NCTWG Construction — BMP Manual

Section 4 - Construction BMPs

Section 4 - Construction BMPs Hazardous Waste Management APPLICATIONS SLOPE PROTECTION DESCRIPTION

The hazardous waste management BMP addresses the problem if storm water polluted

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The objective of PERIMETER CONTROL with hazardous waste through spills or other forms of contact. The objective of SEDIMENT TRAPPING the Management Program is to minimize the potential of stormwater contamination from common construction site hazardous wastes through appropriate recognition CHANNEL PROTECTION handling, storage and disposal practices. TEMPORARY STABILIZATION it is not the intent of this Management Program to supersede or replace normal PERMANENT STABILIZATIO site assessment and remediation procedures. Significant spills and/or contamination warrant immediate response by trained professionals. Suspected WASTE MANAGEMENT iob-site contamination should be immediately reported to regulatory authorities HOUSEKEEPING PRACTICES and protective actions taken. The General Permit requires reporting of significant spills to the National Response Center (NRC) at (800) 424-8802. TARGETED CONSTITUENTS **O SEDIMENT** These management practices along with applicable OSHA and EPA guidelines should be incorporated at all construction sites which use or generate hazardous wastes. NUTRIENTS Many wastes such as fuel, oil, grease, fertilizer and pesticide are present at TOXIC MATERIALS most construction sites. OIL & GREASE OFLOATABLE MATERIAL INSTALLATION, APPLICATION AND DISPOSAL CRITERIA OTHER CONSTRUCTION WASTES 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 LEGEND disposal practices, as well as provisions for safe storage and disposal.

Following are lists describing the targeted materials and recommended procedures: CAPITAL COSTS ■ MAINTENANCE → TRAINING Targeted Hazardous Waste Materials O SUITABILITY FOR SLOPES > 5% Wood preservatives LEGEND Cutting oils SIGNIFICANT IMPACT Roofing tar → MEDIUM IMPACT Pesticides Fuels & lube oils O LOW IMPACT Lead based paints (Demolition) ? UNKNOWN OR QUESTIONABLE IMPACT Specification Section N/A Storage Procedures Wherever possible, minimize use of hazardous materials. Minimize generation of hazardous wastes on the job-site. W-3Searegate potentially hazardous waste from non-hazardous construction s Designate a foreman or supervisor to oversee hazardous materials handling Keep liquid or semi-liquid hazardous waste in appropriate containers (close NORTH CENTRAL TEXAS drums or similar) and under cover. COUNCIL OF GOVERNMENTS NCTWG Construction - BMP Manual February 199 Section 4 - Construction BMPs Hazardous Waste Management

Store waste materials away from drainage ditches, swales and catch basins. Use containment berms in fueling and maintenance greas and where the potential □ 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 disposal procedures. Clearly mark on all hazardous waste containers which materials are acceptable for 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 Instruct workers on safety procedures for common construction site hazardous 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.

□ Job-site hazardous 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.

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for spills is high.

the container.

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. Specification Section

This practice is not intended to address site-assessments and pre-existing 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.

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Concrete Waste Management APPLICATIONS SLOPE PROTECTION <u>DESCRIPTION</u>
Concrete waste at construction sites comes in two forms: 1) excess fresh PERIMETER CONTROL concrete mix including truck and equipment washing, and 2) concrete dust and SEDIMENT TRAPPING concrete debris resulting from demolition. Both forms have the potential to impact water quality through storm water runoff contract with the waste. CHANNEL PROTECTION TEMPORARY STABILIZATION Concrete waste is present at most construction sites. The BMP should be utilized PERMANENT STABILIZATION at sites in which concrete waste is present. WASTE MANAGEMENT HOUSEKEEPING PRACTICES A number of water quality parameters can be affected by introduction of concrete - especially fresh concrete. Concrete affects the pH of runoff, cousing significant chemical changes in water bodies and harming aquatic life. Suspended TARGETED CONSTITUENTS solids in the form of both cement and aggregate dust are also generated from both fresh and demolished concrete waste. O SEDIMENT ONUTRIENTS
TOXIC MATERIALS Current Unacceptable Waste Concrete Disposal Practices Dumping in vacant areas on the job-site. Illicit dumping off-jobsite. OOIL & GREASE Dumping into ditches or drainage facilities. OFLOATABLE MATERIALS Renommended Disposal Practices OTHER CONSTRUCTION WASTES Avoid unacceptable disposal practices listed above. Develop pre-determined, safe concrete disposal areas. Provide a washout area with a minimum of 6 cubic feet of containment area LEGEND volume for every 10 cubic yards of concrete poured. Never dump waste concrete illicitly or without property owners knowledge and CAPITAL COSTS □ Treat runoff from storage areas through the use of structural controls as MAINTENANCE → TRAINING SUITABILITY FOR SLOPES > 5% 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 SIGNIFICANT IMPACT of improperly handled concrete waste. MEDIUM IMPACT □ The construction site manager or foreman must ensure that employees and O LOW IMPACT pre-mix companies follow property procedures for concrete disposal and ? UNKNOWN OR QUESTIONABLE IMPACT equipment washing. Employees violating disposal or equipment cleaning directives must be Specification Section re-educated or disciplined if necessary. Demolition Practices Monitor weather and wind direction to ensure concrete dust is not entering W-3drainage structures and surface waters. □ Where appropriate, construct sediment traps or other types of sediment detenion devices downstream of demolition activities. NORTH CENTRAL TEXAS COUNCIL OF GOVERNMENTS

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Concrete Waste Management

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Use pre-determined disposal sites for waste concrete.

