SANDBLASTING WASTE MANAGEMENT

DESCRIPTION

The objective of the management program is to minimize the potential of storm water quality degradation from sandblasting activities at construction sites. The key issues in this program are prudent handling and storage of sandblast media, dust suppression, and proper collection and disposal of spent media. It is not the intent of this program to outline all of the worker safety issues pertinent to this practice. Safety issues should be addressed by construction safety programs as well as local, state, and and federal regulation. utilized at sites in which Sandblasting waste is present.

INSTALLATION/APPLICATION CRITERIA

Since the media consists of fine abrasive granules, it can be easily transported by running water. Sandblasting activities typically create a significant dust problem which must be contained and collected to prevent off–site migration problem which must be contained and collected to to prevent off–site migration or fines.

Operational Procedures

Use only inert, non–degradable sandblast media.
Use appropriate equipment for the job, do not over–blast.
Wherever possible, blast in a downward direction.
Install a wind sock or other wind direction instrument.
Cease blasting activities in high winds or if wind direction could transport grit to drainage facilities.
Install dust shielding around sandblasting areas.
Collect and dispose of all spent sandblast grit, use dust containment fabrics and dust collection hoppers and barrels.
Non–hazardous sandblast grit may be disposed in permitted construction debris landfills or permitted sanitary landfills.
If sandblast media cannot be fully contained, construct sediment traps downstream from blasting area where appropriate.
Use sand fencing where appropriate in areas where blast media cannot be fully contained.
If necessary, install misting equipment to remove sandblast grit from the air – prevent runoff from misting operations from entering drainage systems.
Use vacuum grit collection systems where possible.
Keep records of sandblasting materials, procedures, and weather conditions on a daily basis.
Take all reasonable precautions to ensure that sandblasting grit is contained and kept away from drainage structures.

Educational Issues

Educate all on–site employees of potential dangers to humans and the environment from sandblast grit.
Instruct all on–site employees of the potential hazardous nature of sandblast grit and possible symptoms of overexposure to sandblast grit.
Instruct operators of sandblasting equipment on safety procedures and personal protection equipment.
Instruct operators on proper procedures regarding storage, handling, and containment of sandblast grit.
Instruct operators to recognize unfavorable weather conditions regarding sandblasting activities.
Instruct operators and supervisors on current local, state, and federal federal regulations regarding fugitive dust and hazardous waste from sandblast grit.
Have weekly meetings with operators to discuss and reinforce proper operational procedures.
Establish a continuing education program to indoctrinate new employees.

Material Handling Recommendations

Sandblast media should always be stored under cover away from drainage structures.
Ensure that stored media or grit is not subject to transport by wind.
Ensure that all sandblasting equipment as well as storage containers comply with local, state, and federal regulations.
Refer to Hazardous Waste BMP fact sheet if sandblast grit is known or or suspected to contain hazardous components.
Capture and treat runoff which comes into contact with sandblasting material or waste.
Foreman and/or construction supervisor should monitor all sandblasting activities and safety procedures.

Quality Assurance

Educate, and if necessary, discipline workers who violate procedures.
Take all reasonable precautions to ensure that sandblast grit is not transported off–site or into drainage facilities.

Requirements

Education and awareness program for all employees regarding control of sandblasting and potential dangers to humans and the environment.
Operator and supervisor education program for those directly involved in sandblasting activities – instructions on material handling, proper equipment operation, personal protective equipment, fugitive dust control, record keeping and reporting, fugitive dust control, record keeping and reporting.
Proper sandblast equipment for the job.
Site–specific fugitive dust control and containment equipment.
Site–specific fugitive dust control procedure.
Compliance by supervisors and workers.

Costs

Minimal cost for training and monitoring.
Potential for significant cost for containment procedures on large jobs.
Potential for significant costs associated with cleanup, correction and remediation if containment occurs.

LIMITATIONS

Site specific solutions to sandblasting problems may be required.
Sandblasting operations on structures known to contain hazardous materials require special procedures not specifically outlined above including professional hazardous waste specialists.
Where hazardous materials are known or suspected, a site assessment and remediation plan may be necessary.
This management program is one part of a comprehensive construction site waste management program.

