

US EPA ARCHIVE DOCUMENT

Appendix E

Maintenance Program Site Visit Reports

Site Visit No. 16

Willow Creek Highway Maintenance Facility
Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Willow Creek Highway Maintenance Facility located at post mile 0.6 Highway 96, Willow Creek, CA. The Trinity River is approximately 1000 feet northeast of the facility and Willow Creek is approximately 1000 feet south of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. As explained by the Highway Maintenance Supervisor, most of the storm water runoff at the facility flows to the northwest corner of the facility either by overland flow or through a culvert inlet and pipe (see [Photographs 1, 2 and 3](#)). He added that storm water runoff does not generally discharge off-site from this location to the adjacent PG&E facility but rather ponds and remains as standing water until it infiltrates into the ground or evaporates. Nonetheless, evidence of sediment discharged to the northwest corner of the facility was observed (see [Photograph 3](#)). Furthermore, a silt fence BMP had been installed in the concentrated flow pathway of the culvert outlet, was not entrenched into the ground, and had been installed backwards (see [Photographs 3 and 4](#)).

In addition, a stockpile of roadway abrasives was stored up-gradient of the storm drain culvert inlet in an uncovered area, and on the impervious ground surface (see [Photograph 5](#)). Straw wattle BMPs had been placed around the stockpile on the downslope side; however, the straw wattles were improperly installed on the impervious surface of the facility, and therefore were not properly entrenched in the ground to retain the stockpiled materials (see [Photograph 6](#)). Furthermore, what appeared to be a salt residue was observed around the stockpile which indicated that the stockpile itself contained salt, or the straw wattles had previously been used for the containment of a salt-bearing product (see [Photograph 7](#)). As a result, there was a potential for the discharge of stockpiled materials to the storm drain culvert inlet and subsequently off-site. Although placed under cover, a second stockpile containing salt also had a straw wattle BMP improperly installed on the impervious ground surface (see [Photographs 8 and 9](#)). Straw wattle BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management.

The facility has a dedicated area for storage of materials picked up from the highway system by maintenance crews. The area is segregated to provide an area for wood-based materials and another area for metal-based materials (see [Photograph 10](#)). According to the Highway Maintenance Supervisor, an engine block from an automobile had been deposited in the metal-bearing materials storage area earlier on day of the inspection (see [Photograph 11](#)). It appeared that the engine block still contained automotive fluids or petroleum products that had leaked onto the impervious ground surface in the storage area (see [Photograph 11](#)). The storage area is not covered and does not have a berm for containment. As a result, there was a potential for the contribution of pollutants to storm water runoff and the subsequent discharge of pollutants off-site.

Although the facility is equipped with a designated and covered vehicle and equipment wash rack, a bermed area toward the southern end of the facility is used for truck bed washing (see [Photograph 12](#)). An area of wet soil was observed on the backside of the bermed area adjacent to a drainage ditch that flows off-site to the south (see [Photographs 13 and 14](#)). As a result, there was a potential for the discharge of pollutants to the drainage ditch, a component of the Caltrans MS4, and subsequently off-site. Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).”

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

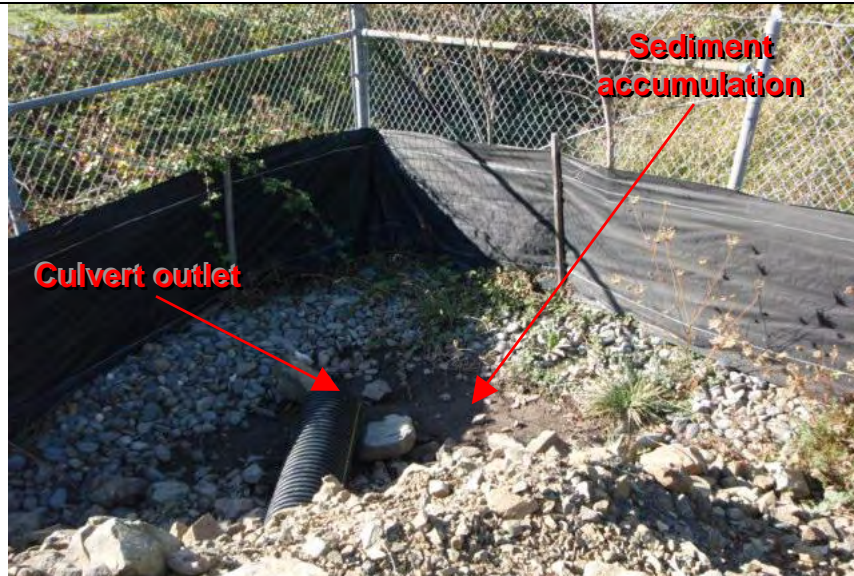
Photograph date: 10/22/2009



Photograph 1 – View from northwest corner of the facility



Photograph 2 – Culvert inlet that flows to northwest corner of facility



Photograph 3 – Culvert outlet to northwest corner of facility (Note: Silt fence BMP installed backwards)



Photograph 4 – Closer view of silt fence BMP shown in Photograph 3

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 5— Stockpile of sand and ash mixture up-gradient of inlet



Photograph 6 – Inappropriate application of straw wattle BMP



Photograph 7— Closer view of straw wattle BMP around stockpile
(Note: Apparent salt residue)

