

**Rocky Flats Citizens Advisory Board  
Meeting Minutes  
May 6, 2004  
6 to 9 p.m.  
College Hill Library, Room L211  
Front Range Community College, Westminster**

Victor Holm, the Board's chair, called the meeting to order at 6:05 p.m.

**BOARD / EX-OFFICIO MEMBERS PRESENT:** Suzanne Allen, Joe Downey, Earl Gunia, Erin Hamby, Victor Holm, Bill Kossack, Mary Mattson, Bill McNeill, Andrew Ross, Vanessa Safonovs, Phil Tomlinson / Rich Schassburger (DOE), Steve Gunderson (CDPHE), John Rampe (DOE), Mark Aguilar (EPA).

**BOARD / EX-OFFICIO MEMBERS ABSENT:** Anne Fenerty, Mike Maus, Sean Rea / Dean Rundle (USFWS)

**PUBLIC / OBSERVERS PRESENT:** Alan Trenary (Westminster resident), Rob Henneke (EPA), Roman Kohler (Rocky Flats Homesteaders), Ralph Stephens (Denver), James Horan (Denver), Patty Cafferty (Broomfield) / Ken Korkia (RFCAB staff), Patricia Rice (RFCAB staff)

**PUBLIC COMMENT / NEW BUSINESS:**

There was no public comment.

**New Business:**

In new business, Board Chair Victor Holm raised the need for members to volunteer to serve on the Membership and Personnel Committees. He noted that Anne Fenerty has agreed to lead the Membership Committee, while he will lead the Personnel Committee. Phil Tomlinson volunteered for the Membership Committee, while Mary Mattson, Bill McNeill and Suzanne Allen volunteered for the Personnel Committee. Victor asked that other members contact the office if they would like to volunteer as well. Victor also noted that Earl Gunia has agreed to serve as Chair for the monthly Committee Night meetings.

Earl Gunia asked Steve Gunderson with Colorado Department of Public Health and Environment (CDPHE) to comment on recent news stories about the release of Grand Jury documents. Steve replied that although the news stories said that documents would be released, it turns out that they will need to provide a list of documents or information they would like to see. The Justice Department will then determine if they can have them based on whether they contain classified information. Thus, they will not have full access to the materials to just browse through them. Arrangements are also pending for a possible site tour with the authors and principals of *The Ambushed Grand Jury* book. The tour will be an opportunity for these individuals to point out areas of contamination they feel need to be addressed at the site, based on their personal knowledge.

Mary Mattson asked about a waste shipment mishap that took place in April. Steve Gunderson stated that a waste hauler lost his trailer just when he pulled out onto Highway 93, at the west entrance to the site. There was no damage to the waste containers, which were brought back onsite. The driver admitted he had not performed a visual inspection of the trailer hitch when he coupled with the trailer. Steve reported the driver was fired on the spot for not performing this standard inspection.

Ken Korkia next went over preliminary plans for the workshop on public participation the Board will hold. He has worked with member Mike Maus. They have put together a preliminary agenda that will focus on delivering a "work product" at the end of the workshop. This "work product" will contain ideas and suggestions for future public participation needs and programs at Rocky Flats post-closure. The workshop will include breakout sessions of smaller groups that will focus on public participation needs based on varying levels of participation or interest. These include those who are most intimately involved with Rocky Flats on a regular basis, such as local governments and the CAB, those who like to keep informed about Rocky Flats by periodically attending meetings or occasionally reading reports and other materials, and those in the public at large who may be aware of Rocky Flats but don't actively participate. Each of these groups likely will have different public participation needs and

ADMIN RECORD

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desires for which, hopefully, those attending the workshop can identify and make recommendations. The workshop is planned for a full day on Saturday, June 26. Ken reported he is having some difficulty finding a suitable facility. He suggested the Board schedule time at its May 20 Committee Night to further discuss planning for the workshop.

Ken next asked the Board whether they would like to move the dates of its July meetings to avoid being so close to July 4. The first Thursday of the month will fall on July 1. The Board agreed, since there are five Thursdays in the month, to schedule the Board meeting for July 8 and the Committee Night on July 22.

### **EDUCATION SESSION ON GROUNDWATER CONTAMINATION AND POSSIBLE REMEDIATION STRATEGIES:**

The Board continued learning about groundwater contamination at the site and the possible remedies that might be employed to address it. John Rampe with DOE provided the presentation. John first reviewed some basic site groundwater information presented previously. He noted that contaminated groundwater is shallow and occurs in limited quantities in and around the Industrial Area. The shallow groundwater is not connected to the deeper, regional aquifer. Groundwater follows site topography and generally flows west to east. Contaminated groundwater surfaces before leaving the site, with the primary contaminants being volatile organic compounds, nitrate and uranium. John stated that site groundwater is managed so that surface water quality is protected and that it is intensively monitored with over 200 monitoring wells. The number of wells may decrease after site closure, to around 80.

