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DEPARTMENT OF ECOLOGY
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May 8, 2007

Mr. Keith A. Klein, Manager
Richland Operations Office
United States Department of Energy
P. O. Box 550, MSIN: A7-50
Richland, Washington 99352

Mr. Charles G. Spencer, Project General Manager
Washington Closure Hanford, LLC
2620 Fermi Avenue
Richland, Washington 99354

Re: Notice of Violation of the Hanford Facility Resource, Conservation, and Recovery Act Permit at 100N Area, Hanford Site

Dear Mr. Klein and Mr. Spencer:

The United States Department of Energy-Richland Operations Office (USDOE-RL) and Washington Closure Hanford, LLC (WCH) are parties to Revision 8B of the Hanford Facility Dangerous Waste Portion of the Resource, Conservation, and Recovery Act Permit (Site-Wide Permit) issued by the Department of Ecology. In this letter, references to the Permittees include WCH and USDOE-RL.

WCH performs demolition and cleanup work at the 100N Area of Hanford under contract to USDOE-RL. Beginning on January 25, 2007, Ecology conducted an inspection of petroleum spills at the 183N demolition site within the 100N Area. As a result of the inspection, we identified two violations of the Site-Wide Permit. The violations relate to the notification, mitigation, and cleanup of dangerous wastes or hazardous constituents that have been released to the environment. In addition to the cited violations, we have five concerns regarding the operations at the 183N demolition site within the 100N Area of Hanford.

We identify concerns to notify owners and operators of inadequate practices which, if not remedied, may evolve into violations subject to enforcement actions that may include orders and penalties. In this case, Ecology will withhold issuance of orders or penalties for 30 days pending the successful revision to current practices in order to remedy the cited violations and concerns.

Summarized below, you will find the violations, concerns, and remedies to them. Ecology will assess the resolutions to these violations and concerns during future inspections on the Hanford Site. Correction of the violations and concerns listed does not relieve USDOE-RL or WCH of the duty to comply with other requirements of state or federal environmental laws.

VIOLATIONS:

1. **Hanford Facility Resource, Conservation, and Recovery Act Permit, Dangerous Waste Portion, Revision 8B, Condition I.E.15.a.**

Site-Wide Permit Condition I.E15.a requires the Permittees to provide Ecology with immediate verbal notification of any release of dangerous waste or hazardous substances, which may endanger human health or the environment.

USDOE-RL and WCH failed to notify Ecology of releases of dangerous wastes and/or hazardous substances within the 183N demolition area as follows:

WCH had knowledge of a diesel fuel spill to the soil on January 16, 2007, and again on January 19, 2007. However, WCH did not notify Ecology of the January 19 spill until January 24, 2007, and failed to notify Ecology of the January 16 spill altogether.

WCH references its Spill and Release Reporting Procedure, ENV-1-1.7, to meet regulatory requirements, including those described in Washington Administrative Code (WAC) 173-303-145, for notification of releases to the environment. However, this policy states that spills of less than 50 gallons of petroleum products do not require reporting. WCH management representatives advised Ecology that the 50-gallon limit on reporting from their policy is a USDOE standard. As such, WCH's Spill and Release Reporting Procedure does not meet WAC 173-303-145 requirements as stated in the procedure. WCH's Spill/Release Procedure states that WCH's Point-of-Contact (POC) makes the determinations whether a spill is reportable to outside agencies. However, in the case of the 100N petroleum spills in January and February 2007, persons subcontracted to WCH made these determinations and not WCH's POC.

2. **Hanford Facility Resource, Conservation, and Recovery Act Permit, Dangerous Waste Portion, Revision 8B, Condition I.E.15.e**

Site-Wide Permit Condition I.E.15.e requires the Permittees to immediately control and mitigate any release of dangerous waste or hazardous substance per WAC 173-303-145(3).
WAC 173-303-145(3) requires immediate action to mitigate and control any release, regardless of quantity, that threatens the environment or human health.

Specifically, USDOE-RL and WCH failed to mitigate and control releases of dangerous wastes and/or hazardous substances into the environment at the 183N demolition site in the following manner:

On January 16, 2007, an unknown quantity of diesel fuel (estimated by WCH to be one to five gallons) was discovered to have leaked to the soil from excavation equipment in use at the 183N demolition site. The leak from the excavation equipment was first observed on January 12, at which time the excavator was removed from service and parked pending repair by a mechanic on

January 15. During this time WCH did not place absorbent or receptacles under the machine to capture leaking fuel. On January 16, the excavator developed another fuel leak at which time WCH 100N field managers said that they placed absorbent upon the stained soil created from the leak. However, no other action was taken to mitigate or cleanup the spilled material or the contaminated absorbent until January 23. At that time at least some of the soil contaminated from this spill was removed as part of cleanup of a nearby, but unrelated spill.

