

July 20, 2010

Mr. Evan Benn
U. S. Army Corps of Engineers, Sacramento District
1325 J Street
Sacramento, CA 95814

Folsom Dam Safety and Flood Damage Reduction, Control Structure, Chute, and Stilling Basin Work Draft Supplemental Environmental Assessment/Environmental Impact Report (SAC200500806c)

Dear Mr. Benn:

Thank you for providing the *Folsom Dam Safety and Flood Damage Reduction, Control Structure, Chute, and Stilling Basin Work Draft Supplemental Environmental Assessment /Environmental Impact Report* (DSEA/EIR) to the Sacramento Metropolitan Air Quality Management District (SMAQMD) for review. Staff comments follow.

1. Although the discussion on diesel particulate matter (DPM) is done well on page 35, the discussion to justify DPM emissions as less than significant should be expanded (pages 43 and 48). The SMAQMD made similar comments regarding DPM emissions in the *Mormon Island Auxiliary Dam (MIAD) Modification Project EIS/EIR* (State Clearinghouse #2009042077). Language from the MIAD FEIS/EIR (attached) is an example of an expanded significance determination discussion when a health risk assessment has not been conducted. Mitigation measures being implemented that reduce DPM should be added to the discussion as well. DPM is reduced when off-road construction equipment particulate exhaust emissions are required to be reduced by 45% (part of the standard SMAQMD construction mitigation measure).
2. The use of aqueous or emulsified diesel fuel as a NO_x mitigation strategy has not been viable in the Sacramento region to date (page 50).
3. On page 51, the "Mitigated Emissions Summary" indicates that "the 20 percent reduction in NO_x applies only to on-site construction equipment and on-site haul trucks." Please clarify that the 20 percent NO_x reduction in construction emissions suggested by the SMAQMD's standard construction mitigation measure only applies to off-road equipment not haul trucks designed for on-road use. It doesn't appear emissions calculation changes are necessary (Appendix D2).
4. The SMAQMD encourages the Army Corps of Engineers to estimate greenhouse gas (GHG) emission reductions that may result from implementing best management practices listed, especially the measures related to concrete production, the most GHG emissive process of this project (pages 61 and 62).
5. A CEQA significance finding for GHG emissions from the project is necessary in accordance with CEQA Guidelines section 15064.4 (page 63).

Mr. Benn

Folsom Dam Safety and Flood Damage Reduction DSEA/EIR

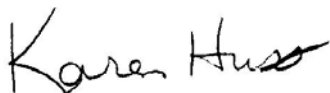
July 19, 2010

Page 2

6. Appendix D2, Air Quality Emissions Calculations, shows the use of electric stationary cranes and man lifts. If electricity to power this equipment is generated by diesel generators, those emissions should be included in the emissions calculations. It is not clear if line power will be used.
7. Appendix D2 also shows maximum NOx emissions of 34.68 tons/year for the Control Structure and 44.54 tons/year for the Chute and Stilling Basin construction. These calculations are not consistent with Tables 3-9 and 3-11 in chapter 3.3.1.
8. SMAQMD rules apply to all projects at the time of construction. A list of the most common rules that apply to construction is attached. A complete list of all SMAQMD rules is available at www.airquality.org or by calling 916-874-4800.

Please contact me at 916-874-4881 or khuss@airquality.org if you have any questions regarding these comments.

Sincerely,



Karen Huss
Associate Air Quality Planner/Analyst

Attachments

Cc: Larry Robinson, SMAQMD

ATTACHMENT
Excerpt from the Mormon Island Auxiliary Dam (MIAD)
Modification Project EIS/EIR

Page 6-22 to 6-23

The following text is revised as follows:

Toxic Air Contaminants If the proposed action would emit TACs, such as diesel particulate matter from diesel-fueled construction equipment, then the health risk associated with these compounds must be assessed. The California Air Pollution Control Officers Association (CAPCOA) and CARB have developed TAC health risk assessment (HRA) guidelines that must be followed to judge the impacts associated with TAC emissions. If a complete HRA is not completed, then emissions from mobile and stationary sources may be *used to conservatively estimate the significance of TAC impacts.* ~~considered to be significant and unavoidable.~~

The recommended significance thresholds for TACs include:

- Lifetime probability of contracting cancer is greater than 10 in one million;
- Ground-level concentration of non-carcinogenic toxic air pollutants would result in a Hazard Index of greater than 1.

