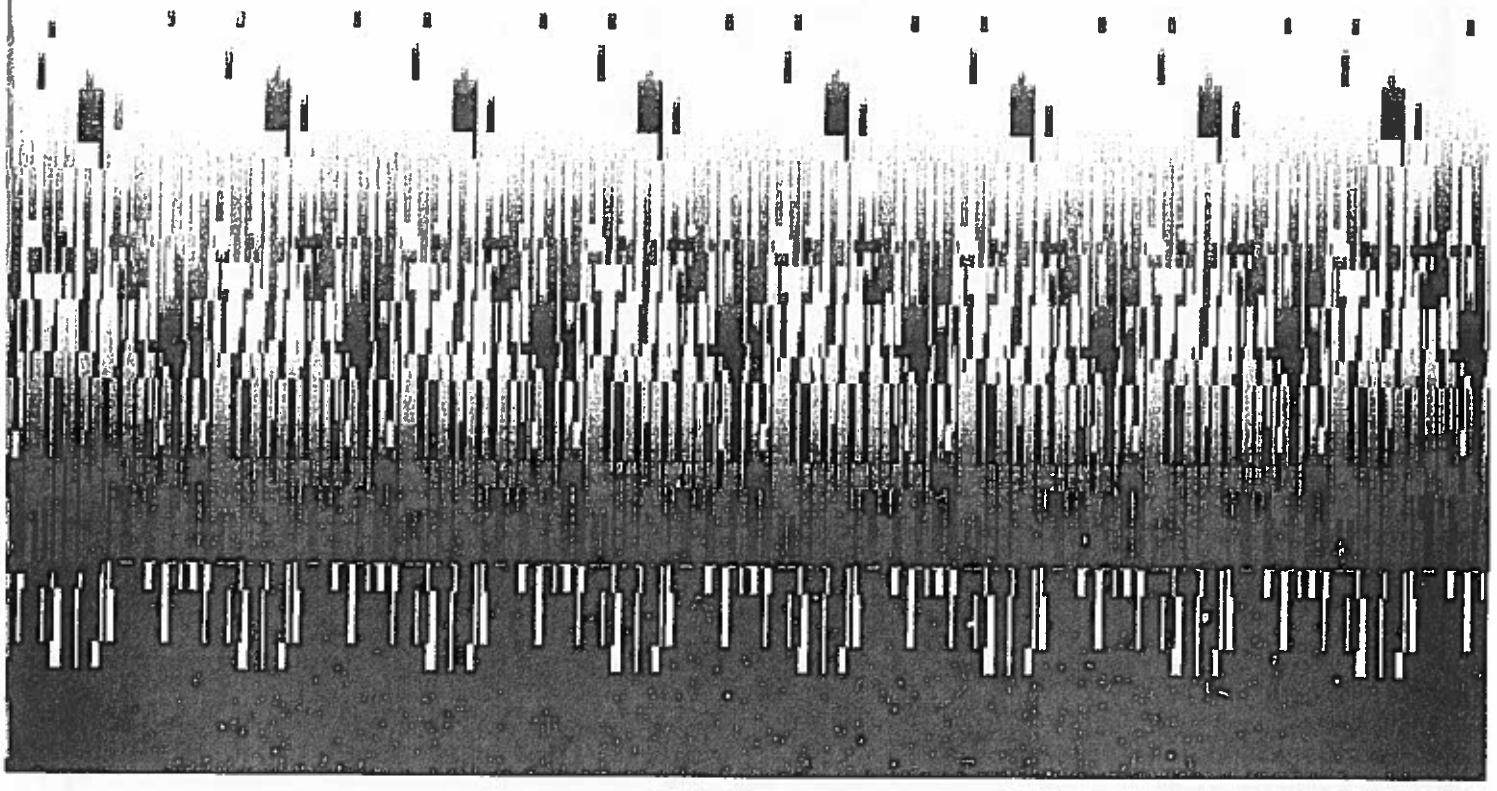
GCC

GUAM COMMUNITY COLLEGE

Kulehon Kumunid i Gu han
Accredited by the
Western Association of
Schools and Colleges

HAZARDOUS MATERIAL/CHEMICAL AND WASTE MANAGEMENT PROGRAM



GUAM COMMUNITY COLLEGE

HAZARDOUS MATERIAL/CHEMICAL
AND
WASTE MANAGEMENT PROGRAM

SUBMITTED BY:

PEDRO D. PAULINO
Safety Administrator

Date: APRIL 5, 1995

[ ] Review
[x] Concur
[ ] Non-Concur

CHIEF OFFICER, Department of Occupational
Safety and Health

Date:

Forwarded and Approved:

JOHN C. CAMACHO
Vice President
Administrative Services Division

Date: 5-1-95

JOHN T. CRUZ
President

Date: 5-1-95

TABLE OF CONTENTS

SECTION 1 - INTRODUCTION

A. PURPOSE:

To establish and implement a hazardous material and waste management program (HM&WM) for the Guam Community College. To prescribe policies and procedures for the procurement, handling, use, storage, labeling, transporting, and disposal of hazardous materials/chemicals and related wastes. To assign specific responsibilities for the management and control of such materials and wastes. To insure that there is minimal risk to students, employees, and environment at Guam Community College.

B. OBJECTIVES:

1. To develop a system that addresses the identification of hazardous waste and chemicals from the point of entry into the facility to the point of final disposal.

2. To develop a system for managing hazardous materials and wastes, safely after identification.

3. To insure that the policies and procedures related to the various hazardous materials/chemicals are reviewed, revised and approved at least annually by the appropriate committees.

4. To enhance adequate supervision of GCC personnel in hazardous materials and chemica controls.

5. To enhance coordination and communication among departments, services and committees o the facility.

C. SCOPE:

This written program unless otherwise specified, applies to all GCC activities involved in the planning procurement, storage, distribution, requisition, use, storage, transportation or other disposition o Hazardous Materials/Chemicals (HM/C) to include disposal of generated Hazardous Wastes (HW).

D. BACKGROUND:

1. Hazardous Material/Chemical & Waste Management (HM/C&WM) is a life-cycle material and equipment involving all elements of GCC. The program requires HM/C&WM actions fro concept formulation of a new or modified GCC system through acquisition, productio operation and the final disposition phases. It involves management at all levels and action o all concern with each phase acquisition of systems components, material or parts.

2. Statutory codes and regulatory requirements include the Resource Conservation and Recover Act (RCRA), 40 Code of Federal Regulation (40 CFR), Occupational Safety and Hea. Administration (OSHA), Environmental Protection Agency (EPA), Hazard Communicatic Standard (HAZCOM). These requirements generate a need for more rigorous GCC action. Suc Actions involve those to plan, control, and manage HM/C inventories and sources of HW.

3. OSHA established requirements for training and informing workers of the hazards from th HM/C in their workplaces (HAZCOM). The ensure worker safety, this manual implemen those same requirement at GCC.

SECTION 2 - POLICY

A. REQUIREMENTS:

Consistent with the requirements of this manual, every department of the GCC shall protect the safe and health of students and employees, including community environment from unnecessary exposu to HM/C. To achieve this, every department head and work unit supervisor involve with the handlin use or storage of HM/C shall:

1. Comply, to the fullest extent, with the requirements of this Program.

2. Develop an inventory system that will identify and account for all HM/C handled, used, stor within each department workplace.

3. Establish and implement a control system for hazardous or hazardous substitutes and to preclu staff personnel and vendors from bringing into GCC work area(s) any HM/C without pri approval by the President, or the Vice President, of ASD.

4. Procure HM/C in strict accordance with state and federal regulations.

5. HM/C considerations, especially those relating to environment, safety, and health, shall be included int he earliest states of the planning and acquisition phases. The system shall:

   a. Identify HM/C needed to meet mission requirements and where feasible, substitute l hazardous material.

   b. Assessments shall be geared to control and reduce HM/C requirements, and minim costs with HW generation and disposal.

6. GCC shall comply with all federal, state and local standards, directives, instructions and regulations related to HM/C&WM.

7. GCC shall control and reduce the amount of HM/C used and HW generated by upfront HM/C control in acquisition, procurement, supply and utilization through the development of:

   a. Proper identification of HM/C and to limit quantities of HM/C acquired and stored.

   b. Activity "authorized HM/C use lists" and controls over HM/C quantities used to reduce HW generation.

B. EMPLOYEE RIGHT TO KNOW: (See Figure 1)

1. **Hazard Communication Standard** - Employers have the responsibility to inform employees of the hazards of substances they handle and/or use daily, and that training and educating employees in such hazards is mandatory, even before the employees are allowed to handle or use the hazardous substances.

2. **Employee Right to Know** - The Hazard Communication Standards mandates that employees have the right to know about the HM/C they are made to handle or use within their workplaces.

3. **Specific Responsibilities:**

   a. **Manufacturers of Hazardous Materials/Chemicals** - Required to disseminate a comprehensive and accurate information regarding the hazards and hazardous ingredients of materials/chemicals produced. Such information shall be made available to consumers/users through the use of labels and warnings as well through a comprehensive Material Safety Data Sheet (MSDS) system of information concerning the hazards of the materials chemicals.

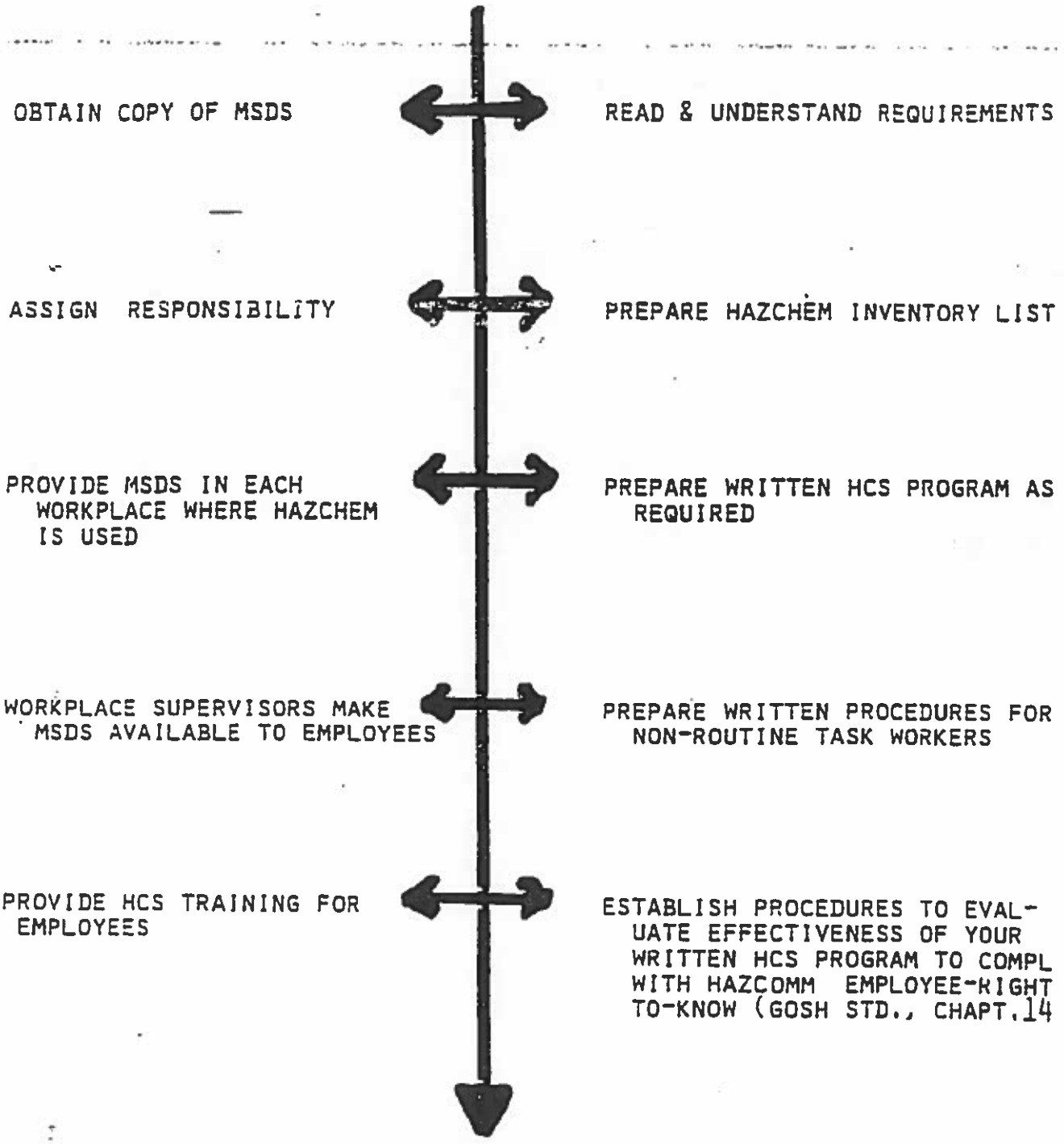
   b. **GCC/Users** - Mandated under the Right to Know to inform and ensure that all employees are made thoroughly aware of the present or use of the HM/C in their place of work.

   c. **Vice President, ASD**

      1. Maintain policy and direct the coordination, monitoring, evaluation, and preparation of appropriate reports concerning GCC HM/C&WM Program.

      2. Comply with applicable HM/C&WM requirements of U.S. OSHA, EPA, and local government to the extent feasible.

HAZARD COMMUNICATION
EMPLOYEE RIGHT-TO-KNOW



CHECKLIST FOR COMPLIANCE

Figure 1

the HM/C&WM Program.

4. Delegation of overall coordination of the HM/C&WM Program to the Safety Administrator who reports directly to the GCC Safety Committee on matters concerning HM/C&WM Program.

d. **GCC Safety Committee:**

1. Review evaluate and determine the GCC's effectiveness in and compliance with meeting the requirements of this standard and to report is findings and recommendations to the GCC President for control action.

2. Establish priorities for the resolution of identified problems with HM/C. requiring upper level management decision or additional funding needs for abatement measures.

3. Review all policies and procedures concerning HM/C&WM Program annually.

e. **Supply Administrator:**

1. Assist the GCC Safety Committee and the Vice President, ASD in carrying out the HM/C&WM Program.

2. Serve as the overall program manager for the supply aspects of the HM/C&WM Program. These include HM/C requirements, material information systems, monitor the marking and labeling of containers received, distributed to departments and storage compatibility information.

3. Develop and maintain a system for acquiring only authorized HM/C.

4. Develop and establish a cost effective and practical means to be sure that all departments have timely receipt and access to MSDS information.

5. Coordinate efforts to assure that MSDS's are available from vendors providing HM/C.

6. Periodically review shelf-life policies and procedures with findings and recommendations annually.

7. Provide guidance on the acquisition, inspection, and receipt of HM/C from supply sources. Include remedial actions to take for HM/C that does not conform with federal, state and local compliances.

f. **Safety Administrator:**

1. Review GCC HM/C&WM policies and procedures with findings and recommendations annually.

2. Develop and update design criteria and specifications for temporary and long term HM/C&WM storage facilities.

3. Insure that hazard analyses are performed for all construction programs related to the HM/C&WM use, handling, storage and disposal.

4. Assist in the preparation and submittal of pollution/hazard abatement projects in GCC to the HM/C&WM.

5. File maintenance of all documentation pertaining to HM/C&WM.

6. Coordination with GCC Safety Committee on findings and recommendations related to the GCC HM/C&WM Program.

7. Identify for permits for HM/C&WM facilities.

8. Establish instructions and procedures for HW cleanup operations and emergency response as required by 29 CFR 1910.120 and 40 CFR 264 and 265.

9. Coordinate and monitor the GCC HM/C&WM Program.

10. Provide workplace hazard evaluations and health risk/assessments specific to HM/C in GCC workplaces and operations.

11. Develop, maintain, and distribute to all GCC departments technical information on health risk/assessments related to HM/C&WM.

12. Provide reviews of performance specifications and guidance on permissible exposure limits for the control of HM/C in all workplaces.

13. Coordinate and monitor the disposing of HW for diluting, handling and transportation for disposal.

14. Assist in the training of all GCC employees who handle, use, store, and any other disposition of HM/C through the usages of video tape, oral, written instructions, technical information and any other training pertinent to the employees work responsibilities.

15. Provide guidance to the Department HM/C&WM Coordinator in the proper procurement, safe handling and use of HM/C.

16. Ensure that all levels of management at GCC is concerned with the procurement, use, handling, transport, or disposal of HM/C.

17. Ensure that all supervisors comply with the training requirements.

18. Establish and maintain a complete file of MSDS for every HM/C used, procured, or stored in GCC.

19. Act as the GCC HM/C Control Officer. A copy of this appointment must be filed in employee personnel file, safety office and Government of Guam Division of Occupational Safety and Health (GOSHA).

20. Review all request for purchase orders relevant to HM/C prior to processing.

h. **Department Heads:**

1. All department heads involved with the procurement, and control of HM/C and for the production of hazardous wasted gases and vapors are held directly responsible and accountable for the safe use, management, control and disposal of such materials and wastes.

2. Shall appoint in writing the workplace supervisors in which HM/C are used as the Department HM/C Control Coordinator.

3. Ensure that all subordinates are properly trained in their specific work descriptions in relation to HM/C&WM.

4. Monitor and ensure that all operations within respect to HM/C&Wm meets all federal, state and local compliances as stated in this manual.

5. Assist the Procurement and Supply Administrator in developing and maintaining a centralized list of authorized HM/C of the approved, less hazardous substitute.

6. Coordinate with the Supply Administrator to ensure MSDS's are obtained and incorporated into the HM/C Information System HM/CIS for each HM/C in the college wide authorized HM/C use list. Also validate or modify HM/C units of issue to conform with HM/C&WM policies.

7. Establish and maintain programs to reduce/minimize entry of HM/C into the supply system. The following conditions shall be met before HM/C'S are introduced into the supply system:

a. A valid requirement exists.

b. A complete MSDS is locally available.

c. A review confirms authorized non-hazardous or less hazardous are not suitable.

d. The MSDS for the required material is entered into the HM/CIS.

e. Ensure that each department acquires and uses only HM/C on their authorized use list.

i. **Department Hazardous Material Control Coordinator:**

1. Responsible to the Safety Administrator for the proper management, control and disposal of all HM/C used within the department.

