United States General Accounting Office

GAO

Report to the Honorable
Dan Burton, House of Representatives

March 1990

HAZARDOUS WASTE

Fort Benjamin Harrison's Compliance With Environmental Laws

GAO/NSIAD-90-88

GAO

United States
General Accounting Office
Washington, D.C. 20548

National Security and
International Affairs Division

B-213706

March 28, 1990

The Honorable Dan Burton
House of Representatives

Dear Mr. Burton:

On August 9, 1989, you asked us to determine if the Army is complying with federal and state environmental laws and regulations at Fort Benjamin Harrison, Indiana. You were specifically concerned about reports issued by the Environmental Protection Agency, the Army Environmental Hygiene Agency, and the Indiana Department of Environmental Management, which stated that Fort Harrison was not in compliance with environmental standards in several areas. The reports identified the following problems.

- The operating landfill at Glenn and Otis Avenues is leaching into the groundwater.
- The closed landfill on Lee Road, which is partially owned by Fort Harrison, is also leaching.
- The air pollution control system for the coal-fired boilers was turned off, which violates Indiana state law, at least 35 times during a 10-month period in 1987.
- The hazardous waste storage site has been in noncompliance with the Resource Conservation and Recovery Act since 1985 due to deficiencies in recordkeeping, training, and other areas.
- The pesticide storage building, built over 70 years ago, is placed dangerously close to a stream that feeds Fall Creek.

The fort is adjacent to the cities of Indianapolis and Lawrence and is situated on top of a major aquifer that feeds the water supply system of Marion County. Consequently, Fort Harrison's operational activities could affect the environment and have a serious impact on the health and welfare of the adjacent communities. A map of Fort Harrison is shown in appendix I.

Results in Brief

The areas reported to be in noncompliance with environmental standards have been problems over the past several years. However, on the basis of recent tests, inspection data, and discussions with Environmental Protection Agency and Indiana Department of Environmental Management officials responsible for monitoring Fort Harrison's compliance

with environmental requirements, we believe that Fort Harrison's operations are not significantly affecting the environment.

Fort Harrison officials appeared to be taking steps to ensure compliance with all requirements and standards. Water samples taken during our review indicated that the operating landfill at Glenn and Otis Avenues was not adversely affecting the aquifer. No adverse effect on the aquifer has been attributed to the Lee Road landfill, but future monitoring of groundwater is planned for this site. The coal-fired boilers have been replaced with gas boilers. Improvements have been made to the pesticide storage facility to comply with applicable requirements.

Background

Fort Harrison was established in 1903 on 2,501 acres. Although classroom training for administrative functions is the primary activity at Fort Harrison, the fort also provides military housing and community services and accommodates many other government functions, such as the Army Finance and Accounting Center. Like any other community, Fort Harrison provides services to its community that could affect the environment. These services include utilities, transportation, construction, maintenance, repair, pest control, and landfill operation.

Fort Harrison uses some hazardous materials during routine operations such as maintenance, equipment repair, printing, painting, pesticide application, and automotive repair. The Defense Reutilization and Marketing Service[1] has a marketing office on base to store, resell, and dispose of surplus and hazardous materials and waste.

The Army requires its bases to comply with federal, state, and local standards; monitor environmental compliance; and minimize any effect base operations may have on the environment. Federal standards are implemented and enforced by the Environmental Protection Agency. State and local standards at Fort Harrison are monitored by the Indiana Department of Environmental Management and the Indianapolis Air Pollution Control Management Division. Periodic inspections are made by these agencies and the Army Environmental Hygiene Agency, which evaluates environmental compliance by Army bases.

[1]The Defense Reutilization and Marketing Service is an activity of the Defense Logistics Agency. The Marketing Service operates 218 offices in 5 regions and is responsible for the disposal of surplus property generated by the military services, Department of Defense activities, and other qualified federal and civilian agencies.

Landfill at Glenn and Otis Avenues Meets Requirements

The landfill at Glenn and Otis Avenues has been in use since 1968 and covers about 35 acres. According to Fort Harrison officials, the refuse placed in this landfill is primarily office and household waste. Although problems with the groundwater were cited in 1988 and 1989 inspection reports, groundwater tests at that time and current tests have shown that the landfill is not significantly affecting the groundwater.

We reviewed the past 13 inspection reports (8 from 1988 and 5 from 1989) prepared by the Indiana Department of Environmental Management. We found that two of the 1988 inspections recorded leaching, but subsequent inspections indicated the problem was corrected. In addition, the Army Environmental Hygiene Agency inspection, completed in July 1988, identified several other problems; for example, coal ash was buried in the landfill without first being tested, monitoring wells[2] did not have protective covers, and groundwater testing procedures were not consistent due to irregular procedures for obtaining and preserving water samples.

At the time these problems were noted, the groundwater from monitoring wells surrounding the landfill was routinely tested, and no water quality problems were found. Surface water samples are also taken quarterly from the two major creeks flowing through Fort Harrison. At your request, we have included the most current sample results in appendix II.

We found that Indiana state law permits coal ash disposal in sanitary landfills without special testing or additional permits. We also found that the fiscal year 1990 Army budget includes funding for protective covers for the monitoring wells. In addition, we found that Fort Harrison's water monitoring contract for fiscal year 1990 with a state-certified laboratory provides more specific details about how samples are to be taken and preserved to provide more uniform results.

The September 1989 Indiana Department of Environmental Management inspection found no evidence of leaching, but the landfill was rated unacceptable because of inadequate soil cover and erosion that resulted from unusually heavy rains. Fort Harrison officials took corrective action, and a subsequent inspection by the Indiana Department of Environmental Management in October 1989 noted that the erosion and soil

[2]Monitoring wells are 6 inches in diameter. They extend into the aquifer and are drilled and screened according to exact specifications. Water is drawn from the wells and sampled to test for groundwater quality and define water flow.

cover problems were corrected. We visited the landfill and observed that these corrections were made.

Fort Harrison plans to close the landfill by October 1992 and transport future refuse to an incinerator in Indianapolis.