HAZARDOUS WASTE MANAGEMENT

DESCRIPTION

The hazardous waste management BMP addresses the problem of storm water Polluted with hazardous waste through spills or other forms of contact. The Objective of the Management Program is to minimize the potential of Storm water contamination from common construction site hazardous wastes Through appropriate recognition, handling, storage, and disposal practices.

It is not the intent of this Management Program to supersede or replace normal site assessment and remediation procedures. Significant spills and/or contamination warrant immediate response by trained professionals. Suspected job–site contamination should be immediately reported to regulatory Authorities and protective actions taken. The General Permit requires reporting Of significant spills to the National Response Center (NRC) at (800)424–8802.

PRIMARY USE

These management practices along with applicable OSHA and EPA guidelines Should be incorporated at all construction sites which use or generate Hazardous wastes. Many wastes such as fuel, oil, grease, fertilizer, and pesticide Are present at most construction sites.

INSTALLATION, APPLICATION AND DISPOSAL CRITERIA

The hazardous waste management techniques presented here are based on Proper recognition, handling, and disposal practices by construction workers And supervisors. Key elements of the management program are education, Proper disposal practices, as well as provisions for safe storage and disposal. Following are lists describing the targeted materials and recommended procedures:

Targeted Hazardous Waste Materials

Paints
Solvents
Stains
Wood preservatives
Cutting oils
Greases
Roofing tar
Pesticides
Fuel and lube oils
Lead based paints (Demolition)

Storage Procedures

Wherever possible, minimize use of hazardous materials.
Minimize generation of hazardous wastes on the job–site.
Segregate potentially hazardous waste from non–hazardous Construction site debris.
Designate a foreman or supervisor to oversee hazardous materials Handling procedures.
Keep liquid or semi–liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
Other enclosed trash container that limits contact with rain and.
Store waste materials away from drainage ditches, swales, and catch basins.
Use containment berms in fueling and maintenance areas and where the potential for spills is high.
Ensure that adequate hazardous waste storage volume is available.
Ensure that hazardous waste collection containers are conveniently located.
Do not allow potentially hazardous waste materials to accumulate on the ground.
Enforce Hazardous waste handling and storage procedures.
Clearly mark on all hazardous waste containers which materials are acceptable for the container.

Disposal Procedures

Regularly schedule hazardous waste removal to minimize on–site storage.
Use only reputable, licensed hazardous waste haulers.

Education

Instruct workers in identification of hazardous waste
Educate workers of potential dangers to humans and the environment from hazardous wastes
Instruct workers on safety procedures for common construction site hazardous wastes
Educate all workers on hazardous waste storage and disposal procedures
Have regular meetings to discuss and reinforce identification, handling and disposal procedures (incorporate in regular safety seminars).
Establish a continuing education program to indoctrinate new employees

Quality Assurance

Foreman and/or construction supervisor shall monitor on–site hazardous waste storage and disposal procedures.
Educate, and if necessary, discipline workers who violate procedures.
Ensure that the hazardous waste disposal contractor is reputable and licensed.

Requirements

Job–site waste handling and disposal education and awareness program
Commitment by management to implement hazardous waste management practices.
Compliance by workers.
Sufficient and appropriate hazardous waste storage containers.
Timely removal of stored hazardous waste materials.

Costs

Possible modest cost impact for additional hazardous storage containers.
Small cost impact for training and monitoring
Potential cost impact for hazardous waste collection and disposal by licensed hauler – actual cost depends
on type of material and volume.

LIMITATIONS

This practice is not intended to address site–assessments and pre–existing contamination.
Major contamination, large spills and other serious hazardous waste incidents require immediate response from specialists.
Demolition activities and potential pre–existing materials, such as asbestos, are not addressed by this program. Site specific information on plans is necessary.
Contaminated soils are not addressed.
One part of a comprehensive construction site waste management program.

SOLID WASTE MANAGEMENT

DESCRIPTION

Large volumes of solid waste are often generated at construction sites including: packaging, pallets, wood waste, concrete waste, soil, electrical wiring, cuttings, and a variety of other materials. The solid waste management practice lists techniques to minimize the potential of storm water contamination from solid waste through appropriate storage and disposal practices.

PRIMARY USE

These practices should be a part of all construction practices. By limiting the trash and debris on site, storm water quality is improved along with reduced clean up requirements at the completion of the project.