On January 19, 2007, WCH experienced another leak of diesel fuel from the same demolition equipment that spilled fuel on January 16. The equipment was removed from service and parked at the site pending repair by a mechanic on January 22. Despite WCH's recent experience with spills from this excavator, WCH failed to place absorbent or receptacles under the machine removed from service to mitigate leaking fuels to the soil. WCH discovered on January 22 the entire contents of the fuel tank had leaked to the soil. WCH did not remove the contaminated soil from these spills until January 23.

WCH's 100N logbooks and maintenance records reveal that the excavation equipment that was the source of the fuel leaks on January 16, 19, and 22, had been leaking fuel since January 12.

CONCERNS:

1. Release Cleanup:

Site-Wide Permit Condition II.Y requires the Permittees to conduct corrective action in accordance with WAC 173-303-646 as necessary to protect human health and the environment for release of dangerous wastes and dangerous constituents. WAC 173-303-646 is referenced for the purpose, applicability, and requirements for corrective action. WAC 173-303-646 has been recoded as WAC 173-303-64610 through WAC 173-303-646920.

USDOE-RL and WCH failed to properly implement corrective action to adequately cleanup spills of petroleum products, hazardous wastes, or hazardous substances, as follows:

On January 19, 2007, WCH operating excavation equipment experienced a leak of diesel fuel, and subsequent spill to the soil, in the 183N demolition site. WCH's 100N logbook documents that their environmental representative inspected the January 19 spill site on January 25, and "gave approval that everything looks OK." WCH 100N field managers advised Ecology inspectors on January 25 that the January 19 spill cleanup had been completed by removal of all visibly stained soils. However, during Ecology's January 25 inspection of the spill site at the 100N Area, Ecology inspectors advised WCH field managers of our concern about the use of visual standards in lieu of confirmatory sampling to determine that spills had been adequately cleaned up. The following day, January 26, WCH prepared to sample the soils remaining at the spill site to confirm that cleanup had been completed. Stained soil and a "strong diesel odor" were discovered within the excavated area. WCH subsequently re-excavated the spill site on January 27, and re-sampled the remaining soils after removing approximately 210 cubic yards

more soil from the spill site. Sampling and analysis performed of the soil remaining at the January 19 spill site after the re-excavation of the contaminated soils yielded analytical results below WAC chapter 173-340 cleanup standards.

During our inspection into the January 19 fuel spill at the 100N Area, WCH management and their environmental representative advised us that distinguishing wetted soils from petroleum stained soils was difficult. They also stated that soil staining was difficult to distinguish after the site had been disturbed by equipment performing excavation operations during cleanup.

During Ecology's inspection into the January 16th fuel spill at the 100N Area, Ecology learned that no confirmatory sampling specific to this spill had been performed by WCH to ascertain if the cleanup of this spill had been completed.

2. Waste Designation:

On January 16, 2007, and again on January 19, 2007, diesel fuel spilled to the soil from equipment operating at the 183N demolition site within the 100N Area of Hanford. WCH designated the resulting contaminated soils based on information from manufacturers' Material Safety Data Sheets (MSDS). WCH performed no sampling or analysis to substantiate their waste designation of the soils accumulated for disposal.

WAC 173-303-070(3)(c) requires a generator demonstrate that the knowledge used to designate a waste is sufficient. In the case of the spilled diesel fuel at the 100N Area, WCH presented to Ecology pre-written waste designations, prepared by WCH waste designation staff, to make waste determinations of the contaminated soils resulting from the spills. However, WCH's pre-existing waste designation document describes that 10 percent or less of diesel fuel in soils does not designate as an ignitable hazardous/dangerous waste. Make note this determination was not based on testing, data, or any published information describing how WCH had derived the 10 percent rule nor did WCH provide any records of how this determination was made.

