ATTACHMENT A

Caltrans Construction Storm Water Inspection Report		
Permittee: State of California, Department of Transportation (Caltrans)	Order No. **99-06-DWQ**	Date: 06/19/2012
Project Name: Highway 1 – Greenwood Creek Bridge (Project Code: 01-310104) Caltrans District 1	Risk Level: 2	Receiving Water: Greenwood Creek
Project Location: Highway 1, ½ mile south of the town of Elk, Mendocino County, California, 95432		
Facility Representative/Title: Chuck Lees (Resident Engineer, Caltrans)		
Additional Persons Present/Titles: Cindy Graham, (ACE, Caltrans); Dan Stiles (Assistant Str. Representative, Caltrans); Walt Dragaloski (Storm Water, Caltrans)	Inspectors: Anthony D'Angelo (PG Environmental, LLC), Jeremiah Puget (North Coast Regional Water Quality Control Board)	
Weather Conditions at the Time of the Inspection: Sunny, with no recent precipitation		

Inspection Findings

On June 19, 2012 a U.S. Environmental Protection Agency (EPA) contractor, PG Environmental, LLC and a representative from the North Coast Regional Water Quality Control Board (hereafter, EPA Inspection Team) conducted a construction storm water inspection of the above-referenced project (hereafter, project or site). Discharges from the Caltrans MS4 are regulated under the *National Pollutant Discharge Elimination System (NPDES) Permit CAS000003 and Waste Discharge Requirements (WDRs) for the State of California, Department of Transportation*, State Water Resources Control Board (SWRCB) Order No. 99–06–DWQ (hereafter, the Permit). The Permit authorizes Caltrans (the Permittee) to discharge storm water runoff and certain non-storm water discharges from Caltrans-owned rights-of-way, properties, facilities, and activities, including storm water management activities in construction, maintenance, and operation of state-owned highways in California. Provision H.2 of the Permit requires that Caltrans' "Construction Management Program shall be in compliance with requirements of the NPDES General Permit for Construction Activities", *Statewide Storm Water Permit, NPDES General Permit No. CAS000002,* SWRCB Order No. 2009-0009-DWQ (hereafter, CGP). The EPA Inspection Team, focused on Caltrans' compliance with the CGP. The EPA Inspection Team held a closing conference at the conclusion of the inspection. During the closing conference, the EPA Inspection Team reviewed the preliminary inspection findings regarding compliance with the CGP with the Facility Representatives; the findings listed below must be corrected. The presentation of findings in this report does not constitute a formal compliance determination or notice of violation.

Records Review

All dischargers shall develop and implement a site-specific Storm Water Pollution Prevention Plan (SWPPP) as required by Section XIV of the CGP, and CGP Attachment D – Risk Level 2 Requirements. The SWPPP shall include a description of Best Management Practices (BMPs) that achieve Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants to minimize or prevent pollutants associated with construction activity in storm water discharges and authorized non-storm water discharges. The discharger shall amend the SWPPP whenever there is a change in construction or operations which may affect the pollutants in storm water discharges and authorized non-storm water discharges to surface waters, ground waters, or a municipal separate storm sewer system (MS4). The SWPPP shall also be amended if the discharger violates any condition of the CGP or has not achieved the general objective of reducing or eliminating pollutants in storm water discharges.

Note: The date that construction started and land-disturbing activities began at the site was March 23, 2012, as provided by the primary on-site Facility Representative, Mr. Chuck Lees (Resident Engineer, Caltrans).

The EPA Inspection Team requested, during the inspection, a current SWPPP, Site Map, and inspection records from Facility Representatives. Facility Representatives produced a SWPPP, dated March 29, 2012 and prepared by Golden State Bridge. The SWPPP, Site Map, and inspection records retained on-site were reviewed during the inspection and were found to be adequate.

Facility Inspection

All Best Management Practices (BMPs) mentioned in the following findings must be selected, installed, implemented and maintained according to Best Available Technology Economically Achievable (BAT) for toxic and non-conventional pollutants and Best Conventional Pollutant Control Technology (BCT) for conventional pollutants to reduce or eliminate pollutants in storm water discharges and authorized non-storm water discharges as required by Finding I.A.1 and Section V.A.2 of the CGP.

The discharger must implement and maintain an effective combination of erosion and sediment controls for sources of erosion and sediment associated with construction activity including: perimeter controls, runoff control BMPs, pollutant controls at entrances and exits, and at all operational storm drain inlets as required by Section XIV of the CGP and CGP Attachment D – Risk Level 2 Requirements.

