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June 7, 2013

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U.S. Department of Energy
Attn: 2015 Budget
P.O. Box 550
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Richland, WA 99354

Via email HanfordBudget2015@rl.gov

RE: Public Comments on Hanford's Fiscal Year 2015 Budget Proposal

Dear U.S. Department of Energy:

Columbia Riverkeeper (Riverkeeper) submits the following comments on the U.S. Department of Energy's (Energy) Fiscal Year 2015 Budget Proposal. Riverkeeper is deeply invested in clean water, strong salmon runs, and healthy communities. Hanford is widely recognized as the most contaminated site in the Western hemisphere, and radioactive pollution is actively leaching into the Columbia River. Large plumes of contaminated groundwater underlie much of the site, and contaminated soil exists in many areas. For the reasons described below, Riverkeeper has grave concerns about Energy's ability to meet Tri-Party Agreement cleanup milestones in the current funding climate, and the impact of current funding shortfalls on the future of Columbia River communities and natural resources.

RIVERKEEPER'S COMMITMENT TO HANFORD CLEANUP

Riverkeeper is a 501(c)(3) nonprofit organization with a mission to protect and restore the Columbia River, from it headwaters to the Pacific Ocean. Riverkeeper's staff and members are dedicated to a long-term solution for Hanford cleanup. Since 1989, Riverkeeper has played an active role in monitoring and improving cleanup activities at the Hanford.

A legacy of the Cold War, the Hanford site continues to leach radioactive pollution into the Columbia River. Hanford's legacy is not a local issue. Nuclear contamination from Hanford threatens the Pacific Northwest's people, a world renowned salmon fishery, as well as countless other cultural and natural resources. Despite this status, the public and Riverkeeper's members continue to catch and consume fish from the Columbia River and recreate near and downstream of Hanford. The federal government has a duty to ensure that Hanford's nuclear legacy does not compromise the public's use and enjoyment of the Columbia River.

GENERAL COMMENTS

A. Energy's Budget Presentation and the 2015 Vision.

Energy has a duty to convey accurate information on the status of Hanford cleanup. And the department's "2015 Vision" public relations campaign is a prime example of Energy failing to level with the public about the status of Hanford cleanup. Five years ago, Energy released the 2015 Vision for Hanford, which promises to reduce Hanford's active cleanup footprint in the River Corridor by 90 percent by 2015. [1] In late 2012, the Tri-Party Agreement Agencies (Energy, the U.S. Environmental Protection Agency, and the Washington Department of Energy) announced setbacks in Hanford cleanup deadlines. Even if Energy did not push back cleanup deadlines, the 2015 Vision would be inaccurate: it underestimates the amount of cleanup that remains by ignoring, among other things, groundwater contamination.

Energy's insistence on promoting the 2015 Vision public relations campaign cuts against the agency's efforts to obtain funding for much needed cleanup work. Energy's May 8, 2013 Budget Presentation appears to acknowledge that the 2015 Vision is off-track. Specifically, Energy's presentation slides notes:

> The $1.040B funding level has not been realized. Fiscal Year 2012 was about $20M below Vision requirements. FY 2013 funding is about $100M lower.
>
> Fiscal years '14 and '15 may also be below this level.[2]

[1] U.S. Dept. of Energy's 2015 Vision, http://www.hanford.gov/page.cfm/2015VISION.
[2] U.S. Dept. of Energy, Envtl. Mgt., Public Briefing, FY 2013 Appropriations, FY 2014 President's Budget, FY 2015 Budget Request at 5 (May 8, 2013), http://www.hanford.gov/files.cfm/RLPublicFY1315BudgetBriefingMay7131%20pm.pdf .

It is unclear why Energy continues to promote the 2015 Vision when funding is clearly not available to fulfill the Vision's aim. Riverkeeper urges Energy to abandon the 2015 Vision public relations campaign and refocus its public outreach on an accurate depiction of the cleanup successes—and challenges—at Hanford.

B. Public Participation.

Riverkeeper encourages Energy to strive for more robust public participation in future budget cycles. Riverkeeper suggests the following improvements to encourage greater public participation:

- Energy should consider timing the *State of the Site Meetings* with comment periods on the budget. This would encourage increased public involvement and understanding on the current state of Hanford cleanup, while allowing the public to weigh-in on funding decisions that influence future cleanup priorities.