In their original waste designations, WCH could not provide any data or documentation, other than the chemical constituent listing in the products' MSDSs, to determine whether the chemical constituents contained within the contaminated soils designated as hazardous or dangerous waste or not. The information for chemical constituents that WCH referenced in their waste designations as being found in the MSDSs was incomplete or missing altogether. For example, the MSDS for #2 diesel fuel referenced by WCH's waste designation for #2 diesel fuel, did not list the product's constituents. This MSDS was discovered by Ecology to have been out-of-use for many years by the manufacturer that originally issued it. Although the MSDSs used in WCH's original waste designations included references to Chemical Abstract Service (CAS) numbers, WCH waste designation personnel could not recall, or provide any data or records to confirm, whether the referenced CAS data had been used or not when designating the contaminated soils at 183N.

During its inspection, Ecology inspectors advised WCH personnel that the information used to designate the contaminated soils was insufficient. WCH then "re-designated" the contaminated soils this time basing their waste determinations on published chemical information and calculations of contaminants in the soil based on these chemical references.

3. Recordkeeping:

Site-Wide Permit Condition I.E.15.d requires the Permittees to document any release of a dangerous waste or hazardous substance not reported to Ecology per condition I.E.15.a. This documentation shall include the time and date of the release, location and cause of the release, type and quantity of material released, and a description of any response actions taken for the release. WCH documented 14 releases to the environment in the 100N area daily log at the 183N demolition site that occurred from August through February. However, this log failed to quantify most of the releases or to describe response actions taken to mitigate the releases.

4. Division and Dilution:

WAC 173-303-150 prohibits division or dilution of wastes to avoid regulation by changing the waste's designation. It appears that WCH excavated soils at the 183N demolition site on January 19, in order to meet pre-existing waste designation profiles instead of to simply clean up the spill site. WCH uses pre-written "global" waste designation profiles to designate contaminated soils excavated from spill sites. In the case of the January 19th spill at 183N, the "global" waste designation profile described soils contaminated with 10 percent or less of diesel fuel as non-regulated (a later revision of this "global" designation reduces the fuel/soil ratio to 1 percent fuel in soil).

WCH field management and waste designation personnel did not obtain samples or any other data from the contaminated soils accumulated for disposal when making their waste determinations of these materials. When Ecology inspectors asked how WCH field managers and waste designation personnel determined that the spilled material met the fuel to soil ratio in their "global" waste determination profiles, the response received was that enough soil was excavated to ensure the soil did not designate as dangerous waste.

On January 23, and again on January 27, WCH excavated a large amount of soil to remove soils contaminated by diesel fuel spills in the 183N demolition site. WCH reported that 68 gallons of diesel fuel was spilled to the soil. However, WCH's cleanup excavation filled a total of 11 ERDF roll-off waste containers at 30 cubic yard capacity each and part of a 12th ERDF container. This represents more than five cubic yards of soil excavated per gallon of fuel spilled.

5. Preparedness and Prevention:

Site-Wide Permit Condition II.B.1 requires the Permittees to provide the equipment specified in WAC 173-303-340(1) as specified in the Hanford Emergency Management Plan. WAC 173-340(1) requires that facilities be operated to minimize the possibility of releases of dangerous waste or dangerous constituents including taking preventative measures and maintaining spill control equipment where necessary. Section 11.2.4 of the Hanford Emergency Management Plan (DOE/RL 92-04) requires the Permittees locate spill control supplies as necessary.

USDOE-RL and WCH failed to maintain spill control equipment sufficient to mitigate releases at the 183N demolition work site. Despite repeated leaks from equipment operating in the 183N demolition area, WCH failed to provide containers or other means to prevent known leaks of petroleum products from equipment operating in the area from reaching the soil. WCH's maintenance records indicate that some equipment operating in the 183N work area was poorly maintained to prevent leaks of petroleum products.

RESOLUTIONS TO VIOLATIONS:

1. Hanford Facility Resource, Conservation, and Recovery Act Permit, Dangerous Waste Portion, Revision 8B, Condition I.E.15.a:

Upon receipt of this letter, Ecology and the U.S. Environmental Protection Agency (EPA) will initiate meetings with the Permittees to establish release notification protocols applicable throughout the Hanford Site and consistent with state and federal regulatory requirements.