2. Shall be the point of contact on all matters pertaining to the HM/C used in the Department workplace.

3. Ensure that all employees meet compliances through training and regulations pertaining to HM/C&WM program.

4. Knowledge and awareness of work to be performed.

5. Safeguard personnel assigned per OSHA.

6. Reporting of hazards, procedures for reporting and investigating allegations of reprisals.

7. HAZCO, OSHA, AND RCRA training for employees.

8. Verification of material for authorized purchase and/or use.

9. Adhere to all federal, state and local regulations related to HM/C.

10. To follow all policies and procedures as outlined in the GCC HM/C&WM.

11. To follow all policies and procedures as outlined in the GCC OSH and Fire Prevention Program, and the Emergency Operations Plan.

4. **Training:**

a. Every employee of GCC who handles or uses HM/C, and all other personnel required to perform non-routine work tasks or operation in any area in which a HM/C is used or stored shall be trained and instructed in accordance with the requirements of this manual.

SECTION 3 - HAZARDOUS MATERIAL INVENTORY LIST (HMIL)

A. GENERAL REQUIREMENTS:

This standard operating procedure sets forth the minimum practices and procedures that must be established and implemented for accountability of hazardous materials, chemicals, and substances procured, used, processed, or stored within the confines of GCC workplaces.

B. HAZARDOUS MATERIAL INVENTORY LIST (HMIL): (See Figure 2)

1. The Safety Administrator shall require the development of a master HMIL that must identify and account for all HM/C used, processed, handled or stored within GCC. The HMIL will be kept current:

   a. As a new hazardous material, chemical, or substance is introduced into GCC.

   b. Whenever a listed material is removed or deleted from use.

   c. Whenever a listed material is transferred to another department or agency.

2. Every Department Head or Unit Supervisor involved with HM/C shall develop and maintain a Department HMIL that will identify and account for only those chemical/substances used, processed or stored within his/her assigned work area. The hazard information listed on this HMIL will be taken form the applicable MSDS's. A copy of the Department HMIL GOSH-700 will be posted conspicuously in the workplace chemicals/substances are used. A copy must be forwarded to the Safety Office. The Supervisor is held responsible for keeping the Department HMIL updated and current. (See Figure 3)

   a. As a new hazardous material or chemical is introduced into the workplace.

GOSH-70x form
(New 11/88)

ANNUAL INVENTORY LIST
HAZARDOUS MATERIAL AND CHEMICAL

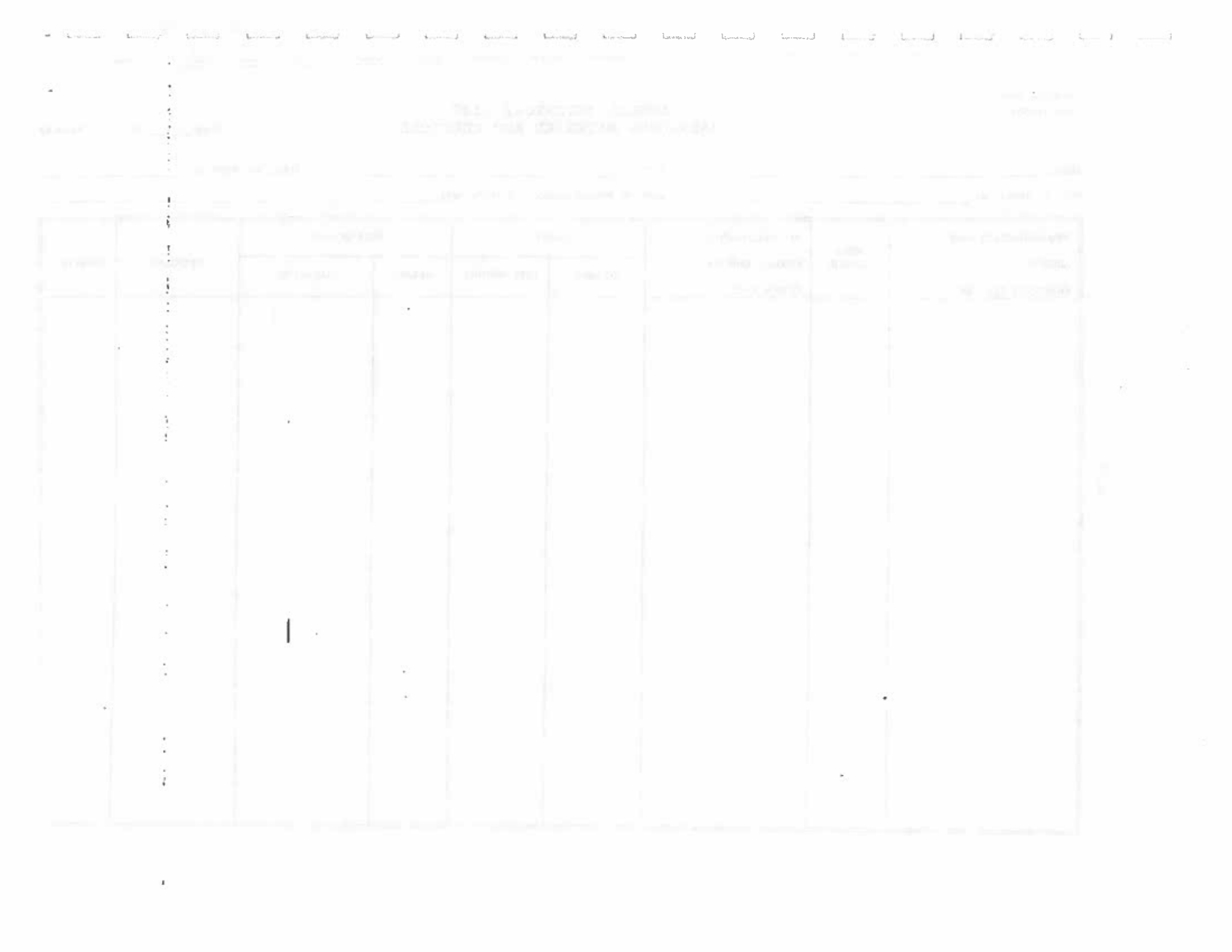
Page _____ of _____ Page(s)

AGENCY: _____ LOCATION: _____ BLDG. NO./ROOM NO.: _____

DATE OF INVENTORY: _____ NAME OF PERSON CONDUCTING INVENTORY: _____

MANUFACTURER'S NAME ADDRESS EMERGENCY TEL. NO.	ORDER NUMBER	MATERIAL/CHEMICAL PRODUCT NAME OR COMMON NAME	QUANTITY		MSDS ON-HAND		DISPOSAL	QUANTITY
			ON-HAND	USED MONTHLY	YES/NO	LOCATION		

Figure 2



GOSH 700A FORM
(NEW 11/88)

ANNUAL INVENTORY LIST

(WORKPLACE HAZARDOUS/TOXIC MATERIALS AND CHEMICALS)

DATE OF INVENTORY: _____ WORKPLACE LOCATION: _____

POINT OF CONTACT: _____ LOCATION OF MSDS: _____

WORKPLACE SUPERVISOR/TEL. NO.

GENERAL INFORMATION

Hazardous substance are not limited to the laboratory. familiar materials such as cleaning agents, photocopier supplies and photographic chemicals may also contain hazardous substances. Whenever there is doubt about the hazards associated with any material, contact your supervisor immediately.

NONROUTINE TASK OR OPERATION

The performance of nonroutine or unfamiliar task or operation in any workplace in which hazardous materials/chemicals are used, processed, or stored without prior permission from the work unit supervisor is prohibited.

GENERAL REQUIREMENT

Federal hazard communication standards require manufacturers to furnish materials safety data sheets (msds's) for their products containing hazardous ingredients or mixture. The msds lists toxicity information, flammability and explosion hazard data, handling precautions and procedures to use in case of spills or contact.

HAZARDOUS MATERIAL/CHEMICAL LIST

The following hazardous materials/chemicals are used, processed, or stored in this work place. All employees must become thoroughly familiar with specific hazards and precautions and other data contained in their specific msds documents before handling or using any of the listed substances.

COMMON NAME OF MATERIAL	HAZARD(S)	FIRST AID	SPILL PROCEDURES

WHITE - Work Unit Supervisor. GREEN - Posted Conspicuously in Workplace Area Where Chemicals are used, Handled, or Stored. YELLOW - Department or Division Head Concerned

FIGURE 3

b. Whenever a listed material is removed or deleted from use.

c. Whenever a listed material is transferred to another department within GCC or to another workplace in another agency of the Government of Guam.

3. A list of hazardous chemicals is a requirement of the HAZCOM Standard. Each HM/C on the inventory should be assigned a unique identifier the relates it to a MSDS with the same identifier, thus aiding, filing, and correct MSDS use by non-technical and emergency responses personnel. The inventory list should be used to:

a. Identify HM/C use by location so that appropriate action is taken to ensure proper controls are in place for storage, use, and OSHA HAZCOM training; Spill Contingency Plans (SCP); and notification of Emergency Response Committees (ERC) in event of a release of a reportable quantity of material.

b. Identify HM/C authorized for domestic and local acquisition and use. Local workcenters or codes should maintain a current inventory of items authorized for local use and keep it current, for MSDS identifier, for disposal procedures, etc.

c. Form the basis for eliminating or disposing of unneeded materials safely and properly.

SECTION 4 - PROCUREMENT OF HAZARDOUS MATERIALS/CHEMICALS

A. GENERAL INFORMATION:

Procurement is an important element of an effective HM/C&WM Program. It encompasses the initial creation of a HM/C that must be managed from "Cradle to Grave".

B. REQUESTING DEPARTMENT:

1. Responsibilities to include:

a. The procurement of HM/C for use only within their particular work area.

b. Determining if the material to be acquired is hazardous or toxic.

c. Determining if a less hazardous or non-hazardous material may be substituted.

C. PROCEDURES FOR PROCUREMENT OF HM/C: (See Figure 4)

1. All HM/C shall be procured or acquired in writing, using GCC Material/Service Requisition Form. If no MSDS is presently on file the words "HAZARDOUS: MSDS REQUESTED", or, if an MSDS is already on file the words "HAZARDOUS: MSDS NOT REQUIRED" shall be entered as a line item and typed in capital letters on the requisition form.

2. Any purchase order prepared for the acquisition of HM/C SHALL NOT be used for the procurement of non-hazardous material(s).

3. The requesting department shall forward the requisition to the GCC Safety Office for review of the need of the need of the material, to verify if a current MSDS is already on hand or not, and if a bonafied effort has been made by the requesting official to find a less hazardous or non-hazardous substitute. This information shall be annotated in the "Remarks" block of the requisition before forwarding to the Safety Administrator.

4. Upon satisfaction that the HM/C meets federal and local requirements, necessary and needed by the requesting department, the Safety Administrator may approve in writing (**Figure 5**) the requisition and forward to Materials Management for processing.

5. The Materials Management Services shall review each requisition received for the procurement of HM/C and determine if the Safety Administrator has signed off on the requisition. If yes, forward requisition to Materials Management for process.

D. GENERAL PROCEDURES: (See Figures 6 through 8)

When the hazardous or extremely hazardous materials/chemicals are received at GCC Supply Management shall:

1. Check to ensure that a MSDS is received along with the HM/C. If yes, the GCC Safety Administrator will be notified: and:

   a. Annotate the name of the requesting department on the upper right hand corner of the MSDS to expedite identification of the requesting official. HM/C will not be delivered to GCC without the approval of the Safety Administrator.

   b. Deliver the MSDS to the Safety Administrator for review and evaluation.

   c. When directed by the Safety Administrator, the Supply Administrator will pick up HM/C from GSA/Vendor using only transport vehicle properly certified to haul HM/CA on the public roads of Guam.

Material/Service Requisition

TO: Materials Management

FROM: DEPT.: DATE:

Suggested Vendor

Name:

Address:

SUBJECT: Please provide the following materials/services and charge to:

Budget Account Code: Date Required:

ITEM NO.	Description of Material(s)/Service(s) (Please provide complete description)	QTY	UNIT	UNIT PRICE	TOTAL
1.	#64197 Formaldehydl, Formalin 30%	5	gal.	$25.00	$ 125.00
	HAZARDOUS: MSDS REQUESTED				
2.	#67663 Chloroform	3	gal.	15.00	45.00
	HAZARDOUS: MSDS REQUESTED				
3.	#71432 Chlorine	50	gal.	20.00	1,000.00
	HAZARDOUS: MSDS REQUESTED				
	SAMPLE ONLY				
	REMARKS: Please include with each HazMat shipped. A bonafide effort has been made to substitute a less hazardous or non-hazardous material as required by GOSH Standards, Chapter 14, Appn. 14-B-2, Paragraph 3.C.				

Program need/justification:

REQUESTED BY: REVIEWED BY: APPROVED BY:

FOR MATERIALS MANAGEMENT USE ONLY

NEGOTIATED BY: DATE: APPROVED BY:

REMARKS:

(FIGURE 4)

Environmental Safety Office
Ext. 270

Date: _____

MEMORANDUM

TO: Vice President, Financial Affairs

FROM: Safety Administrator

SUBJECT: Review of Purchase Orders

The attached document was reviewed by the undersigned and found that:

[ ] Item(s) is/are required and approved for further processing.
[ ] Item(s) is are not required and therefore disapproved.
[ ] Item(s) is are required, but disapproved for the following reasons:
REMARKS: _____

_____

_____

_____

Questions pertaining to this matter can be directed to this office at extension 270.

Again, thank you for putting "SAFETY" up front.

PEDRO D. PAULINO

Attachment(s)

c: [ ] Vice President, ASD
[ ] Vice President, Academic Affairs
[ ] Vice President, Business & Finance
[ ] Vice President, Special Projects
[ ] Dean, SBSST
[ ] Dean, SSD
[ ] Dean STHS

(FIGURE 5)

MATERIAL SAFETY DATA SHEET

0020

SECTION 1: PRODUCT IDENTIFICATION AND USE

MANUFACTURER'S NAME:
American Safety Technologies Inc.

TRADE NAME: MS-2000: HARDENER COMPONENT

ADDRESS:
565 Eagle Rock Avenue

CHEMICAL FAMILY:
Amine Compound

CITY, STATE, ZIP:
Roseland, New Jersey 07068

MANUFACTURER'S DUNNS NUMBER:
002-171-213

SAMPLE

EMERGENCY TELEPHONE NUMBER: (201) 403-2600

TRANSPORTATION EMERGENCY NUMBER (CHEMTREC): 1-800-424-9300

HAZARDOUS MATERIALS DESCRIPTION AND PROPER SHIPPING NAME (49 CFR 172.101):
Paint : UN1263 : Combustible

SECTION 2: HAZARDOUS INGREDIENTS

INGREDIENTS/CAS NUMBER	OSHA	ACGIH	OTHER
Polyamide Resin CAS #: 68410-23-1	N.E.	N.E.	N.E.
Butyl Alcohol CAS #: 071-36-3	50ppm	50ppm	N.E.
Tetraethylenepentamine CAS #: 112-57-2	N.E.	N.E.	N.E.

* - May Contain

SECTION 313 SUPPLIER INFORMATION:
THIS PRODUCT CONTAINS THE FOLLOWING TOXIC CHEMICALS SUBJECT TO THE REPORTING REQUIREMENT
SECTION 313 OF THE EMERGENCY PLANNING AND COMMUNITY RIGHT-TO-KNOW ACT OF 1986 AND OF 40 CFR 372
INFORMATION MUST BE INCLUDED ON THE MSDS COPIED AND DISTRIBUTED FOR THIS MATERIAL)

CHEMICAL NAME	CAS NUMBER	WEIGHT %
Butyl Alcohol	071-36-3	20.0
Tetraethylenepentamine	112-57-2	4.0

SECTION 3: PHYSICAL DATA

BOILING POINT: N.E.
VAPOR PRESSURE: N.E.
VAPOR DENSITY: N.E.
(AIR = 1)

SPECIFIC GRAVITY: 0.96
MELTING POINT: N.E.
EVAPORATION RATE: N.E.
(Butyl Acetate = 1)

SOLUBILITY IN WATER: Partially Soluble.
APPEARANCE AND ODOR: Amber Liquid, Solvent Odor

(NA = Not Applicable) (NE = Not Established)

FIGURE 6

SECTION 4: FIRE AND EXPLOSION HAZARD

FLASH POINT: >100•F/38•C PMCC

FLAMMABLE LIMITS: LEL N.E. UEL N.E.

EXTINGUISHING MEDIA:
Carbon Dioxide, Dry Chemical, Chemical Foam or Water.

SPECIAL FIRE FIGHTING PROCEDURES:
Eliminate all ignition sources. Wear complete personal protective equipment including self-contained breathing apparatus where potential for exposure to vapors or products of combustion exists.

UNUSUAL FIRE AND EXPLOSIVE HAZARDS:
Closed containers may rupture (due to build up of pressure) when exposed to extreme heat. Decomposition and combustion products may be toxic.

SECTION 5: HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY: Inhalation/Skin/Ingestion

HEALTH HAZARDS (ACUTE AND CHRONIC)

Eyes: Causes severe irritation or burns. May cause permanent visual impairment.

Skin: Causes severe irritation or burns. May be absorbed through skin in harmful amounts.

Inhalation: May cause upper respiratory tract irritation.

Ingestion: May cause burns of mouth and throat. Contains material that may be slightly toxic.

CONDITIONS AGGRAVATED BY EXPOSURE: Allergy, eczema and other skin conditions.

CARCINOGENIC DATA: Not on NTP, IARC or OSHA lists.

OVEREXPOSURE EFFECTS: Irritation, sensitization and dermatitis.

EMERGENCY AND FIRST AID PROCEDURES:

Eyes: Flush with large amounts of water for at least 15 minutes. Get medical attention.

Skin: Remove contaminated clothing. Wash contact area with mild soap and water.

Inhalation: Remove to fresh air. If symptoms persist consult a physician.

Ingestion: Do not induce vomiting. If conscious, give large quantities of water to dilute. Get medical attention.

(NA = Not Applicable) (NE = Not Established)

FIGURE 6 (Con't)

SECTION 6: REACTIVITY DATA

STABILITY:
Stable.

CONDITIONS TO AVOID:
Excessive Heat.

INCOMPATIBILITY (Materials to Avoid):
Strong Oxidizing Agents.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon Monoxide, Carbon Dioxide and Oxides of Nitrogen.

HAZARDOUS POLYMERIZATION:
Will not occur.

SECTION 7: SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:
Remove all sources of ignition. Dike Spill. Absorb with inert material and collect for disposal. Flush contaminated area with water; prevent washings from entering waterways.

WASTE DISPOSAL METHODS:
Dispose of in accordance with Federal, State and Local Regulations.

SECTION 8: SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:
NIOSH/MSHA approved respirator with organic vapor cartridge if required.

