the Emergency Coordinator will initiate one or more of the following actions:

1. Direct the Station Fire Department to mobilize and stand by at the site of the spill for fire protection.
2. Request Public Works personnel to handle spill under his supervision.
3. Notify an outside spill response vendor with whom a prearranged contract has been written.

The area impacted by the spill will be evacuated for a distance of 50 feet in all directions. It is not probable that any spill or leak from a container will require greater evacuation.

If the Emergency Coordinator determines that Station personnel can handle the spill, employees will be directed to bring liquid spill absorbent material, 85-gallon recovery drums, and personal protective equipment to the spill locations. These personnel, instructed in safety procedures and use of emergency equipment, will attempt to contain the spill with absorbent and load solidified material into recovery drums.

The Emergency Coordinator will initiate all required notifications for the spill of a reportable quantity of a hazardous substance (one pound unless a higher quantity has been specified in 40 CFR 117) or hazardous waste.

If the Emergency Coordinator determines that on-base efforts are insufficient, or if navigable waters adjacent to the Base are threatened, he will notify a spill response contractor and the appropriate Naval authorities.

The Emergency Coordinator will initiate all notifications required by that plan. These notifications include the reporting of a spill of a reportable quantity of any hazardous material and reports to the appropriate authorities. The procedures to be followed in the event of a spill include:

1. Locate injured personnel, if any, and notify the Naval Hospital to mobilize ambulances and medical personnel.
2. Evacuate area within 50-foot radius and alert downwind employees.
3. Dispatch emergency personnel and associated response equipment to site of spill.
4. Monitor progress to determine whether off-site contractor should be mobilized.
5. Clean-up personnel must use personal protective equipment (gloves, suits, breathing apparatus).

6. Remove leaking drum to a recovery drum.
7. Use absorbent material to contain and solidify liquid.
8. Place all solidified spill material and contaminated spill debris in drums.

After the immediate emergency, the Emergency Coordinator must assess whether unprotected soils have been contaminated and arrange for the removal and containerization of contaminated soils to protect groundwater supplies from contamination. (It is unlikely that sufficient material can spill at one time to pose an immediate threat to groundwater.) The Emergency Coordinator must also ensure that all emergency equipment and safety equipment is cleaned, decontaminated, and re-stored for immediate use. Stock of absorbent and recovery drums must be checked and replenished if necessary.

G-6(c) Destructive Weather:
The elevation of the hazardous waste storage areas and the drainage of the surrounding area are such that flooding of the building is unlikely to occur. In the event of severe destructive weather, hazardous waste storage areas will be secured as required by the Station Disaster Plan.

G-6(d) Post Emergency Actions:
After an immediate emergency, the Emergency Coordinator must take action as described below for incidents contained within the storage building and for those escaping the storage building.
G-6(d)(1) Incidents Contained Within Storage Building:
Each spill or leak will be corrected immediately upon discovery. A portable suction pump will be used to collect spilled material for containment and recontainerization. Any liquids remaining after use of the pump will be absorbed and the absorbent will be combined with the pumped liquid. The pump will be rinsed with

tap water after each use, and the rinse water will be added to the collected liquid.

Each bay has an individual containment curb to contain all spills and leaks. If a spill occurs or a container leaks, the collected liquid can be identified by the label on the leaking or spilled container. If the label has been destroyed, then a visual determination will be used. If the material cannot be readily and correctly identified a sample of the spilled material will be collected and analyzed in accordance with the test methods described in the Waste Analysis Plan.

All spilled material and clean-up material will be drummed in an appropriate DOT approved container and stored for proper disposal.