John next showed a set of maps that depict what the site calls plume signature areas (or PSAs). These plumes, clustered in or near the Industrial Area, contain volatile organic compounds such as tetrachloroethene (TCE) and carbon tetrachloride, two industrial solvents used in great quantities during weapons production. John also showed a plume near the former solar ponds that contains nitrate.

Board member Earl Gunia asked whether there was a nitrate plume associated with the former spray fields. John stated there was not a groundwater contamination issue associated with these areas. Earl noted that the study overseen by the Health Advisory Panel stated there was nitrate contamination in the groundwater. John asked Earl to provide him with the reference and he would look into it. In related discussion, John pointed out that the site operates under two different nitrate standards. One is the drinking water standard of 10 milligrams per liter that the site must meet at the points of compliance. Onsite above the terminal ponds, the site only needs to meet the agricultural standard of 100 milligrams per liter. This latter standard is only during the active remediation of the site, and at closure, the site will need to meet the lower drinking water standard both for water onsite and for water leaving the site.

John next reviewed a matrix that shows the six principal groundwater contamination plumes and some of the possible remedies that might be employed.

- Source removal: contaminated soil would be removed. This strategy has already been done at some of the former burial trenches and will be done for the carbon tetrachloride plume near building 771.
- Hydrogen releasing compound: This method would inject an organic material such as lactic acid into the soil creating a reduced environment by the release of hydrogen. Such an environment promotes bacterial growth that would degrade the volatile organic materials present.
- In situ oxidation: This is a related methodology to above, except a different material, such as potassium permanganate, is injected to create an oxidized environment, which may stimulate different bacteria to help degrade the chemicals present. A question was raised whether manganese build-up might be a problem with this methodology. It was also noted that this method has been used at the Idaho National Lab, and that perhaps the site should contact those who did the work in Idaho.
- Phytoremediation: This method uses plants to draw out the contamination, such as cottonwood trees. It is of particular benefit in areas with nitrate contamination such as near the

former solar ponds.

- **Collect and treat:** The site already employs three passive collection and treatment systems. These systems employ groundwater barriers that funnel contaminated water into a collection system containing iron filings that degrade the volatile organic compounds. The site will likely continue these systems and possibly add others.
- **Biodegradation:** This method relies on natural processes to degrade the contamination over time. There is a vinyl chloride contamination plume near Building 371 where this totally passive approach may be used. Steve Gunderson noted that biodegradation does not appear to work that well at Rocky Flats compared to other places in the country where it has been tried.

John explained that groundwater monitoring will be an important part of whatever remediation strategies are chosen to make sure they are performing as anticipated. Some of the remedies may take many years to accomplish the remediation goals.

Steve Gunderson stated that generally the state is pleased with the tone of the discussions they are having with DOE on groundwater remediation. Although the anticipated plan for addressing groundwater is way behind schedule, work teams comprised of representatives from DOE, Kaiser-Hill, EPA, CDPHE, and Fish and Wildlife are making progress. Some of the things they have agreed upon include locations for post-closure monitoring wells and what they need to do in the future if there is a negative trend in monitoring data.

John concluded by adding that regulatory discussions are beginning that will address where future points of compliance should be located and what regulatory actions might need to be taken should monitoring data indicate a problem. He also stated that long-term monitoring and maintenance needs remain to be determined.

#### **PRESENTATION AND DISCUSSION ON THE POND AND LAND CONFIGURATION ENVIRONMENTAL ASSESSMENT:**

Richard Schassburger of the Department of Energy gave a presentation on the Pond and Land Configuration Environmental Assessment (EA). The EA was released for a 30-day comment period that extends to June 1, 2004.

The draft EA analyzes the changes to the A and B series ponds in North and South Walnut Creeks respectively, removal of roads, contouring of the land, and removal of runoff structures. The EA analyzes the impacts to habitat, wildlife, and wetlands from the construction, floodplain storage, and water quality.

Three alternatives were analyzed for pond configuration and two for land configuration, although specific land conf

One of the purposes of modifying the pond structures is to create a system that would require less active management. The baseline configuration for the A Series ponds is as follows: stormwater is typically routed around Ponds A-1 and A-2 to A-3. From A-3 the pond water is released to Pond A-4, where it is held and sampled before it is released at the dam outfall. Capacity in the A-1 and A-2 ponds was needed in case of a chemical release from the Industrial Area. For the B Series Ponds, water from the wastewater treatment plant was routed to B-3 and stormwater was routed to B-4. Capacity in Ponds B-1 and B-2 was needed in case of a chemical spill onsite.