VENTILATION:
Explosion-proof mechanical ventilation and local exhaust recommended. Mechanical exhaust is not recommended as the sol means of controlling employee exposure.

PROTECTIVE GLOVES:
Impervious gloves.

EYE PROTECTION:
Chemical splash-proof goggles.

OTHER PROTECTIVE EQUIPMENT:
In operations where contact may occur coveralls, apron and impervious foot covering are recommended.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:
Avoid all personal contact.
Do not exceed 110•F/43•C in storage area.
Ground and bond metal containers for liquid transfer to avoid static sparks.

SECTION 9: SPECIAL/OTHER INSTRUCTIONS

* A safety shower and eye wash facility should be available to employees.
* Immediately remove and thoroughly launder contaminated clothing before reuse.

(NA = Not Applicable) (NE = Not Established)

FIGURE 6 (Con't)

PREPARED BY: F. Losloff

DATE: 5/8/91

THE USER OF THIS PRODUCT IS RESPONSIBLE FOR MAKING ITS OWN EVALUATION AND TESTS REGARDING THE CAPABILITIES, SAFETY, UTILITY, SUITABILITY AND APPLICATION OF THE PRODUCT, AND ASSUMES ALL RISKS AND LIABILITIES RESULTING FROM THE USE OR APPLICATION OF THE PRODUCT, WHETHER USED ALONE OR WITH OTHER PRODUCTS. AMERICAN SAFETY TECHNOLOGIES INC. (HEREIN REFERENCED TO AS THE COMPANY) WARRANTS ONLY THAT THE PRODUCT CONFORMS TO THE SPECIFICATIONS CONTAINED IN THE PRODUCT TECHNICAL DATA SHEETS PUBLISHED BY THE COMPANY, A COPY OF WHICH IS AVAILABLE TO THE USER. IF THE PRODUCT FAILS TO CONFORM TO THIS WARRANTY, THE USER SHALL RETURN THE PRODUCT WITHIN 10 DAYS OF THE PURCHASE DATE WITH A NOTE SPECIFYING THE DEFECT AND THE COMPANY WILL EITHER REPLACE THE PRODUCT OR AT ITS OWN OPTION, RETURN THE PURCHASE PRICE. EXCEPT AS EXPRESSLY PROVIDED IN THIS PARAGRAPH, THE COMPANY MAKES NO REPRESENTATIONS OR WARRANTIES OF ANY KIND, NATURE OR DESCRIPTION, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE, AND HEREBY DISCLAIMS THE SAME. IN NO EVENT SHALL THE COMPANY BE LIABLE TO THE USER OF THIS PRODUCT, WHETHER IN CONTRACT OR IN TORT OR UNDER ANY OTHER LEGAL THEORY (INCLUDING, WITHOUT LIMITATION, NEGLIGENCE), FOR DAMAGES WHICH EXCEED THE PURCHASE PRICE OF THE PRODUCT, OR FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL OR SIMILAR DAMAGES, ARISING OUT OF SALE, USE OR APPLICATION OF THE PRODUCT, OR FOR ANY CLAIM MADE AGAINST THE USER BY ANY OTHER PARTY, EVEN IF AMERICAN SAFETY TECHNOLOGIES INC. HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH CLAIM.

FIGURE 6 (Con't)

MSDS Terms and Acronyms

Acute: Effects that generally occur rapidly as a result of short-term exposure, and are of short duration.

ACGIH: An acronym for the American Conference of Governmental Industrial Hygienists which is an organization of professional personnel in government agencies or educational institutions engaged in occupational safety and health programs. ACGIH develops and publishes recommended occupational exposure limits for chemical substances and physical agents.

Asphyxiant: A vapor or gas which can cause unconsciousness or death by suffocation (lack of oxygen).

ASTM: An acronym for the American Society for Testing and Materials which is a voluntary membership organization which publishes voluntary concensus standards for materials, products, systems and services.

CHEMTREC: An acronym for the Chemical Transportation Emergency Center which is a national center established by the Chemical Manufacturers Association to relay pertinent emergency information concerning specific chemicals on request. CHEMTREC's 24-hour toll free telephone number which can be used during chemical transportation emergencies is (800) 424-9300.

Boiling Point: The temperature at which a liquid changes to the vapor state.

CAS: Refers to the Chemical Abstract Service which is an organization which indexes information published in "Chemical Abstracts". CAS numbers identify specific chemicals.

Chronic: Effects that generally occur as a result of long-term exposure and are of long duration.

Decomposition: Chemical breakdown into parts, elements or simpler compounds that may be brought about by heat, electrolysis, decay, or reaction with other chemicals.

Dermatitis: Inflammation of the skin.

Evaporation Rate: A measure of the time required for a given amount of a substance to evaporate, compared with the time required for an equal amount of ether or butyl acetate to evaporate.

Explosive Limits: See flammable limits.

Figure 7

lower explosive limit and UEL means upper explosive limit.

Flash Point: the minimum temperature at which a liquid gives off a vapor sufficient concentration to ignite when tested.

General Exhaust: A system for exhausting contaminants from a general work area.

Ignition Temperature: Minimum temperature required to initiate or cause self-sustained combustion independently of the heating or heated element.

Inhibitor: A chemical which is added to another substance to prevent unwanted chemical changes from occurring.

Inorganic: Substances that do not contain hydrocarbons or their derivatives.

LC_{50} (lethal concentration): The concentration of a chemical in air that is expected to kill 50 percent of the test animals when exposed by inhalation. The LC_{50} is usually expressed as parts of material per million parts of air (ppm).

LD_{50} (lethal dose): The single dose of a chemical that is expected to kill 50 percent of a group the test animals. The dose is usually measured in milligrams of the chemical per kilogram of test animal body weight.

Local Exhaust: A system for capturing and exhausting contaminants from the air at the point where the contaminants are produced.

Melting Point: The temperature at which a solid substance changes to a liquid state.

mg/m^3: A unit used for measuring concentrations of dusts, gases or mists in air expressed as milligrams of the chemical per cubic meter of air.

Mutagen: A chemical capable of causing mutations or alterations of the genetic material in living cells. These substances are usually suspected carcinogens.

NFPA: Acronym for the National Fire Protection Agency, a voluntary membership organization to promote and improve fire protection and prevention and to establish safeguards against loss of life or property by fire. NFPA publishes recommended fire codes including a code for the NFPA hazard ranking diamond described in Chapter 5.

NIOSH: Acronym for the National Institute of Occupational Safety and Health, an organization which conducts health and safety research and advises OSHA.

d. Prior to picking up HM/C, check to ensure all container labels are not removed, defaced, or obliterated in any manner. If labels are not clearly identifiable, do not pick up material(s) until GSA/vendor properly identified and labels the material after checking with the manufacturer or distributor.

e. If all criteria's above have been satisfied, transport the HM/C to Procurement & Supply to be processed immediate for delivery to requesting department. Obtain signature receipt on a copy of the purchase order and furnish a purchase order copy to Safety Office.

E. REQUESTING DEPARTMENTAL PROCEDURES:

1. When the MSDS is received from the Safety Office, the using department will file the MSDS in the Department's MSDS files. NOTE: The department shall maintain a complete file of MSDS's applicable only to the HM/C used within that specific department.

2. When HM/C are received , inspect the materials for proper packaging and container labeling and assure no container is leaking.

3. If the HM/C packaging or individual container labels are removed, defaced or obliterated, DO NOT ACCEPT THE MATERIAL. Call the Safety Administrator immediately to inspect the materials.

4. If the HM/C is a new substance to the department, the department supervisor shall inform all employees assigned to the work area on:

a. The new hazardous material or substance.

b. Its inherent hazard(s) and health effects.

c. Proper handling, use, storage and disposal.

d. Minimum personal protection equipment and/or respirator protection to use and its limitations.

e. Spill clean up procedures.

f. Conduct in-service review of the applicable MSDS with all employees who will be involved with the use of and who will be working in the work area where the new HM/C is to be handled, used, or stored. Such in-service shall be accomplished, prior to the handling or use of the material of substance.

g. Add the new material to the using department's HMIL.

h. The Safety Administrator shall check the GCC Master MSDS file to verify if a current MSDS is on file for HM/C acquisition.

SECTION 5 - HAZARD COMMUNICATION/HAZARDOUS MATERIAL TRAINING PROGRAM

A. GENERAL REQUIREMENTS: (See Figures 9 through 12)

Every GCC employee who handles or uses a HM/C or related substances and those required to perform non-routine work activities in an area where HM/C are present or used must be trained, instructed, or informed on:

1. The hazards of the material or chemicals.
2. Health effects.
3. Personal protective equipment and respiratory protection requirements.
4. Emergency procedures as prescribed in the HM/C's applicable MSDS.
5. Safe handling, use, storage, labeling, transportation, and disposal procedures.
6. Methods and observations that may be used to detect the presence or release of hazardous chemicals and their by-products.
7. The type of operation or work tasks for the safe handling, use, or process of hazardous chemicals or substances.
8. Information contained in MSDS, how to use the MSDS and location of the MSDS file.
9. A review of the HMIL that identifies all HM/C present within their specific department and specified posted location of the workplace HMIL.

B. FREQUENCY OF TRAINING:

Hazard communications/hazardous material training shall be given as follows:

GUAM COMMUNITY COLLEGE

HAZARDOUS MATERIAL SAFETY INSTRUCTION

Following is a suggested outline for use by instructors/lecturers to take information from a Container Label or MSDS prior to giving an instruction on the safe use of the material.

THIS INSTRUCTION MUST BE GIVEN BEFORE STUDENTS ARE ALLOWED TO USE HAZARDOUS MATERIALS.

Instructor/Lecturer:

Department:

Course:

Chemical Name:

Fire Hazards:

Health Hazards:

Emergency/First Aid Procedures:

Spill/Leak Control Procedures:

Waste Disposal Methods:

Safe Handling/Use:

- Respiratory Protection:
- Ventilation:
- Protective Gloves:
- Eye Protection:
- Other Protective Equipment:
- Hygiene:
- Special Precautions:

(FIGURE 9)

GUAM COMMUNITY COLLEGE

FOR SIKA 31 HI MOD GEL, EPOXY GROUT

1. This epoxy is extremely caustic. The curing agent is very alkaline and is hazard to both come in contract with and to breath the vapors.
2. You must protect your eyes, skin, and lungs at all times.
3. Contact with eyes is extremely harmful and must be avoided.
4. This compound is also a sensitizer.

Hazard control includes when working with or around the product:

1. Wear vapor proof goggles.
2. Wear gloves.
3. Wear disposable coveralls.
4. Insure good ongoing ventilation in the work and mixing areas.
5. Use a chemical cartridge respirator.
6. Do not smoke or allow any others to smoke or do hot work in the work and mixing areas.
7. Wastes segregated and always allow waste rags to cure and/or dry before throwing in the trash.
8. Never throw empty containers away in the general trash. Dispose of in the manner your supervisor specifies.
9. When using respirators; always fit and seal check when first putting on, wear as the manufacturer prescribes and as you are instructed an always clean up at the close of the shift. Clean your mask after your general cleanup and after you are sure your hands are clean. Place in your own marked bag for use again on the next shift.

In case of emergencies:

1. Should you get material in the eyes, flush for 20 minutes with water and call for help.
2. Should you get in on your skin, wash off immediately with rags, soap, and water.
3. Remove immediately any contaminate personal clothing and wash yourself as noted above.
4. Report any spills to your supervisor immediately.

Should you have any questions at any time be sure to resolve them with your supervisor immediately before proceeding.

(FIGURE 10)

GUAM COMMUNITY COLLEGE

EXAMPLE

STUDENT ACKNOWLEDGEMENT OF INSTRUCTION AND TRAINING

This acknowledges my receipt of safety and health instruction in the area listed below:

__ SAFE AND HEALTHFUL WORK PRACTICES
FOR
SIKA 30 HI MOD GEL, EPOXY GROUT
SEE ATTACHED

I understand I am to read the written material provided and I am to comply with the requirements of both this material and instruction provided. Any violations of the safety requirements can prohibit me from participating in the lab/shop/classroom activities.

DATE	SIGNATURE	STUDENT NUMBER

NOTE:
1. Copy must be provided to the GCC Safety Office within (5) five working days after instruction and training.
2. Originals and copies will be kept on file for at least (2) two years.

(FIGURE 11)

GUAM COMMUNITY COLLEGE

HAZARD COMMUNICATION PROGRAM

EMPLOYEE TRAINING

DATE: _____

TRAINER: _____

The following names have attended HCC Hazard Communication training. The subjects included in the training are:

1. HCC's written Hazard Communication Program.
2. Applicable safety and health requirements mandated by Hawaii Division of Occupational Safety and Health (DOSH).
3. Definition of a "hazardous chemical, different groups of hazardous chemicals on campus, and their physical and health hazards in general.
4. How to use labels and other forms of warning.
5. Specific requirements regarding Material Safety Data Sheets. How to read on MSDS.
6. Employee protection: personal protective equipment, hazard detection, emergency procedures.

	NAME	DEPARTMENT
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

(FIGURE 12)

1. Upon an employee's initial assignment to the workplace in which a HM/C or substance is present or used.

2. A refresher training at least annually.

3. Whenever a new hazardous material, chemical, substance, or hazardous operation is introduced into the workplace.

C. RESPONSIBILITY FOR TRAINING:

1. Employee Training:

a. Responsibility for employee training in handling, use, precess, storage and disposal of HM/C rest with the workplace supervisor, or instructor dealing with HM/C. The training shall focus only on the specific HM/C used by the employee or student.

2. GCC Communication Standards Training:

a. Responsibilities for HCS training is charged to the Safety Administrator. The HCS training shall be scheduled and conducted in strict accordance with the requirements of OSHA and 40 CFR.

SECTION 6 - LABELS AND WARNINGS

A. GENERAL REQUIREMENTS: (See Figures 13 through 19)

1. Hazardous material management program HAZCOM (29 CFR 1210-1200) require labels/warnings to be placed on all HM/C packages and containers, including inplant used chemicals.

2. When labels and/or warnings are removed, defaced or obliterated from a HM/C package or container, the material shall be held in approved HM/C material storage until the container or package is properly identified and labeled.

3. Under no circumstances shall a HM/C or substance which has not been properly identified be used or removed from storage for use until properly labeled.

U.S. Department of Transportation

Research and Special Programs Administration

GUIDE FOR MARKINGS

USE OF GUIDE - This guide was prepared as an aid to shippers and carriers of hazardous materials. It does not contain or refer to all of the DOT requirements for marking. For specific details, refer to appropriate Sections of Title 49, Code of Federal Regulations (CFR), Parts 100-199.

MARKING - means placing on the outside of a shipping container..one or more of the following: the descriptive name, proper shipping name, hazard class, identification number, instructions, caution and/or weight. Marking also includes any required specification marks on the inside or outside shipping container.

DESCRIPTIVE INFORMATION

1. GENERAL REQUIREMENTS (49 CFR 172.300-172.304)

A. Unless Specifically Exempted, ALL containers of hazardous materials must be marked with:

(1) The proper shipping name(s).

(2) UN or NA Identification number(s) of the contents (49 CFR 172.101 or 172.102), Hazardous Materials Tables.

(3) If the inhalation toxicity of any material in a package falls within the criteria specified in 49 CFR 173.3a(b)(2), the package shall be marked "Inhalation Hazard" in association with the required label(s).

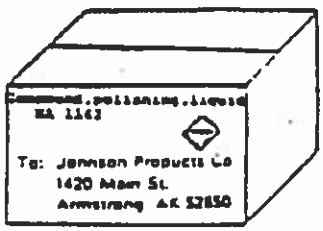
(4) The name and address of either the consignee or consignor.

B. All markings must be:

(1). Durable and in English, printed on or affixed to the surface of the package or on a label, tag or sign.

(2). On a background of a sharply contrasting color, and unobscured by labels or attachments.

(3). Placed away from other markings that could reduce effectiveness.



(FIGURE 13)

II. SPECIFIC REQUIREMENTS

A. HAZARDOUS SUBSTANCES (49 CFR 172.324)

(1). For a package of 110 gallons or less that contains a hazardous substance(s) that is not identified by the proper shipping name, the following must be entered, in parentheses, in association with the proper shipping name:

(a) name of the hazardous substance from Appendix to 49 CFR 172.101, or
(b) for waste streams, the waste stream number, or
(c) for waste exhibiting an EPA characteristic of ignitability, corrosivity, reactivity, or EP toxicity, the letters EPA followed by "ignitability," or "corrosivity ," or "reactivity," or "EP toxicity", or the corresponding "D" number, as appropriate.

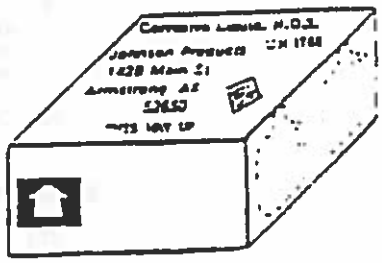
(2). Each package with a capacity of 110 gallons or less, that contains a hazardous substance, must display "RQ" in association with the proper shipping name.

B. LIQUID HAZARDOUS MATERIALS (49 CFR 172.312)

(1). Must be packed with the closures of the inside packagings in the upright position.

(2). Must have marking "THIS END UP" or "THIS SIDE UP" on the outside packaging.

(3). Must use arrow symbol on the outside packaging to show upright orientation of packages. (See ANSI Standard MH6.11968 "Pictorial Marking for Handling Goods"). Example: "THIS WAY UP."



(FIGURE 14)

C. CONTAINERS - OVERPACKS

(1). The outside container (overpack) must be marked in accordance with 49 CFR 173.25.

D. CONTAINERS - CYLINDERS

(1). All cylinders must be marked in accordance with 49 CFR 173.34 and 49 CFR 173.301 through 173.306.

(2). Reinspected and Retested Cylinders must be marked in accordance with 49 CFR 173.34(e)(6).

III. TANKS

A. PORTABLE TANKS (49 CFR 172.326 and 49 CFR 172.332) - Portable tanks must be marked with:

(1). Proper shipping name - in letters at least 2 inches high and on two opposite sides.

(2). Identification number - UN or NA (United Nation or North American) identification number on: TWO OPPOSITE SIDES near proper shipping name; on tanks of less than 1,000 gallons capacity; on EACH SIDE AND EACH END of tanks of more than 1000 gallon capacity.

(3). Name of owner or lessee.

(4). All inlets and outlets (except safety relief valves when carrying compressed gases (DOT-51).