Under the direction of the Emergency Coordinator, trained employees wearing rubber gloves, rubber boots and protective coveralls will wash each contaminated bay and wipe down walls of the storage building with water containing an ionic surfactant. All washings will be drummed for disposal as hazardous waste. The walls will be wiped with rinse water and the bay will then be rinsed with clean fresh water. The rinse waters will be drummed and a representative sample will be analyzed for each hazardous characteristic; i.e., ignitability, corrosivity, reactivity, TCLP , and the applicable constituents of concern. If the rinse waters fail the analytical test, they will be disposed of as hazardous waste, and a second rinsing of the floor will be initiated. The floor will be repeatedly rinsed until the rinse waters pass the characteristic tests. Clean rinse waters will be transported to a sanitary sewer for disposal.

G-6(d)(2) Materials Escaping the Storage Building:

Representative samples of soil will be collected along both edges of the drive at the loading/unloading area at the storage building.

Samples of the top six inches of soil will be collected at five foot intervals along each side of the drive. All samples from the same side of the drive will be combined into one composite. Each of the two resulting composite samples will be analyzed for the four hazardous characteristics and the applicable constituents of concern.

If either sample fails any characteristic test, the Emergency Coordinator will establish a sampling grid that will encompass the driveway edge and any suspected contaminated areas topographically downslope. Discrete samples will be taken at each grid intersection and each sample will be analyzed for the hazardous characteristics. The results of the analyses will define the extent of soil contamination. An area extending five feet beyond the limits of contamination will be excavated to a depth of six inches. Contaminated soil will be transported to a commercial hazardous waste disposal facility and the excavation will be backfilled with uncontaminated material.

Excavation equipment will be decontaminated prior to backfilling of the excavation. The Emergency Coordinator will supervise decontamination. Heavy equipment will be driven to the interior of the excavation and will be manually cleaned of soil residues with hand scrapers, shovels, scrub brushes and brooms. After cleaning, vehicles will be driven from the excavation, and cleaning residue will be manually shoveled into drums for disposal as hazardous waste. Shovels will be cleaned using the hand tools, which will be discarded into drums containing residue for disposal.

G-7 Prevention of Recurrence of Fires, Explosions, or Releases

The Emergency Coordinator may order the temporary removal of containers of waste from storage area after an emergency until the area is safe and no recurrence can be expected.

G-7(a) Storage and Treatment of Released Material:
The Emergency Coordinator will order all spilled material, clean-up debris, and contaminated soil to be containerized and stored for later disposal.

G-7(b) Incompatible Wastes:
The Emergency Coordinator will ensure that released material incompatible with other wastes is segregated during temporary storage and that incompatible wastes are not accidentally mixed during clean-up.

G-7(c) Post Emergency Equipment Maintenance:
After an emergency event, all emergency equipment will be cleaned so that it is fit for use or it will be replaced. Before operations are resumed, an inspection of all safety equipment will be conducted. The Regional Administrator and state authorities will be notified that post-emergency equipment maintenance has been performed and operations will be resumed.

G-8 Emergency and Protective Equipment

Materials and equipment stored and necessary for safe emergency response at the storage building are listed in Table 2a. Support response materials and equipment at NAS Memphis are listed in Table 2. Personal protective equipment is stored at the HW storage areas, the Safety Offices, and the Fire Station.

Recovery drums and absorbent material are stored at the drum storage areas.

The Fire Department maintains its equipment at the fire station.

Emergency equipment, primarily fire extinguishers and absorbent material, must be located at all temporary waste collection staging areas. Employees must be trained in the use of this equipment in case of a hazardous waste emergency.

Each generator will maintain a supply of an absorbent material stored adjacent to the accumulation areas. The Emergency

TABLE 2A

MATERIALS AND EQUIPMENT FOR SAFE EMERGENCY RESPONSE AT HAZARDOUS WASTE STORAGE BUILDING

MATERIAL/ EQUIPMENT	QUANTITY	FUNCTION	CAPABILITY
Telephone	1	Obtain assistance	On and off-base contact with emergency response agencies
Fire Extinguishers	2	Fire protection	Extinguish small fires
Fire Alarm	1	Obtain assistance	Direct contact with NAS Fire Department
Fire Hydrants	2	Fire protection	Water supply at adequate volume and pressure
Absorbent	50 lbs.	Spill clean up	Absorb contents of largest container in storage
Eye wash/shower	1	Decontamination	Decontaminate personnel assigned to storage building
Fire Blankets	1	Fire protection	Personnel egress in fire
Portable Pump	1	Spill clean up	Suction spilled material to containment; transfer material from leaking container
Recovery Drums	2	Spill/ leak containment	Contain spilled/ contaminated material or leaking drums
Eye Glasses/ Face Shields	2	Personal protection	Protect eyes, face