The proposed action would modify Ponds A-1, A-2, B-1, B-2, B-3 and B-4 to create a flow-through system that does not require pumps and machines to release the water downstream. The proposed action would modify the dam at the end of each pond by constructing a notch to allow the water to spill into the next pond in the series. The stormwater bypasses in each pond series may be closed. Also, because the site will stop importing water this year, the effluent from the wastewater treatment plant would stop.

Changes to the Industrial Area will involve the removal of asphalt on roads and parking lots, contouring to promote storm runoff, and actions that are expected to limit erosion and maintain geotechnical stability for the remedy. Those actions include grading and removal of culverts and storm drains.

In answer to a Board member's question, DOE's John Rampe said the ponds were manmade in the 1950s through 1970s and thinks the terminal ponds were built in the mid- to late 1970s.

John confirmed that the wetlands were regulated even though they resulted from manmade alteration in the landscape. The construction would likely reduce the wetlands acreage. John said that would mean the site would have to mitigate for the loss of wetlands, which could mean mitigation on the site or off the site.

In answer to another question on water and sediment quality, Steve Gunderson of the Colorado Department of Public Health and Environment replied that he thinks all the ponds in Walnut Creek and possibly Woman creek are individual hazardous substance sites. He said the site will be doing more characterization on them. He said that contaminants of concern in the ponds are metals and actinides.

John Rampe said, however, that water that goes through the pond system and leaves the site meets the standards set in the Rocky Flats Cleanup Agreement. Steve said the communities are very interested in seeing that the ponds remain because they act as a filter for contamination. Steve said the Fish and Wildlife Service, which will manage the future refuge, does not want the ponds to stay.

John said there would probably be enough water in the ponds to maintain some residual wetlands. He said the site hopes to have no net loss of wetlands.

A board member asked whether the Environmental Assessment addresses cleanup of the ponds. Rich stated that the cleanup plans will be analyzed in separate documentation. The board member said the documentation for the ponds configuration and the cleanup should be tied together.

Another board member said the Site should determine what kind of plant communities would be able to be sustained in the ponds once the water flow is reduced.

In answer to a question, Rich said the size of the A series ponds range from 0.3 acres to 4.2 acres. The size of the B series ranges from 0.15 acres to 2.2 acres.

Another board member was concerned the site study how the water flow would change any contamination levels in the stream system. Another asked a question about analysis of sediments in the C Series ponds and was told the sediments are below the Rocky Flats Cleanup Agreement action levels.

A board member commented the Board does not have a map of the potential land reconfiguration, but Rich said a map would be sent to the Board office. The board member also commented that if the sediments in the ponds were low, it may be possible to not remediate the ponds, leave the wetlands in place, and reduce the cost of cleanup by not having to perform mitigation. Steve Gunderson, however, said the sediment contamination exceeded the RFCFA action levels. The cleanup under federal law would take precedence over other actions or possible wetlands loss.

#### **REPORT ON THE ENVIRONMENTAL MANAGEMENT SITE SPECIFIC ADVISORY BOARD CHAIRS MEETING:**

Before beginning his report on the Chairs meeting, Victor asked Bill McNeill to report on a summary on risk assessment he had been asked to prepare at the April 15 Committee Night. Bill distributed the summary and noted that it focused on the regulatory process for conducting a risk assessment that is codified in EPA guidance. He provided the EPA references in his summary.

In a related matter, Victor reported that DOE and the regulators have formed a working group to prepare the site's Comprehensive Risk Assessment. This assessment will look at both human health and ecological risk once site cleanup is complete. Although the working group has been meeting for some time, they recently agreed to let members of the general public sit in as observers. He and staff member Patricia Rice had attended their first meeting that day. The topic discussed was ecological risk assessment. The group meets every other Thursday, usually in the afternoon, alternating locations between the health department and the EPA offices downtown.

Turning next to the Chairs meeting, Victor encouraged the Board to read Ken Korkia's summary of the meeting

prepared for the last Weekly Update. With limited time, Victor stated he wanted to focus on ideas for future joint advisory board workshops. Workshop ideas raised at the Chairs meeting include site landlord transitions to Legacy Management (or other DOE offices), orphan wastes, high level wastes, risk assessment, waste transportation, and public involvement. Most of the interest at the Chairs meeting was on public participation, possibly combining it with the landlord transition to other DOE offices.

Most members agreed this would be a good topic. Erin Hamby suggested that orphan waste would be a good candidate as well, since each of the site's in the weapons complex likely have concerns about wastes for which there currently is no disposition strategy, or as Victor pointed out, there might be sites that would become the recipients of these wastes. Victor stated that he will participate in a Chairs conference call later this month. He will confirm that the Board is interested in participating in a workshop related to public participation, with orphan wastes as a backup candidate.

