

QAP Corporation - Annual Report

Business Manager Annual Report

As I reflect on the decades since the founding of QAP Corporation, I can say without hesitation that these last few years were one of the most challenging in our history. Faced with the current global economic downturn many of us have ever experienced and increased competition across our markets, our people delivered results that were as impressive considering the business conditions. We were informed by our WC insurance carrier that we are approaching EMR of 1. We had seven reportable injury and illnesses last year. Our IIR is significantly higher than our competitors.

Injury And Illness Incidence Rate Calculator and Comparison Tool

Year:	2012
Area:	Private industry, All U.S.
Supersector:	Manufacturing
Industry:	Fabricated metal product manufacturing

Case Type	Your Establishment	Private industry, All U.S.
Total	12.3	5.7
Days Away	3.5	1.5
Job Transfer/Restriction	5.3	1.3
DART	8.8	2.9

Direct and Indirect costs related to the injuries and illnesses were estimated at \$357,789. Obviously changes are necessary. We can't continue to operate that way.

Estimated Total Cost							
The extent to which the employer pays the direct costs depends on the nature of the employer's workers' compensation insurance policy. The employer always pays the indirect costs.							
Injury Type	Instances	Direct Cost	Indirect Cost	Total Cost	Additional Sale (Indirect)	Additional Sale (Total)	
Respiratory Disorders (gases, fumes, chemicals, etc.)	3	\$ 92,136	\$ 101,349	\$ 193,485	\$ 1,447,851	\$ 2,764,071	Remove
Carpal Tunnel Syndrome	1	\$ 28,647	\$ 31,511	\$ 60,158	\$ 450,167	\$ 859,400	Remove
Dermatitis	2	\$ 18,588	\$ 22,304	\$ 40,892	\$ 318,650	\$ 584,170	Remove
Poisoning - Chemical (other than metals)	1	\$ 30,121	\$ 33,133	\$ 63,254	\$ 473,330	\$ 903,628	Remove
Totals							
Estimated Direct Costs:						\$ 169,492	
Estimated Indirect Costs:						\$ 188,297	
Combined Total (Direct and Indirect Costs):						\$ 357,789	
Sales To Cover Indirect Costs:						\$ 2,689,998	
Sales To Cover Total Costs:						\$ 5,111,269	

QAP Corporation - Annual Report

Unfortunately, we had a State Department of Health and Environment inspection that led to severe fines. In addition they set strict deadlines to complete the recommended corrective measures. We were notified that if we continue to release uncontrolled VOCs emissions, we'll have to close the operations next year.

<u>Operating Status:</u>	X	<u>HPV Flag:</u>	
<u>Operating Status Description:</u>	Notification for closure	<u>State Registration Number:</u>	
<u>State County Compliance Source:</u>	2910100013	<u>Government Facility Code Description:</u>	PRIVATELY OWNED/OPERATED
<u>Region Code:</u>	07	<u>Class Code:</u>	B
<u>Primary SIC Code:</u>	3999	<u>Class Code Description:</u>	POTENTIAL UNCONTROLLED EM
<u>Primary SIC Description:</u>	MANUFACTURING INDUSTRIES,	<u>Compliance Status:</u>	9
<u>NAICS Code:</u>	325998	<u>Compliance Status Description:</u>	COMPLIANCE Violation - - Notified of potential SHUT DOWN
<u>NAICS Code Description:</u>	All Other Miscellaneous Chemical Product and Preparation Manufacturing	<u>Date Plant Information Last Updated:</u>	10/24/2013

Pollutant Data

<u>Air Program Code</u>	<u>Pollutant Code / CAS Number</u>	<u>Pollutant / CAS Description</u>	<u>Attain Indicator</u>	<u>Attain Indicator Description</u>	<u>Pollutant Compliance Status</u>	<u>ES Pollutant Compliance Description</u>	<u>Pollutant Class Code</u>	<u>Pollutant Class Description</u>
3	VOC	VOLATILE ORGANIC COMPOUNDS	A	NONATTAINMENT AREA	9	COMPLIANCE Violations - Notified of potential SHUT DOWN	B	POTENTIAL UNCONTROLLED EM

QAP Corporation - Annual Report

In addition, our turnover rate is unsustainable. Our Employee Turnover Rate last year was 20.7%.

Employee Turnover Rate			
Month	Before Strategy		
	Average Number of Employees	Number of Employees Voluntary Leaving	Turnover Rate
January	89	7	7.9%
February	87	15	17.2%
March	95	18	18.9%
April	103	21	20.4%
May	98	15	15.3%
June	93	25	26.9%
July	83	21	25.3%
August	77	21	27.3%
September	90	17	18.9%
October	95	25	26.3%
November	85	19	22.4%
December	77	17	22.1%
Average			20.7%

Our Quality Control (QC) manager determined that only 72% of the parts are coated properly leading to significant losses. Overall Labor Efficiency is just above 54%.

As a result, our R&D team recommended changes in the process.

I'm sure we will deliver on our EHS and financial commitments and emerge stronger and well-positioned for a sustainable growth.