Potential Leaching at the Lee Road Landfill

The Lee Road landfill was used from 1940 to 1968. Most of the area was subsequently deeded to the city of Lawrence in 1974, but Fort Harrison maintained ownership of land on the extreme south and west edges. In 1989, inspections by the Army Environmental Hygiene Agency and the Indiana Department of Environmental Management did not show any evidence of leaching, but Fort Harrison has agreed to provide equipment and labor to install monitoring wells to see if any leaching is occurring and monitor possible future problems.

In a series of newspaper articles published between August 24 and October 24, 1989, the authors stated that they had found a corridor of dead vegetation covered with a rust-colored substance and several pools of liquid topped with an oily sheen. Other potential problems identified in this landfill have been reported in past inspections. For example, in 1986 the Army Environmental Hygiene Agency inspected the landfill and found differential settling[3] of the trenches and evidence of possible leaching. The possible existence of leachate was also reported by the Indiana Department of Environmental Management in 1988.

Even though no evidence of leaching was noted in the 1989 inspections, the Army Environmental Hygiene Agency recommended that test wells be drilled at the landfill to monitor the quality of groundwater. These test wells are scheduled to be drilled by the Army Environmental Hygiene Agency in the spring of 1990 and will be tested quarterly using state and federal groundwater standards.

During our visit to this landfill, we found settling of trenches, some with standing water, and an orange substance in standing water on the south boundary. At our request, the Fort Harrison contract laboratory tested the surface water in these areas on October 30, 1989. The test results were inconclusive. At your request, we have included the test results in appendix III. The contractor recommended that further testing be done. The contractor stated that the orange substance was an iron bacteria

[3]Differential settling refers to the uneven settling of the trenches in which wastes had been dumped because of inadequate packing or decomposition.

that did not have the characteristic odor of leachate and was not necessarily a result of landfill leaching. The contractor also stated that a high iron content in the ground and water is typical of this area of Indiana. We asked the Indiana Department of Environmental Management to perform further tests for contaminants and conduct a full inspection of the landfill. The results of these tests will be provided to you as soon as they are available.

Air Pollution Control System for Coal-Fired Boilers

The heating facility and cooling plant was constructed in 1952. Until 1988 four coal-fired boilers supplied Fort Harrison's steam and heating needs. In early 1987 Fort Harrison's air pollution control equipment for the boilers was shut off 35 times during night operations, which violates clean air regulations. Subsequently, the Indiana Department of Environmental Management imposed a civil penalty of $35,000—$1,000 for each time the equipment was shut down. The Army questioned whether a federal entity can be fined by a state agency. The Indiana Attorney General is pursuing the matter.

In 1988 one gas boiler was installed and three coal boilers were phased out of use. A fourth coal boiler was used as backup to the gas boiler. Two additional gas boilers were delivered in October 1989 and became operational on December 17, 1989. The remaining coal boiler was taken out of service on December 29, 1989.

Hazardous Waste Storage Facility Cited for Noncompliance

The Defense Reutilization and Marketing Office moved into its general storage facility in 1981. Hazardous waste was stored in this facility until October 1988, when a new hazardous waste storage facility that complied with all Resource Conservation and Recovery Act requirements was completed. The allegation that Fort Harrison's hazardous waste storage facility was not in compliance with the Resource Conservation and Recovery Act since 1985 due to deficiencies in recordkeeping, not deficiencies with the facility, is factually correct.

The Environmental Protection Agency issued noncompliance citations in November 1987 and 1988 for administrative violations, such as outdated training schedules and incomplete spill and contingency plans. However, in October 1989 Fort Harrison signed an agreement called an agreed order with the Environmental Protection Agency that set a schedule for correcting the administrative violations. The fort hired a contractor to correct these violations. The contractor has submitted a

time schedule for each task to be completed. At your request, we have included a copy of the agreed order in appendix IV.

In its December 1988 inspection report, the Army Environmental Hygiene Agency stated that all wastes appeared to be properly stored and accounted for. We inspected the hazardous waste storage site and found that all procedures to identify, classify, and dispose of hazardous wastes were being used. The quantities stored were small, and we found no evidence of immediate danger, such as leaks or spills, from hazardous wastes.

Pesticide Storage Facility Improved to Reduce Potential Hazards

The pesticide storage facility was constructed in 1908. It is a permanent brick structure, measuring about 12 by 24 feet, with two rooms, one used for storage and the other for mixing and other activities. It is located immediately adjacent to tributaries of the Fall Creek water system.

Although the facility is structurally sound, it does not meet current Army requirements for design and construction. In a July 1989 inspection report, the Army Environmental Hygiene Agency cited several problems with the facility. It stated that the facility's proximity to the tributary of Fall Creek could present problems and that the facility was too small. It also stated that the lighting and ventilation were poor, the floors were seamed and possibly porous, and the wooden shelving and pallets posed a potential fire hazard.

Fort Harrison officials said that they were concerned with the site of the facility and have requested a new facility at a different site. However, the Army projects that funds for the new facility will not be available until fiscal year 1993. Fort Harrison officials have taken some interim measures to stabilize conditions at the storage site. They are currently upgrading lighting, replacing wooden shelves, regrading ground elevations, and placing erosion mats around the building. A spill plan has been drafted to provide for emergency actions if a spill occurs. Fort Harrison's fire department has a plan that employs the appropriate methods in case of fire, and fire personnel have been trained in these methods.

The base did not maintain an inventory of the pesticides stored in the facility. During our visit to the facility, we found three 55-gallon drums of pesticides and the storage shelves about one-third full of liquid and dry types of pesticides.

As an interim measure, an agreement with the Defense Reutilization and Marketing Office is being drafted that would allow Fort Harrison to store about 50 percent of its pesticides at the approved Defense Reutilization and Marketing Office hazardous waste facility. Although various chemicals and pesticides would still be mixed at the old facility, Army officials believe the risk of creek contamination from leaks and spills should be greatly reduced.

