

Comments on
Eco & Associates, “Cap Repair Completion Report, Final, Brown & Bryant
Superfund Site, 600 South Derby Street, Arvin, California, Contract No.
W912PP-10-D-0014 Task Order 0006,” Submitted to U.S. Army Corps of
Engineers, Albuquerque NM, April 20 (2012)

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On April 20, 2012 Eco & Associates submitted its, “Cap Repair Completion Report, Final, Brown & Bryant Superfund Site 600 South Derby Street, Arvin, California Contract No. W912PP-10-D-0014 Task Order 0006,” to the U.S. Army Corps of Engineers, Albuquerque, NM. B. Davila of the US EPA forwarded a copy of that report with figures, photographs, and appendices, to G. Fred Lee & Associates, CBA US EPA TAG Advisors for the B&B Superfund site) for our review. That report describes the cap repair activities undertaken at the site in November 2011. Presented below are excerpts (in italics) from the Eco & Associates report discussion the approach used to repair the cap and our comments on persistent deficiencies in the cap inspection and repair being conducted at the B&B Superfund site.

The Introduction states (page 1):

“1.0 Introduction

This Cap Repair Completion Report has been prepared to document the cap repair activities implemented during November and December 2011. The cap repair was required as maintenance of the Resource Conservation and Recovery Act (RCRA) and non-RCRA pavement cap at the Brown & Bryant, Inc. (B&B) Superfund Site...”

“The objectives of this effort are to repair portions of the cap (both RCRA and non-RCRA portions) by milling the surface and placing a new surface layer of 1½ inches in the milled areas. This document describes the repair activities that were performed.”

Section 3 describes cap repair and overlay activities as follows (pages 2 to 4):

“3.0 Cap Repair and Overlay

3.1 Mobilization

The field team mobilized twice to complete the planned cap repairs: on November 14, 2011 for milling and patching; and on December 15, 2011 for patching of smaller cracks in the cap areas that could not be milled using the grinding machine and the concrete slab areas of the Site. In coordination with USACE, it was decided that all cracks in the asphalt were to be patched, not just the major cracks. After Site inspection, USACE also required that the concrete slab areas that had cracked be repaired.

3.2 Surface and Area Preparation

On November 14th, the pavement was still damp, and some Site areas had retained water ponded from the recent rainfall. The ponded water was swept using the blade of the dozer, and the Site areas were allowed to dry prior to the start of milling operations.

All of the cracked surfaces were identified to Eco & Associates, Inc. (Eco) subcontractor, Kern Asphalt and Paving Company of Bakersfield, California. Their staff operated the equipment used for the repairs.

Prior to start of milling, all of the capped surfaces were inspected for any vegetation growing in the cracks that might require removal prior to milling. No such vegetation was observed growing in the cracks and no removal action was necessary prior to the start of milling operations.

3.3 Milling of the Surface

The milling machine was a Caterpillar skid-steer loader fitted with a grinding attachment specifically designed to remove existing pavement. It was set to remove the asphalt to a depth of 1½ inches. At the start of operations, the depth of the cut was measured at several locations of a 20-foot cut to determine that the cut depth was acceptable. The depth of the cut was thereafter periodically inspected to ensure that it was a minimum of 1½ inches and no more than 2 inches.

The machine was operated to grind the cap asphalt in all areas of observed cracking. Most such cracks were oriented either north-south or east-west and extended for most of the cap portions (RCRA or non-RCRA). This allowed operation of the grinding machine in long runs across the Site in the cracked areas of the cap.

Concurrent with the grinding operation, a dozer-sweeper was operated to collect the cuttings and stockpile them temporarily at the Site in the area of the north entrance gate. The cuttings were later removed by Kern Asphalt for re-cycling.

An inspection of the cracks that had been milled showed that further cleaning of the cracks was not necessary because the sweeper had effectively removed the cutting or sufficiently plugged the cracks to allow placement of asphalt on the cleaned surface.

3.4 Tack Coat and Overlay

A tack coat consisting of an application of SS 1-H oil was applied to the milled surface after the filling of the cracks. This tack coat was used to promote the bonding of the existing cap surface with the asphalt overlay. The tack coat was applied in a thin, uniform coating of material covering approximately 90 percent of the milled cap surface.

