IN THE COURT OF COMMON PLEAS
WOOD COUNTY, OHIO

97 OCT 21 PM 1:59

REBECCA E. BHAER

STATE OF OHIO, ex rel.	:	**Case No.** 97-CV-465
BETTY D. MONTGOMERY	:	
ATTORNEY GENERAL OF OHIO	:	**JUDGE** JUDGE DeCESSNA
	:	
Plaintiff,	:	
	:	
v.	:	
	:	
HOLT COMPANY OF OHIO,	:	
	:	
Defendant.		

CONSENT ORDER AND FINAL JUDGMENT ENTRY

Plaintiff, State of Ohio, ex rel. Betty D. Montgomery, Attorney General of Ohio, having filed the Complaint in this action against Defendant to enforce Ohio's hazardous waste laws found in Chapter 3734 of the Revised Code and rules adopted thereunder; and Plaintiff and Defendant having consented to the entry of this Order;

THEREFORE, without trial or admission of any issue of law or of fact, and upon the consent of the parties hereto, it is hereby **ORDERED, ADJUDGED** and **DECREED** as follows:

I. DEFINITIONS

As used in this Consent Order:

"Consent Order" or **"Order"** means this Consent Order and Final Judgment Entry and all appendices hereto. In the event of conflict between this Order and any appendix, the Order shall control.

"Defendant" means Holt Company of Ohio.

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"Director" means Ohio's Director of Environmental Protection.

"Effective Date" or **"Effective Date of this Consent Order"** means the date upon which this consent order is entered by the court.

"Holt Facilities" means Defendant's sales and service facilities located in Cincinnati, Columbus, Dayton, Lucasville and Perrysburg, Ohio.

"Ohio EPA" means the Ohio Environmental Protection Agency.

"O.A.C." means the Ohio Administrative Code.

"Plaintiff" means the State of Ohio by and through the Attorney General of Ohio.

"R.C." means the Ohio Revised Code.

II. JURISDICTION AND VENUE

The Court has jurisdiction over the subject matter of this action, pursuant to R.C. Chapter 3734 and the rules adopted thereunder. This Court has jurisdiction over the parties. Venue is proper in this Court. The Complaint states a claim upon which relief can be granted.

III. PERSONS BOUND

This Consent Order shall apply to and be binding upon the parties to this action. Articles V, VII and VIII of this Consent Order are also binding upon Defendant's agents, officers, servants, employees, assigns, successors in interest and those persons in active concert, privity or participation with Defendant who receive actual notice of the Consent Order whether by personal service or otherwise, all to the extent they are bound, or would be bound if listed, in Rule 65(D) of The Ohio Rules of Civil Procedure.

IV. SATISFACTION OF LAWSUIT

1. Except as otherwise provided in this Consent Order, compliance with the terms of this Consent Order shall constitute full satisfaction of any civil liability of Defendant to Plaintiff for all claims alleged in the Complaint.

2. Nothing in this Consent Order shall limit the authority of the State of Ohio to:

(a) Seek relief for claims or conditions not alleged in the Complaint;

(b) Seek relief for claims or conditions alleged in the Complaint which occur after the entry of this Consent Order;

(c) Enforce this Consent Order through a contempt action or otherwise for violations of this Consent Order;

(d) Take any action authorized by law against any person, under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as amended, 42 U.S.C. §9601, et seq. and/or Ohio Revised Code Sections 3734.20 through 3734.27 to: (1) recover natural resource damages, and/or (2) order the performance of, and/or recover costs for any removal, remedial or corrective activities not conducted pursuant to the terms of this Consent Order.

(e) Take any action authorized by law against any person, including Defendant, to eliminate or mitigate conditions at the Facility which may present an imminent threat to the public health or welfare, or the environment.

3. Nothing in this Consent Order shall be deemed an admission by Defendant of any fact or allegation of the Complaint or any liability or responsibility for any conditions or events which are the subject matter of the Complaint, all of which Defendant specifically denies.

Defendant's participation in this Consent Order shall not be deemed an admission of liability for any purpose.

V. INJUNCTIVE RELIEF

Defendant ~~are~~ IS ordered and enjoined to comply with all applicable provisions of the Ohio hazardous waste laws and rules as set forth in R.C. Chapter 3734 and O.A.C. Chapters 3745-50 through 3745-69.

VI. CIVIL PENALTY AND SUPPLEMENTAL ENVIRONMENTAL PROJECT

1. Defendant is ordered and enjoined to pay to the State of Ohio a civil penalty in the amount of Thirty-Seven Thousand Dollars and No Cents ($37,000.00). This amount shall be paid by delivering to Plaintiff, c/o Bryan Zima, or his successor at the Office of the Attorney General of Ohio, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215-3428, a certified check, payable to the order of "Treasurer, State of Ohio" within thirty (30) days from the date of entry of this Consent Order. This civil penalty shall be deposited into the hazardous waste clean-up fund created by R.C. Section 3734.28.

2. In lieu of paying Fifteen Thousand Dollars of the Thirty-Seven Thousand Dollar civil penalty, Defendant shall pay Fifteen Thousand Dollars and No Cents ($15,000.00) into the Ohio Environmental Education Fund established pursuant to R.C. 3745.22. Such payment shall be made to the Ohio Environmental Education Fund, paid by delivering to Plaintiff, c/o Bryan Zima, or his successor at the Office of the Attorney General of Ohio, Environmental Enforcement Section, 30 East Broad Street, 25th Floor, Columbus, Ohio 43215-3428, within

thirty (30) days from the date of entry of this Consent Order, a certified check payable to the order of "Treasurer, State of Ohio/Ohio EPA", which also states in the check description in the lower left hand corner, "For the Ohio Environmental Education Fund." Otherwise, Defendant shall pay the Fifteen Thousand Dollars as civil penalty in accordance with subparagraph 1. of this Article.

3. In addition to the alternative set forth in subparagraph 2. of this Article, in lieu of paying an amount of up to Seven Thousand Dollars of the Thirty-Seven Thousand Dollar civil penalty, Defendant may deduct the cost of documented expenses incurred in advertising and distributing the Generic Pollution Prevention Plan described in Article VIII of this Consent Order. If Defendant fails to spend an amount of up to Seven Thousand Dollars on advertising and distributing the Generic Pollution Prevention Plan within eighteen (18) months after the Effective Date of this Consent Order, Defendant shall pay the difference between the documented expenses and Seven Thousand Dollars as a civil penalty pursuant to subparagraph 1. of this Article.

VII. POLLUTION PREVENTION FOR HOLT FACILITIES

1. Within ten (10) days from the effective date of this Order, Defendant shall, For each of the Holt Facilities, implement the comprehensive pollution prevention program described in the "Holt Company of Ohio Waste Minimization and Pollution Prevention Program" ("the Holt Plan"), approved by the Ohio EPA on August 27, 1997, a copy of which has been attached hereto as Exhibit A. Defendant shall implement the plan, and specifically, each of the bullet items listed on page 3 of the Holt Plan, in accordance with the schedule contained on page 3 of

the Holt Plan.

2. Within thirty (30) days after entry of this Consent Order, Defendant shall document the current status of the implementation of the bullet items in the implementation schedule on page 3 of the Holt Plan. Within thirty (30) days after completing each group of bullet items separated by horizontal lines in the implementation schedule on page 3 of the Holt Plan, Defendant shall document compliance by submitting to Ohio EPA a detailed narrative report, for review and approval, that discusses the segment just completed. When Defendant submits such detailed narrative reports, all Holt Facilities shall be discussed in a single report, unless otherwise allowed by the Ohio EPA.

3. All evaluations required by the Holt Plan shall address those project elements and evaluation criteria set forth in table 8, "Program Evaluation Criteria," on page 52 of the Ohio Pollution Prevention and Waste Minimization Planning Guidance Manual, dated September 30, 1993.

4. Within 365 days from the effective date of this Order, Defendant shall submit a detailed narrative report, for review and approval, that discusses pollution prevention options which have been selected for implementation by Defendant.

