

**EMS Permit Pilot Project  
Follow-up Environmental Assessment  
Ball Aerospace & Technologies Corp**

***Report Addendum***

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## 1.0 INTRODUCTION

The Colorado Department of Public Health and Environment (CDPHE) is reviewing the efficacy of its environmental management system (EMS) permit pilot project to evaluate whether or not environmental improvements, operating flexibility and regulatory efficiencies can be gained from combining the regulatory requirements of a facility under one cross-media EMS-based operating permit. Legislation was adopted in 2004 that gives CDPHE the authority to pilot this process using industry volunteers.

Ball Aerospace & Technologies Corp. (BATC) agreed to participate in this EMS permit pilot project as an industry partner. A baseline environmental assessment was conducted at BATC in September 2004. The intent of the environmental baseline assessment was to determine the environmental footprint of the facility, gather baseline data related to environmental impacts and assess environmental programs in place at BATC. Additionally, an Environmental Management System (EMS) audit was conducted in February 2005 to assess the status of the EMS.

A follow-up environmental assessment was conducted at BATC on June 20, 2006 and a report was issued on August 11, 2006 describing the results of that assessment.

This report serves as an addendum to the August 11, 2006 Follow-up Assessment Report, provides updated information on the status of environmental improvement projects at BATC, and provides two years of environmental metrics.

Included in this addendum are notations on significant changes made to operations, if any, and progress made with continual improvement projects. A brief summary of metrics that were collected during the baseline and follow-up assessments also are included. Detailed information about the operations and practices in place at BATC may be found in the baseline environmental assessment, the EMS audit and the follow-up assessment reports.

## **2.0 ENVIRONMENTAL UPDATE**

The baseline assessment provided detailed descriptions of BATC operations and its overall environmental footprint. The EMS audit evaluated the structure and function of the management system and identified strengths and areas for improvement. The follow-up assessment provided an update of the operations and noted any significant changes made as a result of the EMS permit pilot project. This addendum provides a summary of changes made to operations since the follow-up assessment and provides 2004 and 2005 environmental data. Metrics for 2006 were unavailable.

### **2.1 ENVIRONMENTAL ASSESSMENT**

There have been no changes to the operations at BATC that have impacted environmental compliance or regulatory status since the follow up assessment was conducted in June 2006. BATC continues to participate in the Colorado Department of Health and Environment's (CDPHE) Leadership Program at the Gold level in addition to participation in the Environmental Management System Permit Pilot Program. A combined air and wastewater EMS permit was issued in 2005 and will be in effect for three years. Conventional permits are still in effect and are being maintained.

### **2.2 CONTINUAL IMPROVEMENT PROJECTS**

BATC has been working on several projects to enhance overall environmental performance. These projects were described in the follow-up assessment report and a brief update is provided below.

#### **2.2.1 Hazardous Materials**

The EH&S Department has been in the process of implementing an innovative online hazardous materials approval and Material Safety Data Sheet (MSDS) system to better track the use of hazardous chemicals. The older ChemTrack system has been merged with the new online system. Work instructions were developed and the system is in use. Monitoring and improving the system has been identified as a target for 2007.

#### **2.2.2 Air Quality**

Isopropyl alcohol represents 75-80% of the facility's waste stream. As part of the Fisher Complex expansion project the above ground storage tank used to store isopropyl alcohol will no longer be used. BATC has developed and implemented a management plan for the use of reusable 350 gallon pre-certified totes.

### **2.2.3 EH&S Training**

All of the EH&S training has been converted to an on-line format, which has improved employee access, distribution and recordkeeping.

## **2.3 ENVIRONMENTAL MANAGEMENT SYSTEM**

Significant improvement was observed in the structure and function of the EMS during the course of the pilot program. BATC identified gaps in the EMS and has developed procedures and work instruction to correct the deficiencies. Significant improvements include the following:

- A commitment to the environment was added to the quality policy.
- An aspects and impacts analysis with ranking criteria has been implemented.
- Objectives and targets are identified and documented.
- Environmental programs have been put in place to achieve stated objectives.
- EMS is more aligned with the ISO 14001 framework

The cycle of continual improvement is evident; the EMS has proven to be a valuable tool for enhanced environmental performance.

BATC is considering participation in EPA's Performance Track program and will participate in the development of a Platinum Level in the CDPHE's Environmental Leadership program.

Objectives and targets for 2007 have been identified and documented with assignment of responsibility and a time frame for completion.

## **2.4 METRICS**

Table 1 presents a summary of metrics that are tracked by BATC. It is important to note that these metrics do not necessarily reflect improvement or degradation of the environment due to BATC's practices and are limited by the fact that only two years have elapsed since the baseline assessment. Ideally, metrics should be tracked over a longer period of time and should be normalized to reflect fluctuations in operations. BATC is involved in many different projects, each typically lasting three to five years, making normalization difficult. However, they do provide a measure of performance that can be useful for driving operational changes.

**Table 1: Environmental Metrics**

<b>Natural Resource/Activity</b>	<b>Baseline 2004</b>	<b>2005</b>
<b>Air Emissions:</b>		
VOC (TPY)	16.9	11.6
HAP (TPY)	1.0	1.4
<b>Hazardous Waste (lbs.)</b>	48,246	50,875
<b>Universal Waste (lbs.)</b>	Light bulbs	Light bulbs
<b>Energy Use:</b>		
Electricity (KWH)	26,742,003	29,440,791
Natural gas (in dTherm)	47,326	53,008
<b>Water Usage (gallons)</b>	28,499,000	30,128,000
<b>Recycling:</b>		
Office paper (in tons)	*50	
Proprietary Destruction (in tons)	**185.5	338.0
Cardboard (tons)	22.5	45.0
Aluminum recycled (lbs.)	3,086	3,202
Commingle plastics (lbs.)	2,362	3,005
Metals (lbs.)	37,119	36,629

\* reflects January to September 2004 when all recycled products are included in "Proprietary Destruction" category.

\*\*January to September 2004 netted 60.5 tons proprietary destruction materials prior to including all recycled products as proprietary destruction; 125 tons were recycled in the remainder of the year for a total of 185.5 tons.