

Comments on
Update of DTSC Activities in B&B Superfund Site Cap Maintenance

Comments provided by
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March 31, 2013

We have discussed significant and recurring inadequacies in the inspection and repair of the cap on the Brown & Bryant (B&B) Superfund site in numerous documents available on the CBA Brown & Bryant Superfund Site website. It was clear from US Army Corps of Engineers' 5-year reports as well as personal observations of the site in the winter and spring of 2012, that the annual site cap inspection and repair regimen was inadequate to maintain the cap in a manner that would prevent water present on the cap surface from entering the underlying wastes/polluted soils and increasing the pollution of the groundwater beneath the cap. When the Department of Toxic Substances Control (DTSC) assumed the responsibility for funding and supervising the cap inspection and repair in 2012, it was agreed that the frequency of cap inspection and repair should be increased to at least quarterly. However DTSC did not have sufficient funds to more appropriately inspect and repair cap.

On March 28, 2013 DTSC made available on its envirostor website two reports that update the status of B&B site cap inspection and maintenance. They are:

- DTSC, "Work Order Brown and Bryant, Arvin Site, Work Order Amendment No. 1-114-2.0-100025," Issued to URS Corporation, Sacramento, CA, by DTSC, Sacramento, CA, February 11 (2013)
http://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/9856733560/Start%20Work%20Order%20Brown%20%20Bryant%201-114-2%200-100025.pdf
- URS, "Brown and Bryant, Arvin Site, Arvin, CA Cap Repair Workplan," Report of URS, Sacramento, CA to DTSC, Sacramento, CA, March (2013)
http://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/9490142643/BB%20Work%20Plan_3_11_2013.pdf

Our comments on those reports are presented below.

Brown & Bryant Work Order Amendment dated February 11, 2013

The February 11, 2013 cover letter transmitting the B&B Site "Work Order Amendment" from DTSC to URS stated,

“In accordance with this Agreement, enclosed are a Work Order Approval Form and Work Order Amendment to initiate and complete the work necessary to 1) develop a cap repair workplan, and 2) implement the cap repair workplan and provide an O&M summary report for the Brown and Bryant Site located at 600 Derby Road, Arvin, California.”

Attachment A, “Specifications of Work Ordered,” to that amendment includes the following:

“II. Scope of Work

Task 1: Revised O&M Manual Preparation & Site Visit – Complete

Contractor shall review the current O&M Manual for OUI, and then visit the Site. After completing the foregoing, the Contractor shall prepare a revised O&M Manual for DTSC's review and approval.

The Revised O&M Manual shall include at a minimum the following elements:

- a. Introduction;*
- b. Post-closure land use;*
- c. Site security and access;*
- d. Site inspection and maintenance;*
- e. Inspection documentation and reporting requirements;*
- f. Map with specific locations showing areas to be inspected and what data will be collected and what problems are being looked for;*
- g. As-built drawings;*
- h. Areas to be photographed and estimated amount of photographic documentation include rational;*
- i. Implementation Schedule;*
- j. Description of equipment used to monitor and/or inspect, designated areas;*
- k. Possible action(s) to be taken for various problem scenarios looked for;*
- l. Transportation procedures identifying routes of travel and final destination of any wastes generated and disposed;*
- m. Health and Safety Plan (HSP) procedures addressing the implementation activities;*
- n. Detailed cost estimate for inspection and reporting; and*
- o. Format and content for operation and maintenance documentation and reporting.”*

“Task 5: Implement the Cap Repair Workplan, Monitor, Inspection, & Maintenance of OUI Remedial Systems

Contractor shall mobilize all personnel, materials, equipment, and services necessary to perform all work in accordance with the approved Cap Repair Workplan and complete a visual inspection of the OUI remedial systems in accordance with the approved Revised Operation and Maintenance Manual.”