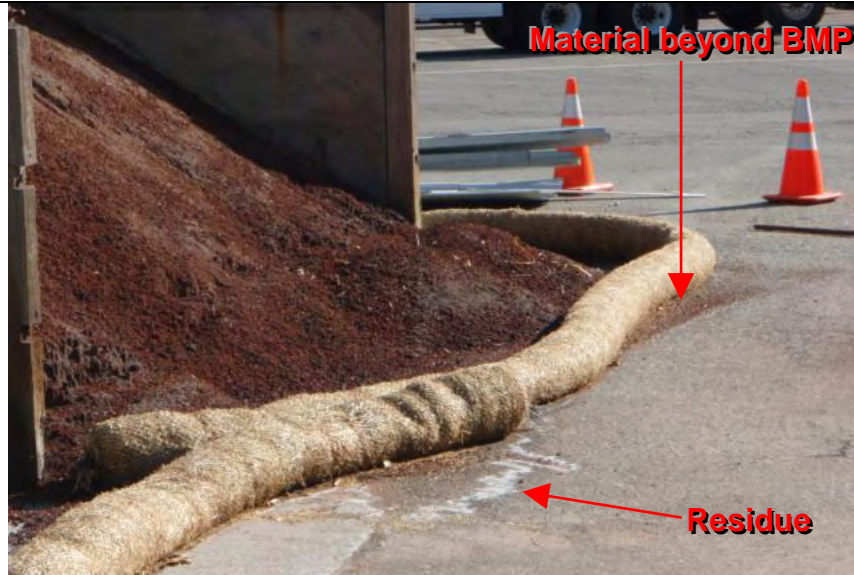


Photograph 8 – Inappropriate application of straw wattle BMP

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

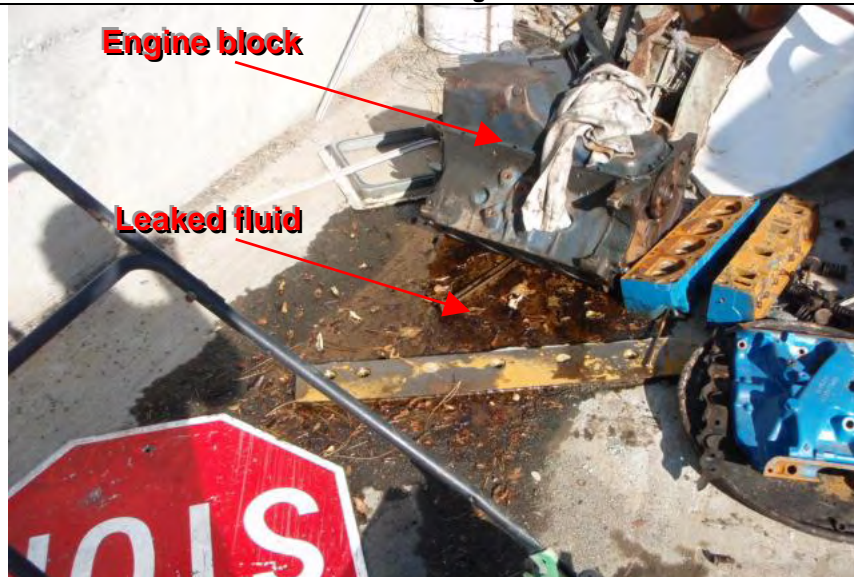
Photograph date: 10/22/2009



Photograph 9— Closer view of straw wattles implemented at edge of covered storage area



Photograph 10 – Storage area for materials picked up from the highways (Note: Area is uncovered and not bermed)



Photograph 11— Engine block stored in metal material storage area (Note: Fluid on impervious ground surface)



Photograph 12 – Bermed area used for truck bed washing

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Willow Creek Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 13 – Another view of area used for truck bed washing



Photograph 14 – View of drainage ditch along southern edge of facility

Site Visit No. 17

Washington Waste Storage Site

Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4**

The EPA Audit Team conducted a site visit at the Washington Waste Storage Site located near the Washington Boulevard exit along Highway 880 North in San Leandro, Alameda County, CA. Caltrans owns and operates this site for the temporary storage of waste picked up by its vector trucks, road sweepers, and road cleaning crews before the debris is loaded into a truck and hauled to a landfill for final disposal ([see Photograph 1](#)).

Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Solid and liquid waste from Caltrans’ vector trucks is deposited into an excavated area for dewatering prior to the debris being hauled off-site for disposal ([see Photograph 2](#)). Vector, sweeper, and roadway waste are potential pollutant sources. Although the site itself is permanent, a facility pollution prevention plan (FPPP) had not been developed for the Washington Waste Storage Site.

Furthermore, coverage and containment BMPs had not been implemented for the sweeper and roadway waste stockpiles and there was a potential for the contribution of pollutants to storm water runoff ([see Photographs 1, 3, and 4](#)). Due to the lack of coverage and containment BMPs, fugitive trash and other debris was not maintained as part of the original stockpile and had been strewn across the site ([see Photographs 4 and 5](#)). A Caltrans roadway maintenance supervisor from the San Leandro Maintenance Yard stated that the debris deposited at the waste storage site is generally stored for about 90 days before a contracted hauling company removes the material and disposes of it at a nearby landfill. A Caltrans staff member explained that BMPs had not yet been implemented at the site because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the waste stockpiles on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide. The EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In recognition of this issue, Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.”

