ROCKY FLATS STEWARDSHIP COUNCIL

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Jefferson County -- Boulder County -- City and County of Broomfield -- City of Arvada -- City of Boulder
City of Golden -- City of Northglenn -- City of Westminster -- Town of Superior
League of Women Voters -- Rocky Flats Cold War Museum -- Rocky Flats Homesteaders
Arthur Widdowfield

MEMORANDUM

TO: Stewardship Council Board
FROM: Rik Getty
SUBJECT: Update on Dam Breach EA/AMP and Changes to RFLMA Points of Compliance
DATE: March 22, 2011

We have scheduled 30 minutes for the downstream communities (the cities of Broomfield, Westminster and Northglenn), DOE, CDPHE and EPA to update the board on the dam breach environmental assessment (EA)/Adaptive Management Plan (AMP). We will weave into the conversation DOE's proposal to move the Indiana Street water points of compliance to the eastern edge of the DOE lands.

As Stewardship Council staff has communicated to you, DOE has delayed issuing the dam breach EA as it works with local communities and others to resolve a number of outstanding issues. (DOE has initiated an AMP planning process in an effort to address and resolve their concerns.) The AMP, in short, is geared towards reassuring "an engaged public on how the Proposed Action would be monitored and eventually implemented. DOE intends that the AMP and the EA decision document will be finalized in April 2011."

To date, DOE has hosted six well-attended meetings of the AMP working group. There have been three AMP meetings since the February 7th Stewardship Council meeting. DOE wants to finalize the AMP and issue the EA according to their original schedule.

DOE AMP Timeline:

- December – Early March: AMP team will identify measurements, controls and actions
- Late January – Late March: AMP Team will draft the AMP
- Early March – Early April: DOE will incorporate AMP commitments into the EA
- Late April: DOE will finalize the AMP and issue the EA

The February and March meeting summaries are attached. All of the meeting summaries can be found at: http://www.lm.doe.gov/Rocky_Flats_AMP.pdf. In addition the following contains information on the proposed dam breaching: http://www.lm.doe.gov/Rocky_Flats_NEPA.pdf.

Also attached are the following documents which are new since the last Board packet:

- 2-15-11 Broomfield letter to DOE suggesting new language for the AMP
- 3-2-11 Broomfield letter to DOE requesting items be included in the AMP
- 2-1-11 Broomfield letter to CDPHE requesting delay of POC moves pending AMP outcome
- 3-4-11 CDPHE response to Broomfield concerning delay of POC moves

Beginning with the first meeting and continuing through the most recent meeting there have been a consistent set of common positions adopted by the cities and the Woman Creek Reservoir Authority. They are as follows:

1. Institutional Control (IC) prohibiting excavations below 3 feet in non-remedy areas
    a. Risk assessment of sub-surface soils in regard to the IC
    b. Environmental covenant in regard to the IC
2. Monitoring points in the Walnut Creek and Woman Creek drainages
3. Levels of contamination that would require DOE to close the valves at terminal ponds A-4, B-5, and C-2
4. Monitoring protocols
5. DOE's obligation/commitment under EA/AMP to monitor water quality
6. Water lease with Broomfield
7. Standley Lake Protection Project (Woman Creek Reservoir) operating agreement
8. Contingency plans
9. Explanation of the reason or basis for proceeding with the proposed action
10. Present Landfill pond dam breaching
11. Requests for more timely information exchange concerning water quality issues

If there is not enough time prior to the Board meeting to review all of the attached material, I recommend you review the letters and March 3rd AMP meeting summary. Notes from this meeting provide a glimpse into the ongoing AMP discussions. There are several contentious issues still undergoing discussion, and reaching consensus agreement on these issues will be challenging.

Finally, DOE has agreed that the next AMP meeting will be determined by completion of the draft AMP. They propose to have the meeting one week following distribution of the draft AMP. During that meeting, DOE plans to discuss the draft and hopes to achieve as much verbal agreement as possible before sending the document out for written comments. DOE will notify the working group as soon as possible of the projected completion of the draft AMP, then will schedule a discussion meeting.

Please contact me if you have any questions.

NOTES SUMMARY
AMP development working group meeting
02/03/11

Follow-up action status:

- State issue letter on IC?
  - CDPHE will keep people informed and provide a letter as soon as it is ready
- Letter from DOE re water lease?
  - DOE will provide letter concerning water lease in the next few weeks when it is completed
- Broomfield – city manager sent letter to CDPHE asking to hold off RFLMA until AMP done.
- Broomfield – doesn't want to go too far down AMP until IC issue resolved and can't indicate support through AMP until issues resolved. Doesn't want to discuss triggers, etc. because IC issue is fundamental – legal issues must be resolved. Will have to withdraw participation in AMP process if path forward on ICs not know.

Questions:

- Will a new contact record be issued re subsurface IC modification?
  - Will be done when RFLMA parties' consultation on a path forward is completed.
- Will this IC change have public comment?
  - Still working on defining the process and what's needed to make the change. DOE explained contact record process used to document RFLMA Party consultations and that they are posted to Rocky Flats LM website for public information. RFLMA parties are not sure if IC clarification will reach threshold requiring public review and comment, but proposed changes will be result of RFLMA Party consultation and public will be kept informed of path forward. CDPHE said IC resolution is a priority.
- Briefing – environmental covenant vs. restrictive notice (see end of notes)
- Was a risk analysis done for soil below 3 feet? Broomfield wants clarification – believes a risk assessment for soil below 3 feet is needed before can change IC/covenant. Citations/quotes from CAD/ROD: pages 47, 54, 66, 70. Broomfield will send to DOE in an e-mail.

Discussion topic 1 – Triggers to close C-2 valve in flow-through (need a strategy)

- South-facing hillsides and 903 lip area (wildfire)
  - DOE - some lightning strikes in north side, but no wildfires have occurred in this drainage to date
- Exceedance of standard at SW027 – trigger?
  - Need to decide what will trigger at GS01, GS31 and/or fence line(any downstream POC), based on 30-day, 12-month average?

    - WCRA - with any exceedance would like to see C-2 closed until source located. Focus on SW027 – perhaps 12-month average?
- Exit strategy after closing valve (to reopen)?
    - SW027 can be a trigger to show something has gone wrong, need to identify steps to close valve during evaluation to identify the issue and steps and criteria to re-open valve.
    - Seasonal?
        - Low-flow vs wet years – may not have enough data to meet criteria to resume flow-through in dry year.
    - Within normal variability?
        - Issue of single bottle exceedance – could be settling problem, C-2 only has by-pass water, not Woman Creek flow
- When POC changes, this decision matrix would be modified accordingly.
    - Response could be based on whether using upstream data or downstream data.
- Is there a trigger based on level of flow? (pending rain event)
    - WCRA – flow-through is a test/proof of principal
    - DOE – concentration and how fast it flows is what matters. Closing valve based on flow raises a technical concern, stops step-wise understanding of final breach and downstream data collection.

Topic 4 – Response Actions to SW027 exceedance in 2010

- Is there intent to let SW027 response vegetation grow for a growing season before go to flow-through? WCRA recommendation
    - DOE – wattles are short-term, vegetation long-term.
    - SW027 response is to accelerate vegetation establishment.
    - There would be a trade-off of losing a year of flow-through data
- Is flow level/storm event a trigger

Broomfield question on flow-through operation.