(5). Whether or not the inlets and outlets communicate with vapor or liquid (49 CFR 178.245-6(b)).

(FIGURE 15)

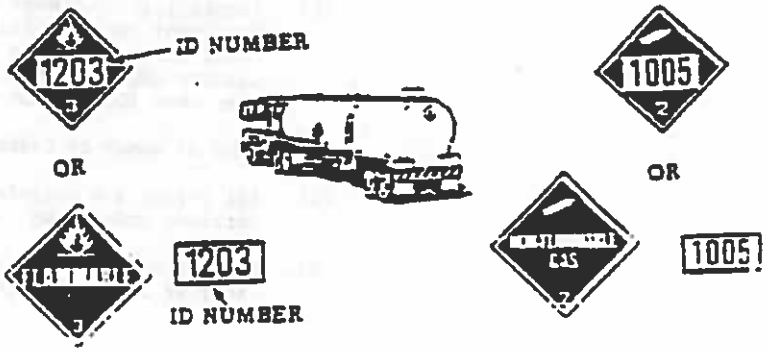
E. CARGO TANKS - HIGHWAY (COMPRESSED GASES) (49 CFR 172.328) - Cargo tanks must be marked with:

(1). Proper shipping name or appropriate common name such as: "Refrigerant Gas." Letters must be at least 2 inches high on each end and each side. (49 CFR 172.101 or 172.102, Hazardous Materials Tables.

(2). Identification number - (49 CFR 172.101 or 172.102) (See illustration below).

(3). Inlets and outlets (except safety relief valves) shall be marked to designate whether the inlets and outlets communicate with vapor or liquid, when the tank is filled to its maximum permitted filling density. (49 CFR 178.337-9 (c). (DOT MC 331 tanks).

(4). The accurate name of contents of the tank.



If the ID number is not displayed on the ends of the vehicle, check the sides of the transport vehicle.

NOTE: When ID numbers are displayed on placards, orange panels are not required. When ID numbers are displayed on orange panels, or white square-on-point display configurations, appropriate placards are ALSO REQUIRED. Materials requiring display of ID numbers placards, where ID number displayed on the placard is not authorized, ID numbers must be displayed on orange panels or on plain white square-on-point display configuration in association with the placard. ID number on white square-on-point display configuration is not a placard.

(FIGURE 16)

C. TANKS CARS (49 CFR 172.330) - Certain cars are required to be marked on each side and each end (49 CFR 172.332 and Parts 173 and 179 for specific details). If required to be marked, they must include:

(1). Proper shipping name OR appropriate common name in letters at least 4 inches high at least 5/8 inch stroke.

(2). Identification numbers - Display the appropriate number(s) on placards or orange panels or white square-on-point display configurations (49 CFR 172.101 and 172.102).

(3). The accurate name of the contents contained in the tank.

NOTE: For requirements for multi-unit tank car tanks, See (49 CFR 179.300 through 179.302).

IV. BULK PACKAGINGS - (other than portable tanks, cargo tanks, tank cars and multi-unit tank car tanks) 49 CFR 172.331

A. Includes packages meeting the following criteria:

(1). Internal volume greater than 119.9 gallons (450 liters) for liquids, or

(2). A capacity greater than 881.8 pounds (400 kilograms) for solids, or

(3). A water capacity greater than 1000 pounds (453.6 kilograms) for a gas as defined in 49 CFR 173.300.

B. Mark packages as prescribed in 49 CFR 172.332 or 172.336(b), as appropriate, with the identification number specified in 172.101 or 172.102, when authorized:

(1). On two opposite sides for packages of 1000 gallons (3785.- liters or 133.7 cubic feet) or less capacity

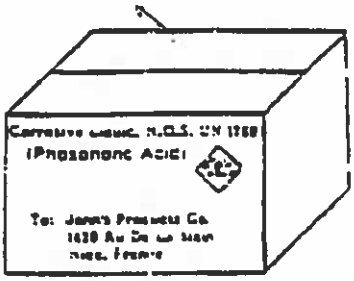
(FIGURE 17)

(2). On lock side and end for packages greater than 1000 gallons (3785.4 liters or 133.7 cubic feet) capacity. Identification numbers shall be displayed on orange panels or specified placards, or when appropriate on white square-on-point display configuration having the same outside dimensions as a placard.

V. EXPORT BY WATER (49 CFR 172.302)

A. All authorized "n.o.s." entries for export by water must have the technical name(s) of the material added in parentheses immediately following the proper shipping name.

B. For mixtures of two or more hazardous materials, the technical name of at least two components most predominately contributing to the hazard or hazards of the mixture must be added in parentheses immediately following the proper shipping name.

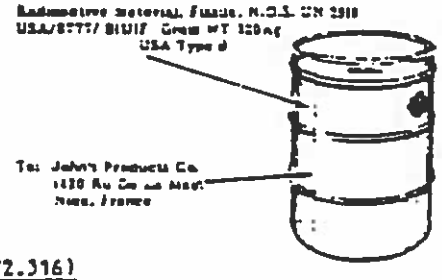


VI. RADIOACTIVE MATERIALS (49 CFR 172.310) - In addition to any other markings required by Subpart D of 49 CFR 172 (Marking), each package must be marked as follows:

A. Gross weight must be marked on containers weighing over 110 pounds.

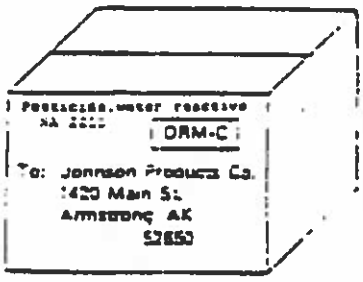
B. "TYPE A" or "TYPE B." (as appropriate) in letters at least 1/2" high.

C. "USA." must follow the specification markings or package certification on export shipments.



VII. OTHER REGULATED MATERIALS (ORM'S) (49 CFR 172.316)

A. Place the appropriate ORM designation immediately following, or below, the proper shipping name on at least one side of end of the package.



(FIGURE 18)

NOTE: For certain containers, specific detailed information (such as original test date information and type of material) are required. (See Parts 178 and 179). As a final check before offering a shipment for transportation, visually inspect the shipment.

This handout does not contain all the marking requirements. It is designed as a guide only. For details on markings, consult the Title 49, Code of Federal Regulations, Parts 100-199.

This publication may be reproduced without special permission from this office.

Training Resources Branch, DHM-51
Federal/State and Private Sector Initiatives Division
Office of Hazardous Materials Transportation
Research and Special Programs Administration
U.S. Department of Transportation
Washington, D.C. 20590

(FIGURE 19)

B. STANDARD PRACTICES AND PROCEDURES:

1. Every container or package of hazardous material, chemical, or substance shall be labeled and warnings indicated with:

   a. The chemical or common name of the hazardous material used on the manufacturer's label or from the applicable MSDS.

   b. The specific warnings such as: causes eye burn, causes lung damage, etc., shall be indicated on the label. The terms **"DANGER"**, **"CAUTION"**, or **"HARMFUL IF SWALLOWED"** shall not be used.

2. Label chemicals carefully. Use a permanent marker or use the manufacturer's label, or other equivalent labeling material.

C. MARKING ON ROOM DOORS AND EQUIPMENT: **(See Figure 20)**

1. All doors opening into rooms in which HM/C are handled, used, processed and doors opening into HM/C storage spaces shall be identified by applicable hazard warning signs as prescribed in this manual.

2. All contaminated equipment shall be appropriately labeled and marked.

SECTION 7 - MATERIAL SAFETY DATA SHEETS (MSDS)

A. GENERAL REQUIREMENTS:

1. Every department of the GCC involved with the use of HM/C shall be obtain from the manufacturer or supplier, a copy of the applicable MSDS for each type of HM/C used or stored in the department. **NO EXCEPTION.**

2. The appropriate MSDS's shall be made readily available and easily accessible to employees in their work areas during their work shifts.

3. No employees shall bring into any GCC workplace, nor accept any sample HM/C or substance from any vendor or sales representative without prior permission from the GCC Safety Administrator or the Vice President, ASD. When prior permission is given to accept HM/C from the vendors, the materials will not be accepted without the appropriate MSDS or equivalent document.

B. RESPONSIBILITIES OF THE DIVISION/DEPARTMENT HEADS:

1. Division/Department Heads shall ensure that an appropriate MSDS is obtained from the manufacturer for each HM/C used at GCC. He/she shall review the MSDS upon receipt to assure that it contains at least the following information:

   a. The identity used on the container label.

   b. The chemical or common name of the hazardous product.

   c. The chemical or common names of the ingredients which make up the hazard(s) and the common name of the mixture itself.

   d. The chemical and common names of all ingredients which are health hazards (1% or greater).

   e. Physical hazards when present in the mixture.

   f. The physical and chemical characteristics of the HM/C.

   g. Potential for fires, explosion, or reactivity.

   h. Health hazards, including signs and symptoms, medical conditions aggravated.

   i. The hazards' primary routes into the body.

   j. General applicable procedures and precautions for safe handling and use of the chemical.

   k. Applicable control measures.

   l. Emergency and first aid procedures.

   m. Name, address and telephone number of manufacturer or responsible party.

C. WAIVERS OF MSDS REQUIREMENT:

1. If the Department Head determines the non-use of the HM/C deleteriously effects the department's operation or function, he/she shall request for waiver to use the HM/C. The waiver request shall be prepared in memorandum request form complete with justification as to effect(s) on the department's mission, tasks, function, or operation if the chemical is not used. The memorandum request for waiver shall be forwarded to the Safety Administrator via the Vice President, ASD.

2. The Safety Administrator, upon request of the waiver requestor from the agency head), shall prepare an "Interim MSDS" for the HM/C using GOSH-700 Form.

3. **MSDS MISSING OR NOT RECEIVED FROM THE MANUFACTURER/SUPPLIER (See figures 21 through 23)**

a. If a HM/C is in use or on hand, but the applicable MSDS is missing or is not received, the work area supervisor shall write to the manufacturer/supplier requesting for the MSDS. In the interim, the HM/C shall be held in approved storage until the applicable MSDS is received. **THE MATERIAL SHALL NOT BE USED.**

SECTION 8 - CONTROL AND DISPOSAL OF HAZARDOUS MATERIAL/CHEMICAL WASTE

A. GENERAL REQUIREMENT:

1. Disposal if HM/C and related wastes shall be conducted in a manner that will assure adequate protection of all employees involved with the handling of such materials.

B. DEFINITIONS:

1. Hazardous Waste/Extremely Hazardous Waste shall be construed as a waste, or combination of wastes which because of its quantity, concentration; or physical chemical, or infectious characteristics may either:

a. Cause, or significantly contribute to an increase on mortality or an increase in serious irreversible illness.

b. Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise mismanaged.

2. Infectious Waste shall be construed as that portion of the refuse from GCC departments that contains disease causing microorganisms such as:

a. Biological cultures, pathological specimens including human tissues, blood and body fluids, excreta and secretions containing etiological agents and attendant disposable fomites.

b. Surgical specimens, including human parts and tissues removed surgically or at autopsy which contain etiological agents and attendant fomites.

MARKINGS ON DOORS

(FIGURE 20)

SAMPLE LETTER FOR REQUESTING MSDS FORM VENDOR

DATE

VENDOR NAME
ADDRESS
CITY, STATE, ZIP

RE: Request for Material Safety Data Sheet (MSDS)

To Whom it May Concern:

According to the federal/state hazard communication standard, you are required to provide copies of MSDSs with the initial order of hazardous chemical and when a MSDS has been revised.

Please send MSDS for the following products:

_____

_____

_____

_____

Your prompt response is necessary to maintain a proper level of safety for our employees.

Sincerely,

NAME
TITLE

(FIGURE 21)

SAMPLE

MSDS REQUEST FOR NEW CHEMICAL PURCHASES

DATE

VENDOR NAME
ADDRESS
CITY, STATE, ZIP

To Whom it May Concern:

Attached to this letter is purchase order #_____ for chemicals which we plan to purchase from your firm. We will accept only containers which have been properly labeled according to the hazard communication standard. Improperly labeled container will result in refusal of the shipment.

Please provide us with a Material Safety Data Sheet (MSDS) for each ordered product covered by the hazard communication standard prior to delivery of our initial order and again when any of the provided MSDSs are revised. Send all MSDS to the attention of _____ at the above address.

Please contact me if you have any questions. Thank you for your cooperation.

Sincerely,

NAME
TITLE

(FIGURE 22)

c. Disposed equipment, instruments, utensils and other materials which are likely to transmit etiologic agents from the rooms which have been isolated or diagnosed communicable diseases.

d. Human dialysis waste materials, including arterial lines and dialyzate membranes.

e. Sharp needles and syringes, broken glasses and surgical blades.

f. Wastes generated by patients who are isolated because of communicable diseases.

C. CHARACTERISTICS OF CHEMICAL WASTES:

1. Flammability
2. Corrosively
3. Reactivity
4. Toxicity
5. Acute Hazardous Chemical Wastes
6. Commercial Chemical Products and Manufacturing Chemical Intermediates
7. Toxic Waste

D. SPECIFIC STANDARDS:

1. It is unlawful for any GCC employee to handle, store, transport, or dispose of any hazardou or infectious waste except as provided in this manual.

2. Any GCC employee who produces or generates an extremely toxic or hazardous waste, whic he or she know, or should know and which he/she intends to dispose of shall notify the Safet Officer, in writing, of intent to dispose of such material.

3. Any GCC employee who knowingly violates a provision of this manual shall be subject t disciplinary action.

4. Any employees of GCC who intentionally or negligently makes any false statement or misrepresentation in any hazardous waste disposal application, label manifest, record, report permit, or other document maintained or used for purposes of compliance with the requirements of this manual shall be subject to disciplinary action.

E. TRANSPORTATION:

1. The originator of any hazardous or toxic waste shall provide the Safety Administrator any vehicle carrying such hazardous or toxic wastes with a document listing. The listing shall include, as a minimum, the following information:

   a. The disclosure and identification of the hazardous/toxic waste carried.

   b. The quantity of the waste.

   c. The general chemical composition or hazardous ingredients of the waste materials.

   d. The origin and destination of the waste.

   e. First aid and recommended safety measures to take in case of accidental contact and emergency procedures in the event of spill.

2. The driver of the transporting vehicle or carrier shall have the written list in his/her possession while carrying and transporting the hazardous/toxic waste, and shall show the list upon demand to any Government of Guam Official, Guam Police Department, Guam Fire Department, any local health official or to any GEPA or DOSH official.

3. It is unlawful for any GCC employee to carry on, or engage in , the transportation of hazardous/toxic materials or wastes unless such person can prove that he/she has been trained and instructed in the hazard communication standards and the provision of this manual, and produces a written authorization to carry and transport such materials and/or wastes.

4. It is unlawful for any GCC employee to transport hazardous materials or hazardous/toxic waste in any truck, trailer, semi-trailer, vacuum truck that has not been inspected or certified by the Department of Public Works as approved for hauling such materials or wastes on the public roads of Guam.

5. Only Government of Guam Owned, contracted, or leased vehicles, which displays a current calendar year inspection or certification tag from the Department of Public Works shall be used for the purpose of hauling and transporting hazardous or infectious wastes.

F. INSPECTION OF HAZARDOUS WASTE STORAGES:

Regular inspections will be conducted by the responsible supervisor and Safety Administrator of all storage sites of hazardous waste to insure there are no leaking or spilled containers and for good housekeeping practices. If a spill or leak is found, follow the spill clean-up procedures in Section 9 herein.

G. HAZARDOUS WASTE COLLECTION AND STORAGE PROCEDURE:

1. HM/C shall be collected and segregated in the workplace origin and placed in approved and properly labeled container in accordance with requirements.

2. HM/C shall be segregated by incompatibilities, (carcinogen, flammable, etc..).

3. Any chemical for which the characteristics of content is not clearly known, shall be identified as to hazard content before disposal.

4. The following materials shall also be treated and disposed of as HM/C:

   a. Ultraviolet (UV) lamps.

   b. Old manometers, cells and batteries containing mercury.

   c. Small gas cartridges.

   d. Aerosol cans. Aerosol cans shall not be mixed with incinerated waste.

   e. All container of HM/C shall be tagged and labelled to clearly show the name of th chemicals, hazard (percentage), the quantity and incompatibility.

   f. HM/C in "ready to ship containers" shall not be placed in corridors or passageways A safe storage away from traffic areas shall be provided.

   g. Hazardous waste gases and vapors shall be disposed of in accordance to federal, state an local regulations.

H. DISPOSAL:

No hazardous chemical wastes shall be discharged into drains and sewer systems: These includes:

1. Carcinogens, mutagens and teratogens.
2. Pesticides and related compounds.
3. Cytotoxic drug substances and agents.
4. Cyanides, arsenicals, chromatees in high concentration.
5. Metalsand their compounds in high concentration.
6. Flammable in high concentration.

NOTE: **All disposal of wastes must be in accordance with Guam's Hazardous Wast Management Regulation.**

SECTION 9 - HAZARDOUS SUBSTANCE SPILL/LEAK

A. PURPOSE:

To establish and implement emergency procedures and responsibilities for handling spills and leaks hazardous substances with the confines of GCC.

B. SCOPE:

This manual covers all GCC employees involved with the procurement and receiving, handling, us processing, storage and disposal of HM/C which, if accidentally spilled or leaked, may result i exposure to staff, patient, the community and environment, including potential contamination of th water and sewer systems.

C. RESPONSIBILITIES:

1. **Vice President, Administrative Services Division (ASD)**

   a. Directly responsible and accountable for the implementation and enforcement of the standards within GCC.

2. **Safety Administrator:**

   a. To assist the Vice President, ASD and Procurement & Supply Administrator in enforcement of hazardous spill/leak procedures in which involves the procurement and receiving, handling, use, processing, storage and disposal of HM/C.

3. **Department Heads:**

   a. Either upon notification or observation of a hazardous substance spill or leak, immediately initiate or activate the Disaster Plan. Complete GOSH-900 Form for small or large spill/leak emergency within 24 hours of occurrence.

4. **Guam Fire Department Response Team:**

   a. The GFD Response Team, when summoned to a HM/C spill/leak emergency, shall execute the following emergency actions.

   b. Determine the emergency protocol to execute.

   c. Assess the spilled or leaked material's hazardous characteristics and the hazardous potential of the situation.

   d. Prioritized emergency actions to execute with life safety given first priority consideration: Al other issues shall be considered secondary.

   e. Shutdown all operations where adverse effects may be imminently endangered.

   f. Contain spills/leaks first to prevent it from reaching or entering into drains, sewers, or waterways, etc.

   g. Establish appropriate decontamination of exposed employees and personnel; summon medical emergency response unit as deemed necessary.

   h. Ensure that all regulatory authorities, having a required "need to know", are notified of the incident.

   i. Complete the Hazardous Material Response Team Incident Report, GOSH 400 Form. Deliver a copy immediately to the Vice President, ASD of the Safety Administrator with spill/leak, and forward a copy of the report to the Chief Officer, OSHA and the GEPA.

