Oregon

July 28, 1997

DEPARTMENT OF
ENVIRONMENTAL
QUALITY

NORTHWEST REGION

Chad Hindman
22 Othello
Lake Oswego, OR 97035

RE: Wagstaff Battery

Dear Mr. Hindman:

The following is a brief summary of remedial investigation and cleanup options for Wagstaff Battery located at 2124 N. Williams Avenue, Portland, Oregon. These recommendations are provided to assist Wagstaff in addressing the data gaps and issues outlined in DEQ's June 19, 1997 File Review Memorandum. You may also propose your own solutions to meet the intent of protecting present and future health, safety and welfare of Oregon's citizens and the environment.

As you will notice in the following discussion, unless you do environmental work routinely, the cleanup process may appear complicated. I encourage you to work with your consultant and DEQ to fully understand your options and the consequences of your decisions. Much of the frustration which you are currently experiencing comes from implementing short-term solutions to a long-term project. We will work with you to resolve the remaining issues. Please note that prior to starting any additional site work, a work plan should be submitted for DEQ review and approval. Otherwise, as with the previous, self-directed cleanup, you may find that the work does not meet Oregon's environmental cleanup rules.

SURFACE SOIL IMPACTS

In 1986, lead contamination in shallow soils was confirmed at Wagstaff Battery. Historic air permit calculations estimate that Wagstaff generated 100 pounds of lead emissions annually. Because of the magnitude of the lead health risk and the proximity to private residences, Wagstaff must evaluate the current levels of contamination. We recommend collecting shallow soil samples (0-3 inches) from the areas where lead is most likely to collect from historic emissions. Samples should be collected from undisturbed areas that are representative of soil exposed during past site operations. Alternatively, you could also propose to grid your site and collect samples at consistent locations over the entire site. If contamination is present at levels of concern, investigation off-site and cleanup of the soil may be required.

John A. Kitzhaber
Governor

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SUMP #1

Contamination beneath sump #1 has not been defined completely. Previous samples identified total petroleum hydrocarbons (TPH) at concentrations of 17,000 to 9,000 mg/kg TPH and total lead at 1,900 mg/kg. Leachable lead was not characterized.

We recommend collecting one soil sample beneath the 60 inch depth where soil removal was completed previously. The sample should be tested for all contaminants of concern. For diesel and heavier oil, the contaminants of concern are polynuclear aromatic hydrocarbons (PAHs). Therefore, the sample should be analyzed for TPH, PAHs, total and leachable lead, and pH.

A second soil sample should be taken to define the vertical extent of contamination. This second sample should be tested for all contaminants detected in the first sample. The results of these analyses should be compared to the Numerical Soil Cleanup Levels (OAR 340-122-045 to -046) to determine whether additional soil removal is necessary. Please note that the applicability of the Numerical Soil Cleanup Levels is contingent upon demonstration that groundwater has not been impacted.

SUMP #2 and WASTE DISPOSAL

The only environmental issue in this area is the disposal of contaminated soil and sludge from the sumps (1 and 2). Petroleum and lead contaminated soil was excavated and remains on-site pending disposal. In addition, one, 55-gallon drum of sludge and water was removed from the sumps with disposal pending. Before disposing of these substances or any other potentially contaminated material from the site, you must determine if the material is hazardous waste.

A representative, contaminated soil sample must be tested by toxic characteristic leaching procedure for metals (TCLP) and pH. A characteristic hazardous waste has a TCLP greater than 5 mg/l or a pH of less than or equal to 2. If the contaminated soil is a hazardous waste, it must be disposed at a RCRA permitted disposal facility (i.e., Arlington). If it is not a hazardous waste, then you should contact facilities which can accept non-hazardous waste or petroleum contaminated soils. I've included a Metro brochure which identifies these facilities in our area.

The liquid/sludge waste must also be evaluated to determine if it is a hazardous waste. The original sludge sample (5884-SL4; pH =1.17) indicates that the sludge is a characteristic hazardous waste because the pH is less than 2. You may neutralize the sludge before retesting to determined if it remains a characteristic waste. In addition, the sludge may be a characteristic waste for lead so it must be tested by TLCP. If it is determined to be a hazardous waste, it must be disposed of at a RCRA permitted disposal facility. The exception to this requirement would be if you could demonstrate that it is a resource rather than a waste.

At our last meeting, you mentioned using the liquid to "top off" battery casings which were to be recycled. Before the DEQ could approve of this disposal method, you must demonstrate that this practice has some resource recovery value. A letter from your recycler indicating that they are paying for the liquid/sludge to be used to "top off" the spent casings should suffice. DEQ will require copies of the testing results and disposal receipts.

SUMP PIPING AND DISCHARGE AREA

Your June 27, 1997 letter has adequately addressed issues raised in the file review memorandum.

