

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



**Facility Identification Data**

Name: ENGELHARD CORPORATION - PIGMENT PLANT  
Address: 1057 LOWER SOUTH STREET  
City: PEEKSKILL  
Zip: 10566  
Zip: 10566

**Owner/Firm**

Name: ENGELHARD CORP  
City: PEEKSKILL  
State: NY Country: USA Zip: 10566  
Owner Classification: Corporation/Partnership

**Permit Contacts**

Division of Environmental Permits:  
Name: ROBERT J. STANTON  
Phone:8452563048

Division of Air Resources:  
Name: ROBERT J. STANTON  
Phone:8452563048

Air Permitting Contact:  
Name: CHRISTINE ANASTOS  
Phone:9147372554

**Permit Description**

**Introduction**

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(2) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that while the permit review report is based on information found in the accompanying permit, it is not an enforceable document and therefore, has no legal standing.

**Summary Description of Proposed Project**

This permit is the initial Title V permit for this facility. This facility is an existing manufacturer of inorganic pigments and includes three natural gas-fired boilers and several production lines with small gas-fired furnaces used to dry the product before packaging.

**Attainment Status**

ENGELHARD CORPORATION - PIGMENT PLANT is located in the town of PEEKSKILL in the county of WESTCHESTER.

**New York State Department of Environmental Conservation**  
**Permit Review Report**



Permit ID: 3-5512-00041/00083

1/22/02 08:38:15

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

<b>Criteria Pollutant</b>	<b>Attainment Status</b>
Particulate Matter (PM)	ATTAINMENT
Particulate Matter < 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	SEVERE NON-ATTAINMENT
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	MODERATE NON-ATTAINMENT

\* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.

\*\* NOx has a separate ambient air quality standard in addition to being an ozone precursor

**Facility Description**

The Peekskill Pigments Plant produces pigments consisting primarily of titanium coated mica and iron oxide coated mica, as well as bismuth oxychloride products. The mica is received from the Engelhard Hartwell, GA facility, while the chemical raw materials are received in the tank truck shipments and stored in tanks located onsite. A portion of the production is used at the Buchanan Pearl Plant, which are sold for use into cosmetics, paint, and plastics markets. The facility has a 300,000 gallon/day ion exchange water demineralization plant for this purpose.

In manufacturing the titanium coated mica, the mica is first classified by particle size and then transferred as slurry into reaction vessels. The mica is mixed with titanyl chloride solution. Sodium hydroxide is added to maintain the pH. The slurry is then washed and dewatered on a vacuum filter, then dried in a furnace to fix the coating. The dried product is then pneumatically conveyed to tote bins, and may then be further packaged.

In manufacturing the iron oxide coated mica, the process is similar to that for titanium coated mica, except that ferric chloride solution is added to the mica instead of titanyl chloride solution. Adding bismuth nitrate to a sodium chloride solution produces the bismuth oxychloride pigments.

This permit also includes Engelhard's Specialty Films Plant (IF Plant) which is located across from South St. from the Peekskill Pigments Plant. The iridescent films produced at the IF plant are layered polyester and acrylic based. Layered films (113-226 layers) are produced in sheets and rolled on various width rolls. Plastic resins are predried and pneumatically conveyed, melted, and sent to an extruder where they

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



are extruded into layered sheets, cooled on a cast roll, trimmed and rolled.

**Permit Structure and Description of Operations**

The Title V permit for ENGELHARD CORPORATION - PIGMENT PLANT is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process.

A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device.

[NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:

- combustion - devices which burn fuel to generate heat, steam or power
- incinerator - devices which burn waste material for disposal
- control - emission control devices
- process - any device or contrivance which may emit air contaminants that is not included in the above categories.

ENGELHARD CORPORATION - PIGMENT PLANT is defined by the following emission unit(s):  
Emission unit EU0003 - SELAS SCREW FURNACE (EXEMPT), SCRUBBERS (EP102 AND EP103), ELECTROSTATIC PRECIPITATOR (EP052), PRODUCT COLLECTOR (EP034).

Emission unit EU0003 is associated with the following emission points (EP):  
EP034, EP102, EP103

It is further defined by the following process(es):

Process: P03 is located at Building BLDG 004B - A 6.24 MMBTU/HR GAS FIRED SELAS SCREW FURNACE THAT IS USED TO PRODUCE SLURRY INTO CLASSIFIED COATED PRODUCTS (SULFATES OR CHLORIDES). THE SLURRY IS TYPICALLY RECEIVED FROM THE WYSSMONT 3 TRAY DRYER (PROCESS P06). THE PRODUCT IS TRANSFERRED FROM THE CALCINER THROUGH AN AIR CLASSIFIER AND A PRODUCT COLLECTOR THAT FEEDS THE PRODUCT INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN/DISCHARGED BY THE PRODUCT COLLECTOR TO THE ATMOSPHERE. THE PROCESS GASES ARE ROUTED THROUGH ONE OF TWO VENTURI ROD SCRUBBERS - BOTH OF WHICH ARE TIED INTO A WET ELECTROSTATIC PRECIPITATOR (P02).

Emission unit EU0004 - WYSSMONT 1 TRAY DRYER (EXEMPT), PRODUCT COLLECTOR

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



(EP018), STRAIGHT LINE VACUUM FILTER.

Emission unit EU0004 is associated with the following emission points (EP):

EP018

It is further defined by the following process(es):

Process: P04 is located at Building BLDG 004 - A STRAIGHT LINE VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 1.0 MMBTU/HR NATURAL GAS FIRED WYSSMONT 1 TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED INTO EITHER THE BSP ROTARY CALCINER (PROCESS P01) OR TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN/DISCHARGED BY THE PRODUCT COLLECTOR TO THE ATMOSPHERE.

Emission unit EU0005 - WYSSMONT 2 TRAY DRYE (EXEMPT), SCRUBBER (EP026), PRODUCT COLLECTOR (EP035), EIMCO 2 VACUUM FILTER.

Emission unit EU0005 is associated with the following emission points (EP):

EP026, EP035

It is further defined by the following process(es):

Process: P05 is located at Building BLDG 004C - AN EIMCO 2 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 1.0 MMBTU/HR NATURAL GAS FIRED WYSSMONT 2 TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR. THE PROCESS GASES ARE ROUTED THROUGH A VENTURI ROD SCRUBBER.

