



Response to Comments LERF and 200 Area ETF: CO2 Removal Skid Class 2 Permit Modification

March 31 – May 29, 2022

For the **Nuclear Waste Program**

Washington State Department of Ecology

Richland, Washington

June 2022, Publication 22-05-014



Publication Information

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Ecology publishes this document to meet the requirements of [Washington Administrative Code 173-303-840 \(9\)](#).

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Cover photo credit

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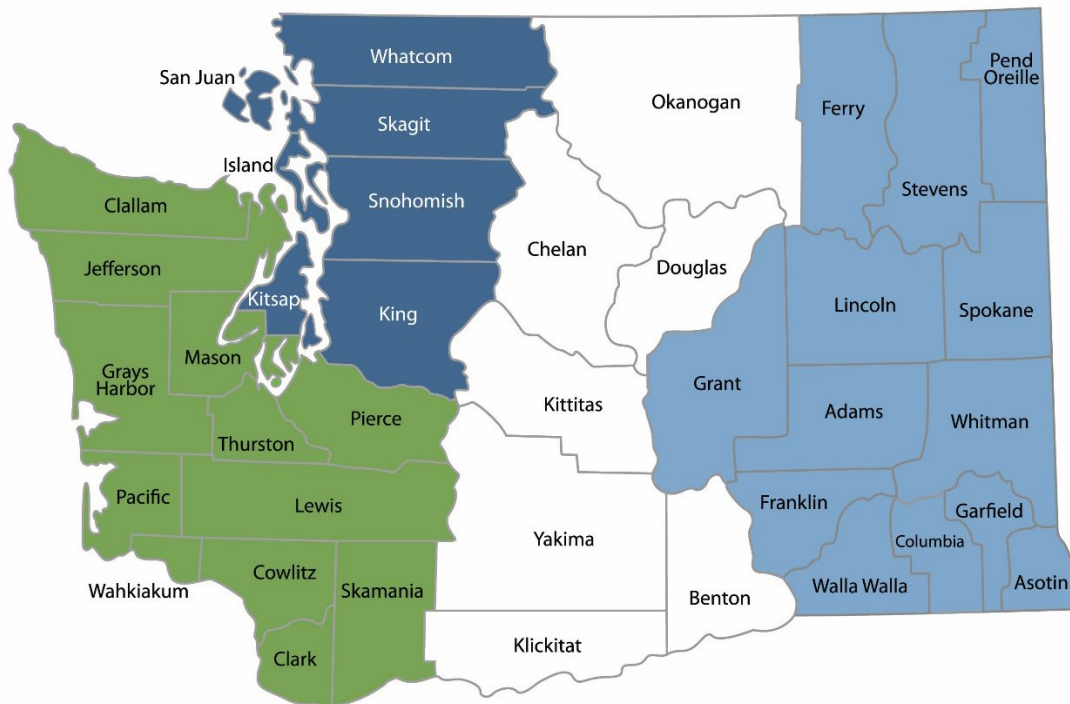
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¹ <https://apps.ecology.wa.gov/publications/summarypages/2205014.html>

² www.ecology.wa.gov/contact

Department of Ecology's Regional Offices

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Northwest Region
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Central Region
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Region	Counties Served	Mailing Address	Phone
Southwest	Clallam, Clark, Cowlitz, Grays Harbor, Jefferson, Mason, Lewis, Pacific, Pierce, Skamania, Thurston, Wahkiakum	PO Box 47775 Olympia, WA 98504	360-407-6300
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Central	Benton, Chelan, Douglas, Kittitas, Klickitat, Okanogan, Yakima	1250 W Alder St Union Gap, WA 98903	509-575-2490
Eastern	Adams, Asotin, Columbia, Ferry, Franklin, Garfield, Grant, Lincoln, Pend Oreille, Spokane, Stevens, Walla Walla, Whitman	4601 N Monroe Spokane, WA 99205	509-329-3400
Headquarters	Across Washington	PO Box 46700 Olympia, WA 98504	360-407-6000

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Nuclear Waste Program
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DEPARTMENT OF
ECOLOGY
State of Washington

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Introduction

The Washington State Department of Ecology's Nuclear Waste Program (Ecology) manages dangerous waste within the state by writing permits to regulate its treatment, storage, and disposal. When a new permit or a significant modification to an existing permit is proposed, Ecology holds a public comment period to allow the public to review the change and provide formal feedback. (See [Washington Administrative Code \[WAC\] 173-303-830](#) for types of permit changes.)

The Response to Comments is the last step before issuing the final permit, and its purpose is to:

- Specify which provisions, if any, of a permit will become effective upon issuance of the final permit, providing reasons for those changes.
- Describe and document public involvement actions.
- List and respond to all significant comments received during the public comment period and any related public hearings.