Caltrans Greenwood Creek Bridge Project sign (refer to Photograph 1 and Photograph 2).

1. The EPA Inspection Team observed, during the inspection, that unconsolidated soils, aggregate and vegetative debris had been released offsite (i.e., beyond the permitted area) along the northwestern side of the access road on the southern side of Greenwood Creek. Specifically, there was a release of unconsolidated soil and aggregate underneath a silt fence BMP that had been installed between the construction access road and the Greenwood Creek riparian buffer zone (refer to Photograph 3 and Photograph 4). In addition, vegetative debris and associated sediment had been placed on the outside of the silt fence in the riparian buffer zone between the construction site access road and Greenwood Creek (refer to Photograph 5 and Photograph 6). As a result, there was a release of sediment, aggregate and vegetative debris off-site from the construction site areas of disturbance to the Greenwood Creek riparian buffer zone and subsequent potential for discharge to Greenwood Creek. Adequate perimeter controls must be established and maintained to prevent the release of sediment from the site as required by CGP Attachment D – Risk Level 2 Requirements, Section E.1, and unconsolidated soils and sediment released and placed offsite must be removed and the area remediated appropriately.

2. The EPA Inspection Team observed, during the inspection, that erosion, sediment, and perimeter controls had not been adequately installed and maintained throughout the site to prevent erosion scouring and the discharge of sediment off-site. Specifically, an area of disturbed soil which exceeded a 50% slope was observed upgradient of Greenwood Creek without linear sediment controls implemented along the toe, face, and grades breaks of the exposed slope. The sheet flow length of the slope was observed to exceed ten feet (refer to Photograph 7, Photograph 8, and Photograph 9). In addition, the silt fence BMPs implemented on the east and west sides of the construction area north and south of Greenwood Creek had not been adequately installed, maintained, and were not contiguous. Specifically, the silt fence BMPs showed evidence of undercutting, degradation, and were observed with construction materials stacked on top and with sediment accumulation exceeding half of the effective height of the fence (refer to Photograph 10, Photograph 11, and Photograph 12). Furthermore, the silt fence BMP junctions had not been adequately installed (e.g., not tightly abutting) (refer to Photograph 13, Photograph 14, and Photograph 15) and sections of the silt fence along the riparian buffer zone on the north and south side of Greenwood Creek at the temporary construction bridge crossing area, as well as on the west side of the construction site were not contiguous as a perimeter controls (refer to Photograph 16 through Photograph 20). As a result, there was a potential for erosion and the release of sediment from areas of soil disturbance offsite and subsequently to Greenwood Creek. Adequate erosion controls must be implemented and maintained for all inactive finished slopes to prevent the discharge of sediment from the site, as required by CGP Attachment D – Risk Level 2 Requirements, Section D.2 and Section A.1.b. Risk Level 2 dischargers shall apply linear sediment controls along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes as required by CGP Attachment D – Risk Level 2 Requirements, Section E.4. Adequate perimeter controls must be established and maintained to prevent the release of sediment from the site as required by CGP Attachment D – Risk Level 2 Requirements, Section E.1.

3. The EPA Inspection Team observed, during the inspection, that vehicle tracking control BMPs were not adequately maintained to prevent the release of sediment from the construction site access road entrances/exits onto Highway 1 on the south side of Greenwood Creek Bridge. Specifically, sediment was visible in the rock pad BMP and the rock had