Emission unit EU0006 - WYSSMONT 3 TRAY DRYER (EXEMPT), SCRUBBER (EP038).

Emission unit EU0006 is associated with the following emission points (EP):

EP038

It is further defined by the following process(es):

Process: P06 is located at Building BLDG 004B - AN EIMCO 3 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 3.0 MMBTU/HR NATURAL GAS FIRED WYSSMONT 3 TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED DIRECTLY INTO THE SELAS SCREW FURNACE (PROCESS P02). THE PROCESS GASES ARE ROUTED THROUGH A VENTURI ROD SCRUBBER.

Emission unit EU0007 - WYSSMONT 4 TRAY DRYER (EXEMPT), SCRUBBER (EP047), PRODUCT COLLECTOR (EP048), EIMCO 6 VACUUM FILTER.

Emission unit EU0007 is associated with the following emission points (EP):

EP047, EP048

It is further defined by the following process(es):

Process: P07 is located at Building BLDG 010B - An EIMCO 6 Vacuum Filter that feeds process slurry into a 3.0 MMBTU/hr natural gas-fired Wyssmont 4 Tray Dryer. The slurry is then dried in the dryer and transferred into tote bins; the product fines generated through the conveying process are captured in a product collector. The process gases are routed through a venturi rod scrubber.

Emission unit EU0008 - WYSSMONT 5 TRAY DRYER (EXEMPT), SCRUBBER (EP053), PRODUCT COLLECTOR (EP054), FEST 4 VACUUM FILTER.

Emission unit EU0008 is associated with the following emission points (EP):

EP053, EP054

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



It is further defined by the following process(es):

Process: P08 is located at Building BLDG 010A - A FEST 4 Vacuum Filter that feeds process slurry into a 1.0 MMBTU/hr natural gas-fired Wyssmont 4 Tray Dryer. The slurry is then dried in the dryer and transferred into tote bins; the product fines generated through the conveying process are captured in a product collector. The process gases are routed through a venturi rod scrubber.

Emission unit EU0009 - WYSSMONT 6 TRAY DRYER (EXEMPT), SCRUBBER (EP065), PRODUCT COLLECTOR (EP064), STRAIGHT LINE 2 VACUUM FILTER.

Emission unit EU0009 is associated with the following emission points (EP): EP064, EP065

It is further defined by the following process(es):

Process: P09 is located at Building BLDG 029 - A STRAIGHT LINE 2 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO AN 0.8 MMBTU/HR NATURAL GAS FIRED WYSSMONT 6 TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR. THE PROCESS GASES ARE ROUTED THROUGH A VENTURI ROD SCRUBBER.

Emission unit EU0010 - WYSSMONT 7 TRAY DRYER (EXEMPT), SCRUBBER (EP067), PRODUCT COLLECTOR (EP068), FEST 2 VACUUM FILTER, EIMCO 10 VACUUM FILTER.

Emission unit EU0010 is associated with the following emission points (EP): EP067, EP068, EP119

It is further defined by the following process(es):

Process: P10 is located at Building BLDG 029 - A FEST 2 VACUUM FILTER AND AN EIMCO 10 VACUUM FILTER THAT FEED PROCESS SLURRY INTO A 1.2 MMBTU/HR NATURAL GAS FIRED WYSSMONT 7 TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR. THE PROCESS GASES ARE ROUTED THROUGH A VENTURI ROD SCRUBBER.

Emission unit EU0011 - DREVER I BELT FURNACE (EP109), SWEEP GAS FROM PROCESS FURNACE (EP021), PRODUCT COLLECTORS (EP022 AND EP023), EIMCO 1 VACUUM FILTER.

Emission unit EU0011 is associated with the following emission points (EP): EP021, EP022, EP023, EP109

It is further defined by the following process(es):

Process: P11 is located at Building BLDG 004B - AN EIMCO 1 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 11.31 MMBTU/HR NATURAL GAS FIRED DREVER 1 BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0012 - DREVER II BELT FURNACE (EXEMPT), SWEEP GAS FROM PROCESS FURNACE (EP040), PRODUCT COLLECTORS (EP041 AND EP042), EIMCO 4 VACUUM FILTER.

Emission unit EU0012 is associated with the following emission points (EP): EP040, EP041, EP042

It is further defined by the following process(es):

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



Process: P12 is located at Building BLDG 009 - AN EIMCO 4 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO AN 8.5 MMBTU/HR NATURAL GAS FIRED DREVER II BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0013 - DRIVER III BELT FURNACE (EP110), SWEEP GAS FROM PROCESS FURNACE (EP044), PRODUCT COLLECTORS (EP045 AND EP046), EIMCO 5 VACUUM FILTER. Emission unit EU0013 is associated with the following emission points (EP): EP044, EP045, EP046, EP110

It is further defined by the following process(es):

Process: P13 is located at Building BLDG 009 - AN EIMCO 5 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO AN 11.31 MMBTU/HR NATURAL GAS FIRED DREVER III BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0014 - UNIQUE 1 BELT FURNACE (EP104) SWEEP GAS FROM PROCESS FURNACE (EP057), PRODUCT COLLECTOROS (EP055 AND EP056), EIMCO 7 VACUUM FILTER.

Emission unit EU0014 is associated with the following emission points (EP): EP055, EP056, EP057, EP104

It is further defined by the following process(es):

Process: P14 is located at Building BLDG 010A - AN EIMCO 7 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 12.0 MMBTU/HR NATURAL GAS FIRED UNIQUE 1 BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0015 - UNIQUE 2 BELT FURNACE (EXEMPT), SWEEP GAS FROM PROCESS FURNACE (EP062), PRODUCT COLLECTOR (EP063), EIMCO 9 VACUUM FILTER.

Emission unit EU0015 is associated with the following emission points (EP): EP062, EP063

It is further defined by the following process(es):

Process: P15 is located at PILOT PLANT, Building BLDG 029 - AN EIMCO 9 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 7.0 MMBTU/HR NATURAL GAS FIRED UNIQUE 2 BELT FURNACE (FOR THE PILOT PLANT). THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR. THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0016 - UNIQUE 3 BELT FURNACE (EP105), SWEEP GAS FROM PROCESS FURNACE (EP070), PRODUCT COLLECTORS (EP069), EIMCO 11 VACUUM FILTER.

