Florida Department of Environmental Protection

Northeast District
7825 Baymeadows Way, Suite B200
Jacksonville, Florida 32256

Rick Scott
Governor

Jennifer Carroll
Lt. Governor

Herschel T. Vinyard Jr.
Secretary

Sent by Electronic Mail – Received Receipt Requested

PERMITTEE:

Kanthal Palm Coast 1 Commerce Blvd Palm Coast, Florida 32135	Air Permit No.: Issuance Date: Expiration Date:	0350011-013-AO January 31, 2012 January 31, 2017
Authorized Representative: Mr. Phil Yu, Site Manager	Site Name:	Sandvik Palm Coast

This permit authorizes the operation of the existing Sandvik Palm Coast facility which is a small diameter precision wire coating facility (Standard Industrial Classification Nos. 3357 and 3479). The facility is located in Flagler County at 1 Commerce Boulevard, Palm Coast, Florida. The UTM coordinates of the facility are Zone 17, 474.60 km East and 3269.00 km North. Latitude: 29° 33′ 7.1452″ North and Longitude: 81° 15′ 48.1812″ West.

This final permit is organized by the following sections.

Section 1. General Information
Section 2. Administrative Requirements
Section 3. Emissions Unit Specific Conditions
Section 4. Appendices

Because of the technical nature of the project, the permit contains numerous acronyms and abbreviations, which are defined in Appendix A of Section 4 of this permit.

Upon issuance of this final permit, any party to this order has the right to seek judicial review of it under Section 120.68 of the Florida Statutes by filing a notice of appeal under Rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department of Environmental Protection in the Office of General Counsel (Mail Station #35, 3900 Commonwealth Boulevard, Tallahassee, Florida, 32399-3000) and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The notice must be filed within 30 days after this order is filed with the clerk of the Department.

Executed in Jacksonville, Florida

Khalid Al-Nahdy

1/31/2012

Khalid Al-Nahdy, P. E. Date
District Air Program Administrator

CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Final Air Permit package (including the Final Determination and Final Permit) was sent by electronic mail (or a link to these documents made available electronically on a publicly accessible server) with received receipt requested before the close of business on January 31, 2012, to the persons listed below.

Mr. Mr. Phil Yu, Site Manager, Sandvik Palm Coast (Email: phil.yu@sandvik.com)
Ms. Sara Greivell, Project Manager, Grove Scientific & Engineering Company (Email: sara@grovescientific.com)

Clerk Stamp
FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to Section 120.52(7), F.S., with the designated agency clerk, receipt of which is hereby acknowledged.

Monique Jordan

1/31/2012

(Clerk) (Date)

FACILITY DESCRIPTION

Existing Facility

Kanthal Palm Coast is manufacturer of precision wire and ultra-fine wire products that are used throughout the medical, electronic, aerospace, music, and other commercial industries.

Production consists of four main operations: wire drawing, annealing, enameling and milling with ancillary operations such as etching and die cleaning.

Non-ferrous wire is "drawn" by being pulled through a series of drawing dies to reduce the diameter of the wire. The wire is then sent to the annealing furnace upon reaching the desired diameter. Annealing softens the wire to make it more pliable and also cleans it by burning off oil and dirt.

The wire is then coated in an organic polymeric material (nylon, polyurethane, polyimide, etc.), in the enameling machines where the wire is fed at speeds ranging from 25 to 500 feet per minute. The wire passes through a bath in the coating applicator and drawn through a coating die that scrapes off the excess coating, leaving a thin film on the wire. The wire may be fed back through the coating applicator more than one time in order to apply the coating in layers and acquiring the desired thickness of coating. After being coated, the wire is routed through to an oven (approximately 620 °F) where the coating dries and cures. The heating oven is considered to be an integral part of the enameling machine. From the heating oven the wire is wound and prepared for shipment to the customer.

The VOCs driven off from the coating during the curing process are sent to a Regenerative Thermal Oxidizer (RTO) for control.

Some product types require that the uncoated wire be etched with sulfuric acid prior to coating. The sulfuric acid is a dilute solution of approximately 15 percent.

On October 5, 2006, the facility certified that the manufacturing building meets the criteria of a Permanent Total Enclosure* as described in EPA Method 204, Procedure T- Criteria for and Verification of a Permanent or Temporary Total Enclosure. All the VOC emissions are assumed to be 100% captured and vented to the RTO for destruction.