Prohibit dumping waste concrete anywhere but pre-determined areas. Assign pre-determined truck and equipment washing areas.

Educate drivers and operators on proper disposal and equipment cleaning

Requirements

Minimal cost impact for training and monitoring.

□ Concrete disposal cost depends on availability and distance to suitable disposal

Additional costs involved in equipment washing could be significant.

site waste management program.

The concrete waste management program is one part of a comprehensive construction

BOTH THE PROPERTY OWNER AND CONTRACTOR SHALL BE RESPONSIBLE FOR SUBMITTING

THE NOTICE OF INTENT (N.O.I.) AND NOTICE OF TERMINATION

(N.O.T.) TO THE E.P.A.

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Specification Section

N/A

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Sandblasting Waste Management

Instruct operators to recognize unfavorable weather conditions regarding sandblasting activities.

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APPLICATIONS

SLOPE PROTECTION

PERIMETER CONTROL

SEDIMENT TRAPPING

CHANNEL PROTECTION

TEMPORARY STABILIZATION

PERMANENT STABILIZATION

WASTE MANAGEMENT

HOUSEKEEPING PRACTICES

TARGETED CONSTITUENTS

) SEDIMENT

• NUTRIENTS TOXIC MATERIALS

OFLOATABLE MATERIALS

OTHER CONSTRUCTION WASTES

LEGEND

LEGEND

? UNKNOWN OR QUESTIONABLE IMPACT

N/A

W-3

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SIGNIFICANT IMPACT

MEDIUM IMPACT

Specification Section

Detial ID

O LOW IMPACT

OOIL & GREASE

CAPITAL COSTS

MAINTENANCE

■ TRAINING

Instruct operators and supervisors on current local, state and federal regulations regarding fugitive dust and hazardous waste from sandblast grit. Have weekly meetings with operators to discuss and reinforce proper operational

Establish a continuing education program to indoctrinate new employees.

Sandblasting Waste Management

safety programs as well as local, state, and federal regulation.

□ Use only inert, non-degradable sandblast media.

□ Wherever possible, blast in a downward direction.

Install dust shielding around sandblasting areas.

debris landfills or permitted sanitary landfills.

downstream from blasting area where appropriate.

Use vacuum arit collection systems where possible.

and kept away from drainage structures.

enviorment from sandblast grit.

personal protection equipment.

containment of sandblast grit.

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and dust collection hoppers and barrels.

□ Install a wind sock or other wind direction instrument

☐ Use appropriate equipment for the job, do not over-blast

INSTALLATION/APPLICATION CRITERIA

grit to drainage facilities.

Operational Procedures

fully contained.

no a daily basis.

Educational Issues

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 the program are prudent handling and storage of sandblast

media, dust suppression, and proper collection and disposal of spent media.

pertinent to this practice. Safety issues should be addressed by construction

Since the media consists of abrasive granules, it can be easily transported by

problem which must be contained and collected to prevent off-site*migration o

Cease blasting activities in high winds or if wind direction could transport

Collect and dispose of all spent sandblast grit, use dust containment fabrics

Non-hazardous sandblast grit may be disposed in permitted construction

Use sand fencing where appropriate in areas where blast media cannot b

If necessary install misting equipment to remove sandblast arit from the air

prevent runoff from misting operations from entering drainage systems.

Expression Keep records of sandblasting materials, procedures, and weather conditions

Educate all on-site employees of potential dangers to humans and the

Take all reasonable precautions to ensure that sandblasting grit is contained

Instruct all on-site employees of the potential hazardous nature of sandblas

grit and the possible symptoms of over-exposure to sandblast grit.

Instruct operators of sandblasting equipment on safety procedures and

instruct operators on proper procedures regarding storage, handling and

If sandblast media cannot be fully contained, construct sediment traps

running water. Sandblasting activities typically create a significant dust

is not the intent of this program to outline all of the worker safety issues

Materials Handling Recommendations

Sandblast media should always be store 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

current local, state and federal regulations. Refer to Hazardous Waste BMP fact sheet if sandblast grit is known or suspected to contain hazardous components.

Capture and treat runoff which comes into contact with sandblasting material or

Quality Assurance Foremen and/or construction supervisor should monitor all sandblasting activities

and safety procedures. Educate and if necessary, discipline workers who violate procedures.

Take all reasonable precautions to ensure that sandblast arit is not transported off-site or into drainage facilities.

Requirements

Education and awareness program for all employees regarding control of sandblasting and potential danger to humans and the environment.

Departor and supervisor education program for those directly involved in sandblasting activities — instructions on material handling, property equipment operation, personal protective equipment, 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 procedures. Compliance by supervisors and works.

□ 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 contamination occurs.

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.

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DESIGN

STORMWATER POLLUTION PREVENTION PLAN

PARKSIDE CORPORATE CENTER

TOWN OF ADDISON, TEXAS BROCKETTE DAVIS DRAKE, inc.

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