“III. Deliverables and Implementation Schedule

<i>Task(s)</i>	<i>Description/Deliverables</i>	<i>Schedule</i>
4	Cap Repair Workplan	Within 30 days of the Start Work Order
5	Implement approved Cap Repair Workplan	Within 90 days after approval of Cap Repair Workplan and with presence of US EPA and/or their Contractors as necessary.
	Complete O&M Summary Report	By September 30, 2013

The total funds available to support this contract are \$114,000.

This update of the B&B site contract covering the site cap inspection and repair maintains the inadequate once-per-year frequency. As discussed in our previous reports, a once-per-year inspection/repair schedule is not adequate to identify and repair the cracks that have been found to, and will continue to, develop in the cap, and to stop animals from creating burrows around the edges of the cap.

Brown & Bryant Superfund Site Cap Repair Workplan, March 2013

In the March 11, 2013 cover letter transmitting the “Cap Repair Work Plan” to DTSC, S. Rice and E. Tarter of URS state:

“Enclosed please find the Cap Repair Work Plan for the Brown & Bryant Arvin Facility Superfund Site in Arvin, California. This work plan presents methods to repair the asphalt cap and associated features located at the subject site. The recommended repairs are based on the findings presented in the Operations and Maintenance Summary Report dated May 18, 2012, and on comments by G. Fred Lee and Associates, dated May 31, 2012. This work plan includes methods to repair cracks in the asphalt cap and to repair security fencing surrounding the site. Methods to mitigate (fill-in) animal burrows located at the subject site are also included in this work plan”.

In the first paragraph of the “Introduction” to the Cap Repair Work Plan it is stated:

“The asphalt is a Resource Conservation and Recovery Act (RCRA) cap in the site’s southern portion and a non-RCRA cap in the site’s northern portion. The RCRA cap is a 3-foot-thick cap consisting of several layers including a Geogrid sand layer, Geosynthetic clay liner, sand filter layer, aggregate base course and 3 inches of asphaltic concrete. The non-RCRA cap consists of compacted subgrade material overlaid with 3 inches of asphaltic concrete. The site is currently vacant and secured by a chain-link fence.”

In the second paragraph of the “Introduction” it is stated:

“To maintain the integrity and protectiveness of the OUI RCRA and non-RCRA caps (remedial systems) installed in 1998 at the B&B site, the caps and associated features are inspected annually, or in the event of a natural disaster, to identify signs of deterioration due to aging or weathering and signs of cap or subbase failure.”

The final paragraph of the “Introduction” states:

“The Operations and Maintenance Summary Report (URS, 2012b) documents the findings of the March 28, 2012, inspection of the remedial systems by USACE (Richard S. Lainhart) and URS (Chris Bellue). In addition to the March 2012 inspection, another inspection was performed and documented on behalf of the Committee for a Better Arvin (CBA) US EPA Technical Assistance Grant (TAG) Technical Advisors, dated May 31, 2012. Attachment A includes a copy of the latter report. Likewise, findings and comments from that report have been incorporated into this work plan.”

Other key elements of the Work Plan are quoted below:

“2.0 Repair Activities

The following maintenance activities are proposed for the subject site: Immediately before performing any construction activity, remove weeds, trash, and debris within the construction area. Abate weeds by hand, by the use of pesticides, or by other authorized methods.

2.1 Fence Repair

Where holes in the fence are present, the chain-link fabric shall be replaced and not repaired. The fabric shall be replaced using full sections between the two closest fence posts at a minimum and secured to the posts with same method or better than the current attachment. Fence fabric shall be replaced with the same mesh size and gauge. The contractor is responsible for disposal of discarded fence fabric.

All fencing work shall comply with City of Arvin construction standards (for details, see Attachment B).

2.2 Cap Repair

For areas requiring asphalt crack fill or concrete crack repair, the basis for the repair recommendations was formulated using guidance from Unified Facilities Criteria (UFC) Pavement Maintenance Management Guide (UFC, 2004). Attachment C includes photographs of each location in need of repair. Figure 2 locates each identified repair by inspection area number. In general, cracks that are less than 0.25 inches wide are recommended for monitoring, whereas larger cracks typically are recommended for sealing.

