

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 by
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In January 2012 the California Department of Toxic Substance Control (DTSC) released the "Revised Operation and Maintenance (O&M) Manual" for the Brown & Bryant (B&B) Superfund site located in Arvin, CA. That manual had been prepared by URS Corporation Sacramento, CA under contract with DTSC.

The January 13, 2012 URS cover letter for the Manual states:
"Enclosed please find the Revised O&M Manual This manual presents the update to the PostClosure Site Control Plan including operations and maintenance requirements, prepared by Morrison Knudsen Corporation for the Brown & Bryant Superfund Site in Arvin, California. This revision focuses on Operable Unit 1 and revises the plan for the annual inspection of the implemented remedial action."

As discussed in our other comments, there is extensive pollution of the upper soils/strata and underlying groundwater in the OU-1 area of the B&B Superfund site as well as off-site groundwater (including a city of Arvin municipal water supply well) by the agricultural chemical, dinoseb, and several low-molecular-weight chlorinated organic chemicals.

The US EPA Region 9 issued a contract to the US Army Corps of Engineers Environmental and Munitions Center of Expertise, Omaha, NE to conduct the US EPA-required five-year reviews of the adequacy of the Record of Decision (ROD) remediation of OU-1 consisting of an asphaltic and RCRA cap and perimeter fencing. The cap is intended to minimize/prevent entrance of water that occurs on the surface of the site into the OU-1-polluted soils and consequent transport of pollutants in OU-1 to the groundwaters in OU-2; groundwaters in OU-2 serve as the domestic water supply for the city of Arvin. The chain link and barbed wire fence is intended to prevent the public and large animals from gaining access to the site cap and thereby from possibly disrupting the integrity of the cap and being exposed to the hazardous chemicals under the cap. The three Corps of Engineers' five-year reviews reports (the latest of which reported on a site visit in December 2010) have each reported that the maintenance of the asphaltic cap at the B&B Superfund site has been inadequate; each of the reviews has noted cracks in the asphaltic cap that have the potential to allow water to penetrate the cap and enter the polluted soils beneath. Further, each of the reports has noted that the perimeter fence has not been adequately maintained to prevent people and large animals from gaining entrance to the site cap.

On January 13, 2012, Dr. Lee examined the site from outside the perimeter fence as part of a B&B Superfund site visit. A report of that site visit is available as:

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

At that time, Dr. Lee noted that cracks in the asphalt cap had been recently sealed with an industrial grade bitumen sealant. The site fence appeared to be in good condition. However, he also found that there were several rodent holes burrowed from offsite, under the fence, and under the asphaltic cap. The Corps of Engineers' third five-year site inspection that had taken place in December 2010 also noted animal burrows under the fence. Based on photographs that the Corps presented in its third five-year review report, it appears some of the animal burrows that had been present in December 2010 were also present in January 2012. Evidently there is an ongoing problem with inadequate control of rodents burrowing under the fence and potentially gaining access to the polluted soils under the cap.

At the time the ROD was developed for the capping and fencing of the B&B site an effective and reliable regimen for site inspection and prompt maintenance was not developed or implemented. There is an urgent need to develop an effective program that will in fact ensure that the site is thoroughly and reliably inspected and that defects and breaches are promptly corrected, for as long as there are hazardous chemicals in the soils and groundwaters at the site. Given the proposed approach for site remediation, this rigorous inspection and maintenance program will be needed forever.

The Introduction to the updated O&M Manual stated:

"This Operations and Maintenance (O&M) Manual is an update to the original 1999 Post-Closure Site Control Plan including O&M requirements prepared by the Morrison Knudsen Corporation under Contract Number DACW05-94-D-0017 to the United States Army Corps of Engineers."

"This O&M Manual will provide the necessary information to perform and document annual monitoring of the implemented remedy for Operable Unit (OU) 1."

Paragraph 2 of the Introduction states:

"The plan sets forth and contains information regarding the inspection schedule and procedures for long-term surveillance and maintenance of the cap. Post-closure actions described in this plan include post-removal land use, site security and access restriction, site inspections and maintenance, inspection documentation and reporting requirements, and potential deed recordation."

Section 2.0 Post-Closure Land Use states:

"No permanent structures or features may be constructed anywhere on the site due to the presence of the caps."

Section "2.1 Considerations for Access states:

“The principal contaminant of concern in surface soil is the agricultural-chemical dinoseb. Within the fenced area, the soil cleanup goal for dinoseb was 80 milligrams per kilograms (mg/kg). Soil with contaminations in excess of that level were moved and placed in the area where the RCRA cap was constructed. Soil with concentrations less than 80 mg/kg were left in place and covered with a non-RCRA cap.”

“Because these concentrations of dinoseb may be hazardous to human health and the environment, the entire site is considered to be access-restricted. It will not be maintained for commercial or private vehicular traffic. However, periodic maintenance may require driving vehicles onto the caps. These vehicles should not exceed weight limitations described in this plan.”

