



**INFORMATION PACKET  
MEMORANDUM**

To: Mayor Applebaum and City Council

From: Jane S. Brautigam, City Manager  
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Date: April 12, 2012

**Subject: Information Item: Valmont Butte Voluntary Clean Up Program Update**

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**EXECUTIVE SUMMARY**

The Voluntary Clean Up Plan (“VCUP”) at the Valmont Butte is under construction; settlements with other responsible parties have been completed, and necessary permits have been obtained. However, the Boulder Weekly and some nonprofit organizations have raised questions regarding various aspects of the VCUP. The city has been diligent and thorough in its investigation, conducted more in-depth testing and sampling of the entire site, and has engaged in several public meetings to answer questions regarding the approved VCUP. Questions raised by these organizations are addressed in this memorandum.

**FISCAL IMPACT**

It is anticipated that the total costs to implement the clean up plan will be approximately \$5 million with the city responsible for 50 percent of the costs. Apportionment of the costs for this effort is allocated between the General Fund 50%, Wastewater Utility 40%, and Open Space and Mountain Parks 10%. When the Valmont Butte site was purchased, it was intended to be used to house a fire training center, wastewater biosolids plant, and as open space.

**COMMUNITY SUSTAINABILITY ASSESSMENTS AND IMPACTS**

- Economic: Economic impacts, including those associated with the consideration of the future use of the property, will be examined with the City Council after completion of the VCUP.

- Environmental: The city is commencing with the clean up and remediation of existing environmental contamination associated with waste products stored on the property from historic activities.
- Social: The clean up will help ensure that the basic health and safety needs of all residents are met with current approved land uses of the property. There is also a historic preservation component of the VCUP to recognize, respect and value our local cultural heritage.

## **BACKGROUND**

On Oct. 4, 2011 the City Council authorized the city manager to enter into settlement agreements with Honeywell International and Tusco, Inc., and to settle a claim that the federal Environmental Protection Agency (EPA) made against the city, Honeywell and Tusco for the response costs that it incurred in its 2004-05 investigation of the property. The general parameters of the settlements are included in the [staff memorandum](#) to the City Council dated Oct. 4, 2011.

The final negotiations with the parties are complete and the settlement agreements have been executed. Due to additional negotiations that occurred after City Council authorized the settlement, Tusco, Inc. contributed an additional \$30,000 to the \$200,000 it previously committed to the clean up efforts on the property. The Honeywell agreement is consistent with the council's authorization.

As part of the settlement, Honeywell agreed to take responsibility for settling the claim to pay the EPA's investigatory response costs. The U.S. Department of Justice insisted that the settlement of this claim be concluded through a Consent Decree, approved by the U.S. District Court for the District of Colorado. This required the filing of a complaint by the federal government against all of the parties to the settlement and resulted in the Court's entry of a Consent Decree on Feb. 29, 2012, approving the terms of the settlement with the federal government.

Background on Valmont Butte Site Management and Remediation may be found beginning on page 174 of the [2012 Council Reference Notebook](#). Additional information and documents are available at the city's website: [www.valmontbutte.net](http://www.valmontbutte.net).

## **ANALYSIS**

The city continues to move forward at its Valmont Butte property (Valmont Butte or Site) with implementation of the VCUP, approved by the Colorado Department of Public Health and Environment (CDPHE). In the last two months, the city and its consultants and contractors have secured the final key permits necessary to begin onsite work. The city's contractor began on March 19 to clear and build haul roads and to stockpile imported clean soils. Excavation work began on April 4 with both the tribe-designated native cultural monitor and the city's archaeologist consultant present. The city anticipates that the VCUP will be completed by the end of 2012.

The city is aware that the Boulder Weekly and some nonprofit organizations (Organizations) with interests in the Valmont Butte have raised questions about various aspects of the Valmont Butte VCUP. The city has carefully reviewed these issues and is confident that all of these topics are ones that were addressed thoroughly by the city and its consultants during the VCUP and Boulder County Limited Impact Special Use Review processes. Below, the city addresses the primary points raised by the Boulder Weekly and the Organizations.