TABLE 2A, continued

MATERIALS AND EQUIPMENT FOR SAFE EMERGENCY RESPONSE AT HAZARDOUS WASTE STORAGE BUILDING

MATERIAL/ EQUIPMENT	QUANTITY	FUNCTION	CAPABILITY
Self-contained breathing apparatus	1	Personal protection	Respiratory protection
Cartridge Respirators	1	Personal protection	Respiratory protection
Chemical protection suit	1	Personal protection	Body protection
Rubber (nitrile) gloves	2 pairs	Personal protection	Hand protection
Neoprene aprons	2	Personal protection	Skin protection
Safety Boots	1 pair	Personal protection	Foot protection
First Aid Kit	1	First Aid	Minor treatment

TABLE 2

RESPONSE SUPPORT
MATERIALS AND EQUIPMENT FOR SAFE EMERGENCY RESPONSE

MATERIAL/ EQUIPMENT	QUANTITY	FUNCTION	CAPABILITY
Truck	One	Transport of absorbent	Allows solidification agent to be brought to site of spill.
Pumper trucks	3	Fire fighting	1-1000 gal. 2-750 gal. Light water and foam capability.
85-gallon recovery drums	Fifteen	Spill response	Use to overpack leaking 55-gal. drums and for containerizing spilled material and spill debris.
Absorbent	2,000 lbs.	Spill response	Use to solidify and contain spills/leaks from containers. Do not use on unneutralized acids or caustics
Forklifts	One	Drum removal	Use to move drums of waste that are leaking.
Excavators	Two	Spill clean-up	Use to remove contaminated soil after spill.

Coordinator must have access to a 2,000-pound forklift and flatbed truck for emergency removal of hazardous waste.

Protective personal equipment, first aid kits, and fire extinguishers are also located at all generating sites throughout the facility. Specific personal protection equipment provided to employees handling hazardous waste include:

1. Neoprene gloves
2. Nitrile gloves
3. Safety boots
4. Rubber aprons
5. Safety glasses
6. Cartridge respirators
7. Chemical resistant suits (Tyvek)

Also available are self-contained breathing apparatus (SCBA) and complete chemical suits.

G-9 Distribution and Coordination

Copies of the Contingency Plan will be sent to, and coordinated with, the Naval Hospital, Station Fire Department, Station Safety Office, and Station Security Officer. A copy of the plan will be kept at Public Works. A copy will also be sent to the City of Memphis HAZMAT React Team.

G-10 Evacuation Plan

The Emergency Coordinator and the Station Fire Chief are responsible for determining whether evacuations are necessary in the event of an emergency. However, it is unlikely that an evacuation of the entire Station will be necessary under any emergencies.

Communications in the event of an emergency are maintained on the

Station telephone system. A telephone will be located in the Hazardous Waste Storage Building. The ~~proposed~~ Hazardous Waste Storage Building will also be equipped with a fire alarm call box linked directly to the Station Fire Department. The signal for evacuation is voice instruction from the Fire Commander and/or Station Security. The "all-clear" is also voice instruction.

If the Emergency Coordinator determines that evacuation of the storage building or adjacent buildings is necessary, Station Security will notify occupants and instruct them to leave the immediate vicinity and rally at the north side of Building N-1 (east on Dakar Street) as shown on Figure 3 of this plan.

Re-entry to the area will be allowed only when the Emergency Coordinator gives an "all-clear" instruction.

