

SANDBLAST & METAL FINISHING

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2 Major Topics

1. Blasting and Blasting Media
2. Metal Finishing

1. BLASTING

❖ PURPOSE of the blasting

- Remove surface coatings/cleaning (e.g paints)
- Smooth surfaces
- Removes dirt
- Removes corrosion

PRIMARY TYPES OF BLASING

- ❖ Hydro-blasting
- ❖ Dry Abrasive blasting
- ❖ Wet Abrasive blasting
- ❖ Vacuum blasting
- ❖ Other (e.g. brush-off, confined/unconfined)

TYPES OF BLASTING MATERIALS

- ❖ SAND
- ❖ STEEL SHOT
- ❖ GARNET
- ❖ WALNUT SHELL
- ❖ GLASS BEADS
- ❖ PLASTIC PELLETS
- ❖ METAL/BEARINGS
- ❖ ASSORTED METAL SLAG (E.G. NICKEL/COPPER)

COMMON INDUSTRIES

- ❖ Ship building
- ❖ Large equipment manufacturing (e.g. cranes)
- ❖ Car and auto body shops/repair/painting
- ❖ Transportation/bridge maintenance
- ❖ Pipe yards
- ❖ Buildings, brickyards, etc.

Concerns

- ❖ Dust (windblown dispersion)
- ❖ Classification of the spent blasting material
- ❖ Storage of the spent blasting material
- ❖ Disposal of the spent blasting material
- ❖ Potential reuse of the spent blasting material

Windblown Dispersion

- ❖ Fines carried off site
- ❖ Blasting material dispersed on site
- ❖ Potential impacts to neighbors, land and water

CLASSIFICATION

❖ INDUSTRIAL VS NON-INDUSTRIAL

- TCEQ DOCUMENT RG-022

www.tceq.state.tx.us/permitting/waste_permits/ihw_permits/NHW_Am_I_Regulated.html

- TCEQ'S GUIDE TO WASTE CLASSIFICATION (RG-222)

www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rg/rg-222_188541.pdf

❖ CLASS 1

❖ CLASS 2

❖ CLASS 3

STORAGE

- ❖ PILES
- ❖ LEAN TO/PARTIAL SHELTER
- ❖ BUILDING
- ❖ CONCRETE PAD
- ❖ GROUND SPREADING
- ❖ BURRIED ON SITE

DISPOSAL

- ❖ GROUND
- ❖ BURRIED
- ❖ LANDFILL
- ❖ REUSE - POTENTIAL

CONTAMINANTS

- ❖ Heavy Metals (Arsenic, Cadmium, Chromium, Lead, Nickel, Selenium, Mercury, Silver)
- ❖ Poly Aromatic Hydrocarbons (PAHs)
- ❖ Asbestos

Control Measures

- ❖ Blasting in a building
- ❖ Blasting with Tarps
- ❖ Magnetic mount dry blasting

2. Metal Finishing

- ❖ Application of surface coating
- ❖ Includes Painting, Passivating, Electroplating, etc.

CLASSIFICATION

- ❖ Same as for the blasting

CONSTITUANTS OF CONCERN: Plating/Passivating

- ❖ Acids
- ❖ Spent plating bath
- ❖ Rinse water
- ❖ Shavings/fines
- ❖ Residual solids from plating/dipping

Surface Coatings: Painting

- ❖ Paint and Paint related residue
- ❖ TCEQ Guidance – what is paint and paint related waste (RG-370)
- ❖ Issues and exceptions

Waste Issues for Blasting and Metal Finishing Sites

1. Spent blasting media
2. Spent coating media
3. Spent Solvents
4. Used PPE (personal protection equipment)
5. Filters
6. Empty containers of products
7. Containers of spent materials
8. Classification/Storage/Disposal
9. Emissions (Volatile Organic Carbon – VOCs)

Frequently Found Violations

1. 30 TAC 335.6 – Notification (generator status)
2. 30 TAC 335.62, 335 Subchapter R/40 CFR 262.11 – Waste Classification and documentation of the determination/adequate determination
3. 30 TAC 335.431/40 CFR 268.50 – Speculative Accumulation
4. 30 TAC 335.431/40 CFR 268 – Land Disposal Restrictions
5. Texas Water Code 26.121 – Unauthorized Discharge

Violations continued -

6. 30 TAC 335.69/40 CFR 265.34 – Container Management, Accumulation times/volumes
7. 30 TAC 335.10/40 CFR 262. - Manifesting
8. 30 TAC 335.9 – Management unit inspection records
9. 30 TAC 335.8 & 350.2(h) – Closure (and Deed Recordation)

Agency Guidance Documents and References

- Guidelines for Determining Waste Management Requirements for Historical Contamination. (RG-100)
- Managing Paint & Paint Related Waste Under the Universal Waste Rule (RG-370)
- Can I Recycle Some of My Industrial or Hazardous Waste? (RG-240)
- Others noted: RG-222; RG-022