5. All reports and other documents required to be submitted pursuant to this Article shall be sent to:

Division of Hazardous Waste Management
Ohio Environmental Protection Agency
c/o Manager, Compliance Assurance Section
P.O. Box 1049
1800 WaterMark Dr.
Columbus, Ohio 43216-1049

VIII. GENERIC POLLUTION PREVENTION PLAN

1. Attached to this Consent Order as Exhibit B is a draft generic version of the pollution prevention plan developed for the Holt Facilities, which will be designed for equipment dealers in general ("Generic Pollution Prevention Plan"). Within sixty (60) days after the effective date of this Consent Order, Defendant shall advertise the existence and availability of the approved Generic Pollution Prevention Plan through the Ohio/Michigan Equipment Dealers Association. Defendant shall send copies of the approved Generic Pollution Prevention Plan to any and all equipment dealers requesting a copy at no charge. Defendant shall send five paper copies and one electronic copy of the approved Generic Pollution Prevention Plan to the Ohio EPA at no charge. The electronic copy shall be typed on a 3.5 inch floppy diskette using a software easily convertible to Word Perfect 5.1 or higher. Defendant authorizes Ohio EPA to copy and distribute copies of the approved Generic Pollution Prevention Plan by Ohio EPA's office of Pollution Prevention and Division of Hazardous Waste Management to any person which Ohio EPA chooses. Defendant's obligation under this Article to advertise and distribute the approved Generic Pollution Prevention Plan shall continue for eighteen months from Effective Date of this Consent Order or until Defendant documents expenditures on advertising and distributing (but not preparation or revision of) the approved Generic Pollution Prevention Plan totaling Seven Thousand Dollars, whichever occurs first. Defendant shall document expenditures by submitting to Ohio EPA copies of invoices or similar documentation for advertising, copying, mailing or shipping, and other expenses of distributing the approved Generic Pollution Prevention Plan.

2. All reports and other documents required to be submitted pursuant to this Article

shall be sent to:

Division of Hazardous Waste Management
Ohio Environmental Protection Agency
c/o Manager, Compliance Assurance Section
P.O. Box 1049
1800 WaterMark Drive
Columbus, Ohio 43216-1049

IX. COMPLIANCE WITH APPLICABLE LAWS, PERMITS AND APPROVALS

Nothing in the consent order shall be construed to relieve Defendant from the obligation to comply with the requirements of all applicable federal and state and local laws, rules and regulations, and permits. Where such laws appear to conflict with the other requirements of this Consent Order, Defendant is ordered and enjoined to immediately notify the Ohio EPA of the potential conflict. This Consent Order is not a permit issued pursuant to any federal or state or local law or rule.

X. RETENTION OF JURISDICTION

This Court will retain jurisdiction of this action for the purpose of enforcing this Consent Order.

XI. COSTS

Defendant is hereby ordered to pay the court costs of this action.

XII. TERMINATION

If Defendant complies with the requirements of R.C. Chapter 3734 and rules adopted

thereunder for a period of two (2) years from the date of entry of this Consent Order, and if Defendant has complied with all other requirements of the Consent Order, Defendant may move under Rule 60 of the Ohio Rules of Civil Procedure for a termination of this Consent Order. Plaintiff reserves all rights to oppose such motion.

XIII. ENTRY OF CONSENT ORDER AND JUDGMENT BY CLERK

Upon signing of this Consent Order by the Court, the clerk is directed to enter it upon the journal. Within three days of entering the judgment upon the journal, the clerk is directed to serve upon all parties notice of the judgment and its date of entry upon the journal in the manner prescribed by Rule 5(B) of the Ohio Rules of Civil Procedure and note the service in the appearance docket.

XIV. AUTHORITY TO ENTER INTO THE CONSENT ORDER

Each signatory for a corporation represents and warrants that he/she has been duly authorized to sign this document and so bind the corporation to all terms and conditions thereof, and that he/she submits with this Consent Order an authenticated and certified resolution from

the corporation establishing that he/she is so empowered.

SIGNED:

JUDGE_____,
WOOD COUNTY
COURT OF COMMON PLEAS

Respectfully submitted,

BETTY D. MONTGOMERY
ATTORNEY GENERAL OF OHIO

By:

BRYAN F. ZIMA (0001053)
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Assistant Attorneys General
Environmental Enforcement Section
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By:

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By:

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Clerk to furnish copy to counsel of record and unrepresented parties.

EXHIBIT A

Holt Company of Ohio

Waste Minimization and Pollution Prevention Program

February 1996
(Revised, August 1997)

INTRODUCTION

U.S. EPA defines pollution prevention as source reduction and other practices that reduce or eliminate the creation of pollutants through the increased efficiency in the use of raw materials, energy, water or other resources, or the protection of natural resources by conservation. (Source: Ohio EPA fact sheet #1, March 1993; *What is Pollution Prevention?*).

Ohio EPA defines Pollution Prevention as the use of source reduction techniques in order to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Pollution prevention avoids cross- media transfers of wastes and/or pollutants and is multi-media in scope. It addresses all types of waste and environmental releases to the air, water and land. (Source: Ohio EPA fact sheet #1, March 1993; *What is Pollution Prevention?*).

Why should Holt Company of Ohio ("Holt") implement a Pollution Prevention ("P2") Program? Implementation of an effective P2 Program can significantly enhance Holt's competitiveness and efficiency. Pollution prevention can also reduce potential liability arising from spills and work place accidents related to the use of hazardous substances. Financial benefits include lower waste transportation costs, lower disposal costs, reduced compliance costs (*i.e.*, permitting, monitoring and enforcement), and lower production costs resulting from a reduction in raw materials and energy usage. In addition to savings, additional income may also be generated though the sale of materials that were previously disposed of as wastes. Furthermore, Holt's public image as an environmentally responsible company can be significantly enhanced through the implementation and maintenance of an effective P2 Program.

Despite the incentives, perceived barriers to implementation of P2 Programs continue to exist. Effective P2 Programs require a significant investment of time and a strong commitment from both employees and management in order to be successful. A company that merely goes through the motions will not reap the substantial benefits described above. The benefits that Holt will realize from a P2 Program are directly proportionate to the amount of effort expended in planning, implementing and maintaining Holt's program.

Resources used in developing the following waste reduction/pollution prevention plan were Ohio EPA's *Ohio Pollution Prevention and Waste Minimization Planning Guidance Manual* (September 1993) and U.S EPA's *Business Guide for Reducing Solid Waste* (November 1993).

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1. Program Objectives

Holt Company of Ohio (Holt) has implemented this Waste Minimization and Pollution Prevention Program (WM/PP Program) in order to maximize the use of materials, processes, and practices that reduce or eliminate the creation of pollutants or wastes at their source.

Throughout the implementation of this program, Holt Company of Ohio, through its employees, will institute work practices that reduce the use of hazardous materials and reduce the consumption of non-hazardous materials, energy, water, and other resources.

First Priority — The first priority of Holt's WM/PP Program is source reduction, which involves the reduction or elimination of solid and hazardous wastes and other environmental releases to air or water at their point of generation.

Second Priority — The second priority will be to recycle and reuse materials wherever possible and increase the use of recycled materials where feasible.

Third Priority — The third priority is to reduce the consumption of energy resources and water.

2. Corporate Policy Statement

The following corporate policy statement, developed by Holt management, demonstrates management's commitment to developing and implementing this WM/PP Program. This policy statement has been communicated to Holt employees during organizational meetings and written copies have been distributed to each Holt employee in order to insure that the policy is both understood and implemented by each individual, company-wide.

HOLT COMPANY OF OHIO
WASTE MINIMIZATION AND POLLUTION PREVENTION POLICY

Holt Company of Ohio has made protecting the environment and providing a safe workplace a high priority. As leaders in our industry, we will strive to satisfy the needs of our customers, employees, and community by doing business in a way that protects the environment and improves our quality of life.