This Response to Comments is prepared for:

Comment period	LERF and 200 Area ETF: CO2 Removal Skid Class 2 Permit Modification, March 31 – May 29, 2022
Permit	<i>Hanford Facility Resource Conservation and Recovery Act (RCRA) Permit for the Treatment, Storage, and Disposal of Dangerous Waste, LERF and 200 Area ETF</i>
Permittees	U.S. Department of Energy (USDOE)
Original Issuance date	01/28/1998
Effective date	07/30/2022

To see more information related to the Hanford Site and nuclear waste in Washington, please visit our webpage, [Hanford Cleanup](#)³.

³ <https://www.ecology.wa.gov/Hanford>

Reasons for Issuing the Permit

The proposed Class 2 permit modification affects the Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (200 Area ETF) portion of the Permit. This modification would allow for the installation and operation of an additional carbon dioxide (CO₂) removal capability at the 200 Area ETF. The CO₂ removal skid is a filtering system that will remove excess CO₂ generated during the wastewater treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant waste stream.

Public Involvement Actions

USDOE encouraged public comment on the LERF and 200 Area ETF: CO₂ Removal Skid permit modification during a 60-day public comment period held March 31 through May 29, 2022.

The following actions were taken to notify the public:

- Mailed a public notice announcing the comment period to 1,005 members of the public.
- Placed a public announcement legal classified advertisement in the Tri-City Herald on March 30, 2022.
- Emailed a notice announcing the start of the comment period to the Hanford-Info email list, which has 1,284 recipients.
- Posted the comment period notice on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages.

USDOE held a virtual public meeting 5:30 p.m. May 3, 2022, on Microsoft Teams. Seven members of the public attended, and zero comments were collected.

The Hanford information repositories located in Richland, Spokane, and Seattle, Washington, and Portland, Oregon, received the following documents for public review:

- Focus sheet
- Transmittal letter
- Draft LERF and 200 Area ETF: CO₂ Removal Skid Permit Modification

The following public notices for this comment period are in [Appendix A](#) of this document:

- Focus sheet
- Classified advertisement in the Tri-City Herald
- Notices sent to the Hanford-Info email list
- Notices posted on the Washington Department of Ecology – Hanford’s Facebook and Twitter pages

List of Commenters

The table below lists the names of organizations or individuals who submitted a comment on the LERF and 200 Area ETF: CO2 Removal Skid Class 2 Permit Modification. The comments and responses are in [Attachment 1](#).

Commenter	Organization
Anonymous	Citizen

Attachment 1: Comments and Responses

Description of comments:

Ecology accepted comments from March 31 through May 29, 2022. This section provides a summary of comments that we received during the public comment period and our responses, as required by RCW 34.05.325(6)(a)(iii). Comments are grouped by individual, and each comment is addressed separately.

I-1: ANONYMOUS CITIZEN

Comment I-1-1

On page Addendum B.7, line 23 includes a "degasification column." On page addendum C.12, this column is identified as being for "removal of carbon dioxide." Addendum C.18 omits the "carbon dioxide" from this equipment. The descriptions are inconsistent. I looked at the original ETF RCRA permit application (DOE/RL-97-03 from July 1997), and the original degasification equipment was called out as "removal of carbon dioxide." Can you make the identification consistent, and show the relative amounts of CO2 removed by each system (the existing column and the skid with the new columns)?

Response to I-1-1

The new CO2 membrane system is designed to remove approximately 90% of CO2 in solution, e.g., carbonate concentration of 3000 reduced to <300 mg/L. With an expected feed concentration of approximately 2205 mg/L dissolved CO2 (equivalent to 3000 mg/L carbonate) from the WTP the outlet concentration should be reduced to approximately 165 mg/L CO2. The existing Degas Column is sized to reduce feed concentration of CO2 from 600 mg/L to 3 mg/L dissolved CO2.

Comment I-1-2

Page Addendum C.13 states that removed CO2 is vented to the VOG system (vessel off-gas system). How does this removal affect the overall concentrations and discharges to atmosphere? The Notice of Construction for ETF should include all of the proposed changes to date. Is the new CO2 emitted enough to dilute isotopes being discharged? Is the new CO2 able to react with the significant amounts of methyl cyanide (acetonitrile) now expected to be added to the off-gas from steam stripping? I would appreciate if Ecology will request and publish an integrated flow sheet and mass balance to show the impacts of the new WTP wastes, including for CO2 and acetonitrile.