DRY WELL

The extent of total lead contamination remaining after the 1993 excavation has not been defined. Confirmatory samples from the perimeter of the excavation were only evaluated by TCLP. Additional soil samples should be collected from the perimeter of the drywell excavation to define the lateral extent of total lead contamination. At a minimum, samples should be collected from the depth at which the highest concentrations of lead were previously detected. Sufficient samples should be collected to define the volume of contaminated soil adjacent or underneath the west wall of the Wagstaff building. Samples should be analyzed for total lead and pH. A limited number of samples should be analyzed by TCLP or the synthetic precipitation leach test (SPLT) to confirm that groundwater impacts are not of concern. DEQ has approved both of these analytical methods. The TCLP is used to define RCRA wastes, determine whether a waste is subject to the land disposal ban, and determine cleanup levels at RCRA sites. The SPLT was originally designed to simulate the leaching potential of contaminated soils in a monofill under acid rain conditions.

After investigation, you should compare the testing results to the Numerical Soil Cleanup Levels. At this stage, you will need to decide whether the site can be remediated to the Numerical Soil Cleanup Levels or whether a risk assessment and feasibility study (FS) is a better option for the Wagstaff site.

The Numerical Soil Cleanup Rules (OAR 340-122-045 and -046) are designed for simple cleanups where the contamination is minimal or may be removed and disposed of off-site, and groundwater is not threatened. In order to close your site using these rules, you would excavate and dispose of the solidified lead waste, excavate residual contamination or demonstrate that only a small pocket of contamination remains, and collect confirmatory samples demonstrating that the numerical cleanup standards for soil (200 mg/kg and 2 mg/l leachate concentration for lead) have been achieved. Because the solidified lead waste is no longer a hazardous waste, it could be disposed at a landfill permitted to accept industrial waste (i.e., Hillsboro Landfill). (You should note that the difference between leaving the solidified waste on-site and disposing of it off-site, is that landfills follow strict monitoring regimes with closure plans to ensure the long-term protectiveness of the environment.) You should contact individual landfills to verify if they will accept this material and if they require any additional testing. If additional, unsolidified lead-

contaminated soils were excavated, they may be subject to hazardous waste characterization, storage, and disposal requirements.

If removal is not a viable option and you choose to leave the solidified waste in place, a site specific risk assessment and feasibility study would be necessary. The remedial investigation and risk assessment would complete the characterization of the extent of contamination and define the risk currently posed by the site. The feasibility study is used to evaluate the protectiveness, effectiveness, long-term reliability, implementability, implementation risk, and reasonableness of cost of potential, cleanup remedies. You could propose a focused feasibility study whereby you only evaluate a soil removal versus capping and associated long-term controls.

The DEQ concurs that there are not good tests to demonstrate the long-term reliability of solidification. Even the bench tests that EPA suggests may need to be supplemented by long-term groundwater monitoring and periodic reporting to DEQ. These costs and their implementability must be carefully evaluated during the feasibility study.

Previously, you mentioned paving the site. Capping and long-term controls are an option but could only be approved after performing a baseline risk assessment The baseline risk assessment would evaluate the anticipated exposure routes and effects on the human population. It must be demonstrated that the remaining risk from leaving contamination is less than the acceptable risk levels for humans and ecological receptors. DEQ needs formal documentation of the health risk posed by the residual contamination before initiating public notice of the proposed remedy. If the acceptable risk was exceeded, then you would need to evaluate cleanup options (including capping) through the feasibility study. In the feasibility study, you may be able to modify the proposed long-term controls (i.e., deed restrictions which prohibit disturbing the solidified soils and/or a more resilient cap) to reduce the residual risk to acceptable levels.

Whichever cleanup path you choose both have advantages and disadvantages. Using the Numerical Soil Cleanup Rules may cost more initially but offers a simple numerical goal and when you're done; you're done. Whereas the feasibility study and risk assessment won't disrupt on-site business in exchange for property restrictions and long-term liability.

As you can see, although this letter is fairly detailed, it doesn't address the myriad of possibilities or issues which you may encounter after you get started. Therefore you should submit a work plan which describes what work and how you intend to perform work at the site. The work plan allows DEQ to advise you (before you do the work) of whether the work is necessary or will be satisfactory in moving toward completion of this project.

If I can be of further assistance, please contact me at 229-5445. If you decide that you want to complete the cleanup without DEQ oversight or that cleanup is not necessary for the sale of the property, please notify us in writing and we will terminate your participation in the Voluntary Cleanup Program in accordance with the terms of the Letter Agreement.

Sincerely,

Sheila A. Monroe

Sheila A. Monroe
Project Manager
Voluntary Cleanup and Site Assessment

SAM:sam

Cc: Bruce Hindman, Wagstaff Battery
Mike Rosen, VC/SAS:DEQ
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