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Comments on "Operations & Maintenance Summary Report, Brown & Bryant, Arvin Facility Superfund Site, First Operable Unit Remedial Action, Arvin, California," Prepared by URS for CA DTSC, May 2012

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On May 25, 2012 the California Department of Toxic Substances Control (DTSC) posted the following report of the March 28, 2012 site inspection, on its Envirostor website:

URS Corp., "Operations & Maintenance Summary Report, Brown & Bryant, Arvin Facility Superfund Site, First Operable Unit Remedial Action, Arvin, California," Report prepared for California Department of Toxic Substances Control (DTSC), Sacramento, CA, May (2012).

http://www.envirostor.dtsc.ca.gov/regulators/deliverable_documents/4303516983/Brown %20&%20Bryant_CD.pdf

That is the first report of site inspections conducted under the revised DTSC O&M Manual for the B&B Superfund site released in January 2012. We commented on technical deficiencies and concerns in provisions outlined in the January 2012 O&M report in the following:

Lee, G. F., and Jones-Lee, A., "Comments on Revised 'Operation and Maintenance Manual Brown & Bryant, Arvin Facility Superfund Site, First Operable Unit Remedial Action, Arvin, CA,' prepared for CA DTSC by URS Corp. Issued January 12, 2012," Comments submitted to CBA by G. Fred Lee & Associates, El Macero, CA, March 15 (2012). http://www.gfredlee.com/CBA_BBSite/2012/OM_Manual_comments.pdf

Presented below are comments on the May 2012 O&M summary report.

The May 2012 final O&M Manual states (pages 1-2):

"To maintain the integrity and protectiveness of the OU1 RCRA and non-RCRA caps (remedial systems) in place at the B&B site, the caps and associated features are currently 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. Figure 1 is a site location map showing the relationship of the site to the surrounding community of Arvin, California."

Inspections include a visual examination of the caps, security fencing, signs, and warehouse exterior. Detailed inspection procedures are included in the Revised O&M Manual for the Brown and Bryant, Inc. Arvin Site (URS Group Inc. [URS], 2012). This report documents the

findings of the 2012 inspection and repair recommendations. This is the first inspection conducted on behalf of Department of Toxic Substances Control (DTSC). Prior inspections were performed by EPA and the United States Army Corps of Engineers (USACE)."

Past "annual inspections" of the B&B site have repeatedly been found to be inadequate in locating problems with the integrity and repair of the site cap. These issues were discussed in our comments on the several five-year review reports of the B&B site conducted by the Corps of Engineers that are available on the CBA website (see the following):

Lee, G. F., and Jones-Lee, A., "Comments on 'Third Five-Year Review Report for Brown and Bryant Superfund Site Arvin, California,' Prepared by: US Army Corps of Engineers Environmental and Munitions Center of Expertise, Omaha, NE, Prepared for: US Environmental Protection Agency Region 9, San Francisco, CA, dated September 2011, (made available by the US EPA January 5, 2012)," Report to CBA from G. Fred Lee & Associates, El Macero, CA, January 9 (2012). http://www.gfredlee.com/CBA_BBSite/2012/USACE3rd5yrRpt-com.pdf

as well as in our comments on site inspection and cap repair issues revealed during our January 2012 site visit:

Lee, G. F., and Jones-Lee, A., "B&B Site Visit and Meeting with CBA and US EPA," Report to CBA from G. Fred Lee & Associates, El Macero, CA, January 18 (2012). http://www.gfredlee.com/CBA_BBSite/2012/BB-site-visit1-13-12Report.pdf

These problems and issues should have been discussed in the URS March 2012 O&M site inspection report.

Page 2 of the March 2012 B&B site inspection report states: "2.0 Inspection Summary Inspection of the remedial systems for 2012 was conducted on 28 March 2012 by USACE (Richard S. Lainhart) and URS (Chris Bellue).

The visual inspection consisted of walking the site and examining the entire cap and drainage system. The caps were inspected by using a systematic pattern of walking traverses longitudinally and transversely along the full dimensions of the caps and drain areas. The cap was inspected on a grid of approximately 60 feet in the north/south direction and 45 feet in the east/west direction, as shown on Figure 2.

Table 1 includes a complete list of identified areas of repair, corresponding inspection area number, and recommendation for these repairs. The basis for the repair recommendations was formulated based on guidance form [sic] Unified Facilities Criteria (UFC) Pavement Maintenance Management Guide (UFC, 2004). Attachment B includes photographs of each location. Figure 2 locates each identified repair by the inspection area number. In general, cracks that are less than 0.25 inches wide are recommended for monitoring, whereas larger cracks are typically recommended for sealing.

In addition to these specific recommendations, future site inspections should include walking the perimeter fence line to inspect for and address animal burrows under the chain-link fence and

under the cap. The site checklists should also be updated under the security fence and signs section to reflect this item and ensure its review in upcoming inspections."