Despite the availability of a designated wash area at the nearby San Leandro Maintenance Yard, a road sweeper pre-washing area was observed along the fenceline of the facility. The pre-washing area is not equipped to properly capture, treat, re-use, or dispose of vehicle wash water and associated pollutants ([see Photographs 6 and 7](#)). As explained by a Caltrans roadway maintenance supervisor from the San Leandro Maintenance Yard, road sweepers are hosed off at the Washington Temporary Storage Site at the end of a working day before they return to the San Leandro Maintenance Yard to be cleaned in the facility’s dedicated wash area. The maintenance supervisor added that this practice is performed to remove large waste from the sweeper before it is in the wash area, so the trough drain at the maintenance yard does not fill up as quickly. It was

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4**

also explained that the waste removed from this trough drain at the San Leandro Maintenance Yard is hauled off-site for disposal as hazardous waste. The maintenance supervisor also stated that the roadway maintenance staff had not received specific training on where and how to clean the road sweepers at the Washington Temporary Storage Site, and Caltrans does not have written procedures that describe this specific process.

The EPA Audit Team reviewed Appendix D of the Caltrans SWMP and found that it does not provide appropriate BMPs for washing road sweepers. Specifically, Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).”

In summary, the pre-washing area is not equipped to properly capture, treat, re-use, or dispose of sweeper wash water and associated pollutants, and the practice of pre-washing may lead to pollutant contributions to storm water runoff.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4

Photograph date: 10/07/2009



Photograph 1 –Waste stockpiles at the facility



Photograph 2 – Close-up view of excavated vactor waste dump site at the facility



Photograph 3 – Lack of BMPs for containment or coverage of road waste stockpiles



Photograph 4 – View of waste stockpiles and proximity to fenceline

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Washington Waste Storage Site
Caltrans District 4

Photograph date: 10/07/2009



Photograph 5 – Example of fugitive trash and debris



Photograph 6 – Location of road sweeper pre-washing area



Photograph 7 – View of site boundary down-gradient of road sweeper pre-washing area

Site Visit No. 18

Livorna Waste Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Livorna Waste Storage Site
Caltrans District 4**

The EPA Audit Team conducted a site visit at the Livorna Waste Storage Site located at approximately post mile 10 along Highway 680 North near the Livorna exit in Contra Costa County, CA. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Although the site itself is permanent, a facility pollution prevention plan (FPPP) has not been developed for the Livorna Waste Storage Site.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans owns and operates this site for the temporary storage of waste picked up by its road sweepers and road cleaning crews before the debris is loaded into a truck and hauled to the nearest landfill for disposal. As explained by Caltrans staff, waste is temporarily stored at the site so that the road sweepers do not have to drive the 10–20 mile distance to the landfill each time the sweeper capacity is filled.

Furthermore, coverage and containment BMPs had not been implemented for a sweeper and roadway waste stockpile at the Livorna Waste Storage site and there was a potential for the contribution of pollutants to storm water runoff (see [Photographs 1 and 2](#)). Specifically, the ground surface appeared to be sloped toward the impervious roadway entrance/exit to the waste storage site. A Caltrans staff member explained that BMPs had not yet been implemented at the site because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the debris pile on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In addition, the EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Livorna Waste Storage Site
Caltrans District 4

Photograph date: 10/07/2009



Photograph 1 – Entrance to temporary storage site. (Note: Impervious roadway entrance and tracking of debris)



Photograph 2 – Waste from road sweeping and other road cleaning activities

Site Visit No. 19

Schaefer Ranch Waste Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Schaefer Ranch Waste Storage Site
Caltrans District 4**

The EPA Audit Team conducted a site visit at the Schaefer Ranch Waste Storage Site located at approximately post mile 25 along Highway 580 West in Alameda County, CA. Provision I.3 of the Permit requires Caltrans to “prepare Maintenance FPPPs for all maintenance facilities...each site must be evaluated separately and provided with appropriate site-specific BMPs.” Although the site itself is permanent, a facility pollution prevention plan (FPPP) had not been developed for the Schaefer Ranch Waste Storage Site.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site...There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans owns and operates this site for the temporary storage of waste collected by its road sweepers and road cleaning crews before the debris is loaded into a truck and hauled to a landfill for final disposal (see Photographs 1 and 2).

Additionally, coverage and containment BMPs had not been implemented for a sweeper and roadway waste stockpile at the Schaefer Ranch Waste Storage site and there was a potential for the contribution of pollutants to storm water runoff (see Photographs 3, 4, and 5). Specifically, the EPA Audit Team observed a culvert in the northwestern part of the site which a Caltrans staff member stated is connected to Caltrans’ storm water conveyance system (see Photograph 6). An unmaintained, collapsed silt fence BMP was observed up-gradient of the culvert inlet (see Photograph 7). A Caltrans staff member explained that perimeter control BMPs had not yet been implemented for the stockpile because at the time of the audit it was prior to the October 15th start of the rainy season. He added that straw wattles would be placed around the debris pile on the ground surface in accordance with the stockpile management techniques outlined in the Caltrans Stormwater Quality Handbook – Maintenance Staff Guide.

Because collected road sweepings and debris contain fine pollutant particles and non-visible pollutants, the stockpile management techniques outlined in the Maintenance Staff Guide are not adequate to contain the collected waste. In addition, the EPA Audit Team noted that BMPs were not stored at the facility for implementation in the event of precipitation prior to October 15th.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Schaefer Ranch Waste Storage Site
Caltrans District 4

Photograph date: 10/07/2009



Photograph 1 – Entrance to temporary storage site



Photograph 2 –Lack of BMPs for containment or coverage of stockpiles



Photograph 3 – Close-up view of debris stockpile from road sweeping and other road cleaning activity



Photograph 4 – Close-up view of debris in stockpile pictured in Photograph 3. The metal cans appeared to contain a liquid milk substance.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Schaefer Ranch Waste Storage Site
Caltrans District 4