- WWE evaluation – what are flow conditions downstream with valves open? Was that evaluated?
    - It falls between the scenarios they evaluated. Not relevant, was a worst-case floodplain analysis for the two alternatives,
- Request – show flow rate out of pond with valve open in 100 year event
    - Valve would not be fully open during flow-through. Won't open valves all the way, flow restricted by the diameter of the outflow pipe. Already have inflow, attenuation and outflow information.

Topic 5 – Minimizing missed sampling periods at GS01

- Concern is missing sampling during large precipitation events
    - 2 cases:
        a. Bottle fills and we can't change right away
        b. Can't get to the bottle or the flume is flooded – too much water
- WCRA recommends back-up bottle, or bigger bottle, in place that picks up when 1st bottle gets full, especially at GS01

- DOE will research to see if back-up bottle or larger bottle is feasible, effective.

Topic 3 – Communications/info provision to WCRA

- WCRA requests increased communication between DOE and WCRA so can do real-time water management
- Share data with WCRA as DOE gets it to help with reservoir management – fence line info is a priority.
  - What kind of time frame the AMP would provide for notification of WCRA?

Topic 2 – Additional AMP-specific data collection

- AMP-specific data collection in Woman Creek
  - Pu/Am with solids
- Would be nice to use this period to understand how system works before any review to change AMP.
- Focused data – like additional sampling in Walnut Creek
- Turbidity probes – GS31 most critical
- SW027 tend to get rising limb – add downstream of pond C-2 as well to see how C-2 responds to events (GS31?), TSS info
  - Want rising limb to be AMP specific for downstream of C-2 for data collection. See how C-2 responds to worst case while recognizing not have any base data.

Topic 6 – AMP re-evaluation timeframes and triggers

- Evaluate data with annual report data or quarterly after annual report or technical meetings?
  - Not resolved yet
- Revisit AMP at "no less than" (possible AMP modification)
  - Periodic reviews – two year review period
  - Set criteria for reviews
  - Recognize steps for re-evaluation and modifications
- Email communication as things happen
- Comment – Broomfield will submit draft AMP language

Request – Plots for Walnut Creek for April storm similar to Woman Creek for next meeting.

Future meetings:

- Feb. 10, 1 p.m.
  - Walnut Creek
  - PLF and No Name
- Feb. 17
  - Ecology
- March 3

- ❖ Woman and Walnut Creeks > start to agree

Environmental Covenant vs Restrictive Notice briefing:
Difference between covenant and restrictive notice

- May not be any difference
- Covenant assumed to be based on state's police power, but it doesn't specifically say and there are disagreements on what it means and how binding it is.
- Restrictive notice – binds anyone with interest in the property
- Practical difference
  - Covenant may not be binding on all parties (prior interest)
- Public notice if do change
- If in doubt, use restrictive notice
- Any changes to covenant would be made at the same time as any changes to the IC.

NOTES SUMMARY
AMP development working group meeting
02/10/11

I. Walnut Creek Drainage

a. FC-1 – seeps in this area?
   - No significant seeps. There will always be some seeps as the area is on top of the Laramie formation, there is a low spot on top of the Mesa from the borrow material removed during cleanup that was filled.

b. FC-2 – review of data for: GW 37505, 37405, 37705, 20705, 20505, 20205, 42505. Data from GW wells and how they contribute.
   - 37 wells – no changes, below Pu standard and no significant nitrate.
   - 20 wells, fairly consistent, 20205 most interesting – increasing trend in U, concentrations below threshold, some VOCs since before closure, some carbon tet.
   - 42505 – AOC well, nothing remarkable, very low results, nothing special.
   - Question – 771 wells, how long for groundwater to move from basements to wells? Can't really tell, 20205 is carbon tet well, estimate 5 feet per year flow rate, not showing much

c. SW018 VOCs, why not Pu/Am?
   - Used as an investigative location for source evaluation, sample more to "not find than find", collected for 3 years, then exit strategy of no analysis if no hits at the downstream POEs. Currently take samples and hold for 6 months, but don't analyze any longer. (Pu/Am analysis was not required by RFLMA Attachment 2.).

Broomfield question – looking for a written response on what happens if a hit.
   - Get into RFLMA response.

d. FC-3-Discusion of current non-RFLMA sampling
   - Review of non-RFLMA sampling per Contact Record 2010-03. What is the basis for not sampling Pu at SW093 or LANL?
     - Pu and LANL already done at SW093

e. Review of what the non-RFLMA data reflects for this past year.
   - North Walnut creek – nitrate shows a lot of variability, U – bounces up and down, similar variability pre and post closure
   - South Walnut – downward trend for U as you go down stream
   - LANL analysis – do it when you have some U event you want to evaluate. It is a way to tell if a known source area is contributing.

II. Sampling during flow-through

a. When will the valve be opened?
   - Depends on NEPA decision from DOE. If a FONSI is issued, some time after that if DOE determines they are ready.
   - Sample pre-release? Yes, pre-discharge sampling.

- Process? Pre-discharge sample; open valve; approximately two weeks at lower flow (300 gpm) to bring dam levels down; continue automatic flow-paced sampling at POCs; continue monitoring at Indiana POCs just like doing now.
- What triggers closing valve if there is an exceedance? Normal RFLMA process – consult with RFLMA Parties and make determination of next step
- Sample results turnaround? 28 days normal; can request shorter turnaround but increased costs. Pu/Am cannot be done faster than about 1 week.
- Broomfield - concerned that it will be months before data is validated. DOE – If see results of interest, can accelerate normal validation process – can get validation in a day or two.

Question and related discussion – If there is an exceedance upstream will you close the valve – for example a 1-time grab sample?
Answer – No, but would close the valve if there is an exceedance at a RFLMA POC and consultation with RFLMA Parties determines closing the valve is the right thing to do.

Broomfield – there is a public perception that if you have an exceedance, how can you not close the valve and let it go downstream – we need a trigger that would close the valve at any exceedance.
DOE – an isolated hit upstream is not an indication of a threat to surface water quality, not a threat to drinking water supplies.

Broomfield – water on site has to meet all use standards.

DOE – yes, this is a remedial action objective of the CAD/ROD – will take time to achieve RAO.

Westminster – perhaps the response to an upstream exceedance at a POE would be to crank up the time frame for turn-around of POC samples.

DOE – It is a wrong message to send to close the valve as a first response. It (closing) is one response that would be based on the threat to water quality and what the data says.

Broomfield – It seems very simple to shut the valve, rather than assuming it is a drastic measure.
DOE – It is drastic if it is based on a single grab sample. The water from the site is not used for consumption. The point is to not overreact because that can send the wrong message, and the regulators have the choice to close the valves anyway. The message is, the dams are not needed for protection, and also all downstream drinking water is protected already. We would not see an impact from only one hit. The standards are based on long term exposure.

Broomfield – Take it to a middle ground?

CDPHE – It might rise to a level where that (closing the valve) would be the logical move upon evaluation of mitigating actions, it's on the list of responses to consider.

Broomfield – We want to know what process will be when there is an exceedance, what will make DOE close the valve?

DOE – Trending, level of exceedance (out of expected variability), consultation with the agencies, what other steps should be taken (based on what ongoing data shows). We need to base closure on a sampling protocol. But if the numbers are continuously high, it would represent an issue and would justify closing the valves to evaluate.

Broomfield – How will you collect nitrate samples at the POCs?
DOE – Presently grab samples. We are looking at use of flow paced automated sampling for 7 days (based on the hold time for nitrate) or could continue to use grabs. Could start a comparison of collection methods in the spring.