APPLICATIONS

The solid waste management practice for construction sites is based on proper storage and disposal practices by construction workers and supervisors. Key elements of the program are education and modification of improper disposal habits. Cooperation and vigilance is required on the part of supervisors and workers to ensure that the recommendations and procedures are followed. Following are lists describing the targeted materials and recommended procedures:

Targeted Solid Waste Materials

Paper and cardboard containers
Plastic packaging
Styrofoam packing and forms
Insulation materials (non–hazardous)
Wood pallets
Wood cuttings
Pipe and electrical cuttings
Concrete, brick, and mortar waste
Shingle cuttings and waste
Roofing tar
Steel (cuttings, nails, rust residue)
Gypsum board cuttings and waste
Sheathing cuttings and waste
Miscellaneous cutting and waste
Food waste
Demolition waste

Storage Procedures

Wherever possible, minimize production of solid waste materials.
Designate a foreman or supervisor to oversee and enforce proper solid waste procedures.
Instruct construction workers in proper solid waste procedures.
Segregate potentially hazardous waste from non–hazardous construction site debris.
Keep solid waste materials under cover in either a closed dumpster or other enclosed trash container that limits contact with rain and runoff.
Store waste materials away from drainage ditches, swales and catch basins.
Do not allow trash containers to overflow.
Do not allow waste materials to accumulate on the ground.
Prohibit littering by workers and visitors.
Police site daily for litter and debris.
Enforce solid waste handling and storage procedures.

Disposal Procedures

If feasible, segregate recyclable wastes from non–recyclable waste materials and dispose of properly.
General construction debris may be hauled to a licensed construction debris landfill (typically less expensive than a sanitary landfill).
Use waste facilities approved by local jurisdiction.
Runoff which comes into contact with unprotected waste shall be directed into structural treatment such as silt fence to remove debris.

Education

Educate all workers on solid waste storage and disposal procedures.
Instruct workers in identification of solid waste and hazardous waste.
Have regular meetings to discuss and reinforce disposal procedures (incorporate in regular safety seminars).
Clearly mark on all solid waste containers which materials are acceptable.

Quality Control

Foreman and/or construction supervisor shall monitor on–site solid waste storage and disposal procedures.
Discipline workers who repeatedly violate procedures.

Requirements

Jobsite waste handling and disposal education and awareness program
Commitment by management to implement and enforce Solid Waste Management Program.
Compliance by workers.
Sufficient and appropriate waste storage containers.
Timely removal of stored solid waste materials.
Possible modest cost impact for additional waste storage containers.
Small cost impact for training and monitoring
Minimal overall cost impact.

LIMITATIONS

Only addresses non–hazardous solid waste.
One part of a comprehensive construction site management program.

CONCRETE WASTE MANAGEMENT

DESCRIPTION

Concrete waste at construction sites comes in two forms; 1) excess fresh concrete mix including truck and equipment washing, and 2) concrete dust and concrete debris resulting from demolition. Both forms have the potential to impact water quality through storm water runoff contact with the waste.

PRIMARY USE

Concrete waste is present at most construction sites. This BMP should be utilized at sites in which concrete waste is present

APPLICATIONS

A number of water quality parameters can be affected by introduction of concrete – especially fresh concrete. Concrete affects the pH of runoff, causing significant chemical changes in water bodies and harming aquatic life.
Suspended solids in the form of both cement and aggregate dust are also Generated from both fresh and demolished concrete waste:

Current Unacceptable Waste Concrete Disposal Practices

Dumping in vacant areas on the job–site
Illicit dumping off–jobsite
Dumping into ditches or drainage facilities

Recommended Disposal Practices

Avoid unacceptable dumping practices listed above.
Develop predetermined, safe concrete disposal areas
Provide a washout area with a minimum of 6 cubic feet of containment area volume for every 10 cubic yards of concrete poured.
Never dump waste concrete illicitly or without property owners knowledge and consent.
Treat runoff from storage area through the use of structural controls as required.

Education

Drivers and equipment operators should be instructed on proper disposal and equipment washing practices (see above).
Supervisors must be made aware of the potential environmental consequences of improperly handling concrete waste.

Enforcement

The construction site manager or foreman must ensure that employees and pre–mix companies follow proper procedures for concrete disposal and equipment washing.
Employees violating disposal or equipment cleaning directives must be reeducated or disciplined if necessary.

