UC SANTA CRUZ

BEST MANAGEMENT PRACTICES
FOR CONSTRUCTION PROJECTS LESS THAN 1 ACRE IN AREA
INVOLVING SOIL DISTURBANCE GREATER THAN 50 CUBIC YARDS

September 20, 2011

APPENDIX E
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FOR
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All Construction Sites

- ☐ Delineate clearing limits, sensitive or critical areas, trees, drainage courses, and buffer zones to prevent excessive or unnecessary disturbance and exposure of soil.
- ☐ Identify all storm drains, drainage swales and creeks located near the construction site and make sure all subcontractors are aware of their locations to prevent pollutants from entering them.
- ☐ Preserve existing vegetation, where required and when feasible, to the maximum extent practicable.
- ☐ Phase grading operations, to the extent possible, to limit areas of disturbance and time of exposure
- ☐ Avoid and/or minimize impacts of excavation and grading during wet weather and immediately preceding expected wet weather.
- ☐ Minimize cuts and fills.
- ☐ Implement measures to minimize erosion, manage storm water runoff, and prevent pollutants from construction activities from entering storm drains.
- ☐ Align temporary and permanent roads and driveways along slope contours.
- ☐ Wash vehicles at an appropriate off-site facility. If equipment must be washed on-site, use wash down areas developed for specific site requirements and approved by the University Representative. Do not use soaps, solvents, degreasers, or steam cleaning equipment, and prevent wash water from entering storm drains.

Minimize Soil Movement

- ☐ Stockpiled soil and materials should be covered and stabilized with tarps, geotextile fabric, hydroseeding and/or erosion control blankets.
- ☐ Create a berm and/or install silt fencing around stockpiled materials to prevent storm water runoff from transporting sediment offsite.
- ☐ Use campus standard erosion control seeding, planting, mulching, geotextile fabric and/or erosion control blankets to stabilize disturbed soil and reduce the potential for erosion.
- ☐ Use other soil stabilizers as approved by the University Representative.

Structures to Control and Convey Runoff

- ☐ Convey runoff by use of earth dikes, drainage swales and/or ditches when feasible.
- ☐ Use slope drains to collect and convey water for discharge below slopes when feasible.
- ☐ Use velocity dissipation devices, flared culvert end sections and/or check dams to reduce runoff velocity and mitigate erosion when feasible.

Capture Sediment

- ☐ Use terracing, riprap, sand bags, rocks, approved temporary vegetation and/or other approved BMP's on slopes to reduce runoff velocity and trap sediments. Do not use asphalt rubble or other demolition debris for this purpose.
- ☐ Protect storm drain inlets from sediment-laden runoff. Storm drain inlet protection devices include gravel bags, filter fabric fences and block and gravel filters.

Other Runoff Controls

- ☐ Temporary sediment basin
- ☐ Sediment trap

- ☐ Brush or rock filter
- ☐ Silt fence
- ☐ Sand or gravel bag barrier

Tracking Control

- ☐ Implement measures as necessary to minimize tracking of soil off site
- ☐ Use dry sweeping methods when cleaning sediments from streets, driveways and paved areas by hand. When using mechanical street sweepers, use fine water spray to reduce dust and improve sediment removal while minimizing runoff.

Paint Work

- ☐ Do not clean paint brushes or rinse paint containers into a street, gutter, storm drain, or creek.
- ☐ For water-based paints, paint out brushes to the extent possible and rinse to a drain leading to the sanitary sewer (*i.e.*, indoor plumbing).
- ☐ For oil-based paints, paint out brushes to the extent possible, and filter and reuse thinners and solvents. Dispose of unusable thinners, oil-based paint, sludges and residue as hazardous waste.
- ☐ Non-hazardous paint chips and dust from dry stripping and sand blasting may be swept up or collected in plastic drop cloths and disposed of as trash. Chemical paint stripping residue and chips and dust from marine paints or paints containing lead or tributyl tin must be disposed of as a hazardous waste.
- ☐ When stripping or cleaning building exteriors with high-pressure water, cover or berm storm drain inlets. Collect (mop or vacuum) building cleaning water for disposal in a pre-authorized manner.
- ☐ Recycle, return to supplier or donate unwanted water-based (latex) paint.
- ☐ Dried latex paint may be disposed of in the trash.

Cement and Concrete Work

- ☐ Avoid mixing excess amounts of fresh concrete or cement mortar on-site.
- ☐ Store dry and wet concrete and cement under cover, protected form rainfall and runoff.
- ☐ Wash out concrete transit mixers only in designated wash-out areas. Whenever possible, recycle washout by pumping back into mixers for reuse. Do not dispose of washout into the street, storm drains, drainage ditches, or creeks. Designated wash-out areas must be maintained to prevent over flow.
- ☐ Whenever possible, return contents of mixer barrel to the off-site yard for recycling. Dispose of small amounts of excess concrete, grout, and mortar in the trash.

