

## Appendix L 141<sup>st</sup> SPT BN OMS

### Baseline Inventory

A baseline inventory is necessary for two reasons. The quantities of waste generation or toxic material use are assessed to target specific waste streams, materials being used, or activities for pollution prevention. Annual reports on waste generation and toxic material use will be compared with the baseline inventories to evaluate the effectiveness of pollution prevention projects and to monitor progress in achieving the 141<sup>st</sup> Support Battalion Organizational Maintenance Shop pollution prevention goals.

<b>BASELINE INVENTORY FOR 141<sup>st</sup> SPT BN Organizational Maintenance Shop 1994</b>				
<b>Waste Type</b>	<b>RCRA Waste Code(s)</b>	<b>Waste (lbs)</b>	<b>% of Total Waste</b>	<b>Process or Operation Generating Waste</b>
Petroleum Naphtha	D001	96	15	Parts Cleaning
Chromium filters	D007	105	16	NBC Training
Lithium Batteries	D001, D003	66	12	Battery Changeout
Magnesium Salts Barium, Chromium	D005, D007	350	56	Battery Changeout
Potassium Hydroxide- Mercury	D009	5	1	Battery Changeout

<b>POLLUTION PREVENTION GOALS</b>				
<b>Waste Type</b>	<b>Subtype</b>	<b>Reduction Goal (%)</b>	<b>Baseline Year</b>	<b>Target Year</b>
Hazardous Waste	Petroleum Naphtha	100	1994	1995
Hazardous Waste	Chromium filters		1994	
Hazardous Waste	Lithium Batteries		1994	
Hazardous Waste	Magnesium Salts Barium, Chromium		1994	
Hazardous Waste	Potassium Hydroxide-Mercury	100	1994	1995
Solid Waste	Cardboard and Recyclable Paper	85	1994	1998
Ozone Depleting Chemical Use	CFCs ( <i>refrigerants i.e. R-12, R-22</i> ) Fire Suppressants ( <i>Halons</i> )	100	1994	2003
TRI Reportable Releases		50%	1994	1999

### **Pollution Prevention Opportunity Assessment**

The PPOA enables the 141<sup>st</sup> SPT BN OMS to examine the alternatives available for pollution prevention. The modules identify the waste stream and the operations from which the stream may be generated, describe the process, and present several pollution prevention alternatives. Each alternative is described along with its advantages and disadvantages.

Assessment modules that apply to the 141<sup>st</sup> BN OMS are:

- Application of Sealant/Adhesives
- Battery Acids/Lead-Acid Batteries from Vehicle Maintenance
- Cleanup Solvents from Painting
- Electronic Equipment Battery Changeout
- Halon Use in Fire Extinguishers
- Manual Surface Preparation Using Rags
- Radiator-Cleaning Waste
- Refrigerants (CFCs) from Refrigeration, Cooling-Equipment Maintenance
- Solid Waste
- Used Antifreeze from Vehicle Maintenance

Used Oil Filters from Vehicle Maintenance  
Used Oil from Vehicle Maintenance  
Vehicle and Aircraft Washing  
Waste Solvents from Parts Cleaning

### ➤ **Past Pollution Prevention Projects**

The status of past pollution prevention projects are discussed. Each project is described to include location implemented, implementation date, targeted waste type (e.g., hazardous waste, EPA Toxic 17 Wastes, ozone-depleting chemical), actual waste, actual implementation costs, actual savings, and funding sources.

#### **Project Title:** Parts Cleaning and Washing

**Description:** Installation of a ZEP parts cleaner has significantly reduced the generation because the solvent is never removed from the parts washer. Due to evaporation, small quantities of new solvent are added, as required.

**Location:** 141 SPT BN

**Implementation Date:** 1994

**Targeted Waste Type(s):** Hazardous Waste/EPA Toxic 17/Solvent Wastes

**Waste Reduction:** 100%

**Implementation Costs:** \$5000.00

**Savings:** Elimination of the waste stream has saved the installation \$2400.00 per year in reduced waste disposal cost.

