



At the location of the mill's former powerhouse, a water truck is used to control dust where building foundations are being removed. *Tony Reed photos.*

G-P mill site workshop provides public update

By TONY REED
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Though not as well attended as many previous workshops and Town Hall meetings, Monday's community workshop on the cleanup of the Georgia Pacific mill site provided an update on the work being done there. Many agencies have become involved in the cleanup process, and oversight is in transition from the Regional Water Quality Control Board to the state's Department of Toxic Substances Control.

The meeting was moderated by Stephanie Shakofski, of the Center For Creative Land Recycling, a non-profit organization that assists in redevelopment of previously used land. A contaminant hydrogeologist by trade, Shakofski said she has done site characterizations for many years with the U.S. Geological Survey.

Water Board Executive Director Kathy Kuhlman said the site's cleanup has been overseen by the water board since 2003, but due to the discovery of hazardous chemicals on the site, it was felt the Department of Toxic Substances Control would be better suited to handle oversight. She said DTSC informally accepted the responsibility, and should be on board by the end of August.

The water board will remain involved, she said, and will still act as the permitting authority for water related issues.

Denise Tsuji, supervising hazardous substances scientist for the DTSC opened by noting the department's mission to protect the environment and public health. She said the department is still putting together a team of experts to work on the site, including a public participation specialist, a toxicologist and an eco-toxicologist. The department will also send out a survey to collect public input and hold public meetings related to the cleanup.

Georgia Pacific's manager of environmental affairs, Julie Raming, said the team will be compiling an overview of additional assessment which has been performed.

"We will also be doing another review of the pre-foundation [removal] and post-foundation [removal] sampling that has been a part of the coastal development permit application," she said.

Michael Acton, vice president of Acton Mickelson Environmental, G-P's consulting firm, presented slides and



Regional Water Quality Control Board project manager Craig Hunt and Stephanie Shakofsky of the Center for Creative Land Recycling, listen to questions from the audience during an update on the Georgia Pacific mill site.

maps of the site which showed where chemicals have been located. The slides also featured photos of equipment used to collect samples from pond sediment and surface soil.

He said that as new information comes to light about how and where past industrial practices occurred, his team returns to those areas to collect samples that are transferred to Tetra Tech labs for testing.

Saying that over 200 locations have been sampled on the site in the additional assessment phase, Acton showed photos of workers collecting samples using a small drilling rig. A second rig used pontoons and floated on the mill ponds to allow sampling of underwater sediments.

What they found

Acton said petroleum hydrocarbons such as diesel fuel were located in areas where one would expect to find them, such as near the mobile equipment shops.

Pentachlorophenol, better known as Penta, a wood-preserving chemical, was found under some mill ponds and near one planer building.

Polychlorinated biphenyls, or PCBs, were in the greatest concentrations near the machine shop, he said.

Dioxins and furans were found in ash stockpiles and in one pond, and were collected using the previously described equipment, he said.

If necessary, interim cleanup measures will take place to remove contaminants, he said.

Two commonly discovered chemicals on the site were motor oil in soil and benzo(e) pyrene. He said that since levels of benzo(e)pyrene were deemed high, the agency is determining whether it will be necessary to perform intermediate cleanup in areas near dewatering slabs. Benzo(e)pyrene is a polycyclic aromatic hydrocarbon believed to be cancer-causing.

Bridgette DeShields, associate scientist for BBL, said the company is overseeing removal of building foundations while working with all consulting firms to ensure compliance with permit conditions. She said that if interim cleanup measures are not determined necessary in certain areas, the soil would be "capped," or covered with sheets of thick plastic.

She said that about 85 percent of the foundation removal work is complete. DeShields added that, so far, there have been no determinations that interim cleanup measures are necessary below the removed foundations.

She said personnel are taking steps to prevent any impact on wildlife, wetlands or rare plant species. Archeologists inspected the site prior to the foundation removal work and found some Native American artifacts in certain areas, but none where foundation removal is scheduled, according to DeShields. She said a report is being prepared for the

Concrete stockpiles are being covered every day, she said.

DeShields said the removal of underground objects and debris in other areas probably would not occur until spring 2007.

Kay Johnson, principal toxicologist at Tetra Tech, Inc., said the process for determining human health risk is simple and well-defined.

"What we've done is take the risk assessment process, which calculates risk by looking at the combination of exposure and the toxicity of these chemicals, and put those two together," she said. Residents and small mammals were chosen as the group most likely to be exposed to chemicals found on the site, she said. Using a risk-based screening process, Tetra Tech personnel will determine if soil needs to be immediately removed before it's capped, she said.