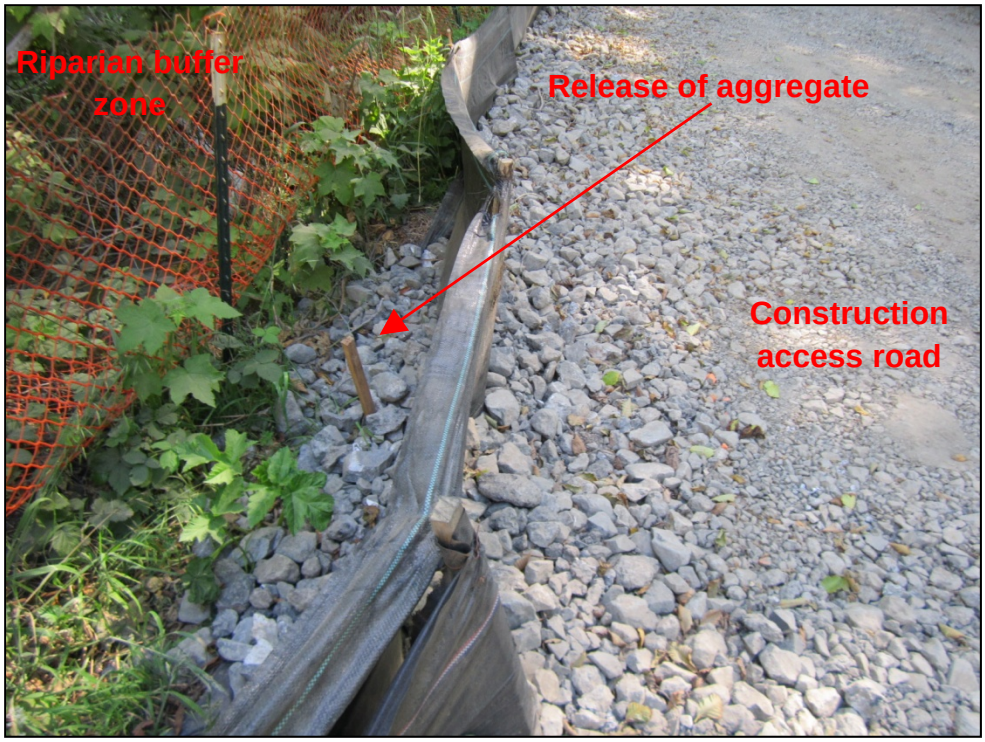
become thin and sparse in areas (refer to Photograph 21 and Photograph 22). As a result, there was a release of sediment onto Highway 1 on the south side of Greenwood Creek Bridge. It should be noted that it was unclear to the EPA Inspection Team whether the sediment accumulation in the tracking control BMP was from the construction site areas of disturbance or from an adjacent private dirt drive. All BMPs must be adequately installed, inspected, and maintained to prevent the release of sediment from the construction site access road entrance/exits onto Highway 1. All construction entrances/exits must be adequately stabilized and maintained to prevent the discharge of sediment from the site as required by CGP Attachment D – Risk Level 2 Requirements, Section E.1.

4. The EPA Inspection Team observed, during the inspection, that the adequate spill response equipment and cleanup procedures had not been implemented for a fuel storage container on the east side of the construction site, south of Greenwood Creek. Specifically, the secondary containment tarp was stained from previous fuel leaks and vegetative and construction debris and fuel was observed on the tarp (refer to Photograph 23 through Photograph 26). The vegetative debris and construction materials observed were causing the containment tarp to be breached, creating a potential for accumulated fuel to discharge out onto the ground surface (refer to Photograph 27). As a result, there was a potential for the contribution of pollutants to storm water and potential discharge of fuel onto the ground surface and underlying soils. Adequate spill response and cleanup BMPs must be implemented to prevent fuel from leaking onto the ground surface and into adjacent surface waters and all leaks must be cleaned immediately and disposed of properly as required by CGP Attachment D – Risk Level 2 Requirements, Section B.3.a and Section B.3.c.

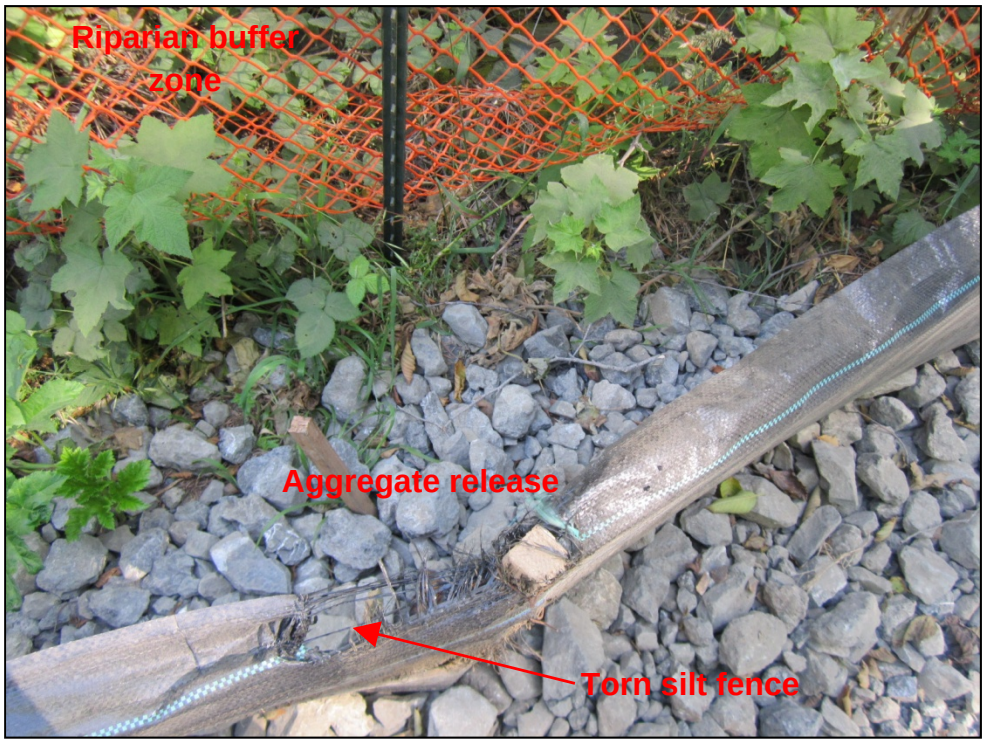
5. The EPA Inspection Team observed, during the inspection, that Good Housekeeping BMPs for vehicle storage and maintenance were not implemented at the bridge footing vault on the south side of Greenwood Creek. Specifically, a vacuum pump vehicle was observed stored inside the vault which was flooded with ground water (refer to Photograph 28). As a result, there was potential for the contribution of pollutants to storm water and ground water. All vehicles must be stored in a designated area fitted with appropriate BMPs as required by CGP Attachment D – Risk Level 2 Requirements, Section B.3.b.