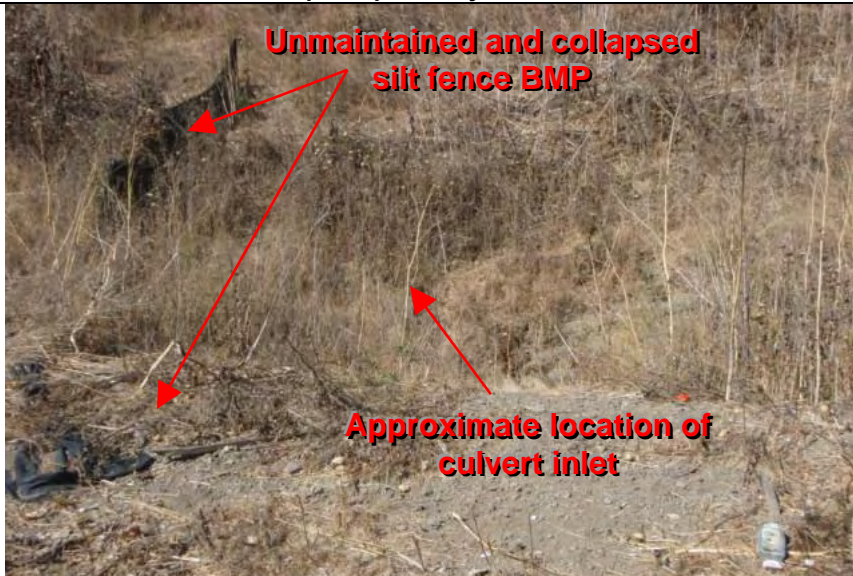
Photograph date: 10/07/2009



Photograph 5 – Note lack of BMPs for containment around stockpile and the stockpile's proximity to the fenceline



Photograph 6 – Location of culvert inlet in the northwestern portion of the waste storage site



Photograph 7 – Location of culvert inlet and unmaintained and collapsed silt fence BMP up-gradient of inlet

Site Visit No. 20

Marysville Maintenance Facility

Site Visit Date: 10/7/2009

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Marysville Maintenance Facility
Caltrans District 3

The EPA Audit Team conducted a site visit at the Marysville Maintenance Facility located at 1001 North Beale Road, Marysville, CA. Caltrans owns and operates the maintenance yard to house equipment and activities for a roadway maintenance crew.

Appendix D of the Caltrans SWMP, Section 2.29, Sweeping and Vacuuming, states “dispose of waste to a landfill or approved site... There is to be no dumping on site, especially during the rainy season or during unseasonal storm events.” Caltrans Maintenance operates this site for the temporary storage of debris picked up by its road sweepers, before the waste is hauled to the nearest landfill for disposal.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Coverage and containment BMPs had not been implemented for a sweeper waste stockpile in the northwest portion of the facility (see Photograph 1). Although straw wattles had been installed along the perimeter of the maintenance yard, the straw wattles were not properly installed or maintained. Specifically, the straw wattles utilized along the northwestern perimeter of site, adjacent to the FEMA Ditch Project, were not properly entrenched or anchored (see Photographs 2 and 3). Additionally, straw wattles utilized at the storm drain inlets at the southern perimeter of site were installed on an impervious surface and, therefore, were not properly entrenched or anchored to create an adequate seal (see Photographs 4 and 5).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Marysville Maintenance Facility
District 3

Photograph date: 10/7/2009



Photograph 1 – View of sweeper waste storage pile at the Marysville Maintenance Station



Photograph 2 – View of straw wattle BMPs, not adequately installed



Photograph 3 – Close up view of straw wattle installation shown in Photograph 2



Photograph 4 – Storm drain inlet on the east side of the Marysville Maintenance Station office building

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Marysville Maintenance Facility
District 3

Photograph date: 10/7/2009



**Inadequate storm drain protection
and maintenance**

**Photograph 5— Storm drain inlet to the west of the Marysville Maintenance
Station office building**

Site Visit No. 21

Bracut Highway Maintenance Facility

Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Bracut Highway Maintenance Facility located at 6100 North Highway 101 in Eureka, CA 95503. The Washington Gulch waterway is located approximately 1000 feet east of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Although the facility is equipped with a designated and covered vehicle and equipment wash rack (see [Photographs 1 and 2](#)), an area in the northwest corner of the facility and directly adjacent to two storm drain inlets was used for road sweeper washing activities (see [Photograph 3](#)). The Highway Maintenance Supervisor at the facility explained that the area was actively used for road sweeper washing because the pressure washing equipment in the dedicated wash rack did not provide enough pressure to effectively conduct the cleaning operation.

The road sweeper washing area was not equipped to properly capture, treat, re-use, or dispose of road sweeper wash water and associated pollutants. Collected road sweepings contain fine pollutant particles and non-visible pollutants. Although BMPs had been installed, any wash water and associated pollutants passing through the BMPs and subsequently entering the MS4 would be considered an illicit discharge. The BMPs implemented for the road sweeper washing area are described in the following paragraphs.

Filter fabric had been installed in one of the adjacent storm drain inlets and absorbent booms had been placed around the other inlet (see [Photographs 4 and 5](#)). However, the BMPs implemented for inlet protection were not properly maintained and significant pollutant accumulation was observed around the inlets. Furthermore, sand bags containing debris had been used for weights on top of the absorbent booms placed around one of the storm drain inlets, and several of the bags were no longer securely closed (see [Photograph 6](#)).