D. GENERAL PROCEDURES - SMALL (MINOR) HAZARDOUS MATERIAL/CHEMICAL SPILL/LEAK

1. The procedures delineated in this manual and the following shall be executed by the workplace supervisor of the workplace in which the small hazardous material/chemical spill/leak occurred.

2. Evacuate all employees from the immediate area of the spill/leak.

3. If there is a fire, extinguish it immediately (follow the GCC Fire Safety Procedures for the type of extinguishing equipment on hand).

4. Immediately shutdown the supply air ventilation system and activate all exhaust ventilation system in the affected areas to prevent the build up of hazardous and/or flammable or explosive vapors in the affected areas. Extinguish all ignition sources in the vicinity.

5. Immediately report the spill/leak to the Department Head, the Safety Administrator and the Vice President, ASD.

6. Confine or isolate the area of the spill/leak; close all doors and windows if possible.

7. Activate all dedicated exhaust or return air ventilation systems to evacuate the airborne vapors to the outside of the building.

8. If the spill is an unknown substance, notify the Vice President, ASD and the Safety Administrator who in turn will notify GFD, GEPA, and DOSH.

9. Take positive steps not to touch the spilled material with bare hands, and avoid inhalation of the gas, fume, or vapor generated by the HM/C.

10. Once the spill/leak is contained and cleaned up, place all contaminated materials, including gowns, gloves, dust masks, contaminated respirator cartridges/filters in a polyethylene (plastic) bag, tie-down the bag, label the bag and seal the bag. Only then shall the hazardous material container be removed from the clean-up area for transfer to the hazardous material storage or staging area awaiting disposal.

E. FIRST-AID EMERGENCY PROCEDURES:

1. **Eye Contact:**

   a. If splashed into the eyes, flush with copious amount of water for at least 15 minutes, or until the irritation subsides. Immediately seek medical attention.

MSDS REQUEST RECORD			
CHEMICAL NAME	MFG. OR DISTRIBUTOR ADDRESS	INFORMATION REQUESTED	DATE SENT

(FIGURE 23)

2. **Inhalation:**

a. If overcome by vapors, remove from exposure and call a physician immediately. If breathing is irregular or has stopped, administer CPR immediately. (CPR performed shall be by a currently trained, and certified Personnel)

3. **Ingestion:**

a. If ingested, do not induce vomiting. Call a physician immediately.

4. **Skin Contact:**

a. If contact with skin, wash with copious amount of water for at least 15 minutes. Notify physician immediately.

F. SPILL/LEAK PROCEDURE: (See Figure 24)

1. Workplace supervisor or person discovering the spill/leak shall alert all employees int he affected area(s) to evacuate the immediate area(s) of the spill/leak.

2. Activate the GCC Emergency Operations Plan.

3. Implement the emergency evacuation procedures under the GCC Emergency Operations Plan.

SECTION 10 - MEDICAL SURVEILLANCE

1. All employees with potential exposure to HM/C through preparation, administration or waste handling or disposal must have a pre-placement physical examination. Care shall be taken to identify risk factors and a blood count, including differential will be taken to establish baseline.

2. Urine testing and screening for mutagenesis will be made since there is no known techniques exist for screening exposed employees that would indicate level of exposure reliability.

3. A record of all employees who routinely uses, handle or work any HM/C will be established and maintained at the work supervisor and safety administrator's office. Records will be filed for at least 30 years.

4. After acute exposure employee will receive a complete physical at no expense to the employee.

5. The Department Head shall identify all areas in which HM/C are used or present. Identify, in writing all employees working in these areas. A copy of this report will be submitted to the Safety Office. The report will be updated annually or when deletion or addition to report is required.

SECTION 11 - EMERGENCY COORDINATOR

At all times, there must be at least one employee either on the facility premises or on call (i.e., available to respond to an emergency by reaching the facility within a short period time) with the responsibility for coordinating all emergency response measures. The emergency coordinator must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out the contingency plan.

NAME, ADDRESS AND TELEPHONE NUMBERS OF PERSONS QUALIFIED AS PRIMARY AND SECONDARY EMERGENCY COORDINATOR REQUIRED BY LOCAL AND FEDERAL REGULATION.

PRIMARY PERSONNEL: Pedro D. Paulino (Safety Administrator)
166A, Jose P. Cruz, St.
Talofofo, Guam
789-5742

SECONDARY PERSONNEL: Rodrigo Quinit (Facility & Maintenance Coordinator)

SECTION 12 - EMERGENCY PROCEDURES

A. Whenever there is an imminent or actual emergency situation, the emergency coordinator (or his designee when the emergency coordinator is on call) must immediately:

1. Activate internal facility alarms or communication systems, where applicable, to notify all facility personnel; and

2. Call 911 to report the incident and request for immediate assistance.

B. Whenever there is a release, fire or explosion, the emergency coordinator must immediately identify the character, exact source, amount, and a real extent of any released materials. He may do this by observation or review of facility records or manifests and, if necessary, by chemical analysis.

C. Concurrently, the emergency coordinator must assess possible hazards to human health or the environment that may result from the release, fire, or explosion. This assessment must consider both direct and indirect effects of the release, fire, or explosion (e.g., the effects of any toxic, irritating, or asphyxiating gases that are generated, or the effects of any hazardous surface water run-offs from water or chemical agents used to control fire and heat-induced explosions).

D. If the emergency coordinator determines that the facility has had a release, fire, or explosion which could threaten human health, or the environment, outside the facility, he/she must report his findings as follows:

1. If his/her assessment indicates that evacuation of local areas may be advisable, he/she must immediately notify appropriate local authorities. He/She must be available to help appropriate officials decide whether local areas should be evacuated; and

2. He/she must immediately notify the appropriate government official designated as the on-scene coordinator for that geographical area. The report must include:

   a) Name and telephone number or reporter;

   b) Name and address of facility;

   c) Time and type of incident (e.g., release, fire);

   d) Name and quantity of material(s) involved, to the extent known;

   e) The extent of injuries, if any; and

   f) The possible hazards to human health, of the environment, outside the facility.

3. During an emergency, the emergency coordinator must take all reasonable measures necessary to ensure that fires, explosions, and releases do not occur, recur, or spread to other hazardous waste at the facility. These measures must include, where applicable, stopping processes and operations, collecting and containing released wastes, and removing or isolation containers.

4. If the facility stops operations in response to a fire, explosion or release, the emergency coordinator must monitor for leaks, pressure buildup, gas generation, or ruptures in valves, pipes, or other equipment, wherever this is appropriate.

IN A CHEMICAL EMERGENCY

In any case of a chemical spill, do not hesitate to follow these emergency procedures no mater how insignificant or trivial the spill may seem. It is always better to be overly cautious than under-cautious.

For skin contact, flood the affected area with water immediately and continue flooding for at least 15 minutes with copious amounts. If the chemical is toxic, or if its toxic properties are unknown, notify your supervisor and seek medical attention immediately.

for eye contact, flood eyes with water immediately and continue flooding for at least 15 minutes with copious amounts. remove contact lenses if possible or move to corner of eye. Any eye injury, no mater how small or insignificant, may be serious. Report the incident immediately to the work place supervisor and seek medical help.

For inhalation or ingestion, follow directions on the product label or MSDS. Seek medical help immediately.

For any chemical spill, check the container or MSDS for instructions. If no instructions are immediately available, encircle the spill with sand or vermiculite. If you suspect the substance is flammable, extinguish all ignition sources. If the spill is large, or if the chemical spilled has definite or unknown corrosive, explosive, or extremely flammable properties, confine the spill and evacuate immediately. Report incident immediately to your work place supervisor and to the Agency Safety Officer.

(FIGURE 24)

5. Immediately after an emergency, the emergency coordinator must provide for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or any other material that results from a release, fire or explosion at the facility.

6. The emergency coordinator must ensure that, in the affected area(s) of the facility:

   a. No waste that may be incompatible with the released material is treated, stored, or disposed of until cleanup procedures are completed; and

   b. All emergency equipment listed in the contingency plan is cleaned and fit for its intended use before operations are resumed.

E. The emergency coordinator must notify the Guam Environmental Protection Agency, and appropriate Local authorities, that the facility is in compliance with all environmental requirements before operations are resumed in the affected area(s) of the facility.

F. The emergency coordinator must note in the operating record the time, date and details of any incident that requires implementing the contingency plan. Within 15 days after the incident, he must submit a written report on the incident to the Guam Environmental Protection Agency. The report must include:

1. Name, address, and telephone number of the owner or operator;

2. Name, address, and telephone number of the facility;

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

4. Name and quantity of material(s) involved;

5. The extent of injuries, if any;

6. An assessment of actual or potential hazards to human health or the environment, where this is applicable; and

7. Estimated quantity and disposition of recovered material that resulted from the incident.

SECTION 13 - EMERGENCY EQUIPMENT (SEE ATTACHMENT NO. 2)

SECTION 14 - EVACUATION PLAN OF GCC (REFER TO GCC EMERGENCY OPERATIONS PLAN

ACRONYMS

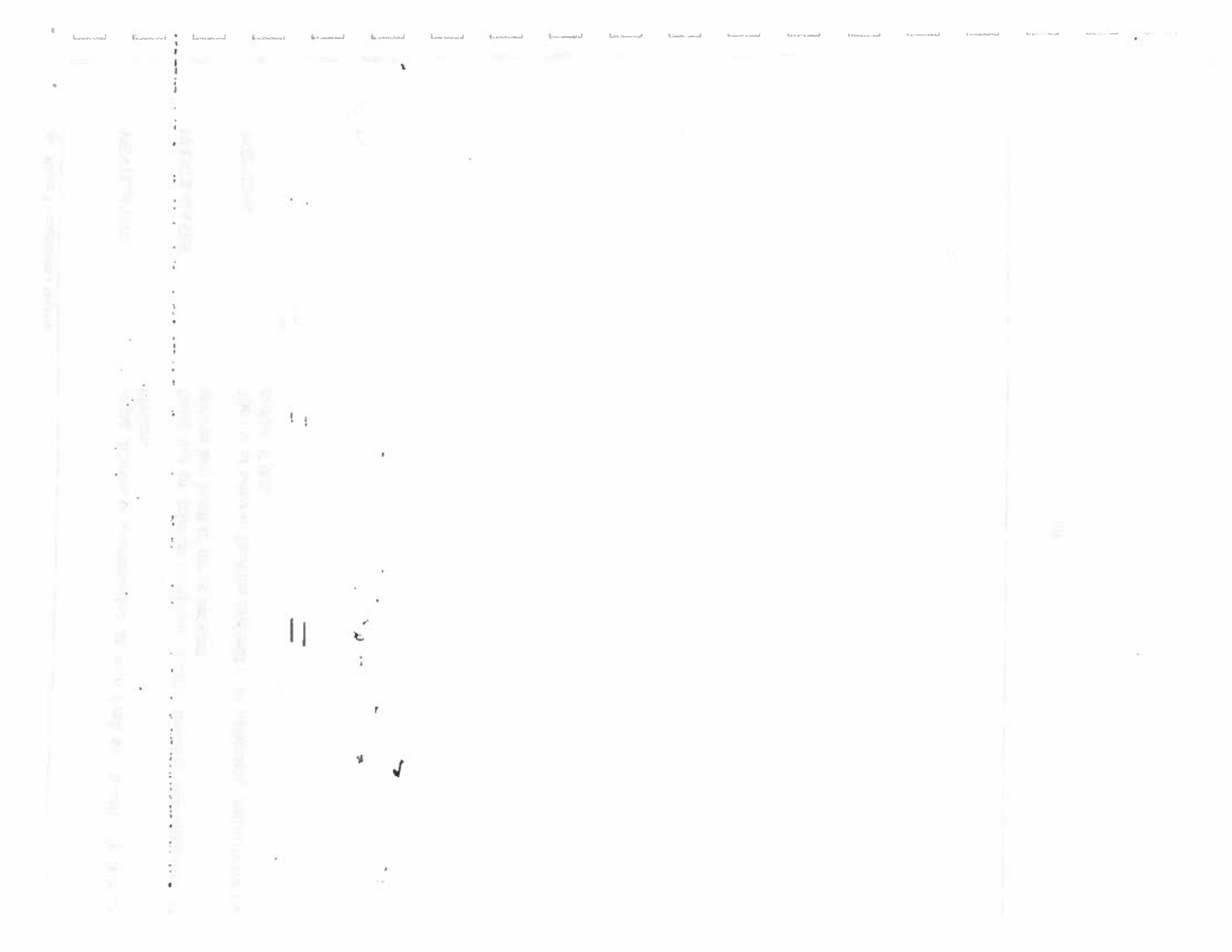
CFR	-	Code of Federal Regulations
DOSH	-	Division of Occupational Safety and Health
EHM	-	Excess Hazardous Materials
EPA	-	Environmental Protection Agency
ERT	-	Emergency Response Team
GEPA	-	Guam Environmental Protection Agency
GOSHA	-	Guam Occupational Safety and Health Act
HAZCOM	-	Hazardous Communication Standard
HMIL	-	Hazardous Material Inventory List
HW	-	Hazardous Waste
HM/C	-	Hazardous Materials and/or Chemicals
HM/CIS	-	Hazardous Materials and/or Chemicals Information System
HM/C&WM	-	Hazardous Materials and/or Chemicals and Wate Management
MSDS	-	Material Safety Data Sheet
OSHA	-	Occuaptional and Safety Health Act
RCRA	-	Resource Conservation and Recovery Act
SCP	-	Spill Contingency Program

GLOSSARY

AUTHORITY	Power to influence or command thought, opinion, or behavior.
CARCINOGEN	Any cancer producing substance and other malignant neoplasms.
CHEMICAL WASTES	As used in this plan means chemical wastes that exhibit any of the characteristics of chemical wastes and outlined in the EPA CFR 40, 260 and 261.
COMPRESSED GAS	Gas forced or squeezed into smaller space.
CONTAINMENT	The storage of waste material under conditions that keep it isolated.
CONTROLLED AREA	Any area where access is controlled by the user.
CORROSION	The result of slow chemical and electrochemical reaction between a metal and its environment.
DECONTAMINATION	The process of rendering an object, person, or area free of a contaminating substance.
DILUTION	Process of mixing the waste with sufficient inert material to reduce the concentration below the permissible level.
DISINFECTION	Removal of dangerous germs by chemical or physical means.
EFFECTIVE	Produces required results.
EVALUATION	Assessment or determination of worth based on some objective criteria or rationale.
EXCESS HAZARDOUS MATERIALS	Ready for use excess material classified as HM and no longer needed by the generating activity.
EXPLOSIVES	Materials which under certain conditions of temperature, shock, or chemical reaction can decompose rapidly to evolve either large volumes of gas or so much heat that the surrounding air is forced to expand very rapidly resulting in explosion.

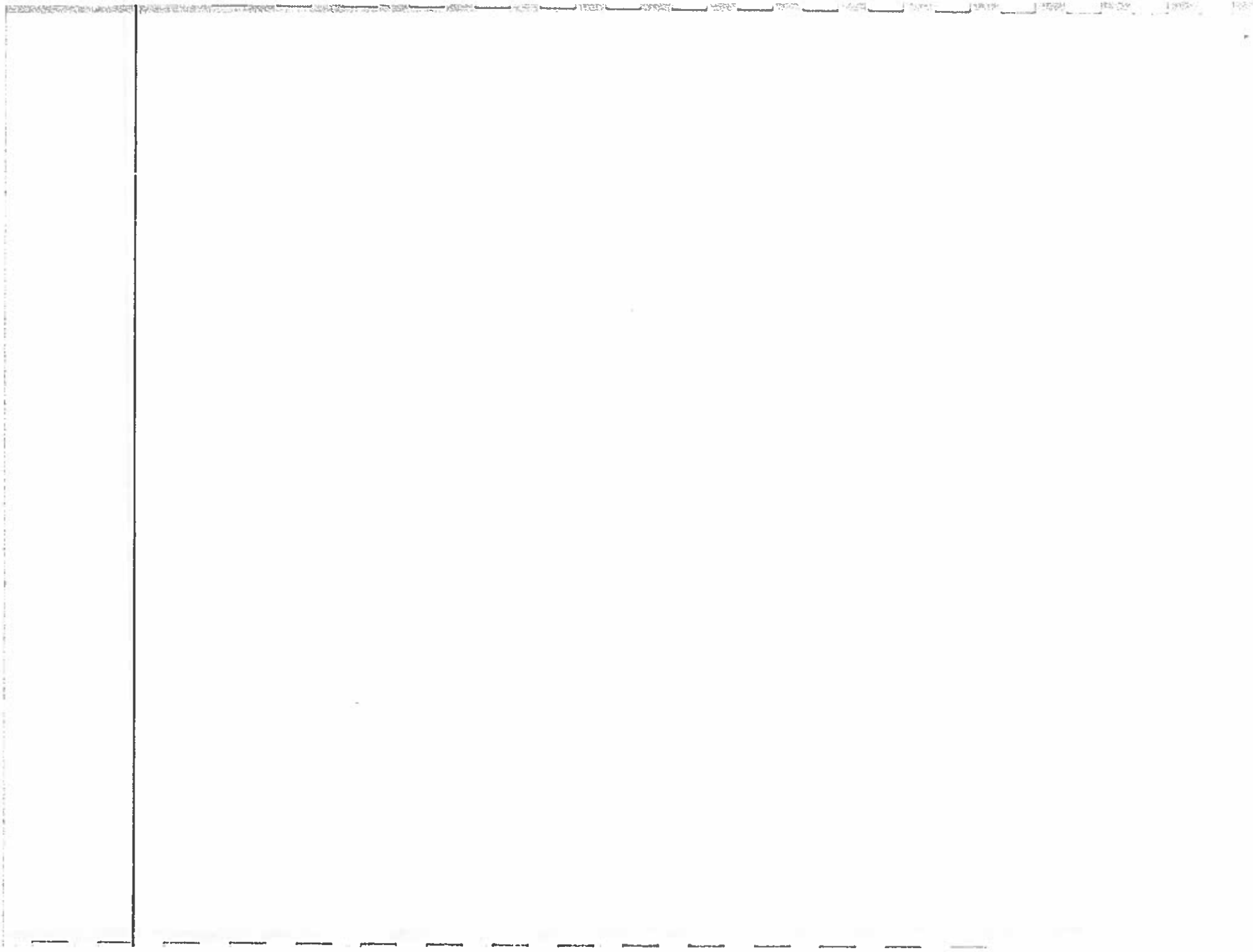
FLAMMABLE	The ability to burn easily under normal condition.
GENERAL HOUSEKEEPING	Regular clean-up procedures.
INCINERATOR	To reduce to ashes without undue emissions (smoke). To incinerate requires more heat than to burn.
INFECTIOUS WASTES	Waste capable of producing an infection. They are characterized by the known or suspected presence of pathogens.
ISOLATION	The process of separating and/or detaching from other persons or things. The limitation of movement and social contact of persons suffering from an infectious disease.
NEUTRALIZE	To render inactivity, to be chemically inert.
ONGOING	Conducted with regularity; not sporadic.
OXIDER	A chemical that combines or mixes with oxygen.
PRIORITY	Precedence in position or importance.
RESPONSIBILITY	The condition assumed by a person or group to accomplish a given obligation, task, duty, or assignment.
SEGREGATION	To confine a potentially dangerous or hazardous situation to an enclosed area to prevent contamination.
SHARPS	Used as a noun, meaning; needles and other sharp objects.
STERILIZATION	The act or process of rendering sterile; to deprive bacteria of the power of reproduction.
SUBSTITUTION	The replacement of a toxic or hazardous material with a material that is less toxic or hazardous, when possible.
TOXIC	Poisonous.
USER	The department licensed to the radiation materials, agents, equipment isotopes, etc.

