

# RESTORATION ADVISORY BOARD

## Meeting Minutes for Tuesday, March 4, 2003

### RESTORATION ADVISORY BOARD MEETING MINUTES

Camp Lejeune's Restoration Advisory Board (RAB) for the Installation Restoration (IR) Program met at Coastal Carolina Community College on Tuesday, 4 March 2003 from 6:30 to 8:30 p.m. The following individuals attended:

Rick Raines	MCB, Camp Lejeune
Thomas Burton	MCB, Camp Lejeune
Randy McElveen	NCDENR
Nina Mendt	BAKER Environmental
MC Powers	Community Member
Rich Mullins	Community Member
Chuck Kassube	Community Member
Laura Bader	Community Member

#### Welcome and Introductions

Rick welcomes everyone to the meeting.

#### New Business (Mr. Rick Raines)

##### **Community Co-Chair Election**

Mr. Raines reads excerpts from the charter regarding the election and duties of the community co-chair. Volunteers and nominations are requested with no response. Community members decide to postpone any election until the June 2003 RAB meeting. Members also decide that the community co-chair will hold a one-year term and two subsequent RAB Community Co-chairs will be selected simultaneously.

##### **FY03 Site Management Plans**

Mr. Raines distributed copies of the fiscal year 2003 Site Management Plan (SMP) and provided information on the content and changes from the FY02 SMP. Several questions were raised as to the scheduling of work planned in the next several months and the on-going DOD/EPA debate over land use controls. Revised schedules are provided in the SMP, and work at IR Site 89 will begin in May of this year. The land use control debate continues. The DoD is envisioning a new "Long term remedial action implementation plan" which would essentially replace our Land Use Control Assurance Plan. However, regardless of what type of documentation is required, MCB will continue with its

Intrusive Activity Training and including land use controls in the Base Master Planning Process.

### **IR Site 78 and 89 Modeling**

Mr. Raines presented two computer models illustrating IR Sites 78 and 89. The IR Site 89 model depicted the southern extent of Site 89 and showed the areas excavated during the Time Critical Removal Action. The model then gives a 3-D rotating view of the identified DNAPL areas and lithology. Obviously, the conceptual model is not current, the data collected in the latest field events will be incorporated into the model as we move forward at the site.

The IR Site 78 model depicted both the north and south plume areas and offered a strictly data view (flat) and a computer extrapolated view (round). The flat model only provides information on areas where we have actual sample data, the round model makes certain assumptions and fills in data gaps based on these assumptions. The model shows an aerial view of the Hadnot Point Industrial Area and the north and south plumes. The model then flips to a rotating section view which illustrates the plumes vertical and horizontal distribution. Monitoring wells are also illustrated to show where consistent analytical data has been collected.

### **IR Site 78, ORC, HRC Injection**

Ms. Mendt discussed the IR Site 78 Pilot Study that is currently underway. We are utilizing Oxygen-Releasing Compounds® (ORC®) and Hydrogen-Releasing Compounds® (HRC®) at two hot-spots at IR Site 78.

An ORC® has been injected at a vinyl chloride hot-spot at IR Site 78 North. The ORC® is a white powdery substance (phosphate-intercalated magnesium peroxide) that is mixed in slurry with water and then pumped into direct push borings. Once in the subsurface, a chemical reaction begins and the ORC® slowly releases oxygen into the groundwater and results in an aerobic environment in which vinyl chloride can degrade to inert ethene and free chloride ions. A grid was established surrounding the hot-spot (approximately 50' X 20') and injections of ORC® proceeded at 4' intervals bgs. A sampling event was undertaken in January to delineate the treatment area and establish baseline concentrations for vinyl chloride and other contaminants. Subsequent field events will take place in May, August, and next January to evaluate the ORCs® impact on the contaminant plume.

A HRC® has been injected at a trichloroethene (TCE) hot-spot at IR Site 78 South. The HRC® is a thick viscous liquid (polylactate ester) that once injected into the subsurface, stimulates a biological reaction that releases hydrogen. The release of hydrogen forms a reducing environment in which specific microbes will break down TCE into daughter products such as dichloroethene and vinyl chloride and eventually to harmless ethene. A grid was spaced out (approximately 50' X 100') and injections preceded continuously with depth beginning at approximately 50 feet bgs and continuing upward to approximately 12 feet bgs. Again, a sampling event was undertaken in

January to delineate the treatment area and establish baseline concentrations for TCE and other contaminants. An identical sampling program is being performed in this area to evaluate HRC® effectiveness.

In addition to the injection of ORC® and HRC® at IR Site 78, soil vapor monitoring is also being performed. A handout was provided showing this process. Vapor probes are installed at a depth of 5 feet bgs. A syringe is then used to purge air from the probes and surrounding soils. The purged air is then containerized and analyzed for target compounds. These soil-vapor readings will be useful in determining if and how HRC®/ORC® impact soil vapor quality.

### **Conclusion**

The next RAB meeting will include a site visit to IR site 89. The meeting will be held on Tuesday, June 4, 2003. Logistics for meeting time and location will be coordinated prior to that time.

[RETURN](#)