Response to I-1-2

The removal of dissolved CO2 from the ETF waste stream does not affect the overall removal of other constituents or discharge of other gasses to the environment.

The permittees have covered what is needed for the Notice of Construction for ETF.

Isotopes are not discharged to the atmosphere at ETF. The VOG system includes a pre-filter, high-efficiency particulate air filters, and carbon absorber (when required to reduce organic emissions).

Since CO2 is an inert gas, it does not react with acetonitrile.

Due to the complexity and scope of the Supplemental Organic Treatment modification (steam stripper) and to ensure the delisting criteria for Acetonitrile could be met, DOE submitted a Mass and Energy Balance (RPP-CALC-64269) that was published in April 2020. DOE's letter 20-ECD-0057 (<https://pdw.hanford.gov/document/AR-04401>) stated DOE is committed to continue

work on the mass balance, including submittal of mass balance information related to the permit application and modifications.

Comment I-1-3

Does the acetonitrile in the WTP waste react with CO₂ removal column materials of construction? Note that the new, incoming acetonitrile will be 2,000 times more concentrated than previous exposures. What is the increased concentration of CO₂ versus previous processing? What is the effect of the anticipated increased concentration of acetonitrile on the CO₂ equipment? The material compatibility analysis appears to be incomplete. Again, it will help if Ecology can obtain a mass balance and flowsheet for the streams of interest so that an updated material compatibility analysis can be performed. What were the fluid properties used to design the new system? How do they differ from the fluid properties used to design the older parts of ETF?

Response to I-1-3

Based on the CO₂ membrane contactor vendor data from 3M, the chemical resistance of the polypropylene membrane material (membrane fibers) is satisfactory when exposed to acetonitrile. The epoxy potting material used to bind the membrane fibers together at the ends of the filter cartridges is not resistant to acetonitrile but contact between the inlet fluid and potting material is minimal. The useful life of the CO₂ filter cartridge potting material may be reduced if the waste fluid contacts the potting material, but the internal membrane (polypropylene) integrity will not be compromised. The expected life of the CO₂ membrane contactors is 10 years.

The WTP EMF effluent compositions in the waste profile show the average and maximum carbonate ion concentration of the WTP EMF effluent to be 1,144 mg/L (ppm) and 1528 mg/L (ppm), respectively. Previous maximum feed concentrations of carbonate were projected to be 750mg/L from the 242-A evaporator. The existing Degas Column is sized for up to 818 mg/L of carbonate.

Both the current CO₂ membrane design and the original systems are designed for water with trace contaminants.

Comment I-1-4

The design specification RPP-SPEC-64209) says the new skid will reduce CO₂ from 3,000 mg/L to 300 mg/L at a rate of 170 gallons/minute. This amounts to 2.5 metric tons a day of CO₂ released to the atmosphere from the ETF stack. What is the volume of the CO₂ air effluent as compared to the volume of off-gas in the existing ETF Notice of Construction? How does this addition affect the distribution and air modeling of other constituents, such as acetonitrile? How does this system affect the amount and composition of secondary solid and liquid wastes from ETF? Again, a mass balance will help, especially as secondary wastes can contain Tc-99 and hazardous chemicals. How many cfm of CO₂ are expected to be released in the new permit documentation? Has DOE performed the calculation?

Response to I-1-4

The volume of CO₂ gas released from the CO₂ removal membrane contactors will be variable based on the carbonate concentrations in the WTP waste stream. Design specifications were based on a maximum design carbonate concentration of 3000 mg/L.

The release of chemicals and radioisotopes is controlled with a pre-filter, high-efficiency particulate air filters, and carbon absorber through the VOG. Chemical emissions, including acetonitrile, from the VOG is outlined in the NOC. The contribution of CO₂ to the overall stack volume is very minor that there is no noticeable impact.

Additional chemicals will be added to the ETF wastewater stream for pH adjustment given the higher concentrations of carbonate in the WTP wastewater stream. These chemical additions will later be rejected to the ETF secondary treatment train and contribute to the ETF secondary (solid) wastes.

Air emissions are addressed in separate permit applications, but the contribution of CO₂ to the overall stack volume is very minor.

Comment I-1-5

According to previous work (HNF-8306, Rev 0), "When the pH of the WTP feed is lowered to 6.0 in the SWRT tanks [at ETF] carbonate will be converted to CO₂ and 2 effervesce into the tank vessel vent system. Any residual dissolved CO₂ will be evolved in the evaporator as the brine is boiled. The calculated gas evolution rate ranges from 3.10 to 19.89 cubic feet per minute (cfm). However, this becomes more complex because of the undesirable off-gassing of Iodine-I 29 at acidic condition. Lowering the pH below a target of 6.0 is undesirable due to potential corrosion in the piping/vessels." As you can see, the chemistry of the waste is interconnected, so any evaluation of new equipment needs to include the rest of the waste.

