

March 3, 2008

Santa Margarita Water District
Attn: Mr. Daniel R. Ferons, Chief Engineer
P.O. Box 7005
Mission Viejo, CA 92690

Subject: Comments on Draft EIR for Upper Chiquita Reservoir Emergency Storage Project

Dear Sir:

I am a homeowner who lives in Coto De Caza and has two children enrolled in the Capistrano Unified School District (CUSD). My children will attend Tesoro High School from September 2008 until June 2015. I am concerned that the Draft Environmental Impact Report (DEIR) is incomplete and has failed to demonstrate that the proposed project is in compliance with all applicable environmental regulatory requirements. Given the proximity of the proposed project to a sensitive receptor (i.e., Tesoro High School with 2800 students), it is essential that a thorough and complete EIR is prepared to identify all risks and appropriate mitigation actions.

My aim is to have Santa Margarita Water District (SMWD) institute sufficient engineering controls and mitigation measures to control risk. I realize that the reservoir is important to provide sufficient water to this area in the event of an emergency.

My specific technical concerns are provided below:

1. The DEIR has only included estimates of air emissions from construction activities. SMWD needs to quantify air emissions from operational activities in accordance with South Coast Air Quality Management District (SCAQMD) rules and regulations. Examples of criteria pollutant and toxic sources which may produce fugitive and/or direct emissions include:
 - o Emergency generators
 - o Fuel tanks
 - o Chlorination process
 - o Chemical storage tanks
 - o Chemical transfer and unloading activities from delivery trucks

SMWD needs to quantify and add operational emission estimates from the proposed stationary equipment to its EIR.

2. Once these operational emissions have been completed using emission factors and estimating methodologies accepted by SCAQMD or the California Air Resources Board (CARB), the emissions need to be compared to SCAQMD operating emission thresholds for criteria pollutants to determine significance:
 - o 55 lbs/day reactive organic gases (ROG)

- 55 lbs/day NO_x (oxide of nitrogen)
- 550 lbs/day CO (carbon monoxide)
- 150 lbs/day PM₁₀ (particulate matter less than 10 microns)

It is possible that SMWD may need to purchase emission reduction credits (ERCs) if these thresholds are exceeded. These calculations and analysis need to be included in the EIR to provide full disclosure about impacts to regional air quality.

3. SMWD is proposing to install a chemical storage tank with 7,000 gallons of aqueous ammonia as part of this project. Ammonia is a regulated toxic air contaminant, which can cause severe irritation of the skin and eyes. If inhaled, ammonia can produce lung edema. SMWD will need to identify the number of valves, flanges and pipe connections in the proposed facility to calculate fugitive leaks and emissions of ammonia. This data needs to be entered into an air dispersion model and a risk assessment should be completed using methodologies approved by SCAQMD to show compliance with Rule 1401 (New Source Review of Toxic Air Contaminants). SCAQMD may require installation of Toxics Best Available Control Technology (T-BACT) if SMWD cannot demonstrate that certain thresholds are met:
 - Health risk is less than 10 in a million;
 - Acute hazard index is less than 1.0; and
 - Chronic hazard index is less than 1.0.

SMWD needs to provide calculations and analysis to determine if T-BACT is required as a mitigation measure.

4. SMWD must obtain approval from SCAQMD by obtaining “Permits to Construct” for the stationary sources described above and any required T-BACT prior to the commencement of any construction activities. This should be stated explicitly in the EIR.
5. In 1987, the California legislature adopted the Air Toxics “Hot Spots” information and Assessment Act, otherwise known as Assembly Bill (AB) 2588. There are several components to this program, including emissions reporting, risk assessment, public notice, and risk reduction. SMWD needs to determine if its storage and use of ammonia will trigger any of these requirements.
6. SMWD has not provided sufficient information to determine the applicability of SCAQMD Rule 1401.1 (Requirements for New and Relocated Facilities Near Schools, adopted November 4, 2005). The purpose of this rule is to ensure that additional health protection is provided for children in schools which are located near new or relocated facilities which emit toxic chemicals. Page 3.7-6 of the DEIR states that the distance to Tesoro High School is “approximately 1100 feet”. SMWD must provide a more accurate assessment of this distance since it is critical in determining the applicability of Rule 1401(d)(2).

SMWD needs to provide maps and site layout diagrams with sufficient detail to show the proposed location of the 7,000-gallon ammonia tank within the perimeter of the proposed project and the

distance to the school property line.

If the distance to the school is less than 1,000 feet, then SMWD must demonstrate that the cancer risk is less than 1 in a million and the hazard indices are less than or equal to 1.0 to comply with Rule 1401.1.