- Energy should notify the public with emails and other outreach materials that specifically state "Public Comment Opportunity" or the like. Energy's notice of the instant public comment period was buried in a series of emails advertising the budget workshop in Richland, Washington.

- Energy should advertise the public comment period on its website.

- Energy should hold budget workshops in locations other than the Tri-Cities, such as a Hood River, Vancouver, Seattle, and Portland.

COMMENTS ON DEPARTMENT OF ENERGY RICHLAND OPERATIONS BUDGET

A. Groundwater Program Funding.

Energy must adequately fund Hanford's Groundwater Program to meet TPA milestones and protect the Columbia River. The Groundwater Program funds well drilling and pump-and-treat systems to remove toxic and radioactive pollutants such as strontium-90 and hexavalent chromium before they reach the Columbia River. Despite the well-documented threats from toxic and radioactive pollution in Hanford's groundwater, Energy's proposed 2014 and 2015 budget underfunds the critical Groundwater Program. This decision is out of line with Energy's stated commitment to protect the Columbia River.

Our region's economic vitality and public health, as well as the future of endangered salmon, depend on the Groundwater Program to stop dangerous radioactive and toxic pollution from entering the Columbia River. Energy's proposed budget ignores this reality. According to

Energy's own estimates, the Groundwater Program will receive ***only half of the funds necessary to reach cleanup milestones.***[3] Just six percent of the proposed Hanford budget of $2.2 billion is targeted at groundwater cleanup.

What does this mean on the ground? First, Energy will lack necessary funding to drill more wells. Energy's own reports acknowledge that more wells are necessary to monitor groundwater plumes and extract hexavalent chromium, which is highly toxic to salmon and other aquatic life. For example, Energy's *2013 Hanford Lifecycle Scope, Schedule and Cost Report* calls for a significant increase in funding for new wells to meet cleanup milestones.[4]

Second, Energy cannot follow through with plans to stem the flow of strontium-90 into the Columbia River. Energy's current plans call for injecting apatite minerals into groundwater wells to capture and hold radioactive and metal contaminants. Strontium-90 is a radioactive waste product that causes bone cancer and immune system suppression. It also concentrates in fish bone tissues. Recent measurements in the groundwater beneath the 100-N area show that strontium-90 levels are over 1000% greater than the drinking water standard (over 8000 picocuries/liter (pCi/L) versus 8 pCi/L).[5] Under Energy's proposed budget, it is unclear how the department plans to fund apatite injections at recently drilled wells.

Energy's decision to shortchange the Groundwater Program is stunning given the threats groundwater pollution poses to endangered salmon and to people who drink water from the Columbia River. Just last month Energy touted the success of the pump-and-treat program after Energy's contractors reported removing 500 pounds of hexavalent chromium from the groundwater in 2013. It makes sense for Energy to capitalize on its success by fully funding the Groundwater Program to defend the river from Hanford's nuclear legacy.

B. Deep Vadose Zone Contamination.

Riverkeeper concurs with comments submitted by our partners at Hanford Challenge: Energy must work to develop plans to remediate the deep vadose zone, particularly near tanks that have leaked high-level nuclear waste. Energy's 2010 *Long-Range Deep Vadose Zone Program Plan* (DOE/RL-2010-89 Rev. 0) (hereafter "*Deep Vadose Plan*", the "[r]emediation of the DVZ [deep vadose zone] is central to Hanford cleanup because it provides an ongoing source of contamination to the underlying aquifer and the Columbia River unless permanent solutions are developed and implemented." Energy's *Deep Vadose Zone Plan* explains that "[w]hile contaminants in shallow sediments can be removed by excavation or hydraulically controlled by surface engineered barriers, contaminants in the DVZ rest beneath the influence of

[3] U.S. Dept. of Energy, 2013 Hanford Lifecycle, Scope, Schedule and Cost Report (Dec. 2012) at 5-20
[4] U.S. Dept. of Energy, 2013 Hanford Lifecycle, Scope, Schedule and Cost Report (Dec. 2012) at D-36.
[5] U.S. Dept. of Energy. *Hanford Site Environmental Report for Calendar Year 2008* at 220.