Methods and materials for asphalt crack repair shall meet California Department of Transportation (Caltrans) standard specification section 37-5 (Caltrans, 2010). Methods and materials for concrete crack repair shall meet Caltrans specifications for concrete repair section 41 (Caltrans, 2010).

2.3 Animal Burrow Mitigation

Animal burrows shall be inspected by a qualified wildlife biologist to confirm whether they are inhabited by threatened or endangered animal species. After the burrows are cleared by the biologist as uninhabited, the contractor will proceed with filling in the burrows with fence-post quality concrete. The purpose of filling the burrows is to protect the integrity of the asphalt cap from collapsing along the edges where burrows are present.”

Appendix C of the Work Plan contains a series of photographs of problem areas in the cap that were found during a March 2012 site inspection by URS staff.

Table 1 of the Work Plan is a summary of inspection findings and repair recommendations.

<i>Finding Identifier</i>	<i>Description of Finding</i>	<i>Repair Recommendation</i>
1	Two small holes, approximately 1-inch diameter, were identified in the fence fabric of the north access gate.	Repair chain-link fence fabric to eliminate holes.
2	Crack in asphalt cap, approximately 0.25 inch wide, extending north from previous crack repair to northern edge of non-Resource Conservation and Recovery Act (RCRA) cap (approximately 50 feet long).	Cracking is of low severity; recommend further monitoring.
3	0.5-inch-wide crack in asphalt cap, approximately 50 feet long running along the edge of a previous patch repair.	Cracks are of low to medium severity. Continue to monitor cracks less than 0.25 inch wide. For crack widths greater than 0.25 inch, recommend sealing the crack with a sealant that meets California Department of Transportation (Caltrans) specifications for crack treatment section 37-5 (Caltrans, 2010), or equivalent. Attachment C includes crack treatment material specifications from Caltrans Standard Specifications 37-5.
4	Small weeds growing from existing less than 0.25-inch-wide cracks next to the patch repair.	Remove weeds and seal cracks with a sealant that meets Caltrans specifications for crack treatment section 35-7 (Caltrans, 2010), or equivalent.
5	Ponding water on cap from recent storm event.	Continue to monitor quality of asphalt where ponding is occurring. If asphalt degrades, consider regrading to sheet water from the non-RCRA cap.
6	Weeds growing from cracks of variable widths at the concrete slab.	Remove weeds and seal crack. The concrete slab failure is a divided slab of medium severity. Seal cracks with sealant that meets Caltrans specifications for concrete repair section 41 (Caltrans, 2010), or equivalent.
7	Crack, approximately 0.5 inch wide, on both edges of a 24-inch-wide swale. Weeds growing from crack in the asphalt cap pavement. The crack becomes more pronounced as it runs toward the edge of asphalt cap.	Remove weeds and seal crack. The joint along the swale has separated resulting in medium severity joint cracking. Seal cracks with a sealant that meets Caltrans specifications for crack treatment section 37-5 (Caltrans, 2010), or equivalent.
8	Location of the former tank (UN-32 Tank) on the RCRA cap. No cracks or deterioration observed.	No repair recommendation required.
9	Fencing that divides the non-RCRA cap from RCRA cap is in good condition and asphalt cap has no signs of cracking.	No repair recommendation required.
10	Fence post, fabric, and stanchions are in good shape along the exterior site fencing, except as noted in item #1 above.	No repair recommendation required.
11	Small cracks extending from recently repaired crack repairs.	Cracking is low severity; recommend further monitoring.
12	Small cracks extending from recently repaired crack repairs.	Cracking is low severity; recommend further monitoring.

No mention was of the numerous animal burrows under the fence and edge of the cap that were observed by Dr. G. Fred Lee in his January 2012 site inspection, as well as by CBA staff in June 2012. These problems were discussed in our May 31, 2012 report appended to the URS Work Plan (Appendix A).

It is suggested that CBA staff walk the site fence line to see if there are animal burrows under the fence and cap. If such problems are found, they should be photographed and reported.