

Marathon Petroleum Company - Galveston Bay Refinery	Abrasives Blasting Management		
Document Custodian: Environmental, Safety and Security	Document No. GBR-HESS-ENV-39	Page 1 of 9	Revision No. 3
Records Retention: Policy, Standard, Procedure or Guideline Records Retention Period: 6 years after revised, superseded or obsolete	Effective Date 30-Sep-14	Revision Date 30-Sep-14	Next Review Date 30-Sep-19

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1.0 Purpose

The purpose of this procedure is to define the environmental requirements for the management of abrasive blasting work being performed throughout the Galveston Bay Refinery and Docks areas. Abrasive blasting surface preparation activities generate air particulate emissions and spent blasting media is considered a solid waste. Abrasive blasting activities are regulated by the Texas Commission on Environmental Quality (TCEQ), and may be regulated by the Environmental Protection Agency (EPA) if the spent blasting media meets the definition of a hazardous waste.

2.0 Scope

This procedure applies to all abrasive blasting activities taking place at the Galveston Bay Refinery and Docks operating areas, including storage, maintenance, infrastructure, and contractor facilities.

3.0 Procedure

3.1 Roles and Responsibilities

- 3.1.1 Craft Personnel (GBR and Contractor) is responsible for adhering to procedure and regulations regarding abrasive blasting activities of its organization and contractors including recordkeeping requirements. GBR Maintenance Supervisors are responsible for notifying the Environmental Department when spent blasting/abrasive media shall be generated and providing equipment to load spent blasting media into containers.
- 3.1.2 Craft Personnel are responsible for requesting approval for any new outdoor abrasive cleaning facilities.
 - 3.1.2.1 GBR Maintenance Supervisors shall contact the Environmental Department for proper characterization, labeling, disposal and information.
- 3.1.3 The Environmental Department is responsible for coordinating containers for storage of spent blasting media, properly classifying and disposing of the spent blasting/ abrasive media and for periodically auditing records.

3.2 Air Emission Control Requirements

- 3.2.1 Requirements for New, Dry, Outdoor Abrasives Cleaning:
 - 3.2.1.1 Construction of new non-mobile permanent or temporary abrasive blasting yards, outdoor, abrasives cleaning facilities has to be pre-approved by the Environmental Department before construction begins. Facilities meeting certain requirements (blasting grit usage below 1 ton/day, 15 tons/month and 150 tons/year) can potentially be authorized under a permit by rule (PBR). Check with Environmental to see if the new or temporary non-mobile sandblast operation meets the requirements.
 - 3.2.1.2 Outdoor abrasive blasting shall be performed at least 500 feet away from any recreational area, residence or other structure not occupied, owned or operated by GBR. This includes bodies of water. Water abrasives cleaning is required if surface preparation shall occur in these areas.
 - 3.2.1.3 Records shall be maintained of operating hours (blasting hours) and abrasive material usage (tons/day). These records shall be kept for at least 5 years at the facility. The forms shall be maintained in the Documentum database. Forms to be used for these records are included as Attachment B and shall be sent via email to the Environmental Department's TRI Coordinator on a quarterly basis. The required dates are March 5, June 5th, September 5 and December 5th. The Environmental TRI Coordinator can be located on the Environmental SharePoint Site.
 - 3.2.1.4 Operations involving in situ blasting, (in pipe racks, process areas, tanks, etc), shall be enclosed to insure that particulate air emissions are contained

within the enclosure.

3.2.1.5 No spent blasting media shall be stockpiled, recycled or reused onsite as fill.

3.2.2 Air Emission Control Requirements for Wet Abrasives:

3.2.2.1 There are no usage restrictions or recordkeeping requirements when using wet abrasives (water blasting). Spent wet abrasives are a solid waste and may be a hazardous waste if they contain lead. All runoff shall be contained and prevented from contacting the ground surface or bodies of water.

3.2.3 Air Particulate Control Requirements for Indoor, Enclosed Abrasive Cleaning:

3.2.3.1 Exhaust air emissions from indoor blasting equipment shall be fabric filtered and controlled so that the exhaust air velocity is less than 4 feet/minute for mechanical cleaning and less than 7 feet/minute for air cleaning in order to operate within the permit by rule (PBR) exemption. The filter and/or equipment manufacturer shall be required to meet these specifications and shall be familiar with them. Contact the Environmental Department Air Group if there are any questions on meeting these requirements or problems with the equipment manufacturer.