Section 2.2 Site Activities

“No activities (e.g. excavation, grading, removal, trenching, filling, earth moving, mining, or drilling) shall be allowed on the site where remedial systems are in place without DTSC approval (or EPA if designated CERCLA lead agency) in advance.”

The Operations & Maintenance Manual contains detailed requirements for all “Excavation” activities at the site and stipulates that US EPA approval is to be obtained before any excavations take place.

Section 3.0 SITE SECURITY AND ACCESS RESTRICTION

3.1 Site Security

Site security will be maintained by physical barriers. The principal physical barrier is the perimeter barbed wire-topped chain-link fence. The chain-link fence is made of galvanized drawn iron wire and is 6 feet high. Three strands of barbed wire are strung on inward-facing stanchions on 6-1/2-foot-high iron fence posts.”

3.2 Access Restrictions

Access to the restricted areas of the property is maintained by the presence of the perimeter fence. Two locked vehicle-access gates are located at the northwest corner of the perimeter fence facing the tracks and South Derby Street and in the north perimeter fence facing Los Osos Cooling property. DTSC, EPA, and their designees, have the combination to all locks used at the site. Each lock has the combination number.”

The URS O&M Manual contains information on the characteristics of the signs that are to be posted on the site fence. We question the appropriateness of specifically naming the current US EPA site manager (i.e., “CALL: Bruni Davila”) as the person within the US EPA who should be contacted regarding site excavation activities; USEPA Superfund site managers can change with the result that the sign information will become out of date. The signs should provide US EPA contact information that will not have to be changed when a new site manager is appointed. Also I understand from statements made by B. Davila that DTSC is now responsible for maintenance of the site cap. If that is the case, it would seem appropriate for the site signs to include information for DTSC to be contacted in the event of problems with cap maintenance.

During the January 13, 2012 site visit B. Davila indicated to Community for Better Arvin (CBA) members present that if any members observe problems at the B&B site such as cracks in the cap or sampling well concrete bases, fence damage, etc. they should call her at her US EPA Region 9 office in San Francisco, CA. This is a much more comprehensive invitation for public involvement at the B&B site for site maintenance than has apparently existed in the past.

Section 4.0 *SITE INSPECTIONS AND MAINTENANCE* states,
“Inspections other than those performed during site maintenance activities, will be routine (annually) and qualitative in order to evaluate the cap system performance relative to each preceding inspection. Cap inspections and concurrent maintenance activities will be performed at regularly scheduled intervals. Alternatively, site maintenance will be conducted generally on an as-needed basis. The cap and cover maintenance will be custodial in nature to limit encroachment or accumulation of undesirable vegetation, ensure the integrity of the caps, ensure site drainage is maintained, and assist in maintaining site security.

The site inspections will be performed and findings recorded on a Site Inspection Form (Attachment A). A map of the site (Figure 2) showing the completed a-built survey in plan view will be attached to each Site Inspection Form. Site conditions which are found to require maintenance or repairs will be investigated and/or corrected within a reasonable time frame as not to further impair the function of the cap. The UN-32 Tank previously identified for post closure maintenance has been demolished and removed from the site.”

We feel in light of the past problems with adequate site maintenance that the frequency of the site inspection and repairs should be specified in this manual as being quarterly rather than yearly as apparently been done in the past and proposed for the future.

Attachment A to the URS O&M Manual presents a check list of items that are to be specifically inspected during a site visit. Notably absent from the list is the inspection of the outside of the fence for animal burrows; such inspection should be made at no-less-than quarterly intervals. Because animals' burrowing under the fence and under the cap continues to be a chronic and neglected problem at this site, the US EPA and DTSC need to develop an approach to promptly repair the current breaches and prevent this type of problem in the future. That approach could include constructing a barrier along the fence line to prevent rodents and other small animals from burrowing under the fence to gain access to the site contaminated soils/wastes.

Dr. Lee understood B. Davila to indicate at the January 13, 2012 meeting with CBA and site visit that the B&B site had been inspected at monthly intervals by a Corps of Engineers' Los Angeles District staff member. Dr. Lee indicated that the CBA/he would like to obtain a copy of the monthly inspection reports for the B&B site. Since the three Corps of Engineers' five-year reviews of the B&B site reported significant maintenance problems, it appears that there is a significant disconnect between the monthly site inspections and prompt repair of the problems at the site.

Dr. Lee obtained a copy of the original 1999 Post-Closure Site Control Plan including O&M requirements, prepared by the Morrison Knudsen Corporation, from the US EPA that has governed the site inspection and maintenance schedule. The site inspection schedule included in

the original 1999 site O&M manual was essentially the same as that adopted in the revised DTSC O&M Manual. The requirements for site inspection in the original B&B site O&M Manual did not establish a schedule of inspection, with the result that adequate cap and other repairs have not been performed as needed. The wording in the original O&M manual: *“Subsequently, the EPA will determine whether annual inspections are appropriate and sufficient to maintain the integrity of the constructed remedies”*

as well as the recently adopted wording:

“Inspections other than those performed during site maintenance activities, will be routine (annually) and qualitative in order to evaluate the cap system performance relative to each preceding inspection”

is too indefinite to ensure that adequate inspection and maintenance is performed as needed. As recommended in our comments, DTSC/US EPA should modify the recently adopted site inspection requirements to ensure that inspection and maintenance problems that have been repeatedly found at the site do not continue.

