

**National Inland Desalination Research Center  
Executive Committee Design and Construction Support Meeting**

**New Mexico Water Resources Research Institute  
Las Cruces, New Mexico  
October 2, 2003**

**Participants**

Lorenzo Arriaga - USBR/El Paso  
Bobby Creel – WRRRI  
Ed Fierro – El Paso  
Tom Jennings – USBR/Denver  
Mike Hightower – Sandia  
Paul Kinshella – City of Phoenix  
Mike Landis – USBR/El Paso  
Coy Webb – Holloman AFB  
Brent Watson – USBR/SLC

Mike Norris – USBR/Yuma  
Karl Wood - WRRRI  
Del Holz – USBR/Denver  
Steve Harder - UTEP  
Rick Huff – USGS/Las Cruces  
Jim Sizemore – State Engineers Office  
Glenn Howard – USBR/Denver  
Bruce Johnson – City of Tucson

**Meeting Goals and Objectives- Mike Hightower**

Mike welcomed members of the Executive Committee (EC) to the meeting. Mike reviewed the meeting agenda, and presented the following meeting goals and objectives:

- Update on the facility design and construction status,
- Update on gravity survey,
- Discussion of suggested facility design,
- Discussion of facility management options,
- Coordination of next meeting for 35% design review.

**Updates on the National Inland Desalination Research Facility – Glenn Howard**

Glenn brought up several issues with the EC that have been identified by the facility design team. Glenn handed out a summary of the design issues. There were six major topics that needed to be addressed by the EC.

1. Change in site conditions
  - a. The building is about 16,000 square feet. The report estimated about 13,000 square feet and the drawings in the report show about 15,000 square feet. The EC agreed that the 16,000 square feet is about right which will raise the cost of the building by about \$800K at \$230/sf
  - b. There is no electrical service to the site, which will have to be brought in.
2. Additional land
  - a. The city is willing to provide an additional 11 acres on the north side of the property in addition to the 30 acres already leased . This would cost about \$35K to investigate and clear. EC agreed that it was good to get the land now for future expansion.
3. Building Design Concept Options
  - a. Malcolm Pirnie provided three building design options to try to improve visitor flow and address mechanical room needs and changes in restroom configurations to add showers. The EC discussed all three options and selected option 3 with some suggestions, which moves the restrooms and the conference room locations, enlarges the restrooms for showers, and increased the size of the mechanical room. The additional room was deducted from the water storage and shop areas, but still provides sufficient room for both functions.
4. Well Field Issues and results of the Gravity Survey
  - a. Steve Harder of UTEP discussed the preliminary results of the gravity survey. He made two

transects through the site of the facility, one north to south, of about two miles, and one east to west of about 6-8 miles. The E-W transect went through the facility site west along the railroad spur on to Holloman. The results suggest that the alluvium is generally deepest on the site and begins to reduce in depth the further west one goes. The N-S transect shows that the depths of alluvium north and south of the site are about the same. Steve estimated alluvial depths of about 2000 feet on site and 1000 feet or more along the railroad spur out to the state land we are looking at for a well field.

- b. The results suggest that drilling on site may be fine. This would reduce pipeline costs.
  - c. EC suggested that first exploratory well be drilled on site closer to facility area to help reduce costs.
  - d. EC also suggested that the Stalberg well be tested to see about water quality.
5. Water Rights Issues
- a. EC agreed to try and get a letter from the city to be able to acquire water rights for the facility as an option
  - b. EC also agreed to follow up as a second option to see if we could lease city water rights.
6. Miscellaneous Issues
- a. EA issues. Air Force is working on the EA for the railroad spur with the USBR. Appears that the two federal agencies will be able to work out a mutually acceptable arrangement to satisfy the necessary environmental, cultural, and jurisdictional requirements.
  - b. Sandia is coordinating with a security professional to conduct the risk based security assessment of the facility and site. It will be completed by October 31. The security reviewer wanted to work with the designers, but USBR wants a totally independent review initially. Mike Hightower will provide the security expert the current drawings of the facility and site for the security review.

### **Discussions of Facility Management and Operations Plans**

Tom Jennings led a discussion on the coordination and further development of a management and operations plan that would expand on the initial plans provided in the report to Congress. Based on discussions within the EC the following recommendations and decisions were developed.

1. It was agreed that the director for the facility should be on board by July 1, 2004. That suggests that the solicitation for an operating organization will need to be ready by January to February 2004.
2. It was also agreed that the operating organization should have several key people on board by October 1, 2004. From September 2003 through January 2004 the facility is expected to be in a shakedown mode with the design engineers and the operating organizations should have their key people to support and learn from this start up phase. It was recommended that at least 4 key people be involved including a facility engineer, mechanical technician, and an electronic and facility control technician along with the facility director.
3. The operations management organization needs to be independent, neutral, and research oriented. It was suggested that university participants or university teams be encouraged to consider submitting a proposal to be part of an operating organization.
4. The EC recommended that a prequalification step be conducted. That might include a 10 page proposal with qualifications and proposed key personnel.
5. It was still recommended that the research advisory board consist of water agencies and associations and that those groups need to be actively recruited starting now.
6. There are several tracks of research that are expected at the facility, cooperative research, CRADA's, partnerships, other government agencies, and university research. All five types of research will need to be conducted by the operating organization with equal quality.
7. The USBR agreed to work on some initial prequalification language that we would review in the end of November or early December.

### **Facility Information Presentations**

The following presentations were identified that have recently or will soon be given :

1. Mike Hightower gave a presentation on desal and the Tularosa Basin Facility on September 18<sup>th</sup> at NMSU as part of a water seminar series. It was attended by about 40 people and an article on the facility appeared in the Las Cruces Sun News about the facility.
2. Paul Kinshella and Mike Hightower will give a presentation on the facility at WEFTEC in mid October in Los Angeles.
3. Mike Hightower will be presenting information on the facility to the Sate of New Mexico's Water Resources Committee in mid October and with Bobby Creel at the New Mexico Water Conference in early November.
4. Lorenzo Arriaga will be giving a presentation on the facility to the Paso del Norte binational water meeting in late November in El Paso.
5. The National Salinity Summit has also requested a presentation in December.

### **35% Design Review**

Genn Howard discussed the 35% design review will be conducted by the USBR on November 6<sup>th</sup>. The USBR will post the design drawings on the web on October 31. Glenn provided each EC member with a password to review the documents.

### **Next Meeting**

The EC will meet November 4<sup>th</sup> at the NM WRRI to discuss our comments. Each person is to have a list of comments for the meeting. A recorder will be available to record all the comments. The EC is to look for "fatal flaws" relative to the design objectives that have also been provided by Glenn.