Roadwork/Pavement

- ☐ Apply concrete, asphalt, and seal coat during dry weather to prevent contaminants from contacting stormwater runoff.
- ☐ Cover storm drain inlets and manholes when paving or applying seal coat, slurry seal, fog seal, and similar materials.
- ☐ Always park paving machines over drip pans or absorbent materials, since they tend to drip continuously.
- ☐ When making saw-cuts in pavement, use as little water as possible. Cover potentially affected storm drain inlets completely with filter fabric during the sawing operation and contain the slurry by wet-

vacuuming, or by placing straw bales, sandbags, or gravel dams around the catch basins. After the liquid drains or evaporates, shovel or vacuum the slurry residue from the pavement or gutter and remove from site.

- ☐ Wash down exposed aggregate concrete only when the wash water can: (1) flow onto a dirt area; (2) drain onto a bermed surface from which it can be pumped and disposed of properly; or (3) be vacuumed from the area along the curb where sediment has accumulated by blocking a storm drain inlet.
- ☐ Allow aggregate rinse to settle, and pump the water to the sanitary sewer if allowed by your local wastewater authority.
- ☐ Do not wash sweepings from exposed aggregate concrete into a street or storm drain. Collect and return to aggregate base stockpile, or dispose with trash.
- ☐ Recycle broken concrete and asphalt.

Hazardous Material Spill Prevention, Spill Reporting and Response

- ☐ All hazardous materials shall be stored so that they are protected from inclement weather and vandalism.
- ☐ Motor vehicles shall not be fueled on the Project site.
- ☐ Spill containment measures must be made prior to fueling when fueling equipment other than motor vehicles.
- ☐ Vehicle maintenance, other than emergency repairs, shall not be performed on the Project site.
- ☐ Appropriate emergency spill containment supplies shall be maintained on site by the Contractor.
- ☐ Spills greater than one quart shall be immediately reported to The University's Representative and UCSC's Project Inspector.
- ☐ Spills shall be diked or contained by trained personnel to prevent the spilled hazardous material from entering the storm water system or leaving the Project site.
- ☐ Spills of less than five (5) gallons shall be absorbed using an appropriate material. All contaminated materials shall be containerized, removed from Campus and disposed in accordance with Federal, state and local regulations.
- ☐ Spills in excess of five (5) gallons shall be absorbed using an appropriate material and placed in containers under the direction of UCSC's Office of Environmental Health and Safety.
- ☐ Any contaminated soil shall be removed by the Contractor and replaced with acceptable fresh soil.
- ☐ Response shall be carried out by appropriately trained personnel utilizing safe practices.

Good Housekeeping Practices

- ☐ Do not wash down pavement or surfaces where silt has been deposited or materials have spilled. Use dry cleanup methods.
- ☐ Avoid contaminating clean runoff from areas adjacent to your site by using berms and/or temporary or permanent drainage ditches to divert water flow around the site.
- ☐ Cover exposed piles of soil, construction materials and wastes when not in use or at the end of every day.
- ☐ Before it rains, sweep and remove materials from surfaces that drain to storm drains, creeks, or channels.
- ☐ Place trash cans around the site to reduce potential litter. Dispose of non-hazardous construction wastes in covered dumpsters or recycling receptacles. Recycle leftover materials whenever possible.
- ☐ Dispose of all wastes properly. Materials that can not be reused or recycled must be taken to an appropriate landfill or disposed of as hazardous waste, as appropriate.
- ☐ Cover open dumpsters with plastic sheeting or a tarp at the end of every day. Secure the sheeting or tarp

around the outside of the dumpster. If the dumpster has a cover, close it.

☐ Train your employees and inform contractors and subcontractors about storm water management requirements and their responsibilities for compliance. Keep training sign-in sheets with plan documents.

Inspection

☐ Project site inspections must be completed:
- o before every 50% chance of rain
- o during every measureable rain event
- o after every measureable rain event
- o or at minimum weekly

☐ Keep all inspection records with plan documents

Sources Of Additional Information

Additional information on Construction Site Controls is available in the publications listed below

✓ California Stormwater Quality Association - California Storm Water Best Management Practice Handbook – Construction http://www.cabmphandbooks.com/

✓ Caltrans. 2003. Storm Water Quality Handbooks – Construction Contractors Guide and Specifications http://www.dot.ca.gov/hq/construc/stormwater/CSBMPM_303_Final.pdf