The primary TAC associated with the project construction is expected to be diesel particulate matter generated during the operation of the construction

equipment. Diesel PM can contribute to several adverse health effects, including premature deaths, lung cancer, decreased lung function in children, chronic bronchitis, increased respiratory and cardiovascular hospitalizations, aggravated asthma, and increased respiratory symptoms (CARB n.d.). Chapter 11 (Noise) identifies the locations of the sensitive receptors in the vicinity of the construction site; the closest receptors are over 1,000 feet from the dam construction site.

Several protocols are available to discuss possible health impacts of TAC emissions from mobile sources. The SMAQMD's Recommended Protocol for Evaluating the Location of Sensitive Land Uses Adjacent to Major Roadways (2009c) recommends using the CAL3QHR model to evaluate emissions of diesel particulate matter (DPM) from roadways. While the protocol provides a sound basis for modeling linear sources of mobile vehicles, it does not directly apply to a construction project like the proposed project, which features mobile sources operating intermittently over a large area.

The California Air Pollution Control Officers Association (CAPCOA) also published Health Risk Assessments for Proposed Land Use Projects (2009), which provided limited guidance on TAC emissions from mobile sources. While the document acknowledges the same thresholds of significance identified in this section, it does not provide a method for quantifying the health risk impacts.

There is currently no adequate methodology to assess TACs from mobile sources because the existing models and procedures are based on stationary sources that emit at a constant rate. Furthermore, the models typically assume a 70-year lifetime exposure to the pollutants, which does not reflect the temporary and highly variable nature of mobile construction emissions.

Although an HRA could demonstrate that a project is less than significant, an HRA was not completed for the reasons stated in the previous paragraph. ~~As a result, TAC emissions were assumed to be significant and unavoidable and no further analysis was completed.~~ Notwithstanding, Reclamation has taken into consideration the nature, extent, and duration of construction activity involving heavy-duty diesel powered equipment along with the location of sensitive receptors in the general vicinity of the project, and has determined that the health risk impact associated with DPM emissions should, conservatively, be considered significant. The air quality mitigation measures proposed for the project represent all feasible measures to reduce air quality impacts and would also apply to reducing TAC emissions. Even with all mitigation, emissions would remain significant and unavoidable.

Attachment
SMAQMD Rules & Regulations Statement (revised 1/07)

*The following statement is recommended as standard condition of approval or construction document language for **all** development projects within the Sacramento Metropolitan Air Quality Management District (SMAQMD):*

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. A complete listing of current rules is available at www.airquality.org or by calling 916.874.4800. Specific rules that may relate to construction activities or building design may include, but are not limited to:

Rule 201: General Permit Requirements. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may require permit(s) from SMAQMD prior to equipment operation. The applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact the District early to determine if a permit is required, and to begin the permit application process. Portable construction equipment (e.g. generators, compressors, pile drivers, lighting equipment, etc) with an internal combustion engine over 50 horsepower are required to have a SMAQMD permit or a California Air Resources Board portable equipment registration.

Other general types of uses that require a permit include dry cleaners, gasoline stations, spray booths, and operations that generate airborne particulate emissions.

Rule 403: Fugitive Dust. The developer or contractor is required to control dust emissions from earth moving activities or any other construction activity to prevent airborne dust from leaving the project site.

Rule 417: Wood Burning Appliances. Effective October 26, 2007, this rule prohibits the installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments.

Rule 442: Architectural Coatings. The developer or contractor is required to use coatings that comply with the volatile organic compound content limits specified in the rule.

Rule 902: Asbestos. The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of asbestos containing material.