Other Issues

Fort Harrison officials believe they will have to correct the management problems that appear to have contributed to the delay in correcting past problems. For example, since 1982 Fort Harrison officials have been aware that 10 positions are needed in the Natural Resources Management Division, which is responsible for environmental protection on the base. However, only one permanent and one temporary position were authorized and filled as of August 1988. Consequently, records were difficult to locate, and technical and managerial staff were required to perform clerical tasks, taking time away from other assignments. Currently, 8 of the 10 authorized permanent positions have been filled, and the division recently obtained a permanent administrative assistant.

Fort Harrison's corrective action responses to the Environmental Protection Agency and other monitoring agencies have been uncoordinated and untimely. Also, standardized procedures for following Resource Conservation and Recovery Act and state requirements have not been formulated, making it difficult for personnel to ensure compliance.

During fiscal year 1989, Fort Harrison spent over $3 million on environmental efforts in 14 programs, including air, solid waste, hazardous waste, and land management. Fort Harrison officials stated that they are proud of the fort's efforts to preserve and maintain wildlife and natural resources. Fort Harrison has also instituted a radon testing program, and the first radon monitors were shipped to the contractor for analysis in October 1989. On November 9, 1989, an environmental awareness day program was held at the fort to further communication and cooperation between Fort Harrison and local communities.

Scope and Methodology

Most of our work was performed at Fort Harrison. We reviewed current and past inspections of Fort Harrison made by the Army Environmental Hygiene Agency and the Indiana Department of Environmental Management to identify problems or violations of standards. We also reviewed noncompliance citations issued by these agencies, the Environmental

Protection Agency, and the Indianapolis Air Pollution Control Division and discussed the citations with officials of those agencies.

We obtained ground and surface water monitoring test results and reviewed the analyses of these results with the Indiana Department of Environmental Management. We met with officials at Fort Harrison, including the Chief of Staff, Director of Installation, Chief of the Natural Resources Division, and Chief of the Defense Reutilization and Marketing Office. We visited each of the five sites that were reported to be in noncompliance with environmental standards.

We conducted our review from August through November 1989 in accordance with generally accepted government auditing standards. As requested, we did not obtain written agency comments. However, we discussed the contents of this report with agency officials and incorporated their comments where appropriate.

Unless you publicly announce its contents earlier, we plan no further distribution of the report until 30 days after its issue date. At that time we will make copies available to others. Please contact me at (202) 275-4268 if you or your staff have any questions concerning this report. Other major contributors to this report are listed in appendix V.

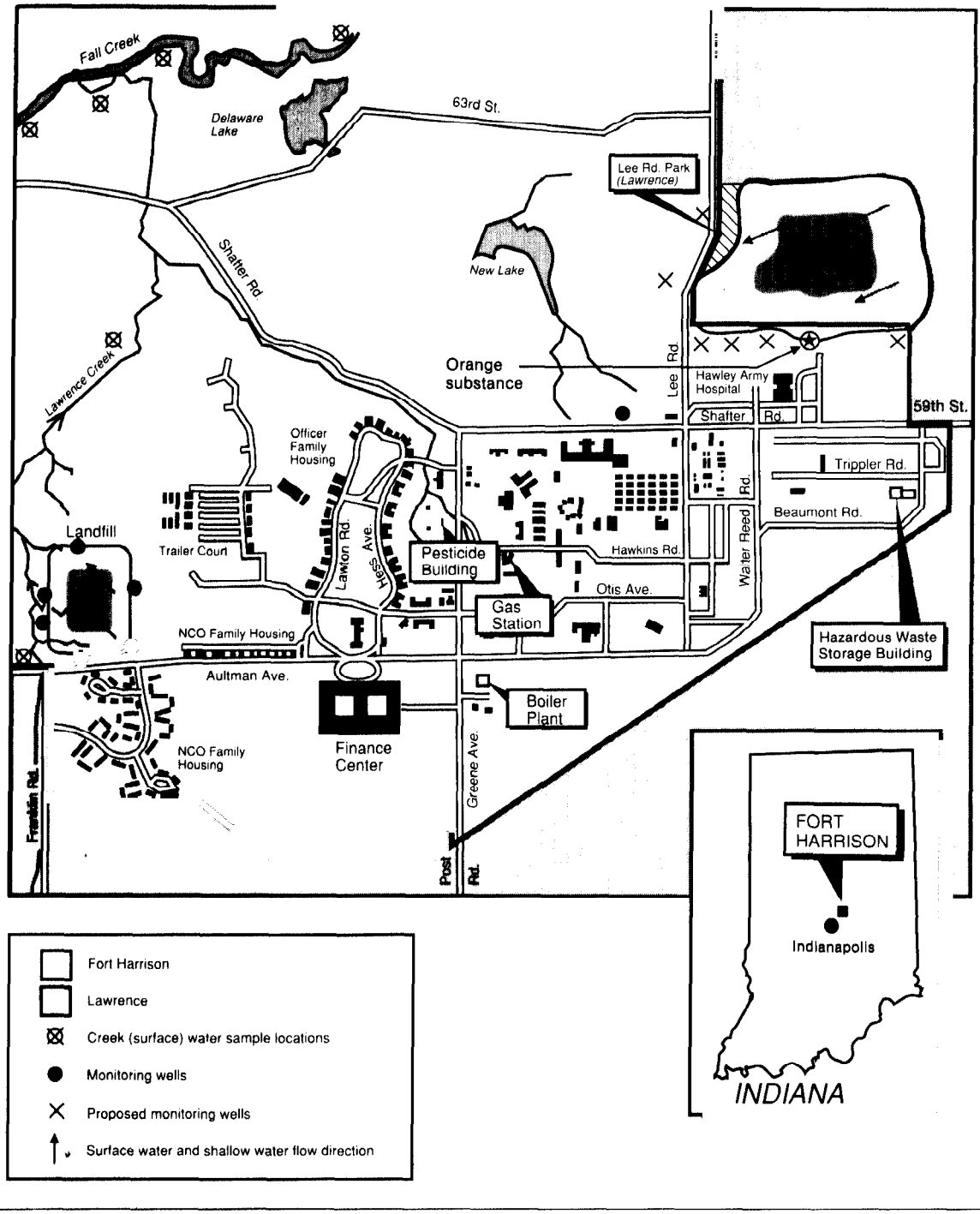
Sincerely yours,

Nancy R. Kingsbury

Nancy R. Kingsbury
Director
Air Force Issues

Contents

Map of Fort Benjamin Harrison



Comparison of Fourth Quarter Fiscal Year 1989 Tests of Monitoring Wells With State and Federal Standards

