

**PARK CITY BLUE RIBBON COMMISSION ON THE SOIL ORDINANCE AND SOIL DISPOSAL OPTIONS  
SUMMIT COUNTY, UTAH  
MINUTES OF MARCH 4, 2013  
10:00am – 12:00pm  
Marsac City Hall Council Chambers**

COMMISSIONERS PRESENT: Roger Armstrong, Hans Fuegi, David Hampshire, Moe Hickey, Liza Simpson, Brian Suhadolc, Leslie Thatcher, Tom Ward, Charlie Wintzer, Katie Wright

COMMISSIONERS ABSENT: Chris Cherniak, Chuck Klingenstein, Rory Murphy

STAFF PRESENT: Tom Daley, Joan Card, Matt Abbott, Jim Blankenau

I. Roll Call and Approval of the Minutes

Craig Sanchez offered corrections to typos in the minutes of February 25, 2013. Tom Ward moved for approval of the minutes of February 25, 2013. Brian Suhadolc second. Minutes of February 25, 2013 approved.

II. Facilitator's Opening Remarks

Craig Sanchez reviewed the agenda and introduced the guest speakers, Scott Anderson, who may not be able to attend the meeting, and Brett Mickelson. Mr. Sanchez also welcomed Commissioner Katie Wright.

III. Staff Presentation—What is a Soil Repository vs. a Disposal Facility?

Joan Card reviewed acronyms, emphasizing the acronym "RCRA," the Resource Conservation and Recovery Act, which she said was enacted by Congress in the mid to late 1980s to address the permitting of new solid and hazardous waste facilities. Ms. Card presented on the differences between a repository and a landfill, or solid waste disposal facility. Ms. Card described a repository as a CERCLA concept and offered the definition of a repository from the EPA Region 10 CERCLA web site. Ms. Card indicated that a CERCLA repository does not require a RCRA permit. All discussion in the past couple of years about a "second repository" have related to a CERCLA repository. CERCLA repositories are governed by EPA's Superfund program and do not require local, state or federal permits. Richardson Flat OU1 includes a CERCLA repository as part of the cleanup action there. Ms. Card described the lack of local, state and federal permitting requirements as potentially advantageous.

Ms. Card described a landfill or disposal facility as requiring a RCRA permit and would include state, local and possibly federal permitting. She described Summit County's Three Mile Canyon landfill and Clean Harbors as RCRA-permitted facility. The concept of a potential disposal facility for Park City mine waste is a new concept that would introduce new regulatory requirements. Tom Ward asked if we would discuss the pros and cons of each. Ms. Card responded yes, that would result from today's guest presentations. Ms. Card indicated that there were relatively few CERCLA regulations (a thin booklet) and many RCRA regulations (a thick book). Leslie Thatcher asked if both kinds of facilities could take contaminated soil and Ms. Card responded yes. Liza Simpson asked if a disposal facility would be able to take all waste not associated with a CERCLA operable unit and if all waste associated with an operable unit would need to go to a CERCLA repository. Ms. Card responded yes to both questions, if EPA's cleanup plans required the cleanup to include a repository. Ms. Simpson asked if material from a CERCLA operable unit would be disposed in a disposal facility and Ms. Card responded that such disposal would need to be permitted and allowed by the disposal facility. Ms. Simpson suggested that her question was whether geography determined where soil would go. Ms. Card turned to the EPA Richardson Flat cleanup map. She opined that EPA is not likely to permit a RCRA landfill in EPA's cleanup area because EPA has said there are more tailings in the cleanup than repository space in the cleanup area. Moe Hickey asked who would be responsible for long term care of a repository and a disposal facility. Ms. Card responded that a potentially responsible party or a PRP would be responsible for the repository and a RCRA permit holder would be responsible for the disposal facility. Mr. Hickey asked if the standards could be changed during the lifetime of either type of facility and Ms. Card responded that EPA could change the standards for a facility under its reopener authorities.

#### IV. Guest Presentation—Disposal Facility Regulatory Requirements—Scott Anderson, Director, Utah Division of Solid and Hazardous Waste

Ralph Bohn, Manager of the Solid Waste Section of the Division of Solid and Hazardous Waste of the Utah Department of Environmental Quality presented to the Commission because Scott Anderson was called to a legislative committee hearing this morning. Mr. Bohn's presentation is based on the requirements of a non-hazardous waste landfill, so the material would be required to pass the Toxicity Characteristic Leaching Procedure or TCLP test. Mr. Bohn stated that DSHW has rules and they require a permit application, usually prepared by a professional engineer. Application length and complexity varies. The application and permit must meet siting criteria, include a facility design, a closure plan, a post-closure care plan and financial assurance for closure and post closure. A solid waste disposal facility must be managed by the permit holder for thirty years or until the waste is stable. Stability decisions vary depending on the type of

facility and Mr. Bohn suggests the owners of permitted disposal facilities should consider they must manage the facility in perpetuity.