- Broomfield - how often will the data be reviewed, trended, evaluated?
  DOE – will work with you to determine process/timing. Depends on what/how long it takes to collect enough data.
- Broomfield – what are the key objectives for non-RFLMA monitoring?
  DOE – CR 2010-03 provides the objectives, want to understand the ambient conditions for uranium; SPPTS influence on nitrate, uranium; precipitation runoff, performance criteria for remedy – revegetation, removal, etc. AMP process DQOs, triggers. What is the fate of nitrate in the stream reaches. Could be site specific or segment specific standards. Noted that Great Western Reservoir has agricultural standards, while water supply standard at Rocky Flats. DOE will distribute the citation prior to the next meeting.

b. Volume of terminal ponds at 10 percent of capacity?
   - A-4 = 3.3 mill gal
   - B-5 = 2.47 mil gal
   - C-2 = 2.31 mil gal

Westminster – what do you mean when you say you'll open the valves "when ready?"
DOE – need a FONSI; pre-discharge sample; field practicalities, i.e. if installing new flumes; vegetation status, will discuss with the AMP group.

Major storm events, etc.

- Similar response at Walnut and Woman Creeks
- Different concerns/contamination

III. Annual costs to maintain terminal ponds and Present Landfill pond
- Current cost figures were distributed at the meeting and will be attached to this notes document.
- Broomfield still wants to see a contingency plan for the PLF pond in flow-through. Broomfield said they don't believe in dilution, or letting contaminated water flow off site.

Next meeting – 1 p.m. Thursday, Feb. 17, 2011 at the Rocky Flats Site office
- Topics to be discussed
  - Evaluation steps
  - Data communication
  - How long AMP monitoring will be conducted/exit strategy
  - Ecological improvements/changes that will result from flow-through/dam breach

NOTES SUMMARY
AMP development working group meeting
02/17/11

Broomfield (BF) opened the discussion with suggested language to include in the AMP that was modeled on the language in RFLMA. The purpose of the language was to establish in writing the level of participation for interested parties.

- BF described their perception of the AMP process and believes the objective of the AMP is to asses the flow-through condition over the next eight years to determine whether to breach or not. Identified three objectives.
    1. Prior to breaching want to reassess conditions via the AMP at set time intervals.
    2. Want to define the process of assessment – define explicitly who is involved.
    3. Wants technical information available at an earlier timeframe than they have previously.

Summary of discussion of BF's proposed language.

Role of parties in AMP decision making:

- BF wants to be sure they are at and remain at the table during the process of making the dam breach decision. BF wants to be at the table, not necessarily as regulators. Don't want to over-ride RFLMA, want an understanding of the parties involved, access to data and the ability to discuss the data in a timelier manner as part of the consultative process. Concerned that DOE has not provided the model that will be used to define roles in the process. Would like to see that.
- DOE – regulators are already defined and consultation is part of the process. AMP is not a regulatory document or agreement. The regulatory process is defined in RFLMA and the other stakeholder involvement is defined in the Public Involvement Plan (PIP). BF proposed regulatory language to a process that doesn't fit under the regulatory model.
- CDPHE – BF extracted language in an agreement between the DOE, EPA, and the state. It's more appropriate to use language from the PIP for the AMP process because the AMP is not regulated by CDPHE or EPA. Talked about this before, the possibility of adding language to the PIP, and BF indicated that the existing language is sufficient. Think BF already has assurances that it will get all the info needed.
- EPA – under NEPA, the initiating federal agency has sole authority.

Summary of discussion of how data will be shared:

- DOE – Data should be available on Geospatial Environmental Mapping System (GEMS) immediately after it is validated. DOE can commit to making data available on a specific basis. DOE has an existing public involvement process that DOE uses to share information, wonder what BF's basis for changing the timing of notifications? The cities/public are notified at the same time as the regulators under RFLMA. DOE

understands that participants want earlier information, but why decrease the current timing? What is the technical basis?

- BF – Dealing with flow-through is a different condition, could present problems. No technical basis, just want a shorter time than in RFLMA. If we can identify triggers we may not have to worry.
- DOE – what is the relationship between the AMP and some of BF's recommendations, for example, violation of institutional controls?
- BF – DOE will be digging below 3 feet and BF thinks it affects the whole system. Dams are BF's last line of defense. The whole reason BF is here is BF doesn't want the terminal dams breached, but after 7-8 years we might have enough data to breach. The site is dynamic enough that DOE can't make a breaching decision. BF wants to be part of and be able to provide input in the decision-making process. BF wants more opportunity to participate as things are happening on site. Wants language in AMP that ensures BF is part of the process when changes are made to the AMP. Doesn't want new regulations, but wants a role on consultation and consensus over the next 8 years. Want to be involved in the resolution of disputes, but will differ to CDPHE and EPA.

Summary of discussion of topics provided by DOE.
Evaluation steps -

- DOE – need to develop monitoring objectives (MO). What do the cities want to do and what does the data mean? Focus is AMP, what is the objective of the monitoring? Goal is to demonstrate to the communities through the AMP process that there will be no exceedances and determine how to apply the new data to this process. DOE identified examples of MOs, which are the type of information to establish – non-RFLMA sampling to establish ambient standards; spatial info on reaches of streams where DOE thinks it knows, but not have enough evidence yet; impact of revegetation and erosion control, which is expected to be positive. Overall goal of MOs is to get more detailed data.
- BF – what about nitrates, for example, how they change through the system?
- DOE – Uranium is major issue (in Walnut Creek drainages) because of high background and low standard. Can also include other constituents as part of the sampling data evaluation at no extra cost, but they are not a compliance issue at the POCs. Issue is learning where in the system the U is picked up – where and how natural U is occurring at Rocky Flats.
- BF – Are MOs a link to operational changes? BF sees three operation actions that need an evaluation process – open valve – close valve – breach dams – BF questions for the AMP are deciding whether/when to open/close/breach.
- DOE – also looking at habitat improvement and returning the areas to a natural condition. Want to stabilize soils and water levels at dams to establish the ecological fluctuation.

Summary of discussion of Woman Creek Reservoir Authority (WCRA) recommended monitoring objectives by number (WCRA list attached at the end of the notes)
#5 – additional AMP specific monitoring

- WCRA – concerned with Pu/Am in Woman Creek, data collection in current locations pretty good to get what data is needed at flow-through. Want a refined

assessment (real time assessment) of solids as they move through the stream. MOs to help determine the relationship between turbidity and Pu/Am concentrations. Use rising limb to collect TSS data, then connect turbidity to TSS, if found to be useful.

- WCRA – exit strategies and 2 year review. Want review of AMP at no more than 2-year intervals to review all the information listed and have good background data – want to look at all the documentation, not just a snapshot.
- DOE – flow at 027 is about every other year, so 2 years is a good timeframe.
- BF – what about GS031, it won't be a RFLMA reporting location after it is not a POC?
- DOE – could continue sampling at GS031 under AMP, can put in turbidity sampling, rising limb etc., it just won't be a POC. Can use data in AMP based on MO goals. Monitoring data will be available to public on GEMS, which is posted at nearly the same time as DOE receives the validated data.