#### Sufficiency of Past Investigations:

When the city first considered entering CDPHE's VCUP program, it retained an experienced environmental consultant, Casey Resources, Inc. ("CRI"), to conduct a thorough review of past investigations of the Site. The city's consultant concluded that none of the past investigations fully delineated exposure hazards at the Site. CRI therefore developed an environmental investigation to fill in these "data gaps" to ensure an effective VCUP remediation plan. CRI performed a radiological and heavy metals survey to identify areas of soil contamination requiring remediation. The Site was screened for metals contamination in the soils on a 50-ft, 100-ft or 200-ft grid. In addition, a radiation survey was completed on 25-ft transects across the entire Site, and the interiors of all buildings on the Site. The CDPHE-approved [Investigation Report](#) is on the city's website.

CRI identified 14 areas of the Site, in addition to the two tailings ponds, that require remediation. The primary constituent of concern is lead, which is co-located with elevated arsenic and radiation levels. The approved VCUP provides for the consolidation of contaminated soils from around the Site and tailings materials from the Secondary Tailings Pond into the Primary Tailings Pond. Construction specifications and designs have been developed that provide for a durable, engineered dirt and rock cap intended to prevent prairie dog encroachment over the long-term.

#### Groundwater Conditions at the Site:

The Boulder Weekly and the Organizations state that there is insufficient information about whether there is contaminated groundwater flowing from the Site to the north. First, only limited groundwater occurrence has been identified onsite, and that is at the east end of the Site. The Butte itself is a barrier to groundwater flow to the north. EPA's [2005 Site Assessment](#) states that the east-west trending volcanic dike (the Butte itself) rises 200 feet above the surrounding plains and is three miles in length. The fact that a man-made dam was built to control surface water flow where the Butte dips does not change the subsurface conditions (i.e., the geologic barrier). In addition, the permeability and porosity of silt and clay soils at the Site as documented with soil borings is very low; therefore, the mobility of water through the Site is very low. The man-made dam along the Site was sampled in September 2004, and was found to be dry (i.e., no evidence of groundwater flow). Sampling shows that the tailings themselves are dry, except for a few isolated areas of perched water that do not have contact with the regional groundwater. Finally, 12 domestic water supply wells north of Valmont Butte were sampled in 2004, and none of the wells showed evidence of groundwater contamination from the Site.

### Location of Third and Pearl Material:

The Boulder Weekly and the Organizations have questioned whether the city has accurately identified the location of the Radium 226 “Third and Pearl” material from the Boulder Housing Authority’s (precursor to the Boulder Housing Partners) 1971 construction site. The city is confident that the identified location of the Third and Pearl material is accurate and that it will be covered with the previously described engineered cap during clean up. The city’s consultant did an extensive review of historic documents to identify the location of the Third and Pearl material. The city’s consultant determined the exact location by using measurements from the existing buildings shown in a 1971 aerial photograph and the location of the Valmont Cemetery parking lot (not by measuring from the western edge of the tailings pond cover, as stated by the Boulder Weekly). The location identified by the Boulder Weekly is the same location identified by the city’s consultant, as shown in Figure 4 (page 79) of the VCUP. The preliminary design drawing presented in the VCUP did not illustrate the cover material covering the radium 226 pit, but the more detailed final cover design extends over the pit.

### Cemetery Property:

The Boulder Weekly and the Cemetery Association raise concerns particular to the adjacent cemetery property, including that:

- 1) the city failed to consult with the Cemetery Association,
- 2) the city should perform ground penetrating radar (“GPR”) at the cemetery parking lot area (located on city property) prior to excavation,
- 3) the city should have conducted sampling at the cemetery, and
- 4) the city may cause the cemetery to become contaminated through its remediation work.