these technologies."[6] Energy's *Deep Vadose Zone Plan* states bluntly: "Some of the vadose zone contaminant issues are urgent." Examples of Energy's cleanup challenges in the deep vadose zone include:

- The leading edge of uranium contamination near the BX Tank Farm in the 200 East Area has reached groundwater at concentrations 150 times above drinking water standards. Another 2000 kg (2.2 tons) of relatively mobile uranium is now within 27 m (90 ft) of groundwater.[7]

- Most of the 700 curies of technetium-99 released in the Central Plateau poses a long-term threat to groundwater, and continuing migrations of technetium-99 in vadose zone plumes near T Farm and SX Farm in the 200 West Area are now impacting groundwater quality at levels more than 100 times above drinking water standards. [8]

- The long-term success of a large groundwater pump-and-treat system being constructed to target contaminant plumes beneath the 200 West Area depends on successful remediation of deep vadose zone contamination to avoid recontamination of the aquifer during and after years of groundwater withdrawal. [9]

Despite recognizing the critical importance of deep vadose zone cleanup, Energy failed to request adequate funding to protect the Columbia River from contamination in the deep vadose zone. Riverkeeper urges Energy to revisit this decision and seek appropriate funding for deep vadose zone cleanup.

COMMENTS ON DEPARTMENT OF ENERGY OFFICE OF RIVER PROTECTION BUDGET

A. New Double Shell Tanks.

Over 56 million gallons of Hanford waste is stored in underground tanks. Energy intends to convert most of the waste into glass logs at the Waste Treatment Plant, a massive facility on the Hanford site, beginning in 2019. Recently, Oregon's Senator Ron Wyden gave a discouraging update on the plant timeline: "Energy cannot say what changes are needed, when they will be completed, or what they will cost."

In the meantime, Energy is responsible for protecting the public and the environment from Hanford's highly dangerous tank waste. Hanford's 177 underground tanks are aging, chemically complex, and have been known to leak in the past. They are buried underground,

[6] U.S. Dept. of Energy, *Long-Range Deep Vadose Zone Program Plan* at iv.
[7] *Id.* at iv.
[8] *Id.*
[9] *Id.*

200 to 300 feet above Hanford's groundwater, and they are located 7 to 10 miles from the Columbia River.

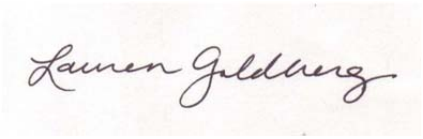
Over the decades, Hanford's single-shell tanks leaked more than 1 million gallons of radioactive waste into the ground, contaminating groundwater and threatening the Columbia River. Energy has confirmed that at least six single-shelled tanks are leaking a combined 660 gallons per year and dozens more could potentially be leaking as well. Other potential leaks are under evaluation by Energy, which admits that 20 tanks show increasing levels (possibly from intrusion of liquid into tanks) and 14 additional tanks show declining waste levels. More tank leaks are sure to happen in coming years until the waste inside the tanks is removed.

Energy anticipated that single-shell tanks could potentially leak waste into the environment. However, Energy planned to mitigate the leak risk by building the Waste Treatment Plant to convert liquid waste into a more stable glass form that would be disposed of in a deep geologic repository. Unfortunately, the Waste Treatment Plan is behind schedule, and the tanks are far beyond their design life. Additionally, Hanford lacks adequate tank capacity to retrieve leaking singe- and double-shell tanks, which ultimately could delay or hamper the planned feeding of waste into the Waste Treatment Plant. In short, Hanford requires additional tank capacity to prevent further harm to the environment and to comply with the TPA. The need for new tanks is urgent. For these reasons, Riverkeeper joins with elected officials and other organizations in calling on Energy to appropriate funds to build new double-shell tanks. In light of tank failures at Hanford, Energy must have a Plan B to deal with the catastrophic threat of future tank leaks.

CONCLUSION

We look forward to working with Energy on the monumental task of protecting the public and future generations from Hanford's nuclear legacy. Thank you for considering Riverkeeper's input on the department's Hanford budget.

Sincerely,



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