Photograph 1. Caltrans Greenwood Creek Bridge construction sign in the town of Elk, California.

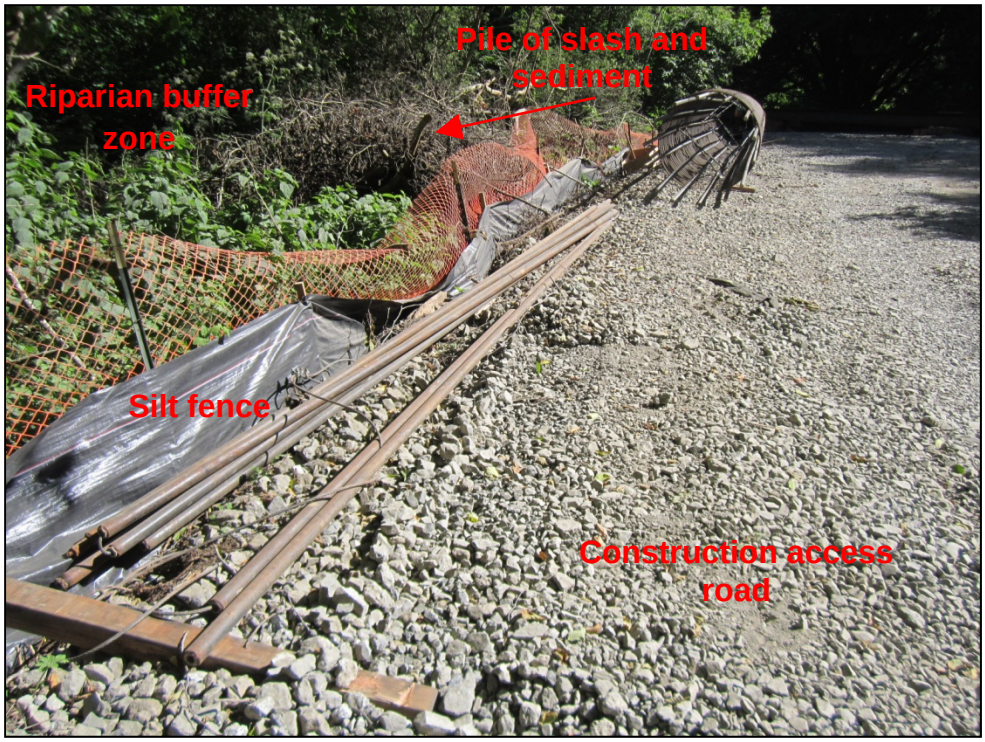
Photograph 2. Greenwood Creek Bridge sign.



Photograph 3. View facing north of aggregate released offsite towards the riparian buffer zone between the construction site and Greenwood Creek.



Photograph 4. Close up view of the aggregate release shown in Photograph 3. Note the silt fence had been torn.



Photograph 5. View facing northeast of slash and associated sediment placed off-site in the riparian buffer zone.

Photograph 6. View facing southwest of the pile of slash and associated sediment placed in the riparian buffer zone shown in Photograph 5.

Photograph 7. View facing west and downgradient of 50% slope of disturbed land without sediment or erosion control BMPs implemented at the slope toe, slope face, and every ten feet.