Response to I-1-5

The pH chosen is just low enough to drive the carbonate/CO₂ equilibrium but does not go unnecessarily lower. This is monitored by control room operators while waste is being processes through the system. A pH of 6.0 is only mildly acidic, and any trace off-gassing would be captured by the VOG system.

Comment I-1-6

What waste acceptance criteria does ETF have that will limit the amount of dissolved/entrained CO₂ so that it does not overwhelm the capacity of the new equipment and perhaps present a breathing hazard to workers if the ventilation system leaks?

Response to I-1-6

The CO₂ membrane is designed to handle feed concentrations of CO₂ of 2205mg/L, so waste streams more than this would require additional consideration, pending waste acceptance. The VOG is operated under vacuum, so if there was a leak in the VOG, containment would be maintained.

Appendix A. Copies of All Public Notices

Public notices for this comment period:

- Focus sheet
- Classified advertisement in the Tri-City Herald
- Notices sent to the Hanford-Info email list
- Notices posted on Washington Department of Ecology – Hanford’s Facebook and Twitter pages



Comment Period

March 31 – May 29, 2022

Virtual Public Meeting

May 3, 5:30 p.m. PT
(see page 3 for details)

Send comments by May 29 to

<http://nw.ecology.commentinput.com/?id=3x2ea>

Administrative Record:

<https://pdw.hanford.gov/document/AR-18485>

Contact Information

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Daina McFadden, Washington
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Hanford@ecy.wa.gov



An aerial view of the Effluent Treatment Facility in the 200 East Area

The U.S. Department of Energy (DOE) is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit, “Liquid Effluent Retention Facility (LERF) and 200 East Area Effluent Treatment Facility (ETF)” chapter. This proposed permit modification is required to install and operate a carbon dioxide removal skid at the Effluent Treatment Facility. The removal skid is a filtering system that will remove excess carbon dioxide generated during the treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant Effluent Management Facility waste.

Background

The Hanford Site is located in southeastern Washington state along the Columbia River. The 580-square-mile site was created in 1943 as part of the Manhattan Project to produce plutonium for the nation’s defense program. Today, waste management and environmental cleanup are the main missions at Hanford.

The DOE and contractor Washington River Protection Solutions are requesting a Class 2 modification to the LERF and ETF unit group of the Hanford Dangerous Waste Permit. The LERF and ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. Sources of effluent include the 242-A Evaporator and the Waste Treatment and Immobilization Plant’s Effluent Management Facility (when it becomes operational) which are part of the Direct-Feed Low-Activity Waste Program.



