

DEPARTMENT OF ECOLOGY

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August 27, 2024

Kevin Tyler Parks & Lands Division Clark County Public Works 1300 Franklin Street #4 Vancouver, WA 98660

Re: Camp Bonneville – Cleanup Status Letter - Revised

Dear Kevin Tyler:

On May 31, 2024, Ecology received a request from Clark County Public Works for a confirmation of the cleanup status for the Camp Bonneville site (Site). This request asks the Department of Ecology (Ecology) for formal confirmation of the cleanup status of all remedial action units (RAU), that the Ecology issued No Further Action (NFA) letters are accurate, and to highlight any areas where additional action may be required, or documentation is incomplete.

1.0 Site Background

1.1 Site History

Camp Bonneville (Site) is a 3,840-acre property located in Clark County near the community of Probstel, approximately 12 miles northeast from the center of the City of Vancouver. The Department of Defense (DOD) operated Camp Bonneville as a military reservation for military training from 1909 to 1995 when the base was placed on DOD's Base Realignment and Closure (BRAC) list and closed. Since then, investigations and cleanup of contamination have been ongoing to prepare the Site for eventual reuse by Clark County as a regional park and wildlife refuge.

Historic military and associated maintenance operations resulted in contamination of the property. These activities include but not limited to:

- Use of military munitions (e.g. artillery, rockets, grenades, mortars), both live and practice rounds.
- Use of small arms.

- Landfills and munition disposal areas.
- Use of petroleum products (diesel fuel, fuel oil).
- Drum disposal.
- Paint and solvent disposal.
- Grease pits.
- Maintenance activities (Wash racks, Underground Storage Tanks (UST), and Maintenance pits).
- Pesticide storage and mixing.
- CSs gas (tear gas) training.

These activities have resulted in contamination of soil and groundwater at the Site. Chemicals of concern include heavy metals (e.g. lead), petroleum hydrocarbons, volatile and semi-volatile organic compounds (e.g. solvents), and explosive residue (e.g. perchlorate and RDX). Additionally, military munitions considered munitions and explosives of concern (MEC) which include unexploded ordnance (UXO) were identified and present at the Site. For cleanup purposes, Camp Bonneville has been divided into five remedial action units (RAUs). These units are primarily grouped by the nature of the release, not by physical boundaries.

Currently, Camp Bonneville is closed to the public with Clark County Public Works overseeing operations such as forestry and site maintenance. The County has an agreement with the Washington State Department of Natural Resources to house a wildfire Helitack team and use a landing pad for helicopters as part of wildfire suppression in Southwestern Washington. The Federal Bureau of Investigation (FBI) operates an active firing range under an agreement between Clark County and the FBI. It is not practical to undertake cleanup of active firing ranges until the range is closed. Once closed the state's Model Toxics Control Act (MTCA) requires that lead above 250 parts per millions (ppm) be remediated. Ecology's position is the federal government, either represented as the U.S. Army or the FBI would be responsible for the cleanup of the range after it closes.

1.2 Regulatory History

Following closure of the base in 1995, the US Army (Army) began Site investigations and cleanup actions to identify the extent and nature of contamination at the Site. In February 2003, Ecology issued Enforcement Order No. 03TCPHQ-5286¹ to the Army directing it undertake remedial actions at the Site under MCTA. An Amended Enforcement Order² was issued to the Army in June 2004 to extend the schedule of work.

¹ https://apps.ecology.wa.gov/cleanupsearch/document/441

² https://apps.ecology.wa.gov/cleanupsearch/document/3021

The Site was transferred from the DOD to Clark County on September 29, 2006. This transfer occurred under a process known as "early transfer" under the federal Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) 42 U.S.C. §9620(h)(3)(C). The early transfer conveyance for the Site is a Conservation Conveyance under 10 U.S.C. §2694(a). The Army and Clark County entered into an Environmental Services Cooperative Agreement (ESCA) with the Army providing funding for cleanup and long-term obligations for the property. In October 2006, Ecology entered into a Prospective Purchaser Consent Decree³ (PPCD) with Clark County and Bonneville Conservation, Restoration, and Renewal Team, LLC (BCRRT), in which Clark County transferred ownership of the Site to BCRRT to manage remediation of the property. In May 2012, Ecology and Clark County entered into an Amended Prospective Purchaser Consent Decree. Prior to the entry of the Amended Decree, BCRRT transferred its ownership of the Site to Clark County and BCRRT was dismissed from the Decree upon the Decree's amendment. Cleanup has since continued with Clark County being responsible to remediate the Site. Public input on the cleanup is solicited as outlined in the Camp Bonneville Public Participation Plan⁵(September 2012).