3.2.3.2 There can be no visible fugitive emissions from the sandblast booth or equipment. If any emissions are visible, the blasting operation shall stop immediately and the equipment repaired before blasting resumes.

3.2.3.3 If the above conditions cannot be met, the sand blasting operation shall need to be permitted in order to operate. Contact the Environmental Department Air Group for assistance before operating outside of these limits.

3.2.3.4 Blasting grit usage shall be tracked and recorded to determine particulate air emissions. A form is provided in Attachment C. This form shall be sent via email to the Environmental Department's TRI Coordinator on a quarterly basis. The required dates are March 5, June 5th, September 5 and December 5th. The Environmental TRI Coordinator can be located on the Environmental TeamView Site.

3.2.3.5 Filters shall be inspected in accordance with the manufacturer's instructions.

3.2.3.6 A preventive maintenance schedule shall be setup in SAP.

3.2.3.7 Written operating instructions shall be created and maintained by and be readily available to maintenance personnel.

3.3 Spent Blasting Abrasives Waste Handling Requirements

3.3.1 General Requirements/Housekeeping

3.3.1.1 Spent abrasives material shall be contained on the blasting pad and prevented from accumulating in soil covered areas. Barriers shall be erected and maintained around the perimeter of the blasting pad to prevent residuals from collecting on the ground or in bodies of water. Any abrasives escaping the blasting pad shall be collected and containerized for disposal.

3.3.2 Waste Handling and Disposal Requirements for Spent Abrasives Contaminated with Lead

3.3.2.1 Before using abrasives to clean painted equipment, the paint shall be tested for lead content or be known not to contain lead. If the paint contains lead then the spent blasting grit shall be segregated from non-lead bearing spent blasting grit and treated as a hazardous waste. **NOTE:** The project manager shall search for alternatives to outdoor abrasives blasting before a final

decision is made to remove the lead paint using this method in accordance with applicable GBR Lead Policies.

3.3.2.2 When lead contaminated abrasives are ready to be containerized for offsite disposal, label the container with a hazardous waste label and the words "lead contaminated blasting grit."

3.3.2.3 Contact the Environmental Department for assistance in moving the container to storage and/or disposal. Label ordering information and example labels can be found in Attachment A.

3.3.3 Waste Handling and Disposal Requirements for Non-Hazardous, Spent Abrasives

3.3.3.1 When blasting clean, unpainted equipment or equipment painted with non-lead paint the spent blasting grit shall be collected and containerized for disposal using the green, non-hazardous waste labels and the words, "spent blasting grit" used as the common waste name. Contact the Environmental Department for assistance in moving the container to storage and/or disposal.

3.3.4 Waste Handling and Disposal Requirements for In-Situ Abrasives Blasting

3.3.4.1 Before using abrasives, wet or dry, to clean equipment in place (for example, in the pipe rack, tank pits, process areas, etc.) containment tarps, plastic liners or equivalent containment system shall be in place to prevent the spent blasting grit from escaping to earthen areas in addition to providing control for air emissions.

3.3.4.2 The spent blasting grit shall be collected in drums or bulk containers, labeled with non hazardous waste labels as "spent blasting grit" or if lead contaminated, labeled with hazardous waste labels as "lead contaminated blasting grit" and properly dated. Labels can be obtained from the warehouse. Contact the Environmental Department for additional information in proper labeling, storage and disposal information.

3.4 Environmental Department Contact Information

3.4.1 The Environmental Department can be contacted for assistance by using the department service number (409) 771-2256.

4.0 Definitions

4.1 **Mobile Source** – is an abrasive blasting activity that utilizes mobile abrasive blasting equipment outside of the sandblast yard.

4.2 **Non-Mobile Source** – is the abrasive blasting yard that has permanent abrasive blasting equipment.

