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UNITED STATES ARMY ENVIRONMENTAL HYGIENE AGENCY

ABERDEEN PROVING GROUND, MD 21010-5422

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

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DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO
ATTENTION OF

19 MAR 1990

HSHB-ME-SG (40)

MEMORANDUM FOR Director, Defense Logistics Agency, ATTN: DLA-WS, Alexandria, VA 22304-6100

SUBJECT: Environmental Program Review No. 38-26-7154-90, Defense National Stockpile, New Haven Depot, New Haven, Indiana, 16-19 October 1989

Copies of the report with Executive Summary are enclosed.

FOR THE COMMANDER:

Encl

PAUL R. THIES
LTC, MS
Chief, Waste Disposal Engineering Division

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Cdr, HSC, ATTN: HSCL-P (w/encl)
Cdr, MEDDAC, Ft Knox, ATTN: PVNTMED Svc (2 cy) (w/encl)
Cdr, USAEHA-N (w/encl)
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Cdr, WRAMC, ATTN: PVNTMED Svc (w/encl)

EXECUTIVE SUMMARY
ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

1. PURPOSE. The objectives of this Environmental Program Review (EPR) were to evaluate the environmental impact of operations at the Defense National Stockpile at New Haven Depot, and to determine compliance with applicable Federal, State, and local environmental regulations. The review included evaluations of water quality, air quality, solid and hazardous waste management, ground-water quality, and environmental radiation.

2. SIGNIFICANT CONCLUSIONS.

a. Air Pollution Review. New Haven Depot (NHD) does not have any air pollution sources which emit significant amounts of air pollutants, are required to be registered with the State of Indiana, or require operating permits. Depot personnel do not conduct open burning operations within installation boundaries except when a written variance has been issued from the Air Pollution Control Board (APCB). Depot personnel should maintain records detailing the amount of fuel consumption, percent of sulfur content, heat content, and SO_2 emission rates for the three boilers located on the installation in the event the APCB requests this information. Uncovered outdoor storage piles at NHD have the potential to emit fugitive dust. Since the piles are rarely disturbed, except from erosion from severe weather, these emissions are minimal.

b. Environmental Radiation Review. The overall personnel dosimetry program appeared to be managed in accordance with Nuclear Regulatory Commission (NRC) requirements; however, the dosimetry program did not fulfill all Defense Logistics Agency (DLA) requirements. The NHD had the basis for a sound radiation protection program; however, the radiological environmental concerns had not been addressed and staffed. A radiological environmental assessment had not been performed as required by Federal regulations. There were no records of training of personnel working in radiation controlled areas. There had been no designated radiological monitor for NHD since the primary monitor's employment was terminated in May 1989; however, the assistant radiological monitor was presently performing the duties at the time of this review. Written guidance had not been provided to NHD by DLA concerning the specific DLA regulations required to be used in the implementation of the radiation protection program.

c. Ground-Water Review. There is some evidence that stockpile materials are capable of leaching heavy metals to surface water and ground water, and therefore, the two potable water wells should be sampled and analyzed annually for heavy metals. The planned removal/replacement of all underground storage tanks (USTs) should identify whether environmental releases have occurred. There is little evidence that past Depot activities have introduced contamination to the ground water; however, the historical use of solvents and lack of disposal data warrant sampling the potable water for volatile organic compounds.

d. Hazardous Waste Management Review. Command emphasis is excellent; action on NHD's part and support/assistance from DLA is superb and responsive to regulatory requirements. There is no written Hazardous Waste Management Plan (HWMP) or hazardous waste minimization (HAZMIN) program at NHD; however, elaborate plans/programs are not required. Records of training in hazardous material/hazardous waste (HM/HW) management are not kept at NHD; the records are maintained at DLA HQ. There is no documentation that the stored HM/HW on the accountability records of the Defense Reutilization and Marketing Office (DRMO) has been inspected.

e. Solid Waste Management Review. New Haven Depot currently manages and disposes of solid waste generated in a proper and effective manner. The storage, transportation, and disposal of solid waste are performed under contract. The infrequency of the pickups under the new contract could result in the prolonged storage of decayable wastes in the roll-off dumpster, leading to odor and pest problems.

f. Water Pollution and Potable Water Quality Review. Sampling of drainage system discharges may be required to determine if contaminants from materials storage areas are being washed into the drainage system at levels exceeding State water quality standards. The NHD has registered its regulated USTs with the Indiana State Board of Health, and the Defense National Stockpile Environmental Office is in the process of issuing a contract for the removal/replacement of all USTs on the installation. A Spill Prevention Control and Countermeasure Plan/Installation Spill Contingency Plan (SPCCP/ISCP) had not been prepared for the NHD. There were no reported problems with the drinking water quality at the time of this review; however, the potable water well head was not adequately sealed and the potable water system had not been adequately monitored.

3. SIGNIFICANT RECOMMENDATIONS.

a. Air Pollution Review. To ensure regulatory compliance, obtain a variance of Indiana open burning restrictions if any future burning activities are planned at the Depot. Maintain monthly records detailing the consumption of No. 2 fuel oil, diesel, gasoline, and propane, percent of sulfur content of fuels, heat content, and percent of SO_2 emissions in accordance with State regulations. Submit these records to the APCB when such actions are requested by the State of Indiana.

b. Environmental Radiation Review.

(1) New Haven Depot. To ensure regulatory compliance, ensure that all individuals working in a radiation controlled area where radioactive materials are stored have been trained and instructed in radiation protection, and ensure that a radiological environmental assessment is performed. To ensure compliance with DLA regulations, designate in writing a qualified radiation protection officer and person responsible for maintaining records of occupational exposure to ionizing radiation. Review the overall personnel dosimetry program and implement the dosimetry control and recording procedures for all personnel exposed to radioactive material. Ensure that radiological emergency procedures are developed and implemented.

(2) Headquarters, DLA. Ensure that regulations which prescribe and outline procedures and responsibilities for control and recording of exposure to ionizing radiation from radioactive materials; regulations which establish policy and assign responsibilities for abatement and control of environmental radiological pollution emanating from DLA facilities; and regulations which prescribe policy and responsibilities for managing and implementing the DLA radiation protection program are provided to NHD.

c. Ground Water Review. To ensure regulatory compliance and protection of ground water, provisions for tank and soil inspection, release assessment, and corrective action must be built into the UST removal plan. Collect samples from the two potable water wells and analyze for heavy metals at least annually. If the ground water is found to be contaminated with metals, investigate whether the stockpile materials are contributing sources. Collect samples from the two potable water wells and analyze for volatile organic compounds at least once.

d. Hazardous Waste Management Review. To ensure regulatory compliance, the following recommendations are made: Develop brief policy statements to serve as an HWMP and documentation of a HAZMIN program. Develop inspection sheets for the HM/HW turned in to DRMO. Maintain records of completed training and completed inspection sheets for 3 years. To ensure good environmental/engineering practice, designate one representative to serve as liaison with the Local Emergency Planning Committee, and consider sending one individual to receive SARA, Title I training in HW operations and emergency response.

e. Solid Waste Management Review. Ensure that decayable solid wastes are not stored in the roll-off dumpster to avoid the promotion of odors, disease vectors, and pests. If these wastes are placed in the dumpster, arrange for collection within 1 week.

f. Water Pollution and Potable Water Quality Review. To ensure regulatory compliance, contact the State permitting authority and determine if there are specific National Pollutant Discharge Elimination System permit sampling/monitoring requirements for NHD's drainage discharges. Ensure that UST removal/replacement is in accordance with Federal UST technical standards and corrective action requirements. Expedite the development and implementation of an SPCCP and ISCP in accordance with Federal and DLA regulations. To ensure good environmental management practice, provide a complete seal at the potable water well head at Building T-133; consider monitoring the potable water system for coliform bacteria on a more frequent basis; and consider resampling/analyzing for lead in the drinking water.

EPR No. 38-26-7154-90, 16-19 Oct 89

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DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-6422

REPLY TO
ATTENTION OF

HSHB-ME-SG

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

1. REFERENCES. The following references are applicable to the body of this report. References used in each program review are provided at the end of each appendix.

a. Brochure, Casad Engineering Depot, Corps of Engineers, U.S. Army, circa 1953.

b. Questionnaire For Federal Facilities or Environmental Compliance Profile, Defense Logistics Agency/Defense National Stockpile, undated.

c. Climatic Atlas of the United States, U.S. Department of Commerce, 1979.

d. Environmental Geology of Allen County, Indiana, N.K. Bleur and Michael C. Moore, Environmental Study 13, Department of Natural Resources, State Geological Survey.

2. AUTHORITY. This review was performed under the following authorities:

a. AEHA Form 250-R, DLA, 7 July 1988.

b. Memorandum, USAEHA, HSHB-M, 20 June 1989, subject: USAEHA Schedule of Field Services, FY 89.

c. Interservice Support Agreement, W23MWP-89277-001, U.S. Army Environmental Hygiene Agency/Defense Logistics Agency, effective until 30 September 1994.

3. PURPOSE. The objectives of this Environmental Program Review (EPR) were to evaluate the environmental impact of operations at the Defense National Stockpile (DNS) at New Haven Depot (NHD), and to determine compliance with applicable Federal, State, and local environmental regulations. The review included evaluations of water quality, air quality, solid and hazardous waste (HW) management, ground-water quality, and environmental radiation.

4. GENERAL.

a. Abbreviations. A list of abbreviations used in this report is provided as Appendix A.

b. Review Team Members. The following team members participated in the EPR:

(1) Ms. Patricia O. Rippey, Waste Disposal Engineering Division, team leader, responsible for the ground-water and solid waste management reviews.

(2) Mr. Michael Diem, Waste Disposal Engineering Division, responsible for the HW management review.

(3) 2LT Brian Higgins, Air Pollution Engineering Division, responsible for the air pollution review.

(4) Mr. Harris Edge, Health Physics Division, responsible for the environmental radiation review.

(5) Mr. Kenneth Lancellotti, Water Quality Engineering Division, responsible for the water pollution and potable water quality review.

c. Personnel Contacted. A list of the personnel contacted during the EPR is provided as Appendix B.

d. Exit Briefings/Preliminary Report. An exit briefing was held at NHD on 18 October 1989, during which the preliminary conclusions and recommendations were presented. In attendance were Mr. Frederic Brooks, NHD Manager; Mr. Kevin Reilly, Defense National Stockpile Center (DNSC); and Mr. Harry Stumpf, Defense Logistics Agency (DLA). The following week, the environmental radiation portion of the EPR was performed. An exit briefing and telephonic briefing to Mr. Reilly (DNS) regarding the conclusions and recommendations of this program area were held on 24 October 1989. A preliminary report containing the exit notes as an enclosure was dispatched from this Agency on 28 November 1989.

e. Location and Mission. New Haven Depot is located on Highway 14 in New Haven, Indiana, approximately 12 miles east of Fort Wayne (Figure 1). The Depot's mission is to procure, store, and maintain strategic materials for national defense.

f. History.

(1) The property, originally encompassing over 600 acres, was acquired by the U.S. Government in 1942. The Depot's construction as a Holding and Reconsignment Point was authorized by the Chief of Engineers. Before its completion in 1943, the

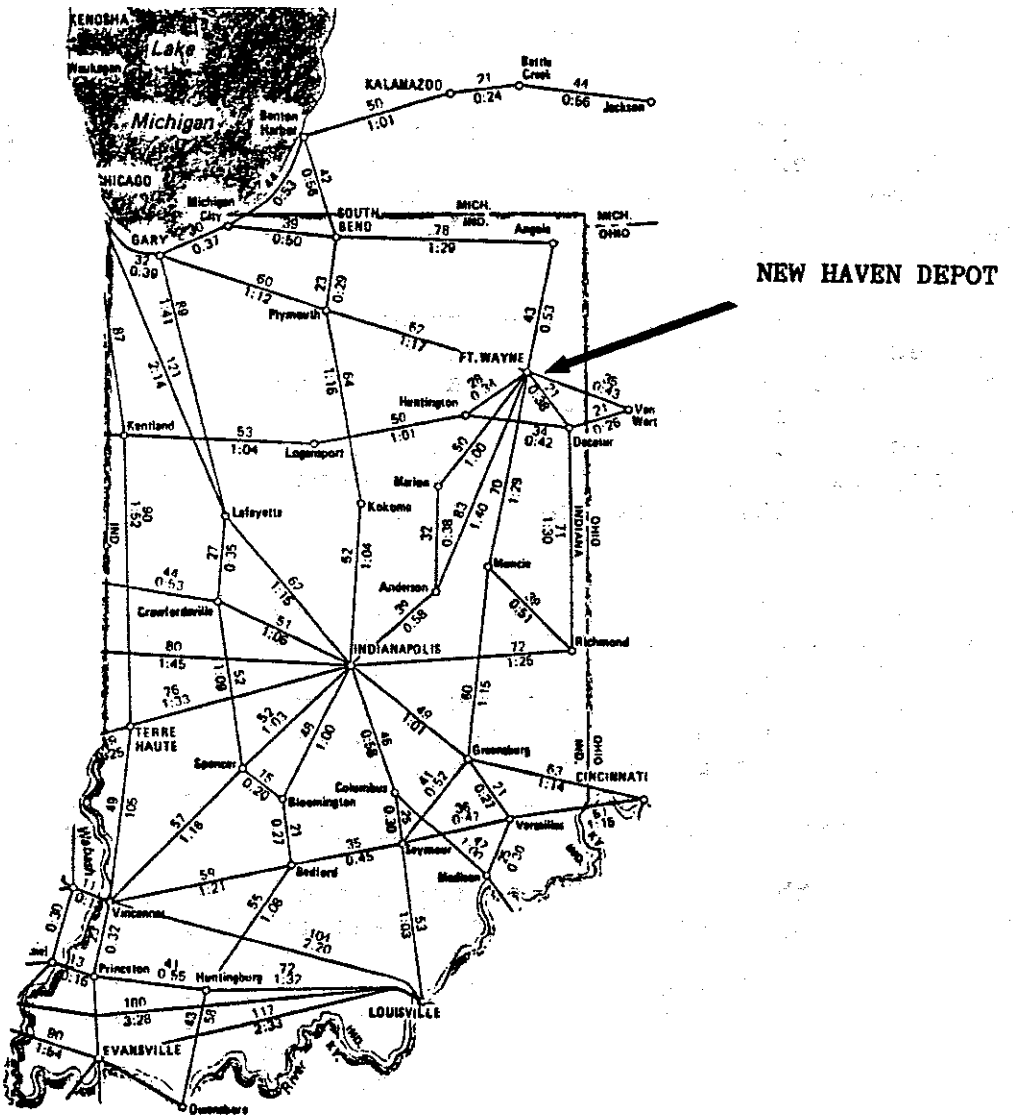

Figure 1. Location of New Haven Depot

Depot was renamed the New Haven Ordnance Depot, and then the Casad Ordnance Depot, under the Ordnance Department. The latter name was derived from Colonel Casad (1878-1927), who served as Chief of Ordnance during World War I. During World War II, the Depot operated as an Ordnance Department Class II installation. After the war, it was given surplus standby status under the Chief of Engineers.

(2) In 1948, the Depot became an inactive Class II installation under the Chief of Engineers and was redesignated Casad Engineer Depot. The sole mission at that time was to store strategic materials for the national stockpile under the General Services Administration (GSA).

(3) In 1951, during the Korean War, Casad Engineer Depot became an active Class II installation. It fulfilled the additional Troop Stock mission of assembling, preserving, and packaging engineer sets for troop supply. These sets included equipment for camouflage, carpentry, firefighting, blacksmithing, pipefitting, surveying, welding, field mapping, and many other engineering activities (reference 1a).

(4) Other sources report that the Depot was used as an Army Engineer Training Area until 1955. Reportedly, the site contained housing, administration, a dispensary, cafeteria, and training facilities during that time, and until after the Korean War. In 1955, the Corps of Engineers reported the land as excess, and in 1958 control of the Depot was given to GSA. Portions of the property have since been sold: in 1959, 130 acres in the western portion; and in 1972, 133 acres in the northeastern portion containing Lake Ashley and a pistol range.

(5) In the early 1980's, the National Defense Stockpile Center, under GSA, assumed the management function (maintenance of grounds and utilities) for stockpile sites across the country. In 1988, the stockpile program was transferred from GSA to the DLA, and renamed DNS. The property itself has not been transferred to DLA, and thus, it is still technically owned by GSA through the Public Building Service.

(6) Currently, NHD occupies 274 acres. A general site map is provided as Figure 2. There are 32 permanent buildings and 2 portable structures in use. The Depot population consists of nine stockpile employees and eight contract guards (reference 1b).

5. ENVIRONMENTAL SETTING.

a. Physiography. The NHD is located in Jefferson Township of Allen County in northeastern Indiana. It falls within the Maumee Lake plain unit of the Central Lowland Physiographic Province.