#6 – communication issues

- WCRA – Will AMP result in annual report, part of RF site annual report?
- DOE – Re-thinking including in annual report because annual report is a regulatory requirement. May split it up, may put on different schedule than site annual report, but would use all the data. One possibility is separate periodic reports, but with summary included in annual report. Communication process will be included in AMP.
- WCRA –technical meetings, regular or periodic meetings? Specify in the AMP? One problem, GEMS data doesn't give any evaluation, just raw data.
- DOE – could add an explanation at quarterly meetings to add AMP information, but don't want to use RFSC to hold technical meetings. Could agree to a regular schedule or to schedule meetings when there is a trigger from the data.
- WCRA – need an exit strategy, perhaps for individual pieces of the AMP, strategy should be staged.
- DOE – need parameters of actions, or a range of behaviors, with flexibility for implementation.

WCRA question – Where did the dirt in the dams come from?
DOE response – still researching that information. (Information was obtained following the meeting that the material removed during spillway excavation was used in dam construction.)

Ecological outcomes of dam breach anticipated in Draft EA presented by site ecologist.

- Will result in losing open water habitat. Because pond bottoms will be filled, it will create a flat, shallow emergent wetland. Areas above water line level will develop upland vegetation, grassland. A native seed mix will be planted. Downstream areas will be similar, dependent on what vegetation can grow in the armoring used in spillways.
- Changes – will lose some aquatic animals, water fowl will lose pond surfaces, but some bird species will decline and others increase.

- Preble's' Meadow Jumping Mouse – open water is not Preble's' habitat, emergent wetlands are critical mouse habitat, so will increase the amount of mouse habitat on site. By enhancing habitat, will be following directives for federal facilities.
- Trees and herbaceous habitat in areas downstream of the COU boundary could benefit from more consistent flows during the growing season in a flow-through/breached condition.
- WCRA – when open valve for flow-through will pond bottoms be flattened (as projected for final breaching)?
- Grass and erosion control matting will be placed on the exposed pond bottoms.

Action Items
DOE – distribute sign-in sheets for previous meetings.
distribute table of topics of agreement
BF – will send MOs to DOE

Next meeting – Thursday, March 3, 1-4 p.m. at DOE RFS office.

DRAFT – WCRA-Requested AMP Inclusion Items_ 2-17-2011 Meeting

The following text comprises the initial draft list of WCRA-requested items for inclusion in the AMP. We look forward to additional discussion and anticipate an opportunity to modify this list, as needed, through edits to the draft AMP and/or other future communications with DOE prior to AMP finalization.

1. **AMP Triggers to Close C-2 Valve During Flow-through Conditions -** Items WCRA requests in the AMP as triggers for closing the Pond C-2 valve during flow-through conditions (i.e., prior to breaching):

- Wildfire in C-2 drainage,
- Significant slumping/ erosion observations in C-2 drainage, and
- Exceedance of standard at GS31, GS01 or SW027

We also recognize that in the event a valve is closed, the AMP will need reasonable language to allow for re-opening of the C-2 valve following review of available data. WCRA would like the process to include a public technical meeting to present the findings of the follow-up analysis and conclusions/basis to reopen.

2. Communications/Info Provision to WCRA – WCRA requests additional communications/information from DOE. Currently, WCRA only receives notice if an exceedance occurs at GS01. Throughout the AMP implementation (during flow-through conditions and following dam breaching), WCRA would like to receive notification of:

- Sample collection at GS01,
- Water quality results as soon as DOE receives them (GS01 [priority], GS31, SW027) – pre-validation/validation notification, and
- Flow data (in an electronic format on a quarterly basis or upon request if more immediate information is needed).

3. Response Actions to SW027 Exceedance in 2010 –WCRA requests that initiation of flow-through at Pond C-2 wait until at least one growing season has passed to allow the reseeding portion of the SW027 response to 'take root'. We also request a review of the revegetation status prior to valve opening.

4. Minimizing Missed Sampling Periods at GS01 – WCRA recommends use of backup sample bottles (master-slave configuration at bottle-#1 flow pace) to minimize the chance/duration of missed sampling periods at GS01. DOE noted that a larger sample bottle could provide the same result, and this might be easier to implement due to the use of "refrigerated" samplers which have ample space for larger bottles. WCRA would request/support either option. There should be no change in the number (monthly sample count targets) of samples collected due to implementation of this approach.

WCRA also recognizes that missed sampling intervals could still occur due to flooding and/or equipment failures. This measure is only to minimize missed sampling during the cases when bottles fill due to rapid changes in flow rate before field staff can visit the sampling station.

5. Additional AMP-Specific Data Collection – WCRA proposed studies that could provide useful information to monitor Pu/Am migration under the new hydrologic conditions of flow-through. These data would also provide information to evaluate in the event of an exceedance at GS31 or GS01:

- Collection of continuous (15-minute) turbidity data below pond C-2 (GS31), and
- Collection of rising limb storm event samples below Pond C-2 (GS31). WCRA is interested in collecting Pu/Am and TSS. This approach would allow for successful collection of TSS, which is currently often missed due to hold-time issues.
- AMP exit strategies to discontinue this additional sampling – Assess need and value during 2 year review (consider event sizes captured, any trends, etc.)

6. **AMP Ongoing Evaluation and Reassessment**–WCRA supports the following approach to ongoing evaluation and periodic reassessment of the AMP:

- Evaluation of the AMP sampling results within the annual reports to allow for consideration of results with all of the data collected at the RFS,
- Discussion of AMP sampling results at periodic technical meetings (greater frequency than annual/quarterly reporting),
- A timeline of no-more-than 2 years before revisiting the AMP. The 2 year timeframe seems reasonable to allow for adequate data collection to assess the changing conditions, noting that the size of hydrologic events captured in the 2 year window should be considered in the evaluation. The "no more than" language leaves the door open for more frequent reassessment as warranted by any unanticipated findings.
- Participation by downstream communities in AMP reassessment/revision.

NOTES SUMMARY
AMP development working group meeting
03/03/11

Broomfield (BF) Monitoring Objectives (MO) (attached at end of notes)
(Notes are referenced to topic number on Broomfield's list of MOs)

Broomfield initiated the discussion by reviewing their proposed MOs (attached for reference following notes). Key points are noted below.

- BF – Broad range of concerns. Not trying to supersede, over-ride or replace RFLMA. Want more frequent reporting of things already monitored, more frequent monitoring
- BF – like to review draft AMP 2 weeks before last AMP development meeting
- BF/Woman Creek Reservoir Authority (WCRA) – go over draft AMP at last AMP development meeting.
- DOE – agrees the AMP participants will have time to review draft before finalizing.

1: Dams remain in place until 2036

- BF – not support any breach before 2036, but willing to negotiate specifics. Disagree with DOE position on water lease. Willing to negotiate modification of lease.
- DOE – will post DOE's letter to Broomfield on water lease to LM website. DOE does not agree with Broomfield's contention that the lease precludes dam breach. DOE considers the water lease is not appropriate subject for the AMP. This issue will be handled by the attorneys.

2: Flow-through operations

- BF – Triggers for closing or reopening valves during flow-through. Want same type of triggers as proposed by WCRA.
- DOE – flexibility on response to water quality issues is discussed in the EA and will be included in AMP.

3: Criteria for breaching dams

- BF – Identify data used to support breach. Want 2, 5-year review (5YR) cycles under AMP before breaching to show site is stabilized. If lease not modified, 5YR cycles start in 2036, could start sooner if lease modified.
- RFSC – define terms, elevated, etc. used in bullets
- BF – AMP working group would define in AMP.

4: Institutional controls issue needs to be resolved before AMP finalized

5: AMP deadline – should reach consensus prior to finalizing, not rely on targeted date (April 2011)

6: Downstream cities should be involved in future changes to the AMP

- DOE – The AMP will include language defining the process.