**New York State Department of Environmental Conservation**  
**Permit Review Report**



**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**

Emission unit EU0016 is associated with the following emission points (EP):  
EP069, EP070, EP105

It is further defined by the following process(es):

Process: P16 is located at Building BLDG 029 - AN EIMCO 11 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 12.0 MMBTU/HR NATURAL GAS FIRED UNIQUE 3 BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0017 - UNIQUE 4 BELT FURNACE (EP106), SWEEP GAS FROM PROCESS FURNACE (EP073), PRODUCT COLLECTORS (EP072), EIMCO 12 VACUUM FILTER.

Emission unit EU0017 is associated with the following emission points (EP):  
EP072, EP073, EP106

It is further defined by the following process(es):

Process: P17 is located at Building BLDG 029 - AN EIMCO 12 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A 12.0 MMBTU/HR NATURAL GAS FIRED UNIQUE 4 BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0018 - SECO BELT FURNACE (EXEMPT), SWEEP GAS FROM PROCESS FURNACE (EP049), PRODUCT COLLECTORS (EP050 AND EP051), EIMCO 8 VACUUM FILTER.

Emission unit EU0018 is associated with the following emission points (EP):  
EP049, EP050, EP051

It is further defined by the following process(es):

Process: P18 is located at Building BLDG 010A - AN EIMCO 8 VACUUM FILTER AND A FEST 3 ROTARY FILTER THAT FEED PROCESS SLURRY INTO A 5.06 MMBTU/HR NATURAL GAS FIRED SECO BELT FURNACE. THE SLURRY IS THEN PROCESSED IN THE FURNACE AND TRANSFERRED INTO TOTE BINS; THE FINES GENERATED THROUGH THE PRODUCT CONVEYING PROCESS ARE CAPTURED IN PRODUCT COLLECTOR(S). THE SWEEP GAS FROM THE PROCESS FURNACE DISCHARGES DIRECTLY TO THE ATMOSPHERE.

Emission unit EU0019 - KRAUSS MAFFEI TRAY DRYER (STEAM HEATED), SCRUBBER (EP075), PRODUCT COLLECTOR (EP074), EIMCO 13 VACUUM FILTER.

Emission unit EU0019 is associated with the following emission points (EP):  
EP074, EP075

It is further defined by the following process(es):

Process: P19 is located at Building BLDG 027 - AN EIMCO 13 VACUUM FILTER THAT FEEDS PROCESS SLURRY INTO A STEAM HEATED KRAUSS MAFFEI TRAY DRYER. THE SLURRY IS THEN DRIED IN THE DRYER AND TRANSFERRED INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR. THE PROCESS GASES ARE ROUTED THROUGH A VENTURI SCRUBBER.

Emission unit EU001A - 12.5 MMBTU/hr CLEAVER BROOKS BOILER #3 and 12.6 MMBTU/hr NORTH AMERICAN BOILER #2. EACH BOILER IS EQUIPPED WITH LOW-NO<sub>x</sub> BURNERS.

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



Emission unit EU001A is associated with the following emission points (EP):  
EP001

It is further defined by the following process(es):

Process: P1A is located at 1, Building BLDG 4A - TWO NATURAL GAS FIRED BOILERS I.E, A 12.55 MMBTU/HR CLEAVER BROOKS, A 12/6 MMBTU/HR NORTH AMERICAN) THAT ARE USED TO PRODUCE STEAM FOR THE PEEKSKILL PLANT.

Emission unit EU001B - One 25.0 MMBTU/hr, CLEAVER BROOKS BOILER #1 (EP076) operating on natural gas.

Emission unit EU001B is associated with the following emission points (EP):  
EP076

It is further defined by the following process(es):

Process: P1B is located at 1, Building BLDG 22 - ONE NATURAL GAS FIRED BOILER (I.E. A 25.11 MMBTU/HR CLEAVER BROOKS) THAT IS USED TO PRODUCE STEAM FOR THE PEEKSKILL PLANT.

Emission unit EU0021 - SCRUBBER (EP025).

Emission unit EU0021 is associated with the following emission points (EP):  
EP025

It is further defined by the following process(es):

Process: P21 is located at Building BLDG 004 - THE VENTING OF STORAGE TANKS AND PROCESS VESSELS THROUGH A PACKED TOWER CAUSTIC SCRUBBER THAT IS USED TO CONTROL HCl FUMES.

Emission unit EU0022 - SCRUBBER WITH 2 TOWERS (EP039).

Emission unit EU0022 is associated with the following emission points (EP):  
EP039

It is further defined by the following process(es):

Process: P22 is located at Building BLDG 009 - THE VENTING OF STORAGE TANKS AND PROCESS VESSELS THROUGH A PACKED TOWER CAUSTIC SCRUBBER THAT IS USED TO CONTROL HCl FUMES.

Emission unit EU0023 - SCRUBBER FOR PILOT PLANT (EP066).

Emission unit EU0023 is associated with the following emission points (EP):  
EP066

It is further defined by the following process(es):

Process: P23 is located at PILOT PLANT, Building BLDG 029 - THE VENTING OF STORAGE TANKS AND REACTOR EXHAUST STREAMS - ASSOCIATED WITH THE PILOT PLANT - THROUGH A PACKED TOWER CAUSTIC SCRUBBER THAT IS USED TO CONTROL HCl FUMES.

Emission unit EU0024 - SCRUBBER WITH 2 TOWERS (EP071).

Emission unit EU0024 is associated with the following emission points (EP):  
EP071

It is further defined by the following process(es):

Process: P24 is located at Building BLDG 029 - THE VENTING OF STORAGE TANKS AND PROCESS VESSELS THROUGH PACKED TOWER CAUSTIC SCRUBBERS THAT ARE USED TO

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



CONTROL HCI FUMES.

Emission unit EU0025 - VENT TO ATMOSPHERE FOR MEARLITE MIXING TANKS (EP005).

Emission unit EU0025 is associated with the following emission points (EP):

EP005

It is further defined by the following process(es):

Process: P25 is located at OUTSIDE, Building BLDG 003 - A VENT TO THE ATMOSPHERE FOR FIVE MEARLITE MIXING TANKS (I.E., A DUMP TANK, A BISMUTH SOLUTION TANK, A BISMUTH SOLUTION MAKE UP TANK, A FEED TANK, AND A WASH TANK.