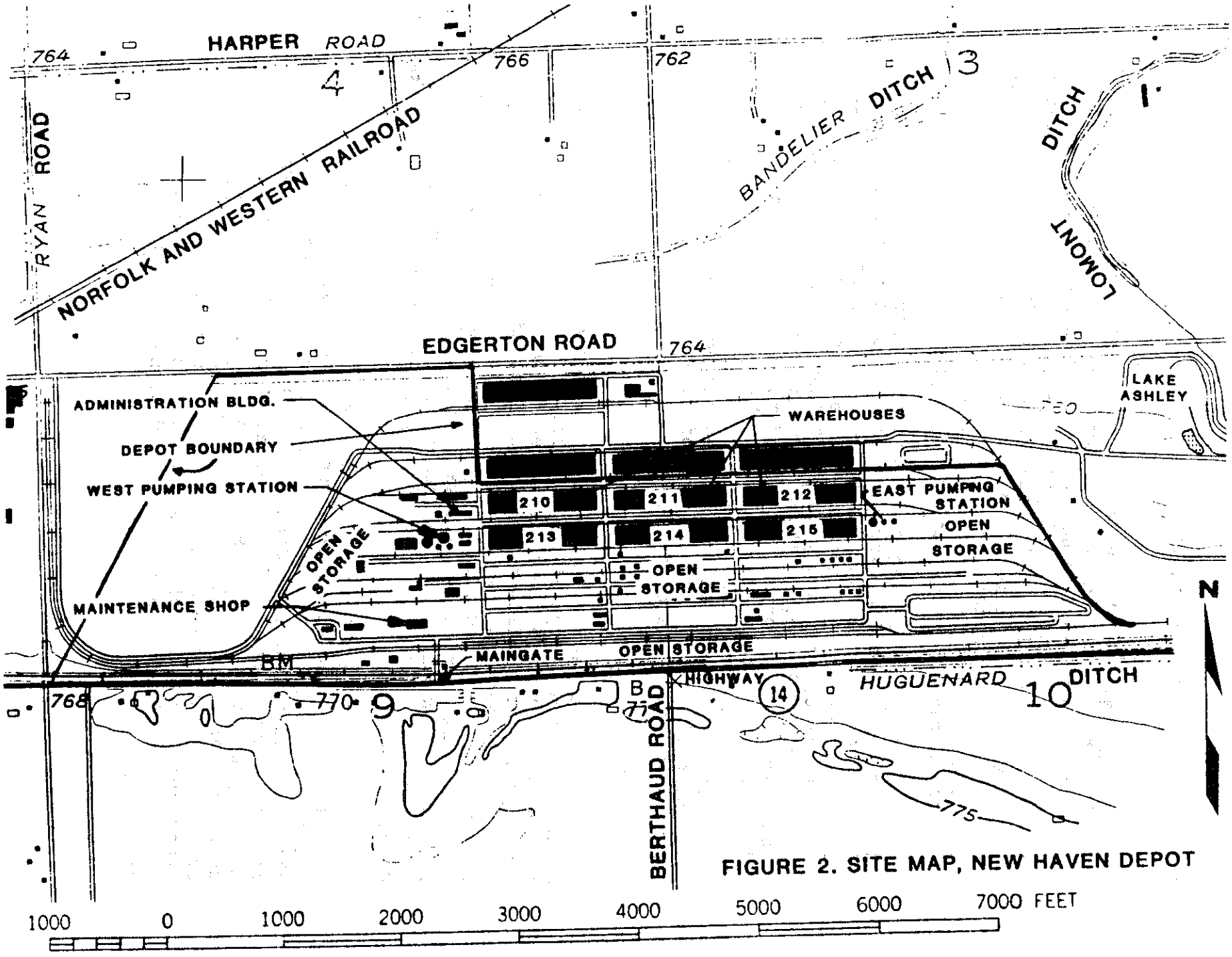

FIGURE 2. SITE MAP, NEW HAVEN DEPOT

b. Climate. New Haven Depot experiences fairly moderate conditions throughout the year. Normal daily temperatures at NHD range from 20 degrees Fahrenheit (°F) in January to 85 °F in August. Normal monthly total precipitation is 2-4 inches, except for heavier rainfall (4-8 inches) in May and June. The average annual total precipitation is 36-38 inches. The mean annual lake evaporation is 32 inches, which characterizes fairly humid conditions. Prevailing winds are to the northeast, with mean wind speeds ranging from 8 to 13 miles per hour (reference 1c).

c. Geology. This region is characterized by glacial till and lacustrine deposits overlying bedrock of Devonian limestone and dolomite. The bedrock was derived from an ancient sea basin prior to the onset of glaciation. The thickness of the till overburden is approximately 50 to 70 feet in the vicinity of NHD, based on area well logs. These deposits extend hundreds of feet in the western and northern parts of the county, but have undergone more extensive erosion in the lake plain area, where the NHD is situated. The till, part of the Lagro Formation, is comprised of lake deposits developed behind an eastwardly retreating glacier. They consist of massive, firm, clay loam and silty clay loam (reference 1d).

d. Hydrology.

(1) Surface Water. Since the topography is very flat, surface water drainage at NHD is controlled by manmade drainage ditches which run north-south and east-west across the depot. The majority of surface drainage is directed towards the north; however, drainage in the southeastern part of the depot runs to the south. A major drainage ditch traverses the northern border of the facility and flows eastward to a small recreational lake. The regional waterway is the Maumee River, which originates in Fort Wayne and travels north of NHD, heading northeast into Lake Erie.

(2) Ground Water. For the most part, ground water occurs at the glacial till/bedrock interface or in the uppermost bedrock formations in this part of the county. Ground water can therefore be expected at depths of 50 to 70 feet, and moves to the north/northwest in the NHD area. Two wells installed on the depot, presumably in the 1940's, provide potable water and stand-by water for firefighting. No records of the well specifications or drilling logs were available at the depot or through various State and County agencies. Appendix E contains a more detailed description of the ground-water conditions and potential sources of contamination.

6. FINDINGS AND DISCUSSION/CONCLUSIONS/RECOMMENDATIONS. Findings and Discussion, Conclusions, and Recommendations are provided in the Appendix corresponding to each program review. For the reader's convenience, Tables 1 through 6 provide a summary of findings for each review area.

7. TECHNICAL ASSISTANCE. Information on obtaining technical assistance from this Agency may be found in Appendix I.

Patricia O. Rippey

PATRICIA O. RIPPEY
Environmental Scientist
Waste Disposal Engineering Division

APPROVED:

John W. Bauer

JOHN W. BAUER, P.G.
Program Manager
Ground Water and Solid Waste Management

TABLE 1. AIR POLLUTION, NEW HAVEN DEPOT ENVIRONMENTAL PROGRAM REVIEW, SUMMARY OF FINDINGS

PROGRAM ELEMENT	*****REGULATORY COMPLIANCE STATUS***** FEDERAL	STATE	LOCAL	DLA	OTHER	REGULATORY CITATION	NATURE OF NONCOMPLIANCE ADMIN	SUBSTANTIVE	COMMENTS
1. Emission Inventory	YES	YES	---	---	---	OMB FORM 158-R75			Submission of information not requested.
2. Combustion Sources	YES	YES	---	---	---	326 IAC 2-1-1 326 IAC 5-1-1			Exempt from permitting. Complies with opacity standard.
3. Reporting Requirements	---	NO	---	---	---	326 IAC 7-1-3	X		Fuel consumption/data not updated.
4. Open Burning Open Detonation	---	YES	---	---	---	326 IAC 4-1-3 326 IAC 4-1-4			OB conducted with proper permits.
5. Fuel Storage /Dispensing	---	YES	---	---	---	326 IAC 8-4-3 326 IAC 8-4-6			Exempt from storage, dispensing, and permitting requirements.
6. Surface Coating	---	YES	---	---	---	326 IAC 8-2			Exempt from surface coating requirements.
7. Metal Cleaning Degreasing	---	YES	---	---	---	326 IAC 8-3-2			Complies with standard.
8. Fugitive Emissions	---	YES	---	---	---	326 IAC 6-4-1			Complies with standards.
9. Toxic/Hazard Air Pollutants	YES	YES	---	---	---	40 CFR 61; Indiana Air Toxics Program			Sources exempt from NESHAP and State AAL's.
10. Mobile Sources	YES	YES	---	---	---	40 CFR 86; 326 IAC 13-1-1			Exempt from State standards; regulated by EPA.
11. Emergency Episode Plan	---	YES	---	---	---	326 IAC 1-5-2			Exempt from State emergency plan requirements.

TABLE 2
ENVIRONMENTAL RADIATION PROGRAM REVIEW
NEW HAVEN DEPOT ENVIRONMENTAL PROGRAM REVIEW
SUMMARY OF FINDINGS

PROGRAM ELEMENT	REGULATORY REQUIREMENTS				REGULATORY CITATION	NATURE OF NONCOMPLIANCE		COMMENTS
	Federal	State	Local	DLA		Admin	Structural	
Shipping Receiving	No	No	N/A	No				
Storage	No	No	N/A	No				
Disposal	No	No	N/A	No				
Dosimetry	No	No	N/A	Yes	DLAR 1000.28	X		Individual responsible for preparing and maintaining DD Forms 1141 and 1952 was not designated in writing.
					DLAR 1000.28	X		Review the overall personnel dosimetry program and implement the dosimetry control and recording procedures outlined in DLAR 1000.28.
Environmental	Yes	No	N/A	Yes	Title 40, CFR, 1500-15008 DSAR 1000.17	X		Ensure that a radiological environmental assessment is performed.
					DLAM 4145.8	X		Ensure that radiological emergency procedures are developed and implemented.

PROGRAM ELEMENT	REGULATORY REQUIREMENTS				REGULATORY CITATION	NATURE OF NONCOMPLIANCE		COMMENTS
	Federal	State	Local	DLA		Admin	Structural	
Manage-ment	Yes	No	N/A	Yes	DLAR 1000.28	X		Ensure that an adequately trained radiation protection officer is designated.
					Title 10, CFR, Part 19 DLAR 1000.28	X		Ensure that all individuals working in a radiation controlled area are instructed in radiation protection.
					NRC Regulatory Guide, NRC License Number STC-133	X		Ensure that instrumentation used for surveying and monitoring radioactive material are calibrated at every 12 months.

TABLE 3. GROUND WATER, NEW HAVEN DEPOT ENVIRONMENTAL PROGRAM REVIEW, SUMMARY OF FINDINGS

Program Element	Regulatory Compliance Status					Regulatory Citation	Comments
	Federal	State	Local	Army	Other		
1. Existing Ground-Water Monitoring Program							No existing program.
2. Units with Need for Ground-water Monitoring							No units currently need monitoring. Sampling and analyses of drinking water wells recommended.

TABLE 4. HAZARDOUS WASTE MANAGEMENT REVIEW, SUMMARY OF FINDINGS

Program Element	Regulatory Compliance Status					Regulatory Citation	Noncompliance		Comments†
	Fed	State	Local	Army	GEJ*		Admin	Struct	
1. Command Emphasis	-	-	-	Y	Y	AR 420-47, para 2-3 & 2-10	-	-	4b(1)
2. Permits Status	Y	Y	-	-	-	40 CFR 261.5; 329 IAC 3	-	-	4b(2)
3. Haz Wst Mngmt Bd	-	-	-	N	-	AR 420-47 para 6-6	X	-	4b(3); NA
4. Haz Wst Mngmt Plan	-	-	-	N	-	AR 420-47 para 6-3	X	-	4b(4)
5. Haz Wst Inventory	-	-	-	Y	-	AR 420-47 para 6-5	-	-	4b(5)
6. HAZMIN Program	-	Y	-	N	-	AR 420-47 para 6-3b(5)(e); 329 IAC 3-10-2	X	-	4b(6)
7. USE Program	-	-	-	NA	Y	DA Letter, 29 July 1984	-	-	4b(7)
8. PCB Management	Y	-	-	-	-	40 CFR 761	-	-	4b(8)
9. Personnel Training	-	Y	-	-	-	329 IAC 3-9-5(d)(4)(c); 3-16-7(e)	-	-	4b(9
10. Facility Inspct	-	N	-	-	-	329 IAC 3-16-6	X	-	4b(10)
11. DRMO Coordination	-	-	-	Y	-	AR 420-47 para 6-4	-	-	4b(11)
12. Turn-in Procedures	-	-	-	Y	-	AR 420-47 para 6-8a(2)	-	-	4b(12)
13. SARA Tilte III	-	-	-	N	-	DLA Letter, 4 Aug 87	X	-	4b(13)(c)

* GEJ - Good Engineering Judgement
† References refer to paragraphs where topic is discussed in Appendix F
Y - yes
N - no
NA - not applicable

TABLE 5. SOLID WASTE MANAGEMENT, NEW HAVEN DEPOT ENVIRONMENTAL PROGRAM REVIEW, SUMMARY OF FINDINGS

Program Element	Regulatory Compliance Federal	State	Local	Status Army	DLA	Regulatory Citation	Comments
1. Solid Waste Handling Operations	Y				Y	40 CFR 243 DLAR 1000.27	Under new contract, potential exists for noncompliance.
2. Solid Waste Disposal Operations		Y				329 IAC 1.5	Disposal through State-licensed contractor.
3. Recycling					Y	DLAR 1000.27	Scrap metals to be recovered through DRMO.

TABLE 6. WATER POLLUTION AND POTABLE WATER QUALITY, NEW HAVEN DEPOT ENVIRONMENTAL PROGRAM REVIEW, SUMMARY OF FINDINGS

PROGRAM ELEMENT	REGULATORY COMPLIANCE STATUS FEDERAL	STATE	LOCAL	DLA	OTHER	REGULATORY CITATION	NATURE OF NONCOMPLIANCE ADMINISTRATIVE	STRUCTURAL	COMMENTS
A. Drinking Water	NA					40 CFR 141.2			The NHD is not considered a public water system (less than fifteen service connections and serves less then 25 individuals daily).
A. Wastewater									
1. Domestic Wastewater Treatment (septic tanks/drain fields)		Yes							
2. Storm Water Discharges		*				40 CFR 122.21	X		Requirement for NPDES permit needs to be determined [see Appendix H, paragraph 4b(3)].
Underground Storage Tanks									
1. UST Registration	Yes					40 CFR 280.22			
2. UST Technical Requirements	*					40 CFR 280.40			Planed replacement of UST should place NHD in compliance with UST technical requirements [see Appendix H, paragraph 4c(2)].
C. Spill Prevention									
1. SPCCP									
Prepared/Implemented	No			No		40 CFR 112.3	X		An SPCCP was not available for review [see Appendix H, paragraph 4d(1)].
2. ISCP									
Prepared/Implemented	No			No		40 CFR 300.3 DSAR 1000.17	X		An ISCP was not available for review [see Appendix H, paragraph 4d(2)].
D. SARA Title III									
Complies With DLA Policy Objectives				No			X		Address potential catastrophic releases of hazardous substances when developing NHD's ISCP (see Appendix H, paragraph 4e).

NA - Not Applicable
* - See comment

APPENDIX A

ABBREVIATIONS

AAC	acceptable ambient concentrations
APCB	Air Pollution Control Board
AQCR	Air Quality Control Region
AR	Army Regulation
Btu/hr	British thermal units per hour
CaF_2	fluorspar
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CO	carbon monoxide
DLA	Defense Logistics Agency
DLAR	Defense Logistics Agency Regulation
DNS	Defense National Stockpile
DNSC	Defense National Stockpile Center
DNSEO	Defense National Stockpile Environmental Office
DOD	Department of Defense
DRMO	Defense Reutilization and Marketing Office
EP	Extraction Procedure
EPA	U.S. Environmental Protection Agency
EPR	Environmental Program Review
FR	Federal Register
FWACBPH	Fort Wayne-Allen County Board of Public Health
GSA	General Services Administration
HAP	hazardous air pollutant
HAZMIN	Hazardous Waste Minimization
HM	hazardous material(s) - any substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated
HSWA	Hazardous and Solid Waste Amendments
HW	hazardous waste - as defined in 40 CFR 261.3
HWM	hazardous waste management
HWMP	Hazardous Waste Management Plan
IAC	Indiana Administrative Code
IAPCR	Indiana Air Pollution Control Regulations
IDEM	Indiana Department of Environmental Management
IHWMB	Installation hazardous waste management board
ISCP	Installation Spill Contingency Plan
kg	kilogram
kW	Kilowatt
LEPC	Local Emergency Planning Committee
MCL	maximum contaminant level
mg/L	milligrams per liter

MHE	materials handling equipment
mph	miles per hour
NAAQS	National Ambient Air Quality Standards
NESHAP	National Emission Standards for Hazardous Air Pollutants
NHD	New Haven Depot
NIOSH	National Institute for Occupational Safety and Health
NO_2	nitrogen dioxide
NPDES	National Pollutant Discharge Elimination System
O_3	ozone
OSHA	Occupational Safety and Health Administration
PL	Public Law
psia	pounds per square inch absolute
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
SO_2	sulfur dioxide
SPCCP	Spill Prevention Control and Countermeasure Plan
SQG	small quantity generator (between 100 and 1,000 kg/month under the HSWA)
TSCA	Toxic Substances Control Act
TSDF	treatment, storage, or disposal facility
TSP	total suspended particulates
T/yr	tons per year
USAEHA	U.S. Army Environmental Hygiene Agency
USE	used solvent elimination
UST	underground storage tank
VOC	volatile organic compound

APPENDIX B

PERSONNEL CONTACTED

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Mr. T. Fleming, Indiana Geological Survey

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Mr. K. Brown, Acme Waste Systems, Ossian, Indiana

DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO ATTENTION OF

HSHB-ME-AA

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

APPENDIX C
AIR POLLUTION REVIEW

1. REFERENCES. See Annex C-1 for a list of references.

2. PURPOSE. To assist the installation in meeting applicable Federal, State, local, and Defense Logistics Agency (DLA) air pollution regulations, identify existing and/or potential air pollution problems, and help improve the existing air pollution abatement program.

3. FINDINGS AND DISCUSSION.

a. Regulatory Authority Requirements. All DLA facilities are required by Defense Logistics Agency Regulation (DLAR) 1000.17 (reference 1) to comply with Federal, State, interstate, and local air pollution regulations. Although the principle of Federal sovereignty traditionally excluded Federal facilities from State and local procedural requirements, the 1977 Clean Air Act Amendments [Public Law (PL) 95-95] (reference 2) removed this exemption. Federal facilities must now comply with State and local procedural standards relating to ambient air quality, air emissions, equipment design and operation, and fuel use and composition requirements. The DLAR 1000.17 reinforces this requirement and fully implements Section 188 of the 1977 Clean Air Act Amendments.

b. State Regulatory Program. The protection of Indiana air quality was formalized with the establishment of the Indiana Air Pollution Control Board (APCB) and enacted by the Indiana Legislature in 1961. The APCB promulgates, adopts, and repeals rules regarding the control, abatement, and prevention of air pollution. The body of ordinances governing Indiana's air quality is referred to as the Indiana Air Pollution Control Regulations (IAPCR) which are promulgated in the Indiana Administrative Code (IAC), Title 326. The Office of Air Management is responsible for the day-to-day implementation and enforcement of the IAPCR.

c. Air Quality Control Region (AQCR). The New Haven Depot (NHD) is situated in the Northeast Indiana Intrastate AQCR. The portion of the AQCR which contains NHD has been classified by the U.S. Environmental Protection Agency (EPA) as "better than National Ambient Air Quality Standards (NAAQS)" for total suspended particulates matter (TSP), sulfur dioxide (SO_2), carbon monoxide (CO), ozone (O_3), and nitrogen dioxide (NO_2) (40 CFR 81) (reference 3). Indiana and Federal Ambient Air Quality Standards are shown in Annex C-2.

d. Air Pollution Emissions Inventory, Registration and Permits to Operate.

(1) Emissions Inventory. The NHD neither completed nor was required to submit an EPA Air Pollutant Emissions Report (OMB Form 158-R75). The APCB has not required the Depot to submit a list of air pollution sources at any time.

(2) Registration and Operating Permits. According to Regulation 326 IAC 2-1-1, facilities with air pollution sources with the potential to emit more than 25 tons per year (T/yr) of any regulated pollutant shall obtain operating permits for the sources. Any facility with sources which have the potential to emit less than 25 T/yr of any regulated pollutant must be registered, if requested by the State of Indiana. The NHD has no air pollution sources which emit regulated pollutants of the amounts specified in 326 IAC 2-1-1(1)(b) and is, therefore, exempt from permitting requirements. The State of Indiana has never required registration or operating permits for any sources at NHD.

e. Stationary Source Compliance.

(1) Boilers/Combustion Sources.