VENTILATION	Rapid dilution of contaminated air with fresh air, usually by fans or blowers.
WASTE GASES	Gases that are released expiration, escape, leeching, decomposition, or spillage as a result of use or accident.
WETTING	The use of water to limit the dispersal of contaminants; primarily for the control of dust.



MASTER REFERENCES

1. U.S. Department of Health and Human Services, Public Health Services, CDC, Guidelines for the Prevention and Control of Nosocomial Infections, Atlanta, GA, February 1981.
2. U.S. EPA, Office of Solid Waste and Emergency Response, Washington, D.C. Draft Manual for Infectious Waste Management, September 1982.
3. U.S. EPA Title 40, Subchapter K, Regulations under the Toxic Substances Control Act, 40 CFR 761 and 762. U.S. Government Printing Office, 1981.
4. U.S. EPA Hazardous Waste Guidelines and Regulations. 43 FR 58946-59028.
5. U.S. Department of Health and Human Services CDC, Disposal of Solid Waste from Hospitals. 2nd Revision, Atlanta, GA. Bureau.
6. National Fire Protection Association, (NFPA), Hazardous Chemicals Data 1975.
7. NFPA, Life Safety Code, NFPA 101 Chapter 31-4, 6-3, NFPA 1975.
8. National Study Commission on Cytotoxic Exposure, "Cancer Chemotherapy" Update.
9. "Hazardous-Infectious Waste Management for Hospitals and Health Care Facilities", American Environmental Systems, Torrance, CA. 1985,
10. U.S. Code, Title 42. The Public Health and Welfare, section 1981-END, U.S.
11. U.S. EPA 40 CFR 122-125 and 260-265 June 1985.
12. U.S. EPA, Solid Waste, "Notification of Hazardous Waste Activity", U.S. June 1985.
13. U.S. EPA Federal Register, Vol-50, 28702-28745, July 15, 1985.
14. U.S. EPA Federal Register, Vol-50, 30908-30914, July 30, 1985.
15. U.S. EPA Federal Register, Vol-50, 31278-31306, August 1, 1985.
16. Guam Occupational Safety and Health Act (GOSHA), August 22, 1988.
17. GCC Emergency Operations Plan.
18. GCC OSH and Fire Prevention Program.



Guam Community College
Generator Facilities

Spill Prevention, Control and Countermeasure Plan (SPCC)

January 2011

Prepared for:

Guam Community College
P.O. Box 23069
GMR, Barrigada Guam 96921

Prepared by:

238 East Marine Corps Drive, Suite 201
Hagatña, Guam 96910

Table of Contents

Tables

Appendices

1. Introduction

Spill Prevention, Control, and Countermeasure plans for facilities are prepared and implemented as required by U.S. Environmental Protection Agency (U.S. EPA) regulations contained in Title 40, *Code of Federal Regulations*, Part 112 (40 CFR 112). A non-transportation related facility is subject to SPCC regulations if: 1) due to its location, the facility could reasonably be expected to discharge oil into or upon the navigable waters of the United States; 2) the total aboveground storage capacity exceeds 1,320 gallons (calculated total of containers with capacity of 55 gallons or more); or 3) the completely buried storage capacity exceeds 42,000 gallons*.

The SPCC plan is not required to be filed with U.S. EPA, but a copy must be available for on-site review by the Regional Administrator during normal working hours if the subject facility is attended at least 4 hours a day. The SPCC plan must be submitted to the U.S. EPA Region III Regional Administrator and the state agency in charge of oil pollution control along with the other information specified in 40 CFR 112.4 if either of the following occurs: 1. The facility discharges more than 1,000 U.S. gallons of oil into or upon navigable water of the United States or adjoining shorelines in a single event; or 2. The facility discharges more than 42 gallons of oil in each of two discharge events within any 12-month period. Discharge information must be reported to U.S. EPA Region III and the state agency within 60 days if either of the above thresholds is reached.

The report is to contain the following information:

1. Name of facility;
2. Name(s) of the owner or operator of the facility;
3. Location of the facility;
4. Maximum storage or handling capacity of the facility and normal daily throughput;
5. Corrective actions and/or countermeasures taken, including a description of equipment repairs and/or replacements;
6. An adequate description of the facility, including maps, flow diagrams, topographical maps as necessary, and diagrams which show the location of exempted tanks;
7. The cause of the discharge, including a failure analysis of the system or subsystem that failed;
8. Additional preventative measures taken or contemplated to minimize the possibility of recurrence; and
9. Such other information the Regional Administrator may require pertinent to the Plan or discharge.

* Completely buried tanks subject to all of the technical requirements of 40 CFR Parts 280 and 281 do not count in the calculation of the 42,000-gallon threshold.

1.1.Management Approval (112.7)

Guam Community College(GCC) is committed to maintaining the highest standards for preventing discharges of oil to navigate surrounding water bodies and the environment through the implementation of this Spill Prevention, Control and Countermeasure (SPCC) Plan. This

SPCC Plan has the full approval of GCC's management, who have committed the necessary resources to implement the measures described in this Plan, if necessary.

Mary Okada is the Designated Person Accountable for Oil Spill Prevention at this GCC Equipment Yard and has the authority to commit the necessary resources to implement the Plan as described.

Authorized Facility Representative: Mary Okada

Signature:

Title: President

Date:

1.2.Professional Engineer Certification (112.3 (d))

The undersigned Registered Professional Engineer is familiar with the requirements of Part 112 of Title 40 of the *Code of Federal Regualtions* (40 CFR part 112) and has visited and examined the facility, or has supervised examination of the facility by appropriately qualified personnel. The undersigned Registered Professional Engineer attests that this Spill Prevention, Control and Countermeasure Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards and the requirements of 40 CFR part 112; that procedures for required inspections and testing have been established; and that this Plan is adequate for the above mentioned facility (112.3(d)).

This certification in no way relieves the owner or operator of the facility of his or her duty to prepare and fully implement this SPCC Plan in accordance with the requirements of 40 CFR part 112.

Kenneth M. Rekdahl

Name of Professional Engineer (P.E.)

Signature of P.E.

1/25/11

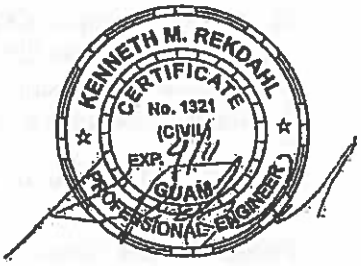
Date

CE No. 1321

Registration Number

Guam

Issuing State



1.3. Plan Review (112.5)

In accordance with 40 CFR 112.5, GCC will periodically review and evaluate this SPCC Plan for any change in the facility design, construction, operation, or maintenance that materially affects the facility's potential for an oil discharge. GCC reviews this SPCC Plan at least once every three years. As a result of this review and evaluation, GCC will amend if necessary, the SPCC Plan within six months to include any effective prevention and control technology. A registered P.E. certifies any technical amendment to the Plan within six months after a change in the facility's design, construction, operation, or maintenance occurs which materially affects the facility's potential for the discharge of oil into or upon the surrounding navigable water bodies, in accordance with 40 CFR 112.3(d).

Scheduled five-year reviews and plan amendments are to be recorded in Table 1. This log must be completed even if no amendment is made to the plan. Unless a technical or administrative change prompts an earlier review, the next scheduled review of this plan must occur by January 2016, five years from initial plan date.

Table 1: Scheduled five-year reviews and plan amendments

Date	Authorized Personnel	Review Type	P.E. Certification	Summary of Changes

1.4. Location of SPCC Plan (112.3 (e))

In accordance with 40 CFR 112.3(e), and because the facilities are normally unmanned, a complete copy of this SPCC is maintained at the campus facilities maintenance office for the two GCC Standby Generator Buildings, located on One Sesame Street Mangilao, Guam 96921. Additional Copies are available at the GCC management office, located on the GCC campus.

1.5. Certification of Substantial Harm Determination (112.20 (f)(1))

Facility Name: Guam Community College(GCC)

1. Does the facility transfer oil over water to or from vessels and does the facility have a total storage capacity greater than or equal to 42,000 gallons? Yes___ or No _X_

2. Does the facility have a total storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground storage area? Yes ___ or No _X_

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculate using the appropriate formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? Yes ___ or No _X_

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculate using the appropriate formula) such that a discharge from the facility would shut down a public drinking water intake? Yes ___ or No _X_

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last five years? Yes ___ or No _X__

Certification:
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate and complete.

Name of Authorized Facility Representative	Title
Signature of Authorized Facility Representative	Date

2. General Facility Information

2.1. Contact Information (112.7 (a)(3)(vi))

The following is site-specific information on the facility for which this Spill Prevention, Control and Countermeasure (SPCC) Plan is prepared for.

Facility Owner:	Guam Community College (GCC)
Address:	One Sesame Street Mangilao, Guam 96921
Facility Name:	GCC Stand-by Generators

Location: 5376 New-2A, Mangilao

Telephone No.: (671) 734-1003

An SPCC Plan is required for on-shore non-transportation facilities, which due to their location could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR 110, into or upon navigable waters of the United States. Because GCC will be storing oil, and its location is above Guam's Central Aquifer, the facility is required to prepare an SPCC in accordance with 40 CFR 112.7.

2.2. Facility Diagram Layout (112.7 (3), 112.8 (b)

Figure 1 provides the subject site's location, surrounding area in relation to waterways, roads, surrounding facilities, and residential areas. Figure 2 detailed facility diagram of the site's flow lines, transfer areas and catch basins. Figures 3 and 4 provide detailed information on the site drainage. Figures 1 through 4 are provided in Appendix A of this Plan.

2.3. Facility Location and Operations

The two stand-by generator and base tanks covered under this plan are located in the central portion of the island of Guam. It is situated off of Route 10, along One Sesame Street in the municipality of Mangilao. The paved and base-coursed roadways throughout the campus provide access to both facilities. One of the stand-by generators (Generac, Gen-1) provides stand-by power to the Technology Center the other stand-by generator (Cummins, Gen-2) provides power to buildings 300 & 400. These base tanks are used to provide diesel fuel to the stand-by generators.

The facilities are unmanned stand-by generators and are maintained by GCC's facilities maintenance division.

2.4. Oil Storage and Handling (112.7 (3))

This SPCC plan has been prepared in accordance with 40 CFR 112.7, *General Requirements for Spill Prevention, Control, and Countermeasure Plans.* A spill event is defined in 40 CFR 112.2 as a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities. A harmful quantity is defined in 40 CFR 110.3 as a discharge that violates applicable water quality standards or causes a sheen upon, or discoloration of, the surface water or adjoining shorelines. These stand-by generator and base tanks have not experienced such a spill event.

The stand-by generator facilities contain fuel belly tanks (base tanks). There are no separate above ground or below ground storage tanks supplying fuel to these two stand-by generators.

2.4.1. Facility Drainage (112.8 (b))

Figures 2 though 4 provide information on the site and facility drainage. Drainage for the site is collected by a network of cachbasins. These catchbasins drain to either one of the sites two ponding basins. Figure 2 provides the location of these ponding basins.

2.4.2. Bulk Storage Containers (112.8 (c))

Other than the base tanks listed in Table 2 below, the stand-by generator facilities covered in this plan do not contain bulk storage containers, buried or partially buried bulk storage tanks.

Table 2: Characteristics of Oil containers

ID	Type	Construction	Primary Content	Capacity (gallons)
1	Generac Stand-by Generator Base Tank (Gen-1)	Steel	Diesel	730
2	Cummins Stand-by Generator Base Tank (Gen-2)	Steel	Diesel	300

The stand-by generator (Generac) facility supplying the Technology center currently has a 8" berm surrounding the building. The site has a single drain valve to the west of the facility.

The stand-by generator (Cummins) facility supplying building 300 and 400 has berm heights of 4" and 7" that surrounds most of the facility. A portion of the facility has a 7" opening and requires immediate correction.

2.4.3. Facility Transfer Operations and Facility Process (112.8 (d))

A diesel fuel delivery truck transfers fuel to belly fuel tank of the stand-by generator. Prior to transfer Operator and facilities maintenance personnel should verify integrity of equipment and inspect the hose, couplers ,& fuel tanks for corrosion.

Transfer operation undertaken during base tank refueling shall be manned continuously. Any spill occurring during this operation shall be immediately cleaned up, see section 3.6.

2.5. Proximity to Navigable Waters

The GCC stand-by generator and base tanks are located approximately 2000 feet west of the Pacific Ocean. Also, the facility is situated in the in the central sector of the Island above potential geological pathways toward Guam's underlying aquifer. No other known natural water resources are located within the vicinity.

Site drainage is such that any spill from the base tanks will be either contained in the secondary containment berm. Should the containment berms fail spillage will be collected in the sites catch basins and pond in the site ponding basin 1. These measures will keep spills from reaching navigable waters.

2.6. Conformance with Applicable Local Requirements (Section 5104 H1,2)

The two facilities stand-by generators have secondary containment berms provided to protect Guam's groundwater resources and navigable waters from potential threat from oil or hazardous material discharges, once the deficiey listed in section 2.4.2 is addressed. The facility has a currently used, diesel fuel, The Stand-by generator (Generac) fuel belly tank, with a capacity greater than 660 gallons a Storage Facility Fuel Prevention Plan shall be implemented in conjunction with an SPCC Plan in accordance with 40 CFR part 112. The Plan shall be based on type of products and their containment-storage capacities and the potential threat the respective facility may pose to Guam's groundwater resources and navigable waters.

3. Spill Response and Reporting

3.1. Discharge Discovery and Reporting

A spill event is defined in 40 CFR 112.2 as a discharge of oil into or upon lhe navigable waters of the United States or adjoining shorelines in harmful quantities. A harmful quantity is defined as a discharge that violates applicable water quality standards or causes a sheen upon, or discoloration of, the surface water or adjoining shorelines. Discharge includes, but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping. Navigable waters include storm sewers and groundwater contamination (resulting from the discharge of oil) having the potential to seep, leach or flow into navigable waters.

Several individuals and organizations must be contacted in the event of an oil discharge. The GCC Facility Maintenance Manager is responsible for insuring that all required discharge notifications have been made. All discharges should be reported to the Campus Facility Manager. Table 4 of this SPCC Plan provides a list of agencies to be contacted in the event of various spill circumstances. Discharges will usually be discovered during inspections conducted at the two GCC stand-by generator facilities in accordance with procedures set forth in Section 4.4 of this SPCC Plan and on the checklist of Appendix C.

If there is an immediate threat to human health (IDLH) or life (i.e., fire, noxious odors or oxygen deficient atmosphere), the facility must be evacuated immediately. The facility maintenance manager and next higher level authority should be notified of the IDLH condition once the facility has been safely evacuated.

If attempts to stop the release of the material at its source are unsuccessful, if special protective equipment is necessary to approach the release area, or if outside assistance is required to stop the release, the personnel identifying the spill and its conditions should notify the President, and a qualified environmental contractor, if necessary, to respond to the release.

The procedures for a small spill include absorbing spill with absorbent material such as absorbent clay, absorbent pads, sand or spill control material. Absorb spill with absorbent such as Place material on leak-proof labeled container for proper disposal.

3.2. Verbal Notification Requirements (Local and Federal)

In the event of a discharge, large spills or spills leading to surface waters must be reported to the Guam Environmental Protection Agency and the National Response Center. Initiate spill notification and reporting procedures. Report the incident immediately to the facility manager. Should he or she not be available report the incident to the next higher level authority of the facility or health and safety personnel. Contact numbers are located in Section 3.7. If there is an immediate threat to human health (IDLH) or life (i.e., fire, noxious odors or oxygen deficient atmosphere), the facility must be evacuated immediately. The facility manager and all higher level authorities should be notified of the IDLH condition once the facility has been safely evacuated. If attempts to stop the release of the material at its source are unsuccessful, if special protective equipment is necessary to approach the release area, or if outside assistance is required to stop the release, the personnel identifying the spill and its conditions should notify the facility manager, and a qualified environmental contractor, if necessary, to respond to the release.

The procedures for a large spill include removing spill with vacuum truck or other approved equipment. Transfer material to leak-proof labeled container for proper disposal. Report spill to Guam EPA.

3.3. Written Notification Requirements (Local and Federal)

All incidental small spills that are controlled and cleaned up by the facility maintenance personnel will be recorded internally by GCC. All spills/discharges in volumes greater than five gallons of any of the facility's fuel in storage shall be reported to Guam EPA both verbally and in writing.

A written notification will be made to Guam EPA for any single discharge of oil to a navigable waters or adjoining shoreline waterway of more than 1,000 U.S. gallons of oil or two discharges of 42 gallons or more in a 12-month period. This written notification must be made within 60 days of a qualifying discharge.