3: criteria

- BF – want to see the data proving the remedy is effective. Could have rising trends that are below the standards that could indicate problems (shouldn't breach). Not looking at this as part of the CERCLA process, looking at as a time frame for breaching. Monitoring is needed to demonstrate the remedy is working, has had sufficient time to reach steady state and no problems remain. Then BF could relax stance that ponds are the last line of defense. Need at least 2- 5Yrs with no

exceedance for any of the AMP criteria. Any time one of the criteria is exceeded, would reset the starting point for the 2- 5YR cycles before a determination to breach. BF is looking for criteria (that must be met prior to breaching) that would allow BF to support breaching the dams. 2-5YR cycles would allow BF to go to its constituents and say DOE has meet the criteria, so it is okay to breach dams.

- DOE – not agree to set 2 5YR cycles as basis for breach decision and restarting clock after any exceedance. During 5YR regulators verify protectiveness of remedy. Would BF accept the protectiveness statement to verify remedy is protective? DOE is concerned about language addressing operation of treatment systems as a trigger for re-starting the review cycle would provide a disincentive to improvements to treatment systems. DOE is obligated to continue to try to improve treatment effectiveness. (referring to 4th bullet). DOE will always provide information to the public regarding proposed changes to treatment systems. Proposed 5YR review criteria language will be in the draft AMP for discussion by the AMP participants prior to finalizing.
- CDPHE – some things, data, could lead us to look at carefully, but don't necessarily mean the remedy is not protective.
- CDPHE/DOE – both have issue with setting back the clock, too many restrictions that may not be related to remedy effectiveness.

4: institutional controls

- DOE – the process to resolve the IC issue regarding excavation below 3 feet is being discussed by RFLMA parties and will need to be resolved prior to breaching the dams. That doesn't preclude completing and implementing the AMP.

5: AMP deadline

- DOE – the April deadline is for completing the plan, the adaptive management components of the plan will continue for the long term, probably post-dam breach. Plan needs to be completed in order to issue the EA/FONSI in timely manner to meet scheduling and procurement requirements.

6: process for involving communities in AMP decision making

- DOE – public involvement and participation is based on the Public Involvement Plan. Language addressing notification, discussion, reviews and AMP modifications will be included in the AMP document. DOE invites full participation of CDPHE and EPA.

BF question: will CDPHE delay the proposed RFLMA mods until after the AMP is completed as requested in the BF letter to the director?

CDPHE: the final decision on the RFLMA mods is not tied to the AMP, but is still in process.

7: Monitoring programs

- BF wants to continue monitoring at identified locations for 2-5YR cycles, wants to keep the existing monitoring locations, regardless if they are changed under RFLMA.

Indiana St. monitoring

- DOE – does not see replacing Indiana St. locations in event they have to be removed due to Jefferson Parkway construction. Won't seek to maintain locations on non-federal land and doesn't want to reinstall monitoring locations outside of NPL site.
- BF – If parkway authority built monitoring stations, would DOE monitor, operate and maintain the new locations?

- DOE – would agree to operate for some time, probably not 2-5YR cycles, but for some period of time as long as have access. If property changes hands, that changes the legal status. Federal government needs agreement to access private land.

Present Landfill/No Name gulch

- BF – wants to analysis of all analytes on Table; 1 new groundwater well above confluence with No. Walnut Creek; continue monitoring at locations that will be eliminated from RFLMA.
- DOE – the locations indicated by BF are not being eliminated, they will continue to be monitored under RFLMA.
- CDPHE/DOE – All of the analytes on Table 1 are based on state standards, and includes the contaminants of concern for Rocky Flats and many additional analytes that were included prior to closure. Analytes are evaluated under RFLMA as specified for each particular monitoring location. Table 1 does not include all "priority analytes". The lab reports the entire suite of analytes for each particular analytical method, including many that are not included on Table 1. DOE reports all laboratory results for all of those analytes and evaluates those that are listed on Table 1.

North Walnut Creek

- DOE – questions why BF wants daily grab samples for nitrate. What is the objective, benefit? There is no way to do grab daily. Possibly do automated sampling, but need to resolve holding time issues. Need to prioritize so the cost-effectiveness of the additional monitoring can be determined. May prefer to spend the limited budget on other analytes like U at other locations rather than for nitrates at SW018. Have to think of what it will buy you.
- BF – wants to make sure that DOE is capturing the same data downstream during flow-through as is currently being captured at upstream locations. It is tied to the uncertainty with the proposed RFLMA changes. Objective of daily monitoring is to get a better resolution of data to show how treatment units are working.
- DOE – already doing bi-weekly grabs, SW018 has no history of nitrate. As for the proposed RFLMA mods, DOE isn't changing any of the RFLMA monitoring currently in place.

South Walnut Creek

- DOE – not doing enhanced nitrate sampling because nitrate is not a concern there, have never seen it and there is no source there based on current monitoring.
- BF – would like to look at it for a while to prove there is no source or concern, especially during flow-through. Looking for a holistic response, how do all the segments interact at the POCs? Also want the POCs that are proposed to be modified to remain as AMP monitoring below confluence of N and S Walnut Creeks. Also want DOE to keep reporting on GS-03.

Groundwater Wells

- BF – increase frequency of groundwater monitoring. Higher frequency of data obtained by more monitoring during runoff season. BF would like to see more refined data to assure the site is stable before breaching dams.
- DOE – What is the value of more frequent analysis of groundwater wells when constituents are below standards and the wells are above the area where the dams will be breached? Runoff probably won't make much difference, AOC wells are out in

front of the plumes, so wouldn't see much there. If don't see contamination above the standards in the wells now, how would more frequent data be of benefit?

Additional discussion

- BF – this group should define consensus and have that language in AMP. How many more meetings until April AMP deadline? Want to see AMP language before hold any more meetings. Want written response to their requests before seeing AMP draft. Doesn't have to be detailed response, but would like a yes or no. Could this group discuss comments on the draft AMP rather than waiting for written response?

  DOE – will lay out in the AMP how the AMP consultation process will work. Scheduling future meetings depends on when the AMP draft is completed, but DOE is committed to flexibility in making this process work. Responses to monitoring objectives provided by BF and WCRA will be addressed in the draft AMP. A lot of the yes or no response should be apparent from the notes summary. Discussion of draft AMP comments could occur at the next AMP development working group meeting.

WCRA monitoring objectives follow-up discussion

- WCRA – What if C-2 is discharged before the AMP is completed? Would like to see turbidity monitoring installed before the next discharge if possible to create a baseline for future flow-through. Multiple bottles with more than one composite per event could be beneficial for rising limb sampling at GS-31.
- Previous recommendations were based on RFLMA sampling staying the same. Propose that RFLMA changes act as a trigger for AMP review and revision. Either require GS-31 sampling in AMP, or, if RFLMA changes, that would trigger an AMP review. If GS-31 sampling goes away, want to continue sampling at a nearby location for two more years just to make sure.
- Recommendations all based on taking a look at the AMP every 2 years.
- Westminster – will the AMP include specifics on how monitoring locations will be set up?
- DOE – that is too specific for AMP. AMP will have the "what and where", similar to RFLMA, and the "how" of specific monitoring could be added to an attachment to the Site Operating Guide (RFSOG) that is being developed that addresses non-RFLMA monitoring.