**Funding Source:**

#### **Project Title:** Battery Acid/Lead from vehicle maintenance

**Description:** Lead Acid batteries are being exchanged on a one-for-one basis with Sterling Battery Company

**Location:** 141 SPT BN

**Implementation Date:** 1996

**Targeted Waste Type(s):** Hazardous wastes EPA Toxic 17

**Waste Reduction:** 100%

**Implementation Costs:** N/A

**Savings:**

**Funding Source:**

#### **Project Title:** Cardboard Recycling

**Description:** Cardboard is collected in a bin provided by an off-site vendor for pickup and reclamation.

**Location:** 141 SPT BN OMS

**Implementation Date:** 1996

**Targeted Waste Type(s):** Solid Waste

**Waste Reduction:** 80%

**Implementation Costs:** N/A

**Savings:**

**Funding Source:** N/A

**Project Title:** Antifreeze Recycler

**Description:** The Techguard Coolant Recycler 88550 Antifreeze Recycler is connected to the vehicle being serviced by using the assortment of connectors provided with the 88550. The vehicle's coolant is circulated through the 88550 that removes scale, suspended material and dissolved toxic metals from the coolant. In essence the coolant never leaves the vehicle. The coolant is restored to ASTM standard 3306 and is warranted for 2 years. EPR number OR00099001.

**Location:** 141st BN OMS

**Implementation Date:** 1998

**Targeted Waste Type(s):** Hazardous Chemicals listed on EPA's 17 ind. Toxics List

**Waste Reduction:** Ethylene Glycol

**Implementation Costs:** \$3,332.16

**Savings:** \$2,536.00

**Funding Source:** 1998 year end funds

**Project Title:** ODS Elimination Water Coolers

**Description:** Eliminate all appliances and equipment that use ozone-depleting substances. These include fire extinguishers using Halon 1301 and refrigeration systems containing CFCS. EPR number OR00099006.

**Location:** 141 SPT BN OMS

**Implementation Date:** 1999

**Targeted Waste Type(s):** Refrigerants-R11, R12, R22 etc.

**Waste Reduction:** Ozone Depleting Substances

**Implementation Costs:** \$1,664.00

**Savings:**

**Funding Source:** AGI EPR

**Project Title:** Oil Filter Crusher

**Description:** The Oberg Model P-300 filter crusher is used to eliminate the amount of oil left in the filter after it is removed from service. The P-300 deposits the crushed filters directly into a transport drum for disposal. EPR number OR00099003.

**Location:** 141 SPT BN OMS

**Implementation Date:** 2000

**Targeted Waste Type(s):** Hazardous Chemicals listed on EPA's 17 ind. Toxics List

**Waste Reduction:** Recovery of metal by eliminating the oil from the element allowing the metal to be recycled, and keeping the oil saturated filters out of the landfill.

**Implementation Costs:** 1 units @ \$3,988.80 ea. Total Investment \$3,988.80

**Savings:** \$1,935.50 annually per unit. Total expected annual savings \$1,935.50.

**Funding Source:** 2000 Year end funds

**Project Title:** Propane Cylinder Recycling System

**Description:** The New Pig ProSolve system safely removes the valve stem so canister can be recycled as scrap steel. Activated carbon filters help remove Volatile Organic Compounds from propellant. EPR number OR00000001.

**Location:** 141st SPT BN OMS

**Implementation Date:**

**Targeted Waste Type(s):** Reactive hazardous waste - generic compressed gas, Volatile Organic compounds.

**Waste Reduction:** Metal, Reactive HW

**Implementation Costs:** \$697.44 ea

**Savings:** \$5,112.00

**Funding Source:** AGI-EPR

**Project Title:** Secondary Containment Structures

**Description:** As required by the SPCCP for this facility and 40 CFR 112.3 and OAR 340-047-0160. A secondary containment structure is needed to be built to house the fuel hauling vehicles that are located at this facility. EPR OR16500001.

**Location:** OMS

**Implementation Date:** 2002

**Targeted Waste Type(s):** Petroleum's, Oils and Lubricants

**Waste Reduction:** Soil contamination.

**Implementation Costs:** \$249,416

**Savings:**

**Funding Source:** NGB

### ➤ **Current Pollution Prevention Projects**

The status of currently funded pollution prevention projects are discussed next. Each project will be described to include location to be implemented, anticipated implementation date, targeted waste type (e.g., hazardous waste, EPA Toxic 17 Wastes, ozone-depleting chemicals), expected waste reduction, estimated implementation costs, estimated savings, and funding sources.

### ➤ **Future Pollution Prevention Projects**

The status of proposed pollution prevention projects is discussed next. Each project will be described to include location to be implemented, anticipated implementation date, targeted waste type (e.g., hazardous waste, EPA Toxic 17 Wastes, ozone-depleting chemicals), expected waste reduction, estimated implementation costs, estimated saving, and funding sources.