In keeping with the core values, which are our guiding principles, we are pledged to eliminate or reduce the use of hazardous materials at our stores and to minimize our use of energy and generation of wastes, whenever possible.

Prevention of pollution and wastes is preferred. However, when waste cannot be avoided, we are committed to reuse, recycle, treat, and dispose of wastes in ways that minimize the undesirable effects on our air, water, and land.

Holt Company is committed to identifying and implementing pollution prevention and waste reduction opportunities by involving all employees. We will actively seek ways to eliminate the generation of any hazardous waste by substituting nonhazardous materials.

By reducing wastes and preventing pollution, we can reduce our operating costs, increase employee efficiency, maintain a safe and healthy workplace, and improve the quality of our services to our customers in ways that are reasonable and cost effective.

Our goal is to prove our commitment to our responsibility by "Doing the Right Thing" and adhering to all environmental rules.

David Morgan
General Manager
Holt Company of Ohio

3. Program Organization and Implementation Schedule

David Morgan, General Manager for Holt Company of Ohio, has designated Marshall Crum as the WM/PP Program Coordinator. Mr. Crum will be responsible for coordinating the development, implementation, and assessment of waste minimization and pollution prevention activities at each of Holt's five locations.

The Holt WM/PP Program is anticipated to be implemented according to the following schedule:

IMPLEMENTATION SCHEDULE

July - August 1997	• Introduce WM/PP at Each Location • Form Waste Reduction Committees • Initial Meetings of Waste Reduction Committees • Begin Preliminary Identification and Assessment of Waste Streams
July - October 1997	• Identification and Assessment of Waste Streams • Prioritize Waste Streams • Identify and Evaluate WM/PP Options
November 1997	• Implement Selected WM/PP Options
January 1998	• Semi-Annual Program Evaluation • Amend Program as Necessary
July 1998	• Annual (1998) Company-Wide Program Evaluation • Amend Program as Necessary

November 21, 1995 - A preliminary identification and assessment of waste streams and waste handling procedures was conducted at the Perrysburg store by Philip Lee of Thompson Hine & Flory P.L.L. and Mr. Crum. The Perrysburg store was selected as being representative of the waste streams and procedures that would be found at the other company locations.

The facilities tour and preliminary assessment was preceded by a meeting attended by representatives from each department within the store, including Parts, Heavy Equipment Service, Administration, Truck Shop, and Heavy Equipment. During this meeting, Mr. Crum explained:

- the waste minimization and pollution prevention process,
- the necessity for an assessment of waste streams,

- how the Program would be developed and implemented with extensive input from all Holt employees, and
- the commitment of Holt management to the development and implementation of a comprehensive WM/PP Program.

Similar meetings will be conducted by Mr. Crum at the Troy, Cincinnati, and Columbus store locations. Each store has formed a Waste Reduction Committee, made up of representatives from each department and a member of store management. The committee will evaluate waste streams, review the EPA Waste Reduction Manual, and provide input into the preparation and implementation of the WM/PP Program. Team members will be rotated on a regular basis in order to encourage participation by all employees and bring new ideas to the Program.

Initial meetings of the Waste Reduction Committees:

December 1, 1995	Perrysburg
July 25, 1997	Cincinnati
August 4, 1997	Columbus
July 31, 1997	Troy
August 12, 1997	Lucasville

Following the initial meetings, each location will establish its own schedule for regular Waste Reduction Committee meetings.

Semi-Annual Program Evaluations for Each Location:

July (each year)

Annual Company-Wide Program Evaluation:

January (each year)

4. **Identification and Assessment of Waste Streams**

The identification and assessment of waste streams is one of the most critical elements in developing a successful WM/PP Program. This will entail a two-step process:

First, a preliminary identification of waste streams will be conducted by all employees under the direction of the Waste Reduction Committees. This process has already been partially completed at the Perrysburg store by Mr. Crum and Mr. Lee.

Following the preliminary identification, Waste Reduction Committee members and individual store employees will continue to identify additional waste streams that were not readily apparent during the preliminary identification process.

Second, after waste streams have been identified, they must be assessed or evaluated to determine which waste streams can be addressed immediately and which waste streams will require additional investigation before determining an appropriate course of action. To have any practical use, an assessment will require an accurate estimate of the quantity of the wastes generated, or the amount of the resource or material being consumed. This initial estimate of the waste generated, or resource or material consumed, will be used as a benchmark to evaluate the success of the program. All employees must assist in collecting and measuring the wastes generated as well as quantifying the resources and other materials consumed. The Waste Reduction Committees will then compile and evaluate the information collected.

Employees and the Waste Reduction Committees will also identify and evaluate the processes that create these waste streams in an effort to identify ways to reduce the use of raw materials and the generation of wastes. The identification and assessment of waste streams will include the identification of waste transportation, treatment, disposal, and recycling facilities and all contractors currently used for these services.

Following are some standard procedures that may help to facilitate the identification and assessment of waste streams:

STANDARD IDENTIFICATION AND ASSESSMENT PROCEDURES

- Observe standard procedures followed by employees (Where can immediate improvements be made?)
- Record quantities and concentrations of materials (Especially wastes and hazardous or toxic materials)
- Note sources, collection method, and handling of wastes
- Review record keeping procedures for ordering materials and disposing of wastes (Look for WM/PP opportunities: a reduction in material used = a reduction in waste)
- Develop flow diagrams that break down individual processes (See Figure No. 1)
- Look for leaking lines or poorly operating equipment
- Note any spill residues (Identify the material. What caused the spill? How was it cleaned up? How can future spills be prevented?)
- Note damaged containers (What was the cause? What happens to the container? How can future damage be prevented?)
- Note the physical and chemical characteristics of wastes or releases