**DISCUSSION AND APPROVAL OF THE RECOMMENDATION ON THE DRAFT 903 PAD LIP AREA INTERIM MEASURE/INTERIM REMEDIAL ACTION DOCUMENT:**

The Board discussed its draft recommendation for the Interim Measure/Interim Remedial Action (IM/IRA) for Individual Hazardous Substance Site 900-11 (903 Lip Area and Vicinity, the Windblown Area, and Surface Soil in Operable Unit 1 [881 Hillside]) dated April 26, 2004.

The IM/IRA covers soil removal for several IHSSs and Potential Areas of Concern (PACs) in the area of the 903 Pad Lip Area, as well as additional remediation in some of the areas. After some discussion, the Board approved the draft recommendation without changes.

In the recommendation, the Board supported the Site's decision not to cover 190 acres in the Windblown Area with dirt because it is impractical and would cause ecological damage.

The board also recommended additional sampling in the area, most notably because of a Kriging map that showed significant distance between sampling points in the area. However, Mark Aguilar of the U.S. Environmental Protection Agency noted that additional sampling had been done. The Board decided not to omit the recommendation, however, noting that DOE would provide an answer to the board's concerns on how much additional sampling had been done.

Some discussion centered on a recommendation for DOE and Kaiser-Hill to omit a disclaimer in its map legends stating neither the government nor Kaiser-Hill assumes responsibility for the accuracy or completeness of maps for the site. One Board member suggested this disclaimer was merely a legal phrase without real meaning. Others think the legend should be removed. The Board allowed the recommendation to remain.

The Board recommended the confirmation sampling plan be included in the IM/IRA and asked that the plan, as outlined at its previous meeting, be explained. Confirmation sampling is done after remediation of each grid area to confirm that surface soil is below radionuclide soil action levels.

In its previous meetings, Board members expressed concern about migration of plutonium and americium from the 903 Pad Lip Area and other areas addressed in the IM/IRA. In particular, they are concerned that residual surface contamination may migrate downhill into the South Interceptor Ditch (SID), C series ponds, and Woman Creek. In its recommendation, the Board asked the site to characterize the sediments in Woman Creek and the C Series ponds to determine if there are significant levels of radioactive contamination in the waterways. If contamination is found in excess of the radionuclide soil action levels, then the Board suggested the sediments should be removed. In this way, it would provide a baseline to determine if these contaminants are continuing to migrate downhill in the future. The Board also asked that monitoring of sediments in Woman Creek and C series pond be included in the post-closure monitoring plan.

The recommendation also asks the site to consult with the Fish and Wildlife Service on revegetation. The Board also asked that the sampling plan for the East Firing Range be included in the document and be open for public comment.

In the final part of the recommendation, the Board asked that any subsurface contamination in areas of slope instability be remediated to surface radionuclide soil action levels because of the potential for subsurface

contamination to be exposed to the surface via landsliding and erosion.

#### **PLANNING FOR UPCOMING MEETINGS:**

At its May Committee Night, the Board will discuss and prepare its draft recommendations on the Pond and Land Configuration Environmental Assessment. They also will discuss preparations for the June 26 Public Participation Workshop.

At the June Board meeting, the agenda will include discussion and approval of the recommendation on the Pond and Land Configuration Environmental Assessment. The featured presentation for the evening will be on soil sampling at the site, focusing primarily on the Buffer Zone and Industrial Area Sampling and Analysis Plans.

At the conclusion of the meeting, member Vanessa Safonovs announced that she will be working in Alaska this summer beginning in a week and extending through mid-August, and then will be returning to school full-time in the fall. She stated she felt it best to leave the Board because she will miss the summer meetings and she is not sure of her availability in the fall. Victor Holm suggested she take a leave of absence for the summer and wait until the fall to decide if she wants to leave the Board on a permanent basis. Vanessa agreed to do so.

#### **NEXT MEETING:**

*Date: June 3, 6 to 9:00 p.m.*

*Location: College Hill Library, Room L268, Front Range Community College*

*Agenda:*

- *Board education presentation on soil sampling at Rocky Flats*

- *Approval of recommendation on the Pond and Land Configuration Environmental Assessment*

#### **MEETING ADJOURNED AT 9:00 p.m. \***

(\* Taped transcript of full meeting is available in the RFCAB office.)

RESPECTFULLY SUBMITTED:

Anne Fenerty, Secretary  
Rocky Flats Citizens Advisory Board

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The Rocky Flats Citizens Advisory Board is a community advisory group that reviews and provides recommendations on cleanup plans for Rocky Flats, a former nuclear weapons plant outside of Denver, Colorado.

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