(a) The NHD operates three low pressure boilers. The boilers located in Buildings T-111 and T-136 are used for space heating. The boiler located in Building T-126B is utilized to maintain the water temperature in the elevated water storage tank above freezing. Table C-1 lists information for each boiler. All three boilers operate on Number 2 fuel oil. Each boiler is connected to individual smoke stacks. Emissions from the boilers were observed from all three stacks during start-up and normal service and appeared to comply with State of Indiana opacity standards (326 IAC 5-1-1).

TABLE C-1. NEW HAVEN DEPOT BOILER INFORMATION

Boiler ID. No.	Manufacturer	Installation Date	Fuel Used	Thermal Output (Btu/hr)	Average Fuel Consumption (gal/day)*
T-111	Weil-McLean	Nov 85	No.2	1,904	25
T-136	Weil-McLean	?	No.2	400,000	10
T-216B	Cyclotherm	1962	No.2	1,000,000	5

* Heating season approximately October through March.

(b) Two 50 Kilowatt (kW) diesel generators are employed at NHD to supply emergency electricity to parts of the facility. One generator supplies electricity to the administration office and water suppression pump house. The other generator supplies electricity to the motor pool area and guard house. Both units are run for 30 minutes every Friday. The generators were not observed in operation during this survey, and it could not be determined whether the units comply with State of Indiana standards for visible emissions (326 IAC 5-1-1).

(c) Two 70-kW diesel motors are employed to run two water supply well pumps. Neither motor was observed operating during this survey, and it could not be determined whether emissions from the motors comply with State of Indiana visible emissions limitations (326 IAC 5-1-1).

(2) Storage Piles. The NHD stores 14 commodities outdoor in 87 storage piles of various sizes. Annex C-3 lists the commodity type, amount, and total area (at base of pile) for each commodity.

(a) The majority of storage piles are composed of unrefined ores and do not have the potential to emit any particulate matter. Some of the storage piles, however, have the potential to be sources of particulate matter due to erosional effects during windy conditions. The piles with erosion potential are: aluminum oxide, beryl ore, metallurgical-grade fluorspar (CaF_2), and zirconium dioxide. These piles, generally, have not been disturbed in several years. Crust thickness on these piles ranged from approximately ¼-inch to 1-inch.

(b) Emissions from storage piles must comply with visible emissions limits established under 326 IAC 5-1-2(a). Visible emissions shall not exceed an average of 40 percent

opacity in 24-consecutive readings or 60-percent opacity for more than a cumulative total of 15 minutes in any 6-hour period. The air pollution review was conducted during very windy conditions [10-20 miles per hour (mph), gusting up to 25 mph] and visible emissions from all storage piles appeared to be within State of Indiana standards.

(c) Particulate emissions from storage piles must comply with standards for fugitive dust described in 326 IAC 6-4-1. The fugitive dust standard requires that sources restrict emissions of particulate matter so as not to increase the ambient downwind concentration more than 67 percent above the upwind concentration, ground level ambient concentrations cannot exceed 50 micrograms per cubic meter above background concentration, and emissions may not be visible at the boundary of the installation. Particulate emissions from erodible piles were calculated using emission factor equations listed in EPA "Compilation of Air Pollutant Factors" (reference 7). Total particulate emissions from the storage piles were calculated to be 5,950 pounds per year. This is a conservative estimate that, in part, assumes the erodible piles are disturbed at least once a year from aggregate handling or severe weather conditions. The Depot has not conducted ambient air monitoring for particulate matter to determine the compliance status of the storage piles; however, it appears, based on calculated emission rates, that the Depot is in compliance with fugitive dust limitations.

(3) Open Burning/Open Detonation. The Depot does not conduct any open burning operations on a routine basis. The State of Indiana does not allow any open burning except for the types of burning described under the provisions of 326 IAC 4-1-3 (Exemptions) or unless the facility conducting the open burning secures a written variance pursuant to 326 IAC 4-1-4 (Variances). The APCB approved a request for variance (correspondence dated 17 Feb 86) from the NHD to conduct open burning of waste wood material. The variance expired 13 February 1987, and no open burning of wood materials has been conducted since that date. The Depot occasionally (once per year) conducts residential-type open burning of small amounts of paper products. This burning is done in vented, noncombustible containers. The NHD has no fire-fighting personnel nor does it conduct any fire-fighting training within the installation boundaries. The Depot does not conduct any open detonation activities.

f. Sources of Volatile Organic Compounds (VOCs).

(1) Fuel Storage and Dispensing Operations.

(a) There are 11 storage tanks at NHD that contain either diesel fuel, No. 2 fuel oil, or gasoline. Storage of petroleum liquids is governed by 326 IAC 8-4-3 which regulates storage vessels greater than 39,000 gallons which contain VOCs whose true vapor pressure is greater than 1.52 pounds per square

inch absolute (psia). The NHD has four gasoline storage tanks, six No. 2 fuel oil storage tanks, and one diesel storage tank. None of the storage tanks are larger than 39,000 gallons; therefore, none of the provisions of this regulation apply to the Depot. There are no air pollution permitting or registration requirements for the storage tanks at NHD.

(b) The Depot is planning to remove old storage tanks and replace them with new ones. The Depot should ensure that if tanks larger than 39,000 gallons are used, they comply with the standards of 326 IAC 8-4-3. There are no air pollution permitting requirements for removing underground storage tanks. In the event it is found that the storage tanks planned for removal have leaked and that excavation activities may release VOCs into the atmosphere, the Depot should ensure that corrective measures are taken to minimize these emissions. In addition, the Depot must comply with standards for removing storage tanks as outlined under the Resource Conservation and Recovery Act.

(c) The Depot has one gasoline dispensing pump and one diesel dispensing pump for transferring fuels to motorized vehicles. Gasoline dispensing facilities with a throughput of 10,000 gallons per month, or more, are subject to the provisions of 326 IAC 8-4-6. Since the NHD does not have a gasoline throughput of 10,000 gallons per month, it is exempt from the requirements of this regulation.

(2) Sulfur Content of Fuels and Reporting Requirements.

(a) Sulfur Content. The State of Indiana regulates the amount of SO_2 that may be emitted from combustion sources under the provisions of 326 IAC 7-1-1. The standard limits SO_2 emissions to 6.0 pounds per million Btu heat input. The NHD has never conducted any air monitoring of stack emissions from the three boilers to determine the compliance with 326 IAC 7-1-1 nor has the State of Indiana requested this action. The State may require, at some time, a stack test in accordance with 40 CFR 60, Appendix A, Method 6, to determine the compliance status of these boilers.

(b) Reporting Requirements. Upon request from the APCB, the Depot must submit reports of calendar month or annual average sulfur content of fuels, heat content, fuel consumption, and SO_2 emission rates from the three boilers located in T-111, T-136, and T-216B according to 326 IAC 7-1-3. In the past, the APCB has not requested this information from the NHD. The Depot should ensure that accurate records are maintained detailing the type of information described above in case the State of Indiana requests the information.

(3) Surface Coating. The NHD occasionally performs painting operations using approximately 75 gallons per year of latex and thinning agents. Due to the small amount of paints

used, the Depot is exempt from surface coating standards outlined in 326 IAC 8-2.

(4) Metal Cleaning Operations. The motor pool at NHD has a single open top liquid degreaser which uses approximately 15 gallons per year of water-soluble solvent. The requirements for operating a solvent bath of the type at NHD are provided under 326 IAC 8-3-2. The NHD should ensure that the degreaser cover is closed when the device is not in use, cleaned parts are allowed to dry for a minimum of 15 seconds or until dripping stops, operating requirements are conspicuously posted, and waste solvent is stored in covered containers. At the time of this survey, it appeared that Depot personnel were complying with the standards of this regulation.

g. Miscellaneous Sources/Fugitive Emissions.

(1) Some of the commodities stored within warehouses at the Depot have the potential to be regulated as fugitive dust. In particular, acid-grade fluorspar and tannin are fine powders and may be emitted in significant amounts to the atmosphere if the warehouse doors are open during operations with these substances (i.e. loading, unloading, transferring, or other types of handling). The Depot should ensure that measures are taken to minimize the amount of these materials that escape the warehouse storage areas.

(2) The Depot performs air monitoring for tannin dust within the warehouses twice each year. Recent results from tannin monitoring indicate that indoor ambient air concentrations are within Occupational Safety and Health Administration (OSHA) action levels. These results suggest that outdoor ambient air concentrations of tannin are insignificant and that the provisions for fugitive dust generation (326 IAC 6-4-1) do not apply to the warehouses. Although no monitoring for fluorspar has been done either indoors or outdoors, it appears that storage of this material indoors does not present a significant fugitive dust source.

(3) Much of the Depot is unpaved gravel or dirt roads and unvegetated gravel storage areas which are not being used. There is a limited number of vehicles at NHD that travel over these areas; however, fugitive emissions (as defined in 326 IAC 6-4-1) do not appear to be significant compared with other sources of fugitive dust at the Depot.

(4) The NHD operates a small woodworking shop near the motor pool area. Saw dust, which is collected using a vacuum cleaner and broom, is discarded in dumpsters. Fugitive emissions from the woodworking operation are minimal and not significant compared with the other fugitive dust sources at the Depot.

h. Hazardous and Toxic (Noncriteria) Air Pollutants.

(1) Hazardous Air Pollutants. The EPA has established National Emission Standards for Hazardous Air Pollutants (NESHAP) under 40 CFR 61 (reference 6). The provisions of this standard apply to certain facilities emitting one or more of the following: asbestos, benzene, beryllium, coke oven emissions, inorganic arsenic, mercury, radionuclides, and vinyl chloride.

(a) At the time of this survey, there were no facilities at NHD emitting any of the hazardous air pollutants (HAPs) except for asbestos and possibly, beryllium and mercury. The NESHAP standards, however, do not apply to the NHD because the Depot does not have any facilities that use or process these materials. The NHD must still comply with OSHA standards when working with these materials.

(b) The Depot has not removed any asbestos-containing material from the installation. In the event asbestos-containing materials are removed from the Depot (i.e. pipe insulation) site personnel must follow strict rules which address requirements for locating, reporting, removal techniques and wetting, and disposal procedures for the materials. These rules are outlined in 40 CFR 61 and 40 CFR 763 (references 6 and 11).

(c) The Depot is planning to decontaminate asbestos-containing pallets that were originally used to support asbestos ore in the warehouses. Approximately 2,500 pallets will be cleaned with a high pressure high efficiency particulate air-filter vacuum and then wetted before being landfilled as normal industrial waste. The removal and disposal of treated pallets will be done by contractor. This project was scheduled to begin on 24 March 1989; however, at the time of this survey, the cleaning had not begun. The depot does not have any personnel who have been State certified to handle asbestos waste material. The NHD should contact the State of Indiana if Depot personnel are utilized in this cleaning project to determine if State certification is required for the cleaning operation.

(2) Indiana Air Toxics Program. The APCB, in response to the significant number of toxic air contaminants not regulated under NESHAP, has established an Air Toxics Program for the control of air pollution and to promote public health, welfare and safety, and to prevent injury or detriment to human, plant, and animal life. Approximately 35 air contaminants have been identified by the State of Indiana which will be regulated under this Program. The list specifies Acceptable Ambient Concentrations (AAC's) for each of these noncriteria air pollutants. The only substance at NHD that may be regulated by the State Air Toxics Program is mercury; however, no AAC has been established for mercury. Therefore, the Depot is not effected by the standards of the Program.

(3) Air Monitoring Program. Ambient indoor air monitoring is performed in certain warehouses at NHD twice each year to detect total respirable particulate matter from the handling of commodities which are stored indoors. In particular, the monitoring program is used to determine the ambient levels of asbestos and tannin dust. The National Institute for Occupational Safety and Health (NIOSH) analytical method 7400 (reference 12) is used to count the number of fibers in each sample. Table C-2 lists the results of recent tests. The Depot is encouraged to continue air monitoring to help determine compliance with OSHA ambient air concentrations and it may facilitate compliance with State of Indiana fugitive dust standards.

TABLE C-3. AMBIENT INDOOR AIR MONITORING RESULTS FOR ASBESTOS AND TANNIN DUST STORAGE AT NEW HAVEN DEPOT

Sample No.	Sample Date	Sample Location	Flow Rate (l/min)	Sample Duration (min)	Indoor Temp. (^{o}F)	Conc. (f/cc)*
2-103-NH	4 Jan 88	T-213	1.0	180	13	.017
2-104-NH	5 Jan 88	T-212	1.0	240	5	.010
2-105-NH	6 Jan 88	T-214	1.0	240	10	.006
2-106-NH	12 Jan 88	T-214	1.0	120	45	.020†
2-107-NH	7 Jun 89	T-213	1.5	420	72	.003
2-108-NH	8 Jun 89	T-211	1.5	420	70	.002

* f/cc = total fibers per cubic centimeter
† sample taken during material transfer activities (forklift)

i. Mobile Source Compliance. The NHD operates four government-owned passenger vans, several light duty trucks, one 2-ton flatbed truck, one tractor trailer, and materials handling equipment (MHE) of various types. The State of Indiana regulation governing emissions from motor vehicles is outlined in 326 IAC 13-1-1. All motor vehicles must be registered with the State and pass emissions standards for total hydrocarbons and CO. Motor vehicles and MHE vehicles which are owned by the United States Government and operated by Depot personnel are exempt from this rule.

j. Emergency Episode Plan. In the State of Indiana, any person responsible for the operation of an air pollution source that has the potential to emit 100 T/yr, or more, of any air pollutant, shall prepare and submit to the APCB, a written plan for the abatement of the pollutant during air pollution episode

conditions. The storage piles, boilers, fugitive dust sources, and other miscellaneous air pollution sources at NHD do not emit more than 100 T/yr of any air pollutant; therefore, the Depot is exempt from emergency reduction plan requirements as set forth in 326 IAC 1-5-2.

4. CONCLUSIONS.

a. The NHD generally does not have traditional air pollution sources which emit significant amounts of air pollutants.

b. The NHD does not have any air pollution sources which are required to be registered with the State of Indiana or require operating permits. The State does not require an air pollution construction permit for the planned removal of storage tanks.

c. Visible emissions from installation boilers comply with State of Indiana standards for opacity. Emissions from diesel-powered back-up generators and well pump motors were not observed, and it could not be determined whether these sources were in compliance with State opacity standards.

d. Uncovered outdoor storage piles at NHD have the potential to emit fugitive dust. Since the piles are rarely disturbed, except from erosion from severe weather, these emissions are minimal.

e. Visible emissions from outdoor storage piles were observed to be in compliance with State of Indiana standards for opacity.

f. Depot personnel do not conduct open burning operations within installation boundaries except when a written variance has been issued from the APCB.

g. The NHD is exempt from petroleum storage requirements because the Depot does not have any tanks with capacities greater than 39,000 gallons. The installation does not have to meet gasoline dispensing standards because it does not have a monthly throughput of gasoline greater than 10,000 gallons.

h. Depot personnel should maintain records detailing the amount of fuel consumption, percent of sulfur content, heat content, and SO_2 emission rates for the three boilers located on the installation in the event the APCB requests this information.

i. Miscellaneous fugitive dust emissions from warehouse storage of commodities, woodworking operations, and unpaved gravel roads/open spaces is not significant compared with other air pollution sources at the site.

j. The storage of asbestos, beryllium, and mercury at NHD is exempt from requirements outlined in NESHAP.

k. Twenty five hundred asbestos-containing pallets will be cleaned onsite and then removed for disposal in a State landfill.

5. RECOMMENDATIONS. To ensure regulatory compliance, the following recommendations are made:

a. Obtain a variance of Indiana open burning restrictions if any future burning activities are planned at the Depot (326 IAC 4-1-4).

b. Maintain monthly records detailing the consumption of No.2 fuel oil, diesel, gasoline, and propane, percent of sulfur content of fuels, heat content, and percent of SO_2 emissions in accordance with 326 IAC 7-1-3. Submit these records to the APCB when such actions are requested by the State of Indiana.

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ANNEX C-1

REFERENCES

1. DLAR 1000.17, 1 July 1977, Protection and Enhancement of Environmental Quality.

2. Public Law 95-95, 7 August 1977, Clean Air Act Amendments of 1977.

3. Title 40, CFR, 1987 rev, Part 1, Designation of Areas for Air Quality Planning Purposes.

4. Title 40, CFR, 1988 rev, Part 50, National Primary and Secondary Ambient Air Quality Standards.

5. Title 40, CFR, 1988 rev, Part 51, Requirements for Preparation, Adoption, and Submittal of Implementation Plans.

6. Title 40, CFR, 1988 rev, Part 61, National Emission Standards for Hazardous Air Pollutants.

7. Compilation of Air Pollution Emission Factors, 3d ed, EPA No. AP-42, with supplements 1 through 15, September 1985.

8. Title 40, CFR, 1988 rev, Part 60, Standards of Performance for New Stationary Sources.

9. Local Climatological Data, Annual Summaries For Fort Wayne, Indiana, 1986.

10. State of Indiana Air Pollution Control Laws, Indiana Administrative Code, Title 326, 1980, as amended.

11. Title 40, CFR, 1988 rev, Part 763, Asbestos.

12. NIOSH Analytical Methods and Techniques, 15 February 1984, Method 7400, Fibers.

ANNEX C-2

INDIANA AND FEDERAL AMBIENT AIR QUALITY STANDARDS
(reference 4, 10)

Contaminant	Primary Standard Concentration	Secondary Standard Concentration
Suspended Particulates Matter (TSP)	75 µg/m³-AGM 260 µg/m³-24 hr*	60 µg/m³-AGM 150 µg/m³-24 hr.*
Particulate Matter (PM_{10})	50 µg/m³-AGM 150 µg/m³-24 hr	50 µg/m³-AGM 150 µg/m³-24 hr
Sulfur Dioxide (SO_2)	80 µg/m³ (0.03 ppm)-AGM 365 µg/m³ (0.14 ppm)-24 hr*	1,300 µg/m³ (0.5 ppm)-3 hr
Carbon Monoxide (CO)	10 mg/m³ (9.0 ppm)-8 hr* 40 mg/m³ (35.0 ppm)-1 hr*	10 mg/m³ (9.0 ppm)-8 hr* 40 mg/m³ (35.0 ppm)-1 hr*
Ozone (O_3)	235 µg/m³ (0.12 ppm)-1 hr	235 µg/m³ (0.12 ppm)-1 hr
Nitrogen Dioxide (NO_2)	100 µg/m³ (0.05 ppm)-AAM*	100 µg/m³ (0.05 ppm)-AAM*
Lead (Pb)	1.5 µg/m³-calendar quarter	1.5 µg/m³-calendar quarter

* Not to be exceeded more than once per year.

