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DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION
ACTIVITY REPORT: Scheduled Inspection

N272338758

FACILITY: Odyssey Industries		**SRN / ID:** N2723
LOCATION: 3020 INDIANWOOD, LAKE ORION		**DISTRICT:** Southeast Michigan
CITY: LAKE ORION		**COUNTY:** OAKLAND
CONTACT: Nichole Poster , Health & Safety Manager		**ACTIVITY DATE:** 02/24/2017
STAFF: Francis Lim	**COMPLIANCE STATUS:** Compliance	**SOURCE CLASS:** MINOR
SUBJECT:		
RESOLVED COMPLAINTS:		

On February 24, 2017, I conducted an inspection at Odyssey Industries located at 3020 Indianwood Road, Lake Orion. The purpose of the Air Quality Division's inspection was to determine compliance with the Federal Clean Air Act; Article II, Part 55, Air Pollution Control of Natural Resources and Environmental Protection Act, 1994 Public Act 451; and Michigan Department of Environmental Quality, Air Quality Division (MDEQ-AQD) Administrative Rules. Nichole Poster, Health and Safety Manager assisted during the inspection.

Odyssey Industries is part of Ascent Aerospace Tooling Group. This facility produces tooling used in the manufacturing of composite structures and aerospace assemblies. Their clients include Boeing, Airbus and Bell Helicopters. This facility operates 2 shifts employing more than 200 employees.

Facility operates several large and medium sized CNC milling equipment. Other equipment used are band saws, wood saws, welders, a water jet cutter, and a plasma arc cutter. These equipment, except the plasma arc cutter are exempt from permits in accordance with Rule 285(l).

CNC machines are computer numerical controlled machines that are operated by programmed commands, as opposed to manually controlled by hand wheels or levers. Milling machines are used to machine flat surfaces, but can also produce irregular surfaces. The milling process removes material by performing separate, small cuts. The cuts are accomplished by using a cutter with many teeth and by spinning the cutter at high speed. The milling machines currently use metal working fluids (coolant/lubricant) from two suppliers (see attached SDS). I did not detect any foul odor from the coolant/lubricant.

Plasma arc cutters are used for cutting metal. Plasma is a gas subjected to an extremely high temperature. Plasma cutters use a pressurized gas passing through a small channel (nozzle). As the inert gas pass through the small channel, an electric spark heats up the gas until the gas reaches the plasma state. The plasma stream converts the metal to a molten slag, thus cutting the metal.

Plasma gases used at this facility are oxygen, argon, and nitrogen, depending on the material and type of cut. The plasma cutter is a wet cutting table but operated semi-dry. It is located near a wall where two exhaust wall fans are installed. Particulates are collected in the wet table. Fumes go out through the wall fans. Some of the fumes emit indoor.

During the inspection conducted July 5, 2016, Joyce Zhu addressed the permitting issue for the plasma arc cutter. A permit application was submitted September 14, 2016. The plasma arc cutter is used for cutting an alloy called Invar 36. This alloy contains 36.0% nickel and 0.4% cobalt. At this time, Paul Schleusener cannot issue the permit since the facility cannot

meet the screening level for nickel and cobalt. Facility is evaluating options for a control device.

The permit for the plasma arc cutter is being evaluated based on emissions of elemental nickel, although their emissions are actually ferronickel (steel alloyed with nickel). In the Toxics Unit guidance to Paul Schleusener, emissions of nickel alloy PM should be molecular weight-adjusted so that the emission or concentration of metallic nickel is the focus. Toxics unit does not have any evidence to not apply nickel screening levels to the nickel component of nickel alloys.

Odyssey Industries also operates a paint spray booth exempt under Rule 287(c). I verified that filters are in place. I verified that daily usage records are kept by the painter. Paint usage is less than 50 gallons per month. See attached.

NAME S-A.V DATE 03-03-17 SUPERVISOR