Figure No. 1

ROUTINE EQUIPMENT SERVICE

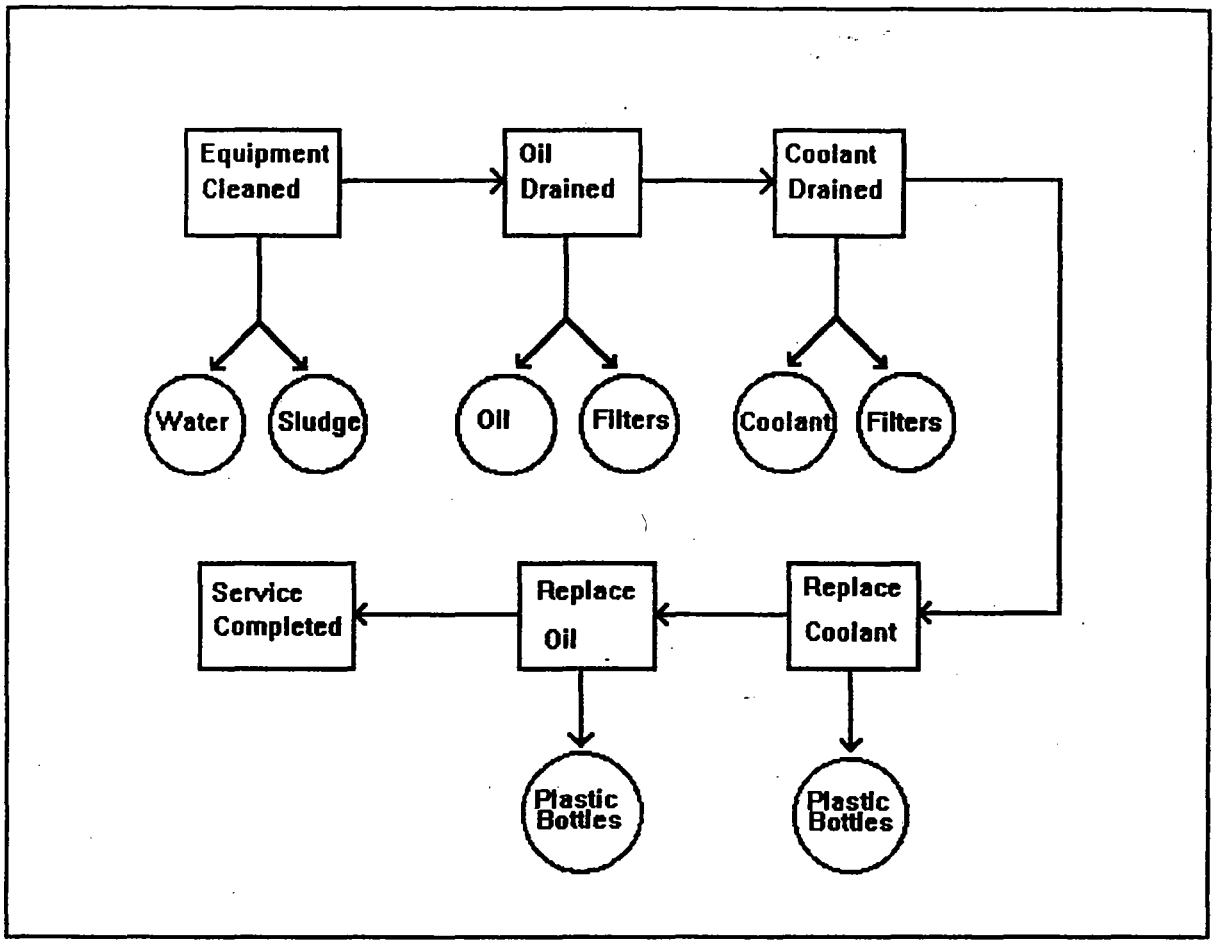

Figure 1: Example of a flow diagram that breaks down a process into individual units and assists in identifying WM/PP opportunities.

DEPARTMENT SPECIFIC PROCEDURES

Shipping and receiving	Packaging materials — what is done with waste? How are materials shipped/received — drums, bulk? Can containers be returned/recycled? Can return empty containers to the vendor? What happens to pallets?
Purchasing	Who orders materials? How far in advance are materials ordered? Can materials be ordered as needed (just-in-time)? Is the minimum amount ordered?
Parts/Other Inventory	What is the shelf-life of all materials? Is there an inventory control system? Bar coding? Is there a central stockroom (no individual orders)? Do you operate by "just-in-time" philosophy? Do you operate by "first in, first out" principle?
Truck/Equipment Maintenance	Are solvents used for parts cleaning? Are solvents recycled and have solvent alternatives been tested? Do you recycle batteries, used oil, or antifreeze? How are used oil filters/carburetor cleaners handled?
Waste Handling and Storage	Are waste streams segregated? Do you know the sources of all waste? Do you have a "waste inventory" control system? How often is waste shipped off-site? Treated on-site? How is waste handled once shipped off-site?

A third step, which is actually not a part of the waste stream evaluation, is an assessment of energy usage. Employees and the Waste Reduction Committees must assess the energy usage at each location and identify ways to improve energy efficiency.

The following waste streams or sources of waste streams, which may be representative of waste streams generated at all Holt locations, were identified in the preliminary identification of waste streams conducted at the Perrysburg store:

PRELIMINARY IDENTIFICATION OF WASTE STREAMS

I. Miscellaneous Fluids Management

A. Citri-Solve Cleaner (1 gallon plastic containers)

B. Petroleum based calibration fluid

II. Fuels

III. Parts Washers

A. Hydro-Blast Power Washers use a sodium hydroxide solution attached to an oil water separator. Each unit creates sludge 2-3 times a year when cleaned.

B. Glass Bead Cleaning Units creates approximately 100 lbs. of waste (beads) annually.

C. Ultra-Sonic Cleaners

D. Parts Washer Degreaser, which is used to bore cylinders and reuses the oil.

IV. Bench-Type Parts Washers

A. Solvent Streams

V. Spent Oil Filters

VI. Used Antifreeze

A. Antifreeze is recycled by T.D.A. Recycling Inc. at no cost to Holt Company.

VII. Used Batteries

A. Each store currently uses a separate lead/acid battery recycler.

B. Bulk battery fill solution (35% sulfuric acid) is stored and dispensed from 55 gallon drums.

VIII. Used Oils & Lubricants

A. Diesel Oil

B. Hydraulic Oil

C. Gear Oil

D. Multi-purpose Tractor Oil

E. Grease

IX. Used Refrigerants

A. Each store has its own reclamation system for R-12 and R-134 refrigerants.

X. Used Tires and Other Rubber Products

XI. Vehicle Washing Wastewater and Sumps

XII. Empty Containers

A. Cardboard

B. Aerosol Cans

C. Plastic 5-gallon Oil Containers

D. Wood Pallets

XIII. Computer Paper

XIV. Miscellaneous

A. Metal filings from parts grinding

B. Floor absorbent

C. Rags

D. Scrap Metal from all sources is currently recycled.

XV. **Energy Consumption**

XVI. **Water Consumption**

Other locations may use this list as a guide and for comparison purposes, but should not assume that all waste streams will be identical. The attached appendices contain OEPA Fact Sheets and U.S. EPA Guidance Documents that may provide additional guidance to the Waste Reduction Committees when conducting waste stream assessments. The appendices also contain forms, worksheets, and case studies useful for this purpose.

5. Prioritizing Waste Streams

Based on procedures recommended in Waste Minimization and Pollution Prevention guidance documents prepared by the USEPA and Ohio EPA, companies implementing WM/PP Programs are encouraged to identify one or two waste streams on which to concentrate their initial efforts. Attempting to address each and every identified waste stream at the beginning of a new program can be overwhelming and lead to the eventual failure of the entire WM/PP Program.

Waste streams generated at Holt stores will be prioritized by the Waste Reduction Committees taking each of the following factors into consideration:

WASTE STREAM PRIORITY FACTORS

- U.S. EPA's 17 target chemicals from the 33/50 program (see Appendix A)
- Toxic Release Inventory (TRI) wastes
- High purchase, disposal, and other costs
- High potential cost savings
- Highly toxic wastes or substances
- Hazardous wastes
- Regulatory concerns
- High use and/or release rates
- Potential for removing bottlenecks in production or waste treatment
- Potential liability due to endangerment of employees, the environment, or the public
- Potential for successful implementation
- High volume wastes
- Carcinogens
- Hazardous Air Pollutants (HAPs)
- Chlorofluorocarbons (CFCs) and other ozone-depleting materials
- Local citizens' concerns

The waste streams which are initially identified for immediate action by each of Holt's five locations may vary and will not be dictated on a company wide basis due to Holt's commitment to make this program a product of the individual efforts of each store and each individual employee. Once the initial waste streams have been prioritized and addressed at each location, the Waste Reduction Committees should review the processes generating the waste to determine if further waste reductions can be realized before prioritizing the remaining waste streams for further assessment or action. Eventually, each of the initially identified waste streams will be addressed and additional waste streams may be subsequently identified and added to the list for future evaluation.

6. Identifying, Evaluating and Implementing Waste Minimization and Pollution Prevention Options

Once waste streams have been identified, assessed and prioritized, options for reducing waste generation, reducing the use of hazardous substances, and reducing the use of raw materials and other resources, must be identified, evaluated and implemented. The Waste Minimization Committees will propose options and then evaluate those options based upon three factors: economic feasibility, practicality of implementation, and effectiveness.

Economic feasibility will be determined based upon the total current economic cost of the waste stream as it is currently being generated and managed compared to the cost of implementing the proposed option taking into consideration any potential savings. When evaluating the economic feasibility of a proposed option, potential reductions in raw material costs, energy usage, and waste disposal costs will be considered. If options are being proposed that will effect the generation, handling or disposal of hazardous materials, the potential savings from the reduced cost of regulatory compliance and reduced environmental liabilities will also be considered. Not all proposed options are expected to produce a net savings. However, even where cost savings are not realized, the environmental, health, or safety benefits may outweigh or justify any additional cost that may be incurred. The following chart illustrates some additional costs that should be considered when evaluating the economic feasibility of a waste minimization and pollution prevention option.