Emission unit EU0027 - VENT TO ATMOSPHERE (EP058).

Emission unit EU0027 is associated with the following emission points (EP):

EP058

It is further defined by the following process(es):

Process: P27 is located at OUTSIDE, Building BLDG 007 - A VENT TO THE ATMOSPHERE FOR A 3,000 GALLON HCI STORAGE TANK (I.E. TANK NO. HHCL2).

Emission unit EU0028 - BOWEN SPRAY DRYER (EXEMPT), PRODUCT COLLECTOR (EP008).

Emission unit EU0028 is associated with the following emission points (EP):

EP008

It is further defined by the following process(es):

Process: P28 is located at Building BLDG 003 - A 1.9 MMBTU/HR NATURAL GAS FIRED BOWEN SPRAY DRYER THAT IS USED FOR THE DRYING OF PIGMENTS FROM WATER SUSPENSIONS. THE PROCESS SLURRY IS PROCESSED IN THE DRYER AND TRANSFERRED INTO THE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN A PRODUCT COLLECTOR.

Emission unit EU0029 - DUST COLLECTOR FOR AIR CLASSIFIER (EP012), DUST COLLECTOR FOR BAG DUMPING STATION (EP013).

Emission unit EU0029 is associated with the following emission points (EP):

EP012, EP013

It is further defined by the following process(es):

Process: P29 is located at Building BLDG 004 - A DUST COLLECTOR THAT IS USED TO COLLECT FINES GENERATED BY A REMA II BAG DUMPING STATION FOLLOWED BY A REMA II AIR CLASSIFIER AND A PRODUCT COLLECTOR, WHICH CAPTURES THE PRODUCT FINES GENERATED VIA THIS PROCESS, AND CONVEYS THE PRODUCT INTO M1 AND M2.

Emission unit EU0030 - Bismuth Nitrate Solution Storage Tank (BNTA3)

Emission unit EU0030 is associated with the following emission points (EP):

EP112

It is further defined by the following process(es):

Process: P30 is located at Building BLDG 004 - Vent from Bismuth Nitrate Solution Storage Tank (BNTA3).

Emission unit EU0032 - DUST COLLECTOR (EP031).

It is further defined by the following process(es):

Process: P32 is located at Building BLDG 004 - A PERSONAL HYGIENE BOOTH THAT IS

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



EQUIPPED WITH A DUST COLLECTOR USED TO COLLECT PRODUCT FINES.

Emission unit EU0033 - DUST COLLECTOR (EP060).

Emission unit EU0033 is associated with the following emission points (EP):  
EP060

It is further defined by the following process(es):

Process: P33 is located at Building BLDG 009 - A MIX TANK, WHICH IS USED FOR THE DUMPING OF OFF-SPEC PRODUCT, THAT IS EQUIPPED WITH A DUST COLLECTOR USED TO COLLECT PRODUCT FINES.

Emission unit EU0034 - DUST COLLECTOR (EP107), SCRUBBER VENT (EP111).

Emission unit EU0034 is associated with the following emission points (EP):  
EP107, EP111

It is further defined by the following process(es):

Process: P34 is located at OUTSIDE, Building BLDG 30 - A PRODUCT COLLECTOR THAT IS USED TO CONTROL EMISSIONS GENERATED DURING THE UNLOADING OF HYDRATED LIME FROM A BULK TRAILER TO THE OUTSIDE STORAGE TANK. THE PRODUCT COLLECTOR DISCHARGES TO AN ENCLOSURE AT THE TOP OF THE LIME SILO THAT IS NOT COMPLETELY SEAL ED. A PREVIOUSLY PERMITTED SCRUBBER, WHICH IS NOT IN SERVICE, THAT ACTS AS AN EMISSION POINT WHEN MATERIAL IS BEING TRANSFERRED TO THE LIME SLURRY TANK.

Emission unit EU0035 - PRODUCT COLLECTOR FOR CYCLONE AIR CLASSIFIER (EP043).

Emission unit EU0035 is associated with the following emission points (EP):  
EP043

It is further defined by the following process(es):

Process: P35 is located at Building BLDG 010 - A PRODUCT COLLELCTOR FOR A CYCLONE AIR CLASSIFIER THAT SEPARATES OUT THE FINER MICA.

Emission unit EU0036 - SULLAIR MODEL NO. 1506-1Q-CAT (300 HP) EMERGENCY DIESEL COMPRESSOR (EP108).

Emission unit EU0036 is associated with the following emission points (EP):  
EP108

It is further defined by the following process(es):

Process: P36 is located at OUTSIDE & PORTABLE, Building BLDG 027 - A PORTABLE SULLAIR MODEL NO. 1506-1Q-CAT (300 HP) DIESEL-FIRED EMERGENCY COMPRESSOR THAT IS USED FOR BACKUP POWER GENERATION.

Emission unit EU0037 - Gas-fired Therma-Jet Product Dryer Equipped with a Two Stage Product Collection System

Emission unit EU0037 is associated with the following emission points (EP):  
EP113

It is further defined by the following process(es):

Process: P37 is located at Building BLDG 04D - Gas-fired Terma-Jet Product Dryer Equipped with a Two-Stage Product Collection System.

Emission unit EU0038 - Air Classification of Product Solids

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



Emission unit EU0038 is associated with the following emission points (EP):  
EP114

It is further defined by the following process(es):

Process: P38 is located at Building BLDG 004 - Air Classification of Product Solids

Emission unit EU0039 - Gas-fired Grieve Oven Product Dryer

Emission unit EU0039 is associated with the following emission points (EP):  
EP115

It is further defined by the following process(es):

Process: P39 is located at Building BLDG 04D - Gas-Fired Grieve Oven Product Dryer

Emission unit EU0050 - LINES 1, 2, 3 IRRIDESCENT FILM PLANT - VENTILATION FOR EXTRUDERS (EP500, EP501, EP502) ELECTRIC ARC TREATERS (EP503, EP504) AND FLUIDIZED BED (EP505).