Contaminant	Standards[a] (mg/liter)	Well 1	Well 2	Well 3	Well 4	Well 5	Well 6[b]	Surface water[c] Upstream	Surface water[c] Downstream
Primary									
Arsenic	0.050	0.004	0.004	0.005	0.006	0.004	0.005	0.005	0.005
Barium	1.000	0.240	0.070	0.210	0.510	0.040	0.030	0.050	0.070
Cadimum	0.010	0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.001
Chromium	0.050	0.001	<0.001	0.001	0.002	0.002	0.002	0.007	0.007
Lead	0.050	0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.002
Mercury	0.002	<0.0002	<0.0002	<0.0002	<0.0002	0.0002	0.0002	0.0002	0.0002
Selenium	0.010	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.002	0.002
Silver	0.050	0.001	0.002	0.002	0.002	0.001	0.003	0.001	0.001
Secondary									
Chloride	250.000	6.500	12.000	35.000	56.000	2.500	8.500	51.000	51.000
Iron	0.300	0.035	0.157	0.157	9.390[d]	0.062	0.060	0.307	0.283
Chemical oxygen demand	[e]	8.000	<2.000	10.000[d,f]	42.000[d]	8.000	8.000	22.000	24.000
Conductivity	[e]	680.000	1200.000[f]	1460.000[d,f]	1550.000[d]	940.000	1180.000	615.000	610.000
Hardness	[e]	388.000	836.000[f]	805.000[d,f]	753.300[f]	515.000	745.000	504.000	446.000
pH	6.5–8.5	7.000	6.500	6.500	6.500	6.800	6.500	7.800	7.700
Total dissolved solids	500.000	399.000	707.000[f]	869.000[d,f]	949.000[d]	611.000[f]	871.000[d]	364.000	374.000

[a]State and federal standards are the same.

[b]Well no. 6 was placed upstream of the groundwater flow to the landfill. It provides the background for natural contaminants in the groundwater so that they can be compared with tests downstream from the landfill.

[c]These samples were taken from Lawrence Creek, which is located directly west and north of the landfill.

[d]According to the Indiana Department of Environmental Management, parameters such as iron, hardness, specific conductivity, and total dissolved solids often exceed standards and are interrelated. For example, if total dissolved solids increases, specific conductivity increases; if iron increases, total dissolved solids increases. Higher levels in these parameters is not unusual for central Indiana groundwater.

[e]The standard for these items is the reading taken in the upgradient, or well no. 6.

[f]According to the Indiana Department of Environmental Management, values are no higher (or not significantly higher) than those for well no. 6 and for groundwater in the area.

Contractor's Report on Test of Surface Water at the Lee Road Landfill

TO: Ron Smith
Directorate of Installation Support
National Resources Management Division
Building #28
Fort Benjamin Harrison, Indiana 46216-5450

FROM: James H. Keith
Geosciences Research Associates, Inc
627 North Morton Street
Bloomington, Indiana 47404

DATE: November 7, 1989

SUBJ: Biological reconnaissance of ditches, wet depressions and a stream near Hawley Army Hospital, Fort Benjamin Harrison, Indiana

REF: DABT-15-90-M-0432

INTRODUCTION AND PURPOSE

The purpose of this biological reconnaissance is to identify the fauna and/or flora present in water samples collected from eight stations in the vicinity of Hawley Army Hospital, consisting of two wet depressions, a drainage ditch and a stream tributary to Lawrence Creek. Some local concerns had been voiced about the source and quality of the ground water in this area since an old landfill is situated in the same general area, and since the water in the ditch, and to some extent the wet depressions, contained a reddish-orange slimy material of unknown composition. As a first step toward determining the possible source and quality of the water, a biological reconnaissance was undertaken to determine to what extent the waters are capable of supporting aquatic life. Recommendations for further study are included with the findings of this reconnaissance.

METHODS

Samples were gathered from the stations shown in Figure 1 on August 30, 1989:

Station 1 - A sample of the reddish-orange material was gathered from the ditch in a glass jar and returned to the laboratory without preservative to determine whether the material was of biological origin, or whether it was a chemical precipitate.

Station 2 - This was a wet depression in a wooded area. The water was about 6 inches deep and the depression was full of fallen leaves. It was about 8 feet across, roughly oval, and there was no discernible flow into or out of the depression. One square foot of bottom sediment and leaves was collected, placed in a jar with 10 ml of formalin and returned to the laboratory.

Station 3 - This too was a wet depression in a wooded area. The water was about 3 inches deep and again was full of fallen leaves. This pool was irregular in outline and was about 10 feet across. It connected with two other smaller pools. The sample was collected and preserved as for Station 2.

Station 4 - This sample was from the east-west ditch directly north of the hospital helipad. The ditch, about 3 feet across, was choked with weeds and cattails and contained standing water with no discernible flow. The sample was collected and preserved as for Station 2.

Stations 5 and 6 - These samples are from the north-south segment of the same ditch. The ditch was about the same dimensions and had the same vegetation and lack of flow. The samples were collected and preserved as for Station 2.

Stations 7 and 8 - These samples are from the Lawrence Creek tributary stream that receives input from both the ditch and the wet depressions. Station 7 is upstream from the input and Station 8 is

downstream. Flow at both stations was over a substrate that varied from gravel to cobbles. Samples were collected from the two stations by disturbing 2 square feet of bottom area by hand and capturing the drifting material in a 0.75 mm hand strainer. The material was trsnsferred to a glass jar with water and 10 ml of formalin was added.