As discussed in our comments on the January 2012 revised O&M manual, a key issue that was not included in the previous O&M manual or the revised O&M Manual was the failure to visually inspect and repair all animal burrows under the fence and cap. The expansion of the revised O&M manual to include inspection of the fence line for animal burrows is a significant improvement in the revised O&M Manual inspection procedures. As discussed below, care must be taken, however, to include inspection for burrows that originate outside the perimeter fence that may not be evident from the on-site side of the fence.

Page 2 states,

"3.0 Scheduled Remedial Action Operations The next inspection of the remedial systems will occur in 2013; a specific date will be determined later. This inspection will be coordinated between DTSC, EPA, and USACE and their contractors, as appropriate."

Table 1, "*Inspection Findings and Recommendations*," lists problems found with the cap and makes recommendations for repair. Note was made that some of the cracks found in the cap had weeds growing in them.

The Corps of Engineers inspected and repaired the Site cap in November 2011. At the time of the site visit in which I (GFL) participated in mid-January 2012, cracks that had been reported could be seen, from the outside of the fence, to have been sealed. However the URS March 2012 inspection report and photographs noted additional cracks, some with extensive weed growth; this shows that the site cap is susceptible to very rapid deterioration in just a couple of months. Clearly there is need for more frequent inspection of the site cap than that which has occurred in the past and the annual inspection requirement adopted by DTSC in its January 2012 updated O&M site Manual.

No mention was made in the report of the URS/Corps site inspection in March 2012 of the animal burrows that had been observed along the fence in our January 2012 visit, and that had been reported in the Corps' five-review inspection reports discussed in our above-referenced comments. Was the March 2012 inspection along the fence line made from on top of the cap only, or did it include inspection from outside the fence? The animal burrows reported by GFL and in the previous Corps inspection reports were found from outside the fence, from which perspective they were readily observed and photographed.

Page 3 of the Daily Field Sheet, item 9, states: "I walked the perimeter fence and Non-RCRA divider fence. No signs of cracking noted."

No mention was made of animal burrows under the fence and cap that had been observed and photographed by GFL in January 2012 and earlier (see our January 2012 report and the previous Corps of Engineers five-year review report referenced above). It appears that either someone repaired the significant animal burrows that have been repeatedly observed and photographed, or the inspection did not include inspection from a vantage point at which those burrows would be

visible. There is need for this issue to be investigated to determine who, if anyone, repaired the animal burrows between January 2012 and March 2012. If the burrows that were found in January 2012 were not repaired prior to the March 2012 inspection, the URS/Corps March 2012 inspection for animal burrows under the fence and cap was not done properly.

It is suggested that the fence-line inspection requirements be expanded to include inspection for animal burrows from outside the fence.

In our comments on the proposed DTSC B&B Superfund site updated O&M manual referenced above, we indicated that based on past experience cap inspection and repair should be conducted more frequently than annually, and suggested that such inspection and repair be conducted at least quarterly. If quarterly inspection proves to be more frequent than needed to promptly attend to the cracking, the frequency could be decreased to every six months. The recently released URS report strongly supports the need to greatly increase the frequency of site inspection/repair to at least quarterly.

The URS May 2012 report of site inspection documents that several approximately half-inchwide cracks had developed within a couple of months, and it recommends that they be repaired. However no information was provided to document that the recommended repairs are in fact being made. This issue needs to be evaluated.

In discussing cap inspection and repair issues with Steve Ross, DTSC B&B site project manager, I was informed that there is a funding limitation for DTSC activities at the B&B site such that beyond this next year there is no assurance that appropriately frequent site inspection and repair will be performed for as long as the site will need postclosure monitoring and remediation. These issues need to be addressed to ensure that funds will be available for adequate site inspection/repair/maintenance for as long as there are wastes/pollutants at the site that pose a threat to public health and groundwater resources. Because the US EPA/DTSC opted to "remediate" the polluted soils/strata under the site by capping the waste rather than treating/removing the pollutants, this site will need ongoing monitoring and maintenance effectively forever. While the capping approach is initially less-expensive than treating or removing the pollutants, that option will be far more expensive in the long run as funds will need to be provided for effective site cap maintenance and repair in perpetuity to contain the residual pollutants that are present, and will continue to be present, at the site.

An issue that should be explored is whether it would be appropriate for a CBA member or the city of Arvin public utilities staff manager to inspect the B&B site cap from outside the fence line for cap maintenance/animal burrow problems as was done with GFL in January 2012. At the CBA/US EPA meeting in January 2012 B. Davila invited the CBA members to contact her (US EPA) if they observe problems in site maintenance. Periodic (e.g., every few months) site inspection by a CBA/city of Arvin representative would be appropriate in light of the current DTSC funding limitations for site inspection/remediation.