Photograph 8. View facing south and upgradient of 50% slope of disturbed land shown in Photograph 7 without sediment or erosion control BMPs implemented at the slope toe, slope face, and every ten feet.

Photograph 9. View facing southeast and upgradient of 50% slope of disturbed land shown in Photograph 7 and Photograph 8 without sediment or erosion control BMPs implemented at the slope toe, slope face, and every ten feet.

Photograph 10. View facing west of soil stockpiled against a perimeter silt fence BMP. Note the silt fence BMP was not adequately maintained as the soil stockpile was higher than half the effective height of the fence.

Photograph 11. View facing west of construction materials stacked on top of the silt fence BMP implemented between the construction access road and the riparian buffer zone.

Photograph 12. View facing northwest of the silt fence BMP implemented along the northwest edge of the construction site access road, adjacent to the riparian buffer zone, showing evidence of undercutting and degradation.

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Photograph 13. View facing southwest of a silt fence BMP junction not adequately installed. For example, the silt fence was not tightly abutting.

Photograph 14. Close-up view of a silt fence BMP junction not tightly abutting, shown in Photograph 13.

Photograph 15. Additional view of the silt fence BMP junction shown in Photograph 13 and Photograph 14 not adequately installed.

Photograph 16. View facing northeast of the temporary construction bridge crossing area without adequate perimeter controls implemented. Note the silt fence BMP was removed between the area of disturbance and the riparian buffer zone/Greenwood Creek.

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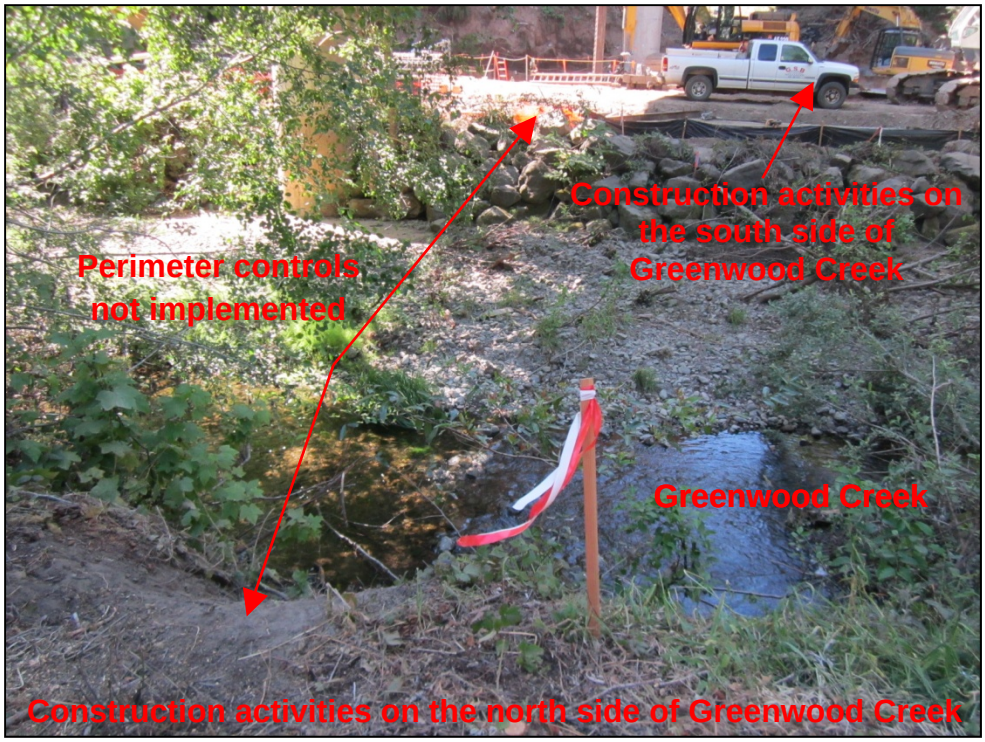
Photograph 17. View facing east of a gap in the silt fence BMP implemented on the east side of construction activities on the north side of Greenwood Creek.