2.0 Remedial Action Unit 1 (RAU-1) - 20 Areas

RAU-1 (FSID 5093080 & CSID 1513) consists of 20 areas of the property with identified releases of hazardous toxic waste. This included petroleum hydrocarbons (i.e. diesel fuel, fuel oil), pesticides, semi-volatile and volatile organic compounds, solvents, and lead- and chromium- containing paint. Investigations and cleanup work at RAU-1 began as voluntary cleanup actions lead by the Army starting in 1996. Following voluntary cleanup, these areas underwent additional confirmation sampling to verify efficacy of those cleanup actions. A cleanup action plan (CAP) for RAU-1, *Final Cleanup Action Plan for Remedial Action Unit* 16, was finalized following public comment in July 2004. Cleanup was completed with institutional controls and restrictive covenant placed at two cleanup locations: Building 4475 at the Camp Killpack cantonment; and Building T-1932 at the Camp Bonneville cantonment.

In January 2008, Ecology issued a <u>No Further Action</u>⁷ determination for RAU-1. Upon review Ecology can confirm that the January 2008 letter is accurate. However, Clark County Public Works will need to demonstrate compliance with the institutional control requirements laid out in the CAP and the restrictive covenant.

³ https://apps.ecology.wa.gov/cleanupsearch/document/3026

⁴ https://apps.ecology.wa.gov/cleanupsearch/document/7340

⁵ https://apps.ecology.wa.gov/cleanupsearch/document/65977

⁶ https://apps.ecology.wa.gov/cleanupsearch/document/99864

⁷ https://apps.ecology.wa.gov/cleanupsearch/document/85400

3.0 RAU-2A 21 small arms ranges

RAU-2A (FSID 47197 & CSID 3867) consists of the small arms range areas with lead and munition contamination. Investigations identified 17 areas consisting of 21 small arms ranges used from approximately 1910 through 1995. Please note, the FBI range as an active range is not a part of RAU-2A and will be addressed separately following closure of the range.

As part of the Remedial Investigation/Feasibility Study (RI/FS)8 (August 2007), approximately 1,760 soil samples (including quality assurance samples) were collected and analyzed from the identified range areas. Based on sampling results, Ecology determined that further cleanup action was required at nine of the small arms ranges. The RAU-2A Cleanup Action Plan (CAP)9(January 2008) recommended excavation and removal of contaminated soil for remediation of the nine small arms ranges. Following remedial excavations, confirmation sampling and subsequent investigations identified further lead contamination at two range areas, RAU 2A-16 (1,000-inch Rifle Range and Machine Gun Range) and RAU 2A-21 (Field Fire ranges No. 1 and No. 2). At RAU 2A-16 lead contamination was identified at depths greater than the conceptual site model for the RAU. Based on sampling and visual observation the range had been constructed on fill which was contaminated with lead. At RAU 2A-21 lead slugs from overshoots of the range were identified adjacent to the remedial excavations. Subsequent surveying and investigation identifying that RAU 2A-21 had an overshoot area of approximately 6.21 acres. To address the contamination at these two locations, the remedy was amended with a chosen remedy of capping the lead-contaminated soil in place with a clean soil cap. See Addendum to the <u>Cleanup Action Plan</u>¹⁰ (June 2017). Given that contamination above cleanup levels remain at this RAU, institutional controls are required in the form of inspection and maintenance of the clean soil caps. Clark County Public Works must continue to comply and demonstrate compliance with the institutional controls laid out in the CAP and the restrictive covenant.