7. Page 3.2-2 states that “Tesoro High School campus too (sic) is at a substantially lower elevation than the ridges of the canyon walls”. Page 3.6-2 states that the elevation of the project area ranges from 720 to 950 feet above mean sea level (MSL). Please state the difference in elevation in feet between the top of the earthen dam and the Tesoro school property. Also, please provide topographic contours extending from the reservoir down to encompass the high school property. Figure 2-3 does not show this information. At present, it is impossible to evaluate the drainage pattern of the reservoir water or the location of any safe elevated areas in the vicinity of Tesoro High School in the event of a catastrophic rupture or flood from the earthen dam.

SMWD should add a new mitigation measure to the EIR – assist Capistrano Unified School District with updating its contingency and evacuation plan for Tesoro High School by providing topographic contour diagrams, water drainage modeling data, and other engineering information to address potential scenarios of catastrophic rupture or leaking of the earthen dam.

8. On SMWD’s webpage under Frequently Asked Questions, it is stated, “SMWD has studied what would occur if the reservoir were to completely fail – an unrealistic scenario in which both the embankment and the lining behind it were suddenly to fail completely (a likelihood of less than one in 1,000,000).”

Please identify where the engineering calculations and statistical analysis are located in the DEIR to support the “one in a million” estimate. The discussion about earthquake probabilities appears to be qualitative and not quantitative.

9. When does SMWD plan to complete its Risk Management Plan/California Accidental Release Plan to address the 7,000 gallon ammonia tank? This document will contain valuable information for the public to assess the worst-case release scenario, alternative release analysis, SMWD’s prevention program and emergency response. SMWD should consider adding mitigation measures to the EIR and revise the construction and design elements of the project to address or alleviate some of these risks.

Examples of mitigation actions that SMWD should consider adopting for handling of ammonia and minimizing the risk of accidental releases as part of its RMP:

- All valves, connectors and hoses associated with aqueous ammonia handling should be maintained in leak-proof condition at all times.
- When transferring aqueous ammonia, all vapors shall be vented back to the host tank and never to the atmosphere.
- Each aqueous ammonia tank shall be equipped in such a manner that will prevent unauthorized operation.
- When relieving pressure from connectors and hoses, all ammonia vapors shall be bled into back into the tank and never to the atmosphere.
- A barrier shall be erected and maintained around the aqueous ammonia tanks to prevent

accidental ruptures from vehicular traffic.

- All pressure relief valves shall be equipped with a rupture disc. A pressure gauge shall be installed between the relief valve and the rupture disc to monitor integrity. All leaking discs shall be replaced at the earliest opportunity.
- Audio, olfactory and visual checks for ammonia leaks within the operating area and within the storage tank area shall be made every four hours during operating hours.
- A water spray system shall be installed to minimize ammonia emissions in the event of a release/rupture of the tanks.

10. The DEIR states on page 3.7-8 that the concentration of ammonia in aqueous ammonia solution ranges from 10 to 35 percent. SMWD used the numerical value of 20% in its calculation for the RMP threshold determination. SMWD should avoid using averages or assumptions in its calculations. If available, it is preferable that SMWD obtains product data from its supplier showing an actual ammonia concentration or a material safety data sheet. If this data is not available, then it is more conservative to use the maximum concentration of 35% in calculations. This is especially important for the health risk assessments under Rule 1401 and Toxic Hot Spots to conform with standard practices and avoid understating risk.

11. Per the SMWD webpage (Alternative Locations Studied), it appears that coordination with U.S. Fish & Wildlife Service and the California Department of Fish and Game began in 1994. At that time, Tesoro High School was not built and the Upper Chiquita location appeared to be an ideal location with minimal impacts to threatened and endangered species. SMWD appears to have given biological and cultural resource impacts significant weight in choosing the Upper Chiquita location for its new reservoir.

However, once CUSD completed construction and opened Tesoro High School in 2001, SMWD should have recognized that the risk profile of the site changed dramatically. Specifically, a sensitive receptor (Tesoro High School) materialized within 1100 feet of the proposed site. Accordingly, SMWD needs to more carefully consider the risks and potential health impacts of storing and using toxic chemicals so close to the local high school.

In conclusion, I hope that SMWD will remedy the deficiencies in the DEIR so that all risks are properly identified and quantified. Only then can the risks be categorized as significant or insignificant, thereby allowing appropriate mitigation measures to be identified and added to the Final EIR. I am hopeful that the certification process for the EIR will proceed in the spirit of full disclosure and public participation.

If there are any questions, please call me at 949-713-6339.

Sincerely,



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