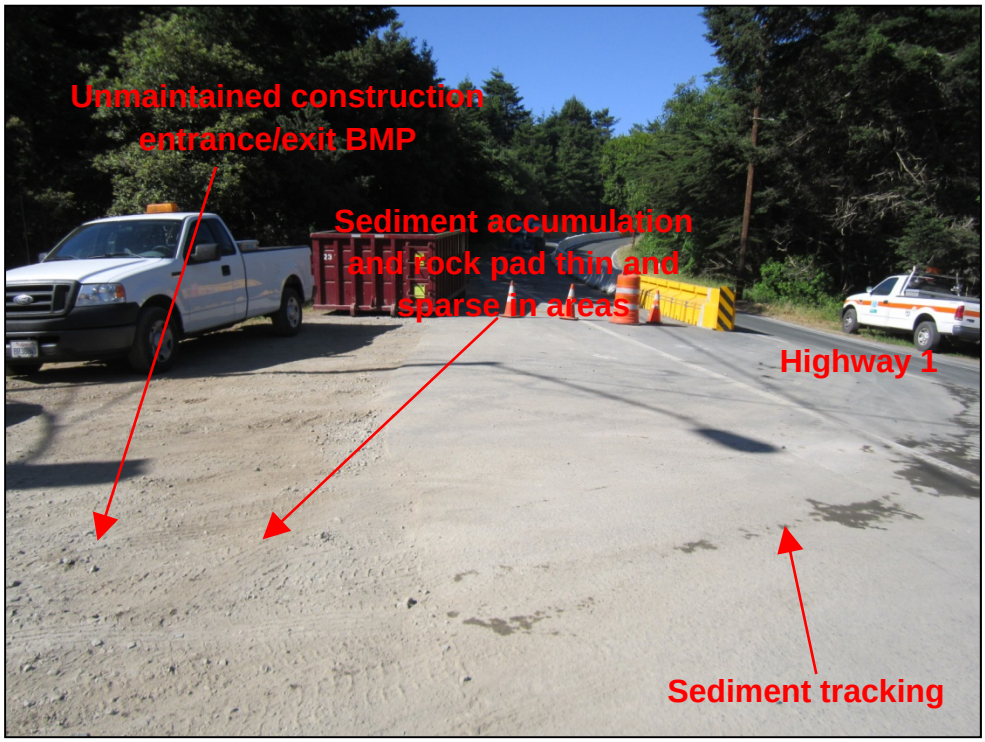
Photograph 18. View facing west of a gap in the silt fence BMP implemented on the west side of construction activities on the north side of Greenwood Creek.



Photograph 19. View facing south of the temporary construction bridge crossing area without perimeter controls implemented.

Photograph 20. View facing east of perimeter controls not implemented between construction activities on the north side of Greenwood Creek and the riparian buffer zone/Greenwood Creek.

Photograph 21. View facing northeast of the construction entrance/exit off of Highway 1. Note the sediment accumulation in the rock pad and the release of sediment onto the impervious surface of Highway 1. Note that rock pad had become thin and sparse due to sediment accumulation.



Photograph 22. View facing southwest of the construction entrance/exit off of Highway 1. Note the sediment accumulation in the rock pad and the release of sediment onto the impervious surface of Highway 1. Note that rock pad had become thin and sparse due to sediment accumulation.