ECONOMIC FEASIBILITY CONSIDERATIONS

COSTS ASSOCIATED WITH RAW MATERIAL AND HAZARDOUS SUBSTANCE USE

Purchasing
Taxes on hazardous and other products
Safety training
MSDS filing
Safety equipment
Extra insurance premiums
Labor

Storage and Inventory
Special storage facilities
Safety equipment
Storage area inspection and monitoring
Storage container labeling
Safety training
Emergency response planning
Spill containment equipment
Lost product from spills, evaporation, etc.
Labor
SARA Title III (TRI) reporting

In-Process Use
Safety training
Safety equipment
Containment facilities and equipment
Clean-up supplies
Labor

Lost Raw Materials
Labor for handling
Equipment for clean-up
Reporting

COSTS ASSOCIATED WITH WASTE GENERATION

Air and Water Emission
Air emission permits and controls
TRI measurements/estimates
TRI reporting
TRI fees
Worker health monitoring
Sewer discharge fees

COSTS ASSOCIATED WITH WASTE GENERATION (continued)

NPDES permits
Water quality monitoring
Sampling training
Pretreatment equipment
Pretreatment system operation

Solid Waste Collection
Safety training
Safety equipment
Collection supplies
Container labels
Container labeling
Record keeping
Truck maintenance (for in-house fleet)

Waste Storage
Storage permits
Special storage facilities
Spill containment equipment
Emergency response planning
Safety training
Storage area inspection and monitoring

On-Site Treatment or Recycling
Capital and operating costs
Depreciation
Utilities
Operator training
Safety equipment
Emergency response planning
Permits
Inspection and monitoring
Insurance

Disposal
Sewer fees
Container manifesting
Disposal vendor fees
Preparation for transportation
Transportation
Insurance and liability
Disposal site monitoring

(Table from, *Pollution Prevention Planning* Washington State Dept of Ecology, January 1992)

Practicality of implementation will be determined based upon how easily the proposed WM/PP option can be introduced into standard operating procedures. An option that is inherently inconvenient or time consuming will not easily be incorporated into standard operating procedures and, over time, personnel will fail to follow the new procedure. In many cases the practicality of an option cannot be evaluated without implementation of the proposed option for a trial period. Other practicality considerations may be based upon each store's physical limitations, equipment restrictions, or performance requirements. For example, non-hazardous parts cleaners may be proposed as an alternative to solvents, however, if the proposed replacement product does not perform its intended use satisfactorily, it becomes an impractical solution.

Effectiveness will be determined on the degree of improvement that can be measured over time if the proposed WM/PP option is implemented. Any proposed option must provide some measurable economic, environmental, or safety benefit. Therefore, accurate measurements of wastes created or materials used must be obtained prior to implementing the chosen WM/PP Program and additional measurements must be obtained after a specified time. The semi-annual and annual WM/PP Program Evaluations (see Sec. 7) will provide an opportunity to determine if implemented options have been effective. Ineffective measures will be abandoned and other options evaluated for implementation.

Some WM/PP options may be simple to identify and implement such as:

- Ship/receive materials in bulk to eliminate disposal of numerous small containers
- Reuse containers where possible
- Establish a central stockroom/inventory control system
- Investigate solvent/cleaner alternatives
- Reduce the total number of different solvents used
- Reduce the volume and/or toxicity of a solvents/cleaners used by substituting less toxic or less hazardous alternatives
- Reuse solvents where possible
- Segregate waste streams
- Making process modifications and/or operating conditions that improve efficiency
- Improving preventive maintenance and operating procedures
- Turn off lights and computers when not in use.

Each evaluation should result in a brief report that includes:

- The options proposed
- The results of options screening
- The results of the feasibility analysis
- The project proposal for each selected option
- Possible performance measures to allow the project to be evaluated after it is implemented

In addition to identifying, evaluating, and implementing WM/PP Options for individual waste streams, Holt will develop programs to implement good operating practices at each location. Following are examples of good operating practices that the Waste Minimization Committees will evaluate for their applicability to Holt operations. If determined to be applicable, these good operating practices may be instituted on a company wide basis.

Good Operating Practice	Program Ingredients
Waste Segregation	Prevent mixing of hazardous wastes with nonhazardous wastes Store materials in compatible groups Segregate different solvents Isolate liquid wastes from solid wastes *The elements listed above are critical and will reduce the possibility of creating hazardous waste, reduce waste disposal costs and make it easier to comply with hazardous waste management rules.*
Preventive Maintenance Programs	Maintain equipment history cards on equipment location, characteristics, and maintenance Maintain a master preventive maintenance (PM) schedule Keep vendor maintenance manuals handy Maintain a manual or computerized repair history file
Training/Awareness-Building Programs	Provide training for: - Operation of the equipment to minimize energy use and material waste - Proper materials handling to reduce waste and spills - Emphasize importance of pollution prevention by explaining the economic and environmental ramifications of hazardous waste generation and disposal - Detecting and minimizing material loss to air, land, or water - Emergency procedures to minimize lost materials during accidents
Effective Supervision	Closer supervision may improve production efficiency and reduce inadvertent waste generation. Centralize waste management. Appoint a safety/waste management officer for each department. Educate staff on the benefits of pollution prevention. Establish pollution prevention goals. Perform pollution prevention assessments.

The attached appendices contain OEPA Fact Sheets and U.S. EPA Guidance Documents that may provide additional guidance to the Waste Reduction Committees when identifying, evaluating, and selecting WM/PP options for implementation. The appendices also contain forms, worksheets, and case studies that may be useful for this purpose.

7. Program Evaluations

An important element of the Holt WM/PP Program is the ongoing evaluation of the effectiveness of the options implemented to address specific waste streams. It is anticipated that some of the initial measures implemented will not be practical, effective, or cost efficient, and additional alternatives will need to be evaluated. Trial and error, as well as self-evaluation, are all part of the WM/PP process.

Due to the decentralized nature of the Holt WM/PP Program, strict time lines for program evaluations will not be enforced on a company-wide basis. It is anticipated that initially, the status and success of each store's program will be evaluated by Mr. Crum and the Waste Reduction Committees on a semi-annual basis, beginning in June 1996 and again in December 1996. However, corporate support, guidance and assistance will be available to individual stores on an as-needed basis throughout the year.

During January of each year, Mr. Crum will evaluate the Holt WM/PP Program on a company-wide basis taking into consideration the Holt WM/PP Policy Statement, the Holt Company's Guiding Principles, and the practicality, cost efficiency, and effectiveness of the Program.

The success of the Program will be indicated by:

- money saved in waste disposal costs;
- any significant measurable reduction in the amount of wastes generated;
- any measurable reduction in the toxicity of wastes generated;
- any measurable reduction in raw materials used or energy consumed;
- any reduction in energy consumed as indicated by reduced energy costs; or
- money saved from areas listed in the table on page 12.

Although the goal of the program is waste minimization and pollution prevention and not cost savings, an economic evaluation of the program will be conducted that takes into consideration the costs of implementing the program and any savings realized in waste disposal, materials usage, regulatory compliance, or energy consumption.

8. Record keeping

Each store will maintain, in a three-ring binder and possibly on computer disk, a copy of the Holt WM/PP Program as well as the reports, data, information, and records developed by the Waste Reduction Committees that pertain to the implementation of the WM/PP Program for that location. Initially, records are expected to include the following:

- Copy of the WM/PP Program;
- List of current Waste Reduction Committee Members;
- Minutes of each Waste Reduction Committee Meeting indicating date, time, attendees, items discussed, and actions recommended or taken;
- Results of the preliminary waste stream identification process;
- Assessment/evaluation of waste streams including accurate quantity estimates;
- Waste streams prioritized;
- Identification and evaluation of WM/PP options with recommendations for implementation based upon economic feasibility, practicality of implementation, and effectiveness;
- Identification of WM/PP options selected for implementation including goals and time lines;
- Semi-Annual Program Evaluations; and
- Annual Program Evaluations.