Next meeting

- DOE – next meeting will be determined by completion of the draft AMP. Propose 1 week following distribution of draft AMP to discuss and achieve as much verbal agreement as possible before sending out for written comments. DOE will notify the working group as soon as possible of the projected completion of the draft AMP, then will schedule a discussion meeting for approximately 1 week after the draft is distributed.

For reference, Broomfield's monitoring objective proposals are attached below:

The City and County of Broomfield's Requested Items for the Rocky Flats Surface Water Configuration Environmental Assessment – Adaptive Management Plan

Suggested Language for the Adaptive Management Plan
Rocky Flats Site, Jefferson County, Colorado

Submitted by the City and County of Broomfield
February 15, 2011

Introduction

Suggested Language. Broomfield suggests that the language below be included in the Adaptive Management Plan ("AMP") agreement related to the U.S. Department of Energy ("DOE") proposal to implement a flow-through condition at the terminal dams which may lead at some time in the future to a determination to breach the terminal dams.

In summary, the language here replicates (with suggested additions) the language of:

(a) paragraph 11 of the Rocky Flats Legacy Management Agreement ("RFLMA") concerning "consultation; " and

(b) section 6 of Attachment 2 of the RFLMA concerning "Action Determinations" at the site, i.e., "triggers" which the parties have been discussing at the AMP meetings.

Invitation for additional language. The parties to the AMP discussions may wish to suggest additional language for the AMP Agreement including, but not limited to,

(a) additional "triggers" or "reportable conditions" which would require notification by DOE to the parties and which would begin the consultative process, and

(b) variations to the listed "flowcharts" which are appended to the RFLMA and which are listed in paragraph 3, below.

Need for "default action" language? The parties to the AMP discussions may wish to suggest "default actions" which would be implemented by DOE depending upon the data or circumstances which might arise.

For example, as discussed in recent AMP meetings, is it advisable to require DOE to "close the valve(s)" on one or more of the terminal dams in the event of:

(i) any particular size of precipitation event; or

(ii) the occurrence of any particular type of data result,

in order to pursue the consultative process identified herein?

Suggested Language for the AMP Agreement

1. Parties to the AMP.

The parties to this Adaptive Management Plan Agreement ("AMP Agreement") shall include the U.S. Department of Energy ("DOE"), the U.S. Environmental Protection Agency ("EPA"), the Colorado Department of Public Health and Environment ("CDPHE"), the City and County of Broomfield ("Broomfield"), the City of Westminster ("Westminster"), the City of Northglenn ("Northglenn"), and the Woman Creek Authority ("WC Authority") (each individually referred to herein as a "Party" and collectively referred to herein as the "Parties").

2. Consultation Upon the Occurrence of a Reportable Condition.

Upon the occurrence of a reportable condition at the site (as defined herein at paragraph 3, below), the Parties agree to follow a consultative process in implementing this Agreement.

"Consultation" and "the consultative process" mean the responsibility of one Party to meet and confer with another Party and any appropriate contractors, consultants, advisors, or representatives of the Parties in order to reach agreement, to the extent possible, regarding a proposed course of action.

Consultation involves a cooperative approach to problem solving at the staff level. Consultation includes the responsibility to raise any concerns or suggestions regarding the implementation of this Agreement as soon as the concern or suggestion is identified, to maximize the chances of reaching agreement before (i) action at the site is taken, (ii) a document must be submitted or (iii) a regulatory determination rendered.

Consultation means timely participation at the staff or management level, as appropriate, to reach consensus among the Parties so that there is a clear understanding of the actions or direction to be taken based upon the outcome of the consultative process.

3. Action Determinations Based on the Occurrence of Reportable Conditions.

(a) Whenever any of the following reportable conditions are observed at the site, DOE, in cooperation with all of the other Parties to this AMP Agreement, shall follow the appropriate procedures in this section.

Reportable conditions include:

 Exceedances of surface water standards at any surface water and/or groundwater monitoring locations as monitored by an Party (??? consistent with the attached flowcharts ???);

- Evidence of significant erosion in areas of residual subsurface contamination;

- Evidence of adverse biological conditions;

- Conditions affecting the effectiveness of the landfill covers;

- Evidence of violation of the institutional controls;

- Physical control failure that may adversely affect the remedy; or

- Other abnormal conditions that may adversely affect the remedy.

(b) When reportable conditions occur (except in the case of evidence of violation of institutional controls as described below), DOE will inform all of the other Parties within three (3) calendar days of receiving the inspection reports or other data (validated or otherwise).

(c) Within fifteen (15) calendar days of receiving inspection reports or analytical data (validated or otherwise) documenting a reportable condition, DOE will (a) if requested by any Party, meet with the other Parties to review the reports or other data, and (b) submit a plan and a schedule for an evaluation to address the condition.

(d) DOE will consult with the other Parties as described in Paragraph 2 of this AMP Agreement to determine if mitigating actions are necessary. Final plans and schedules for mitigating actions, if any, will be agreed to by the Parties hereto as contemplated by the consultative process defined in paragraph 2 of the AMP Agreement and approved by CDPHE in consultation with EPA. DOE is not, however, precluded from undertaking timely mitigation once a reportable condition has been identified, provided that such actions are subject to subsequent agreement among the Parties to either (a) confirm such mitigation as appropriate or (b) to make changes to such mitigation if warranted by the data and circumstances.

(e) (i) In the case of evidence of violation of institutional controls, DOE will notify the Parties hereto within two (2) calendar days of discovering any evidence of such a violation, and at that time will initiate the consultative process identified in paragraph 2 herein to address the situation.

(ii) In no case will DOE notify the other Parties hereto more than ten (10) calendar days after the discovery of a situation that may interfere with the effectiveness of the institutional controls. DOE will notify the other Parties hereto of the actions it is taking within ten (10) calendar days after beginning the process to address the situation.

(f) The Parties hereto will consult whenever reportable conditions are observed or at the request of one of the Parties when routine communication processes are not sufficient or appropriate. The objective of the consultation will be to determine a course of action to address the reportable condition and to ensure the remedy remains protective.

(g) Results of consultation will be documented in contact records and/or written correspondence which shall be communicated to all the Parties hereto as soon as such contact records or written correspondence are prepared.

(h) Surface water and groundwater monitoring results will be evaluated as described in the following flowcharts:

- Figure 5 Flowchart – Points of Compliance
- Figure 6 Flowchart – Points of Evaluation
- Figure 7 Flowchart – Area of Concern Wells, Boundary Wells, and SW018
- Figure 8 Flowchart – Sentinel Wells
- Figure 9 Flowchart – Evaluation Wells
- Figure 10 Flowchart – RCRA Wells
- Figure 11 Flowchart – Groundwater Treatment Systems
- Figure 12 Flowchart – Original Landfill Surface Water
- Figure 13 Flowchart – Pre-discharge Pond Sampling

The City and County of Broomfield's Requested Items for the Rocky Flats Surface Water Configuration Environmental Assessment – Adaptive Management Plan

March 2, 2011

The City and County of Broomfield (Broomfield) requests that Department of Energy, Office of Legacy Management (DOE-LM) include the following items in the Adaptive Management Plan (AMP) for the Draft Rocky Flats Water Configuration Environmental Assessment (EA), dated April 2010. The items below are not mutually exclusive and any proposed changes or revisions will require further evaluation and review by Broomfield.