Emission unit EU0050 is associated with the following emission points (EP):  
EP500, EP501, EP502, EP503, EP504, EP505

It is further defined by the following process(es):

Process: P50 is located at Building BLDG IF - THE IF PLANT PROCESSES PLASTIC PELLETS THAT IT STORES IN FOUR SILOS LOCATED OUTSIDE OF THE PLANT. OPERATIONS WITHIN THE PLANT INCLUDE THREE PLASTIC FILM EXTRUDERS THAT VENT TO THE ATMOSPHERE VIA A FILTER; THE FILTER MEDIA IS NOT REGENERATED AND IS DISPOSED OF IN AN ENERGY RECOVERY FACILITY. THE PLANT ALSO INCLUDES TWO ELECTRIC ARC TREATERS THAT ARE USED TO TREAT PLASTIC FILM AND ONE ELECTRICALLY HEATED FLUIDIZED BED THAT IS USED TO COMBUST DIE SOLID RESIDUE.

Emission unit EU0002 - BSP ROTARY CALCINER (EXEMPT), DUST/PRODUCT COLLECTOR FOR PRODUCT CONVEYOR (EP100), SCRUBBER (EP101), ELECTROSTATIC PRECIPITATOR (EP052), PRODUCT COLLECTOR (EP020).

Emission unit EU0002 is associated with the following emission points (EP):  
EP020, EP052, EP100, EP101

It is further defined by the following process(es):

Process: P02 is located at Building BLDG 004 - AN 8.0 MMBTU/HR NATURAL GAS FIRED BSP ROTARY CALCINER THAT IS USED TO PRODUCE SLURRY INTO CLASSIFIED COATED PRODUCTS (SULFATES OR CHLORIDES). THE SLURRY IS TYPICALLY RECEIVED FROM THE WYSSMONT 1 TRAY DRYER (PROCESS P04). THIS PRODUCT IS TRANSFERRED FROM THE CALCINER THROUGH AN AIR CLASSIFIER AND A PRODUCT COLLECTOR THAT FEEDS THE PRODUCT INTO TOTE BINS; THE PRODUCT FINES GENERATED THROUGH THE CONVEYING PROCESS ARE CAPTURED IN DISCHARGED BY THE PRODUCT COLLECTOR TO THE ATMOSPHERE. THE PROCESS GASES ARE ROUTED THROUGH A VENTURI ROD SCRUBBER THAT IS TIED IN TO A WET ELECTROSTATIC PRECIPITATOR.

**Title V/Major Source Status**

ENGELHARD CORPORATION - PIGMENT PLANT is subject to Title V requirements. This determination is based on the following information:

This facility is a major source of oxides of nitrogen (NOx). The potential emissions of NOx exceed 25

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



tons per year, which is the major source threshold for severe non-attainment ozone areas.

**Program Applicability**

The following chart summarizes the applicability of ENGELHARD CORPORATION - PIGMENT PLANT with regards to the principal air pollution regulatory programs:

<b>Regulatory Program</b>	<b>Applicability</b>
PSD	NO
NSR (non-attainment)	NO
NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	NO
NSPS	NO
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	NO
SIP	YES

**NOTES:**

**PSD** Prevention of Significant Deterioration (40 CFR 52) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NSR** New Source Review (6 NYCRR Part 231) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

**NESHAP** National Emission Standards for Hazardous Air Pollutants (40 CFR 61) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's)

**MACT** Maximum Achievable Control Technology (40 CFR 63) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated

## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

**NSPS** New Source Performance Standards (40 CFR 60) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

**Title IV** Acid Rain Control Program (40 CFR 72 thru 78) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

**Title VI** Stratospheric Ozone Protection (40 CFR 82, Subparts A thru G) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

**RACT** Reasonably Available Control Technology (6 NYCRR Parts 212.10, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

**SIP** State Implementation Plan (40 CFR 52, Subpart HH) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

### Compliance Status

Facility is in compliance with all requirements

### SIC Codes

SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

**New York State Department of Environmental Conservation  
Permit Review Report**



Permit ID: 3-5512-00041/00083

1/22/02 08:38:15

SIC Code	Description
2816	INORGANIC PIGMENTS
3080	MISCELLANEOUS PLASTICS PRODUCTS, NEC

**SCC Codes**

SCC or Source Classification Code is a code developed and used by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information. Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
1-02-006-02	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - NATURAL GAS 10-100 MMBtu/Hr
2-01-001-02	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL)
3-01-011-98	Reciprocating CHEMICAL MANUFACTURING
3-01-014-01	CHEMICAL MANUFACTURING - HYDROCHLORIC ACID Handling and Storage (99.9% Removal)
3-01-018-09	CHEMICAL MANUFACTURING - PAINT MANUFACTURE General Mixing and Handling
3-01-035-01	CHEMICAL MANUFACTURING - PLASTICS PRODUCTION Extruder
3-01-035-53	CHEMICAL MANUFACTURING - INORGANIC PIGMENTS TiO2 Sulfate Process: Calciner
3-01-035-54	CHEMICAL MANUFACTURING - INORGANIC PIGMENTS Pigment Dryer
3-01-035-99	CHEMICAL MANUFACTURING - INORGANIC PIGMENTS Conveying/Storage/Packing
3-01-900-04	CHEMICAL MANUFACTURING - FUEL FIRED EQUIPMENT Process Gas

**Facility Emissions Summary**

In the following table, the CAS No. or Chemical Abstract Series code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant, including air pollution

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE Range represents an emission range for a contaminant. Any PTE quantity that is displayed represents a facility-wide emission cap or limitation for that contaminant. If no PTE quantity is displayed, the PTE Range is provided to indicate the approximate magnitude of facility-wide emissions for the specified contaminant in terms of tons per year (tpy). The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. ONY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant Name	PTE	
		lbs/yr	Range
000630-08-0	CARBON MONOXIDE	37316	
001308-38-9	CHROME (III) OXIDE (HAP)	7023	
001308-14-1	CHROMIUM HYDROXIDE (HAP)	538	
001333-82-0	CHROMIUM OXIDE (HAP)	3	
014038-43-8	FERRATE (4-), HEXAKIS (CYANO-C)-, IRON (3+) (3:4)	754	
000050-00-0	FORMALDEHYDE (HAP)	2.07	
ONY100-00-0	HAP	3	
007647-01-0	HYDROGEN CHLORIDE (HAP)	17553	
007439-92-1	LEAD (HAP)	0.0001	
000074-82-8	METHANE	> 0	but < 2.5 tpy
007697-37-2	NITRIC ACID	0.9	
ONY210-00-0	OXIDES OF NITROGEN	122446	
010028-15-6	OZONE	1468.8	
ONY075-00-0	PARTICULATES	214396	
ONY075-00-5	PM-10	0.001	
007446-09-5	SULFUR DIOXIDE	851	
007446-11-9	SULFUR TRIOXIDE	1451	
007664-93-9	SULFURIC ACID	> 0	but < 2.5 tpy
ONY998-00-0	VOC	46254.3	