3.4. Submission of SPCC Information

Whenever the facility experiences a spill of more than 1,000 U.S. gallons or two discharges of 42 gallons or more in a 12 month period, which will likely cause adverse effects on Guam's groundwater resources and navigable waters, Guam Community College will provide

~~information in writing to the Administrator (Guam EPA) within 60 days of a qualifying~~ discharge. The detailed requirements are provided in Appendix F (Discharge Notification Procedures) of this SPCC Plan.

3.5. Spill Response Materials

Table 3: GCC Spill Response Equipment Inventory`

Quantity	Available Amt.	Type	Description	Uses
2 ea.	50 pound bag	Absorbent	All Purpose	Oil
½ Bail	100 pads	Absorbent	Oil-only Absorbent pads (200 pads/bail)	Oil-only
2 ea.		Empty Drums	Empty 55-gallon drums to hold contaminated material	Oil and diesel
2 boxes		Nitrile Gloves	Nitrile Gloves	Oil and other fuel spill response
2 boxes		Neoprene Gloves	Neoprene gloves	Oil and other fuel spill response
2 pairs		Coveralls	Disposable coverall suits for spill response	Oil and other fuel spill response
2 pairs		Vinyl/PVC overboots	Vinyl/PVC pull-on overboots	Oil and other fuel spill response

The inventory is checked monthly by GCC Facilities maintenance personnel to insure that all used, expired or obsolete response materials are replenished.

3.6. Spill Mitigation Procedures

An effective response plan aims to minimize the migration of petroleum products. Every effort should be made to prevent spills and emphasize containment at the source. This section outlines the emergency procedures in place should the release of petroleum products occur at the facility.

Actions to contain a release will depend on the extent of the release. An incidental release is a small spill that can be cleaned up by facility personnel under the OSHA Hazard Communication Standard. The release of material outside a containment area or a release that cannot be controlled may require the assistance of a qualified environmental contractor to provide emergency response.

If attempts to stop the release of the material at its source are successful and the released material is contained within the containment area, facility personnel may proceed with cleanup.

Following proper safety procedures, the spill should be contained by absorbent materials and dikes using shovels and brooms. Consult applicable MSDS found in Appendix B for material compatibility and environmental precautions.

All waste materials generated from the cleanup must be transported and disposed of in compliance with all applicable laws and regulations.

After a spill event, the designated company authority and facility manager will review spill response efforts, notification procedures and cleanup equipment usage to evaluate their adequacy for such an event. Where deficiencies are found, the SPCC Plan will be revised and amended.

3.6.1. Shut Off Ignition Sources

The person discovering a release of material from a container, tank, piping or operating equipment should initiate certain actions immediately. These actions include, but are not limited to:

Extinguish any potential source of ignition of flammable substances. Until the released material is identified as non-flammable and non-combustible, all potential sources of ignition should remain off. If the ignition source is stationary, attempt to move the spilled material away from the ignition source. Avoid sparks and movement creating static electricity.

3.6.2. Stop Oil Flow

If there is no danger to human health, attempt to stop the release at its source. This may include turning valves off, plugging leaks, etc. Wear appropriate personal protection equipment.

3.6.3. Stop the spread of Oil and Contact Field Operations Manager

Initiate spill notification and reporting procedures. Report the incident immediately to the facility maintenance manager, and should he or she not be available, report the incident to the next higher level authority. Contact numbers are located in Section 3.7.

3.6.4. Gather Spill Information

First identify the released material. Consult material safety data sheets (MSDS) to identify the released material. The MSDS will also provide information on the physical and chemical characteristics of the material, as well as information on the safe handling of the material. MSDS for petroleum products on the facility are located in Appendix B of this SPCC Plan.

3.6.5. Notify Agencies

Notification and reports to outside agencies are the responsibility of the designated company authority. He or she determines if a reportable spill has occurred and makes the necessary notifications. Verbal notifications to military and government agencies shall be executed, if necessary (see Appendix F).

3.7.Disposal Plan

Recovery and cleanup procedures should follow once the material has been contained. Recover and reuse as much material as possible where appropriate. Material that cannot be reused must be discarded as hazardous waste. Liquids absorbed by solid materials should be shoveled into open drums, or if size warrants, into a roll-off container. When drums are filled after a cleanup, the drum lids should be secured and the drums appropriately labeled identifying the contents, the date of the spill/cleanup, the site name and location. "Hazardous Waste" placards should be placed on the drums. Combining non-compatible materials can cause potentially dangerous chemical and/or physical reactions or may limit disposal-options; therefore, all cleanup materials should be placed in separate containers based on material type and product cleaned. If facility containment is limited at the time of a spill or discharge, and combining two different products is necessary, then compatibility information of facility materials can be found on their MSDS's located in Appendix B of this SPCC Plan. Porous materials, such as soil and wood, contaminated as a result of the spill will require disposal by a qualified environmental contractor (see Table 4).

If the spill threatens to reach an off-site waterway and the spill cannot be contained and recovered by facility personnel, the following agencies will be notified by the President.

Table 4: List of Emergency Response Contacts

NAME	TELEPHONE NO.	FAX NO.
National Response Center	1-800-424-8802	
U.S. Environmental Protection Agency	1-800-424-4000	
U.S. Coast Guard (Emergency)	671-564-8724	
CHEMTREC	1-800-424-9300	
Guam Environmental Protection Agency	671-475-1658	671-477-9402
Ambulance, Fire and Police Emergency Contact Number	911	
Environmental Contractors (not all inclusive)	----------	----------
Unitek Environmental Guam	671-689-4656	671-565-3391

Decontaminate non-disposable tools and equipment used in the cleanup. Even if the tools and equipment are dedicated for cleanup efforts, they must be decontaminated before returning them back into their spill control kit storage area. Methods of decontamination may include brushing, scraping, rinsing, high pressure washing, dissolving in a solvent, washing using household detergents, neutralizing or sterilizing the tools and equipment.

4. Spill Prevention, Control and Countermeasure Provisions

4.1.Potential Discharge Volume, Direction of Flow and Containment (112.7 (b))

Table 5: Potential Discharge Volume and Direction of Flow

Source	Type of Failure	Maximum Volume (gal)	Maximum Discharge Rate (gal/min)	Direction of Flow	Containment
Tanks					
Fuel Tank (Gen-1)	Tank Rupture	730		West and South West of Facility	Secondary Containment
Fuel Tank (Gen-2)	Tank Rupture	300		West and South West of Facility	*Catchment basin to Site Ponding Basin
Transfer					
Gen-1 Refueling	Incidental	5	7.5	West and South West of Facility	None, See Section 3.6
Gen-2 Refueling	Incidental	5	7.5	West and South West of Facility	None, See Section 3.6

*see deficiency in section 4.2

4.2.Containment and Diversionary Structures (112.7 (c))

The Stand-by generator facility, Gen-1, is a fairly new structure on campus and has a 8" secondary containment berm. Secondary containment for the 1,000gallon base tank is adequate, see below.

Berm Interior Demensions	22ft X 12.67ft
Berm Height	0.67ft
Berm Volume	22 X 12.67 X 0.67 X7.48 = 1,396gal >> 730gal OK

The Stand-by generator facility Gen-2 has a 4-inch berm. The secondary contain is not adequate due to a 7-inch opening at the east facing side of the generator building. This opening must be sealed with 4-inch high fill. A drain valve with lock must also be installed. One these measure are implemented this stand-by generator facility will be in compliance, see below.

Berm Interior Demensions	17.58ft X 14.33ft
Berm Height	0.33ft
Berm Volume	17.58 X 14.33 X 0.33 X7.48 = 621gal >> 300gal OK

4.3.Other Spill Prevention Measures (112.7 (d)

Minor spill kits in both stand-by generator facilities will be readily available to ensure quick and safe clean up occurs.

4.4.Inspections, Tests and Records (112.7 (e))

This SPCC Plan requires routine inspections of the two GCC stand-by generator facilities fuel containment equipment. Records of inspections performed as described in this SPCC Plan and signed by the appropriate supervisor are maintained at the GCC campus facilities maintenance office for a minimum of five years. The reports are to include a description of the inspection procedure, the date of the inspection, whether accumulated rainwater drainage was required, and the inspector's signature.

Each fuel container is inspected monthly by GCC qualified personnel as described in this Plan and following the checklist provided in Appendix C of this SPCC Plan. The monthly inspection is aimed at identifying signs of deterioration and maintenance needs, including the foundation and support of each container. Any leak from tank seams, gaskets, rivets, and bolts is promptly corrected. This Plan also describes provisions for monitoring the integrity of flow lines through a combination of monthly visual inspections and periodic pressure testing or through the use of an alternate technology.

The inspection program is comprised of informal daily inspections, scheduled monthly inspections, and periodic condition inspections. Additional inspections or examinations are performed whenever a potential malfunction, leak, spill, etc. is reported following a scheduled examination. Written examination/inspection procedures and monthly examination/inspection reports are signed by the GCC Facility Maintenance Manager or qualified inspector and are maintained at the GCC campus facilities maintenance office for a minimum of five years.

4.5.Personnel, Training and Discharge Prevention Procedures (112.7 (f))

The facility maintenance manager must provide periodic spill prevention briefings to facility personnel to assure adequate understanding of the SPCC plan. This may be done as frequently as monthly or at minimum annually. The training should highlight and describe known spill events or failures, if any, malfunctioning components, and recently developed precautionary measures. The training is meant to familiarize personnel with the SPCC plan, emergency response procedures, Personal Protective Equipment (PPE), mechanical systems and Material Safety Data Sheets (MSDS) for the products with which they are likely to come in contact. Personnel responsible for compliance of the SPCC plan must also continue to be updated on applicable pollution control laws, rules and regulations. A written agenda and attendance sheet is to be kept on file for each training session. New personnel will be instructed, as deemed appropriate, within a reasonable time after entering the facility. Contractors and other transient personnel will be advised of applicable spill prevention measures upon entering the facility.

4.6.Security (112.7 (g))

The Stand-by Generator Facility (Generac, Gen-1) is currently cordoned off by walls, decorative blocks, and a gated entrance. The facility itself has lighting on the interior as for the exterior the campus has multiple light posts surrounding its vicinity. One aluminum access door is locked and the chain link access gate is padlocked by facilities maintenance personnel.

The Stand-by Generator Facility (Cummins, Gen-2) is blocked off by chain link fence and concrete columns. The facility has one access gate which is padlocked by facilities maintenance personnel.

4.7.Facility Tank Car Loading and Unloading (112.7 (h))

This section is not applicable. Facility Tank Car Loading and Unloading is not presently undertaken and the site and it is not expected to be undertaken in the future. Should operations change such that facility tank car loading and unloading does occur at the site then this SPCC plan must be updated accordingly.

APPENDIX A
Figures

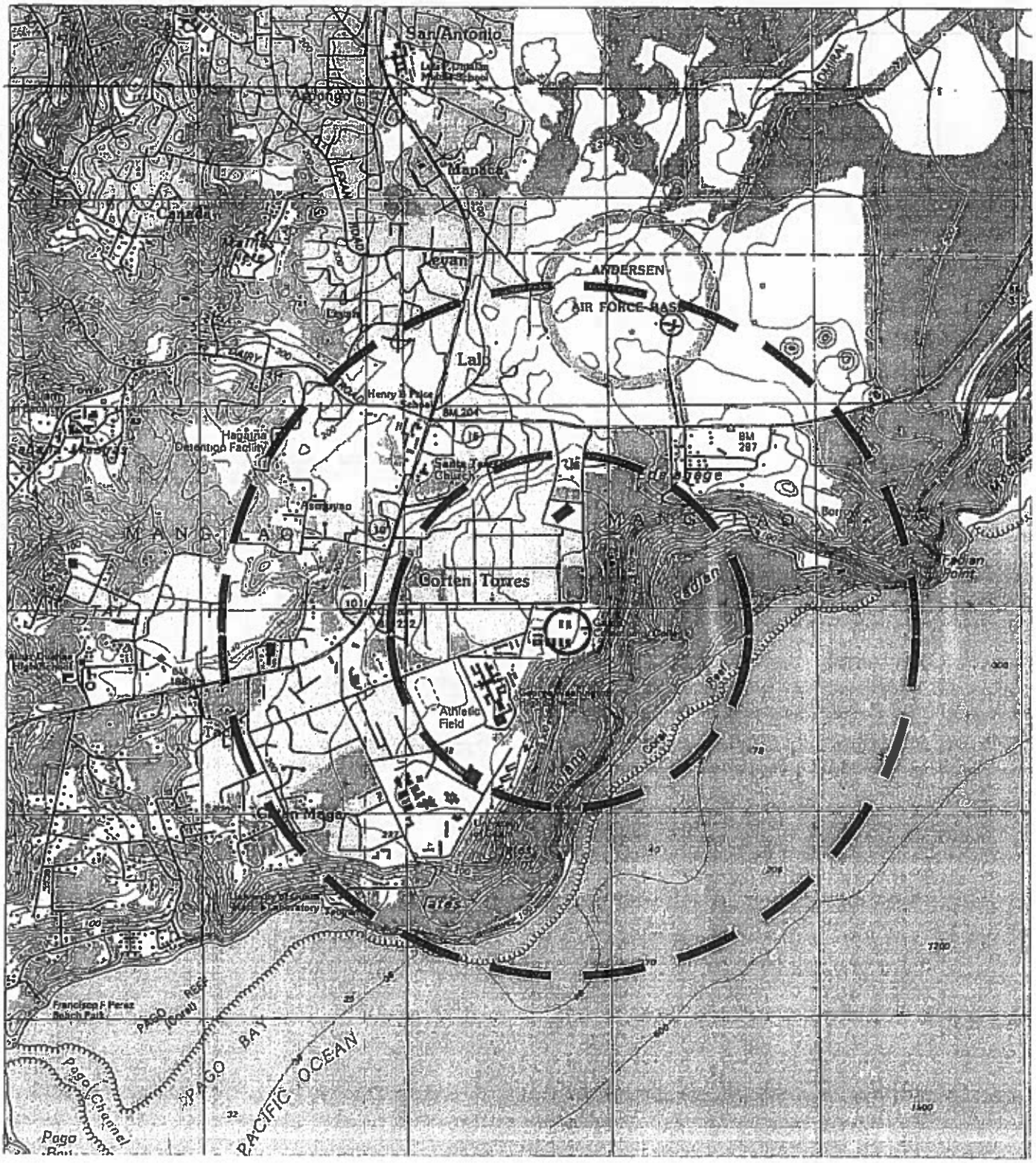
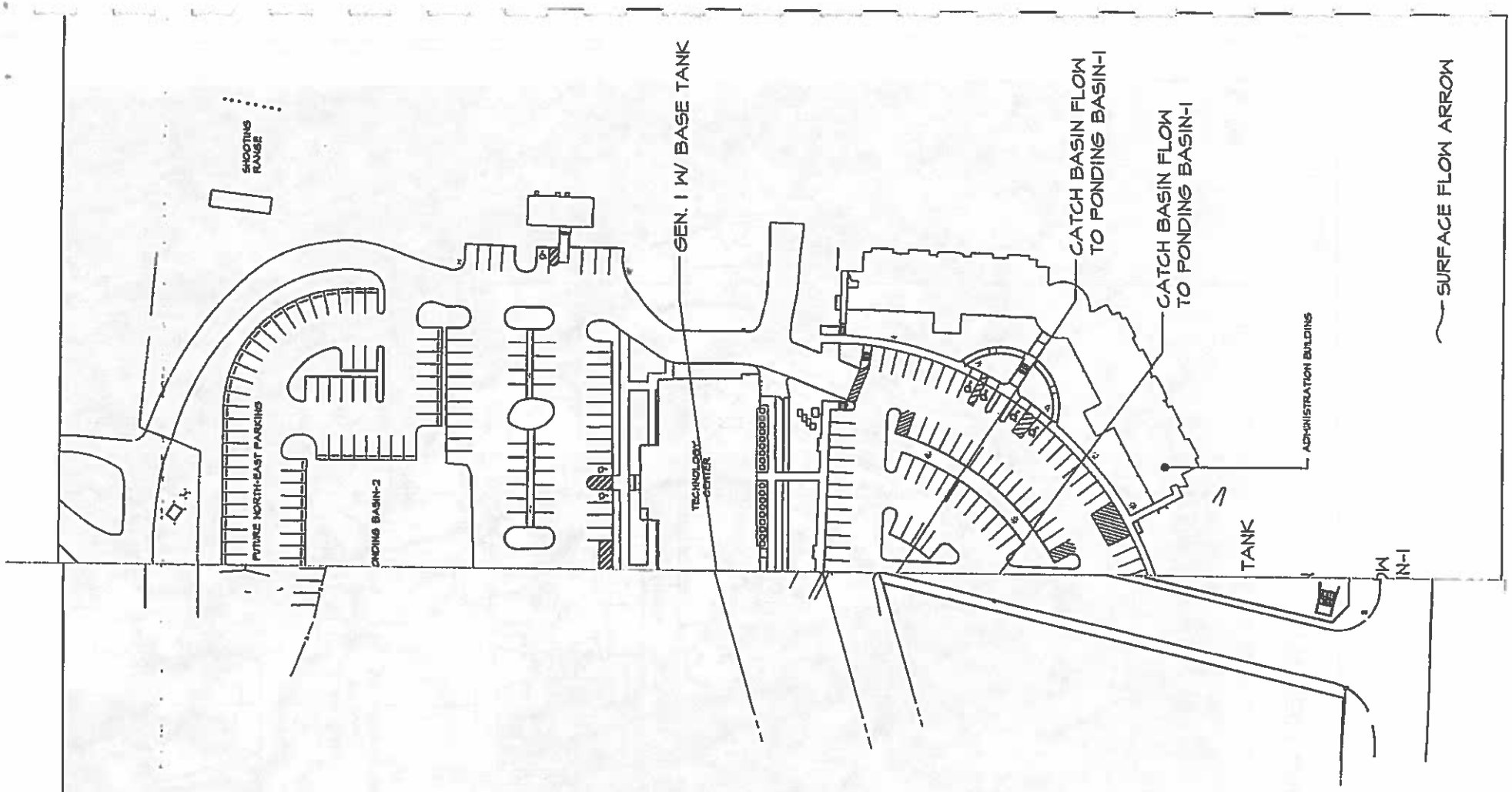


FIGURE 1
PROJECT AREA, 2000 USGS QUADRANGLE
5376 NEW-2A

SCALE: 1" = 2000'