Demolition Practices

Monitor weather and wind direction to ensure concrete dust is not entering drainage structures and surface waters.
Where appropriate, construct sediment traps or other types of sediment detention devices downstream of demolition activities.

Requirements

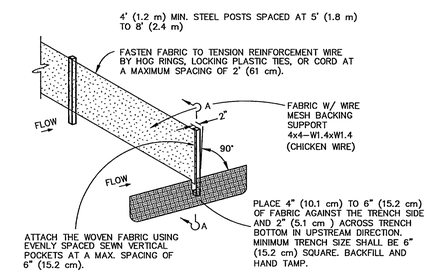
Use predetermined disposal for waste concrete.
Prohibit dumping waste concrete anywhere but predetermined areas.
Assign predetermined truck and equipment washing areas.
Educate drivers and operators on proper disposal and equipment cleaning procedures.

Costs

Minimal cost impact for training and monitoring.
Concrete disposal cost depends on availability and distance to suitable disposal areas.
Additional costs involved in equipment washing could be significant.

LIMITATIONS

This concrete waste management program is one part of a comprehensive construction
site management program.



SILT FENCE
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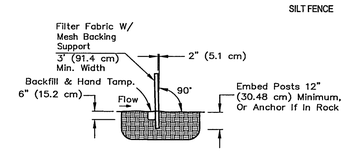

SECTION A–A
NTS

1. STEEL POSTS WHICH SUPPORT THE SILT FENCE SHALL BE INSTALLED ON A SLIGHT ANGLE TOWARD THE ANTICIPATED RUNOFF SOURCE. POST MUST BE EMBEDDED A MINIMUM OF 1 FOOT.

2. THE TOE OF THE SILT FENCE SHALL BE TRENCHED IN WITH A SPADE OR MECHANICAL TRENCHER, SO THAT THE DOWNSLOPE FACE OF THE TRENCH IS FLAT AND PERPENDICULAR TO THE LINE OF FLOW. WHERE FENCE CANNOT BE TRENCHED (e.g. PAVEMENT), WEIGHT FABRIC FLAP WITH WASHED GRAVEL ON UPHILL SIDE TO PREVENT FLOW UNDER FENCE.

3. THE TRENCH MUST BE A MINIMUM OF 6 INCHES DEEP AND 6 INCHES WIDE TO ALLOW FOR THE SILT FENCE FABRIC TO BE LAID IN THE GROUND AND BACKFILLED WITH COMPACTED MATERIAL.

4. SILT FENCE SHOULD BE SECURELY FASTENED TO EACH STEEL SUPPORT POST OR TO WOVEN WIRE, WHICH IS IN TURN ATTACHED TO THE STEEL FENCE POST. THERE SHALL BE A 6 INCH DOUBLE OVERLAP, SECURELY FASTENED WHERE ENDS OF FABRIC MEET.

5. INSPECTION SHALL BE MADE WEEKLY OR AFTER EACH RAINFALL. REPAIR OR REPLACEMENT SHALL BE MADE PROMPTLY AS NEEDED.

6. SILT FENCE SHALL BE REMOVED WHEN THE SITE IS COMPLETELY STABILIZED SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.

7. ACCUMULATED SILT SHALL BE REMOVED WHEN IT REACHES A DEPTH OF 6 INCHES. THE SILT SHALL BE DISPOSED OF IN AN APPROVED SITE AND IN SUCH A MANNER AS TO NOT CONTRIBUTE TO ADDITIONAL SILTATION.

8. REFER TO TXDOT STANDARD EC(3)-09 FOR ALL SILT FENCE PLACED WITHIN TXDOT ROW.

RECORD DRAWINGS

NOTE:
To the best of our knowledge Spiars Engineering, Inc. hereby by states that this plan is a Record Drawing. The information provided is based on field surveying at the site and information provided by the contractor.

spiars ENGINEERING
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STATE OF TEXAS
KEVIN S. WIER
91219
LICENSED
PROFESSIONAL ENGINEER
8/9/13

HONDA OF ROCKWALL ADDITION
LOT 1, BLOCK 1
ROCKWALL, TEXAS
STORMWATER POLLUTION PREVENTION GUIDELINES

Revisions	Date
1	
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Issue Dates:

Scale: N.T.S.
Drawn By: AO
Checked by: KSW

Sheet C 11 of 12

SEI No. 11–112
11–112–EC2

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