Tabbed dividers for each of the above categories will ease the Record keeping burden and improve the accessibility of the WM/PP records.

APPENDIX A

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (U.S. EPA)

33/50 Program

The 33/50 Program was initiated in January of 1991 by U.S. EPA to reduce national pollution releases and off-site transfers of 17 toxic chemicals reported under the Toxics Release Inventory (TRI). Reduction goals are 33 percent by the end of 1992 and 50 percent by the end of 1995. Companies are encouraged to examine their industrial processes and establish cost effective pollution prevention practices for these chemicals. Participation in the 33/50 Program is completely voluntary. The TRI will be used to track these reductions using 1988 data as a baseline.

The 17 chemical groups are:

- benzene
- cadmium & cadmium compounds
- carbon tetrachloride
- chloroform
- chromium & chromium compounds
- cyanide & cyanide compounds
- lead & lead compounds
- mercury & mercury compounds
- methylene chloride
- methyl ethyl ketone
- methyl isobutyl ketone
- nickel & nickel compounds
- tetrachloroethylene
- toluene
- 1,1,1-trichloroethane
- trichloroethylene
- xylenes

For more information contact: The TSCA Hotline: 202/554-1404. All information received by EPA through the 33/50 Program is available to the public through the Emergency Planning and Community Right to Know Act (EPCRAA) Reporting Center, P.O. Box 23779, Washington, D.C. 20026-3779, Phone: 202/488/1501.

Appendix B

Appendix C

Appendix D

Appendix E

Appendix F

Appendix G

Appendix H

Appendix B

(Company Name)

EXHIBIT B

Waste Minimization and Pollution Prevention Program

The information in this program is provided by Holt Company of Ohio as a general guide to assist members of the heavy equipment service industry in developing and implementing their own Pollution Prevention/Waste Minimization programs. Even though the waste streams at each business may be different, this program can be tailored to fit any facility or process. This information is not intended as legal or technical advice and every company is encouraged to seek appropriate professional advice prior to developing or implementing its own Pollution Prevention/Waste Reduction Program.

INTRODUCTION

U.S. EPA defines pollution prevention as source reduction and other practices that reduce or eliminate the creation of pollutants through the increased efficiency in the use of raw materials, energy, water or other resources, or the protection of natural resources by conservation. (Source: Ohio EPA fact sheet #1, March 1993; *What is Pollution Prevention*?).

Ohio EPA defines Pollution Prevention as the use of source reduction techniques in order to reduce risk to public health, safety, welfare and the environment and, as a second preference, the use of environmentally sound recycling to achieve these same goals. Pollution prevention avoids cross-media transfers of wastes and/or pollutants and is multi-media in scope. It addresses all types of waste and environmental releases to the air, water and land. (Source: Ohio EPA fact sheet #1, March 1993; *What is Pollution Prevention*?).

Why should your company implement a Pollution Prevention ("P2") Program? Implementation of an effective P2 Program can significantly enhance your company's competitiveness and efficiency. Pollution prevention can also reduce potential liability arising from spills and work place accidents related to the use of hazardous substances. Financial benefits include lower waste transportation costs, lower disposal costs, reduced compliance costs (*i.e.*, permitting, monitoring and enforcement), and lower production costs resulting from a reduction in raw materials and energy usage. In addition to savings, additional income may also be generated though the sale of materials that were previously disposed of as wastes. Furthermore, your company's public image as an environmentally responsible company can be significantly enhanced through the implementation and maintenance of an effective P2 Program.

Despite the incentives, perceived barriers to implementation of P2 Programs continue to exist. Effective P2 Programs require a significant investment of time and a strong commitment from both employees and management in order to be successful. A company that merely goes through the motions will not reap the substantial benefits described above. The benefits that your company will realize from a P2 Program are directly proportionate to the amount of effort expended in planning, implementing and maintaining your company's program.

Resources used in developing the following waste reduction/pollution prevention plan were Ohio EPA's *Ohio Pollution Prevention and Waste Minimization Planning Guidance Manual* (September 1993) and U.S EPA's *Business Guide for Reducing Solid Waste* (November 1993).

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1. Program Objectives

(Company Name) has implemented this Waste Minimization and Pollution Prevention Program ("WM/PP Program") in order to maximize the use of materials, processes, and practices that reduce or eliminate the creation of pollutants or wastes at their source.

Throughout the implementation of this program, (Company Name), through its employees, will institute work practices that reduce the use of hazardous materials and reduce the consumption of non-hazardous materials, energy, water, and other resources.

First Priority — The first priority of the (Company Name) WM/PP Program is source reduction, which involves the reduction or elimination of solid and hazardous wastes and other environmental releases to air or water at their point of generation.

Second Priority — The second priority will be to recycle and reuse materials wherever possible and increase the use of recycled materials where feasible.

Third Priority — The third priority is to reduce the consumption of energy resources and water.

2. Corporate Policy Statement

The following corporate policy statement, developed by (Company Name) management, demonstrates management's commitment to developing and implementing this WM/PP Program. This policy statement has been communicated to (Company Name) employees during organizational meetings and written copies have been distributed to each employee in order to insure that the policy is both understood and implemented by each individual, company-wide.

(Company Name)
WASTE MINIMIZATION AND POLLUTION PREVENTION POLICY

(Company Name) has made protecting the environment and providing a safe workplace a high priority. We will strive to satisfy the needs of our customers, employees, and community by doing business in a way that protects the environment and improves our quality of life.

(Company Name) is committed to eliminating and reducing the use of hazardous materials and minimizing the use of energy and generation of wastes, whenever possible.

Prevention of pollution and waste is preferred. However, when waste cannot be avoided, we are committed to reuse, recycle, treat, and dispose of wastes in ways that minimize the undesirable effects on our air, water and land.

(Company Name) is committed to identifying and implementing pollution prevention and waste reduction opportunities by involving all employees. We will actively seek ways to eliminate the generation of any hazardous waste by substituting nonhazardous materials.

By reducing wastes and preventing pollution, we can reduce our operating costs, increase employee efficiency, maintain a safe and healthy workplace, and improve the quality of our services to our customers in ways that are reasonable and cost effective.

Our goal is to demonstrate our commitment to our responsibility to comply with all environmental laws, rules and regulations.

General Manager
(Company Name)

3. **Program Organization and Implementation Schedule**

The General Manager for (Company Name), has designated (Name of Responsible Person) as the WM/PP Program Coordinator. (Responsible Person) will be responsible for coordinating the development, implementation, and assessment of waste minimization and pollution prevention activities at each company location.

The (Company Name) WM/PP Program is anticipated to be implemented according to the following schedule:

IMPLEMENTATION SCHEDULE

Date	Action
	• Introduce WM/PP at Each Location • Form Waste Reduction Committees • Initial Meetings of Waste Reduction Committees • Begin Preliminary Identification and Assessment of Waste Streams
	• Identification and Assessment of Waste Streams • Prioritize Waste Streams • Identify and Evaluate WM/PP Options
	• Implement Selected WM/PP Options
	• Semi-Annual Program Evaluation • Amend Program as Necessary
	• Semi-Annual Program Evaluation • Amend Program as Necessary
	• Annual Company-Wide Program Evaluation • Amend Program as Necessary

A preliminary identification and assessment of waste streams and waste handling procedures must be conducted at each company facility. As an alternative, a single facility can be selected as being representative of the streams and procedures that would be found at other company locations.

A tour and preliminary assessment should be preceded by a meeting attended by representatives from each department within the store facility, including Parts, Heavy Equipment Service, Administration and Engine Service. During this meeting, explain:

- the waste minimization and pollution prevention process,
- the necessity for an assessment of waste streams,
- how the Program would be developed and implemented with extensive input from all (Company Name) employees, and
- the commitment of (Company Name) management to the development and implementation of a comprehensive WM/PP Program.