In the laboratory the collected materials were hand washed and sorted through no. 10, 35 and 120 sieves, then examined by microscope and identified.

RESULTS

As a general observation, it should be noted that most of the reddish-orange material was located in the ditch, and that very little was seen in the wet depressions. It should also be noted that the water in the ditch and depressions had a distinctive odor of iron, but no septic odors could be detected.

What follows is a discussion of the organisms found in each of the samples.

Sample 1 - This sample was collected unpreserved in order to identify the nature and perhaps the source of the reddish-orange material. At a magnification of 675X, the material appeared as a collection of unbranched filaments, some covered with tiny orange particles. The filaments proved to be iron-precipitating bacteria of the Sphaerotilus - Leptothrix group of filamentous bacteria. These bacteria find optimum growth in water at a pH range of 6-8, a dissolved oxygen concentration of 1-3 mg/L, and a dissolved ferrous iron content of >0.2-5.0 mg/L (Hackett and Lehr, 1985). There is some doubt in the literature about whether these organisms directly metabolize dissolved iron, or whether iron precipitation is a byproduct of metabolizing other dissolved substances.

Sample 2 - Oligochaetes - 4/square foot
Empty shells of aquatic snails Helisoma and Lymnaea

Sample 3 - Helichus sp. larva (Coleoptera, Dryopidae) - 1/square foot
Pupa, prob. Culex (Diptera, Culicidae) - 1/square foot
Empty shell of the aquatic snail Planorbus sp.

Sample 4 - Oligochaetes - 57/square foot
Limnebius sp. (Coleoptera, Hydraenidae) - 1/square foot
Empty shells of Helisoma and fingernail clams

Sample 5 - Oligochaetes - 17/square foot
Dipteran larva (partly destroyed) - 1/square foot

Sample 6 - Oligochaetes - 1/square foot

Sample 7 - Prionocera sp. (Diptera, Tipulidae) - 0.5/square foot
Hydropsyche sp. (Trichoptera, Hydropsychidae) - 1/square foot
Dicranopsephalus sp. (Coleoptera, Psephenidae) - 1/square foot
"Orthocladiini" larvae (Diptera, Chironomidae) - 1/square foot
fragmented pupa

Sample 8 - Dicranopsephalus sp. - 0.5/square foot
Hydropsyche sp. - 1.5 square foot

DISCUSSION

The organisms identified from the wet depressions and ditch are typical of those that might be found in temporary or semipermanent aquatic habitats: oligochaetes (earthworms), larvae of semiaquatic organisms such as Helichus and Limnebius, and empty shells of small, immature aquatic snails, and dipteran larvae. Likewise, the organisms found in the stream are probably typical of those found in small streams draining developed areas. However, unlike some of the fauna of the pools and ditches, the stream organisms are fully aquatic. All of the organisms identified have a certain amount of tolerance for varying water quality conditions, and can withstand the varying levels of water quality that would be typical of developed areas such as Fort Benjamin Harrison.

The waters sampled are capable of supporting aquatic life to varying

degrees, but the results of this reconnaissance do not reveal the chemical nature and origins of the wet depression and ditch waters. The proximity of an old landfill has been the some of some local concern regarding the possible origins of the water. It should be pointed out the the iron bacteria found in the waters are not necessarily associated with pollution, but can be widespread in water with a high iron content. It should also be pointed out that ground water in Marion County is in many places characterized by its high iron content and reddish color. Brown (1882) noted that there were a number of springs in Marion County of this sort, one of which he named the Minnewa Spring, located 1.5 miles northeast of the "village of Lawrence". While it is not suggested that the depressions are part of this spring, it is clear that iron-bearing ground water is not uncommon in the Lawrence area.

To further characterize the nature and possible source of the water in the wet depressions and ditch, it is recommended that samples of water be collected from one depression (S-2), from the ditch (S-6), and from the tributary creek (S-7 and S-8), and analyzed for primary parameters listed for Phase I landfill monitoring in 329 IAC 2-16-6, and secondary parameters listed in 329 IAC 2-16-7(c). These parameters should indicate the probable source of the waters in those areas, and whether they may present a threat to human health and welfare.

LITERATURE CITED

Brown, R.T. 1882. Report of a geological and topographical survey of Marion County, Indiana. 12th Annual Report of the Indiana State Geologist.: 79 - 99.

Hackett, G. and J.H. Lehr. 1985. Iron bacteria occurrence, problems and control methods in water wells. National Water Well Association. 79 p.