**Regulatory Analysis**

Location Facility/EU/EP/Process/ES	Regulation	Short Description	Condition
FACILITY	40CFR 82-F.	Protection of Stratospheric Ozone - recycling and emissions reduction	32
FACILITY	6NYCRR 200.5	Sealing.	1
FACILITY	6NYCRR 200.6	Acceptable ambient air quality.	2
FACILITY	6NYCRR 200.7	Maintenance of equipment.	3
FACILITY	6NYCRR 201-1.10(b)	Permitting - public access to records kept for Title V permitting	8
FACILITY	6NYCRR 201-1.2	Permitting - unpermitted emission sources	4
FACILITY	6NYCRR 201-1.4	Unavoidable noncompliance and violations	95
FACILITY	6NYCRR 201-1.5	Emergency defense	5
FACILITY	6NYCRR 201-1.7	Recycling and Salvage	6
FACILITY	6NYCRR 201-1.8	Prohibition of	7

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



		reintroduction of collected contaminants to the air	
FACILITY	6NYCRR 201-3.2(a)	Exempt Activities - Proof of eligibility	9
FACILITY	6NYCRR 201-3.3(a)	Trivial Activities - proof of eligibility	10
FACILITY	6NYCRR 201-5.	State Facility Permit General Provisions	96
FACILITY	6NYCRR 201-5.3(b)	Permit Content and Terms of Issuance - permit conditions	97
FACILITY	6NYCRR 201-6.	Title V Permits and the Associated Permit Conditions	12, 17, 19, 11, 13, 14, 15, 16, 18, 20, 21, 22, 23, 33, 34
FACILITY	6NYCRR 201-6.5(c)(3)(ii)	Permit conditions for Recordkeeping and Reporting of Compliance Monitoring	24
FACILITY	6NYCRR 201-6.5(e)	Compliance Certification	25
FACILITY	6NYCRR 201-6.5(g)	Permit shield	26
FACILITY	6NYCRR 202-1.1	Required emissions tests.	27
FACILITY	6NYCRR 202-2.1	Emission Statements - Applicability	28
FACILITY	6NYCRR 202-2.5	Emission Statements - record keeping requirements.	29
FACILITY	6NYCRR 211.2	General Prohibitions - air pollution prohibited.	98
FACILITY	6NYCRR 211.3	General Prohibitions - visible emissions limited	30
E-U0002/EP052/P02/ES02C	6NYCRR 212.	General Process Emission Sources	36
E-U0002/EP052/P02/ES02C	6NYCRR 212.3(b)	General Process Emission Sources - emissions from existing emission sources	37
E-U0050	6NYCRR 212.4(a)	General Process Emission Sources - emissions from new sources and/or modifications	94
E-U0002/EP020/P02/ES02D	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	35
E-U0002/EP100/P02/ES02A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	38
E-U0002/EP101/P02/ES02B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	39
E-U0003/EP034/P03/ES03C	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	40
E-U0003/EP102/P03/ES03A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	41
E-U0003/EP103/P03/ES03B	6NYCRR 212.4(c)	General Process Emission	42

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



E-U0004/EP018/P04/ES04A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	43
E-U0005/EP026/P05/ES05A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	44
E-U0005/EP035/P05/ES05B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	45
E-U0006/EP038/P06/ES06A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	46
E-U0007/EP047/P07/ES07A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	47
E-U0007/EP048/P07/ES07B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	48
E-U0008/EP053/P08/ES08A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	49
E-U0008/EP054/P08/ES08B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	50
E-U0009/EP064/P09/ES09B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	51
E-U0009/EP065/P09/ES09A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	52
E-U0010/EP067/P10/ES10A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	53
E-U0010/EP068/P10/ES10B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	54
E-U0010/EP119	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	55
E-U0011/EP021/P11/ES11C	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	56
E-U0011/EP022/P11/ES11A	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	57
E-U0011/EP023/P11/ES11B	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	58
E-U0012/EP040/P12/ES12C	6NYCRR 212.4(c)	Sources - emissions from new processes and/or modifications General Process Emission Sources - emissions from	59

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



E-U0012/EP041/P12/ES12A	6NYCRR 212.4(c)	new processes and/or modifications General Process Emission Sources - emissions from new processes and/or modifications	60
E-U0012/EP042/P12/ES12B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	61
E-U0013/EP044/P13/ES13C	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	62
E-U0013/EP045/P13/ES13A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	63
E-U0013/EP046/P13/ES13B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	64
E-U0014/EP055/P14/ES14B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	65
E-U0014/EP056/P14/ES14C	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	66
E-U0014/EP057/P14/ES14D	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	67
E-U0015/EP062/P15/ES15B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	68
E-U0015/EP063/P15/ES15A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	69
E-U0016/EP069	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	70
E-U0016/EP070	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	71
E-U0017/EP072	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	72
E-U0017/EP073	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	73
E-U0018/EP049	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	74
E-U0018/EP050/P18/ES18A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	75
E-U0018/EP051/P18/ES18B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	76

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



E-U0019/EP074/P19/ES19B	6NYCRR 212.4(c)	modifications General Process Emission Sources - emissions from new processes and/or modifications	77
E-U0019/EP075/P19/ES19A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	78
E-U0028/EP008/P28/ES28A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	84
E-U0029/EP012/P29/ES29A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	85
E-U0029/EP013/P29/ES29B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	86
E-U0033/EP060/P33/ES33A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	87
E-U0034/EP107/P34/ES34A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	88
E-U0034/EP111/P34/ES34B	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	89
E-U0035/EP043/P35/ES35A	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	90
E-U0037/EP113	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	91
E-U0038/EP114	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	92
E-U0039/EP115	6NYCRR 212.4(c)	General Process Emission Sources - emissions from new processes and/or modifications	93
FACILITY	6NYCRR 215.	Open Fires	31
E-U001A/EP001	6NYCRR 227-1.3(a)	Smoke Emission Limitations.	79
E-U001B/EP076	6NYCRR 227-1.3(a)	Smoke Emission Limitations.	82
E-U001A/EP001/P1A/ES01A	6NYCRR 227-2.4(d)	RACT for Oxides of Nitrogen - small boilers.	80
E-U001A/EP001/P1A/ES01B	6NYCRR 227-2.4(d)	RACT for Oxides of Nitrogen - small boilers.	81
E-U001B/EP076	6NYCRR 227-2.4(d)	RACT for Oxides of Nitrogen - small boilers.	83