AGM = annual geometric mean
AAM = annual arithmetic mean
ppm = parts per million (expressed as the concentration by volume)

ANNEX C-3

COMMODITY STORAGE TYPE, AMOUNT, AND EMISSION RATES
FOR OUTDOOR STORAGE PILES AND SELECT COMPOUNDS STORED IN WAREHOUSES
AT NEW HAVEN DEPOT

Commodity	Amount Stored (tons)	Package/ Storage Method	Emission Rate (lbs/yr)
ABRASIVE GRAIN	1,276	UNCOVERED PILE	0
ALUMINUM OXIDE (Al_2O_3)	29,348	UNCOVERED PILE	939
ANTIMONY (Sb)	4,815	UNCOVERED PILE	0
ASBESTOS (Chrysotile and Amosite)	12,392	DOUBLE BAGGED, (WAREHOUSE)*	<1
BERYLLIUM (Be)	77	DRUM (WAREHOUSE)	<1
BERYLLIUM ORE ($Be_3Al_2Si_6O_{18}$)	2,649	UNCOVERED PILE	277
FERROCHROME (FeCr)	101,597	UNCOVERED PILE	0
FEROMANGANESE (Fe_2MnO_4)	79,989	UNCOVERED PILE	0
FLUORSBAR (CaF_2)	115,306	UNCOVERED PILE†	2215
KYANITE (Al_2O_5Si)	140	UNCOVERED PILE	0
LEAD (Ingots)	50,442	UNCOVERED PILE	0
MERCURY	652	VASED (WAREHOUSE)	0
SILICOMANGANESE ($SiMn_2$)	6,281	UNCOVERED PILE	0
TANNIN ($C_{76}H_{52}O_{46}$)	11,492	DRUM (WAREHOUSE)	<1
TIN (Sn)	11,245	UNCOVERED PILE	0
TITANIUM (Ti)	1,059	UNCOVERED PILE	0
ZINC (Zn)	32,817	UNCOVERED PILE	0
ZIRCONIUM DIOXIDE (ZnO_2)	15,990	UNCOVERED PILE	550
TOTAL			5950

* Asbestos is packed in bags (plastic or burlap) within a second outer plastic bag, tied with wire and duct tape, placed in lined crates.
† Emissions are for uncovered metallurgical-grade fluorspar; acid-grade fluorspar is covered with either latex or concrete foam and an aluminum asphalt paint/sealant.

DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO
ATTENTION OF

HSHB-MR-HI

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
23-25 OCTOBER 1989

APPENDIX D

ENVIRONMENTAL RADIATION PROGRAM REVIEW

1. REFERENCES. See Annex D-1 for a listing of references.

2. PURPOSE. To evaluate the environmental compliance status and the management practices associated with the storage, handling and disposal of radioactive materials at Defense National Stockpile (DNS), New Haven Depot (NHD), New Haven, Indiana.

3. FINDINGS AND DISCUSSION.

a. General.

(1) A radiation protection program was implemented and carried out by the DNS, NHD, New Haven, Indiana.

(2) There had been no designated radiological monitor for NHD since the primary monitor's employment was terminated in May 1989; however, the assistant radiological monitor was presently performing the duties at the time of this review.

(3) At the time of this EPR, HQ, DLA had not provided NHD written guidance on the specific DLA regulations required to be used in the implementation of the radiation protection program.

b. Personnel Dosimetry Program.

(1) All personnel occupationally exposed to ionizing radiation utilized the U.S. Air Force personnel dosimetry services.

(2) No person was designated as responsible for preparing and maintaining records of occupational exposure to ionizing radiation.

(3) The overall personnel dosimetry program appeared to be managed in accordance with Nuclear Regulatory Commission (NRC) requirements; however, the dosimetry program did not fulfill all DLA requirements set forth the in DLAR 1000.28.

(4) Personnel dosimetry results indicated that occupational radiation exposures had been kept as low as is reasonably achievable except for four individuals who reportedly received exposures ranging from 439 milliroentgen (mR), deep and shallow doses, to 1762 mR. This exposure was received by the individuals in a single reporting period. Bioassay procedures were performed on the individuals; an investigation of the reported exposures was on-going at the time of this EPR.

c. Radioactive Materials.

(1) The storage and handling of radioactive material at NHD were authorized under NRC License number STC-133.

X (2) There were no records of training of personnel working in radiation controlled areas.

(3) At the time of the EPR, NHD did not have documentation to show that instrumentation used to perform radiation protection surveys had been calibrated within the last 2 years. Radiation protection surveys performed by USAEHA during the EPR indicated that radiation exposure readings observed did not differ from those documented by NHD personnel by more than plus or minus 10 percent.

X (4) Radiological emergency procedures had not been formally developed and implemented, although informal communication with local fire and emergency support units had been made.

X (5) A radiological environmental assessment had not been performed as required by Title 40, CFR Parts 1500-1508 and DSA Regulation 1000.17.

4. Conclusion. The NHD had the basis for a sound radiation protection program. However, the radiological environmental concerns had not been addressed and staffed. Implementing the noted recommendations should improve the overall management and regulatory compliance of the radiation protection program.

5. Recommendations.

a. New Haven Depot.

(1) Ensure that an adequately trained and qualified radiation protection officer is designated in writing [DLAR 1000.28, paragraph 5e(3)].

(2) Designate in writing a person responsible for preparing and maintaining records of occupational exposure to ionizing radiation such as DD Form 1141, Record of Occupational Exposure to Ionizing Radiation or seek DLA approval to use an equivalent form (such as NRC Form 5), and the DD Form 1952, Dosimeter Application and Record of Occupational Radiation Exposure or seek DLA approval to use an equivalent form (such as NRC Form 4) [DLAR 1000.28, paragraph 5e(8)].

(3) Review the overall personnel dosimetry program and implement the dosimetry control and recording procedures for all personnel exposed to radioactive material outlined in DLAR 1000.28 (DLAR 1000.28, paragraph 2).

(4) Ensure that all individuals working in a radiation controlled area where radioactive materials are stored have been trained and instructed in radiation protection [Title 10, CFR, Part 19.12 and DLAR 1000.28, paragraph 5e(5)].

(5) Ensure that instruments used for surveying and monitoring radioactive material storage areas are calibrated at frequencies to meet NRC license requirements. Generally, NRC recommends that survey instruments be calibrated at least every 12 months, and after any repair or servicing of the instrument, other than a simple battery change (NRC Regulatory Guide 10.4, Item 10.4).

(6) Ensure that radiological emergency procedures are developed and implemented (DLAM 4145.8, paragraphs 4-4 and 4-5).

(7) Ensure that a radiological environmental assessment is performed to comply with Title 40, CFR, Parts 1500-1508 (DSA Regulation 1000.17 paragraph II).

b. Headquarters, DLA (DNSC-O)

Ensure that regulations which prescribe and outline procedures and responsibilities for control and recording of exposure to ionizing radiation from radioactive materials; regulations which establish policy and assign responsibilities for abatement and control of environmental radiological pollution emanating from DLA facilities; and regulations which

prescribe policy and responsibilities for managing and implementing the DLA radiation protection program are provided to NHD.

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Physics Branch
Health Physics Division

EPR No. 38-26-7154-90, 23-25 October 1989

ANNEX D-1

REFERENCES

1. DSA Regulation 1000.17, 22 November 1974, Protection and Enhancement of Environmental Quality [RCS DD-I4L(Q) 1088 and DD - H & E (A) 1269].

2. DLAR 1000.28, 15 March 1982, Control and Recording Procedures for Exposure to Ionizing Radiation and Radioactive Materials.

3. DLAR 4145.23, Radioactive Materials in the DLA Supply Systems.

4. DLAM 4145.8, April 1985, Radioactive Commodities in the DoD Supply Systems.

5. Nuclear Regulatory Commission (NRC) License No. STC-133, Expiration Date: 31 March 1994.

6. Title 10, Code of Federal Regulations (CFR), 1989 Revision.

7. Title 40, CFR, Parts 1500-1508.

8. Nuclear Regulatory Guide 10.4, Guide For The Preparation of Applications For Licenses To Process Source Material.

EPR No. 38-26-7154-90, 23-25 October 1989

ANNEX D-2

PERSONNEL CONTACTED

1. Entrance and exit briefings provided to Mr. Frederic W. Brooks, Plant Manager, Defense National Stockpile, New Haven Depot, New Haven, Indiana.

2. A telephonic exit briefing was provided to Mr. Kevin Riley, Headquarters, DLA (DNSC-O), Alexandria, Virginia on 24 October 1989.

DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO ATTENTION OF

HSHB-ME-S

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

APPENDIX E
GROUND-WATER REVIEW

1. REFERENCES. See the Annex for a listing of references.

2. PURPOSE. The objectives of this review were to identify sources of potential ground-water contamination resulting from past and present activities at Defense National Stockpile (DNS), New Haven Depot (NHD), and to determine the vulnerability of the uppermost aquifer to potential contamination.

3. FINDINGS AND DISCUSSION.

a. Ground-Water Occurrence.

(1) The depot is situated on the Maumee Lake plain (Figure E-1), and is underlain by glacial till (moraine and glacial lake deposits). These deposits extend approximately 50 to 70 feet, also reported as 40 to over 60 feet (reference 1). Figure E-2 illustrates the surface distribution of glacial deposits in the area. Below these deposits lies bedrock of Devonian limestone and dolomite (the Traverse and Detroit River Formations) (Figure E-3). Ground water generally occurs at the till/bedrock interface or in the uppermost bedrock formations in this part of the county. Sand and gravel lenses within the till overburden do contain substantial ground-water reserves in the surrounding areas, but are somewhat limited in the Maumee Lake plain. This is due to the extensive erosion of the till and lacustrine deposits, resulting in less frequent, thinner sand lenses and shallower bedrock encounters.

(2) Ground water can therefore be expected at depths of 50 to 70 feet and flows to the north/northwest toward the Maumee River.

(3) Seventeen drilling logs from wells drilled within about a 1-mile radius of the depot provided the following information on site stratigraphy and local use of aquifers. Figure E-4 is a reproduction of a drilling log from a well located just outside the Depot's northern boundary.