Following the construction of the cleanup actions at RAU-2A, a <u>Final Cleanup Action</u>
Report¹¹ (June 2018) was prepared and provides an detailed summary of the remedial action unit and cleanup history. On September 10, 2019, Ecology issued a <u>No Further Action</u>
Determination¹² for RAU-2A. Upon review Ecology can confirm that the letter is accurate.
Ecology has noted that a workplan for RAU-3, WESTON 2015, is included in the NFA supporting documents for RAU-2A, as this workplan, particularly health and safety protocols, is referenced for work related to the amended CAP.

⁸ https://apps.ecology.wa.gov/cleanupsearch/document/143953

⁹ https://apps.ecology.wa.gov/cleanupsearch/document/145107

¹⁰ https://apps.ecology.wa.gov/cleanupsearch/document/65962

¹¹ https://apps.ecology.wa.gov/cleanupsearch/document/86464

¹² https://apps.ecology.wa.gov/cleanupsearch/document/86585

4.0 RAU-2B Demolition Areas 2 and 3

RAU-2B (FSID 3184561 & CSID 2522) was the investigations of two open burning/demolition areas (open burning/Demolition Areas 2 & 3, where ammunitions were either burned or detonated) for explosive chemical contamination to soils and groundwater. Demolition Area 2 was estimated to be approximately 60-feet in diameter demolition area identified from historic photographs and interview on the southwest facing valley slope north of "David Creek" and east-southeast of the base pop-up target pond. The exact location of Demolition Area 2 was not discovered in investigations due to the steep slope and heavy vegetation and investigations focused sampling near and downgradient to the location. Demolition Area 3 was a surface crater approximately 20-feet in diameter and 10 feet deep was located 2,000 feet upstream of the base boundary with Lacamas creek. MEC cleanup of Demolition Area 2 occurred as part of RAU-3. Remedial investigations with multiple rounds of sampling occurred for soils, groundwater, and surface waters on, near, and downgradient of the demolition areas. These investigations are summarized in the Remedial Investigation Report¹³ (June 2007). These investigations identified limited contamination at low concentrations which did not pose a threat to human health or the environment. On March 23, 2009, Ecology issued a No Further Action ¹⁴ determination for RAU-2B. Upon review Ecology can confirm that this March 2009 letter is accurate.

5.0 RAU-2C Landfill 4 / Demolition Area 1

Cleanup for RAU-2C Landfill 4 / Demolition Area 1 (FSID 475000 & CSID 861) is still in progress. This RAU has contamination from explosive compounds (e.g. RDX, Perchlorate) that remain in groundwater following interim actions which removed the primary contamination source in 2004. For more details on that action see the <u>Final Interim Action Report</u>¹⁵ (February 2006). Quarterly groundwater monitoring is conducted to monitor the groundwater plume and the RI/FS for this RAU is being prepared. Following finalization of the RI/FS, the next major project milestone will be the development of a CAP for this RAU.

6.0 RAU-3 Munitions and Explosives of Concern

RAU-3 (FSID 5125990 & CSID 2216) consist of the site wide cleanup of MEC including UXO across Camp Bonneville.

Prior to the development of a site specific CAP for RAU-3, several interim actions to remove MEC occurred at the Site. Cleanup of MEC was based on the planned future land use and activities for Camp Bonneville and detailed in the site specific <u>Cleanup Action Plan</u> for RAU-

¹³ https://apps.ecology.wa.gov/cleanupsearch/document/97493

¹⁴ https://apps.ecology.wa.gov/cleanupsearch/document/85401

¹⁵ https://apps.ecology.wa.gov/cleanupsearch/document/144628

3¹⁶ (September 2010). The proposed site specific cleanup standards were chosen to be protective of human health and the environment. It is not feasible to remove all MEC from the Site and cleanup was designed so that the likelihood of human exposure to MEC is negligible. Cleanup of RAU-3 includes ongoing institutional controls (e.g. signage, fencing, inspections, activity restrictions, and access restrictions), vegetation removal, surface clearances of MEC, and removal of MEC to the frost line (14-inches below ground surface for the Site). The frost line was chosen as frost heave is a mechanism for buried MEC to reach the surface through repeated frost thaw cycles.

