

DEPARTMENT OF ENVIRONMENTAL QUALITY  
 AIR QUALITY DIVISION  
 ACTIVITY REPORT: Self Initiated Inspection

N3922  
 FY2016 Insp-

N392233082

FACILITY: DIAMOND AUTOMATION INC		SRN / ID: N3922
LOCATION: 23400 HAGGERTY RD, FARMINGTN HLS		DISTRICT: Southeast Michigan
CITY: FARMINGTN HLS		COUNTY: OAKLAND
CONTACT:		ACTIVITY DATE: 12/15/2015
STAFF: Iranna Konanahalli	COMPLIANCE STATUS: Compliance	SOURCE CLASS: MINOR
SUBJECT: FY 2016 inspection of Diamond Moba Americas		
RESOLVED COMPLAINTS:		

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**Diamond Moba Americas (N3922) –DBA since January 12, 2009**  
**Diamond Systems, Inc (N3922) – Formerly DBA**  
**Aka Diamond Automation, Inc. –Legal name**  
**23400 Haggerty Road**  
**Farmington Hills, Michigan 48335-2613**

**Phone: 248-476-7100**

**PTI void: Permit-to-Install No. 534-93 dated August 11, 1993, for powder coating process (voided 6/17/2005 per May 10, 2005, inspection). Based upon FY 2005 inspection, all sheet metal used in the egg processing machines is stainless steel (SS), which need not be painted.**

**Rule 336.1285**

On December 15, 2015, I conducted a level 2 self-initiated inspection of Diamond Moba Americas (“Diamond”) located at 23400 Haggerty Road, Farmington Hills, Michigan 48335. The inspection was conducted to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control, of the Natural Resources and Environmental Protection Act, 1994 PA 451 and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) rules.

During the inspection, Mr. Jon Robinson (Phone: 248-476-7100-ext. NA or 248-919-5146; Fax: 248-476-0849; E-mail: Jon.Robinson@dma-group.com), Director of Production and Integration, and Mr. David Lewis (Phone: 248-476-7100-ext. NA; Fax: 248-476-0849; E-mail: David.Lewis@dma-group.com), Quality Engineer, assisted me.

During the inspection, Mr. Fred (Butch) Pack (Phone: 248-476-7100-ext. 3183 or 248-919-5140; Fax: 248-476-0849; E-mail: Fred.Pack@dma-group.com), Manufacturing Engineer, was not present.

Mr. Jay Smith (Phone: 248-919-5151; Fax: 248-476-0849; E-mail: Jay.Smith@dma-group.com), Process Improvement Manager, separated about September 2011.

Diamond Moba Americas is a sales, service and support organization for the egg grading and packing industry in North and South America. It represents two innovative and leading brands of equipment: Diamond and Moba. This organization, as they merged about 2009 as resolution of patent litigation, combines the operations of Diamond Automations, Inc. in Farmington Hills, Michigan, and Moba USA, Inc. in Lancaster, Pennsylvania. Food Processing Systems, Inc. (FPS) owns Diamond Automation, Inc.

Diamond is a Michigan corporation that manufactures and sells high-speed egg processing machines to sort batches of eggs into different categories by weight and quality. Diamond developed these machines during the early 1980s with technology that significantly increased the processing speed for eggs. Diamond obtained various patents covering aspects of that technology. Diamond supports egg grading and packaging industry in North and South Americas. Equipment includes egg washers, dryers, detection, identification, packaging, breaking into liquid eggs, etc. Moba is headquartered in Netherlands. Diamond Moba practices Lean Kaizen methods.

The "front end" process first washes the eggs, and then introduces them into a candling station where a high intensity light source checks the eggs for defects such as blood spots or cracks. The process then weighs the eggs. A computer stores this information for use in sorting the eggs at a later point. Each egg is identified electronically using an unique electronic image signature.

Diamond and FPS were in patent infringement litigation before the merger. Diamond claimed its patents were infringed upon.