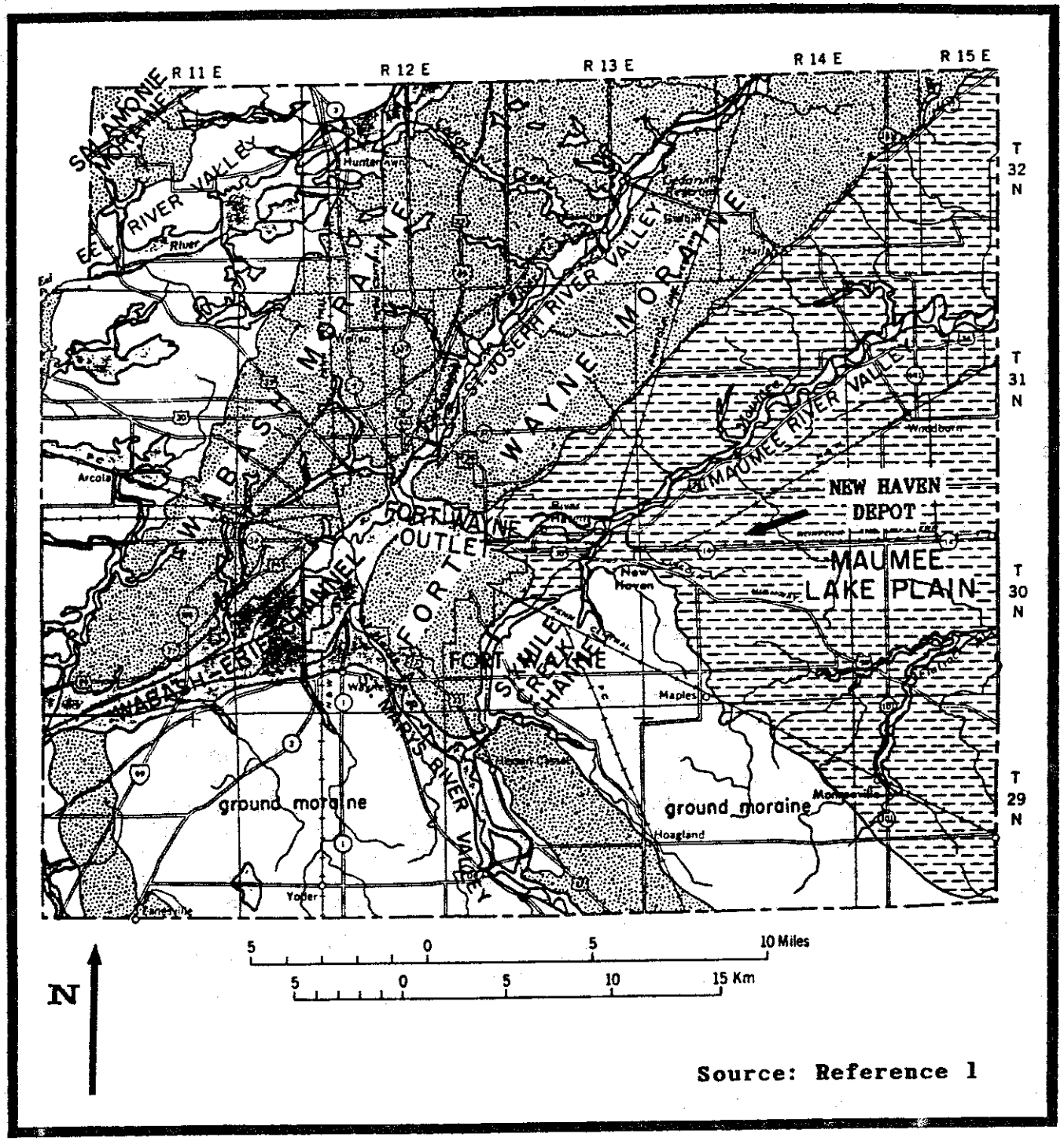

FIGURE E-1. PRINCIPAL LANDFORMS

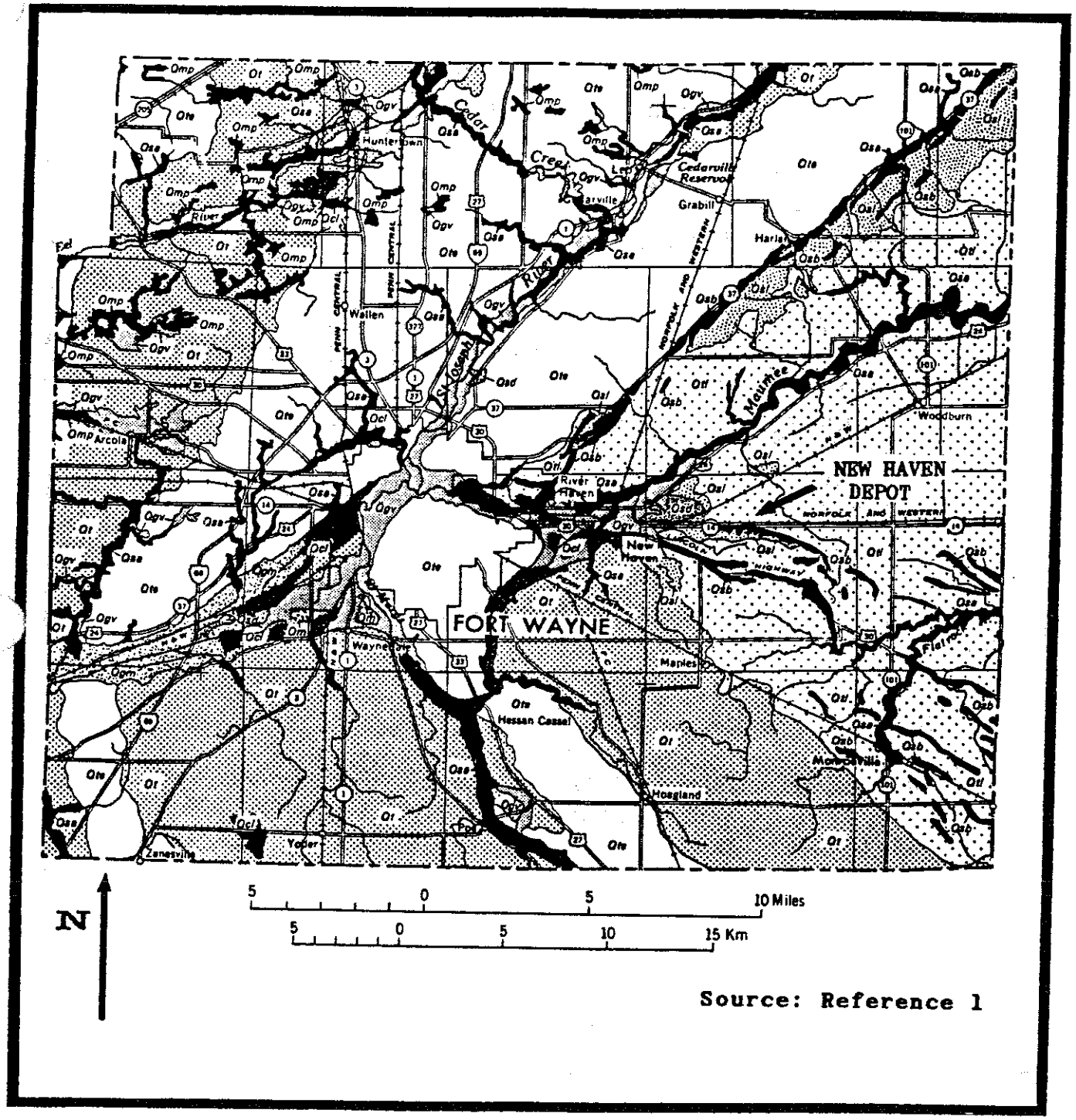

FIGURE E-2. SURFACE DEPOSITS

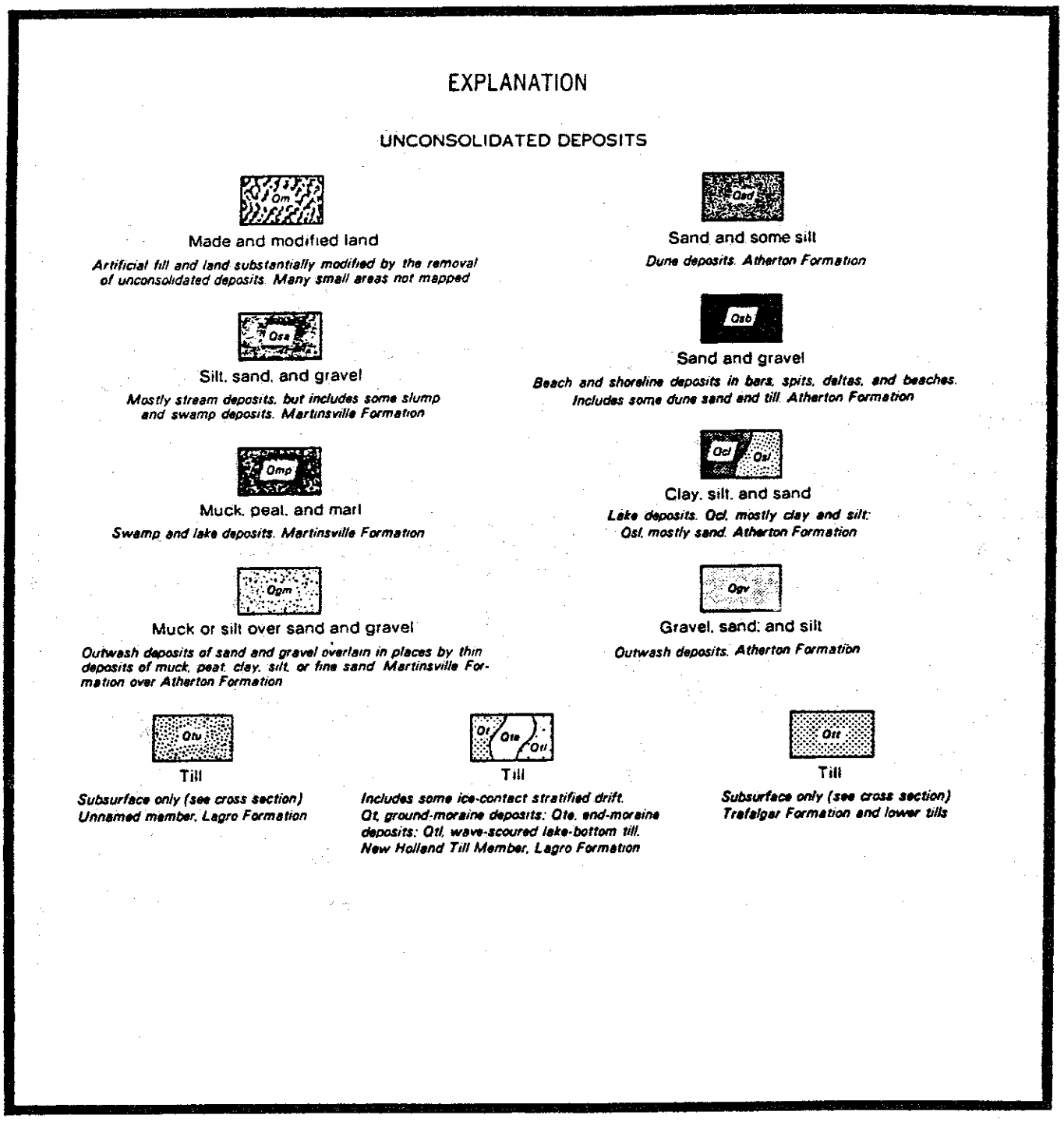

FIGURE E-2. SURFACE DEPOSITS - EXPLANATION

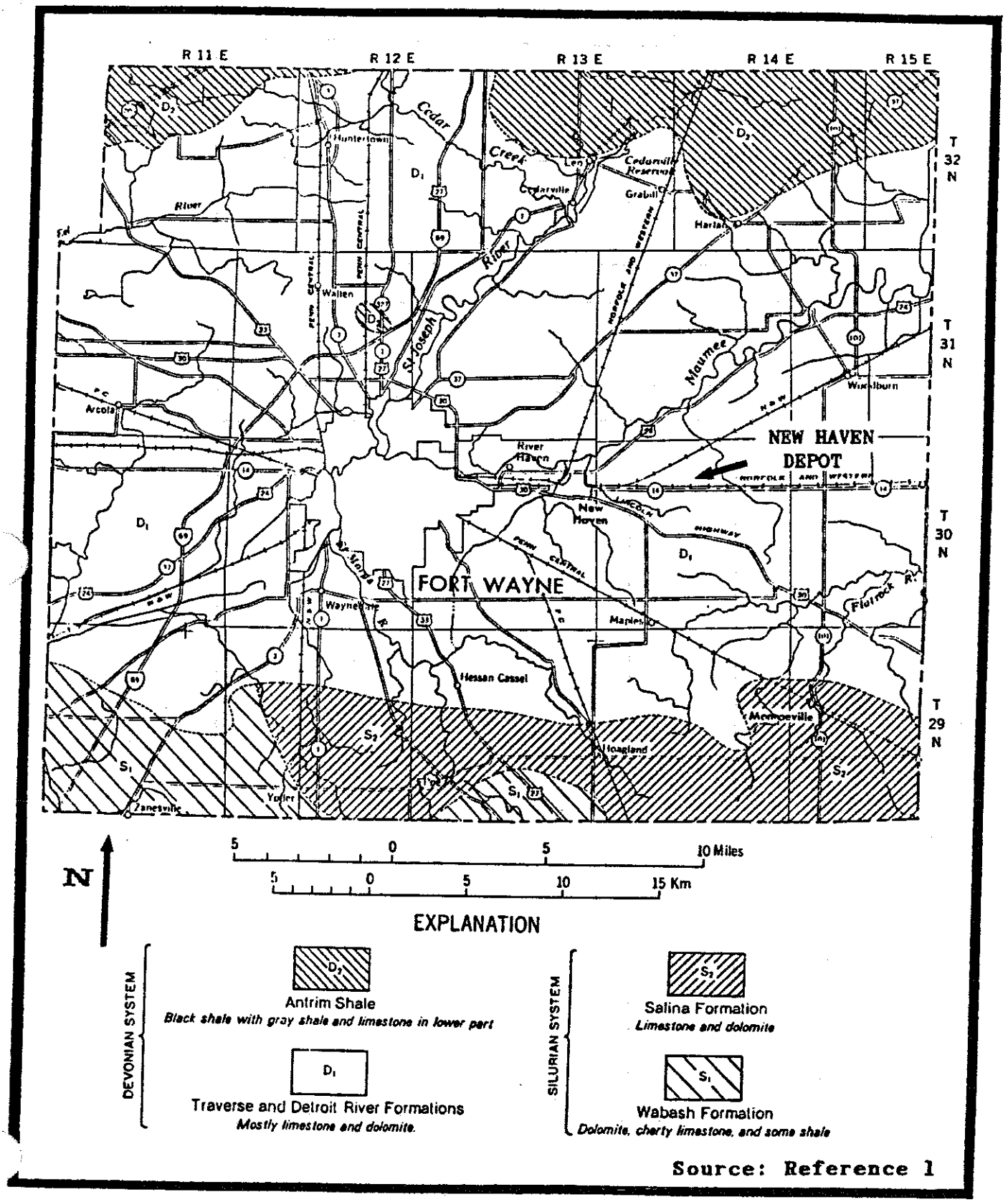

FIGURE E-3. BEDROCK GEOLOGY

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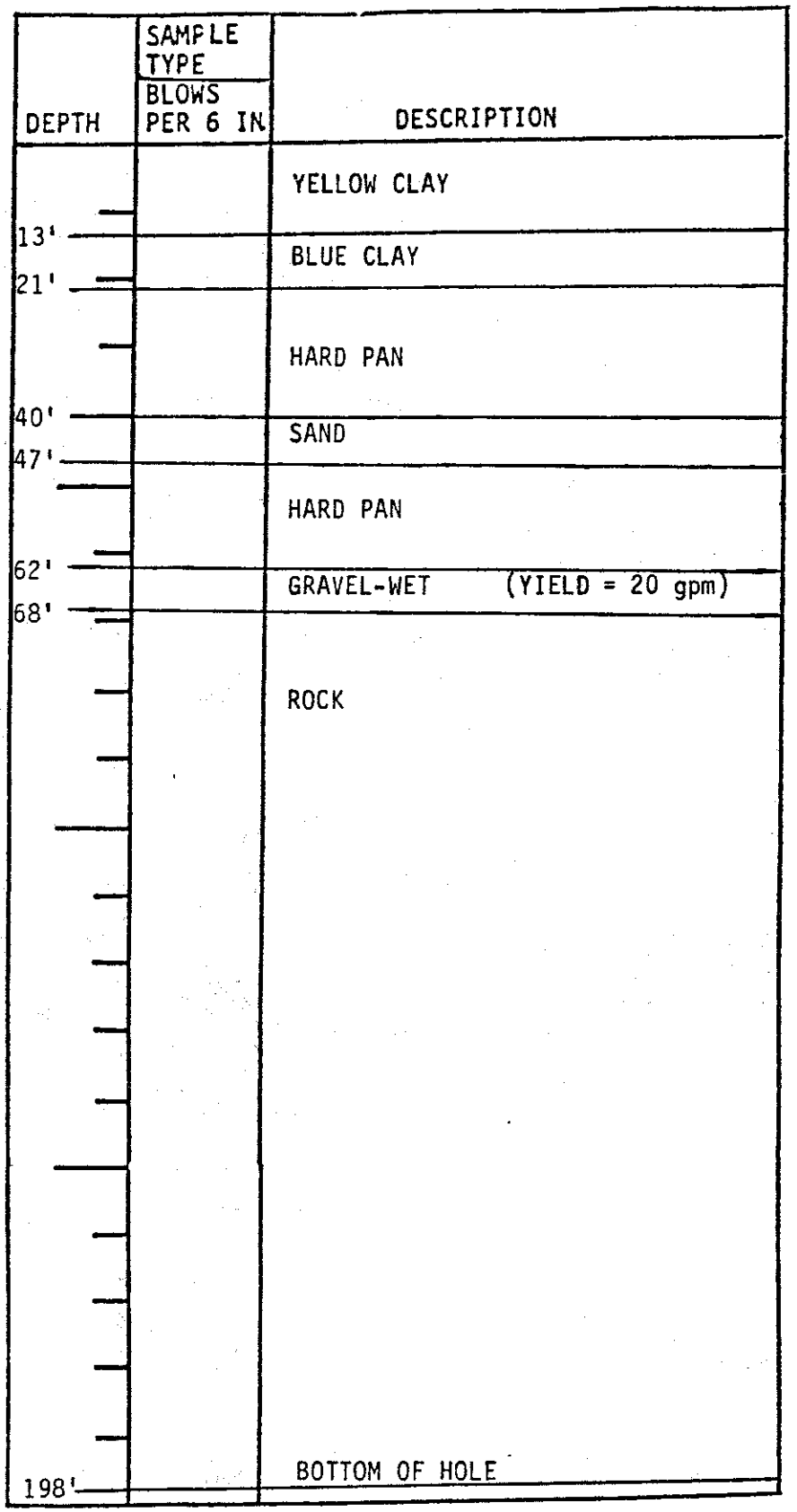

FIGURE E-4. DRILLING LOG FROM WELL LOCATED OUTSIDE DEPOT BOUNDARY

(a) Several layers of clay, varying in color from yellow to blue to gray, comprise the uppermost portion of the subsurface. Also frequently identified were layers of "hard pan," the dense loam till of the Trafalgar Formation. These often comprised the lowest section of the unconsolidated sediments.

(b) Sand and gravel lenses were noted in many of the logs; however, there was little consistency as to their depth and thickness. Lenses well over a foot in thickness were reported, and in one case sand comprised the uppermost 18 inches below ground surface.

(c) The aquifers tapped for water usage included both the bedrock limestone and sand and gravel layers at the base of the overburden. Of the 17 well logs, 8 indicated that sand and gravel aquifers were used.

(d) Depth to bedrock varied from 54 to 73 feet, and averaged 66 feet. Static water levels in the potable wells were usually not reported, but for a select number of wells they ranged from 11 to 30 feet below ground surface. This indicates that the ground water beneath the overburden occurs under confined conditions.

(4) Based on the above information, there is a fairly low probability of contaminant migration to the uppermost aquifer. The predominance of clay in the subsurface, the sporadic nature of the sand and gravel lenses, and the confined nature of the water table contribute to this conclusion. Factors which could increase the likelihood of contaminant movement are drawdown from the Depot's wells and the possibility of localized occurrences of substantial sand and gravel in the subsurface.

b. Existing Wells.

(1) Potable Water Wells. Two wells supply the Depot with potable water and standby water for firefighting. Historical records report well depths of 165 feet and 225 feet, but do not correlate these depths to specific wells. Records of the well construction and stratigraphy encountered were not available, either through NHD or State/local agencies. It is possible that the information was never recorded or has since been lost. By all accounts, the wells were drilled in the early 1940's when the government acquired the property. Because of their reported depths, these wells are almost certainly tapping bedrock aquifers.

(2) Ground-Water Monitoring Wells. No ground-water monitoring is presently conducted at NHD.

c. Potential Sources of Ground-Water Contamination. The following discussion examines the potential sources of ground-water contamination at NHD.

(1) Stockpile Materials.

(a) Currently, DNS operations at NHD involve the storage of 49 types of strategic materials amounting to over 500,000 tons. The NHD utilizes over 425,000 square feet of warehouse space and over 650,000 square feet of outside storage. Stockpile materials stored outside (uncovered) include abrasive grain, aluminum oxide, antimony, beryl ore, ferrochrome, ferromanganese, fluorspar, kyanite, lead, silicomanganese, tin, titanium, zinc, and zirconium dioxide. These piles have the most environmental significance since they are directly exposed to the elements. Piles of acid grade fluorspar are stored outdoors, protected by covers. The remaining commodities are stored in warehouses on the Depot.

(b) The potential for outside storage of ores and metals to cause solid or dissolved constituents to be introduced to surface water or ground water has not been fully determined. At at least two other DNS sites, lead, zinc, or manganese contamination has resulted from outside commodity storage. Chromium contamination found in surface waters was partially attributed to the storage of chromium ore piles at one installation. It was concluded, however, in a U.S. Army Environmental Hygiene Agency (USAEHA) study (reference 2), that the expected movement of chromium from outside commodity storage was very minimal; chromium was found in the surrounding soils at close to naturally occurring levels, but no chromium was detected in the ground water. It was also determined that manganese had a higher potential for migration, although high levels of this metal pose only aesthetic complications rather than health risks.

(c) The DNS has also investigated the heavy metal leaching potential [through the Extraction Procedure (EP) Toxicity test] of samples from the outdoor storage materials, several of which are currently stored at NHD. Highest leaching concentrations occurred on the ferromanganese samples, which leached high levels of manganese and iron. In addition, relatively small levels of chromium, lead, arsenic, mercury, nickel, and zinc leached from the samples. It is important to note that these results are from samples prepared in accordance with the U.S. Environmental Protection Agency's EP Toxicity test procedures (i.e., the samples were crushed to a powder prior to analysis). When subsequent ferromanganese samples were tested in the form found in the storage piles (rocks several inches in diameter), no leaching occurred. Therefore, in general, the earlier leaching tests appear to present a worst-case picture of

the potential for contamination. The NHD has 26 outdoor piles of ferromanganese, some of which are located adjacent to drainage ditches (see Appendix H for further discussion).

(d) Fluorspar (acid grade) was found to leach lead, zinc, and manganese in the DNS leach tests. In one test, lead was detected at 10 mg/L, above the maximum allowable concentration of 5 mg/L defining a hazardous waste (reference 3). This commodity is stored as a covered outdoor pile at NHD, virtually eliminating the potential for leaching and runoff to the environment.

(e) Ferrochrome samples have also been shown to leach small amounts of chromium at concentrations up to 0.37 mg/L. This is below the maximum acceptable level of 5 mg/L (reference 3), and chromium has been shown to be fairly immobile (reference 2). A total of 32 ferrochrome piles are openly stored at NHD, some of which border drainage ditches (see Appendix H for further discussion).

(f) Some measures have been taken to protect and maintain some of the outside storage piles at NHD, such as applying a multilayered cover. This consists of either a latex or concrete foam layer, sprayed with aluminum asphalt paint. The piles most frequently covered in the stockpile program are those consisting of finer particles which may be wind-eroded. Fortunately, these are often the piles most susceptible to leaching of metals by acid rain, and thus receive dual protection.

(g) The exorbitant cost of moving piles onto pads (estimated at $10.00 per ton) or covering them ($2.00 to $3.00 per square foot) has prevented such measures being taken on all stockpile materials.

(h) Although relatively small, the possibility for migration of heavy metals from the stockpiled materials does exist. Since the ground water underlying the Depot is used for potable water onpost and locally, it would be prudent to collect samples and analyze for heavy metals at least annually.

(2) Underground Storage Tanks (USTs). At the time of the Environmental Program Review (EPR), DNS had initiated procedures for contracting the removal of NHD's 11 USTs. The tanks, most of which are over 25 years old, will be replaced with five double-walled tanks. Although the USTs had not been leak tested, the expected removal of all tanks in the near future will provide more complete information concerning the tanks' integrity and potential environmental releases. Provisions for tank and

soil inspection, release assessment, and corrective action must be built in to the UST removal plan, in order to ensure that any releases will be properly addressed and remedied. These provisions are also requirements of Federal regulations covering USTs (reference 4). Depot and DNS personnel contended that these issues will be addressed.

(3) Past Activities.

(a) Past activities are also considered potential contributors to ground-water contamination. The following historical activities involving the use of chemicals were identified through a Casad Engineering Depot brochure (reference 5). In the 1950's, a vapor degreaser using perchloroethylene solvent was installed in Building 210. It was used to clean parts for the packaging of engineer sets sent to troops in the Korean War. This Building is currently used as a warehouse for commodity storage. Dip tanks for preserving metal parts were used in Buildings 201 and 210, using a preservative identified only as "P-1" (speculated to be cosmoline, a semisolid mineral oil). Drums of methanol were stored in an open area just northeast of the main gate. These may have been part of the stockpile program or used on the Depot as solvents for component cleaning.

(b) It is possible that during those years, the municipal wastes and some preservatives or solvents used in troop stock assembly were buried on the Depot or deposited in its waterways. However, there was no disposal information to confirm that this was the case.

(c) Other nearby industries and/or disposal sites may have introduced contamination to the soil and ground water. It was reported by sources at the Indiana Geological Survey that many waste disposal sites existed in the New Haven area alone.

(d) Although much of this discussion of past activities is speculative, consideration must be given to the possibility of historical contamination sources. This is particularly important because the Depot's potable water supply, from two onpost wells, has not been tested for chemical contaminants. Although it is not likely that the organic compounds used would have persisted in the environment, compounds such as perchloro-ethylene may cause problems related to their density. They are capable of migrating through sand and gravel layers to confining beds, leaving residues which act as long term sources of ground-water contamination. For this reason, and also to rule out contamination by offpost sources, the two potable water wells should be sampled and analyzed for volatile organic compounds at least once.

4. CONCLUSIONS.

a. Both the limestone/dolomite bedrock and shallower sand/gravel till aquifers are used as potable water sources on the Depot and in the immediate vicinity.

b. Although lenses of sands and gravels are frequently found in the unconsolidated till deposits, the predominant clay deposits limit the migration of contaminants to ground water to some extent.

c. There is some evidence that stockpile materials are capable of leaching heavy metals to surface water and ground water, and therefore, the two potable water wells should be sampled and analyzed for heavy metals.

d. The planned removal/replacement of all USTs should identify whether environmental releases have occurred.

e. There is little evidence that past Depot activities have introduced contamination to the ground water; however, the historical use of solvents and lack of disposal data warrant sampling the potable water for volatile organic compounds.