Each location should have a Waste Reduction Committee, made up of selected representatives or volunteers from each department and a member of store management. The committee will evaluate waste streams, review the EPA Waste Reduction Manual, and provide input into the preparation and implementation of the WM/PP Program. Team members will be rotated on a regular basis in order to encourage participation by all employees and bring new ideas to the Program.

Initial meetings of the Waste Reduction Committees:

Date **Location**

Following the initial meetings, each location should establish its own schedule for regular Waste Reduction Committee meetings.

Semi-Annual Program Evaluations for Each Location:

Month **Location**

Annual Company-Wide Program Evaluation:

Month

4. Identification and Assessment of Waste Streams

The identification and assessment of waste streams is one of the most critical elements in developing a successful WM/PP Program. This will entail a two-step process:

First, a preliminary identification of waste streams will be conducted under the direction of the Waste Reduction Committees. Following the preliminary identification, Waste Reduction Committee members and location employees will continue to identify additional waste streams that were not readily apparent during the preliminary identification process.

Second, after waste streams have been identified, they must be assessed or evaluated to determine which waste streams can be addressed immediately and which waste streams will require additional investigation before determining an appropriate course of action. To have any practical use, an assessment will require an accurate estimate of the quantity of the wastes generated, or the amount of the resource or material being consumed. This initial estimate of the waste generated, or resource or material consumed, will be used as a benchmark to evaluate the success of the program. All employees must assist in collecting and measuring the wastes generated as well as quantifying the resources and other materials consumed. The Waste Reduction Committees will then compile and evaluate the information collected.

Employees and the Waste Reduction Committees will also identify and evaluate the processes that create these waste streams in an effort to identify ways to reduce the use of raw materials and the generation of wastes. The identification and assessment of waste streams will include the identification of waste transportation, treatment, disposal, and recycling facilities and all contractors currently used for these services.

Following are some standard procedures that may help to facilitate the identification and assessment of waste streams:

STANDARD IDENTIFICATION AND ASSESSMENT PROCEDURES

- Observe standard procedures followed by employees (Where can immediate improvements be made?)
- Record quantities and concentrations of materials (Especially wastes and hazardous or toxic materials)
- Note sources, collection method, and handling of wastes
- Review record keeping procedures for ordering materials and disposing of wastes (Look for WM/PP opportunities: a reduction in materials used = a reduction in waste)
- Develop flow diagrams that break down individual processes (See Figure No. 1)
- Look for leaking lines or poorly operating equipment
- Note any spill residues (Identify the material. What caused the spill? How was it cleaned up? How can future spills be prevented?)
- Note damaged containers (What was the cause? What happens to the container? How can future damage be prevented?)
- Note the physical and chemical characteristics of wastes or releases

Figure No. 1

ROUTINE EQUIPMENT SERVICE

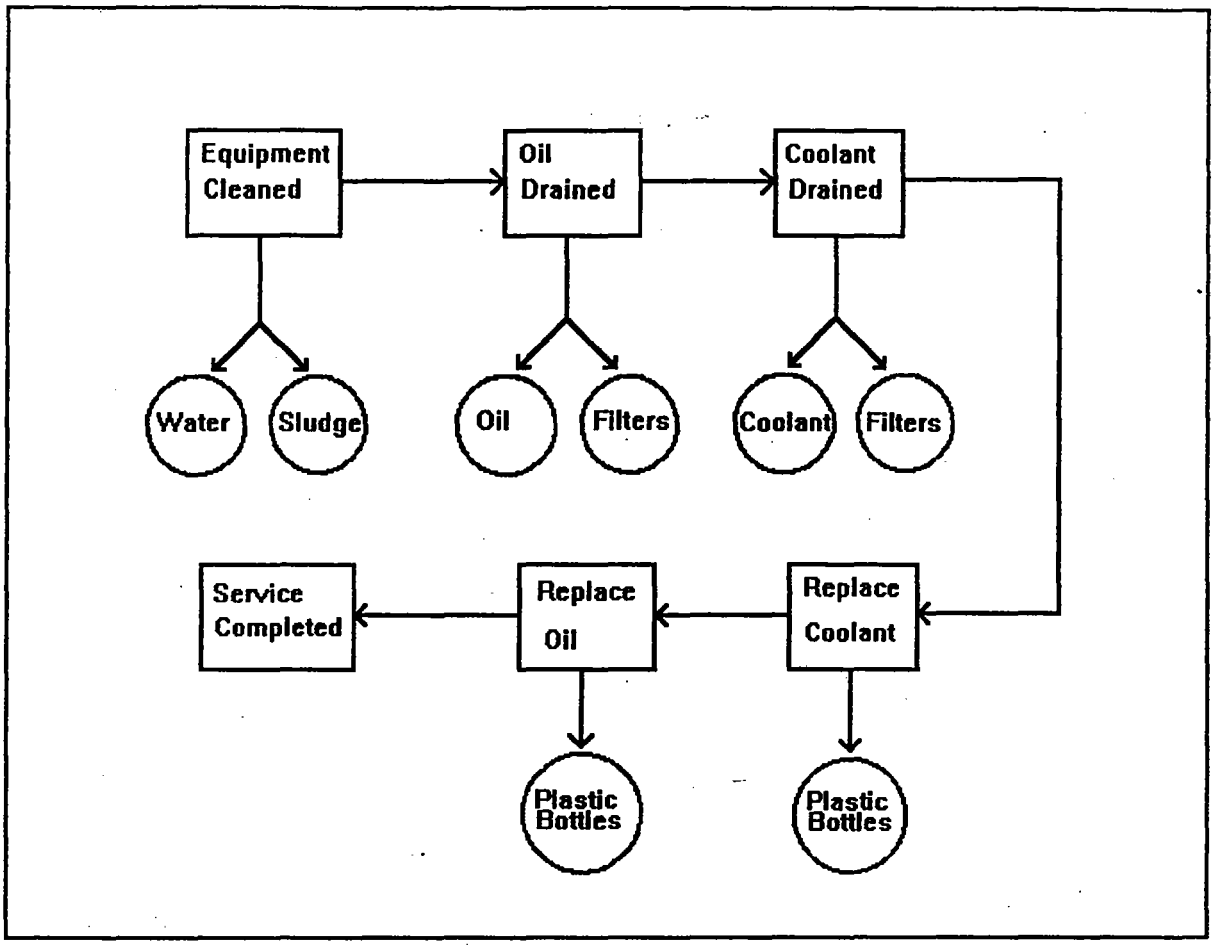

Figure 1: Example of a flow diagram that breaks down a process into individual units and assists in identifying WM/PP opportunities.

Shipping and receiving	Packaging materials — what is done with waste? How are materials shipped/received — drums, bulk? Can containers be returned/recycled? Can return empty containers to the vendor? What happens to pallets?
Purchasing	Who orders materials? How far in advance are materials ordered? Can materials be ordered as needed (just-in-time)? Is the minimum amount ordered?
Parts/Other Inventory	What is the shelf-life of all materials? Is there an inventory control system? Bar coding? Is there a central stockroom (no individual orders)? Do you operate by "just-in-time" philosophy? Do you operate by "first in, first out" principle?
Truck/Equipment Maintenance	Are solvents used for parts cleaning? Are solvents recycled and have solvent alternatives been tested? Do you recycle batteries, used oil, or antifreeze? How are used oil filters/carburetor cleaners handled?
Waste Handling and Storage	Are waste streams segregated? Do you know the sources of all waste? Do you have a "waste inventory" control system? How often is waste shipped off-site? Treated on-site? How is waste handled once shipped off-site?

A third step, which is actually not a part of the waste stream evaluation, is an assessment of energy usage. Employees and the Waste Reduction Committees must assess the energy usage at each location and identify ways to improve energy efficiency such as turning off lights and computers when not in use.