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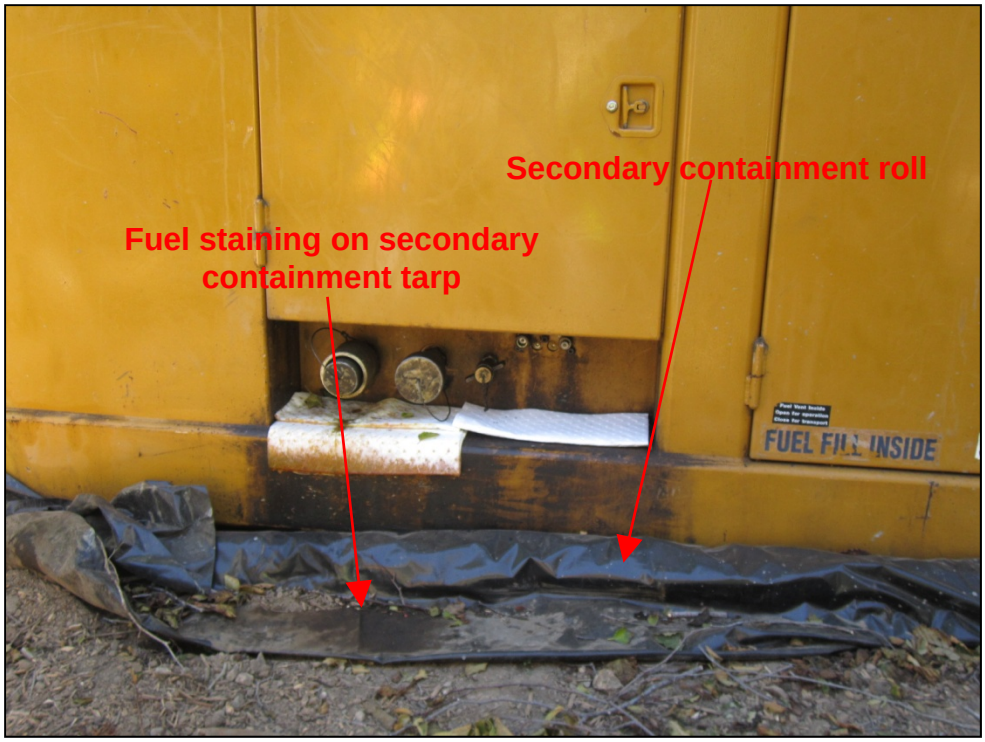
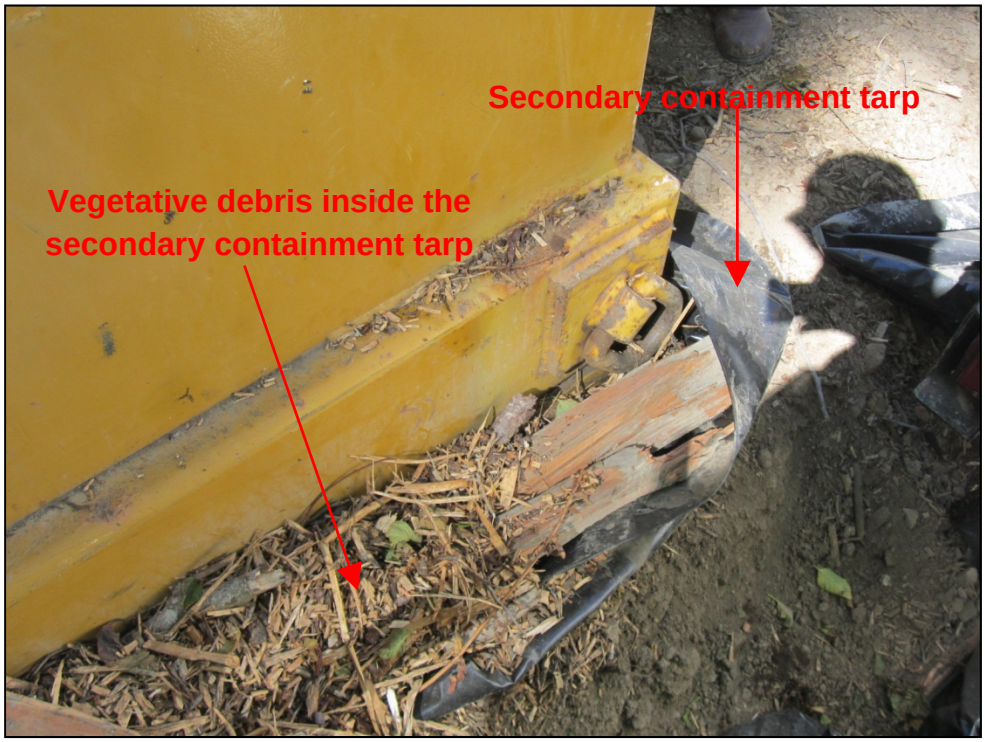