**Applicability Discussion:**

**New York State Department of Environmental Conservation**  
**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

6NYCRR Part 200-.5

Allows for the sealing of non-compliant air contamination sources

6NYCRR Part 200-.6

Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6NYCRR Part 200-.7

Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6NYCRR Part 201-1.2

Any existing emission source that is required to be permitted or registered but has not done so, must apply for the necessary permit or registration. The source is subject to all regulations that were applicable at the time the original permit or registration was required as well as any subsequent applicable requirements that came into effect since.

6NYCRR Part 201-1.4

This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up shutdown, malfunction or upset in the event that these are unavoidable.

6NYCRR Part 201-1.5

An enforcement action may be avoided if the facility can demonstrate that an emergency situation occurred which resulted in an emission limitation or permit violation. The following information would constitute evidence of an emergency situation: a properly signed operating log recorded during the actual event which; identifies the cause(s) of the emergency, indicates that all equipment was operating properly at the time, the person responsible took all reasonable steps to minimize the exceedance or violation, and that the department was notified of the emergency within 2 working days of the event.

6NYCRR Part 201-1.7

Requires the recycle and salvage of collected air contaminants where practical

6NYCRR Part 201-1.8

Prohibits the reintroduction of collected contaminants to the air

**New York State Department of Environmental Conservation**  
**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



6NYCRR Part 201-1.10(b)

Any permit application, compliance plan, permit, and monitoring and compliance certification report that is submitted as part of the Title V permit process must be made available to the public as per requirements set forth under 6 NYCRR Part 616 - Public Access to Records and section 114(c) of the Clean Air Act Amendments of 1990.

6NYCRR Part 201-3.2(a)

An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6NYCRR Part 201-3.3(a)

The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6NYCRR Part 201-5

General Provisions - this requirement applies to those permit terms and conditions which are not federally enforceable; specifies that permittees must maintain emission units and control devices in compliance with all rules; authorizes reasonable access for inspections for department representatives; requires that on-site monitoring recordkeeping be made available for review for at least 5 years.

Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the state-only portion of the permit, unless they are specifically addressed by it.

6NYCRR Part 201-5.3(b)

Lists those contaminants subject to contaminant specific requirements

6NYCRR Part 201-6

General provisions for Title V permits including:

Applicable Criteria, Limits, Terms, Conditions and Standards - requires that facility operations take place in accordance with approved criteria, emission limits, terms,

## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



conditions and standards as specified in the permit and that any documents required by the federally enforceable portion of the permit be certified by a responsible official

Cessation or Reduction of Permitted Activity Not a Defense - specifies that the cessation or reduction of a permitted activity to maintain compliance is not a defense in an enforcement action

Compliance Requirements - lists the information that must be included in any required compliance monitoring records and reports; and requires; compliance with any approved compliance schedule; the submittal of risk management plans as per 112(r) of the Act if necessary; and the submittal of compliance progress reports on a semiannual basis, at a minimum

Federally-Enforceable Requirements - specifies what permit terms and conditions, in general, are federally enforceable

Fees - requires the permittee to pay any required fees

Monitoring, Related Recordkeeping and Reporting Requirements - requires all compliance monitoring and recordkeeping to be conducted according to the terms and conditions of the permit and any Q/A requirements; any monitoring or support information is to be retained for minimum of 5 years.

Permit Revocation, Modification, Reopening, Reissuance or Termination and Associated Information Submission Requirements - specifies that the permit may be modified, revoked, reopened and reissued, or terminated for cause; and the permittee must furnish information regarding the permit to the department upon reasonable request

Permit Shield - sets forth criteria under which the permit shield applies and what authority the department maintains in pursuing violations

Property Rights - specifies that the permit does not convey any property rights

Reopening Cause - sets forth criteria and procedures for reopening a permit

Right to Inspect - establishes authority whereby department representatives may enter and inspect a facility

Severability - establishes that the permit continues to be valid in instances where any provisions, parts or conditions of the permit are found to be invalid or are the subject of a challenge

#### 6NYCRR Part 201-6.5(e)

Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

#### 6NYCRR Part 201-6.5(g)

## New York State Department of Environmental Conservation

### Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



Permit Exclusion Provisions - specifies those actions, such as administrative orders, suits, claims for natural resource damages, etc that are not affected by the federally enforceable portion of the permit, unless they are specifically addressed by it.

#### 6NYCRR Part 202-1.1

Specifies that emissions tests may be required to ascertain compliance with any air pollution codes and rules.

#### 6NYCRR Part 202-2.1

Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calendar year.

#### 6NYCRR Part 202-2.5

Specifies the emission statement records that must be maintained for a 5 year period.

#### 6NYCRR Part 211-.2

General air pollution prohibition

#### 6 NYCRR Part 211.3

Restricts the opacity of visible emissions from any air contamination source.

#### 6 NYCRR Part 215

Prohibits open fires at industrial and commercial sites.

#### 40 CFR Part 82, Subpart F

Requires affected permittees to comply with the recycling and emissions reduction standards specified by this rule when using ozone depleting substances identified under Title VI of the Act. Specifically, these regulations apply to the following persons or activities:

- a. Persons opening appliances for maintenance, service, repair, or disposal
- b. Equipment used during the maintenance, service, repair, or disposal of appliances
- c. Persons performing maintenance, service, repair, or disposal of appliances
- d. Persons disposing of small appliances, motor vehicle air conditioners or MVAC's, and MVAC-like appliances
- e. Persons owning commercial or industrial process refrigeration equipment
- f. Owners/operators of appliances normally containing 50 or more pounds.