The following waste streams or sources of waste streams, which may be representative of waste streams generated at all (Company Name) locations, were identified in the preliminary identification of waste streams:

EXAMPLES: PRELIMINARY IDENTIFICATION OF WASTE STREAMS

I. **Miscellaneous Fluids Management**

A. Hand Cleaner (1 gallon plastic containers)

B. Petroleum based calibration fluid

II. **Fuels**

III. **Parts Washers**

A. Power Washers use a sodium hydroxide solution attached to an oil water separator. Each unit creates sludge (x) times a year when cleaned.

B. Glass Bead Cleaning Units creates approximately (x) lbs. of waste (beads) annually.

C. Ultra-Sonic Cleaners

D. Parts Washer Degreaser, which is used to bore cylinders and reuses the oil.

IV. **Bench-Type Parts Washers**

A. Solvent Streams

V. **Spent Oil Filters**

VI. **Used Antifreeze**

A. Used Antifreeze is recycled by a coolant recycler.

VII. **Used Batteries**

A. Each store currently uses a separate lead/acid battery recycler.

B. Bulk sulfuric acid is stored and dispensed from 55 gallon drums

.VIII. **Used Oils & Lubricants**

A. Diesel Oil

B. Hydraulic Oil

C. Gear Oil

D. Multi-purpose Tractor Oil

E. Grease

IX. **Used Refrigerants**

A. Each location should have its own reclamation system for R-12 and R-134 refrigerants.

X. **Used Tires and Other Rubber Products**

XI. **Vehicle Washing Wastewater and Sumps**

XII. **Empty Containers**

A. Cardboard

B. Aerosol Cans

C. Plastic Containers

D. Wood Pallets

XIII. **Computer Paper**

XIV. **Miscellaneous**

A. Metal filings from parts grinding

B. Floor absorbent

C. Rags

D. Scrap Metal

XV. **Energy Consumption**

XVI. **Water Consumption**

This list may be used as a guide for comparison purposes, but the assumption should not be made that all waste streams will be identical. The attached appendices contain OEPA Fact Sheets and U.S. EPA Guidance Documents that may provide additional guidance to the Waste Reduction Committees when conducting waste stream assessments. The appendices also contain forms, worksheets, and case studies useful for this purpose.

5. Prioritizing Waste Streams

Based on procedures recommended in Waste Minimization and Pollution Prevention guidance documents prepared by the USEPA and Ohio EPA, companies implementing WM/PP Programs are encouraged to identify one or two waste streams on which to concentrate their initial efforts. Attempting to address each and every identified waste stream at the beginning of a new program can be overwhelming and lead to the eventual failure of the entire WM/PP Program.

Waste streams generated at (Company Name) stores will be prioritized by the Waste Reduction Committees taking each of the following factors into consideration:

WASTE STREAM PRIORITY FACTORS

- U.S. EPA's 17 target chemicals from the 33/50 program (see Appendix A)
- Toxic Release Inventory (TRI) wastes
- High purchase, disposal, and other costs
- High potential cost savings
- Highly toxic wastes or substances
- Hazardous wastes
- Regulatory concerns
- High use and/or release rates
- Potential for removing bottlenecks in production or waste treatment
- Potential liability due to endangerment of employees, the environment, or the public
- Potential for successful implementation
- High volume wastes
- Carcinogens
- Hazardous Air Pollutants (HAPs)
- Chlorofluorocarbons (CFCs) and other ozone-depleting materials
- Local citizens' concerns

The waste streams which are initially identified for immediate action may vary and will not be dictated on a company wide basis due to (Company Name)'s commitment to make this program a product of the individual efforts of each location and each individual employee. After the initial waste streams have been prioritized and addressed at each location, the Waste Reduction Committees should review the processes generating the waste to determine if further waste reductions can be realized before prioritizing the remaining waste streams for further assessment or action. Eventually, each of the initially identified waste streams will be addressed and additional waste streams may be subsequently identified and added to the list for future evaluation.

6. Identifying, Evaluating and Implementing Waste Minimization and Pollution Prevention Options

After waste streams have been identified, assessed and prioritized, options for reducing waste generation, reducing the use of hazardous substances, and reducing the use of raw materials and other resources, must be identified, evaluated and implemented. The Waste Minimization Committees will propose options and then evaluate those options based upon three factors: economic feasibility, practicality of implementation, and effectiveness.

Economic feasibility will be determined based upon the total current economic cost of the waste stream as it is currently being generated and managed compared to the cost of implementing the proposed option taking into consideration any potential savings. When evaluating the economic feasibility of a proposed option, potential reductions in raw material costs, energy usage, and waste disposal costs will be considered. If options are being proposed that will effect the generation, handling or disposal of hazardous materials, the potential savings from the reduced cost of regulatory compliance and reduced environmental liabilities will also be considered. Not all proposed options are expected to produce a net savings. However, even where cost savings are not realized, the environmental, health, or safety benefits may outweigh or justify any additional cost that may be incurred. The following chart illustrates some additional costs that should be considered when evaluating the economic feasibility of a waste minimization and pollution prevention option.

ECONOMIC FEASIBILITY CONSIDERATIONS

COSTS ASSOCIATED WITH RAW MATERIAL AND HAZARDOUS SUBSTANCE USE

Purchasing
Taxes on hazardous and other products
Safety training
MSDS filing
Safety equipment
Extra insurance premiums
Labor

Storage and Inventory
Special storage facilities
Safety equipment
Storage area inspection and monitoring
Storage container labeling
Safety training
Emergency response planning
Spill containment equipment
Lost product from spills, evaporation, etc.
Labor
SARA Title III (TRI) reporting

In-Process Use
Safety training
Safety equipment
Containment facilities and equipment
Clean-up supplies
Labor

Lost Raw Materials
Labor for handling
Equipment for clean-up
Reporting

COSTS ASSOCIATED WITH WASTE GENERATION

Air and Water Emission
Air emission permits and controls
TRI measurements/estimates
TRI reporting
TRI fees
Worker health monitoring
Sewer discharge fees

COSTS ASSOCIATED WITH WASTE GENERATION (continued)

NPDES permits
Water quality monitoring
Sampling training
Pretreatment equipment
Pretreatment system operation

Solid Waste Collection
Safety training
Safety equipment
Collection supplies
Container labels
Container labeling
Recordkeeping
Truck maintenance (for in-house fleet)

Waste Storage
Storage permits
Special storage facilities
Spill containment equipment
Emergency response planning
Safety training
Storage area inspection and monitoring

On-Site Treatment or Recycling
Capital and operating costs
Depreciation
Utilities
Operator training
Safety equipment
Emergency response planning
Permits
Inspection and monitoring
Insurance

Disposal
Sewer fees
Container manifesting
Disposal vendor fees
Preparation for transportation
Transportation
Insurance and liability
Disposal site monitoring

(Table from *Pollution Prevention Planning*, Washington State Dept. of Ecology, January 1992)

Practicality of implementation will be determined based upon how easily the proposed WM/PP option can be introduced into standard operating procedures. An option that is inherently inconvenient or time consuming will not easily be incorporated into standard operating procedures and, over time, personnel will fail to follow the new procedure. In many cases the practicality of an option cannot be evaluated without implementation of the proposed option for a trial period. Other considerations may be based upon each location's physical limitations, equipment restrictions, or performance requirements. For example, non-hazardous parts cleaners may be proposed as an alternative to solvents, however, if the proposed replacement product does not perform its intended use satisfactorily, it becomes an impractical solution.

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- Reduce the total number of different solvents used
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During (Month) of each year, (Name of evaluator) will evaluate the (Company Name) WM/PP Program on a company-wide basis taking into consideration the (Company Name) WM/PP Policy Statement, practicality, cost efficiency, and effectiveness of the Program.

The success of the Program will be indicated by:

- money saved in waste disposal costs;
- any significant measurable reduction in the amount of wastes generated;
- any measurable reduction in the toxicity of wastes generated;
- any measurable reduction in raw materials used or energy consumed;
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