G-11 Required Reports

In addition to the verbal notifications to be initiated by the Emergency Coordinator, written follow-up reports will be prepared. All emergencies which require the implementation of the Contingency Plan will be reported in writing within 15 days to ~~TDPH~~ TDEC and the Administrator, EPA Region IV. The report will detail name of the facility, date, time, and type of accident; type and quantity of material involved; extent of injuries; an assessment of the impact on human health and the environment; and the quantity and disposition of material released. An example form is included as Appendix III.

After an emergency, the Emergency Coordinator will review the Contingency Plan for effectiveness and make changes as are appropriate. The plan will also be reviewed when Emergency Coordinators, emergency equipment, or the Hazardous Waste Management Plan are altered.

APPENDIX I
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
Adhesives	Flash point	Some adhesives have a flash point of <140 F.
Amalgam	TCLP (Hg)	Waste stream is toxic (D009, and U151).
Ammonium hydroxide	pH	Solution has a pH>12.5 and is corrosive.
Battery Acid	pH TCLP (Pb)	Solution has a pH<2.0 and is corrosive; solutions may contain a toxic level of lead.
Calcium hypochlorite	pH	Solution is corrosive (D002).
Calibrating fluid	Flash point	Fluid has a flash point of <140 F (D001).
Cleaning solvents (Non-Halogenated)	Flash point, xylene, toluene, methyl ethly ketone, methyl isobutyl ketone, methyl alcohol	These paint cleaners have flash points between 0 F and 140 F and are ignitable; they may contain the listed wastes xylene, methyl isobutyl ketone, and methyl alcohol (F003) or toluene and methyl ethyl ketone (F005).
Carbon removing compound	pH Methylene chloride	This material has a pH<2.0 and may contain the listed waste methylene chloride (F001).
Chromic acid (Alodine)	pH TCLP (Cr)	This waste is acidic (corrosive), and contains chrome, (D007).
Chromium crystals	TCLP (Cr)	Contains chrome (D007), and is an oxidizer (D001).
Developers (film) and fixers	TCLP (Ag)	Film developing and fixing chemicals contain silver and are toxic. (Exempt is silver that is reclaimed.)
Dry cleaning solvent (PD-680)	Flash point	This solvent (PD-680) has a flash point ranging from 80 F to 145 F.
Electrostatic Solution	pH	Solution is corrosive (D002).
Ethylene dichloride	Ethylene dichloride	Listed waste (U077) and is flammable (D001).
Hydraulic fluid, contaminated (Skydrol)	TCLP (Cd)	This fluid fails TCLP for cadmium (D006).

APPENDIX I (continued)
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
JP Fuel	Flash point	Fuel has a flash point <140 F.
Liquid dye	Flash point	This NDT solution has a flash point <140 F and is ignitable.
Mixed paint wastes and thinners	Flash point TCLP (Pb,Cr)	Paint wastes are toxic for lead and chromium and may be ignitable.
Naphtha Aliphatic	Flash point	Flash point is <140 F.
Nicad Batteries	TCLP (Cd)	Batteries are toxic (D006).
Oil	Flash point	Some waste oil has a flash point <140 F.
Paint remover	pH Methylene chloride	Paint removing (stripping) compounds are acidic with pH <2.0. Compound also contains the listed waste methylene chloride (F001).
Paints and paint sludges	Flash point TCLP (Pb,Cr)	Most paint materials are solvent-based with flash points varying from 40 F to 140 F and are ignitable. Some paints contain lead and chromium.
Sodium hydroxide (descaling compound)	pH	Material has a pH >12.5 and is corrosive.
Toluene	Flash point	Material is a listed waste (F005) and is ignitable; flash point <140 F.
Trichloroethane	Trichloroethane	Material is a listed waste (F001, U226) for toxicity.
Trichlorotrifluoro-ethane (Freon)	Freon	Material is a listed waste (F002) for toxicity.
Xylene	Flash point	Xylene has a flash point of 84 F; it is also a listed waste (F003, U239) for ignitability.
Switches, Thermometers containing Mercury	TCLP (Hg)	Listed waste (U151) and is toxic (D009).
Insecticides	Flash Point TCLP (Lindane)	Some insecticides have a flash point <140 F. Some may be toxic (D013).
Herbicides and Pesticides	TCLP (2,4-D) TCLP (As)	Some herbicides are listed (U240) and toxic (D016), (D004).