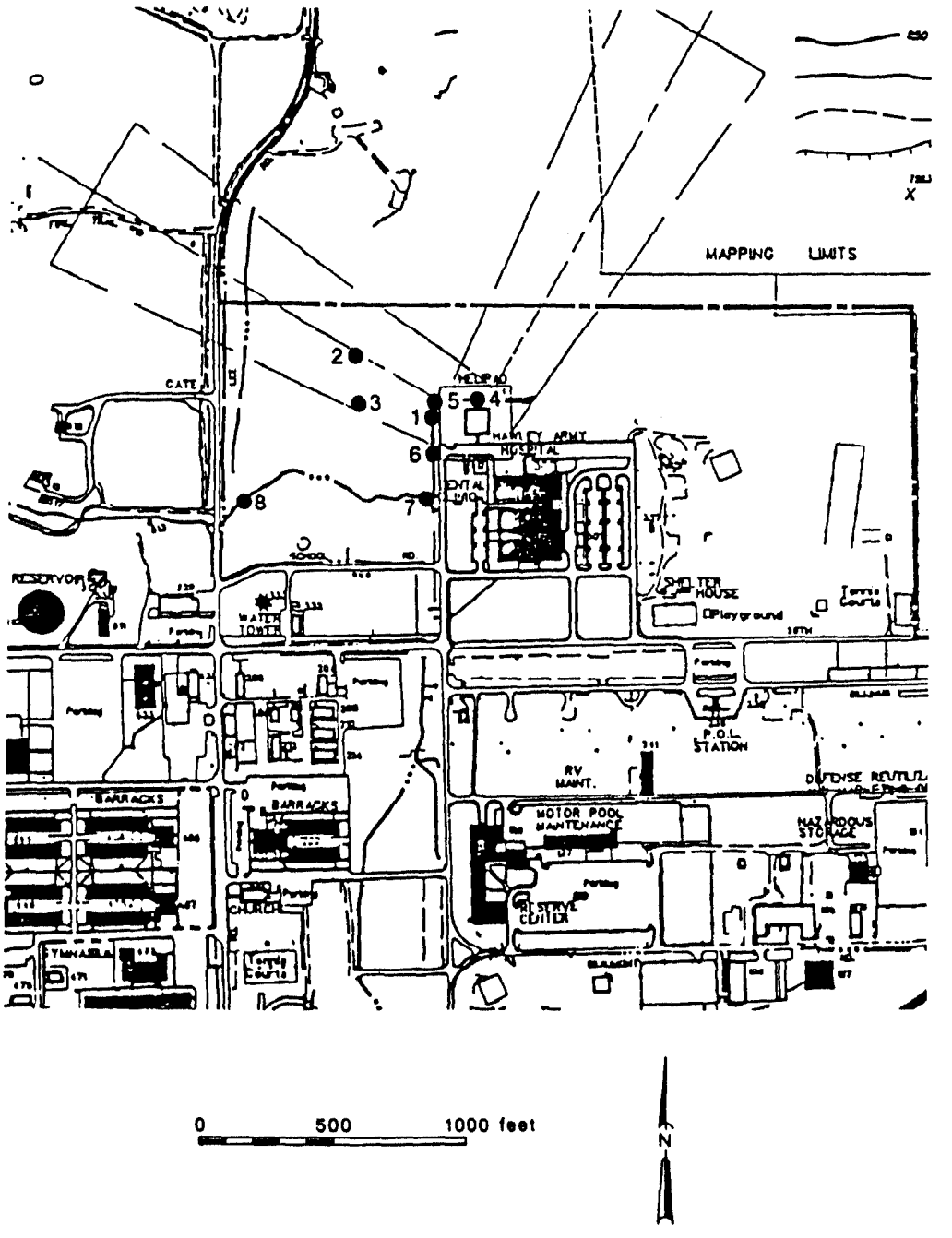


Figure 1. Location of sampling points.

Agreed Order Between Fort Harrison and the Environmental Protection Agency

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION V

IN THE MATTER OF DEPARTMENT OF THE ARMY U.S. ARMY SOLDIER SUPPORT CENTER FORT BENJAMIN HARRISON, INDIANA Respondent.	)	FEDERAL FACILITY COMPLIANCE AGREEMENT Docket No. V-W-89-R-4

I. INTRODUCTION

1. The United States Environmental Protection Agency, Region V, (hereinafter U.S. EPA) and the Department of the Army, U.S. Army Soldier Support Center, Fort Benjamin Harrison, Indiana (hereinafter USASSC) are the parties to this Federal Facility Compliance Agreement ("agreement") which is entered into pursuant to Executive Order 12088, October 13, 1978 (43 F.R. 47707) and the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, as further amended by the Hazardous and Solid Waste Amendments (RCRA), 42 U.S.C. §6901 et seq. The authority to enter this agreement has been delegated by the U.S. EPA Administrator to the Regional Administrator of U.S. EPA, Region V.

2. Executive Order 12088 was promulgated to insure Federal compliance with applicable pollution control standards. The Office of Management and Budget and the Department of Justice will take cognizance of this agreement pursuant to their respective duties to assure compliance with the environmental laws under Executive Order 12088 and RCRA. This agreement contains a "plan", as described in Section 1-601 of Executive

Order 12088, to achieve and maintain compliance with the specified hazardous waste rules of the State of Indiana which are contained at Title 329 of the Indiana Administrative Code (IAC), and of U.S. EPA whch are contained at 40 CFR Part 268. U.S. EPA and USASSC have reached a determination as to the steps that USASSC must take to achieve compliance and those steps are set out herein.

3. This Federal Facility Compliance Agreement does not address corrective action or response measures pursuant to Sections 3004(u), 3004(v), 3008(h) or 9003(h) of RCRA, 42 U.S.C. §§ 6924(u), 6924(v), 6928(h), or 6991b(h), or pursuant to the Comprehensive Environmental Response Compensation and Liability Act of 1980 ("CERCLA"), as amended by the Superfund Amendments and Reauthorization Act of 1986 ("SARA"), 42 U.S.C. §9601 et seq. This Federal Facility Compliance Agreement has been agreed to by USASSC and U.S. EPA to resolve only the matters stated below and to facilitate implementation of the measures described herein.

II. COMPLIANCE REQUIREMENTS & SCHEDULE

1. USASSC shall, immediately upon signature of this agreement, begin marking all storage containers of hazardous waste with the date upon which accumulation begins and with the words "Hazardous Waste" as required by 329 IAC 3-9-5.

2. USASSC shall develop a detailed waste analysis plan, as required by 329 IAC 3-16-4, for the facility. This plan shall be completed within by USASSC 120 days of signature of this agreement.

3. USASSC shall, within 180 days of signature of this agreement, complete a thorough hazardous waste determination at all its waste generation points. Said inventory shall list all generation points, determine quantities generated, and shall indicate which are considered satellite accumulation areas as described in 329 IAC 3-9-5 (c)(1).

4. Within 45 days of signature of this agreement, USASSC shall devise and maintain a complete operating record as required by 329 IAC 3-19-4.

5. Within 30 days of signature of this agreement, USASSC will initiate weekly inspections, as required by 329 IAC 3-16-6, for all areas not currently being inspected by the Defense Reutilization and Marketing Office (DRMO). USASSC shall see to it that its inspection reports are combined with those of the DRMO such that all inspection reports, logs, and summaries are in one location that is easily accessible to inspectors and safety personnel.

6. USASSC will revise its Installation Spill Contingency Plan, to comply with the requirements of 329 IAC 3-18-3, within 180 days of signature of this agreement.

