

June 11, 2007
Project No. 401329001

Mr. Larry Theis
Contra Costa County Public Works Department
255 Glacier Drive
Martinez, CA 94553

Subject: Site Closure Plan Summary for the Vine Hill Complex adjacent to Walnut Creek
and Pacheco Creek, Martinez, California

Dear Mr. Theis:

In accordance with your request and the Ninyo & Moore proposal dated May 21, 2007, we have completed a review of file documents for the IT Corporation Baker and Vine Hill sites (collectively referred to as the Vine Hill Complex) at the Department of Toxic Substances control (DTSC). The purpose of the review was the identification of protective measures taken at the Vine Hill Complex to guard against impact from the flooding of the nearby Pacheco Creek and Walnut Creek, as directed by Contra Costa County Public Works Department (CCCPWD). CCCPWD requested Ninyo & Moore prepare a brief letter report describing flood control plans identifying potential impacts on the IT site from periodic inundation, and note specific protection measures IT has installed to mitigate this threat.

Ninyo & Moore conducted the file review at the DTSC in Sacramento, California on June 1, 2007. After consultation with DTSC, the Closure and Post-closure Plans Revision 2.2 (IT 1996) prepared for the Vine Hill Complex by IT for the DTSC, dated February 1996, was reviewed. Flood mitigation measure related information reviewed in this report is presented below.

OBSERVATIONS

The Vine Hill Complex is located within the Federal Emergency Management Agency's (FEMAs) 100-year flood plain boundary (FEMA, 2001). The closure documents reviewed describe engineering and maintenance measures taken to protect the Vine Hill Complex from

inundation by Pacheco and/or Walnut Creek. Engineering measures implemented by IT include: a protective cap to prevent the downward entry of water into the landfill and contaminated impoundments below, to minimize surface erosion, and to preclude surface-water run-on; a groundwater interceptor trench and slurry walls surrounding the subject site to prevent any water that does infiltrate the cap from moving off-site; a lined evaporation basin into which infiltrated groundwater will be pumped; and monitoring wells on both sides of the slurry wall to monitor the potential flow of contaminants emanating from the subject site.

There are three slight variations of protective cap, but all generally consist of the following, from bottom to top: a compacted foundation soil layer; a clay barrier layer; a high-density polyethylene membrane layer; gas collection vent pipes; a drainage layer to drain any water infiltrating the top layer; and a vegetative soil layer to support erosion and protect the under-layers.

According to a 1987 FEMA study discussed in the IT report, levees on Walnut and Pacheco Creek have approximately 0.5 to 2.0-feet of freeboard above the 100-year flood level, which does not meet the FEMA requirement of 3-feet of freeboard. However, according to the IT report, any overbank flow caused by a 100-year flood would be too shallow and slow moving to erode surface soils and “would have no effect on the Vine Hill landfill” and “would not impact the Baker landfill”. At the direction of the Regional Water Quality control Board, IT modeled the Walnut Creek watershed to evaluate the potential impact of a 24-hour probable maximum precipitation storm event, and concluded that “while the storm event would clearly have some impact on the Vine Hill Complex, the repercussions of that impact are not significant, short-term and easily remediated (sic).”

Maintenance measures taken at the subject site to protect it from inundation by Pacheco and/or Walnut Creek include monthly to yearly inspections of the cap. Additionally, according to Mr. Wade Cornwell of the DTSC, funds have been put aside for 30-years of post-closure maintenance of the cap.

LIMITATIONS

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk. Further, this transmittal is for informational purposes only. Ninyo & Moore was not asked to complete, nor have we undertaken, a review of the efficacy or acceptability of the IT Vine Hill Complex flood-protection measures.

We very much appreciate the opportunity to serve CCCPWD.

Sincerely,
NINYO & MOORE



D. Blair Bridges
Senior Staff Environmental Geologist



Markus B. Niebanck, P.G.
Principal Geologist

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