Overview

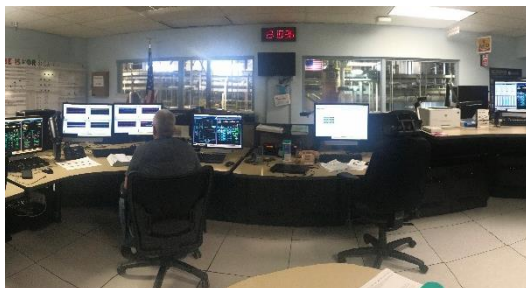
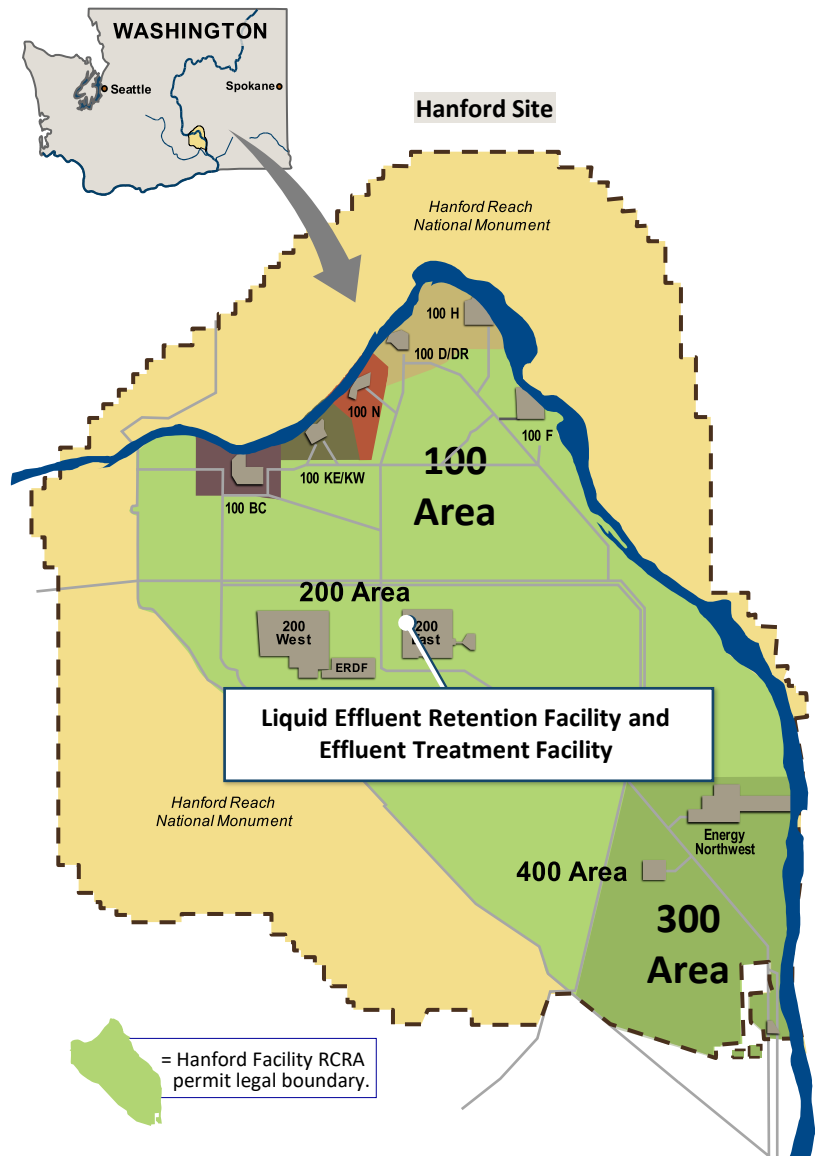
The Hanford Dangerous Waste Permit establishes requirements to ensure that waste management activities protect human health and the environment. DOE is proposing a Class 2 permit modification pursuant to [WAC 173-303-830](#), which requires a 60-day comment period, a public meeting, a newspaper notice, and a mailing list notice. This fact sheet is the mailing notice.

Summary of Changes

If approved, the modification would allow DOE to install and operate additional carbon dioxide removal capability at the Effluent Treatment Facility.

Permit Chapters Affected by this Modification

- Addendum B, “Waste Analysis Plan”
- Addendum C, “Process Information”
- Addendum I, “Inspection Requirements”



The Liquid Effluent Retention Facility and Effluent Treatment Facility are monitored closely by the operations staff in the control room



Outside the Effluent Treatment Facility

Public Involvement

A 60-day public comment period will begin March 31 through May 29, 2022. A virtual public meeting will be held May 3, 2021, at 5:30 p.m. PT, and will include a presentation introducing the LERF and ETF modification for the installation and operation of a carbon dioxide removal skid. During the virtual meeting, you can view the presentation, hear the speakers and ask your questions. To participate via Microsoft Teams, please follow the instructions below:

Join on your computer or Teams mobile app

[Click here to join the meeting](#)

<https://bit.ly/35Kxdvb>

Join with a video conferencing device

197920091@teams.bjn.vc

Video Conference ID: 111 329 341 1

Or call in (audio only)

[\(509\) 931-1284](tel:(509)931-1284) United States

[\(833\) 633-0875](tel:(833)633-0875) United States (Toll-free)

Phone Conference ID: 881 182 033#

All comments must be submitted by May 29, 2022, in writing, by mail or electronically (preferred) to:

Washington State Department of Ecology

3100 Port of Benton Boulevard

Richland, WA 99354

<http://nw.ecology.commentinput.com/?id=3x2ea> (preferred)

At the conclusion of the public comment period, the Washington State Department of Ecology will address public comments and issue a final permit.

Copies of the proposed plan and supporting documentation will be available online during the public comment period in the Administrative Record at <https://pdw.hanford.gov/document/AR-18485>. Hanford Public Information Repository locations are listed at <https://go.usa.gov/xVDTS>.

The permittee's compliance history during the life of the permit being modified is available from the Washington State Department of Ecology contact person.

Please contact Dana Gribble, at dana_c_gribble@rl.gov or (509) 376-5917, at least 10 working days prior to the event to request disability accommodation. DOE makes every effort to honor disability accommodation requests.



Dana Gribble, Hanford
Mission Integration Solutions
P.O. Box 450, H6-60
Richland, WA 99352

Daina McFadden, Washington
State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354



Public Involvement Opportunity

We want to hear from you.