Current Year

As you very well know, we were acquired by XYZ Corporation. XYZ Corporation is ISO 14001 and OHSAS 18001/ANSI/AIHA Z10 certified. We are tasked with achieving ISO 14001 and ANSI/AIHA Z10 certification within three years. Our new management believes that “worker safety is a keystone habit – a habit that can set off a chain reaction. And by changing that, he could actually transform the company.”

In addition, our parent company strengthened core businesses and invested in the launches of a number of recently approved innovative products. We also continue to play a role in helping to shape automotive industry policy around the world. The future of our core products is promising and exciting. We have formed a team of professionals, who are diligently working to address all EHS related challenges.

Moving Ahead

Every difficult period brings with it a corresponding opportunity for growth. Despite a challenging year, we believe, we'll be stronger next year. We have outstanding new products, robust pipelines and talented employees working in a streamlined organization with more resources for growth. Our EHS team is working with our parent company engineers, accountants, HR, supervisors and **employees**, to develop even better solutions.

QAP Corporation - Annual Report

The global automotive market is expected to grow almost 5 percent per year over the next five years. Our EHS objectives and business strategies are aligning with many evolving trends in automotive and the plastics industries.

I believe that the brightest and most innovative automotive companies - with dedicated people who care about our **business, employee, community**, product safety, quality, and sustainable development will thrive in this evolving and still-changing environment. QAP Corporation will be one of these companies.

Growth Priorities and Business Objectives

QAP Corporation has tremendous opportunities for growth: our employees, products, pipeline and now global presence. Our unwavering operating model includes a commitment to being broadly based in automotive and the plastics industries, a decentralized management approach that keeps our people close to customers, managing for the long term and a focus on people and values.

Within our new strategic framework we galvanize our organization around high-level business objectives that reflect the changing global environment. These provide leaders with a common set of growth priorities.

- Our growth has always been based on sustainable business model, EHS excellence, innovative quality products that serve customer needs in a meaningful way.
- A mix of internal and external sources to sustain a robust pipeline of new products that provides a competitive advantage.
- Maintain a global presence and continue to expand our presence in an appropriate way for diverse markets and customers. Our approach will be strategic, sustainable, effective and cost-efficient to address local and global needs.
- The hallmark of QAP Corporation is our talented employees. Making sure we have the right people and core values in place to help this company excel. Our ability to develop, challenge, motivate and reward a diverse workforce is our cornerstone for sustained growth and increase market share.
- We are committed to EHS excellence, managing our products life cycle in a social responsible manner protecting our workers, customers, the public, producing safer products and maintain sustainable operations.
- We use our values to build financial success, environmental excellence, stewardship, and social responsibility in order to deliver net long-term benefits to our shareholders, employees, customers, suppliers, and the communities in which we operate.
- We will continually strive to improve our operations and products to protect our environment and resources for future generations.

QAP Corporation Workshop – New Process Development

Quality Auto Parts: Painting Operation

Description of Operation

XYZ Manufacturing is a company that produces high quality aluminum and plastic parts for the automotive industry. The company stores oil based paint in 55 gal. drums in the storage room. Flammable solvents are also stored in the storage room. The solvents contain up to 5% of Benzene. The paint and the solvents are moved with a forklift truck to the conventional spray booth. Conventional air spray guns are the standard spray equipment used to apply coatings in the automotive refinishing industry. The employees are using this type of spray gun. A low volume (2 to 10 cubic feet per meter (cfm)) of air is pressurized and forced through a nozzle; the paint is atomized in the air at the nozzle throat. The spray guns are operated with air pressures of 30 to 90 pounds per square inch (psi) at a fluid pressure of 10 to 20 psi. The air is supplied by air compressors during spraying operations. There are two basic types of conventional spray guns: syphon-feed and gravity feed. The company is using syphon-feed guns, where the paint cup is attached below the spray gun, and the rapid flow of air through the gun creates a vacuum that siphons the paint out of the cup.

The coating operators are using only N95 respirators and safety glasses. However, the glasses are “coated” with paint after just 10 min. of use. The spray paint operators are complaining that they can’t see very well the parts and the Quality Control (QC) manager determined that only 72% of the parts are coated properly. Overall Labor Efficiency is 54.08 %.

Overall Labor Effectiveness (OLE) Tool					OLE = Availability x Performance x Quality		
Availability = Time operators are working productively / Time scheduled					Quality = QC parts / Total parts produced		
Example	Operators	Scheduled Time/min	Downtime	Total Sch. Time	Example	QCd Units	Started Units
	10	450	0	4500	See F13	4500	6250
	10	450	60	3900	Quality =	0.72	
				0.866666667	Quality % =	72.00%	
Availability % =				86.67%			
Performance = Actual output of the operators / the expected output					OLE = 0.5408		
Example	Unit/Parts/hr	Unit/Parts/min			OLE % = 54.08%		
	60	1					
Example	Operators	Scheduled Time/min	Downtime	Available Time	Total Units		
	10	450	0	4500	4500		
					Actual Units		
	10	450	60	3900	3900		
				0.866666667	0.866667		
Performance % =				86.67%	86.67%		