<b>FOR            FUTURE POLLUTION PREVENTION PROJECTS</b>					
<b>Polluting Process</b>	<b>P2            Opportunity</b>	<b>Investment            Cost (\$)</b>	<b>Net            Annual            Savings            (\$)</b>	<b>Payback            Period            (Years)</b>	<b>Net Present            Value of            Operation            (\$)</b>
Safety Kleen	Solvent Waste Station Purchase and Modification	198,500	(5,841)	No Payback	(243,603)
Safety Kleen	Aqueous Cleaner with Jetwasher	701,050	44,639	15.7	(356,345)

<b>POLLUTION PREVENTION IMPLEMENTATION PLAN FOR FUTURE PROJECTS</b>							
<b>Project Title</b>	<b>Location</b>	<b>Waste Type</b>	<b>Reduction Expected (lbs/year)</b>	<b>Estimated Cost(\$)</b>	<b>Estimated Savings (\$/yr)</b>	<b>Expected Implement Date</b>	<b>EPR Status</b>
Cardboard Baler	Recycling Center	Solid Waste	400,000	99,000	30,000	CY95	Entered

<b>141<sup>st</sup> SPT BN OMS POLLUTION PREVENTION ACHIEVEMENT REPORT FOR 1997</b>					
<b>Waste Type</b>	<b>Subtype</b>	<b>Reduction Goal (%)</b>	<b>Baseline 1994 (lbs./year)</b>	<b>Current (lbs./year)</b>	<b>Achieved to Date (%)</b>
Hazardous Waste	Petroleum Naphtha	100	96	0	
Hazardous Waste	Chromium filters		105	3	
Hazardous Waste	Lithium Batteries		66	400	
Hazardous Waste	Magnesium Salts Barium, Chromium	100	350		
Hazardous Waste	Potassium Hydroxide- Mercury		5		
Solid Waste	Cardboard and Recyclable Paper	85			
Ozone Depleting Chemical Use	CFCs ( <i>refrigerants i.e. R-12, R-22</i> ) Fire Suppressants ( <i>Halons</i> )	100			



<b>141<sup>st</sup> SPT BN OMS POLLUTION PREVENTION ACHIEVEMENT REPORT FOR 1998</b>					
<b>Waste Type</b>	<b>Subtype</b>	<b>Reduction Goal (%)</b>	<b>Baseline 1994 (lbs./year)</b>	<b>Current (lbs./year)</b>	<b>Achieved to Date (%)</b>
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Hazardous Waste	Chromium filters		105		
Hazardous Waste	Lithium Batteries		66		
Hazardous Waste	Magnesium Salts Barium, Chromium	100	350		
Hazardous Waste	Potassium Hydroxide- Mercury		5		
Solid Waste	Cardboard and Recyclable Paper	85			
Ozone Depleting Chemical Use	CFCs ( <i>refrigerants i.e. R-12, R-22</i> ) Fire Suppressants ( <i>Halons</i> )	100		32	

<b>141<sup>st</sup> SPT BN OMS POLLUTION PREVENTION ACHIEVEMENT REPORT FOR 1999</b>					
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<b>141<sup>st</sup> SPT BN OMS POLLUTION PREVENTION ACHIEVEMENT REPORT FOR 2000</b>					
		<b>Reduction</b>	<b>Baseline</b>	<b>Current</b>	<b>Achieved to</b>

Waste Type	Subtype	Goal (%)	1994 (lbs./year)	(lbs./year)	Date (%)
Hazardous Waste	Petroleum Naphtha	100	96		
Hazardous Waste	Chromium filters		105		
Hazardous Waste	Lithium Batteries		66		
Hazardous Waste	Magnesium Salts Barium, Chromium	100	350		
Hazardous Waste	Potassium Hydroxide- Mercury		5		
Solid Waste	Cardboard and Recyclable Paper	85			
Ozone Depleting Chemical Use	CFCs ( <i>refrigerants i.e. R-12, R-22</i> ) Fire Suppressants ( <i>Halons</i> )	100			

141 <sup>st</sup> SPT BN OMS POLLUTION PREVENTION ACHIEVEMENT REPORT FOR 2001					
Waste Type	Subtype	Reduction Goal (%)	Baseline 1994	Current (lbs./year)	Achieved to Date (%)

			(lbs./year)		
Hazardous Waste	Petroleum Naphtha	100	96		
Hazardous Waste	Chromium filters		105		
Hazardous Waste	Lithium Batteries		66		
Hazardous Waste	Magnesium Salts Barium, Chromium	100	350		
Hazardous Waste	Potassium Hydroxide- Mercury		5		
Solid Waste	Cardboard and Recyclable Paper	85			
Ozone Depleting Chemical Use	CFCs ( <i>refrigerants i.e. R-12, R-22</i> ) Fire Suppressants ( <i>Halons</i> )	100			