7. USASSC shall, as required by 329 IAC 3-17-7, update its emergency response agreements with local authorities or contracted response teams within 60 days of signature of this agreement. USASSC shall distribute the revised contingency plan to all response teams that may be called upon to provide emergency services, as required by 329 IAC 3-18-4, within 75 days of signature of this agreement.

8. USASSC will identify training needs and provide training to appropriate personnel, in accordance with 329 IAC 3-16-7, within 210 days of signature of this agreement. Photocopies of all personnel training records (including DRMO, fire department, etc.) shall be maintained in one location that is easily accessible to inspectors and safety personnel.

9. USASSC shall within 60 days of signature of this agreement, submit an acceptable closure plan for the entire facility to the Indiana Department of Environmental Management (IDEM), as required by 329 IAC 3-21-3 and 4.

10. USASSC shall complete partial facility closure of the old hazardous material storage building (#124), in accordance with 329 IAC 3-21 and shall amend its RCRA permit application to include the new hazardous waste storage building.

11. The compliance schedule set out herein is intended to achieve compliance as expeditiously as practicable, pursuant to Section 1-601 of Executive Order 12088. The schedule was determined after consultation between USASSC and U.S. EPA. USASSC agrees to take the specified actions to achieve compliance with the regulatory requirements within the specified time periods subject, however, to the following paragraphs entitled "Funding" and "Delay in Performance." Whenever reasonably possible, USASSC will expedite the schedule.

III. FUNDING

USASSC shall seek all funding necessary to implement the Compliance requirement of this agreement pursuant to the schedule set forth herein. Section 1-5 of E.O. 12088 states "The head of each executive agency shall ensure that sufficient funds for compliance with applicable pollution control standards are requested in the Agency budget." Failure to obtain adequate funds or appropriations from Congress does not, in any way, release USASSC from its obligation to comply with the applicable rules at 329 IAC and the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6901 et seq. If, however, sufficient funds are not appropriated by the Congress as requested and existing funds are not available to achieve compliance with the schedules provided in this Agreement, and USASSC reports the lack of funds in accordance with Section VI of this agreement, any resulting delay shall be presumed to have been due to circumstances beyond the reasonable control of USASSC which could not have been overcome by due diligence. Nothing in this Agreement shall be construed to require the USASSC to obligate funds in any fiscal year in contravention of the Anti-Deficiency Act, 31 U.S.C. §1341.

IV. DELAY IN PERFORMANCE

If any event occurs which causes delay in the achievement of the requirements of this agreement, USASSC shall have the burden of proving that the delay was caused by circumstances beyond the reasonable control of USASSC which could not have been overcome by due diligence. As soon as USASSC becomes aware of a delay, USASSC shall promptly notify U.S. EPA's Designated Project Officer orally of the delay and shall, within thirty (30) calendar days of oral notification to U.S. EPA, notify U.S. EPA in writing of the cause and anticipated length of the delay, the measures taken and/or to be taken to prevent or minimize the delay, and the timetable by which USASSC intends to implement these measures. If the parties agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of USASSC, the time for performance of the affected task shall be extended in writing for a period equal to the delay resulting for such circumstances. If the parties cannot agree that the delay or anticipated delay has been or will be caused by circumstances beyond the reasonable control of USASSC or cannot agree on the period for extending performance, the dispute resolution procedures of this agreement shall apply. USASSC shall adopt all reasonable measures to avoid or minimize delay. Failure of USASSC to comply with the notice requirements of this paragraph shall constitute a waiver of the Respondent's right to request a waiver of the requirements of this Compliance Agreement.

V. AMENDMENT

In the event there is an amendment of RCRA, or changes to the regulations promulgated under RCRA, statutes, prior to completion of the requirements set forth within this agreement the compliance schedule may be renegotiated to accomodate any additional time necessary to comply with the new RCRA requirements. During the pendency of any renegotiation, the compliance schedule, to the extent it does not conflict with statutory or regulatory changes, shall remain in effect unless specifically waived by U.S. EPA, Region V.

VI. REPORT REQUIREMENTS

1. If USASSC subsequently determines that funds are not appropriated from Congress as requested and existing funds are not available to achieve compliance in accordance with the schedule, USASSC shall notify the U.S. EPA immediately in writing.

2. USASSC shall submit monthly progress reports until the compliance activities set forth herein have been completed and a final report within one month of completion of the final compliance activities. The progress reports will be submitted to U.S. EPA and IDEM. The progress reports shall indicate compliance or non-compliance with the schedule. In the event of non-compliance, the report shall include the cause of non-compliance and any remedial actions taken.

3. USASSC intends to keep the U.S. EPA and IDEM informed of other environmental studies and activities pertaining to solid waste management units which are not addressed as part of this Federal Facility Compliance Agreement and to send copies of such studies and plans and reports on such

activities to U.S. EPA as they become available. The provisions of this paragraph are not considered requirements under section VIII of this Agreement.

4. All agreed to items and reports should be submitted to William E. Muno, Chief, RCRA Enforcement Branch, U.S. EPA, 230 South Dearborn Street, 5HR-12, Chicago, Illinois 60604, and to Dennis Zawodni, Chief, Enforcement Section, Hazardous Waste Management Branch, Indiana Department of Environmental Management, 105 South Meridian Street, Indianapolis, Indiana 46206-6015.

VII. ENFORCEABILITY

1. USASSC recognizes its obligations to comply with RCRA as set forth in Section 6001 of RCRA, 42 U.S.C §6961.

2. The provisions of this Agreement including those related to statutory requirements, regulations, permits, closure plans, recordkeeping, reporting and schedules of compliance, shall be enforceable under citizen suits pursuant to 42 U.S.C. §6972(a)(1)(A), including actions or suits by the State of Indiana and its agencies. USASSC agrees that the State and its agencies are a "person" within the meaning of Section 7002(a) of RCRA, 42 U.S.C §6972(a).