Broomfield has stated in various written and verbal communications that it is concerned with the DOE-LM's proposal to breach the dams so soon following closure. Broomfield believes that the following items will address unanticipated changes in environmental conditions or the subsequent information that might effect the environmental protections as analyzed in the EA, and provide Broomfield with the necessary technical data and assurances regarding the long-term performance and reliability of the remedy.

Please provide us with a written response on our request before the draft AMP is released for comment and review. In addition, we are requesting that DOE-LM distribute a draft copy of the AMP 2 weeks before the final working group meeting. The final working group meeting would be reserved for reviewing and discussing the draft AMP before it is finalized. We are looking forward to continuing our technical discussions on the AMP so that the items listed below can be included in the development and implementation of the AMP.

1. **The dams for Ponds A-4, B-5, and the Present Landfill should remain in place until 2036.**
   - The water lease with Broomfield specifies that the DOE-LM must collect and test the water prior to release as part of the operations for the A- and B-Series Ponds until 2036.
   - The terms and conditions of the water lease for this mode of operation shall remain in effect, unless otherwise amended in writing and approved by both parties.

2. **The goals and objectives of the AMP must clearly identify the triggers for commencing and ceasing flow-through operations and the criteria that will be used to decide whether or not to breach the dams.**
   - The following language was extracted directly from the sixth paragraph of a handout entitled "*Rocky Flats Surface Water Configuration Environmental Assessment, Adaptive Management Plan Purpose and Process*," that DOE provided at the January 13, 2011(AMP) working group meeting:

     DOE envisions a flexible process that integrates long-term monitoring and analysis with adjustments to management actions to address unforeseen changes in site operations. ... Examples of elements that could be adjusted include, adding water monitoring locations and modifying monitoring frequency, setting parameters for the

decision to breach, and determining the specific time-frame for breaching the terminal dams.

- Consistent with the information provided, the DOE-LM should include a contingency plan for opening and closing the valves during flow through conditions (similar to the triggers provided by the Woman Creek Reservoir Authority at the February 27, 2011 AMP working group meeting).
- The breaching of the terminal ponds should be based on meeting data quality objectives rather than a specified timeframe as stated in the EA.

3. **Broomfield proposes that the criteria for breaching the dams for Ponds A-4, B-5, and the Present Landfill should be based on the successful demonstration that the remedy continues to function properly without significant issues, site changes, or water quality exceedances for 2 consecutive 5-year Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) review periods.**

- The determination of successful site operations will include, but are not limited to, the following performance indicators:
    - No water quality exceedances or elevated levels at any surface water Points of Compliance (POC), surface water Points of Evaluation (POE), surface water monitoring at Indiana Street (regardless of the designation as a POC, or not), and groundwater Area of Concern (AOC) wells.
    - Surface water and groundwater monitoring are not showing increasing trends.
    - Sustained functional performance of the groundwater treatment units without changes, modifications, or alterations to the treatment process.
    - No significant erosion activities, landslides, slippage, slope failure or other geological activity where surface or subsurface soils are mobilized or disturbed.
    - No abnormal or unforeseen condition that could have an adverse effect on the breaching of the dams.
- The eligible review period will not commence until after the year 2036 unless the DOE-LM's Water Lease with Broomfield is amended. (If the Broomfield Water lease is amended, the review period would not begin until the AMP has been finalized and a Record of Decision (ROD) for the Rocky Flats Surface Water Configuration EA is published in the Federal Register.)
- Whenever there is a water quality exceedance, modification to the site, or soil movement, the beginning of the subsequent CERLA review period would become the new starting point.
- Similarly, if the Colorado Water Quality Control Commission (CWQCC) adopts less stringent water quality standards or stream segment designation than what currently exists at the DOE-LM's request, then the new staring point would coincide with the beginning of the next CERCLA review period.

4. **All outstanding legal issues related to the institutional controls for the Central Operable Unit and compliance with the Resource Conservation and Recovery Act (RCRA) for the Present Landfill must be resolved, including any requirements for public participation, before the AMP is finalized.**
   - The DOE-LM has an opportunity to continue the public process of developing an AMP while proposed changes and amendments to the institutional controls in the Proposed Plan, Corrective Action Decision/Record of Decision (CAD/ROD), Rocky Flats Legacy Management Agreement (RFLMA), and the Environmental Covenant are being considered.
   - Broomfield has not been provided with any written responses to whether the breaching of the Present Landfill complies with the RCRA and the Colorado Hazardous Waste Act (CWHA).

5. **The preparation and release of the AMP should be linked to achieving a goal based outcome rather than an arbitrary deadline.**
   - There is no regulatory basis for completing the AMP by April 2011.
   - Since the breaching of the terminal dams is not planned for many years in the future, development and preparation of the AMP should be based on meeting the needs of all the parties.

6. **The AMP needs to include a process where the downstream communities are involved and "at the table" when any future changes, modifications, or amendments to the AMP are being considered, or when any significant decisions to implement the AMP or Proposed Action in the EA are made.**
   - Any changes, modifications, or amendments to the AMP should be made through a consensus building, public participation process.
   - DOE must invite the Colorado Department of Public Health and Environment (CDPHE) and the Environmental Protection Agency (EPA) to all future technical meetings related to the AMP.

7. **The following surface and groundwater monitoring programs, delineated by stream segment, needs to be included for the full duration of the AMP implementation and continued for a minimum of two complete CERCLA review cycles after the last terminal dam at the site is breached.**
   - The proposed sampling program listed below should be included in the AMP regardless of any current or future proposals to amend the RFLMA.
   - If the Indiana Street monitoring sites are forced to be relocated due to the construction of the proposed Jefferson Parkway, DOE will install and continue to operate new surface water monitoring sites at the western boundary of the Jefferson Parkway right-of-way.

Present Landfill / No Name Gulch

Objectives: (1) Ensure that the groundwater treatment unit for the Present Landfill continues to function properly and (2) water quality standards for a closed landfill are being met.

- Conduct monthly/quarterly analyses of all analytes listed in the Rocky Flats Legacy Management Agreement, Attachment 2, Table 1 dated February 2007 for the following locations:
    - **PLFSYSEFF** (this location is being proposed for elimination from RFLMA)
    - PLPONDEFF (or NN01 after the Present Landfill dam has been breached)
    - **New No Name Gulch AOC Well** (This would be a new groundwater monitoring location above confluence with North Walnut Creek)

North Walnut Creek

Objectives: (1) Ensure that the Solar Ponds groundwater treatment unit continues to function properly and (2) water leaving the site meets CWQCC surface water standards.

- Increase the frequency of the monitoring program from semiannually to monthly during the runoff season and after significant precipitation events for the following monitoring locations listed in the Rocky Flats Legacy Management Agreement, Attachment 2, Table 2 dated September 2009:
    - **SW-018** (Current RFLMA monitoring is limited to semiannually)
    - **SPIN** (Current RFLMA monitoring is limited to semiannually)
    - **SPOUT**(Current RFLMA monitoring is limited to semiannually)
- Calculate and report 30-day and 12-month flow weighted rolling averages for Americium, Plutonium, and Uranium, and collect daily grab samples for Nitrates, at the following locations:
    - **SW-018** (Current RFLMA monitoring does not include radionuclides or nitrates)
    - **SW-093** (Currently, only 12-month averages are reported as part of RFLMA)
    - **GS-13** (Currently, only 12-month averages are reported as part of RFLMA)
    - **GS-11** (Currently, only 12-month averages are reported as part of RFLMA. In addition, DOE is proposing to delete this monitoring location from the RFLMA)

South Walnut Creek

Objectives: (1) Ensure that the Mound Site and East Trenches groundwater treatment units continue to function properly and (2) water leaving the site meets CWQCC surface water standards.