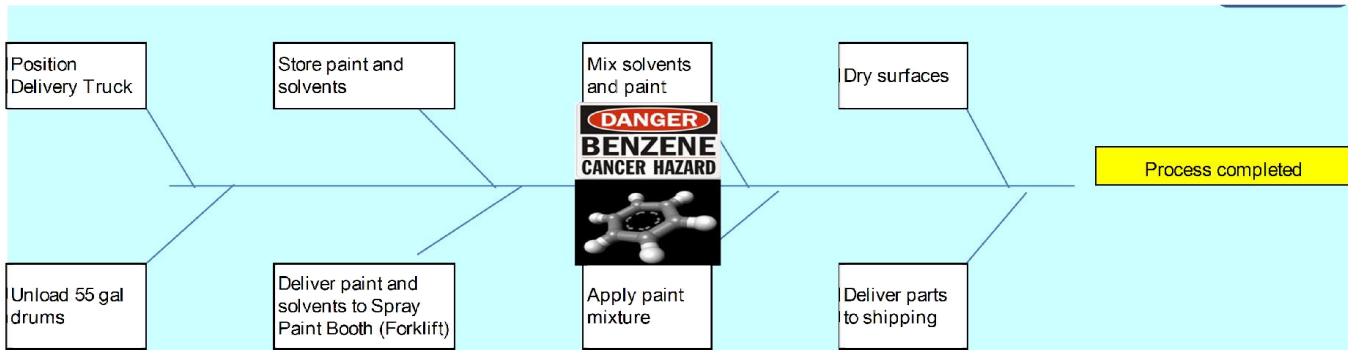
QAP Corporation Workshop – New Process Development

The following diagram presents the sequence of the process. Please see the digital photograph below:



Quality Auto Parts Spray Booth

Fish-bone diagram of the process is provided for simplicity and visualization.



Suggested changes for next year:

Our county was designated as a non-attainment area by EPA. Therefore, VOCs control has a very high priority. The allowable solvent content in surface coating formulations used by spray painting operations will be progressively reduced by legislative pressure. In addition, our R&D team developed lower-VOC emission formulations. Furthermore, we are going to substitute Benzene with Toluene and Methyl Acetone Blend and improve paint booth operators PPE. It is estimated that this new process will **reduce** our Process Cycle Efficiency by 5.0%. However, our parent company IH department assured us that we will significantly reduce the risk of exposure.

Other changes in the process:

QAP Corporation Workshop – New Process Development

We are not going to use fork lift to deliver 55 gal drums to the painting booth anymore. Instead, we'll be using a strictly controlled piping system to deliver Just-In-Time solvents and paint from the storage room.



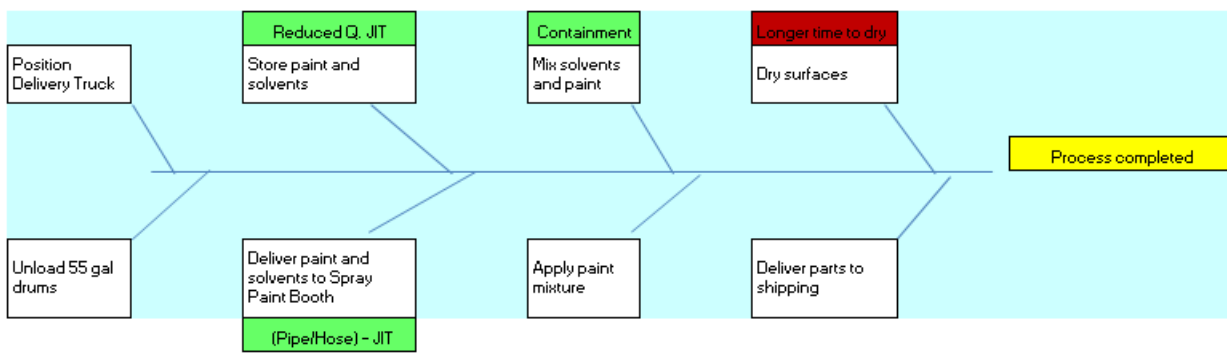
JIT – Reduce Quantities and open containers

We will also install carbon adsorbers (Granulated Activated Carbon Rejuvenation System) to reduce VOCs emissions.



Granulated Activated Carbon Rejuvenation System

New Process diagram.



Risk Assessment Strategies and Non-Financial Benefits

The current state risk assessment indicates that the workers were exposed to organic compounds, there is a risk of potential explosion due to solvents storage and uncontrolled VOCs emissions are of a serious concern for the community. The current controls do not adequately protect the workers during this high-risk operation.

QAP Corporation Workshop – New Process Development

We will apply risk assessment strategies, evaluate non-financial benefits, calculate risk reduction and incorporate PtD principles.

Hazard Intervention

The company formed a Project Team to determine worker exposure control methods that also meet the requirements for EHS excellence, sustainable development, operability, cost containment, and worker risk minimization.

The project team interviewed operations management to develop a set wants and needs. Two possible interventions were proposed. The Project Team then utilized DMAIC model to further develop their understanding of the project requirements. The project team summarized the new process for each of the two possible interventions, including the potential Non-Financial Benefits impacts.