In August 2017, the CAP was amended for cleanup of the Central Impact Target Area – Targets, see <u>Change Memorandum 2017</u>¹⁷ (August 2017) and <u>Response to Public Comments</u>¹⁸ (October 2017). This amendment changed the cleanup within 200 X 200 ft of the 15 hard target points from vegetation removal and surface to subsurface MEC removal to vegetation and surface MEC clearance of 100 – 120 acres which includes the hard targets and additional institutional controls (i.e. annual surface MEC inspections and MEC inspections after heavy storms).

In November 2018, the CAP was amended for cleanup of the of the Western Slopes Area, see <u>Change Memorandum 2018</u>¹⁹ (November 2018) and <u>Response to Public Comments</u>²⁰ (April 2019). This amendment changed the cleanup from a vegetational removal and surface MEC clearance of all areas with a slope of 25 degrees or less (approximately 425 acres of the 609 acres) to vegetation removal and surface MEC clearance of all areas with a slope of 14 degrees or less (approximately 195 acres of 609 acres). This change was based on the result of a 2017 pilot test and access limitations of steep vegetated slopes.

Cleanup at RAU-3 was further broken into four (4) phases:

- Phase 1 Central Valley Floor and associated wetlands
 - Surface and subsurface MEC clearances to a depth of 14 inches over 447 accessible acres within the 449-acre Central Valey Floor and associated wetlands.
 - Final cleanup of the Central Valley Floor is documented in the Revised Final Site-Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Central Valley Floor and Associated Wetlands prepared by Weston Solutions Inc. (June 2018).

¹⁶ https://apps.ecology.wa.gov/cleanupsearch/document/78713

¹⁷ https://apps.ecology.wa.gov/cleanupsearch/document/65966

¹⁸ https://apps.ecology.wa.gov/cleanupsearch/document/79231

¹⁹ https://apps.ecology.wa.gov/cleanupsearch/document/78716

²⁰ https://apps.ecology.wa.gov/cleanupsearch/document/84065

- Phase 2 Demolition Areas 1 and 2
 - Surface clearance of the kickout area of Demolition Areas 1 (approximately 104 Acres) and Demolition Area 2 (approximately 5.7 Acres centered on the original location).
 - Surface clearance of the Range Target Areas (Hand Grenade Range; Rifle Grenade Range; and 3.5-inch Rocket Range firing point).
 - Surface and Subsurface Clearence (Frost line 14 inches below ground clearance) of the Firing Positions and points (Artillery Positions 1, 2, 3, 4, and 7; Mortar Positions 1, 2, 5, and 6; Rifle grenade firing point; and 3.5-inch Rocket Range firing Point).
 - Surface clearance of Roads and Trails (20-foot buffer on either side) and the Roads and trails Step out Areas.
 - Final cleanup is documented in Final Site-Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Phase 2 prepared by Weston Solutions Inc. (June 2020) and After-Action Report Roads and Trails prepared by BCRRT LLC (April 2009).
- Phase 3 Central Impact Target Area (CITA)
 - Surface clearance of the CITA Target Areas (approximately 100 acres)
 encompassing 15 identified target areas and previous MEC finding locations.
 - Surface and subsurface clearance (Frost line 14 inches below ground clearance) of the Northern CITA Expansion Perimeter Fence/Road easement.
 - Surface Clearance of Step outs (approximately 17 acres).
- Phase 4 Surface clearance of the Western Slope Area
 - Surface clearance of slopes (approximately 194 acres).

Final Cleanup of each phase is documented in the following reports:

- Revised Final Site Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Central Valley Floor and Associated Wetlands prepared by Weston Solutions Inc. (June 2018).
- Final Site Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Phase 2 prepared by Weston Solutions Inc. (June 2020).
- Final Site Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Central Impact Target Area and Northern CITA Expansion prepared by Weston Solutions Inc. (January 2021).

• Final Site Specific Final Report Munitions and Explosives of Concern Remedial Action Unit 3 Western Slopes Area prepared by Weston Solutions Inc. (December 2020).

These reports contain information on the location and nature of cultural resources identified during work within the Site that is protected from public disclosure. See RCW 42.56.300. At this time these reports have not been uploaded for public access due to this information. Ecology is working on redacting the protected information within the reports and uploading them for public access as part of the site record.