5. RECOMMENDATIONS.

a. To ensure regulatory compliance and protection of ground water, include tank and soil inspection, release assessment, and corrective action in the UST removal plan (40 CFR 280).

b. To ensure good environmental practice:

(1) Collect samples from the two potable water wells and analyze for heavy metals at least annually. If the ground water is found to be contaminated with metals, investigate whether the stockpile materials are contributing sources.

(2) Collect samples from the two potable water wells and analyze for volatile organic compounds at least once.

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APPROVED:

John W. Bauer
JOHN W. BAUER, P.G.
Program Manager
Ground Water and Solid Waste
Management

ANNEX

REFERENCES

1. Environmental Geology of Allen County, Indiana, N.K. Bleur and Michael C. Moore, Environmental Study 13, Department of Natural Resources, State Geological Survey.

2. Memorandum, USAEHA, HSHB-ME-SE, subject: Geohydrologic Study No. 38-26-0344-89, Potential Ground-Water Contamination in the Chromium Ore Piles Area, Ravenna Army Ammunition Plant, Ravenna, OH, 5-9 December 1988.

3. Title 40, Code of Federal Regulations (CFR), 1988 rev, Part 261, Identification and Listing of Hazardous Waste.

4. Final Rule, Underground Storage Tanks; Technical Requirements, 53 FR 37194, 23 September 1988.

5. Brochure, Casad Engineering Depot, Corps of Engineers, U.S. Army, circa 1953.

DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO
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HSHB-ME-SH

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

APPENDIX F
HAZARDOUS WASTE MANAGEMENT REVIEW

1. REFERENCES. See Annex F-1 for a list of references used in this Appendix.

2. PURPOSE. To evaluate operations associated with the generation, storage, transport, disposal, and recycling of HW and the management of PCBs to ensure compliance with applicable regulations.

3. GENERAL.

a. HW Regulatory Background.

(1) Federal Regulations. The RCRA is implemented by the EPA in the regulations promulgated as 40 CFR 260 thru 280 (references 4-13). The SARA, Title III is known as the "Community Right to Know Act of 1986." It is one portion of the CERCLA and is promulgated in 40 CFR Parts 300 and 302 (see Appendix H). The SARA, Title I concerns emergency response in HW operations and is implemented under OSHA's regulations in 29 CFR 1910.120 (reference 15). The TSCA covers requirements for the management of PCBs which are regulated by 40 CFR 761 (reference 14).

(2) State Regulations. On 18 August 1982, the State of Indiana was granted Phase I Interim Authorization by the Administrator of the EPA to administer an HW program in lieu of the Federal program. On 31 January 1986, the State of Indiana was granted final authorization. The NHD is, therefore, regulated by Indiana provisions found in 329 IAC 3 rather than the Federal regulations set forth in 40 CFRs 261, 262, and 265.

(3) Department of the Army HW Regulations. Army Regulation 420-47 is the prime Army Regulation pertaining to HWM. This regulation, in as much as it pertains, was used to evaluate the HWM program at NHD. The forthcoming revision of AR 200-1 will contain more definitive statements regarding responsibilities for HWM than does the current regulation (reference 1).

b. Basis of the HWM Review.

(1) This Appendix of the EPR reflects a "snapshot" view of the HWM program at NHD. The report is based on observations of the survey team, discussions with personnel contacted, and various documents provided for review during the site visit from 16 through 19 October 1989.

(2) Actions taken by NHD after our site visit are not reflected in the text that follows.

4. FINDINGS AND DISCUSSION.

a. Site Evaluations. Individual site evaluations are presented in Annexes F-2 through F-4 and are summarized in Annex F-5.

b. Program Evaluation. The Hazardous Waste Management Program Evaluation is summarized in Annex F-6. Thirteen program areas were evaluated during the review. Six program areas require management action in order to comply with DOD or other regulatory guidance. Seven program areas are in compliance with DOD and EPA/State regulatory guidance. The 13 program areas from Annex F-6 are more fully discussed in the comments that follow.

(1) Command Emphasis. This program area complies with pertinent guidance. The Depot Manager has a working knowledge of all depot operations that might possibly have an impact on HWM activities. The Depot Manager's office responds to regulatory reporting requirements on or before the date required by regulatory offices. Supporting assistance from DLA to regulatory requirements is superb.

(2) Permit Status.

(a) HW Generator Status. The NHD is currently a conditionally exempt SQG of HW. The Depot notified the EPA of its HW activity on 19 December 1984 and was given an EPA identification number which is IN5470000600.

(b) Permit Activity. The NHD does not operate under Interim Status for HWM. An RCRA permit application (RCRA Part A) was never submitted; one was not needed in the past, and one is not currently required. The sporadic and miniscule amounts of HW that are generated are removed properly (i.e., by manifest) from the installation within 90 days. Under normal depot operations, the amount of HW generated per month is well under 100 kilograms. The Depot may operate for several consecutive months without generating any HW. Only during catastophic events (e.g., warehouse fire) or extraordinary mission requirements (e.g., repackaging of some stocks, massive shipments, or possible spill events

connected with the shipments) might the amount of HW generated exceed 100 kilograms per month.

(c) Compliance. From the information available to us, the installation complies with the reduced regulatory requirements of a conditionally exempt SQG, as stated in 329 IAC 3-3-5(b). The Depot also complies with the accumulation time requirements in 329 IAC 3-9-5(a), and therefore, does not need a permit or interim status.

(3) Hazardous Waste Management Board. The NHD does not have an Installation Hazardous Waste Management Board (IHWMB). One is not needed because of the mission, operational activities, staff makeup, and size of the installation. For most Army installations, an IHWMB is required by AR 420-47, paragraph 6-6. The NHD should be considered one of the few exceptions to that requirement.

(4) HWMP. A written HWMP does not exist. An elaborate and detailed HWMP, as specified in paragraph 6-3 of AR 420-47, is not necessary for an installation as small as NHD or with the mission that the Depot has. Instead, we believe that a brief written policy statement concerning HWM should be developed. It should highlight key topics, specify the location of important records, and reflect the coordinations among staff elements relating to HWM. The policy statement should be signed by the Depot Manager.

(5) HW Inventory. All the HW on hand and ready for disposal are on the accountable records of the supporting DRMO. There is enough current information and records to allow consistently effective and timely management of HW. The inventory, although not labelled as such, consists of the turn-in documents. It meets the Depot's needs and complies with the guidance specified in AR 420-47, paragraph 6-5.

(6) HAZMIN Program. There is no written HAZMIN program. On 22 April 1988, the Depot responded to EPA Region V by sending them the 1987 HAZMIN Package which the regulators required. It met the regulatory requirements and the regulators expressed no adverse reaction to the documents submitted. In order to make its HAZMIN activities formal and to document oral activity in this program area, the Depot should develop a brief written policy statement concerning its HAZMIN activities. The policy statement should address the ongoing efforts taken to reduce the volume and toxicity of wastes generated, as is required when preparing the biennial report [329 IAC 3-10-2(b)].

(7) USE Program. A specific program does not exist and is not required due to the nature and size of ongoing operations (references 18 and 19). Nonhazardous used oil is properly

containerized, labelled, and picked up by a permitted local hauler for re-refining and subsequent reuse.

(8) PCB Inventory and Management. At NHD, a comprehensive program existed between 1985 and 1987 to identify, remove, and replace all PCB transformers and capacitors belonging the the Depot. By the end of 1987, the task was accomplished. The Depot has retained the Certificate of Destruction for the PCB materials. There is no current PCB inventory and no further requirement to adhere to the PCB requirements in 40 CFR 761. However, the Depot has four large transformers on its property, all of which belong to the Indiana Michigan Power Company (CASAD Station). The Depot Manager should ascertain, either from the company or by independent testing, information concerning the PCB content of those transformers. Depending on the results, the Depot could then take steps to protect its interests if any of the transformers should leak or become involved in a fire.

(9) Personnel Training. Training in HM/HW subjects has been given to Depot personnel who work with HM. The training, as described orally to the survey team, meets operational needs. Records of the training are kept at DLA/DNSC. The Depot should maintain records onsite for pertinent HM/HW training that is given to depot employees, and maintain those records for 3 years [329 IAC 3-16-6, 3-16-7(a), and 3-19-5]. Maintaining the records onsite will make visits from regulatory officials more satisfactory, although 329 IAC 3-19-5(a) would allow for the present system. Facsimile transmission of training records maintained offsite is acceptable.

(10) Facility Inspections. There were no records of inspections at Building T-130, which is the designated 90-day storage location for HW. Although inspections are not required by 329 IAC 3-3-5 for conditionally exempt SQGs, it is both prudent and proactive to conduct them anyway as described in 329 IAC 3-23-5. Examples of effective inspection sheets were sent to the NHD after the onsite portion of this EPR had been completed. These sheets, or a modification of them to meet local needs, should be used to strengthen confidence on the part of regulatory enforcement officials.

(11) DRMO Coordination. The supporting DRMO is located at Fort Benjamin Harrison. The DRMO is cooperative, knowledgeable in HW matters, and provides excellent mission support and technical assistance. Disposal contracts have been made and the Depot is well served. The DRMO coordination and support comply with DOD guidance and regulatory requirements.

(12) Turn-in Procedures. There is no evidence of improper turn-in or disposal of HW.

(13) CERCLA.

(a) Spills and Required Notifications. From the information available, there were no spills that required notification. Appendix H discusses the need for additional information on spills and releases to be made part of spill plans and CERCLA actions.

(b) SARA, Title I, Section 126(b). No training under SARA, Title I has yet occurred. Most emplyees at NHD who work around HM/HW would not require SARA, Title I training. It is our interpretation that installation personnel who would or could be involved in emergency response actions at HW operation incidents (e.g., fire department personnel) and the on-scene coordinator of significant spill events should be trained by the authority of 29 CFR 1910.120 (e), as cited in reference 15. The training details can be found in 54 FR 9320. Refinements and further training requirements are found in 29 CFR 1910.120(p)(7) and (8), as stated in 54 FR 9327.

(c) SARA, Title III. See Appendix H for findings and recommendations that pertain to SARA, Title III. In addition to what is stated in Appendix H, we learned that NHD has not designated a representative to serve as liaison with and to attend meetings of the LEPC. One person should be chosen to meet the requirement in reference 20.

5. CONCLUSIONS.

a. Command emphasis is excellent. Action on the Depot's part and support/assistance from DLA is superb and responsive to regulatory requirements.

b. There is no written HWMP nor HAZMIN program. Elaborate plans/programs are not needed because NHD is a conditionally exempt SQG, is subject to reduced regulatory requirements, and would not benefit from extensive documents in either program area.

c. Training in HM/HW activity is not documented in records kept at NHD; training records are maintained at DLA HQ.

d. Inspections of stored HM/HW, which are on the DRMO accountable records, are not documented or kept on file.

6. RECOMMENDATIONS.

a. To ensure regulatory compliance, the following recommendations are made:

(1) Develop a brief written policy statement to serve as an HWMP (AR 420-47, paragraph 6-3).

(2) Develop a brief written policy statement to document HAZMIN activity and considerations [329 IAC 3-10-2(b)(2); 40 CFR 262.41].

(3) Develop inspection sheets for the HM/HW turned in to DRMO (329 IAC 3-23-5).

(4) Maintain records of completed training and completed inspection sheets for 3 years [40 CFR 262.341; 329 IAC 3-16-6, 3-16-7, and 3-19-5].

b. To ensure good environmental/engineering practices, the following recommendations are made:

(1) Designate one representative to serve as liaison with and to attend meetings of the LEPC.

(2) Consider sending one individual to receive SARA, Title I training in HW operations and emergency response.

Michael H. Diem

MICHAEL H. DIEM
Environmental Scientist
Waste Disposal Engineering Division

APPROVED:

Stephen L. Kistner

STEPHEN L. KISTNER, P.E.
Program Manager
Hazardous Waste Management

ANNEX F-1

REFERENCES

1. AR 200-1, 15 June 1982, Environmental Protection and Enhancement.

2. AR 420-47, 1 December 1984, Solid and Hazardous Waste Management.

3. Public Law (PL) 94-580, 21 October 1976, Resource Conservation and Recovery Act of 1976, as amended by PL 98-616, 8 November 1984, Hazardous and Solid Waste Amendments of 1984.

4. Title 40, Code of Federal Regulations (CFR), 1988 rev, Part 260, Hazardous Waste Management System: General.

5. Title 40, CFR, 1988 rev, Part 261, Identification and Listing of Hazardous Waste.

6. Title 40, CFR, 1988 rev, Part 262, Standards Applicable to Generators of Hazardous Waste.

7. Title 40, CFR, 1988 rev, Part 263, Standards Applicable to Transporters of Hazardous Waste.

8. Title 40, CFR, 1988 rev, Part 264, Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities.

9. Title 40, CFR, 1988 rev, Part 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities.

10. Title 40, CFR, 1988 rev, Part 266, Standards for the Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities.

11. Title 40, CFR, 1988 rev, Part 268, Land Disposal Restrictions.

12. Title 40, CFR, 1988 rev, Part 270, EPA Administered Permit Programs: The Hazardous Waste Permit Program.

13. Title 40, CFR, 1988 rev, Part 280, Underground Storage Tanks.

14. Title 40, CFR, 1988 rev, Part 761, Polychlorinated Biphenyls (PCBs), Manufacturing, Processing, Distribution in Commerce, and Use Prohibitions.

15. Final Rule, Hazardous Waste Operations and Emergency Response, 54 Federal Register (FR) 9317, 6 March 1989.

16. Indiana Administrative Code, Title 329, Article 3, Hazardous Waste Management Permit Program and Other Related Hazardous Waste Management Requirements, 1 July 1988.

17. USAEHA Technical Guide (TG) No. 126, December 1988, Waste Disposal Instructions.

18. Letter, HQDA, DALO-SMP-U, 6 July 1984, subject: Used Solvent Elimination (USE) Program.

19. Letter, HQDA, DALO-SMP(M), 20 June 1986, subject: Army Used Solvent Elimination (USE) Program.

20. Letter, DLA, DLA-W, 4 August 1987, subject: Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

ANNEX F-2

HAZARDOUS WASTE MANAGEMENT-INDIVIDUAL SITE EVALUATION

1. INSTALLATION: New Haven Depot
2. EXACT LOCATION, BUILDING NUMBER: T-111
3. BRIEF DESCRIPTION OF UNIT/OPERATION: Shops for equipment maintenance, vehicle maintenance, and carpentry.
   a. Type of Unit (storage, treatment, etc.) N/A
   b. Permit Status (Part A or Part B) N/A
   c. Types of HM/HW generated at site N/A
   d. Amount of HM/HW generated at site None
4. POINT OF CONTACT: Mr. Frederick Brooks, Depot Manager
5. COMPLIANCE STATUS RCRA Yes STATE Yes
   COUNTY _____ OTHER _____
6. IF NOT IN COMPLIANCE, WHY? Is in compliance. Collection method for used oil and labelling to ensure segregation is exceptionally good. No paint wastes are generated.
7. CITE REGULATION(S) PERTAINING TO ITEM 6:
   FEDERAL: _____
   STATE: _____
   LOCAL: _____
   OTHER: _____
8. RECOMMENDED ACTIONS:
   a. TO ENSURE REGULATORY COMPLIANCE: None
   b. TO ENSURE SOUND ENGINEERING JUDGEMENT: Continue current practices.

ANNEX F-3

HAZARDOUS WASTE MANAGEMENT-INDIVIDUAL SITE EVALUATION

1. INSTALLATION: New Haven Depot
2. EXACT LOCATION, BUILDING NUMBER: 215, Section 3
3. BRIEF DESCRIPTION OF UNIT/OPERATION: Storage of stockpiled low acid fluorspar; no HW activity.
   a. Type of Unit (storage, treatment, etc.) N/A
   b. Permit Status (Part A or Pa B) N/A
   c. Types of HM/HW generated at site None
   d. Amount of HM/HW generated at site None
4. POINT OF CONTACT: Mr. Frederick Brooks
5. COMPLIANCE STATUS RCRA Yes STATE Yes
   COUNTY _____ OTHER _____
6. IF NOT IN COMPLIANCE, WHY? _____
7. CITE REGULATION(S) PERTAINING TO ITEM 6:
   FEDERAL: _____
   STATE: _____
   LOCAL: _____
   OTHER: _____
8. RECOMMENDED ACTIONS:
   a. TO ENSURE REGULATORY COMPLIANCE: None
   b. TO ENSURE SOUND ENGINEERING JUDGEMENT: None

ANNEX F-4

HAZARDOUS WASTE MANAGEMENT-INDIVIDUAL SITE EVALUATION

1. INSTALLATION: New Haven Depot
2. EXACT LOCATION, BUILDING NUMBER: T-130
3. BRIEF DESCRIPTION OF UNIT/OPERATION: Container storage of HM/HW; all containerized HM and HW were on DRMO's accountable records for contractual removal and disposal.
   a. Type of Unit (storage, treatment, etc.) storage (under 90 days)
   b. Permit Status (Part A or Part B) N/A
   c. Types of HM/HW generated at site None
   d. Amount of HM/HW generated at site None
4. POINT OF CONTACT: Mr. Frederick Brooks, Depot Manager
5. COMPLIANCE STATUS RCRA No STATE No
   COUNTY N/A OTHER N/A
6. IF NOT IN COMPLIANCE, WHY? Was in full compliance during site visit because Depot then qualified as a conditionally exempt SQG. In the event that the Depot might become an SQG, it would not be in compliance because of lack of regular inspections (329 IAC 3-16-6 and 3-23-5) and lack of diking or containment around containers (329 IAC 3-23-1). It is prudent to have containment within and regular inspections of the storage facility regardless of generator status.
7. CITE REGULATION(S) PERTAINING TO ITEM 6:
   FEDERAL: 40 CFR 262.34(D); 40 CFR 265-15 and 265.31
   STATE: 329 IAC 3-16-6; 3-23-1; 3-23-5.
   LOCAL: N/A
   OTHER: N/A
8. RECOMMENDED ACTIONS:
   a. TO ENSURE REGULATORY COMPLIANCE: Develop inspection sheets for HM/HW on DRMO records and physically located in Bldg T-130. Maintain records for 3 years. Provide containment and spill cleanup materials in the building.
   b. TO ENSURE SOUND ENGINEERING JUDGEMENT:

ANNEX F-5

HAZARDOUS WASTE COMPLIANCE AUDIT
Summary of Individual Site Evaluations

Site Location	Type of Facility or Operation	Complies with Regs: RCRA	State	Other	Regulatory Noncompliance* (cite regulatons)
Building T-111	Shops	X	X	X	
Building 125 Section 3	Stockpile Storage	X	X	X	
Building T-130	HM/HW Container Storage	X	X	X	329 IAC 3-16-6 3-23-1 3-23-5 40 CFR 262.34(d) 265.31

* If or when the Depot ever becomes an SQG.