If applicable, the above persons or activities may be required to comply with certain disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

**New York State Department of Environmental Conservation**

**Permit Review Report**

**Permit ID: 3-5512-00041/00083**

**1/22/02 08:38:15**



**Facility Specific Requirements**

In addition to Title V, ENGELHARD CORPORATION - PIGMENT PLANT has been determined to be subject to the following regulations:

6NYCRR 201-6.5 (c) (3) (ii)

This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6NYCRR 212 .

Requirements for emissions from any process emission source.

6NYCRR 212 .3 (b)

This rule requires existing sources (in operation on or before July 1, 1973) of solid particulates with environmental rating of B or C which are not subject to Table 5 "Processes for which Permissible Emission Rate is Based on Process Weight, to be limited to an particulate emission rate not to exceed 0.15 grains per dry standard cubic foot.

6NYCRR 212 .4 (a)

This rule requires compliance with the degree of control specified in Tables 2, 3 and 4 for new (after July 1, 1973) process emission sources.

6NYCRR 212 .4 (c)

This rule requires existing sources (in operation after July 1, 1973) of solid particulates with environmental rating of B or C which are not subject to Table 5 "Processes for which Permissible Emission Rate is Based on Process Weight, to be limited to an particulate emission rate not to exceed 0.05 grains per dry standard cubic foot.

6NYCRR 227-1.3 (a)

This regulation prohibits any person from operating a stationary combustion installation which emits smoke equal to or greater than 20% opacity except for one six-minute period per hour of not more than 27% opacity.

6NYCRR 227-2.4 (d)

This rule specifies that the reasonably available control technology (RACT) requirement for small boilers (< or = 50 million BTUs/hr) at Title V facilities consists of an annual tune-up.

**Compliance Certification**

Summary of monitoring activities at ENGELHARD CORPORATION - PIGMENT PLANT:

<b>Location</b>	<b>Type of Monitoring</b>	<b>Cond No.</b>
<b>Facility/EU/EP/Process/ES</b>		
FACILITY	record keeping/maintenance procedures	24

New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 3-5512-00041/00083

1/22/02 08:38:15



FACILITY	record keeping/maintenance procedures	25
FACILITY	record keeping/maintenance procedures	28
E-U0002/EP052/P02/ES02C	record keeping/maintenance procedures	36
E-U0002/EP052/P02/ES02C	intermittent emission testing	37
E-U0002/EP020/P02/ES02D	intermittent emission testing	35
E-U0002/EP100/P02/ES02A	intermittent emission testing	38
E-U0002/EP101/P02/ES02B	intermittent emission testing	39
E-U0003/EP034/P03/ES03C	intermittent emission testing	40
E-U0003/EP102/P03/ES03A	intermittent emission testing	41
E-U0003/EP103/P03/ES03B	intermittent emission testing	42
E-U0004/EP018/P04/ES04A	intermittent emission testing	43
E-U0005/EP026/P05/ES05A	intermittent emission testing	44
E-U0005/EP035/P05/ES05B	intermittent emission testing	45
E-U0006/EP038/P06/ES06A	intermittent emission testing	46
E-U0007/EP047/P07/ES07A	intermittent emission testing	47
E-U0007/EP048/P07/ES07B	intermittent emission testing	48
E-U0008/EP053/P08/ES08A	intermittent emission testing	49
E-U0008/EP054/P08/ES08B	intermittent emission testing	50
E-U0009/EP064/P09/ES09B	intermittent emission testing	51
E-U0009/EP065/P09/ES09A	intermittent emission testing	52
E-U0010/EP067/P10/ES10A	intermittent emission testing	53
E-U0010/EP068/P10/ES10B	intermittent emission testing	54
E-U0010/EP119	intermittent emission testing	55
E-U0011/EP021/P11/ES11C	intermittent emission testing	56
E-U0011/EP022/P11/ES11A	intermittent emission testing	57
E-U0011/EP023/P11/ES11B	intermittent emission testing	58
E-U0012/EP040/P12/ES12C	intermittent emission testing	59
E-U0012/EP041/P12/ES12A	intermittent emission testing	60
E-U0012/EP042/P12/ES12B	intermittent emission testing	61
E-U0013/EP044/P13/ES13C	intermittent emission testing	62
E-U0013/EP045/P13/ES13A	intermittent emission testing	63
E-U0013/EP046/P13/ES13B	intermittent emission testing	64
E-U0014/EP055/P14/ES14B	intermittent emission testing	65
E-U0014/EP056/P14/ES14C	intermittent emission testing	66
E-U0014/EP057/P14/ES14D	intermittent emission testing	67
E-U0015/EP062/P15/ES15B	intermittent emission testing	68
E-U0015/EP063/P15/ES15A	intermittent emission testing	69
E-U0016/EP069	intermittent emission testing	70
E-U0016/EP070	intermittent emission testing	71
E-U0017/EP072	intermittent emission testing	72
E-U0017/EP073	intermittent emission testing	73
E-U0018/EP049	intermittent emission testing	74
E-U0018/EP050/P18/ES18A	intermittent emission testing	75
E-U0018/EP051/P18/ES18B	intermittent emission testing	76
E-U0019/EP074/P19/ES19B	intermittent emission testing	77
E-U0019/EP075/P19/ES19A	intermittent emission testing	78
E-U0028/EP008/P28/ES28A	intermittent emission testing	84
E-U0029/EP012/P29/ES29A	intermittent emission testing	85
E-U0029/EP013/P29/ES29B	intermittent emission testing	86
E-U0033/EP060/P33/ES33A	intermittent emission testing	87
E-U0034/EP107/P34/ES34A	intermittent emission testing	88
E-U0034/EP111/P34/ES34B	intermittent emission testing	89
E-U0035/EP043/P35/ES35A	intermittent emission testing	90
E-U0037/EP113	intermittent emission testing	91
E-U0038/EP114	intermittent emission testing	92
E-U0039/EP115	intermittent emission testing	93
E-U001A/EP001	monitoring of process or control device parameters as surrogate	79
E-U001B/EP076	monitoring of process or control device parameters as surrogate	82
E-U001A/EP001/P1A/ES01A	record keeping/maintenance procedures	80
E-U001A/EP001/P1A/ES01B	record keeping/maintenance procedures	81
E-U001B/EP076	record keeping/maintenance procedures	83

**Basis for Monitoring**

Required by regulation.