3. In the event of any action filed under Section 7002(a) of RCRA, 42 U.S.C. §6972(a), alleging any violation of any such requirement of this Agreement, it shall be presumed that the provisions of this Agreement including those provisions which address recordkeeping, reporting, and

schedules of compliance are related to statutory requirements, regulations, permits, or closure plans, and are thus enforceable under Section 7002(a) of RCRA, 42 U.S.C. §6972(a).

VIII. RESOLUTION OF DISPUTES

1. Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement the procedures of this Part shall apply. In addition, during the pendency of any dispute, USASSC agrees that it shall continue to implement those portions of this Agreement which are not affected by the dispute and which can be reasonably implemented pending final resolution of the issue(s) in dispute. If U.S. EPA determines in writing that all or part of any field work affected by the dispute should stop pending resolution of the dispute, USASSC shall discontinue implementing those portions of the work or proceed at its own risk.

2. All parties to this Agreement shall make reasonable efforts to informally resolve disputes at the level of the Installation Commander and the U.S. EPA Region V RCRA Enforcement Branch Chief responsible for USASSC RCRA compliance, or their designees. If resolution cannot be achieved informally, within the thirty day period provided for in Paragraph 3 or 4, the procedures of Paragraph 5 of this Part shall be implemented to resolve the dispute.

3. Within thirty (30) days of the date of receipt by USASSC of a written notice from U.S. EPA of a decision or an action pertaining to

USASSC's implementation of this agreement with which USASSC disagrees, USASSC may submit to U.S. EPA a written statement of dispute setting forth the nature of the dispute, USASSC's position with respect to the dispute and the information USASSC is relying upon to support its position, and any impact such dispute may have on specified schedules, elements of work, submittals, or actions required by this Agreement. If USASSC does not provide such written statement to U.S. EPA within this 30-day period, USASSC shall be deemed to have agreed with the action taken by U.S. EPA which led to or generated the dispute.

4. Where U.S. EPA issues a Written Notice of Position, if USASSC disagrees with the Written Notice of Position it may provide U.S. EPA with a written statement of dispute setting forth the nature of the dispute, its position with respect to the dispute and the information it is relying on to support its position, and any impact such dispute may have on specified schedules, elements of work, submittals or actions required by this Agreement. If USASSC does not provide such a written statement of dispute within thirty (30) days of receipt of the Written Notice of Position, USASSC shall be deemed to have agreed with the Written Notice of Position.

5. Upon receipt of the written statement of dispute, the Parties shall engage in dispute resolution between the AMCCOM Commander and the EPA RCRA Enforcement Branch Chief or their designees. The parties shall have thirty (30) days from the receipt by the U.S. EPA of the written statement

of dispute to resolve the dispute. During this period, the Parties shall meet as many times as are necessary to discuss and attempt resolution of the dispute. Any agreed resolution shall be in writing, signed by both parties. If agreement cannot be reached on any issue by the end of this thirty (30) day period, each Party shall state its position in writing and provide it to the other Party within 10 days of the end of the 30 day period. Either Party may, within twelve (12) days of the issuance of the other Party's position, submit a written notice to the other Party escalating the dispute to the Dispute Resolution Committee (DRC) for resolution. If no Party elevates the dispute to the DRC within in this twelve (12) day escalation period, the Parties shall be deemed to have agreed with U.S. EPA's final written position with respect to the dispute.

6. The DRC will serve as a forum for resolution of disputes for which agreement has not been reached pursuant to Paragraphs 3,4 or 5 of this Section. The parties shall each designate one individual to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level (SES or equivalent) or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. Following escalation of a dispute to the DRC as set forth in Paragraph 5, the DRC shall have thirty (30) days to unanimously resolve the dispute. Any agreed resolution shall be in writing and signed by both Parties. If the DRC is unable to unanimously resolve the dispute within this thirty (30) day period, each party shall put its position in writing and provide it to the other Party within (10) days of the end of the 30 day period. Either Party may, within twelve (12) days of the issuance of the other Party's positon, submit a written notice of dispute to the

Administrator of U.S. EPA. In the event that the dispute is not escalated to the Administrator of the U.S. EPA within the designated twelve (12) day escalation period, the Parties shall be deemed to have agreed with the U.S. EPA DRC representative's final written position with respect to the dispute.

7. Upon escalation of a dispute to the Administrator of U.S. EPA pursuant to Paragraph 6, the Administrator will review and resolve such dispute as expeditiously as possible, but not later than sixty (60) days, following escalation. Upon resolution, the Administrator shall provide USASSC with a written decision resolving the dispute.

8. The U.S. EPA representative on the DRC is the Waste Management Division Director of U.S. EPA's Region V or his designee. USASSC's designated member is Ronald J. Medaris or his designee. Notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to the other Party.

9. The pendency of any dispute under this Section shall not affect USASSC responsibility for timely performance of the work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period time not to exceed the actual delay caused by the resolution of any good faith dispute in accordance with the procedures specified herein. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule.

10. Within thirty (30) days of resolution of a dispute pursuant to the procedures specified in this Section, USASSC shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedure.

11. Resolution of a dispute pursuant to this Section of the Agreement constitutes a final resolution of any dispute arising under this Agreement. The Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section of this Agreement.

IX. SANCTIONS

In the event that USASSC fails to bring its facility into full compliance with the regulatory requirements specified in this Agreement within the time periods which are specified herein, subject to Section IV. "Funding" and Section V. "Delay in Performance" of this Agreement, USASSC shall immediately cease and desist from the management of hazardous waste at the affected unit unless and until the unit is brought into compliance, a Presidential exemption is obtained pursuant to Section 6001 of RCRA, 42 U.S.C. §6961, or Congress grants a petition for specific legislative relief. In such event, U.S. EPA reserves the right to pursue any remedies that it may have pursuant to law.

This agreement in no way modifies Section 3008 of RCRA.

13 Oct 89
Date

Commanding Officer
U.S. Army Soldier Support
Center
Fort Benjamin Harrison, Indiana

12 December 1989
Date

Valdas V. Adamkus
Regional Administrator
Region V
U.S. Environmental Protection
Agency

Fort Benjamin Harrison
IN4 210 090 003
V-W-89-R-4

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