APPENDIX I (continued)
WASTE ANALYSIS PROTOCOL

WASTE	PARAMETER(S)	COMMENT
Zeolite Resin	pH	Waste is corrosive (D002).

APPENDIX II

EMERGENCY RESPONSE INFORMATION

Ammonium Hydroxide

Fire: May react violently with water. Use dry chemical, CO_2 or foam. Keep containers cool. Fire may produce irritating fumes.

Spill: Do not touch material. Take up with sand or other absorbent material. Contact with skin and eyes should be avoided. Do not inhale fumes.

Chromic Acid (Alodine)

Fire: May react violently with water. Use dry chemical, CO_2 or foam. Some of these materials may burn but not ignite readily.

Spill: Do not touch material. Use personal protective clothing. Use sand or other non-combustible absorbent material. Wear self-contained breathing apparatus.

Chromium Crystals

Fire: Vapors from fire are toxic. May burn rapidly. May ignite other combustible materials. Reaction with fuels may be violent. Use self-contained breathing apparatus and full protective clothing. Use dry chemical or CO_2, water spray. Keep containers cool.

Spill: Inhalation of dust poisonous. Keep combustibles away from spilled material. With clean shovel place material into clean, dry container and cover.

Carbon Removing Compound (Methylene Chloride)

Fire: Vapors from fire are toxic. Use self-contained breathing apparatus. Use dry chemical, foam, or CO_2. Does not ignite easily.

Spill: Do not touch spilled material. Soak up with absorbent material or allow to evaporate.

Ethylene Dichloride

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain source of heat or sparks. Soak up with non-combustible absorbent material.

APPENDIX II (continued)
EMERGENCY RESPONSE INFORMATION

Freon (Trichlorotrifluoroethane)

Fire: Vapors from fire are toxic. Use self-contained breathing apparatus. Use dry chemical, foam, or CO_2. Does not ignite easily.

Spill: Do not touch spilled material. Soak up with absorbent material or allow to evaporate.

Hydraulic Fluid (Skydrol)

Fire: Will ignite and burn easily. Vapors from fire are toxic. Wear self-contained breathing apparatus and full protective clothing. Use dry chemical, CO_2, water spray or foam.

Spill: Take up with sand or other noncombustible absorbent material.

Mixed Solvents

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain sources of heat or sparks. Soak up with non-combustible absorbent material.

Methyl Ethyl Ketone

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain sources of heat or sparks. Soak up with non-combustible absorbent material.

Methyl Isobutyl Ketone

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain sources of heat or sparks. Soak up with non-combustible absorbent material.

APPENDIX II (continued)
EMERGENCY RESPONSE INFORMATION

Mixed Chlorinated Solvents

Fire: Vapors from fire are toxic. Use self-contained breathing apparatus. Use dry chemical, foam, or CO_2. Does not ignite easily.

Spill: Do not touch spilled material. Soak up with absorbent material or allow to evaporate.

P-D-680 Type I (Dry Cleaning Solvent)

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain sources of heat or sparks. Soak up with non-combustible absorbent material.

Paint Wastes

Fire: Use dry chemical, CO_2, or water. Will burn. Vapor explosive possible in confined spaces.

Spill: Remove sources or sparks. Soak up with non-combustible absorbent material.

Paint Thinners

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain sources of heat or sparks. Soak up with non-combustible absorbent material.

Paint Stripper

Fire: May react with water. Use dry chemical, foam, or CO_2. Vapors from fire are toxic. Wear self-contained breathing apparatus.

Spill: Do not touch spilled material. Contact causes burns to eyes and skin. Soak up with earth, sand, or inorganic absorbent material.