5376 NEW-2A
MANGILAO, GUAM

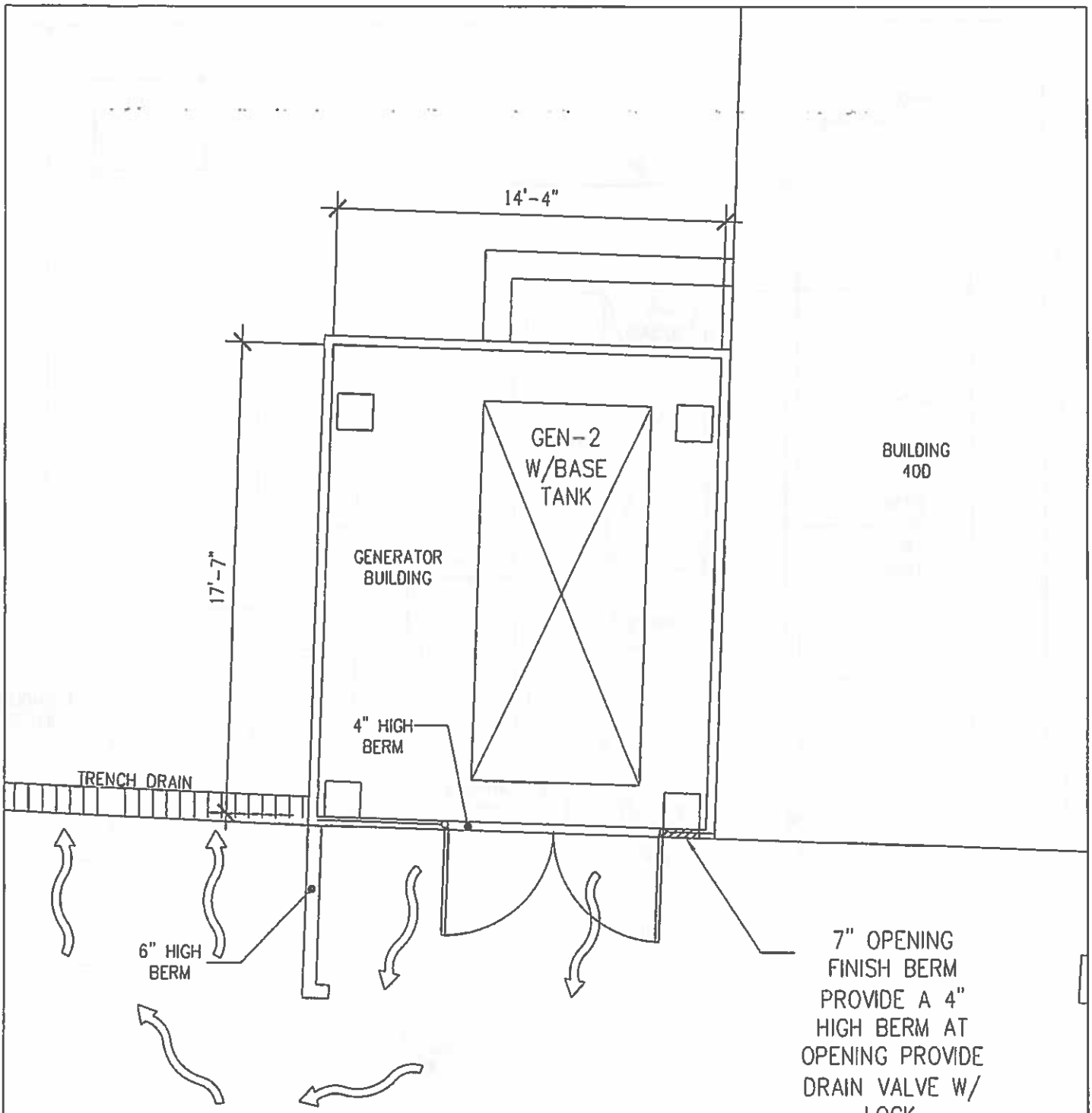


NOT TO SCALE

FIGURE 2

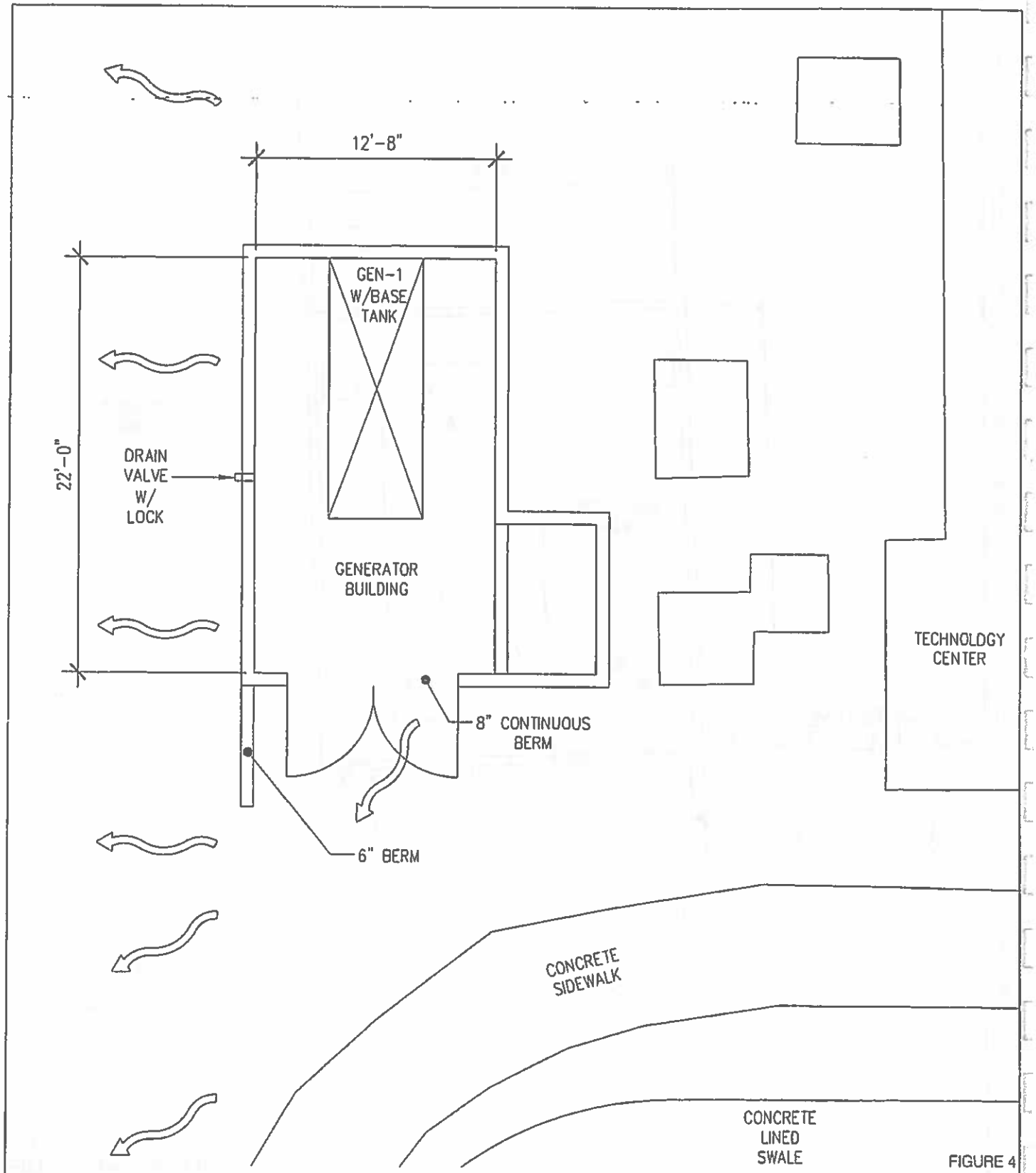
PROJECT AREA, SITE PLAN
5376 NEW-2A

5376 NEW-2A
MANGILAO, GUAM



NOT TO SCALE

FIGURE 3
PROJECT AREA, GEN-1
5376 NEW-2A



NOT OT SCALE

FIGURE 4

PROJECT AREA, GEN-2

5376 NEW-2A

APPENDIX B
Material Safety Data Sheets

www.spfcorp.com
SOUTH PACIFIC PETROLEUM

Material Safety Data Sheet

DIESEL

USE: FUEL FOR DIESEL ENGINES

1. PHYSICAL DESCRIPTION/PROPERTIES (Typical Figures)

APPEARANCE AND ODOR:
Clear and bright liquid. Oil odor.

CHEMICAL REACTIVITY:
Stable. Reacts with oxidizing agents.

SPECIFIC GRAVITY: 0.85
BOILING POINT (C): Init. 200, Final 380
MELTING POINT (C): n/ap.
VAPOR PRESSURE: n/av.
VAPOR DENSITY: > 1 (Air = 1)
EVAPORATION RATE: n/av.
SOLUBILITY (WATER): negligible
PERCENT VOLATILES: n/av.

FIRE/EXPLOSION HAZARD
FLASH POINT (C): 65
AUTOIGNITION (C): 230
LEL: 1.0% v/v UEL: 6.0% v/v

INGREDIENTS	PROPORTION	CAS No.
Complex mixture of paraffinic, naphthenic and aromatic hydrocarbons with very small amount of additive.	HIGH 100%	

2. HEALTH HAZARDS

HEALTH EFFECTS

SWALLOWED
Moderately toxic. Tends to break up into a foam if the patient vomits. Upon aspiration into the lungs, chemical pneumonitis may develop.

SKIN
Mildly irritating to skin. Frequent and prolonged contact can cause dermatitis.

EYE
Mildly irritating to eyes.

INHALED
Vapors are slightly toxic and high concentrations can cause irritation of the respiratory tract.

FIRST AID

SWALLOWED
If swallowed, do NOT induce vomiting. Give glass of water. Seek medical advice.

EYE
Hold eyes open, flood with water for at least 15 minutes. Seek medical advice.

SKIN
Remove contaminated clothing and wash skin thoroughly.

INHALED
Remove affected person from contaminated area. Apply artificial respiration, if not breathing. Urgently seeking medical advice.

*ADVICE TO PHYSICIAN
ORAL: Gastrointestinal irritation, nausea, vomiting and cramping. CNS depression, ranging from mild headache to anesthesia and coma. Pulmonary irritation secondary to exhalation of solvent. Lavage with cuffed tube if large quantity ingested. Aspiration is main danger. Enforce bed rest and observe carefully. Prophylactic antibiotics useful. Observe for 24 hours for chemical pneumonitis. Longer term medical surveillance may be necessary. Maintain airway and vital functions. Avoid sympathomimetic amines.

INHALATION: CNS depression characterized by headache and dizziness.

3. PRECAUTIONS FOR USE

EXPOSURE LIMITS
None established.

ENGINEERING CONTROLS

Special ventilation is not normally required due to the low volatility of the product at normal temperatures. At higher than ambient temperatures, or in the operation of certain equipment, mist or vapor may be generated and additional ventilation should be provided to keep air levels low.

Where necessary: Provide explosion proof ventilation system. Maintain adequate ventilation.

In confined spaces, air supplied equipment complying with AS1716-1984 "Respiratory Protective Devices" should be used.

PERSONAL PROTECTION

Avoid contact with the skin and eyes and avoid breathing vapors, fumes or spray mists.

For normal use, where contaminant vapor/mist levels are low the following equipment is required:

1. Eye protection, i.e.: safety glasses.
2. Gloves
3. Cotton overalls done up
4. Leather boots with rubber soles

Where liquid is liable or likely to come into contact with the person irrespective of spray mists or vapor levels in the area, the following equipment should be included in the previous precautions:

1. Goggles or face shield
2. PVC gloves
3. PVC apron and sleeves, or full PVC covering
4. PVC or rubber boots.

Where high contaminant spray mist or vapor levels exist or are expected to arise the following additional equipment is required:

1. For short exposures, i.e.: sampling – Appropriate organic cartridge respirator i.e.: 3M brand 8712 and goggles. Ensure working life of cartridge is not exceeded. NB: If vapor levels are extremely high, air supplied apparatus should be used.
2. For prolonged exposures and confined spaces: - Full face air supplied or self contained breathing apparatus complying with AS 1716-1984 "Respiratory Protective Devices".

If contamination occurs, change clothing. Launder contaminated clothing before reuse. Gloves or footwear internally contaminated should be discarded.

Observe good personal hygiene – wash hands thoroughly with soap or hand cleanser before eating, drinking or smoking and before using the toilet.

Respiratory Protection – refer to "Ventilation".

FLAMMABILITY

Combustible liquid. Isolate from sources of heat, naked flames or sparks. Take precautions against static electricity discharges. Earth and bond all process equipment including tanks and drums. Explosive air-

vapor mixture may form, ensure adequate ventilation. Ensure equipment and fittings are flame proofed. See Safe Handling Information-Fire/Explosion Hazard.

SAFE HANDLING INFORMATION

STORAGE AND TRANSPORT
Store in a cool place. Store container in well ventilated place. Store away from heat, naked flames or sparks. Store away from strong oxidizing agents. Keep containers closed at all times. Keep away from food, foodstuffs, drink or clothing. Take precautions against static electricity discharges.

SPILLS AND DISPOSAL
Extinguish or remove all sources of ignition. Clear area of all unprotected personnel. Wear appropriate protection equipment. Refer to VENTILATION and PERSONAL PROTECTION.

Shut off source of leak if safe to do so. Dike and contain spill with sand or earth.

MINOR: Absorb the liquid with sand, earth or other absorbent. Place used absorbent in suitable, sealable, labeled containers.

MAJOR: take up with vacuum truck if available or absorb with sand, earth, or other absorbent. Place used absorbent in suitable, sealable, labeled containers.

Dispose of following requirements of state environmental authority. Keep away from heat, naked flame or sparks.

Do not flush to drains or sewers. Do not contaminate stream, rivers, or watercourses. Inform local authority if liquid enters drains, sewers, streams, etc.

FIRE/EXPLOSION HAZARD
Explosive air-vapor mixture may form. Earth and bond all transfer equipment including tanks and drums. Keep away from heat, naked flames or sparks. Have adequate fire equipment available.

Evacuate immediate area. Advise Fire Brigade of nature of hazard. Keep pipelines, containers, and etc. cool with water spray. Wear full protective equipment including breathing apparatus.

Foam, BCF, carbon dioxide or dry chemical extinguishers required. For large fires, use foam.

Carbon Monoxide and other unidentifiable organic compounds may be formed during combustion.

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND

APPENDIX C
Monthly Inspection Checklist

APPENDIX C: Monthly Inspection Checklist

Further description and comments, if needed, should be provided on a separate sheet of paper and attached to this sheet. Any item answered "Yes" needs to be promptly reported, repaired, or replaced, as it may result in non-compliance with regulatory requirements. Records are maintained with the SPCC Plan at the

Signature:_____ Date:_____

	Yes	No	Description and Comments (Note tank/equipment ID)
Storage tanks and Separation Equipment			
Tank surfaces show signs of leakage			
Tanks show signs of damage, rust, or deterioration			
Bolts, rivets or seams are damaged			
Aboveground tank supports are deteriorated or buckled			
Aboveground tank foundations have eroded or settled			
Gaskets are leaking			
Level gauges or alarms are inoperative			
Vents are obstructed			
Theif hatch and vent valve does not seal air tight			
containment berm show discoloration or stains			
Berm is breached or eroded or has vegetation			
Berm drainage valves are open/broken			
Tank area clear of trash and vegetation			
Equipment protectors, labels or signs are missing			
Piping/Flowlines and related equipment			
Valve seals or gaskets are leaking			
Pipelines or supports are damaged or deteriorated			
Buried pipelines are exposed			
Transfer equipment			
Loading/unloading lines are damaged or deteriorated			
Connections are not capped or blank-flanged			
Secondary containment is damaged or stained			
Response Kit Inventory			
Discharge response material is missing, damaged, or needs replacement			

APPENDIX D
Record of Dike (Berm) Drainage

APPENDIX D: Record of Dike Drainage

This record must be completed when rainwater from diked areas is drained into a storm drain or into an open watercourse, lake, or pond, and bypasses the water treatment system. The bypass valve must noramlly be sealed in closed position and opened and resealed following drainage under responsible supervision. Records are maintained with the SPCC Plan

Date	Area	Presence of Oil	Time Started	Time Finished	Signature

APPENDIX E
Discahrge Prevention Briefing Log

APPENDIX E: Discharge Prevention Briefing Log

Date	Type of Briefing	Instructor(s)

APPENDIX F
Discharge Notification Procedures

APPENDIX F: Discahrge Notification Procedures

Circumstances, Instructions, and phone numbers for reporting a discharge to the National Response Center and other federal, state, and local agencies, and to other affected parties, are provided below. This list of numbers is also posted

Local Emergency (fire, explosion, or other hazards) Contact No. 911

Agency/Organization	Agency Contact	Circumstances	When to Notify
National Response Center	1-800-424-8802		
U.S. Environmental Protection Agency	1-800-424-4000		
U.S Coast Guard (Emergency)	671-564-8724		
CHEMTREC	1-800-424-9300		
Guam Environmental Protection Agency	671-475-1658		
Ambulance, Fire and Police Emergency Contact Number	911		
Environmental Contractor: Unitek Environmental Guam	671-689-4656		

The person reporting the discharge must provide the following information:

- Name, location, organization, and telephone number;
- Name and address of the owner/operator;
- Date and time of the incident;
- Location of the incident;
- Source and cause of discharge;
- Type of material(s) discharged;
- Total quantity of materials discharged;
- Quantity discharged in harmful quantity (to navigable waters or adjoining shorelines);
- Danger or threat posed by the release or discharge;
- Description of all affected media (e.g. water, soil)
- Number and types of injuries, if any, and damaged caused;
- Weather conditions;
- Actions used to stop, remove, and mitigate effects of discharge;
- Whether an evacuation is needed;
- Name of individuals and/or organizations contacted;
- Any other information to help emergency personnel respond to the incident.

Whenever the facility discharges more than 1,000 U.S. gallons of oil in a single event, or discharges more than 42 gallons in each of two discharge incidents within a 12-month period, the Equipment Yard Manager or designated official in charge of the facility's SPCC Plan must provide the following information to the Guam EPA Administrator within 60 days:

- Name of the facility;
- Name of the owner/operator;
- Location of the facility;
- Maximum storage or handling capacity
- Corrective actions and countermeasures taken, including a description of equipment repairs and replacements;
- Description of facility, including maps, flow diagrams, and topographical maps;
- Cause of discharge(s) to navigable waters, including a failure analysis of the system and subsystems in which the failure occurred.

- Additional preventive measures taken or contemplated to minimize possibility of recurrence;
- Other pertinent information requested by the Regional Administrator.