Although storm drain inlets at the facility were equipped with filters, evidence of pollutant accumulation was observed within one of the storm drain inlets near the road sweeper washing area (see [Photograph 7](#)), which indicated that an unknown quantity of sweeper wash water had been discharged to the MS4. The discharge location of the storm drain inlets associated with the road sweeper washing area was unclear. Prohibition A.7 of the Permit states “wastes or wastewater from road sweeping vehicles or from other maintenance or construction activities shall not be discharged to any surface waters or to any storm drain leading to surface water bodies.”

Additional storm drain inlet filters at the facility (see [Photograph 8](#)) did not appear to have been recently cleaned or maintained and debris accumulation was observed in the filter units and inlets (see [Photograph 9](#)). It was not clear when maintenance had been last performed on the filters.

In a separate location along the eastern edge of the facility, a stockpile of gravel and sediment did not have properly selected and implemented BMPs for stockpile management (see [Photograph 10](#)). Specifically, the stockpile was only partially covered and perimeter controls had only been implemented around a portion of the stockpile. Furthermore, absorbent booms are not intended to be used on impervious surfaces as sediment control.

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1**

Two containers of a cleaning agent were improperly stored adjacent to a concrete drainage swale and leaking hose along the eastern side of the facility (see Photograph 11). The containers were not stored within secondary containment, and as a result, there was a potential for the contribution of wash water and pollutants to storm water runoff, and subsequently to a down-gradient storm drain inlet (see Photograph 12).

In summary, the observed washing areas in the northwest corner and eastern side of the facility were not equipped to properly capture, treat, re-use, or dispose of wash water and associated pollutants, and the practice of washing may therefore lead to pollutant contributions to storm water runoff.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 1 – Covered wash rack



Photograph 2 – Another view of covered wash rack



Photograph 3 – Area in northwest corner of facility used for road sweeper washing. (Note: Pollutant accumulation around storm drain inlet)



Photograph 4 – Second storm drain inlet near road sweeper washing area. Inlet is just out of the picture to the bottom left of Photograph 3.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1

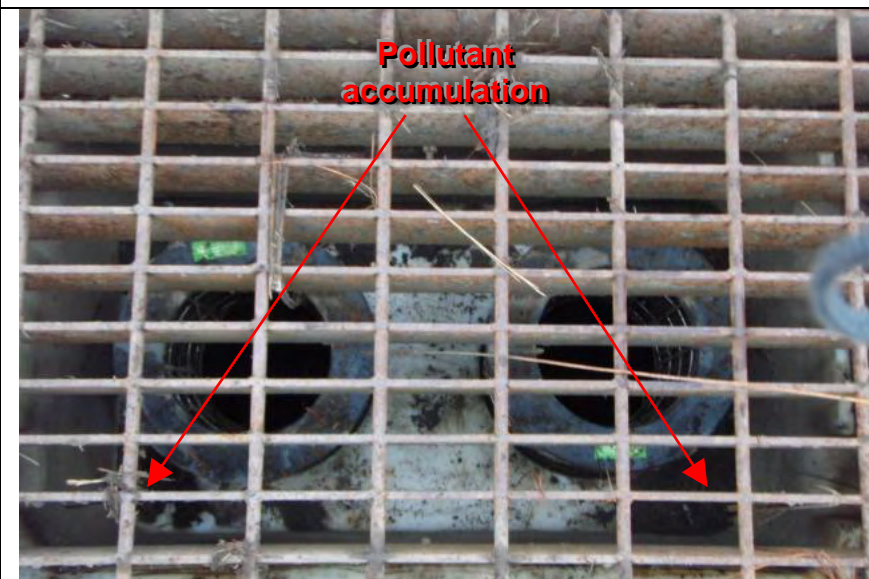
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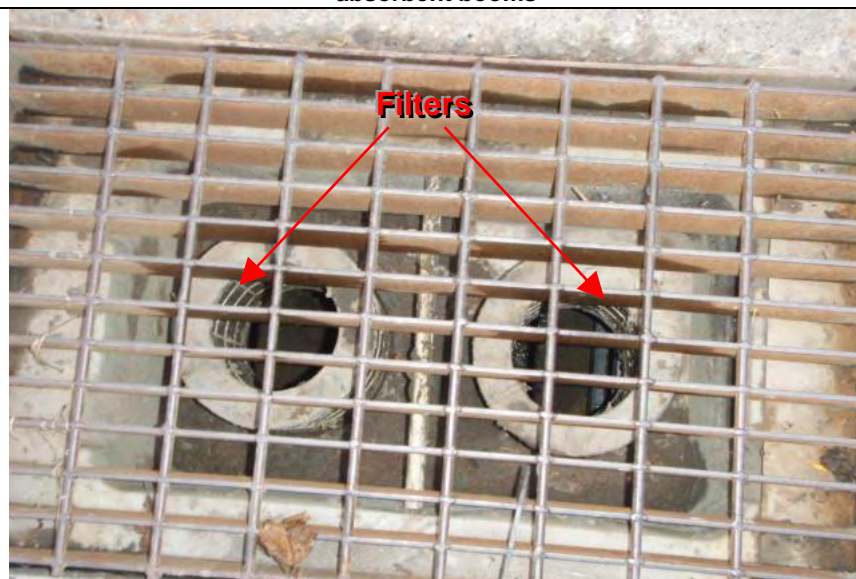
Photograph 5— Closer view of storm drain inlet shown in Photograph 3



Photograph 6 – View of debris contained in bags used for securing absorbent booms



Photograph 7— View into storm drain inlet shown in Photographs 3, 5 & 6



Photograph 8 – View into another storm drain inlet at the facility

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Bracut Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 9— Closer view of filter shown in Photograph 8.
(Note: Pollutant accumulation within filter and inlet)