APPENDIX II (continued)
EMERGENCY RESPONSE INFORMATION

Sodium Hydroxide

Fire: May burn but not easily ignited. Vapors from fire may be toxic. Wear full protective clothing and self-contained breathing apparatus. Use dry chemical, CO_2, water spray or foam.

Spill: Do not touch material. Wear full protective clothing and self-contained breathing apparatus. Soak up with non-combustible absorbent material.

Toluene

Fire: Will ignite and burn easily. Vapor explosion hazard possible. Container explosion hazard possible. Use dry chemical, CO_2, water or foam.

Spill: Vapors may cause dizziness. Contain source of heat or sparks. Soak up with non-combustible absorbent material.

Trichloroethane

Fire: Vapors from fire are toxic. Use self-contained breathing apparatus. Use dry chemical, foam or CO_2. Does not ignite easily.

Spill: Do not touch spilled material. Soak up with absorbent material or allow to evaporate.

Xylene

Fire: May be ignited by heat, sparks, or flames. Container explosion hazard possible. Vapor explosion hazard possible. Vapors may flash back to source of ignition. Wear full protective clothing and self-contained breathing apparatus. Use dry chemical, CO_2, water spray or foam.

Spill: Do not touch material. Wear full protective clothing and self-contained breathing apparatus. Soak up with non-combustible absorbent material.

APPENDIX III

REPORTING FOR EMERGENCY EVENTS TO NATIONAL RESPONSE CENTER and FEDERAL/STATE AGENCIES

Name, address, and phone number of reporter

Name, address, and phone number of facility

Date, time, and type of incident (e.g., fire, explosion, etc.)

Name and quantity of material(s) involved

Extent of injuries (if any)

Assessment of actual or potential hazards to human health or the environment (if applicable)

Estimated quantity and disposition of material recovered from the incident

Send to:
U.S. EPA, Region IV
Regional Administrator
345 Courtland Street
Atlanta, GA 30365

Division of Solid Waste Management
TN Department of Public Health
701 Broadway, Customs House 4th Floor
Nashville, TN 37219-5403