Siting criteria include location standards such as setbacks from homes and schools, geologic standards, such as not in an active fault or geographic hazard, seismic impacts analysis and design, avoid surface water and wetlands unless the Army Corps of Engineers will be able to issue a federal permit. Many of these items can be engineered to address, except siting in an active fault. There are criteria that avoid or minimize impacts to groundwater, including requirements that relate to distance to groundwater.

Design criteria include a standard liner design. Brett Mickelson passed around a swatch of standard HDPE liner. Leslie Thatcher asked if it was toxic. Mr. Bohn said no and such liners last several hundreds of years with proper use. The standard liner design is based on a standard of lack of permeability. The design also requires a design for one foot of head (water pressure) and a leachate collection system. Mr. Bohn said an “equivalent design” also is permissible, and most facilities use the HDPE with a thin layer of bentonite clay rather than 18 full inches of clay. One facility in the state has no liner and no groundwater monitoring because it is constructed in shale and there is no groundwater. Groundwater monitoring usually is required and involves the installation of at least three wells, one up gradient and two down gradient. Liza Simpson asked if the state performs the monitoring and Mr. Bohn said no, the permit holder is required to complete the monitoring, though the state will review and may participate in monitoring once or twice in a permitting cycle. Katie Wright asked how long is a permitting cycle and Mr. Bohn responded 10 years and then a permit must be renewed under a new application. Groundwater monitoring must involve a statistical analytical method for reporting. Employee training is required. Leslie Thatcher asked if design includes an assumption that people dispose of mercury and other such contaminants and Mr. Bohn responded yes. Operations plans include equipment maintenance, litter control, dust control, occasional covering of the waste depending on type of waste and weather. Moe Hickey asked what the waste cover plan might be in our case. Mr. Bohn responded there might be something like monthly cover with clean dirt. An operation plan also must include contingency plans for fire and operation interruptions.

Mr. Bohn stated that closure requires a cover design with at least no less permeability than the liner. The cover requires a re-vegetated cover, so 18-24 inches of top soil is advised—the rule requires only 6 inches of top soil, but that depth probably is inadequate for revegetation. The rules allow for alternative cover of soil that ensures evaporation before water might filter down to the waste and become leachate. Katie Wright asked if this analysis was difficult given our changing climate and variability of precipitation. Mr. Bohn responded that the rules require the analysis for alternative

cover to be based on the last 5 wettest years on record. He said this would include the worst case scenario by far. The alternative cover must demonstrate human health and the environment will be protected. Liza Simpson asked if asphalt could be approved as an alternative cover. Mr. Bohn said the rigidity of asphalt usually would be problematic because the landfill is likely to subside, but a soil landfill may be different.

Post closure requires continued groundwater monitoring, inspection and repair of the re-vegetation, the cover, and the leachate collection system. David Hampshire asked for more information on the leachate collection system. Mr. Bohn responded that the liner would be designed to slope to a sump. Brett Mickelson passed around a material that can be used for leachate collection. Mr. Bohn said sometimes pipes are used for leachate collection. The leachate water is collected at the sump and evacuated for reuse or disposal, as permitted. Sometimes leachate is used for dust control, sometimes sent to the sewer under a permit or to surface water under a permit. Katie Wright asked if leachate is monitored for air quality purposes and Mr. Bohn responded that only methane gas is monitored at landfills for air quality purposes. A soil landfill would not generate a gas that would be of an air quality concern. Mr. Hampshire followed up by asking if the leachate in a soil landfill would require a treatment system.

Mr. Bohn described the financial assurance requirements for landfills. Only federal and state-owned facilities are exempt from financial assurance. Financial assurance is based on the cost of a third party performing closure and post-closure care because it assumes the permit holder had walked away from the requirements and the state must hire someone to perform them. Roger Armstrong asked what variables affect the cost of closure. Mr. Bohn responded that it depends on the type of facility. For example, the number of groundwater monitoring wells can affect facility costs significantly. Third party closure and post closure costs must be detailed. Financial assurance mechanisms can include a trust fund, a bond, insurance, a letter of credit or an annual local government financial test.