- Increase the frequency of the monitoring program from semiannually to monthly during the runoff season and after significant precipitation events for the following monitoring locations listed in the Rocky Flats Legacy Management Agreement, Attachment 2, Table 2 dated September 2009:
    - **MOUND R1-0** (Current RFLMA monitoring is limited to semiannually)
    - **MOUND R2-E** (Current RFLMA monitoring is limited to semiannually)

- **ET INFLUENT** (Current RFLMA monitoring is limited to semiannually)
- **ET EFFLUENT**(Current RFLMA monitoring is limited to semiannually)

- Calculate and report 30-day and 12-month flow weighted rolling averages for Americium, Plutonium, and Uranium, and collect daily grab samples for Nitrates, at the following locations:
  - **GS-10** (Currently, only 12-month averages are reported as part of RFLMA)
  - **POM2** (Currently, only 12-month averages are reported as part of RFLMA)
  - **GS-08** (Currently, only 12-month averages are reported as part of RFLMA. In addition, DOE is proposing to delete this monitoring location from the RFLMA)
- Conduct monthly analyses of VOC's at **GS-10** and **GS-08**:

Walnut Creek (below confluence of North and South Walnut Creeks)
Objective: Ensure that the migration of contaminants from the site do not result in exceedances of the CWQCC surface water standards.

- Calculate and report 30-day and 12-month flow weighted rolling averages for Americium, Plutonium, and Uranium, collect daily grab samples for Nitrates, and conduct monthly analyses of VOC's at the following locations:
  - **Proposed Walnut Creek POC**(The DOE-LM is proposing to replace GS-03 as the Walnut Creek POC with a new monitoring site further upstream)
  - **GS-03** (DOE is proposing to delete this monitoring location from the RFLMA)

Groundwater Wells
Objectives: (1) Ensure that the existing contaminated groundwater plumes are not migrating and (2) groundwater at the Area of Concern (AOC) wells meets the CWQCC groundwater standards.

- Increase the frequency of the monitoring program from semiannually to monthly during the runoff season and after significant precipitation events for all of the AOC groundwater wells listed in the Rocky Flats Legacy Management Agreement, Attachment 2, Table 2 dated September 2009.

OFFICE OF THE CITY AND COUNTY MANAGER

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February 1, 2011

Ms. Martha Rudolph
Executive Director
Colorado Department of Public Health and Environment
4300 Cherry Creek Drive South
Denver, CO 80246-1530

RE: Request to Postpone RFLMA Decisions Pending AMP Process Completion

Dear Ms. Rudolph:

Proposal

The City and County of Broomfield hereby requests that the Colorado Department of Public Health and Environment ("CDPHE") temporarily postpone any decisions with regard to changes to the Rocky Flats Legacy Management Agreement ("RFLMA") pending completion of the discussions being undertaken with the U.S. Department of Energy ("DOE") in the context of the Adaptive Management Plan ("AMP") process.

Our Goal

As indicated in a joint letter to CDPHE, DOE, and the Environmental Protection Agency dated November 30, 2010, the goal of the communities affected by Rocky Flats is to ensure an open and transparent communication process during which all substantive issues related to current proposals can be fully vetted (i.e., fully appraised, verified, and checked) and subsequently resolved ***before*** decisions related thereto are made by the agencies. These proposals include:

(1) breaching the dams at the site (the subject of the draft Environmental Assessment ("EA"), and

(2) revising the points of compliance locations and protocols (the subject of the RFLMA changes),

We submit that a piecemeal approach only adds to the feeling of anxiety and distrust which DOE fostered over several decades of operations at the Rocky Flats site.

DOE and CPDHE representatives at the AMP meeting on January 13, 2011, acknowledged that there are no statutory or regulatory deadlines which are driving the current timetable. In addition, we understand that there are no substantive reasons to separate the timelines for either (1) final decisions related to the Environmental Assessment related to the dam breaching, or (2) responding to public comments and finalizing the suggested changes to the RFLMA, other than a desire to move ahead on the schedules the agencies have identified, to date.

Indeed, it appears the primary driving force to proceed on separate paths is an unyielding, yet we believe unsupported, desire to "stick to an arbitrarily imposed timetable."

It is a simple matter to revise the timetable. Therefore, please postpone making any final decisions on the proposed changes to RFLMA in order to allow the parties to coordinate their resources and focus on all the substantive issues with the RFLMA and the AMP process, simultaneously.

Thank you, and we look forward to continuing our work in a cooperative manner that meets all needs.

Sincerely,

George Di Ciero
City and County Manager

cc: Doug Young, Governor's Office
Carolyn Boller, Senator Udall's Office
Zane Kessler, Senator Bennet's Office
Andy Schultheiss, Representative Polis' Office
Stuart Feinhor, Representative Polis' Office
Bill Holen, Representative Perlmutter's Office
Dave Geiser, DOE-LM
Thomas Pauling, DOE-LM
Jane Powell, DOE-LM
Scott Surovchak, DOE-LM
James Martin, USEPA
Carol Rushin, USEPA
Larry Svoboda, USEPA
Vera Moritz, USEPA
Howard Roitman, CDPHE
Joe Schieffelin, CDPHE
Gary Baughman, CDPHE
Carl Spreng, CDPHE
Steve Berendzen, USFWS
John Watson, Esquire, Berenbaum Weinshienk PC
Lori Cox, Broomfield Councilmember
Jeff Stoll, Broomfield Public Health Officer
David Allen, Broomfield Deputy Director of Public Works
Mike Smith, Westminster Director of Public Works
David Willett, Northglenn Director of Public Works
Bud Elliot, Thornton Deputy City Manager – Infrastructure
David Abelson, Rocky Flats Stewardship Council

STATE OF COLORADO

John W. Hickenlooper, Governor
Christopher E. Urbina, MD, MPH
Executive Director and Chief Medical Officer

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Colorado Department
of Public Health
and Environment

February 24, 2011

Mr. George DiCiero
Manager
City and County of Broomfield
One DesCombes Drive
Broomfield, CO 80020

Dear Mr. DiCiero,

Thank you for your letter of February 1, 2011 requesting that the Colorado Department of Public Health and Environment (CDPHE) delay its decision regarding the modifications being proposed for Attachment 2 of the Rocky Flats Legacy Management Agreement (RFLMA). As a party to the RFLMA and as the lead regulatory agency, CDPHE has approval authority for those modifications. As you know, we have not yet made any decision regarding any modifications.

My staff has kept me apprised of the many meetings and conversations that have occurred to work through the issues that have been raised by the communities impacted by Rocky Flats. I know that you and your staff have been actively engaged in these meetings. One series of meetings, the technical working group, has addressed details of the substantive issues with the RFLMA modifications. A separate series of meetings, pursuant to DOE's Adaptive Management Plan process, is addressing concerns related to DOE's proposed changes to pond management at Rocky Flats. I am pleased to learn that both sets of meetings have proven fruitful and have resulted in increased recognition and understanding by all the participants of the concerns, positions, known and unknown facts and legal underpinnings that influence the resolution of the issues. In response to discussions during these meetings, the RFLMA parties are working to revise the originally proposed RFLMA modifications. We expect to share with you the decision on the proposed modifications in the coming weeks.

Sincerely,

Martha Rudolph
Director of Environmental Programs