Photograph 10 – Partially covered and contained stockpile along eastern edge of facility



Photograph 11— Cleaning/washing chemicals stored on impervious ground surface adjacent to leaking hose



Photograph 12— View from down-gradient storm drain inlet to location of hose and chemical containers pictured in Photograph 11

Site Visit No. 22

Garberville Highway Maintenance Facility

Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Garberville Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Garberville Highway Maintenance Facility located on Redwood Drive in Garberville, CA 95542. The South Fork Eel River is located approximately 500 feet west of the facility.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Although the facility is equipped with a designated and covered vehicle and equipment wash rack (see [Photographs 1 and 2](#)), an overflow for the wash rack sump was observed. The overflow outlets to a drainage ditch leading toward the South Fork Eel River (see [Photographs 3 and 4](#)). The Caltrans Maintenance Supervisor indicated that the overflow does not discharge because the wash rack is now covered. However, Caltrans staff could not provide site plans at the time of the site visit or otherwise demonstrate whether the overflow has been plugged, or whether the wash rack is appropriately connected to the sanitary sewer.

Despite the availability of the designated wash rack, a vehicle pre-washing area was observed in the lower yard (see [Photograph 5](#)). The lower yard is located west of the main office and maintenance facility, in much closer proximity to the South Fork Eel River. The pre-washing area is not equipped to properly capture, treat, re-use, or dispose of vehicle wash water and associated pollutants. Additionally, a berm installed down-gradient of the vehicle pre-washing area showed signs of standing water and had been damaged (see [Photographs 6 and 7](#)).

Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).” The Caltrans Maintenance Supervisor explained that the area is used for pre-washing trucks and other vehicles prior to using the designated wash rack. The practice of pre-washing is not fully consistent with the Caltrans SWMP and may lead to pollutant contributions or an illicit discharge.

In addition, straw wattle BMPs used for stockpile management were improperly installed on impervious surfaces throughout the facility and were not properly entrenched in the ground to retain the stockpiled materials (see [Photographs 8 and 9](#)). Although located under cover, a second stockpile area containing salt also had a straw wattle BMP improperly installed on an impervious surface (see [Photograph 9](#)). Furthermore, straw wattle BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management.

Outlet protection and flow dissipation BMPs were not in place below a drainage pipe leading from the facility (see [Photograph 10](#)). As a result, there was a potential for erosion and scouring at the pipe outlet leading to the South Fork Eel River (see [Photographs 11 and 12](#)).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Garberville Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 1 – Covered wash rack



Photograph 2 – Covered wash rack



Photograph 3 – Sump overflow leading to drainage ditch



Photograph 4 – View of drainage ditch leading toward South Fork Eel River

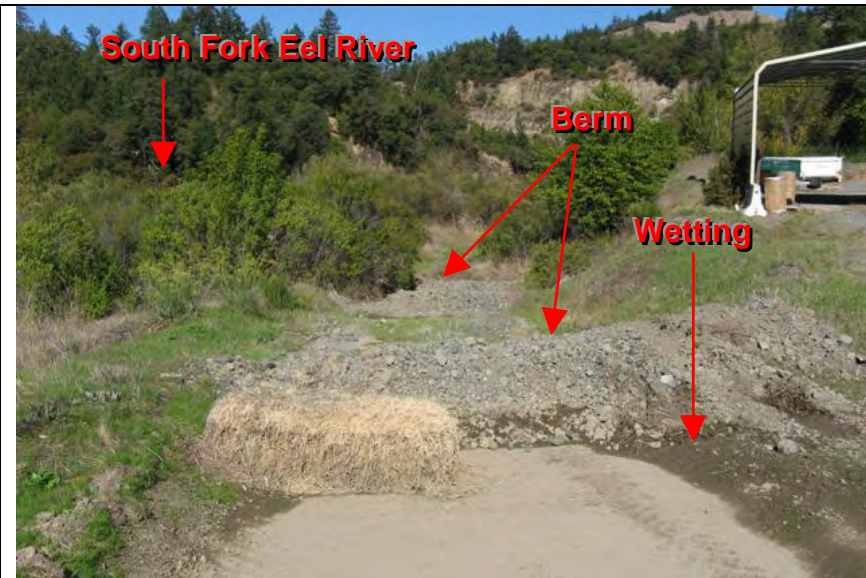
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
 Garberville Highway Maintenance Facility
 Caltrans District 1

Photograph date: 10/22/2009



Photograph 5— Vehicle pre-washing area in the lower yard



Photograph 6 – View down-gradient of pre-washing area



Photograph 7— Damaged berm shown in Photograph 6



Photograph 8 – Inappropriate application of wattles on impervious surface

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Garberville Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 9— Inappropriate application of wattles



Photograph 10 – Facility outfall



Photograph 11— Outlet pipe down-gradient of facility outfall



Photograph 12— Proximity of outlet to receiving water

Site Visit No. 23

Berry Summit Sand Storage Facility
Site Visit Date: 10/22/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Berry Summit Sand Storage Facility located at post mile 34.1 Highway 299, Willow Creek, CA. The facility is located approximately 250 feet west of Willow Creek.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A stockpile of roadway abrasives was stored on the impervious ground surface up-gradient of a storm drain inlet in the northern corner of the facility (see Photographs 1, 2 and 3). BMPs were not implemented for coverage or containment of the stockpile. As explained by a Caltrans staff member, the storm drain inlet is equipped with an enlarged catch basin area to allow sand particles to settle prior to discharge; however, based on conversations with Caltrans staff, it did not appear that there was an established frequency for regular cleaning and maintenance of the inlet. Absorbent boom BMPs had been placed around a portion of the storm drain inlet (see Photograph 2); however, the BMPs were not fully protective of the inlet and absorbent boom BMPs are not intended to control salt products or other pollutants that will dissolve upon contact with water. As a result, adequate BMPs were not implemented for stockpile management and there was a potential for the discharge of pollutants off-site.