2. Hanford Facility Resource, Conservation, and Recovery Act Permit, Dangerous Waste Portion, Revision 8B, Condition I.E.15.e:

Upon receipt of this letter, WCH or USDOE-RL must take all actions necessary to mitigate all releases to the environment of dangerous wastes or hazardous substances, including petroleum products, immediately upon their discovery per WAC 173-303-145(3). Immediately means within an hour of discovery of the release or, if a one-hour response is not possible, as soon thereafter as possible, not to exceed 24 hours. Mitigation means containing or otherwise preventing the released material from further migrating into the environment and, as in soil, removing the contaminated soils from the release site as soon as possible (typically within 24 hours).

Documentation of the mitigation of all releases shall be maintained in the facility's operating record and available to Ecology upon request. Any policies or procedures used by USDOE-RL or WCH to demonstrate to Ecology compliance with the mitigation and control requirements of WAC 173-303-145 must clearly describe the requirements above.

RESOLUTIONS TO CONCERNS:

1. Release Cleanup:

Upon receipt of this letter, Ecology and EPA will initiate meetings with the Permittees to determine the application of corrective action at the Hanford Facility in order to clean up releases of dangerous waste, dangerous constituents, and hazardous substances including petroleum products.

2. Waste Designation:

WCH performed no sampling or analysis of the contaminated soils accumulated for disposal from the diesel spills occurring on January 16th and January 19th. However, in this case, Ecology's confidence that the waste soils do not exhibit characteristics for which they may designate is strengthened by data that Ecology obtained from analysis at its contract laboratory of soils remaining at the spill site.

WCH relied heavily on information from manufacturers' Material Safety Data Sheets (MSDSs) as the basis for making waste designations. MSDSs are not produced for the purpose of waste designation and by themselves rarely contain sufficient information on which to base waste determinations. Although the information contained within MSDSs may be useful to supplement other information and data when making waste determinations, Ecology rarely will accept MSDS information as the sole basis for determining if a solid waste has been properly designated to be a dangerous/hazardous waste or not.

Ecology will continue to review waste designations during future inspections including review of the information supporting waste determinations. The standards for using knowledge of a waste in order to designate the waste can be found in WAC 173-303-040 (definition of "knowledge"). WAC 173-303-070(3)(c)(ii) describes the requirements for using knowledge to designate a waste. WAC 173-303-300(2)(a) provides good guidelines for the standards to be met when using knowledge for designating a waste. If the requirements for the use of knowledge to properly designate a waste cannot be met, then testing of the waste per WAC 173-303-070(4) must be performed.

3. Recordkeeping:

To meet recordkeeping requirements of the Hanford Federal Facility Agreement and Consent Order, the Site-Wide Permit, and the requirements of Washington Administrative Code, USDOE-RL and its contractors should document all releases to the environment of dangerous waste, dangerous constituents, and hazardous substances, including petroleum products,

regardless of quantity in the facility operating record or other log. This documentation must include the time and date of the release, the location and cause of the release, the type and quantity of the material released, and a description of the response actions taken for the release. This documentation must be maintained current and available to Ecology upon request.

4. Division and Dilution:

Any business practice that encourages division or dilution of wastes, including excessive removal of soils for the purpose of avoiding regulation, may be considered by Ecology to be dilution per WAC 173-303-150. Furthermore, such practices may unnecessarily increase cleanup costs and impact limited waste disposal resources. Ecology will consider the requirements of WAC 173-303-150 during future inspections at the Hanford Site.

5. Preparedness and Prevention:

Site-Wide Permit condition II.B.1 requires USDOE and its contractors to equip the facility with the equipment specified in WAC 173-303-340(1). Among other requirements, WAC 173-303-340(1) requires a facility be equipped with spill control equipment to avoid or mitigate releases of dangerous wastes or dangerous waste constituents. USDOE and WCH must equip all work areas in which the possibility of releases to the environment exists of dangerous wastes, hazardous substances, or hazardous constituents, including petroleum products, with the appropriate and readily available spill control equipment capable of immediately mitigating releases until they can be cleaned up. Examples include equipping work areas where dangerous wastes or hazardous substances are known or suspected to be present with containers, hand tools, absorbents, impermeable sheathing, or other materials and equipment as necessary to mitigate releases should they occur. Work areas with a history of releases and where heavy equipment operates should be equipped with appropriate spill response equipment to mitigate releases in these areas.

Ecology will consider the requirements of WAC 173-303-340 during future inspections at the Hanford Site.

If you have any questions, please contact me at 509-372-7933.

Sincerely,

Bob Wilson

Bob Wilson
Compliance Specialist
Nuclear Waste Program

pll
cc: See next page

cc: Nick Ceto, USEPA
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