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December 1, 2005

Ms. Marsi A. Steirer
Deputy Director
City of San Diego Water Department
600 B Street, Suite 700, MS 907
San Diego, CA 92101-4518

Dear Ms. Steirer:

The National Water Research Institute (NWRI) is pleased to transmit this letter on the findings of the Independent Advisory Panel (Panel) to assist the City of San Diego, California, with its study of water reuse opportunities, as directed by the Council of the City of San Diego (City Council).

The Panel determined that a thorough technical review of viable water reuse strategies has been conducted by the City and the proposed water reclamation technologies will produce water that will meet or exceed all health and safety requirements.

Background

On January 13, 2004, the City Council passed resolution No. R-298781, titled *Resolution of the City Council Regarding the Study of Increased Aspects of Water Reuse,* which directed the City Manager to conduct a one-year study to evaluate "all aspects of a viable increased water reuse program, including but not limited to groundwater storage, expansion of the distribution system, reservoirs for reclaimed water, livestream discharge, wetlands development, and reservoir augmentation."

As part of the study process, the City of San Diego requested that NWRI organize a neutral third-party Panel to review the drafts of the reports prepared by the City and its consultants and to offer suggestions for clarifying and improving the study.

Panel Activities

The Panel met on July 13-14, 2004, and again on May 15-16, 2005, in San Diego, California, to listen to a series of comprehensive presentations by the City's staff and consultants regarding the City's water reuse program. The Panel also completed its review of the first draft report of the *City of San Diego Water Reuse Study 2005* (dated May 5, 2005) at the May 2005 meeting, and offered significant suggestions for reorganizing the draft report and recommendations to enhance its technical content.

Based on input from the Panel, a revised interim report draft of the *City of San Diego Water Reuse Study 2005* (dated June 15, 2005) was prepared by the City's consultants to reflect the Panel's comments and concerns. It was also distributed to attendees of the second City of San Diego Assembly on Water Reuse, held on July 11, 12, and 14, 2005. Two Panel members attended this Assembly. The revised interim report was later reviewed by the Panel, which provided additional comments and suggested revisions to the City.

In November 2005, the City submitted the *City of San Diego Water Reuse Study 2005 Draft Report* (November 2005) to the Panel for review. This version of the report reflects the Panel's comments and suggestions regarding the interim report, as well as input from participants attending the second Assembly.

A third Panel meeting took place in San Diego, California, on November 30-December 1, 2005, to review the current status of the study and suggest revisions to the November 2005 report. The Panel's final observations and findings are summarized in this letter.

Findings

The City's staff and consultants are to be commended for the positive and thoughtful approach they used to address the many challenges associated with bringing this complex study to completion in an orderly and timely manner. The Panel believes that the *Water Reuse Study 2005 Draft Report* is responsive to the mandate set forth in the City Council Resolution. The Panel is also pleased with the responsiveness of the City's staff and consultants to the comments and recommendations made by the Panel. The Panel recognizes that:

1. The *Water Reuse Study 2005* has been conducted in a transparent manner with full disclosure. The City's staff has made an effort to engage the public and elicit input through a Speaker's Bureau (98 presentations were made to a wide range of community groups, as of November 15, 2005), a website with an online survey (which has received 5,875 visits), and two Assembly workshops to further engage stakeholders and interested parties (which were attended by a total of 67 citizens and stakeholder representatives).

2. The City's staff has made full public disclosure on both the objectives of the study and reuse opportunities prior to developing the strategies for increasing water reuse.

3. The City's staff has consulted with public health agencies to ensure that the water produced would meet and exceed all health and safety requirements for all designated uses, including indirect potable reuse.

More specifically, the Panel finds that:

1. The *San Diego Water Reuse Study 2005* has been conducted in a scientific manner. To that end, a thorough review of scientific literature, other water reuse projects, and current technologies has been completed. In addition, research studies were completed to answer critical questions regarding appropriate treatment technologies (e.g., reverse osmosis).

2. Because of the location of existing wastewater treatment plants and the distances involved, it is appropriate to consider alternative water reuse strategies for the northern and southern service areas.

3. The water reuse alternatives identified in the *San Diego Water Reuse Study 2005* reflect technically feasible and viable reuse opportunities available to the City of San Diego.

4. The criteria used to evaluate viable alternative water reuse strategies are reasonable and rational.

5. Water produced with the technologies that have been evaluated, including membrane systems and advanced oxidation, will meet health and safety requirements for any of the water reuse strategies.

6. Recycled water is a valuable asset that should be utilized effectively as an alternative source of water.

Conclusion

It is the unanimous conclusion of the Panel that appropriate alternative water reuse strategies for the City of San Diego have been identified, and that these alternatives have been presented clearly so that the citizens of the City of San Diego can make informed choices with respect to water reuse.

Respectfully submitted by the Independent Advisory Panel,

George Tchobanoglous, Ph.D., P.E.
Panel Chair

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Michael P. Wehner

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cc: Jeffrey J. Mosher, NWRI