Comment Period:

March 31 – May 29, 2022

Public Meeting: May 3, 5:30 p.m. PT (see page 3 for details)



Supreme Court raises concerns over veteran work protections

BY TODD RUGER
CQ-Roll Call

WASHINGTON
The Supreme Court sounded ready Tuesday to back the power of Congress to recruit and retain armed forces, in an oral argument that touched on the current conflict in Ukraine as an example of the unpredictable need to defend the nation.
The case centers on a federal law, the Uniformed Services Employment and Reemployment Rights Act, or USERRA, that gives employment protections for military service members who return from duty. The law

includes the right to be promptly reemployed upon return from service and to be free from discrimination based on military service.
State courts in Texas, Virginia, Florida, Tennessee, Georgia, Delaware and Alabama have ruled that Congress doesn't have the power to give service members the right to file civil lawsuits to enforce those protections against a state, unless that state has given its permission to be sued.
The Supreme Court is expected to issue a decision by the end of the term at the end of June.
While questions from the justices explored the

history of the Constitution and whether states consented to such lawsuits upon its adoption, some justices kept front and center the lessons from the Vietnam War and the potential for another international conflict.
Justice Brett Kavanaugh used his questions to defend Congress' broad and sweeping powers to raise and support military forces, known as the War Powers, and brought up the importance of recruitment and retention. Members of Congress filed a brief in the case with those concerns.
Assistant Solicitor General Christopher Michel, defending the law, told

Kavanaugh that the United States has a military of 2 million people, and 800,000 of those are National Guard members and reservists. The brochure that the Army gives its recruits lists the USERRA protections as part of the incentive package to join, Michel said, and it matters to be able to tell recruits that they get to keep their job and their employer has to let them take leave for training exercises or deployment.
"And it would matter a great deal in the real world if it was harder for the United States to recruit Guardsmen and Reservists for the military," Michel said. "The national security needs are unpredictable, and the government doesn't know when it's going to need to deploy troops overseas, and being able to have a supply of forces to defend the nation is one of the most existential jobs of the federal government in the first place."

FROM PAGE 1A
SHOOTING
the ground where Rotter pulled out a handgun and fired twice at Rocha's head, said the Herald.
Rotter then left the officer's body behind a Mini Cooper that he was driving. He got into the car, backed over Rocha's body and drove out of the parking lot, the Daily Herald reported.
Minutes after speeding off, Rotter hit a van and another car. He was arrested soon after.
Police investigators found that Rocha, 41, did not fire his gun.
Rotter is currently being held on \$5 million bail in Snohomish County jail on suspicion of first-degree murder and second-degree illegal gun possession.
At the time, Rotter was wanted for a July 2 hit-and-run and a Dec. 7 domestic violence assault in Benton County.
But those were only the latest warrants for a man who spent much of his adult life in trouble with the law.
for drug possession. A Richland detective spotted him and notified the U.S. Marshals Pacific Northwest Violent Offender Task Force, according to a Tri-City Herald story at the time.
When police surrounded Rotter at a Shell station on Goethals Drive in Richland, he backed into a police car to escape.
About six years earlier, he rammed another police car to escape members of the U.S. Marshals Task Force. This time in Pasco, the Tri-City Herald reported.

A year before that, he was wanted for skipping out on court hearings while facing charges of possession of oxymorphone, heroin, malicious mischief and forgery.

EVERETT SHOOTING
A memorial fund has been set up to support Rocha's family, Everett police said. All of the donations are going to help the officer's wife and two children.

Police Chief Dan Templeman said Rocha was highly respected and well-liked and loved serving the people in his community.
"There are no words to make sense of this tragedy or to ease the pain for Officer Rocha's grieving family," Templeman said in a written statement on the city's website.
"Officer Rocha was a loving husband and father and a role model for his two sons. They should be very proud of their dad, as he gave the ultimate sacrifice protecting our community," he said.
Cameron Probert: 509-416-6478, @cameroncprobert

US consumer confidence rises despite inflation

BY JORDAN YADOO
Bloomberg

U.S. consumer confidence unexpectedly edged up in March, suggesting solid job growth offset Americans' concerns over decades-high inflation and Russia's invasion of Ukraine.
The Conference Board's index increased to 107.2 from a downwardly revised 105.7 reading in February, which was the lowest in a year, according to the group's report Tuesday. The median forecast in a Bloomberg survey of econ-

omists called for a reading of 107.
Even though confidence edged higher, Americans are facing the highest inflation since 1982, which is outpacing wage gains and being fanned further by the war in Ukraine. That's already causing some to limit their purchases of certain goods or services, and a slowdown in consumption would pose a risk to economic growth.
Inflation-adjusted spending data for February will be released Thursday.
Still, steady labor market gains have pushed employment back to pre-pandemic



KATHRYN GAMBLE Bloomberg

A shopper inside a women's clothing store in the East Village neighborhood of Des Moines, Iowa, on Feb. 5.
levels in some sectors, buoying U.S. households. The economy probably added close to a half million jobs in March as the unemployment rate fell to 3.7%, according to the median projections in a Bloomberg survey ahead of government data Friday.
A gauge of current con-

ditions rose by the most since June to 153, suggesting consumers had a more upbeat assessment of business conditions and the labor market. The Conference Board's expectations index – which reflects consumers' six-month outlook – declined to 76.6, the lowest since 2014.