Mr. Bohn state that a pre-application conference is expected if we want to pursue a landfill. He showed a diagram of the permitting process, which includes a public comment process that may take months or more. When an application is complete a draft permit is sent to the applicant then issued for thirty days of public notice and comment and possibly a public hearing. If criteria or met for a public hearing—15 people or a person representing 15 people—a public hearing is scheduled. Any comments on a permit received in the public comment period must be addressed by the Division of Solid and Hazardous Waste. The Division issues a permit based on the technical requirements of the Division's rules. General opposition is not a basis for the state to deny a permit. The Division does not make public policy decisions about the location and certain operations of a landfill such as traffic—those are local decisions. A DSHW permit may be appealed. Liza Simpson asked when the local process typically

occurs. Mr. Bohn responded that local governments might do a lot of work prior to submitting an application to the Division. One landfill permit recently issued was the result of a local process that started in about 1995. Brian Suhadolc asked how long an application process might be in our case. Mr. Bohn responded that it could be about 90-120 days if the application is complete and there is not a lot of public interest. Joan Card said there is a lot of work done in application preparation. Mr. Bohn agreed you might take something like 2 years to prepare an application.

Mr. Bohn then described the Bevill exclusion. He said that when RCRA was enacted there was concern about large volume, low toxicity waste. Congress excluded certain wastes from RCRA regulation in the Bevill exclusion legislation. Bevill excluded waste included waste from oil and gas production, mining and mineral processing waste, coal ash, cement kiln dust. The legislation required EPA to study these wastes and decide how to regulate them. EPA completed those studies and most of the wastes, including mining and mineral processing waste, were determined to be solid waste but not hazardous waste. Mr. Bohn said that as a policy matter the Division of Solid and Hazardous Waste does not consider mine waste generated at or removed from a residential property to be Bevill-excluded mining waste. Leslie Thatcher asked why this was the case if it got there because of mining. Mr. Bohn said the digging and moving of it again is not mining and therefore not excluded from hazardous waste regulation under the Bevill exclusion. Joan Card asked if the intent in part was to address all the large deposits and piles of mine waste, so they would not need to be treated as an unpermitted hazardous waste disposal facility. Moe Hickey stated that he assumes waste cannot be added to an existing excluded mine waste facility. Mr. Bohn responded no, not without a permit. Charlie Wintzer asked about repairs if groundwater monitoring indicates a failure. Mr. Bohn said there would be a certain amount of contamination allowed—up to the drinking water Maximum Contaminant Levels. Groundwater is protected for drinking water. Mr. Bohn said that if Maximum Contaminant Levels are exceeded, corrective action must be taken. Corrective action could include pump and treat, close the facility, or replace the cap.

V. Guest Presentation—Additional Considerations for Disposal Facilities—Brett Mickelson, P.E.

Brett Mickelson began by responding to previous questions about time frames. Mr. Mickelson said the siting for the Cache Valley landfill took about 10 years and the permit application was submitted about a year ago and the permit recently was issued. Tom Ward asked how landfill HDPE liners are seamed together. Mr. Mickelson responded that the seams are welded or melted together and geosynthetic liner materials are overlapped. There are a variety of methods depending on material. Mr. Mickelson said that some of the information he presents may not apply to a mine waste soil landfill. He said that the first decision is to determine if it is your responsibility to take the waste.

Municipal waste landfills are a public health necessity, like water service, so the decision may be different for a mine waste soil landfill. Second, the waste must be characterized. Then ask how much waste you need to manage because landfill capital costs are driven by economies of scale. Mr. Mickelson echoed previous sentiment about the wisdom of segregating clean from contaminated soil.

He described the need for a feasibility analysis. One of the major concerns is location because of hauling costs and approvals from local permitting authority. Mr. Mickelson said the biggest challenge will be the politics of waste disposal rather than the technical design and operation issues. He showed a graph that showed a cost curve that is very sensitive to the volume of waste, or economies of scale—designing and managing small operations means the unit costs will be higher. Mr. Mickelson said the location of the facility may involve local zoning changes or conditional use permits and local relations are typically the hardest part of siting landfills. Mr. Mickelson said the application requirements are prescriptive and involve a several page checklist. The design that goes with an application is more conceptual and final construction designs are completed after permit issuance. Liza Simpson asked about the costs for design. Mr. Mickelson said it could range from \$10,000.00 to \$300,000.00 depending on the site and its issues. Landfill designs involve “air space,” which is the amount of space between the liner and the cover. He summarized that the liner and other infrastructure costs on the order of \$200,000 per acre, so the more air space the more those costs can be covered by a reasonable tipping fee. Charlie Wintzer asked if a facility could be phased in construction and Mr. Mickelson responded yes. He said the first phase or cell would be excavated and that material would cover the first phase, etc.