Diamond makes equipment for poultry industry for egg production. Diamond makes various egg production related machines, all made of stainless steel. Diamond designs, builds and assembles the machines for egg production: chicken to grocery cartons. After converting to "stainless steel egg processing equipment only", a powder coating booth was not required and it was removed about 1999 as confirmed by FY 2005 inspection.

Liquid egg processing equipment is sold under the brand name Diamond-Moba; "OvaPro" trade name is not used since March 2011.

For many years, Diamond removed all equipment, such as CNC machines, relating to machining, fabrication, grinding, polishing as it dedicated its operations to "*assembly only*"; all parts were then imported from other facilities. However, in March 2011, Diamond-Moba started SS sheet-metal work again as it wanted restart manufacturing. As a result, laser cutting, polishing, sanding, etc. equipment were added.

### **Laser-cutting machine**

CY-Laser ([www.cy-laser.com](http://www.cy-laser.com), High Brilliance Laser Systems) cutting machine with a dedicated Donaldson Torit Cartridge filters is present. Six (6) cartridge filters in two stages are present: 4 on dirty air intake side and two on clean air exhaust side. The filters are cleaned once every five minutes by pulse-jet air. The metal particles are collected in a 30-gallon drum, which is emptied once in about six months. Filtered air is exhausted to in-plant environment. The laser cutting machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285 (I).

### **Polishing and sanding machine**

A sanding and polishing machine (Model # DC 5500, Serial # 3228-008), by Midwest Sand-right Company (Minneapolis, Minnesota), sands and polishes SS metal sheets. Particulate emissions are controlled by a box equipped with baffles and standing water. The baffles together with water curtain capture sanding particulate matter and retain captured particles in water, which needs to be disposed of periodically. Filtered air is exhausted to in-plant environment. The machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule

336.1285(l).

Sludge and dirty water removed once in about one year.

### **Welding station**

One welding station is present. Particulate laded exhaust is treated by the above water curtain control equipment with baffles and water. Filtered air is exhausted to in-plant environment. The welding station is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(i).

### **Belt sanders**

Belt sanders are not equipped with any air pollution control devices. They release exhaust to in-plant environment.

The sanders are exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

### **PTI No. 534-93: Powder coating**

Powder coating booth (PTI No. 534-93) is torn down about 2005. Paint line removal could be accomplished because Diamond decided to make "stainless steel only" equipment. However, powder coating is now exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1287(d) subject the conditions in the rule.

### **AccurPress**

Accell AccurPress Brake 245 ton machine forms stainless steel sheet metal to a desired form and shape by application of pressure on the sheet. The process hardly produces any pollution and is not equipped with any air pollution control device. The press exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

### **Carpenter saw machines**

Carpenter saw machines are being installed. One Dust-Dog (V-Weave Filter Technology) pleated filter canister unit is installed. Saw dust is collected in a 55-gallon plastic bag. Filtered air is exhausted to in-plant environment. The machine is exempt from Rule 336.1201 (Permit-to-Install) pursuant to Rule 336.1285(l).

I asked Mr. Robinson to ensure that the Dust-Dog unit has sufficient capacity for all units to be operated simultaneously.

One egg-breaker machine was assembled during the previous inspection. The machine breaks 600 cases per hour; based upon 36 dozens per case, 259,000 eggs per hour.

Space heater boiler is rendered inoperable and the heat to the building is now supplied by roof-top space heaters, which are natural gas fired. Mr. Smith stated that after converting to 100 percent stainless steel machines, Diamond removed coating booth and associated equipment and processes. Therefore, PTI No. 534-93 dated August 11, 1993, is voided.

### **RCRA Waste**

I referred Mr. Butch Pack for RCRA (solid waste) questions to MDEQ-OWMRP (Office of

Waste Management and Radiological Protection)-

**Conclusion**

Diamond Systems, Inc. appeared to be in compliance at the time of inspection. The powder coating booth is permanently removed.

NAME J. McManahall DATE 01/25/2016 SUPERVISOR CJE