5.0 References

None

6.0 Attachments

6.1 Attachment A – Container Labels Ordering Information

6.2 Attachment B – Dry, Outdoor Abrasives Cleaning Usage Records

6.3 Attachment C – Indoor, Enclosed Abrasives Cleaning

6.4 Attachment D – Instructions for Completing Forms

7.0 Revision History

Revision Number	Description of Change	Written by	Approved by	Revision Date	Effective Date
0	Original Issue.	M.K. Alberts	K.M. Casey S.W Dio	04-Sep-08	04-Sep-08
1	Review by Environmental Waste Team. Added definitions, clarified requirements for mobile and temporary sources, and updated recordkeeping requirements. Eliminated BP Job Representative references per MOC M2010923-001.	M.K. Alberts	M.J. Berlinger O.O. Niederhofer	12-Jan-11	12-Jan-11
2	Reviewed by Environmental Waste Team. Removed TCC references	M.K. Alberts	M.J. Berlinger	11-Oct-12	11-Oct-12
3	Reformatted as MPC GBR Procedure	M.K. Alberts	B. Contractor	30-Sep-14	30-Sep-14

Attachment A
Container Labels Ordering Information

Galveston Bay Refinery Main Warehouse – (409)942-2355

Stock item number: 90216327 - red hazardous waste label
90216326- green non-hazardous waste

HAZARDOUS WASTE	
BP TEXAS CITY	
Waste Description:	<i>Spent lead contaminated blasting grit</i>
MO Number:	<i>(to be filled in)</i> _____
Unit:	<i>(to be filled in)</i> _____
Date:	<i>(to be filled in)</i> _____
<small>bpAed</small>	<small>BN# 401-0390-42</small>

NON-HAZARDOUS WASTE	
BP TEXAS CITY	
Waste Description:	<i>Spent Blasting grit</i>
MO Number:	<i>(to be filled in)</i> _____
Unit:	<i>(to be filled in)</i> _____
Date:	<i>(to be filled in)</i> _____
<small>bpAed</small>	<small>BN# 401-0390-41</small>
	<small>PART NO. 181L070</small>

Attachment B

Dry, Outdoor Abrasives Cleaning Usage Records

Galveston Bay Refinery Non-Mobile & Mobile Facilities

DATE	ABRASIVES USAGE (indicate all actual usage rates)	OPERATING HOURS	COMMENTS/TYPE OF ABRASIVE USED	NOTE if MOBILE or NON-MOBILE (MOBILE IS ANY BLASTING OUTSIDE OF BLAST YARD)
	_____ tons per day _____ tons per month _____ tons per year			
	_____ tons per day _____ tons per month _____ tons per year			
	_____ tons per day _____ tons per month _____ tons per year			
	_____ tons per day _____ tons per month _____ tons per year			

Attachment C
Indoor, Enclosed Abrasives Cleaning
Galvestonm Bay Refinery
Non-Mobile & Mobile Facilities

WEEK OF	EQUIPMENT ID/ SERIAL #	ABRASIVES USAGE	TYPE OF BLASTING AGENT
		_____ lbs per week _____ lbs per month _____ tons per year	
		_____ lbs per week _____ lbs per month _____ tons per year	
		_____ lbs per week _____ lbs per month _____ tons per year	
		_____ lbs per week _____ lbs per month _____ tons per year	
		_____ lbs per week _____ lbs per month _____ tons per year	

Note: For indoor, non-mobile (blast yard & mobile (tanks, vessels, etc.) abrasives cleaning you can choose to track on a daily basis if that is easier or more convenient.

Attachment D

Instructions for Completing Forms

1. Recordkeeping is **NOT** voluntary – it is required by law.
2. Indoor abrasives cleaning (Attachment C) require weekly estimates of usage. Outdoor abrasive cleaning (Attachment B) is more stringent and requires daily usage recordkeeping.
3. If no abrasives cleaning is done that day or week, then zero out the tons or lbs per day/week but carry forward the tons/lbs per month and tons/lbs per year.
4. Forms shall be sent via email to the Environmental Department's TRI Coordinator on a quarterly basis. The required dates are March 5, June 5th, September 5 and December 5th. The Environmental TRI Coordinator can be located on the Environmental SharePoint Site.
5. The Environmental Department shall periodically check the records and use the data for emissions calculations to comply with the law and maintain the records in the Documentum database.
6. Fill in all blanks – if no comments, write "none".
7. Estimate usage using known factors such as visual observations, grit density, purchase records, etc.
8. Keep material safety data sheets (MSDS) for each type of abrasives on file.
9. For indoor cleaning use one form for each blasting abrasive device.