Another site inspection issue that is not included in the proposed site inspection check list is the inspection of the integrity of the concrete base of the sampling well heads. Some of those areas show cracking that could lead to entrance of water into the OU-1 polluted soils near the sampling wells. Inspection for cracking of the well head concrete bases should be added to the inspection checklist.

Attachment B of the URS O&M Manual presents a “Health and Safety Plan Post Closure Site Control” dated November 2011, prepared by URS. Page 1-2 of that attachment contains the following:

“1.4 SCOPE OF WORK

URS personnel will perform operations and maintenance activities for the caps including:

- *Inspections of cap areas and fencing*
- *Inspection of wells*
- *Inspection of UN-32 tank, warehouse, valve box*
- *Excavation of non-RCRA cap area to reach water line, as necessary*
- *Repair of caps using bitumen sealant”*

It is unclear how often the site visits are supposed to occur, how often they actually occur, and the allowed period of time after identification during which repair and re-inspection must be accomplished. These issues need to be defined.

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Following receipt of the URS O&M Manual from B. Davila, Dr. Lee contacted Steven Ross, Hazardous Substances Engineer, Brownfields and Environmental Restoration Program, Department of Toxic Substances Control (DTSC staff member responsible for overseeing the

investigation and remediation of the B&B Superfund site) requesting information on the revised O&M Manual. The information Ross provided follows:

Lee: *“What is the status of the revised O&M Manual?”*

Ross: *“1) The Revised O&M Manual for OUI is final. It is now uploaded at the following link:  
[http://www.envirostor.dtsc.ca.gov/public/final\\_documents2.asp?global\\_id=15280011&doc\\_id=60268464](http://www.envirostor.dtsc.ca.gov/public/final_documents2.asp?global_id=15280011&doc_id=60268464)”*

The revised O&M Manual referred to is the same as that sent by B. Davila and that is commented on in the above comments.

Lee: *“It appears that URS will be conducting monthly site visits; is this the situation? Can a copy of the monthly site inspections be provided to me for CBA review?”*

*“What is the expected period of the URS contract?”*

*“What is the budget for site maintenance?”*

Ross: *“2) URS is arranging to schedule with the Corps contact the first annual inspection sometime before March 30, 2012. I can send you the inspection report results in a link to Envirostor for you to look at after the fact. You can indicate then what might need to happen for the following year in terms of operation and maintenance so DTSC can consider it and allocate necessary funding. There is no monthly inspection schedule planned by DTSC. Each year DTSC will need to get secure available funds to continue the yearly inspection. The current Work Order is uploaded at:  
[http://www.envirostor.dtsc.ca.gov/public/final\\_documents2.asp?global\\_id=15280011&enforcement\\_id=60271629](http://www.envirostor.dtsc.ca.gov/public/final_documents2.asp?global_id=15280011&enforcement_id=60271629)  
3) Work Order ends June 30, 2012 and \$34K was allocated this year for 1) Revising the existing O&M Manual; 2) Monitor, Inspection and Maintenance; and 3) O&M Summary Report. In future years, allocation will be based on necessary activities identified in the inspection results”.*

Based on the significant problems with achieving adequate site maintenance there is need to understand the inspection regimen and associated repair protocol for maintenance problems at the site. It appears from Mr. Ross’s response regarding future inspections and funding we feel that there is need for a conference call meeting with US EPA, DTSC, CBA and Lee/Jones-Lee to review these issues. At least quarterly inspections should be done, and necessary repairs made promptly. CBA staff may want to visually inspect the site for visible problems from outside the fence at about monthly intervals. Any problems found should then be promptly reported to US EPA, DTSC and Lee/Jones-Lee. Also there is need to get a more assured funding for the site inspections and repair.

Lee: *“What limitations are placed on the length of time that the cap etc. will be maintained?”*

Ross: *“4) As the implemented remedy stands for OUI, operation and maintenance in perpetuity. Revised O&M Manual states "no activities (e.g. excavation, grading, removal, trenching, filling, earth moving, mining, or drilling) shall be allowed on the site where the remedial systems are in place without DTSC approval (or EPA if designated CERCLA lead agency) in advance. Submittal for approval may come in the*

*form of a Soils Management Plan, revised Operations and Maintenance Manual, and/or revised Health and Safety Plan describing how excavated materials will be handled and how workers will be protected from exposure to contaminated soil."*

These are issues that should be discussed in a conference call. If there are questions or comments on these comments please contact G. Fred Lee at [gfredlee@aol.com](mailto:gfredlee@aol.com).