* *Permanent Total Enclosure* is defined as a permanently installed enclosure that completely surrounds a source of emissions such that all VOC emissions are captured and contained for discharge to a control device. The enclosure shall be in negative pressure as an indication that the airflow is not exhausted out of the enclosure.

The RTO is sized at 12,000 SCFM and is equipped with a variable frequency drive motor that allows the flow rate to be automatically adjusted and a puff capture system to control system spikes. In accordance with Air Construction Permit No. 0350011-011-AC, the RTO is designed for 98% destruction efficiency at 1600 ^{o} F. The heat of combustion is 15,125 Btu/lb. The unit is equipped with a LPG fired burner.

This facility consists of the following coating and enameling machines:

a) Gold Ovens/Machines (Special Enamel) Nos. G-01 through G-14

b) Long Ovens/Machines Nos. L-1 through L-17

c) Short Ovens/Machines Nos. S-02, S-04, 07 through S-10

d) Double Ovens/Machines Nos. D-0, D-01 through D-19

e) MAG Machine Nos. M-01 & M-02*

f) Tower Ovens (Bose)/Machines Nos. T1 through T6

g) Machine H1 through H3

h) MAG HESF 2/2-3/49 F enameling oven*

i) Aumann DLH 6-80-160 enameling oven

* Machine which does drawing, annealing, coating, and packaging. The VOCs driven off during the curing process are destroyed by the internal catalytic burner which destroys 99% of emissions. The catalytic burner is an integral part of the machine.

There are three die cleaning operations in the facility and one pump cleaning operation. These operations are ancillary to the enameling operations. Machine dies and pumps are flushed with three materials: xylene, cresylic acid, and NMP. Both die cleaning and pump cleaning operations are conducted under hoods. Emissions from the hoods are vented to the RTO for control.

The facility also includes a 4.5 KW electric steam boiler, and three (3) Teflon coaters. These sources meet the generic exemption criteria of Rule 62-210.300(3)(b)1., F.A.C.

This facility is classified as a natural minor air pollution source. It emits Volatile Organic Compounds (VOCs) and Hazardous Air Pollutants (HAPs). For informational purposes, the annual solvent usage rate on a facility-wide basis is approximately 187 tons.

The existing facility consists of the following emission units.

Facility ID No. 0350011

ID No.	Emission Unit Description
001	Coated Wire Facility

FACILITY REGULATORY CATEGORIES

- The facility is a not major source of hazardous air pollutants (HAP).
- The facility has no units subject to the acid rain provisions of the Clean Air Act.

- The facility is not a Title V major source of air pollution in accordance with Chapter 213, F.A.C.
- The facility is not a major stationary source in accordance with Rule 62-212.400, F.A.C. for the Prevention of Significant Deterioration (PSD) of Air Quality.

RELEVANT DOCUMENTS

The documents listed below are the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

Application for Air Permit – Non-Title V Renewal received December 2, 2011

SECTION 2. ADMINSITRATIVE REQUIREMENTS

1. Permitting Authority: The permitting authority for this project is the Northeast District Air Program, Florida Department of Environmental Protection (Department). The Northeast District's mailing address is 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256-7590. All documents related to applications for permits to operate an emissions unit shall be submitted to the Northeast District.

2. Compliance Authority: All documents related to compliance activities such as reports, tests, and notifications shall be submitted to the North East District Office. The mailing address and phone number of the District Office is: 7825 Baymeadows Way, Suite B200, Jacksonville, Florida 32256. The Permitting Authority's telephone number is 904/256-1700.

3. Appendices: The following Appendices are attached as part of this permit:

   a. Appendix A. Citation Formats and Glossary of Common Terms;
   b. Appendix B. General Conditions;
   c. Appendix C. Common Conditions; and
   d. Appendix D. Common Testing Requirements.

4. Applicable Regulations, Forms and Application Procedures: Unless otherwise specified in this permit, the construction and operation of the subject emissions units shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of: Chapter 403, F.S.; and Chapters 62-4, 62-204, 62-210, 62-212, 62-213, 62-296 and 62-297, F.A.C. Issuance of this permit does not relieve the permittee from compliance with any applicable federal, state, or local permitting or regulations.

5. New or Additional Conditions: For good cause shown and after notice and an administrative hearing, if requested, the Department may require the permittee to conform to new or additional conditions. The Department shall allow the permittee a reasonable time to conform to the new or additional conditions, and on application of the permittee, the Department may grant additional time.

   [Rule 62-4.080, F.A.C.]