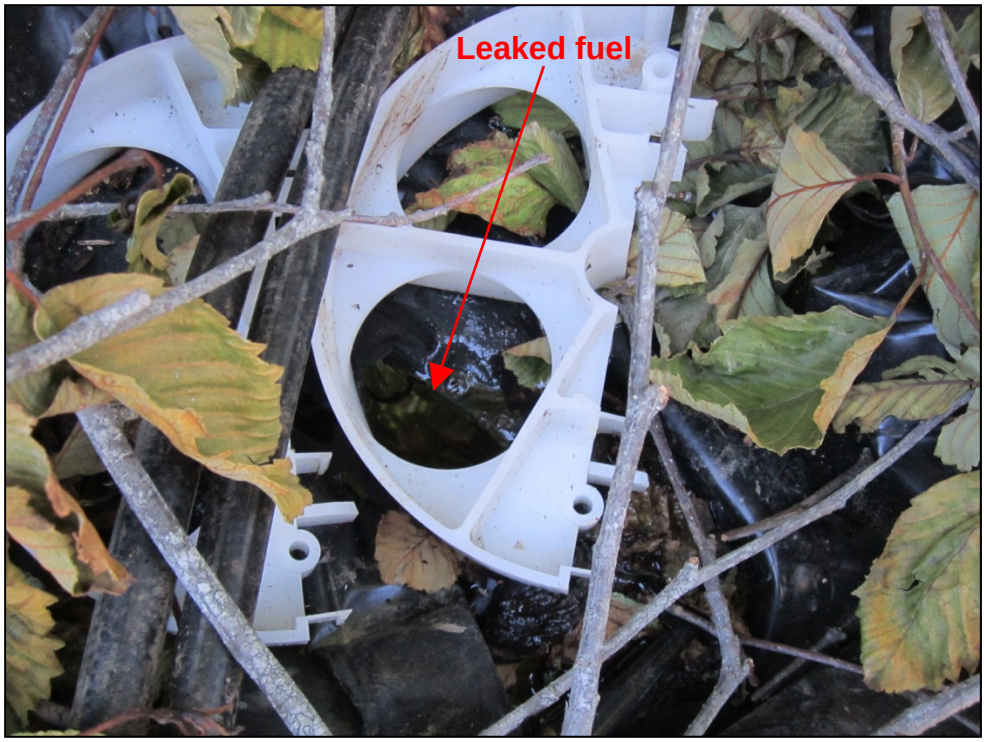
Photograph 23. View of fuel storage area on the east side of the construction area south of Greenwood Creek. Note fuel staining was present on the secondary containment tarp outside of the secondary containment roll and spill cleanup procedures had not been implemented.



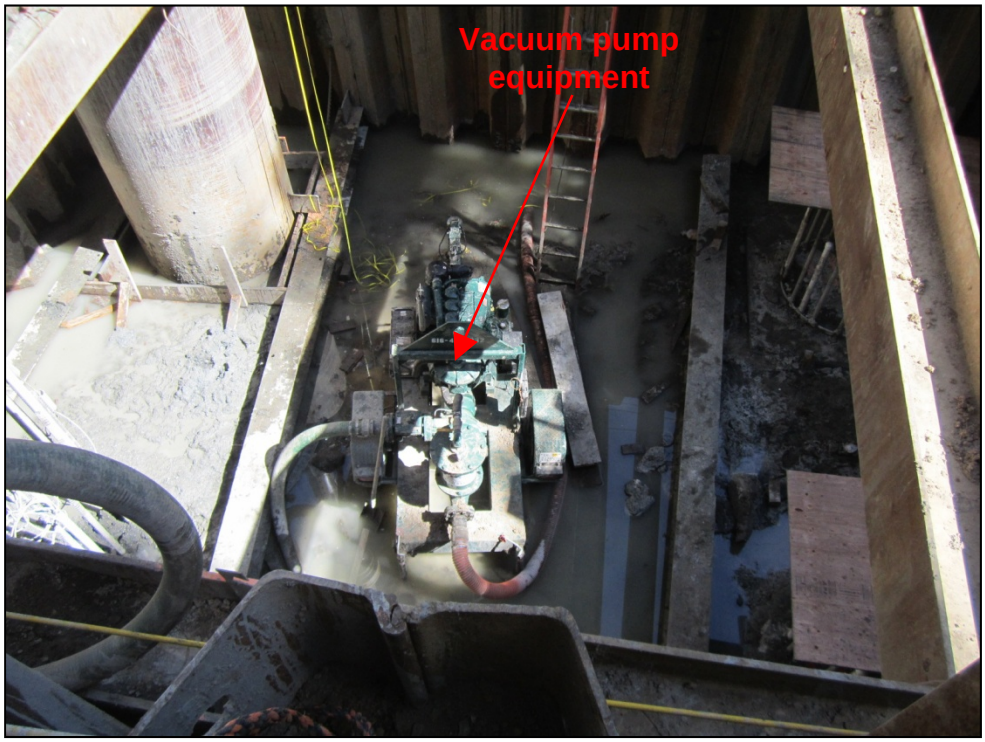
Photograph 24. Close-up view of vegetative debris inside the secondary containment tarp.

Photograph 25. Additional close-up view of vegetative debris inside the secondary containment tarp.

Photograph 26. View of vegetative debris and construction materials inside the secondary containment tarp. Note the tarp has been unrolled and breached creating the potential for leaking fuel to discharge onto the ground surface.



Photograph 27. Close-up view of fuel inside the secondary containment tarp shown in Photograph 26. Note this fuel had the potential to discharge onto to ground surface due to the secondary containment tarp being breached by vegetative and construction debris.



Photograph 28. View of vacuum pump equipment stored in a flooded bridge footing vault without appropriate BMPs implemented to prevent the contribution of pollutants to storm water and/or groundwater.

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