ANNEX F-6

HAZARDOUS WASTE MANAGEMENT PROGRAM EVALUATION*

	Meets DOD Guidance	Does Not Meet DOD Guidance	Program Does Not Exist	Comments
Command Emphasis	C			Administrative promptness of Depot Manager is excellent. Support, assistance, action of DLA to regulatory requirements is superb.
Permit Status	C			Conditionally exempt SQG.
Hazardous Waste Management Board			NA	Not required due to size and mission of Depot.
Hazardous Waste Management Plan			RMA	Develop a brief written policy statement.
zardous Waste ventory	C			HW on hand are on accountable records of supporting DRMO.
Hazardous Waste Minimization (HAZMIN)			RMA	Develop a brief written policy statement. This program area is the new interest of Congress, EPA, and IDEM. HAZMIN reports to regulators have been submitted on time.
Used Solvent Elimination (USE)	NA			Used oil is properly collected for re-refining and sequent reuse.
PCB Inventory and Management	C			PCB-containing items were properly removed by contract in 1987.
Personnel Training	C			Meets operational needs. Training in HW matters not documented in depot files; DLA maintains training records.

See footnote page F-6-2.

	Meets DOD Guidance	Does Not Meet DOD Guidance	Program Does Not Exist	Comments
Facility Inspections		RMA		Develop and maintain inspection sheets for HM/HW turned-in to DRMO and for stored HW destined for contractual disposal arranged for by the Depot.
DRMO Coordination	C			Coordination and working relationship between the Depot and DRMO is excellent.
Turn-in Procedures	C			Completely satisfactory.
CERCLA: Spills and Notifications		RMA		No reportable spills have occurred. See Appendix H.
SARA Title I		RMA		New requirements under 29 CFR 1910.120 for training selected employees in HW operations and emergency response.
SARA Tile III			RMA	Need one representative to serve as liaison with and to attend meetings of the LEPC.

Note: This evaluation reflects the status of New Haven Depot's HW management program on 19 October 1989. For a detailed description and recommendations concerning HW management practices, see the text of this report.

* Responses: C - Satisfactory, in compliance
RMA - requires management action
NA - not applicable
N/O - not observed

DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO ATTENTION OF

HSHB-ME-S

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

APPENDIX G
SOLID WASTE MANAGEMENT REVIEW

1. REFERENCES.

a. Title 40, Code of Federal Regulations (CFR), March 1976, Part 243, Guidelines for the Storage and Collection of Residential, Commercial, and Institutional Solid Waste.

b. Defense Logistics Agency Regulation (DLAR) 1000.27, Solid Waste Mangement - Collection, Disposal, Resource Recovery and Recycling Program, 26 August 1977.

c. FONECON between Ms. Pat Rippey, this Agency, and Mr. Keith Brown, Acme Waste Systems, Ossian, Indiana, 24 October 1989, subject; Services Provided to New Haven Depot.

2. PURPOSE. The purpose of this review was to evaluate solid waste management and disposal practices at the Defense National Stockpile, New Haven Depot (NHD), Indiana.

3. FINDINGS AND DISCUSSION.

a. Solid Waste Generation. Based on figures from the collection of solid wastes by a contractor, NHD generates less than 15 cubic yards of solid waste per month. The waste is generally comprised of restroom/office refuse and warehouse packaging materials. No oils, solvents, thinners, or other hazardous materials are disposed of with the solid waste (see Appendix F for a discussion of hazardous waste management). Occasionally, however, major Depot repackaging projects would cause an increase in the amounts and types of wastes generated. For these projects, the Depot manager reports, special contracts are awarded for the management and disposal of wastes.

b. Solid Waste Storage and Collection.

(1) The storage and collection of solid wastes are performed under contract by Acme Waste Systems of Ossian, Indiana. Until FY 90, solid wastes were picked up once a week and stored in one 8-cubic yard dumpster. The contract awarded for FY 90 called for one contractor-supplied, 20-cubic yard dumpster, placed at the entrance of the Depot near the guard

shack. Pickups under the new contract are at the Depot manager's request, projected to average one every 6 weeks (about eight pickups per year).

(2) Though this is a more convenient schedule, and responsive to the Depot's disposal needs, it has the potential of creating odor and pest problems if the waste contains decayable (food-related) wastes. Depot personnel assured the EPR team that no food wastes were placed in the dumpster. However, as a precaution, the dumpster should be inspected frequently to ensure that decayable wastes are not openly stored. If discovered, a refuse pickup must be scheduled within 1 week, to comply with EPA and DLA guidelines for the storage of food wastes (references 1a and 1b).

c. Solid Waste Disposal. The disposal of solid waste generated at NHD was also performed under contract by Acme Waste Systems. Acme is a State-licensed waste transporter and owner/operator of several landfills, three of which are in the Fort Wayne area (reference 1c). The specific landfill receiving the NHD wastes is the North Wells landfill, located south of Fort Wayne along Highway 1. Since Acme owns numerous landfills in Indiana, there are virtually no foreseeable problems related to the expected life of the present landfill.

d. Recycling. Recycling was performed on a very limited basis at NHD, owing to the fact that such a small amount of waste is generated on a regular basis. Scrap metal was stored in a small area in the eastern part of the depot, awaiting pickup by the Defense Reutilization and Marketing Office (DRMO). Recycling of used oil was also accomplished (see Appendix F).

e. Past Disposal Sites.

(1) Waste Burial. There was no evidence of any past waste burial activities on the Depot. However, the team was able to obtain only limited information about the facility during its active period in the 1950's. It is possible that during those years, the municipal wastes and possibly some preservatives or solvents used in the troop stock mission were buried on the installation. Old photographs, maps, and documentation did not provide direct evidence. A 1943 photograph revealed several acres of scrap wood spread on the ground; however, it did not look as if any burial was involved. The Depot manager believed that this area was no longer part of Depot property.

(2) Burn Area. The NHD periodically burned dunnage wastes in a small open burn area up until about 2 years ago. Two trash cans with holes punched in the top were used for burning paper wastes twice a year. The Depot possessed a permit variance from the State of Indiana for these practices. Although the cans

still remained at the site, the surrounding grounds were notably free from residues. No burial was performed at the site to the knowledge of Depot personnel.

4. CONCLUSIONS.

a. New Haven Depot currently manages and disposes of solid waste generated in a proper and effective manner. The storage, transportation, and disposal of solid waste are performed under contract.

b. There were no records or evidence of any burial of wastes on the Depot. The area formerly used for open burning was notably free of residues.

c. Efforts were being made to recover scrap metals through DRMO channels. The Depot did not generate any other wastes in quantities amenable to recycling.

d. The infrequency of the pickups under the new contract could result in the prolonged storage of decayable wastes in the roll-off dumpster, leading to odor and pest problems.

5. RECOMMENDATION. To ensure regulatory compliance, if decayable solid wastes are placed in the dumpster, arrange for collection within 1 week (40 CFR 243.203-1 and DLAR 1000.27, paragraph X).

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DEPARTMENT OF THE ARMY
U. S. ARMY ENVIRONMENTAL HYGIENE AGENCY
ABERDEEN PROVING GROUND, MARYLAND 21010-5422

REPLY TO ATTENTION OF

HSHB-ME-WS

ENVIRONMENTAL PROGRAM REVIEW NO. 38-26-7154-90
DEFENSE NATIONAL STOCKPILE, NEW HAVEN DEPOT
NEW HAVEN, INDIANA
16-19 OCTOBER 1989

APPENDIX H
WATER POLLUTION AND POTABLE WATER QUALITY REVIEW

1. REFERENCE. See the Annex for a listing of references.

2. PURPOSE. To assess compliance with the mandatory requirements of the Federal, State, and local laws and regulations governing drinking water supply, wastewater discharge, and oil/hazardous substance spill prevention and response.

3. REGULATORY CRITERIA. Regulatory areas addressed during this review include:

a. Compliance with provisions of the Clean Water Act.

b. Compliance with State of Indiana water pollution regulations.

c. Compliance with the Safe Drinking Water Act.

d. Compliance with Federal oil/hazardous substance spill prevention and response requirements.

e. Compliance with Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986.

4. FINDING AND DISCUSSION.

a. Drinking Water.

(1) Potable Water. Water supplied to the Defense National Stockpile New Haven Depot (NHD) was obtained from ground water wells located at Buildings T-304 and T-133. The wells provided water for both the fire hydrant and the potable water system. Water for the potable water system was obtained from the well at Building T-133. The system consisted of a 2,000-gallon storage tank connected to a 2-inch diameter copper pipe distribution system which provided water service to Buildings

T-111, T-115, T-136, and T-141B (four service connections). An air compressor pressurized the system to 150 pounds per square inch. No treatment was provided to the system. The population served by the system at the time of this review consisted of nine NHD employees and six security guards (only one guard per shift). The NHD potable water system is not considered a public water system (less than 15 service connections and serves less then 25 individuals daily), and therefore, is exempt from Federal safe drinking water regulations (Indiana did not have primacy for public water systems).

(2) Water Quality Monitoring.

(a) Bacteriological Monitoring. The Fort Wayne-Allen County Board of Public Health (FWACBPH) normally conducts bacteriological examination of NHD potable water system once per year. The system was tested on 8 June 1989 at which time the water was found to be contaminated with coliform organisms. The contamination was the result of flooding at Building T-133. Nonpotable water had entered the well casing contaminating the water supply. Sealing off the well head from the building environment would prevent a reoccurrence of well contamination during a flood situation. The well has since been decontaminated. Subsequent testing of the system by the FWACBPH (28 June 1989) indicated that the water was bacteriologically safe for drinking. The NHD should consider monitoring its water system for coliform bacteria on a more frequent basis, at least once per calendar quarter (Federal requirement for noncommunity public water systems). There were no reported problems with drinking water quality at the time of this study.

(b) Lead Monitoring. The NHD's potable water system has been monitored for lead (23 December 1988). Water samples were taken from a drinking fountain in Building T-111 and from a kitchen tap in Building T-136. Lead levels in samples collected, 0.006 mg/L (kitchen) and 0.008 mg/L (fountain), were below existing and proposed U.S. Environmental Protection Agency (EPA) allowable maximum contaminant levels (MCL) of 0.050 mg/L and 0.010 mg/L, respectively (references 8 and 13). However, it was unclear as to how water samples were collected. The EPA recommends samples be the first draw of the day with no initial flushing (worst-case scenario). The NHD should consider resampling/analyzing for lead (according to EPA procedures) in order to ensure lead content is at a safe level for drinking.

b. Wastewater Disposal.

(1) Domestic Wastewater. Wastewater treatment and disposal was provided by two septic tanks (6,800 gallons each)

and four drain field filter beds (two per septic tank). Considering the population served (ten daytime employees, one guard 2nd and 3rd shifts), the systems are probably under-used compared to their wartime design capacity. There were no reported problems with the treatment systems.

(2) Industrial Wastewater. There were no activities on the installation which generated industrial wastewater.

(3) Storm Water. Drainage sewers collect storm water runoff throughout the installation including runoff from uncovered materials storage areas (metal ingots and ores). Open drainage ditches (running south to north) convey drainage water off the installation eventually discharging it to Ashley Lake. Historically, storm water runoff has seldom been regulated under the National Pollutant Discharge Elimination System (NPDES) permit program. However, the Water Quality Act of 1987 (reference 2) contains provisions for regulating runoff, and the NPDES permitting authority can issue permits for runoff if deemed necessary. The Defense National Stockpile Environmental Office (DNSEO) is currently conducting a leachability study on the different types of ores stored at the NHD. Sampling of the drainage system discharges may be required to determine if contaminants from materials storage areas are being washed into the drainage system at levels exceeding State water quality standards. The DNSEO should contact the State authority which administers the NPDES permit program and determine if there are specific permit sampling/monitoring requirements for the NHD's drainage discharges.

c. Underground Storage Tanks (USTs).

(1) UST Notification. Federal law required registration of all USTs containing regulated substances by 8 May 1986, unless exempt (reference 12). The NHD has registered it's regulated USTs (11 tanks) with the Indiana State Board of Health.

(2) Technical Requirements For USTs. The EPA has promulgated technical standards and corrective action requirement regulations for USTs (22 December 1988). By December 1998, USTs that were installed before December 1988 must have corrosion protection for steel tanks/piping and must have devices that prevent spills and overfills. In addition, leak detection requirements (defined in reference 12) will be phased in for existing USTs depending on their age. The majority of the installation's tanks are over 25 years old (10 tanks) and must have leak detection by December 1989. The DNSEO is in the process of issuing a contract for the removal of the installation's 11 USTs; only five of the tanks will be replaced

(double-walled tanks). The DNSEO should ensure that UST removal/replacement is in accordance with Federal UST technical standards and corrective action requirements (reference 12).

d. Spill Plan Implementation.

(1) Spill Prevention Control and Countermeasure Plan (SPCCP). An SPCCP had not been prepared for the NHD. Title 40, Code of Federal Regulations (CFR), Part 112, requires that facilities with underground petroleum storage capacity in excess of 42,000 gallons prepare and implement an SPCCP (reference 6). Current underground storage capacity at NHD was 44,500 gallons. When the UST replacement project has been completed, total underground capacity will be approximately 8,000 gallons. The DNSEO is aware of the requirement and plans to develop an SPCCP (regardless of the total UST capacity requirement). The plan will be incorporated into the installation's overall emergency protection plan. Information concerning SPCCP development and requirements can be obtained from 40 CFR 112 and USAEHA Water Quality Information Paper No. 12 (references 6 and 14).

(2) Installation Spill Contingency Plan (ISCP). The National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR 300 (reference 9), requires Federal agencies to develop a plan to cleanup discharges of oil and hazardous substances for which they are responsible. In accordance with these requirements, Defense Logistics Agency (DLA) policy (reference 1) requires DLA activities which could release oil or hazardous substances in quantities that may be harmful to the environment to maintain an ISCP. The plan should identify resources for use in cleaning up discharges at their installation. An ISCP was not available at the time of this review. The DNSEO was aware of the deficiency and indicated that an ISCP will be developed and included in NHD's emergency protection plan. Information related to the development of an ISCP can be obtained from Defense Supply Agency Regulation DSAR 1000.17 and USAEHA Water Quality Information Paper No. 12 (references 1 and 14). In addition, the DNSEO should ensure that UST release reporting and spill/overfill cleanup requirements (40 CFR 280, Subchapter E) are identified in the ISCP.

e. SARA Title III. Title III of SARA is known as the Emergency Planning and Community Right-To-Know Act of 1986. Because of its wording, neither the substantive nor procedural aspects of Title III apply to the Department of Defense. However, it is DLA policy to ensure that facility emergency plans at DLA-managed installations are comparable to state Title III programs (reference 15). The objective of DLA is to establish programs within the boundaries of DLA installations which provide

the same level of hazardous awareness and community protection as Title III programs established by the local community. The program will include expansion of existing contingency plans to cover releases during catastrophic events and the establishment of emergency planning committees. When developed, the NHD's ISCP should include potential catastrophic releases of hazardous substances and provide for notifying the local emergency planning committee of releases that could affect persons outside the NHD fence. An example of a catastrophic release would be emission of toxic vapors during a major warehouse fire. In addition, the local planning committee must be notified if there is a release of a listed hazardous substance that exceeds the reportable quantity for that substance (identified in references 10 and 11). Identification of extremely hazardous substances and locations where threshold planning quantities are stored (identified in reference 11) should also be included in the ISCP. Additional guidance on the DLA Emergency Planning and Community Right-To-Know program can be obtained from reference 15.

5. CONCLUSIONS.

a. There were no reported problems with drinking water quality at the time of this study.

b. The potable water well head was not adequately sealed.

c. The NHD's potable water system has been monitored for lead but the sampling procedure was not adequately documented.

d. The sanitary wastewater treatment system appears to be operating properly.

e. Sampling of drainage system discharges may be required to determine if contaminants from materials storage areas are being washed into the drainage system at levels exceeding State water quality standards.

f. The NHD has registered it's regulated USTs with the Indiana State Board of Health.

g. The DNSEO is in the process of issuing a contract for the removal/replacement of the installations USTs.

h. An SPCCP/ISCP had not been prepared for the NHD.

6. RECOMMENDATIONS.

a. To ensure regulatory compliance, the following recommendations are made:

(1) Contact the State permitting authority and determine if there are specific NPDES permit sampling/monitoring requirements for NHD's drainage discharges [40 CFR 122.21(a)].

(2) Ensure that UST removal/replacement is in accordance with Federal UST technical standards and corrective action requirements (40 CFR 280).

(3) Expedite the development and implementation of an SPCCP and ISCP in accordance with DLA and Federal regulations (DSAR 1000.17, 40 CFR 112, and 40 CFR 300).

b. To ensure good environmental management practice, the following recommendations are made:

(1) Provide a complete seal at the potable water well head at Building T-133.

(2) Consider monitoring the potable water system for coliform bacteria on a more frequent basis, at least once per calendar quarter (Federal requirement for noncommunity public water systems).

(3) Consider resampling/analyzing for lead in drinking water (according to EPA procedures) in order to ensure lead content is at a safe level for drinking.

(4) Include an inventory of extremely hazardous substances (at or above reportable quantities) in the SPCCP.

(5) Include potential releases of extremely hazardous substances in the ISCP and provide for notifying the Local Emergency Planning Committee in the event of a release of any of these substances.

Kenneth A Lancellotti

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APPROVED:

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ANNEX

REFERENCES

1. DSAR 1000.17, 22 November 1974, Protection and Enhancement of Environmental Quality.

2. Public Law (PL) 92-500, 18 October 1972, Federal Water Pollution Control Act Amendments of 1972, as amended by PL 95-217, 27 December 1977, Clean Water Act of 1977, and PL 100-4, 4 February 1987, Water Quality Act of 1987.

3. PL 93-523, 17 December 1974, Safe Drinking Water Act of 1974, as amended by PL 99-339, 19 June 1986, Safe Drinking Water Act Amendment of 1986.

4. Title 40, CFR, 1988 rev, Part 109, Criteria for State, Local, and Regional Oil Removal Contingency Plan.

5. Title 40, CFR, 1988 rev, Part 110, Discharge of Oil.

6. Title 40, CFR, 1988 rev, Part 112, Oil Pollution Prevention.

7. Title 40, CFR, 1988 rev, Part 122, EPA Administered Permit Programs: The National Pollutant Discharge Elimination System.