Ecology has issued four NFA letters, one for each phase at RAU-3. Ecology issued the Phase 1 No Further Action²¹ letter on May 18, 2021, the Phase 2 No Further Action²² letter on June 25, 2020, the Phase 3 No Further Action²³ letter on May 5, 2021, and the Phase 4
No Further Action²⁴ letter on March 10, 2021. Ecology has reviewed the NFA letters and has identified mistakes in the administrative record (i.e. citations) referenced within some the NFA letters.

The No Further Action letter for Phase 2 has a citation mistake for:

 "Camp Bonneville Local Redevelopment Authority. 2005. Camp Bonneville Reuse Plan. Initially prepared September 1998. 1st Revision February 20, 2003. 2nd Revision November 15, 2005. Clark County Washington. 2012. 'Remediation Agreement.' May 1. Including Modification 03 dated August 21, 2015."

This citation is a simple formatting error and the NFA should contain two separate citations:

- Camp Bonneville Local Redevelopment Authority, 2005. Camp Bonneville Reuse Plan, Initial prepared September 1998. 1st revision February 20, 2003. 2nd revision November 15, 2005.
- Clark County, 2012. Remediation Agreement between Clark County Washington and WESTON. Including modification 03 dated August 21, 2015.

The NFA letters for Phase 3 and Phase 4 contain the citation "PARSONS. 2014. Draft Remedial Investigation/Feasibility Study, Remedial Action Unit 3, Camp Bonneville, Vancouver, Washington. November 29." The year for this citation should be 2004.

²¹ https://apps.ecology.wa.gov/cleanupsearch/document/101344

²² https://apps.ecology.wa.gov/cleanupsearch/document/93115

²³ https://apps.ecology.wa.gov/cleanupsearch/document/100991

²⁴ https://apps.ecology.wa.gov/cleanupsearch/document/105962

The NFA letter for Phase 4 references the CAP amendments for Phase 3 in two sections:

- The section describing the MEC and MPPEH clearance documents cites: "Cleanup Action Plan (CAP) for RAU 3 (Bonneville Conservation Restoration and Renewal Team, LLC [BCRRT], 2010) as amended in August 2017 (WDOE, 2017a) and finalized in October 2017 (WDOE, 2017b)"; AND
- The section outlining supporting document cites: "Washington State Department of Ecology (WDOE). 2017a. Memorandum from Ben Amoah-Forson of Washington State Department of Ecology Toxic Cleanup Program to Camp Bonneville RAU 3 File. 'Subject: Proposed Changes to the 2010 Cleanup Action Plan for Remedial Action Unit 3, Site Wide Munitions Contamination.' August.".

The above citations are incorrect and reference the amended CAP for Phase 3 rather than the amended CAP for Phase 4. These incorrect references are present in the Final Site Specific Final Report for Phase 4. Ecology has verified within that report and confirmed with Weston Solutions Inc. that work followed the 2018 CAP amendment the NFA should cite:

- Final Cleanup Action Plan (CAP) for RAU 3 (Bonneville Conservation Restoration and Renewal Team, LLC [BCRRT], 2010) as amended in Washington State Department of Ecology (Ecology), 2018) with Response to Public Comments (Ecology 2019).
- Ecology November 2018. Memorandum from Ben Amoah-Forson of Washington State Department of Ecology Toxic Cleanup Program to Camp Bonneville RAU 3 File. "Subject: Proposed Changes to the 2010 Cleanup Action Plan for Remedial Action Unit 3, Site Wide Munitions Contamination."
- Ecology April 2019. Summary Response to Public Comments Proposed Changes to Cleanup Action Plans RAU 3, Western Slopes Area. Publication no. 19-09-062.

After identifying these administrative issues Ecology has further reviewed the final reports and can verify that cleanup documented within the reports is accurate and was conducted in accordance with the RAU-3 CAP and task specific work plans. Ecology proposes the issues identified above in the NFA Letters be documented and discussed further in the periodic review to provide formal documentation in a report of record with opportunity for public comment. Discussion of these issues will include additional review by an Ecology UXO specialist, the position is currently being filled following staff vacancy.

7.0 Additional Actions

Additional action at the Site is needed in several areas. With regards to cleanup, specifically identifying if and where additional action may be required, this request is beyond the scope of this letter and will be addressed in the pending periodic review.