The milled surface receiving the tack coat was cleaned and dried to promote maximum bonding. The sequencing of the tack coat application was coordinated with asphalt overlay to promote the effectiveness of the tack coat bonding. A cap overlay consisting of a 1½-inch layer of asphalt concrete (meeting the California Department of Transportation [CalTrans] Section 39 or Section 92 requirements, as applicable) was then laid on the milled surface. All overlay work was consistent with the requirement set forth in the scope of work associated with this task order.

The asphalt concrete was transported to the Site. Material was loaded from the truck into a pick up device (skip loader) and then deposited directly in the hopper of a Lee Boy 8515 paving machine. The material was loaded directly from the transport truck to prevent excessive cooling of the material from occurring. In keeping with Caltrans requirements, the lay down temperature was maintained at or about 125°C with the minimum finish temperature at 95°C.

The paved area was suitably rolled to achieve a compacted state utilizing an Ingersoll Rand drum roller. The number of roller passes to achieve this state was determined by observation in the field by an Eco professional experienced in asphaltic concrete (AC) paving placement and in consultation with the USACE representative in the field. The paved layer was placed to meet CalTrans, Section 39 Requirements for Type A, ½” Maximum Aggregate, Medium Grade, and P 70-10 for the asphalt binder meeting Section 92 Requirements.

3.5 Fog Sealing

Fog sealing is applied to improve sealing and waterproofing of the overlay pavement and to improve the surface appearance. A fog seal layer consisting of a thin layer of SS 1-H oil was applied after the completion of the overlay.

3.6 Repair of Minor Cracks

Minor cracks that could not be milled using the grinding machine were patched using Elastoflex 360, a rubber modified asphalt manufactured by Maxwell Products, Inc. of Salt Lake City, UT. A copy of the product sheet for this compound is presented in Appendix A.

The field crew was remobilized mid-December 2011 (15th, 16th, and 19th) to perform this work. The following approach was used to patch all visible cracking of the pavement as well as the concrete slabs at the Site outside of the warehouse building area.

- Loose soil and material was flushed from the cracks using a high powered blower.*
- Elastoflex 360 compound was heated to a temperature of about 350°F utilizing a Bearcat KA 345 trailer mounted crack filling machine, see photographs in Appendix B.*
- The heated asphaltic compound was be poured into the crack to fill it to the surface.*
- A laborer used a squeegee device to work the poured material into the crack.*
- The compound was allowed to cool to form a flexible seal at the crack and effectively seal it.*

All visible cracks were patched using this approach.”

Section 6.0 “Completion Statement” states (page 5):

“6.0 Completion Statement

All of the repairs that were completed were surficial or within the upper 2 inches (maximum) of the caps. These repairs do not impact the structural or other integrity of the caps as previously designed and constructed. All repair activities were performed in keeping the approved work plans for this project.”

As discussed in our previous reports on the maintenance of the B&B Superfund site (available on the CBA B&B Superfund site website, http://www.gfredlee.com/CBA_BBSite/bbdoc.htm) each of the three five-year reviews of this site have noted inadequacies in the inspection and repair of the site cap undertaken between the reviews. When the CBA B&B Superfund site inspection

took place in January 2012, two months after the repairs had been completed, the cap and repairs appeared to be in good condition. However, the Eco & Associates inspection of the cap in November 2011 failed to adequately inspect and address the area of the cap just under the perimeter fence; several animal burrows were apparent under the fence and under the cap during the January 2012 CBA inspection. These findings were discussed in our report of the CBA site inspection available at www.gfredlee.com/CBA_BBSite/2012/BB-site-visit1-13-12Report.pdf).

To date neither the DTSC nor the US EPA has responded to comments we submitted concerning inadequacies in the past and recently updated O&M Manual schedule for periodic inspection of the B&B Superfund site cap and the area along the fence line for potential problems in the condition of the cap. Our comments on this matter include:

Lee, G. F., and Jones-Lee, A., "Comments on 'Post-Closure Site Control Plan Including Operations & Maintenance Requirements, Brown & Bryant, Arvin Facility Superfund Site, First Operable Unit Remedial Action, Arvin, California,' Prepared by Morrison Knudsen Corporation, Irvine, CA, July 2000," Comments submitted to CBA by G. Fred Lee & Associates, El Macero, CA, March 16 (2012).

http://www.gfredlee.com/CBA_BBSite/2012/Postclosure_Site_Control_Plan_comments.pdf

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

This is an important issue that needs to be addressed so that deterioration of the cap that occurs at the site, as has been reported in the past five-year site reviews, can be promptly repaired.

Questions on these comments should be directed to G. Fred Lee at gfredlee33@gmail.com.