THE HANFORD SITE

Class 2 Permit Modification to the Hanford Dangerous Waste Permit



PUBLIC COMMENT PERIOD: March 31 – May 29, 2022

The U.S. Department of Energy is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit. This proposed permit modification is required to install and operate a carbon dioxide removal skid at the Effluent Treatment Facility (ETF). The removal skid is a filtering system that will remove excess carbon dioxide generated during the wastewater treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant Effluent Management Facility waste.

The Liquid Effluent Retention Facility and ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. These facilities include the 242-A Evaporator and the Waste Treatment and Immobilization Plant's Effluent Management Facility (when it becomes operational) to support treating tank waste using the Direct-Feed Low-Activity Waste approach.

The comment period runs from March 31 through May 29. A virtual public meeting will be held May 3 at 5:30 p.m. PT. To participate via Microsoft Teams, please follow the instructions below:

Join on your computer or Teams mobile app
<https://bit.ly/35Kxdvb>

Join with a video conferencing device
197920091@teams.bjn.vc
Video Conference ID: 111 329 341 1

Or call in (audio only)
(509) 931-1284 United States
(833) 633-0875 United States (Toll-free)
Phone Conference ID: 881 182 033#

Please submit any comments by **May 29**, electronically (preferred) or by mail to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354
<http://nw.ecology.commentinput.com/?id=3x2ea>

Copies of the proposed plan and supporting documentation will be available online during the public comment period in the Administrative Record at <https://pdw.hanford.gov/document/AR-18485>. Hanford Public Information Repository locations are listed at <https://go.usa.gov/xVDTs>.

Questions? Please contact Dana Gribble, Hanford Mission Integration Solutions, at dana_c_gribble@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

The permittee's compliance history during the application of the relevant permit, is available from the Washington State Department of Ecology contact person.

To request disability accommodation, contact Dana Gribble, dana_c_gribble@rl.gov, at least 10 working days prior to the event.



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From: [Washington Department of Ecology](#)
To: [McFadden, Daina \(ECY\)](#)
Subject: Upcoming Public Comment Period on the Installation and Operation of a CO2 Removal Skid at ETF
Date: Tuesday, March 1, 2022 9:29:01 AM

THE HANFORD SITE

This is a message from the U.S. Department of Energy

Notice of Upcoming Public Comment Period on Proposed Changes to the Hanford Dangerous Waste Permit

The U.S. Department of Energy is planning a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit. This proposed permit modification is required to install and operate a carbon dioxide removal skid at the Effluent Treatment Facility (ETF). The removal skid is a filtering system that will remove excess carbon dioxide generated during the wastewater treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant Effluent Management Facility waste.

The Liquid Effluent Retention Facility and ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. These facilities include the 242-A Evaporator and the Waste Treatment and Immobilization Plant's Effluent Management Facility (when it becomes operational) to support treating tank waste using the Direct-Feed Low-Activity Waste approach.

The comment period is expected to begin in March, with a public meeting in May.

The proposed modification and supporting documentation will be available online during the public comment period on the Hanford [events calendar](#), the Hanford [Administrative Record](#), and at the Hanford [Public Information Repositories](#).

A summary fact sheet and details of the public meeting will be provided when the comment period begins.

Questions? Please contact Dana Gribble, Hanford Mission Integration Solutions, at dana_c_gribble@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

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From: [Washington Department of Ecology](#)
To: [McFadden, Daina \(ECY\)](#)
Subject: Public Comment Period Begins for a Carbon Dioxide Removal Skid at the Effluent Treatment Facility
Date: Thursday, March 31, 2022 6:55:33 AM

THE HANFORD SITE

This is a message from the U.S. Department of Energy

Public Comment Period on Proposed Changes to the Hanford Dangerous Waste Permit

The U.S. Department of Energy is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit. This proposed permit modification is required to install and operate a carbon dioxide removal skid at the Effluent Treatment Facility (ETF). The removal skid is a filtering system that will remove excess carbon dioxide generated during the wastewater treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant Effluent Management Facility waste.