6. Modifications: The permittee shall notify the Compliance Authority upon commencement of construction. No new emissions unit shall be constructed and no existing emissions unit shall be modified without obtaining an air construction permit from the Department. Such permit shall be obtained prior to beginning construction or modification.

   [Rules 62-210.300(1) and 62-212.300(1)(a), F.A.C.]

7. Source Obligation:

   (a) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by virtue of a relaxation in any enforceable limitation which was established after August 7, 1980, on the capacity of the source or modification otherwise to emit a pollutant, such as a restriction on hours of operation, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   (b) At such time that a particular source or modification becomes a major stationary source or major modification (as these terms were defined at the time the source obtained the enforceable limitation) solely by exceeding its projected actual emissions, then the requirements of subsections 62-212.400(4) through (12), F.A.C., shall apply to the source or modification as though construction had not yet commenced on the source or modification.

   [Rule 62-212.400(12), F.A.C.]

8. A completed **Application for Non Title V Air Permit Renewal** [DEP Form No. 62-210.900(4)] shall be submitted to the Department at least 60 days prior to the expiration date of this operation permit. To properly apply for an operation permit, the permittee shall submit the appropriate application form, processing fee, and compliance test reports as required by this permit.

   [Rules 62-4.055 and 62-4.220, F.A.C.]

This section of the permit addresses the following emissions unit.

ID No.	Emission Unit Description
001	Coated Wire Facility

PERFORMANCE RESTRICTIONS

1. Hours of Operation: The hours of operation are not restricted: 24 hours/day; 7 days/week; 52 weeks/year (8760 hours/year).

   [Rules 62-4.160(2) & (14)(b), 62-210.200(PTE), F.A.C., Definitions- Potential to Emit (PTE)]

EMISSIONS STANDARDS

2. Property line Monitoring: The permittee shall conduct daily inspection of property line to determine if any odors are detected.

   [Rule 62-4.070(3), F.A.C., Permit No. 0350011-007-AC; Permit No. 0350011-008-AC]

3. Maintenance-RTO: The RTO shall be maintained in order to operate successfully. The maintenance actions include the followings but not limited to:
   a. Daily- The operator shall "walk around" the RTO at least once a day to observe the normal operation of the system and attempt to spot any potential problem.
   b. Weekly- All lubrication points shall be checked weekly.
   c. Monthly- All pipelines should be inspected to insure there are no leaks. All airlines shall be checked to insure there is no moisture or dirt present which could disrupt proper operation. The combustion blower inlet filter shall be checked to insure it is not to be clogged.
   d. Semi-Annually- The hatches at the diverter valves should be removed while the unit is offline. Valve seating areas shall be inspected for any wear or buildup from process stream contaminants. Valve operation shall be observed to insure total closure is occurring when the valves are in the extended and retracted positions. The main fan and the bearing shall be observed while the unit is online to insure there is no excessive heat or vibration. Records should be kept of all observations.
   e. Annually- The RTO should be taken offline and allowed to cool down sufficiently to allow vessel entry to occur. The burner/combustion chamber shall be inspected internally to insure that all refractory modules are in good shape and that the ceramic media shows no sign of degradation. The main fan access hatch shall be removed and the wheel examined for signs of particulate deposition or corrosion. The main fan coupling shall be examined to insure proper alignment is being

Specific Condition No. 3 Continued:

maintained. The combustion blower internals shall be examined as well. All instrumentation calibration shall be verified.

[Permit No.0350011-008-AC]

RECORDS AND REPORTS

4. Recordkeeping (Material Usage): Owner or operator shall record the following data.
    a. Monthly VOCs containing material usage.
    b. Material safety data sheet (MSDS) or material content specification sheet provided by manufacturer for each VOCs containing material used.
    c. Monthly VOCs and HAP emissions.
    d. Copy of all calculations and supporting documents for VOC and HAP emission rate estimation.

    [Permit No. 0350011-008-AC; Permit No. 0350011-009-AC; Permit No. 0350011-011-AC]

5. Recordkeeping (Maintenance): Owner or operator shall hold at the facility all the maintenances and inspections records as required by Specific Condition No. 6.

    [Rule 62-160(14), F.A.C.; Permit No. 0350011-008-AC]

6. Record Retention: All the measurements, records, and other data required by this permit shall be documented in a permanent, legible format and retained for at least three (3) years following the date on which such measurements, records, or data are recorded. Records shall be made available to the Department upon request.

    [Rule 62-160(14) b, F.A.C.]