"The important thing for everyone to understand is that when they [soils] get removed, there will be sampling done below the removed soils, and around the edges, so we really know what's still in the soils," she said.

All data will be compiled into a complete risk assessment, she said, which will inform all agencies about what needs to be done on the site and what areas need to be cleaned up. Once developed, a final cleanup plan will be available for review and comment.

She said Tetra Tech's priority is to make the site safe and usable for future development.

Stewart Holm, principal scientist with G-P, spoke about the sources, exposure and risk of chemicals found on the site. However, his presentation became hard to follow at times, as he spoke in a stream of parts-per-trillion figures, in a soft, low voice. Some audience members leaned forward or cupped their ears with their hands in an attempt to hear better.

Chemicals found on the site fall into four categories. Petroleum hydrocarbons, such as oil and diesel, are consistent with the site's industrial use, and are expected to be found, he said. Asbestos used as insulation around piping, which needs to be



Stephanie Shakofski, right, introduces panelists from several agencies during Monday's workshop. Tony Reed photo.

dioxins, he said.

"One thing about dioxins that is important is that they were never intentionally produced." They are a byproduct of combustion involving other chemicals, he said.

About 98 percent of dioxin exposure to humans comes through the diet, in fatty foods, fish, eggs, cheese and milk, he said. Exposure to dioxin particles on the mill site is not considered to be significant, Holm said.

He said the Environmental Protection Agency's figures have shown dioxin production to have dropped in the U.S. over the years.

"It used to be that industrial sources were a much, much larger percent of the total dioxin sources," he said, referring to a graph. "As you see, industrial sources are about 15 percent of the total. Interestingly enough, burning backyard waste in 55 gallon drums contributes a great deal of exposure at this point in time."

Cigarette smoke, forest fires and cars also contribute to the world's dioxin, he said.

Holm said due to pressure from the EPA beginning in 1985, production of dioxins has dropped drastically, along with human exposure to it.

"Levels continue to decline, as it relates to dioxin concentrations," he said.

Referring specifically to dioxin concentrations found in ash piles on the mill, Holm said stockpiles

on ash concentrations from wood-fired boilers, and that's basically what we would expect," he said. He said that, historically, piles of wood chips were burned in the boiler, but when the wood pile became low, it became exposed to sea spray.

"It's our feeling that those concentrations are resulting from that salt-laden wood," he said.

He added that the ash pile on site is nothing like what comes from cleaning a fireplace, and will not blow around. The ash appears more like soil because it is consolidated and heavily vegetated, he said.

He said mobility of ash pile contaminants via air or water is unlikely, and, once all testing is done, the deposits would be transported to Keller Canyon Landfill, an industrial waste site in Pittsburg, Calif. He estimated that all ash deposits would take less than a week to remove.

Public Q&A

Following a break, audience members asked questions directly of the panelists, beginning with Michael Brady, who asked what sampling would be done below the ocean mean high tide line. Raming said that no data has shown that testing for contaminants is needed on the shore, but future data may result in shoreline testing.

Sierra Club Mendocino Group member Mary Walsh asked if work could cease until DTSC personnel come on board to per-

someplace and you would still be trying to absorb the situation?" Walsh asked.

Tsuiji said G-P may want to move materials offsite, but DTSC will review information generated during the process and may or may not allow that.

North Coast Action member David Russell asked Kay Johnson what screening levels Tetra Tech is using to determine if interim cleanup measures are necessary.

Johnson said that for human health screening Tetra Tech was using residential screening levels.

Russell asked if any concrete had been removed from the site. Raming said some concrete which was thought to be clean was removed from the site to be used as a barricade against trespassing into Campbell Timberland property. She said that G-P is planning to retrieve the rubble and return it to the mill site for testing. Susan Lightfoot later commented that the concrete was taken to Little Valley Road, where she found it removed later.

Local attorney Sean Hogan and audience member Laurel Krauss asked for an estimated length of time for the cleanup, but were given general, wide ranging answers from the panel.

Resident Nancy Barth expressed support for the Coastal Trail development, asking if the trail could be open in segments as work in certain areas con-

assessment process under DTSC oversight.

Resident Judy Williams addressed the reporting of dioxin findings on the site, asking hypothetically if the general public has a realistic perspective on how small a trillionth really is.

Jody Sparks, president of the toxics assessment group, said she had been working for North Coast Action pro bono. Sparks said her only request to DTSC is to advise G-P to cease all work on the site and review the risk to the public and environment.

Shakofski said that under DTSC oversight, there would be more opportunities for public participation.

"Tonight's meeting was more to put information out as a community update," Shakofski told the audience. "I don't want you to read anything more into it than that."