In addition, a 10 to 20 foot section of the berm along the northern perimeter of the site was not intact and accumulated roadway abrasives were observed adjacent to the failed berm (see Photograph 4). Roadway abrasives were also observed on the impervious ground surface in other various areas at the facility and beyond the perimeter fenceline (see Photographs 5, 6 and 7). As a result, there was a discharge of pollutants beyond the bermed perimeter, and the potential for subsequent off-site discharge.

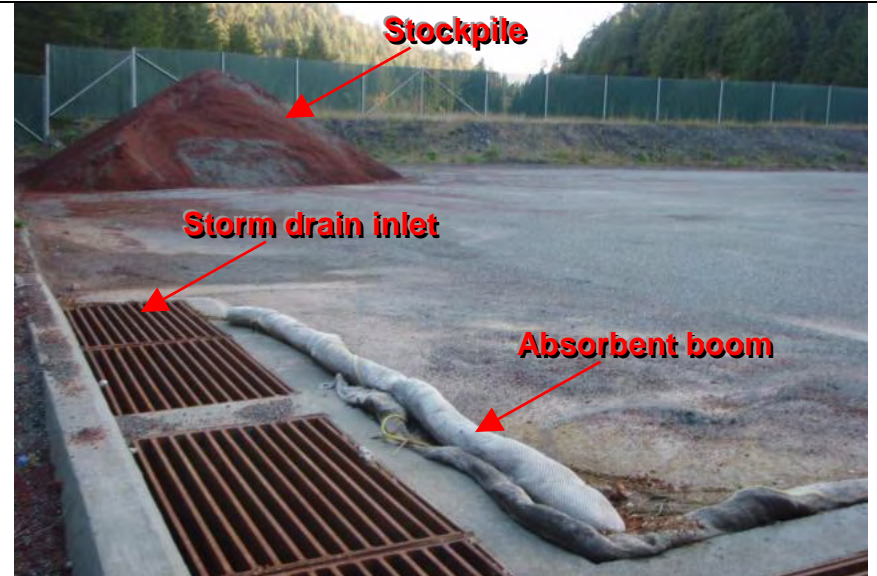
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 1 – Stockpile without BMPs for coverage or containment



Photograph 2 – View of storm drain inlet and stockpile shown in Photograph 1



Photograph 3 – Discharge location from inlet shown in Photograph 2



Photograph 4 – Broken berm along northern perimeter of facility
(Note: Accumulation of roadway abrasives adjacent to berm)

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Berry Summit Sand Storage Facility
Caltrans District 1

Photograph date: 10/22/2009



Photograph 5— Roadway abrasives on impervious ground surface



Photograph 6 – Roadway abrasives on impervious ground surface



Photograph 7— Roadway abrasives outside facility entrance

Site Visit No. 24

Crescent City Highway Maintenance Facility
Site Visit Date: 10/21/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1**

The EPA Audit Team conducted a site visit at the Crescent City Highway Maintenance Facility located at 711 North Highway 101 in Crescent City, CA 95531. Elk Creek is located approximately 0.75 miles east of the facility and the Pacific Ocean is about 1 mile to the south and southwest.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A significant amount of sediment accumulation was observed within a storm drain inlet at the facility that did not appear to have been recently cleaned (see Photographs 1 and 2). As explained by the Highway Maintenance Supervisor, storm drain inlets at the facility flow to the drainage ditch in the southeast corner of the facility (see Photograph 3). He added that storm water runoff does not generally discharge off-site from this location but rather ponds and remains as standing water until it infiltrates into the ground. Nonetheless, evidence of sediment discharged to the drainage ditch as well as sediment accumulation within the culvert pipe that discharges to the southeast corner of the facility was observed (see Photograph 5). Furthermore, a silt fence BMP had been installed in the flow pathway of the culvert outlet and was not entrenched into the ground to retain sediment and prevent failure (see Photograph 3).

In addition, a significant amount of sediment accumulation was observed on the impervious ground surface near the southeast corner of the facility (see Photographs 6 and 7). As explained by the Highway Maintenance Supervisor, the area was used as a temporary stockpile location for washout material from front loaders and dump trucks. Whether the equipment washout operation was conducted with dry or wet processes was unclear. Appendix D of the Caltrans SWMP, Section 2.15.1, Vehicle and Equipment Cleaning, states “when possible, truck beds should be cleaned using dry cleanup technique (sweep up or shovel out).” It should also be noted that the stockpile area was located directly in the flow pathway of the surface drainage system at the facility (see Photograph 8). As a result, there was a potential for the discharge of sediment and other pollutants to the drainage ditch along the southern edge of the facility (see Photograph 9).