Mr. Mickelson described the leach collection process again. He said that a mine waste soil facility would include no volatile compounds and would not “off gas.” Liza Simpson asked if a dewatering facility could be co-located at a landfill. Mr. Mickelson said he often sends leachate to POTWs (sewage treatment plants or publicly owned treatment works) under a permit and pays the fee. David Hampshire asked if the leachate would need to be treated for arsenic and other metals first. Mr. Mickelson responded that leaching typically occurs in an acid environment, which he would not foresee if a mine waste soil landfill in which the leachate would be caused by rainwater. Mr. Mickelson also said in our climate, total evaporation would exceed precipitation. Mr. Mickelson continued that the decision to operate a landfill involves decisionmaking about whether operations would be contracted to a private third party or whether the permit holder would purchase equipment purchasing and hire personnel. Mr. Mickelson suggested that a hard or asphalt cap might work in a mine waste soil landfill. Moe Hickey asked if there was a potential energy source at a mine waste soil landfill and Mr. Mickelson said no. Mr. Mickelson said landfills generally are not “money makers.”

Mr. Mickelson reviewed photographs of landfill construction projects. He summarized that landfill politics are challenging. Leslie Thatcher stated she assumed that a landfill would be sited in the Richardson Flat area, but wondered if it is possible to excavate tailings to create a landfill and if there's enough room to do so. Joan Card responded that it is her opinion that EPA likely will not allow a permitted landfill in the area of the planned cleanup in order to reserve capacity for the planned cleanup. Charlie Wintzer asked if the City has every studied the volume of soil that may need to be landfilled. Ms. Card responded that because there has not been a practice of segregating clean from contaminated soil, there is not a solid basis to estimate the future volume of contaminated soil that would require landfilling. Ms. Card suggested that the Soil Commission could recommend that the City pursue volume and other feasibility studies rather than recommend that the City pursue a landfill option directly. She also said such a volume study would not be simple. Katie Wright asked if the Commission should look more broadly at all community hazardous waste needs. It was stated that the City Council's charge to this Commission is specific to soils. Leslie Thatcher asked to confirm whether the mine waste soils in Park City should be treated as hazardous. Ralph Bohn responded that most Park City soils likely would pass the TCLP test, so would not be hazardous under the landfill permitting program. Any landfill approval would require a methodology for characterizing the waste and require segregation between simple solid waste and hazardous waste. Ms. Thatcher asked if a segregation facility makes sense. Brett Mickelson and Ralph Bohn said segregation should occur at the generation sight and not after transfer to another facility. Roger Armstrong asked if RCRA would allow such segregation and Mr. Bohn responded yes. Several indicated that the City's soil ordinance currently does not. Mr. Armstrong asked about financial modeling to determine the feasibility of a facility. Mr. Mickelson responded that it is simple math to determine the volume of soil disposal that will make a landfill cost effective—small volumes will be more expensive to landfill than large volumes. He said it should be an overwhelmingly better deal to site, permit, design, operate, close and post-close a new landfill than to send hazardous soil to an existing permitted facility.

#### VI. Commissioner Discussion and Questions to Staff

Craig Sanchez suggested we start a "parking lot" of issues and discussion of new facility feasibility should be listed in the parking lot. David Hampshire recounted his understanding that at one point tailings material was disposed in the Keetley mine tunnel through a solidification process and asked if something like that might be feasible today. Mr. Mickelson responded that such a facility or approach is worthy of conversation, but it would involve answering a number of questions. Leslie Thatcher suggested the life of the landfill should take into consideration the community's long term needs. Charlie Wintzer agreed that redevelopment can conceivably be a 50 year project. Liza Simpson said the City Council wants to take the long, broad view of the

challenge. Katie Wright noted that liability questions have come up in the prior meetings and she asked when we are covering that and Mr. Sanchez said staff is working on that.

Joan Card concluded the meeting with a policy question for discussion among the Commissioners at the next meeting: Is Park City's soil management challenge a community wide problem requiring a community based solution? She asked the Commission to assume for the sake of discussion that the City has no legal responsibility to provide a solution. She asked the Commission to approach it philosophically. Liza Simpson said the policy question is important because the soil challenge will always be a challenge for Park City based on redevelopment far into the future. Charlie Wintzer responded that the scale of the problem might not be as big as we think, especially in certain areas of town. Moe Hickey asked if we need to schedule more than six meetings. Craig Sanchez and Joan Card suggested we schedule one or two more meetings. Ms. Card emphasized that the Commission does not need to decide that the City should pursue a landfill tomorrow. She suggested the Commission should focus on what information should be gathered, define the policy approach to the problem, short and long term changes to the Soil Ordinance, etc. Charlie Wintzer suggested the Commission could remain alive after an initial set of recommendations to review work the staff has done in an interim. Several Commissioners thought that was a good suggestion.

Moe Hickey moved the meeting adjourned. Han Fuegi second.

The meeting was adjourned.