As the city has discussed with the Cemetery Association on multiple occasions, GPR is effective to locate subsurface metal objects, but is not reliable for identifying skeletal remains. Instead, the city has engaged an archeologist to monitor all ground disturbing work, anticipated to go down to 18 inches, within 100 feet of the cemetery boundary. This is a more conservative requirement than the county’s permit condition of a 50-foot monitored boundary and is intended to ensure that if remains are uncovered, they are handled appropriately, per a county-approved Archeological Monitoring and Discovery Plan. This approach is more reliable and will be more protective of potential remains than GPR.

Regarding sampling on the Cemetery Property, there is no justification to sample or remediate the land of an adjacent property owner where the city is not the cause of any historic contamination that might exist on that property. However, the city, as the present owner of the Valmont Butte, is committed to cleaning up its property. As to concerns about remediation-related impacts, the city is implementing numerous precautions to preclude contamination migration offsite during remediation, including: dust suppression to meet a zero observable dust requirement from construction-related activities; a perimeter air monitoring program in accordance with USEPA protocols and requirements; and a Storm Water Management Plan approved by CDPHE and Boulder County, with appropriate Best Management Practice controls (silt fencing, vehicle tracking pads, strategically placed sediment control features).

### Prairie Dogs:

Prairie dog control is a requirement of the State of Colorado [environmental covenants](#) for the tailings ponds. In 2006, tissue samples were collected from prairie dogs on the tailings pond at Valmont Butte to test the amount of uranium, arsenic and lead on or in the animals. As anticipated, traces of the contaminants were found on the prairie dog pelts. The Colorado Department of Public Health and the Environment (CDPHE) determined that prairie dog contaminant levels were not high enough to pose a risk to human health or the food chain. However, the Colorado Department of Parks and Wildlife (CPW) indicated that the prairie dogs were not good candidates to be donated to an animal recovery program (black footed ferret or raptor) or to be relocated to another area due to contaminant exposure risk to other species. As a result in 2008, the city used lethal control over a 25-acre area that included the primary and secondary tailings ponds of Valmont Butte. In conjunction with use of lethal control, a barrier was constructed around the area to prevent prairie dogs from returning to the site, as required by the covenant agreement with CDPHE. In the original and subsequent years, through an annual lethal control permit, prairie dogs have been removed using lethal control on the tailings ponds.

The city's preferred method of lethal control is the use of carbon dioxide (CO<sub>2</sub>) and individually trapping the animals. The application of CO<sub>2</sub> is considered humane, and minimizes impacts to non-target species that may be in the burrow system. In the case of Valmont Butte, the city chose to use ground fumigants for lethal control due to the risk of human exposure to the contaminants in the soil and on the prairie dogs while handling the animals. The city's preferred method of ground fumigant is carbon monoxide. Carbon monoxide was initially used at the site in 2008 (two treatments), but with limited success (approximately 20 to 25 percent mortality). The initial carbon monoxide treatments were followed by aluminum phosphide, which is a more effective method of lethal control, but is considered less humane to the animals. Aluminum phosphide continues to be used at the Butte due to its effectiveness.

With respect to these special circumstances, the prairie dog management strategy includes:

- continuing consultation by Valerie Matheson, Urban Wildlife Conservation Coordinator, with the Prairie Dog Coalition on treatments at the Butte;
- lethal control in the form of ground fumigants for an additional 30 acre area;
- erecting a barrier to prevent prairie dogs from re-entering the area; and
- removal of prairie dogs for the next five years as the site revegetates.

### **NEXT STEPS**

The next update on VCUP implementation will be provided as a June 2012 Information Packet item, and the city will continue to post relevant documents on the city's website ([www.valmontbutte.net](http://www.valmontbutte.net)) as cleanup activities continue at the Valmont Butte. For questions, please contact Joe Castro, Facilities and Fleet Manager, at 303-441-3163 or [castroj@bouldercolorado.gov](mailto:castroj@bouldercolorado.gov).