Telephone to:
National Response Center
800-424-8802

TN Emergency Operations Center
800-342-1328

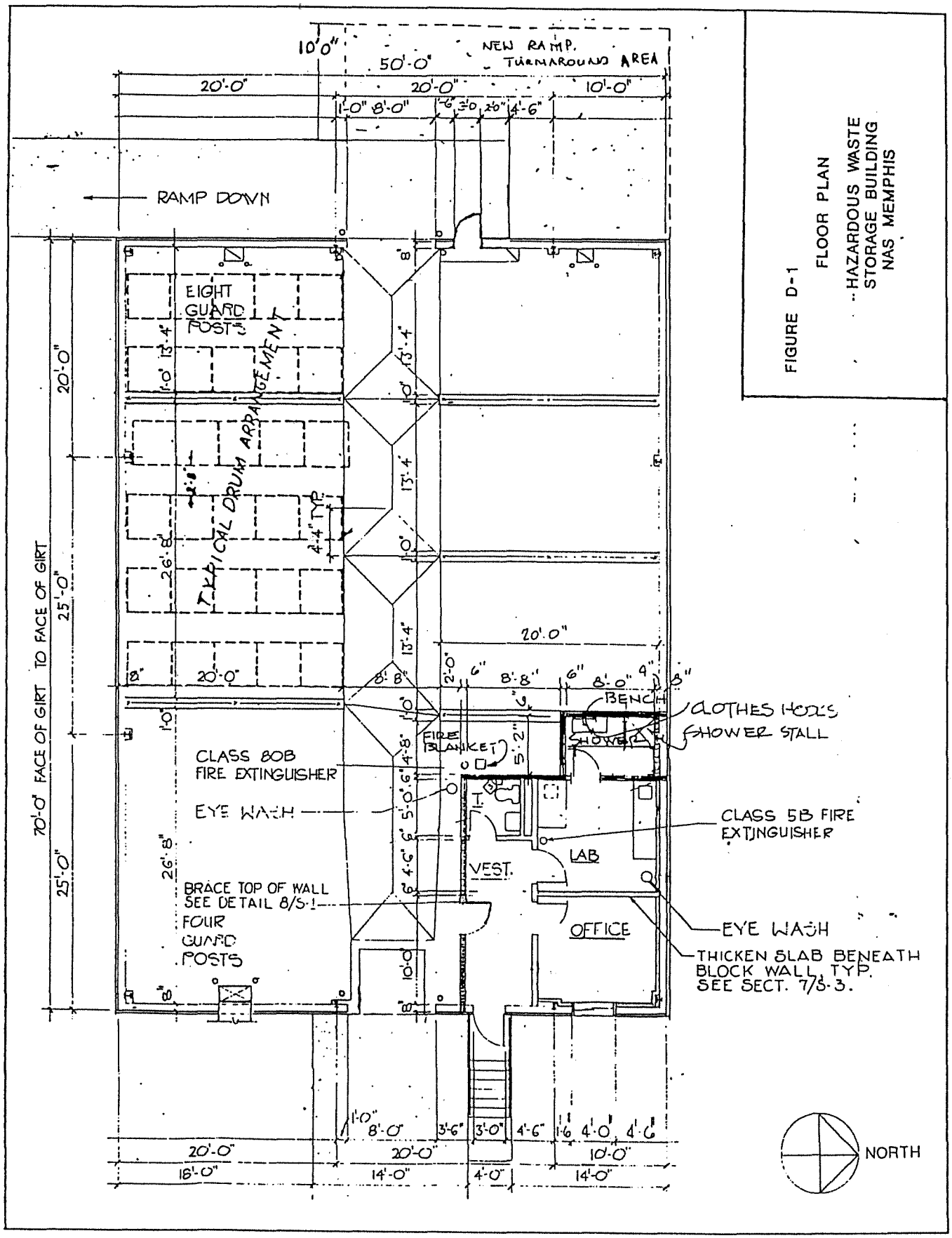

FIGURE D-1

FLOOR PLAN

HAZARDOUS WASTE STORAGE BUILDING NAS MEMPHIS

IN ATTACHMENT 5

Class 2 modification dated:7-9-94

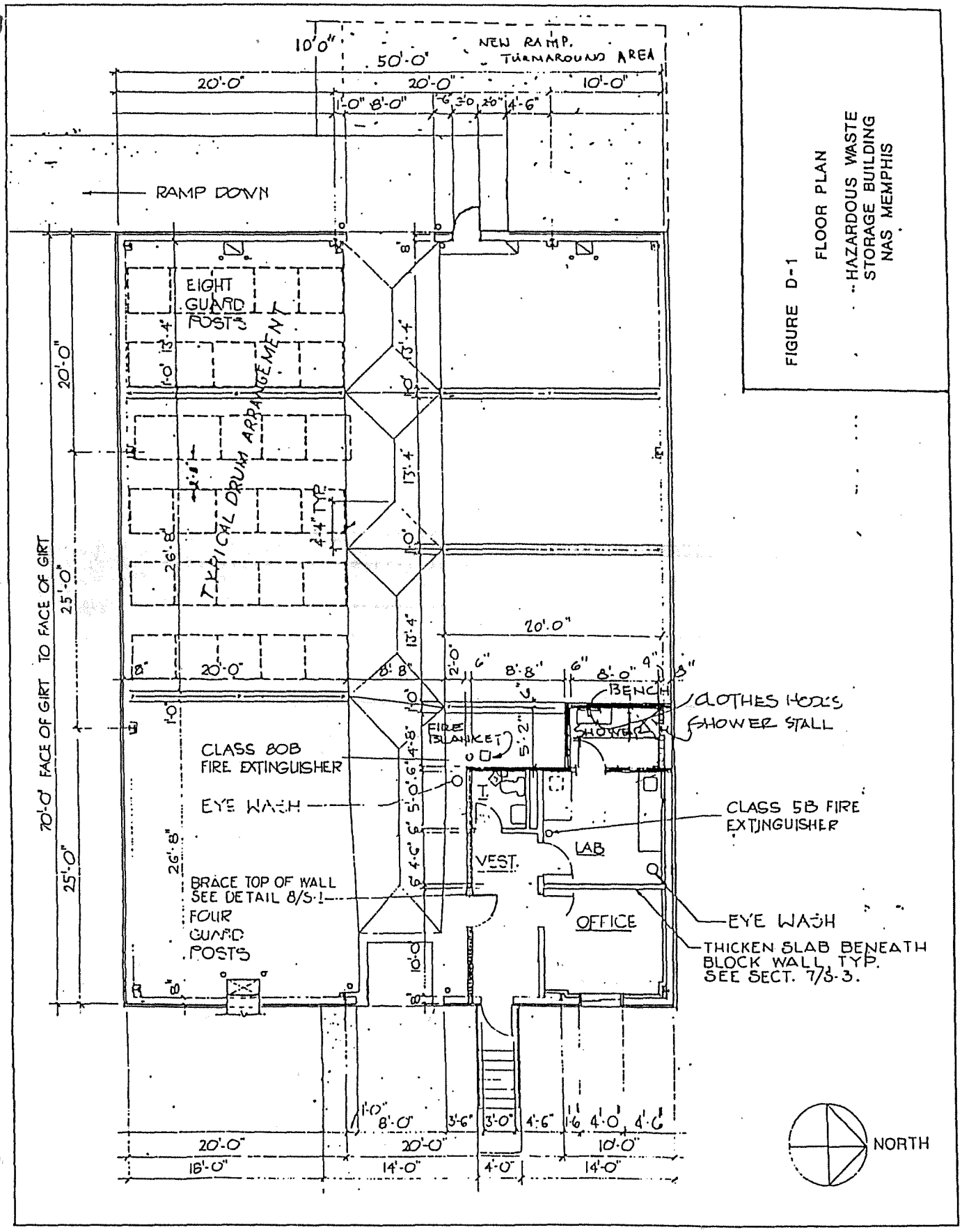

FIGURE D-1
FLOOR PLAN
HAZARDOUS WASTE STORAGE BUILDING
NAS MEMPHIS

IN ATTACHMENT 7

Class 2 modification,dated:2-9-94

Continued from page 2.
NOTE: Photocopy this page before completing if you have more than 26 wastes to list.

Form Approved OMB No. 158-S80004

EPA I.D. NUMBER (enter from page 1): W I N 2 1 7 0 0 2 2 6 0 0 — T/A: — C: 1

FOR OFFICIAL USE ONLY: W DUP — T/A: — C: 2 DUP

IV. DESCRIPTION OF HAZARDOUS WASTES (continued)

LINE NO.	A. EPA HAZARD. WASTE NO. (enter code)	B. ESTIMATED ANNUAL QUANTITY OF WASTE	C. UNIT OF MEASURE (enter code)	D. PROCESSES 1. PROCESS CODES (enter)				D. PROCESSES 2. PROCESS DESCRIPTION (If a code is not entered in D(1))
1	F001	5000	P	S01				
2	F002	11000	P	S01				
3	F003	2600	P	S01				
4	F005	1600	P	S01				
5	D001	30000	P	S01				
6	D002	10000	P	S01				
7	D007	1200	P	S01				
8	D008	1000	P	S01				
9	D011	1000	P	S01				
10	D006	300	P	S01				
11	U077	1000	P	S01				
12	D004	400	P	S01				
13	D009	200	P	S01				
14	D016	400	P	S01				
15	U151	200	P	S01				
16	U240	400	P	S01				
17	D013	100	P	S01				
18	U239	1000	P	S01				
19	U226	1000	P	S01				
20								
21								
22								
23								
24								
25								
26								