The Liquid Effluent Retention Facility and ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. These facilities include the 242-A Evaporator and the Waste Treatment and Immobilization Plant's Effluent Management Facility (when it becomes operational) to support treating tank waste using the Direct-Feed Low-Activity Waste approach.

The comment period runs from March 31 through May 29, 2022. A virtual public meeting will be held May 3 at 5:30 p.m. PT. To participate via Microsoft Teams, please follow the instructions below:

Join on your computer or Teams mobile app

[Click here to join the meeting](#)

<https://bit.ly/35Kxdvb>

Join with a video conferencing device

197920091@teams.bjn.vc

Video Conference ID: 111 329 341 1

Or call in (audio only)

[\(509\) 931-1284](tel:(509)931-1284) United States

[\(833\) 633-0875](tel:(833)633-0875) United States (Toll-free)

Phone Conference ID: 881 182 033#

Please submit any comments by **May 29**, [electronically](#) (preferred) or by mail to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, WA 99354

The proposed permit modification and supporting documentation is available online during the public comment period on the [Hanford events calendar](#), the Hanford [Administrative Record](#), and at the Hanford [Public Information Repositories](#). Please see the attached summary fact sheet.


Questions? Please contact Dana Gribble, Hanford Mission Integration Solutions, at dana_c_gribble@rl.gov, or Daina McFadden, Washington State Department of Ecology, at Hanford@ecy.wa.gov.

To request disability accommodation, please contact Dana Gribble, dana_c_gribble@rl.gov or (509) 376-5917 at least 10 working days prior to the event. DOE makes every effort to honor disability accommodation requests.

- [Fact Sheet_LERF ETF CO2 Removal_FINAL.pdf](#)

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 Washington Department of Ecology - Hanford
28m · 🌐

Heads up!

A new U.S. Department of Energy public comment period began today, involving the Liquid Effluent Retention Facility and Effluent Treatment Facility at Hanford.


Check it out and get your comments in by May 29: <https://ecology.wa.gov/.../Nuclear.../Public-comment-periods...> See more



 Ecology - Hanford ✓ @ecyHanford · 33m

Heads up!

A new [@HanfordSite/@RiverProtection](#) public comment period began today, involving the Liquid Effluent Retention Facility and Effluent Treatment Facility at Hanford. Check it out and get your comments in by May 29: ecology.wa.gov/Waste-Toxics/N... @EPAnorthwest @EcologyWA



0:01 6 views



Class 2 Permit Modification for the Liquid Effluent Retention Facility and 200 Area Effluent Treatment Facility CO2 Removal Skid

March 31 through May 29, 2022

The U.S. Department of Energy is holding a 60-day public comment period on a proposed Class 2 permit modification to the Hanford Dangerous Waste Permit, "Liquid Effluent Retention Facility (LERF) and 200 Area Effluent Treatment Facility (ETF)" chapter.

Proposed changes

This proposed permit modification is required to install and operate a carbon dioxide removal skid in the 200 East Area Effluent Treatment Facility. The removal skid is a filtering system that will remove excess carbon dioxide generated during the treatment process. This additional capability is necessary to treat the Waste Treatment and Immobilization Plant Effluent Management Facility waste.

Facility background

The LERF and 200 Area ETF are mixed-waste treatment and storage units for treating liquid effluents from operating Hanford cleanup facilities. These facilities include the 242-A Evaporator and the Waste Treatment and Immobilization Plant's Effluent Management Facility (when it becomes operational) to support treating tank waste using the Direct-Feed Low-Activity Waste approach.

Review and comment

For more information on the public comment period and supporting documents, visit [Energy's website](#).

Please submit any comments by **May 29, 2022**, [electronically](#) (preferred), or by mail to:

Washington State Department of Ecology
3100 Port of Benton Boulevard
Richland, Washington 99354

Public meeting

Energy is holding a virtual public meeting **5:30 p.m. PT, May 3, 2022**. To participate via Microsoft Teams, please follow the instructions below:

Join on your computer or Teams mobile app

- Use [this link](#) to join the meeting or <https://bit.ly/3IP3TSE>

Join with a video conferencing device

- [197920091@teams.bjn.vc](https://teams.microsoft.com/join/197920091@teams.bjn.vc)
- Video Conference ID: 112 244 009 3

Or call in (audio only)

- [\(509\) 931-1284](tel:(509)931-1284) United States
- [\(833\) 633-0875](tel:(833)633-0875) United States (Toll-free)
- Phone Conference ID: 536 266 435#

Questions? Please contact [Jennifer Colborn](#), Hanford Mission Integration Solutions, or [Daina McFadden](#), Ecology.