7.1 Periodic Review

The periodic review for the Site as required by MTCA's regulations and the Amended Decree is substantially overdue. A breakdown in responsibility for producing the periodic review and the due date of the reviews occurred within the development of the consent decrees for the Site. This will be further discussed with lessons learned in the upcoming periodic review to incorporate into a report of record.

The language in the amended PPCD states that the Clark County Public Works shall submit a report to Ecology 90 calendar days before every five year anniversary of the date of dismissal that address the review criteria. See Amended Consent Decree at page 49, sec. XV. Clark County Public Works must thus produce a report to support the periodic review, but it is Ecology's responsibility to produce a periodic review for the Site. Under MCTA, the periodic review must be conducted by Ecology every five years after the initiation of a cleanup action for applicable sites, WAC 173-340-420(3). Based on the language in the Amended PPCD and the regulation, a periodic review report should have been produced in January 2013, five years after the first No Further Action letter was issued.

Ecology understands that Clark County Public Works has put a Request for Proposal for a contractor to prepare a report for the Periodic Review to address the cleanup of the Site and is preparing the final contract for approval. Ecology is providing input to Clark County Public Works in this process and will prepare the draft final version of the report prior to public comment period. Ecology is responsible for making the final determinations required by MCTA under WAC 173-340-420 and will manage the public comment process for the periodic review report and manage finalizing the report once public comments are received and addressed. Ecology anticipates receiving the draft report in January 2025 based on the schedule in the Request for Proposal.

7.2 RAU-2C

RAU-2C is still in the RI/FS stage and Ecology is working with Clark County Public Works and its contractors to address potential data gaps in the Site as part of preparation of the final draft RI/FS. This report is being prepared and has gone through initial rounds of review and revision. Following the finalization of the RI/FS the next major milestone will be the development of a CAP for RAU-2C. These documents will go through the public review process.

7.3 Compliance issues

The Site is currently out of compliance with the institutional controls required by the cleanup action plans and the restrictive covenants that have been recorded. These controls must be in place and documented as effective before site wide cleanup can be considered

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complete. These non-compliance issues will be identified and further addressed in the Periodic Review but include items such as lack of required annual inspections, lack of two staff with UXO technician training, and a long-term operations and maintenance plan. Clark County Public Works is actively working on addressing these issues. Clark County Public Work Parks staff have been active in maintaining the roads and trails at the Site and is in the process of repairing and upgrading required fencing at the Site. One County Public Works staff member has received the required UXO training in May 2024 and a second staff member will be trained in 2025. A position for a Camp Bonneville Compliance Manager to oversee compliance and cleanup efforts has been created and is in the process of being filled. These are encouraging steps and Ecology is committed to working with Clark County Public Works to continue to address these issues.

7.4 Documentation

Clark County Public Works and Ecology, under the amended PPCD, are required to maintain information repositories located at the Department of Ecology office in Lacey, Washington and the Washington State University Vancouver Library. Ecology understands the State University records have been moved to the Vancouver Community Library in Downtown Vancouver, WA. Over time upkeep of these records became inconsistent from both Ecology and Clark County Public Works. Ecology is actively working on addressing this item, within its available resources, including digitizing and uploading reports of record. Ecology suggests amending the PPCD to clarify the updated record location and bring the record keeping requirements in line with other MCTA sites & consent decrees.

This letter is based on the information contained in the documents referenced and is not a comprehensive review of all reports produced for the Site nor a technical review of the documents referenced. If you have any questions or further concerns, please contact me at erik.snyder@ecy.wa.gov, or Michael Cronin, Site Manager, at michael.cronin@ecy.wa.gov. Ecology looks forward to continuing cooperation with Clark County Public Works as an agency, and to providing the best possible cleanup of this Site.

Sincerely,

Erik Snyder, Section Manager Headquarters Cleanup Section

C. Ag Ou

Toxics Cleanup Program

cc: Erik Harrison, Clark County Public Works
Evelyn Ives, Clark County Public Works
Ken Lader, Clark County Public Works
Jeremy Squire, Clark County Public Works
Kathleen Otto, Clark County, County Manager