In addition, straw wattle BMPs used for stockpile management were improperly installed on impervious surfaces at the facility, and therefore were not properly entrenched in the ground to retain the stockpiled materials (see Photograph 10).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/21/2009



Photograph 1 – Storm drain inlet at facility



Photograph 2 – View into storm drain inlet pictured in Photograph 1
(Note: Sediment accumulation within inlet)



Photograph 3 – Storm drain outlet to drainage ditch in southeast corner of facility



Photograph 4 – Closer view of silt fence BMP shown in Photograph 3

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/21/2009



**Sediment
accumulation**

Photograph 5— View into storm drain pipe from outlet



Photograph 6 – Area used for stockpiling washout material
(Note: Sediment accumulation on impervious ground surface)



Photograph 7— Closer view of sediment accumulation on imperious
ground surface



**Approximate
direction of flow**

Photograph 8 – View of surface drainage system through stockpile area

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Crescent City Highway Maintenance Facility
Caltrans District 1

Photograph date: 10/21/2009



Photograph 9— View of drainage ditch and storm drain system culvert outlet



Photograph 10 – Inappropriate application of wattles on impervious surface

Site Visit No. 25

Obrien Rest Area
Site Visit Date: 10/13/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Obrien Rest Area
Caltrans District 2**

The EPA Audit Team conducted a site visit at the Obrien Rest Area located along Interstate 5 north of Redding, CA adjacent to Shasta Lake in Shasta County, CA.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. A visible sheen was observed flowing into the storm drain located along the curb and gutter line of the northern portion of the rest area (see Photographs 1 and 2). The Caltrans Maintenance representative stated that an oil water separator BMP had been installed at this location because it drained directly into Shasta Lake. However, site plans or maintenance activity schedules were not produced to confirm that the treatment BMP was installed at this location.

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Obrien Rest Area
Caltrans District 2

Photograph Date: 10/13/2009



Photograph 1 – Visible sheen entering storm drain



Photograph 2 – Storm drain from Photograph 1

Site Visit No. 26

Lake Boulevard Temporary Storage Site
Site Visit Date: 10/13/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lake Boulevard Temporary Storage Site
Caltrans District 2**

The EPA Audit Team conducted a site visit at a temporary storage site facility located near the intersection of Interstate 5 and Highway 299 in Redding, CA. Caltrans operates this site for the temporary storage of construction and roadway building materials.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. BMPs had not been implemented at the site to prevent the discharge from stockpiles and there was a potential for the contribution of pollutants to storm water runoff (see Photographs 1 and 2). Although the facility had a Faircloth skimmer treatment BMP installed at the southern portion of the site, the stockpiles were located adjacent to a drainage ditch on the western portion of the site which flows into a down-gradient storm drain along Highway 299 (see Photograph 3). BMPs were not implemented to prevent the discharge of material and debris to the storm drain inlet located adjacent to the temporary storage site (see Photograph 4

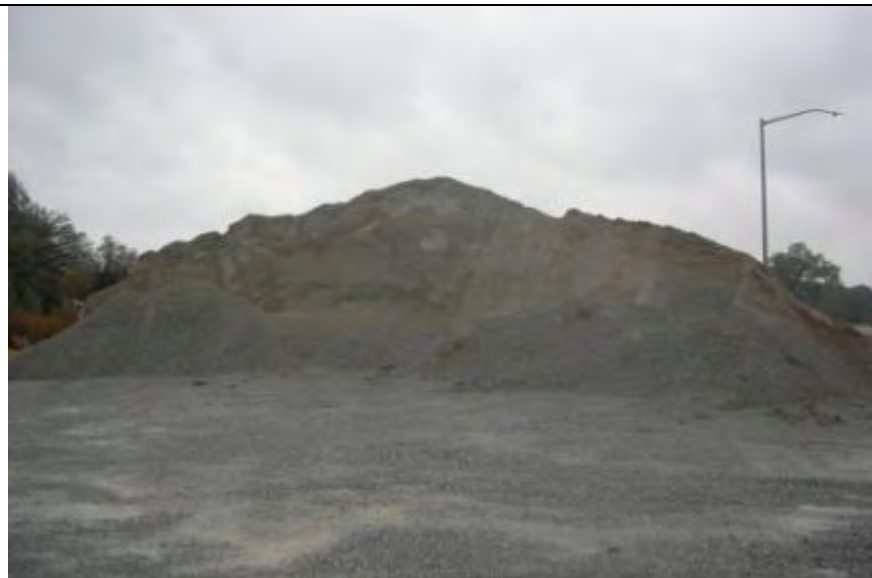
Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Lake Boulevard Temporary Storage Site
Caltrans District 2

Photograph Date: 10/13/2009



Photograph 1 – View of stockpiles



Photograph 2 – Lack of BMPs to contain stockpiled materials



Photograph 3 – View of Photograph 2 stockpile proximity to drainage ditch



Photograph 4 – Storm drain inlet adjacent to temporary storage area

Site Visit No. 27

Colusa Temporary Storage Site
Site Visit Date: 10/7/2009

**Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Colusa Temporary Storage Site
Caltrans District 3**

The EPA Audit Team conducted a site visit at a temporary storage site located near the Colusa Maintenance Yard in Colusa, CA. Caltrans operates this site for the temporary storage of tree trimming waste before it is loaded into a truck and hauled to a landfill for disposal.

Provision I.3.b of the Permit requires Caltrans to provide appropriate site-specific BMPs for all maintenance facilities. Despite the storage of BMPs at the site (see Photograph 1), BMPs had not been implemented for soil stockpiles and there was a potential for the contribution of pollutants to storm water runoff (see Photograph 2).

Site Photographs

Caltrans MS4 (SWRCB Order No. 99-06-DWQ)
Colusa Temporary Storage Site
Caltrans District 3

Photograph date: 10/07/2009



Photograph 1 – View of BMP stockpile



Photograph 2 – Lack of BMPs to contain stockpiled soils from tree removal



Photograph 3 – View of tree trimming debris