8. Title 40, CFR, 1988 rev, Part 141, National Primary Drinking Water Regulations.

9. Title 40, CFR, 1988 rev, Part 300, National Oil and Hazardous Substance Contingency Plan.

10. Title 40, CFR, 1988 rev, Part 302, Designation, Reportable Quantities, and Notification.

11. Title 40, CFR, 1988 rev, Part 355, Emergency Planning and Notification.

12. Final Rule, Underground Storage Tanks; Technical Requirements, 53 FR 37194, 23 September 1988.

13. Proposed Rule, Drinking Water Regulations; Maximum Contaminant Level Goals and National Primary Drinking Water Regulations for Lead and Copper, 53 FR 31516, 18 August 1988.

14. Letter, USAEHA, HSHB-EW-S/WP, 17 June 1983, subject: Water Quality Information Paper No. 12, Oil and Hazardous Substance Spill Plans.

15. Letter, DLA DLA-W, 4 August 1987, subject: Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

APPENDIX I

TECHNICAL ASSISTANCE

1. Technical advice and/or assistance regarding this report may be obtained telephonically from members of the EPR team or the respective Division Chief: Chief, Air Pollution Engineering Division, AUTOVON 584-3500; Chief, Waste Disposal Engineering Division, AUTOVON 584-2024; Chief, Health Physics Division, AUTOVON 584-3502; and Chief, Water Quality Engineering Division, AUTOVON 584-3816. The commercial area code and exchange are (301) and 671, respectively.

2. The USAEHA is available, upon request, to furnish assistance in the implementation of the recommendations presented in this report. Requests for additional services should be directed through the appropriate command channels of the requesting activity to the Commander, U.S. Army Environmental Hygiene Agency, ATTN: HSHB-ME, Aberdeen Proving Ground, MD 21010-5422 with an information copy to the Commander, U.S. Army Health Services Command, ATTN: HSCL-P, Fort Sam Houston, TX 78234-6000.

AUDIT NUMBER: 38-26-7154-90

ACTIVITY: DNSC New Haven

MEDIA: Air Pollution

DATE: 25 May 90

RECOMMENDATION: 5(a) Obtain a variance of Indiana open burning restrictions if future burning activities are planned at the depot.

CORRECTIVE ACTION TAKEN: As noted in conclusion (see item 4f), depot personnel do not conduct open burning within the installation boundaries except when a written variance has been issued by the Indiana Air Pollution Control Board (IAPCB).

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 89

AUDIT NUMBER: 38--26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Air Pollution DATE: 25 May 90

RECOMMENDATION: 5(b) Maintain monthly records detailing the consumption of No. 2 fuel oil, diesel, gasoline and propane, percent of sulphur content of fuels, heat content, and percent of Sulphur dioxide content emissions in accordance with 326 IAC 7-1-3. Submit these records to the APCB when such actions are requested by the State of Indiana.

CORRECTIVE ACTION TAKEN: Records are being maintained relative to fuel usage to plan and program fuel expenditures. However, as part of our underground storage tank program in conjunction with our facilities maintenance, we will now be recording fuel consumption to ascertain potential leakage of tanks, as well as usage and fuel cost for energy conservation.

Since we are not regulated under the State of Indiana emission standards, we will obtain this information if and when the State requests it.

COMPLETE: Yes

DATE COMPLETE: 25 may 90

AUDIT NUMBER:38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(1) Ensure that an adequately trained and qualified radiation protection officer is designated in writing.

CORRECTIVE ACTION TAKEN: Two (2) DNSC employees from the New Haven Depot are scheduled to attend the National Institute of Occupational Safety and Health (NIOSH) 40 hour seminar on radiological (ionizing) protection in July 90. Upon completion these employees will be assigned the duties of RPO and Alternate Radiological monitor. These employees will be responsible for periodic monitoring of all storage areas containing radioactive commodities and completing and maintaining records of occupational exposures, Dosimetry distribution and calibration of radiological equipment.

COMPLETE: no

DATE COMPLETE: 30 August 90

ESTIMATED DATE OF COMPLETION: entire program upgrade December 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(2) Designate in writing a person responsible for preparing and maintaining records of occupational exposure to ionizing radiation such as form DD 1141, Record of Occupational Exposure to Ionizing Radiation or seek DLA approval to use equivalent form (such as NRC form 5), and the DD form 1952, Dosimeter Application and Record of Occupational Radiation Exposure or seek DLA approval to use an equivalent form (such as NRC form 4).

CORRECTIVE ACTION TAKEN: See response to recommendation 5(a)(1) of this section.

It should be noted that the Nuclear Regulatory Commission (NRC) governs our license and has voiced no problems with the forms we are maintaining because they contain the necessary information. As previously noted, we are planning to upgrade and streamline our radiological program and at that time we will obtain NRC approved forms for inclusion in our program.

COMPLETE: ongoing

DATE COMPLETE:

ESTIMATED DATE OF COMPLETION: entire program upgrade December 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(3) Review the overall personnel dosimetry program and implement the dosimetry control and recording procedures for all personnel exposed to radioactive material outlined in DLAR 1000.28, paragraph 2.

CORRECTIVE ACTION TAKEN: The Nuclear Regulatory Commission (NRC) issues, governs and regulates our NRC license to maintain radioactive commodities. As noted in the narrative of this report (see item 3(b)(3)) DNSC manages and implements a dosimetry program in accordance with the NRC requirements. As we upgrade our program this year, we will continue to make improvements to better comply with these (NRC) requirements.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 89

ESTIMATED DATE OF COMPLETION: Entire program upgrade December 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(4) Ensure that all individuals working in controlled area where radioactive materials are stored have been trained and instructed in radiation protection.

CORRECTIVE ACTION TAKEN: Although no formal radiological training has been given to each depot employee, ALL depot personnel have had instruction in respiratory protection and procedures to be implemented while working around the minimal amount of radioactive material being stored at this facility. Employees know and understand that they are required to wear pocket dosimeters and film badges whenever they enter a storage section containing radioactive material. Please note that the DNSC only maintains what is considered low specific activity (LSA) source material. The radioactive content is minimal thus so is the radioactive hazards. Training is commensurate with the hazard presented.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(5) Insure that instruments used for surveying and monitoring radioactive material storage areas are calibrated at frequencies to meet NRC license requirements.

CORRECTIVE ACTION TAKEN: As you will note the radiological readings obtained by AEHA did not differ from those recorded by depot personnel and instruments. We have since this inspection, forwarded all our monitoring equipment to the respective manufacturers for calibration. Our license requires us to maintain yearly calibration on our monitoring equipment and we will continue this annual calibration procedure.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(6) Ensure that radiological emergency procedures are developed and implemented.

CORRECTIVE ACTION TAKEN: Emergency Protection Plans have been developed for ALL DNSC facilities nationwide. In general, a warehouse fire involving one of the hazardous commodities under our purview, would pose the most serious environmental problem.

The method of containerization or packaging and the type of materials being stored significantly reduces the potential for this type of catastrophe. Packaging, warehouse fire suppression (sprinkler)systems, working with the local fire departments to improve response time, educating the fire departments as to the characteristics of stored material, all significantly reduce the potential for disaster. Our emergency plans are actually more protection /prevention procedures than emergency plans. Our first priority is to anticipate and prevent emergencies.

COMPLETE: Yes and continuing

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(a)(7) Ensure that a radiological environmental assessment is performed to comply with Title 40, CFR, Parts 1500-1508 (NEPA).

CORRECTIVE ACTION TAKEN: We fail to see the correlation between the EPA standard stated and the fact that DNSC stores radioactive commodities. The Emergency Protection Plan addressed in the preceding recommendation should be adequate in response to this recommendation. Even though we find no significant impact under NEPA, we will draft a document if DLA deems it necessary.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90

ACTIVITY: DNSC New Haven

MEDIA: Groundwater

DATE: 25 May 90

RECOMMENDATION: 5(a) To insure regulatory compliance and protection of ground water, include tank and soil inspection, release assessment, and corrective action in the underground storage tank removal plan.

CORRECTIVE ACTION TAKEN: This recommendation has already been addressed in our underground storage tank removal project. All newly installed tanks are constructed with double fiberglass walls with interstitial monitoring. These tanks also include Two (2) means of overfill protection. If during the removal and replacement of these tanks soil contamination was/is noted,all required State and EPA remedial actions are included in the contract specifications.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 89

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Environmental Radiation DATE: 25 May 90

RECOMMENDATION: 5(b) Ensure that regulations which prescribe and outline procedures and responsibilities for the control and recording of exposure to ionizing radiation from radioactive materials; regulations which establish policy and assign responsibilities for abatement and control of environmental radiological pollution emanating from DLA facilities; and regulations which prescribe policy and responsibilities for managing and implementing the DLA radiation protection program are provided to the New Haven Depot

CORRECTIVE ACTION TAKEN: The Nuclear Regulatory Commission (NRC), (10 CFR, Energy) establishes the rules, requirements, and regulations that govern the storage, movement, exposure levels, protection, abatement and the management of our radiological commodities and program. As an addendum to these Federal regulations DNSC in 1980 issued The DNSC Occupational Health Guideline to all facilities. These guidelines prescribe our policies, procedures and our responsibilities for the control, protection, and recording of exposures to ionizing radiation. Additional manuals, guidelines, rules, and regulation provide no improvements to our program.

Please note: DLAM 6055.1 has already been distributed to all Depot Managers and supervisors in September 1988.

COMPLETE: Yes

DATE COMPLETE: May 1980

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Groundwater DATE: 25 May 90

RECOMMENDATION: 5(b)(1) To insure good environmental practice:

Collect samples from two (2) potable water wells and analyze for heavy metals at least annually. If the groundwater is found to be contaminated with metals, investigate whether the stockpile materials are contributing sources.

CORRECTIVE ACTION TAKEN: We have already made arrangements with a local water testing laboratory to include heavy metals in our semi annual water testing program.

We have already begun the evaluation to determine the potential for stockpile commodities to leach into soil and groundwater.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90

ACTIVITY: DNSC New Haven

MEDIA: Groundwater

DATE: 25 May 90

RECOMMENDATION: 5(b)(2) To insure good environmental practice:

Collect samples from the two (2) potable water wells and analyze for volatile organic compounds at least once.

CORRECTIVE ACTION TAKEN: We will include a ONE time analysis for volatile organic compounds (VOC's) in our next water evaluation.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(a)(1) Develop a brief written policy statement to serve as a Hazardous Waste Management Plan (HWMP).

CORRECTIVE ACTION TAKEN: Policy statement issued May 1990. See attachment to recommendation 6(a)(2).

COMPLETE: Yes

DATE COMPLETE: May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(a)(2) Develop a brief written policy statement to document Hazardous Waste Minimization (HAZMIN) activity and considerations.

CORRECTIVE ACTION TAKEN: Policy statement issued May 1990. See attached.

COMPLETE: Yes

DATE COMPLETE: May 1990

DEFENSE LOGISTICS AGENCY
DEFENSE NATIONAL STOCKPILE CENTER
1745 JEFFERSON DAVIS HIGHWAY
ARLINGTON, VIRGINIA 22202

IN REPLY
REFER TO

14 MAY 1990

DNSC-OD (Kevin Reilly/746-7342/jm)

SUBJECT: The Defense National Stockpile's Policy on Hazardous Waste Management and Minimization of Hazardous Waste

TO: Zone Administrators DNSZ-NYD
DNSZ-HMD
DNSZ-FWD

1. The environmental climate of the country today is one of awareness and serious concern for the air, soil and water that make up our human environment.

2. The public's single most troubling concern is how industry and government handle their hazardous waste.

3. We (DNSC) are generally considered conditionally exempt small quantity generators (SQG) of hazardous waste. It is during repackaging of hazardous materials in the stockpile that we exceed this designation. All generators of hazardous waste, however, whether large or small, are required to handle, test, package, transport, and dispose of their hazardous waste in a manner that will not cause harm to human health or the environment.

4. It is for this reason I want to clearly establish and define in writing, DNSC's policy regarding the generation and management of our hazardous waste.

5. When DNSC facilities generate a hazardous waste, no matter how small, they will through the established chain of command, contact DNSC-OD to discuss the methods and procedures to be implemented for the proper disposal of this material. DNSC-OD in coordination with the generating facility will contact appropriate State and/or Federal environmental agencies to gain their input and concurrence for the proper and approved disposal of the material.

6. DNSC contracts that will generate hazardous waste will be thought out in the planning stages of the contract preparation and all appropriate contract clauses shall be included in the contract specifications. All appropriate permits, licenses, and identification numbers shall be thoroughly checked through the appropriate State and/or Federal agencies, along with the Contractors and Sub Contractors respective compliance status, prior to award of the contract. Once Contractors and Sub Contractors have been approved there will be no change in these contractors without the approval and written consent of the DNSC Contracting Officer or his representative.

7. When DNSC facilities plan to purchase a hazardous material for use in and around the depot, several steps shall be taken prior to the actual purchase of this material.

A. Material Safety Data Sheets should be obtained from prospective manufacturers and/or distributors and carefully reviewed to determine if we want to introduce this material into the depot.

B. We will thoroughly investigate the use of alternate materials that will accomplish the same purpose and be less hazardous.

C. If after review it is determined that the more hazardous material is better suited for the intended use, common sense and good judgement will dictate how much of this material is necessary to perform the assigned task. Quantities of hazardous materials purchased and used must be kept to a minimum to reduce the amount of hazardous waste that will require specialized disposal.

These are three simple steps to reduce and minimize the introduction of hazardous materials and waste into our operation.

8. This policy and instructional procedures clearly outline how we (DNSC) will minimize and manage the hazardous materials and waste in the Stockpile program.

9. Should you have any questions or wish to discuss this policy or the procedures contact Kevin Reilly on 746-7342.

J. WAYNE KULIG
Administrator

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(a)(3) Develop inspection sheets for Hazardous Material/Hazardous Waste (HM/HW) turned into DRMO's.

CORRECTIVE ACTION TAKEN: Inspection sheets were provided by AEHA during their visit and are now in use.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(a)(4) Maintain records of completed training and completed inspection sheets for 3 years.

CORRECTIVE ACTION TAKEN: Training records for DNSC personnel are maintained in headquarters.

We just initiated these "inspection sheets" and we will maintain these records for a minimum of three (3) years.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(b)(1) Designate one representative to serve as liaison with and to attend meetings of the Local Emergency Planning Committee (LEPC).

CORRECTIVE ACTION TAKEN: We have been working with the local Fire Department regarding fire protection and emergency response. We have not been requested to join or participate in the local LEPC. When requested we will designate our Depot Manager to serve as a liaison.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Hazardous Waste Management DATE: 25 May 90

RECOMMENDATION: 6(b)(2) Consider sending one individual to receive SARA, Title I training in hazardous waste operations and emergency planning.

CORRECTIVE ACTION TAKEN: We are considering the application of this recommendation to stockpile operations.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Solid Waste Management DATE: 25 May 90

RECOMMENDATION: 5 To insure regulatory compliance, if decayable solid wastes are placed in the dumpster, arrange for collection within one week.

CORRECTIVE ACTION TAKEN: A very limited amount of "decayable waste" is placed in this dumpster (only lunch scraps from 6 employees) daily. We do not perceive nor has our past disposal practice shown this to be an odor or pest problem. If such a problem arises we will change our schedule for collection.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(a)(1) Contact the State permitting authority and determine if there are specific NPDES permit sampling and monitoring requirements for the depot drainage discharges.

CORRECTIVE ACTION TAKEN: We have contacted the State of Indiana and we are not required to have or to obtain an NPDES permit.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(a)(2) Ensure that UST removal and replacement is in accordance with Federal UST technical standards and corrective action requirements.

CORRECTIVE ACTION TAKEN: The DNSC has removed and replaced all underground storage tanks (even those not regulated by EPA) at all DNSC facilities nationwide. These projects were performed using American Petroleum Institute (API) technical guidelines in accordance with State and Federal environmental standards.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY:DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(a)(3) Expedite the development and implementation of an SPCC and ISCP in accordance with Federal Regulations.

CORRECTIVE ACTION TAKEN: SPCC plans, that are part of the depot's Emergency Protection Plan, have been instituted at all DNSC facilities nationwide.

COMPLETE: Yes

DATE COMPLETE: 2 Feb 90

AUDIT NUMBER:38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(b)(1) Provide a complete seal at the potable water well head in building T-133.

CORRECTIVE ACTION TAKEN: Due to the age and structure of this 40 year old well it would be extremely difficult and expensive to provide the complete seal requested. The reason the well was temporarily contaminated was due to the collapse of a wall surrounding the well during an unusually excessive rain that flooded part of the depot and surrounding community. Since this incident we have completely rebuilt the retaining wall and well head collar to prevent a recurrence. No further actions are planned.

COMPLETE: Yes

DATE COMPLETE: July 89, This action was already completed during this audit. No further actions are planned

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(b)(2) Consider monitoring the potable water system for coliform bacteria on a more frequent basis, at least once per calendar quarter.

CORRECTIVE ACTION TAKEN: As noted in a previous response, we are requesting a local water analysis laboratory to perform analysis for VOC's (one time), and heavy metals along with the already requested evaluation of coliform bacteria. This will be performed twice per year.

COMPLETE: Yes

DATE COMPLETE: 25 May 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 23 May 90

RECOMMENDATION: 6(b)(3) Consider resampling/analyzing for lead in drinking water in order to ensure lead content is at a safe level for drinking.

CORRECTIVE ACTION TAKEN: We have already sampled for lead in our drinking water. Results were well within allowable limits. Another test for lead will be performed at a later date.

COMPLETE: Yes

DATE COMPLETE: 16-19 Oct 89

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(b)(4) Include an inventory of extremely hazardous substances (at or above the reportable quantities) in the SPCC Plan.

CORRECTIVE ACTION TAKEN: Inventories of stockpile commodities are already maintained at each DNSC facility but since none of the stockpile commodities, with the exception of mercury, is liquid, we will not be including our inventory of commodities in our SPCC plan. We plan to handle and coordinate our Emergency Protection Plan and our Spill Prevention Control and Countermeasure (SPCC) plan with the local fire departments servicing our facilities.

COMPLETE: Yes

DATE COMPLETE: 2 Feb 90

AUDIT NUMBER: 38-26-7154-90 ACTIVITY: DNSC New Haven

MEDIA: Water Pollution and Potable Water DATE: 25 May 90

RECOMMENDATION: 6(b)(5) Include potential releases of extremely hazardous substances in the ISCP and provide for notifying the Local Emergency Planning Committee (LEPC) in the event of a release of any of these substances.

CORRECTIVE ACTION TAKEN: The only potential for the release of an extremely hazardous substance would be from a fire involving a stockpile commodity. All proper notification procedures are outlined in the depot's Emergency Protection Plans. Our cooperation and coordination with the local fire department and their understanding of the commodities under our purview will limit these possible releases. Our first priority is to anticipate and prevent emergencies.

COMPLETE: Yes

DATE COMPLETE: 2 Feb 90