

**Land Disposal Restrictions Training**  
**Lesson 3: Conducting Follow-Up After Inspection**  
**Exercise 1: Communicating with Stakeholders**

Instructions: This exercise asks you to convey some key information to your supervisor about your inspection of the WD facility and to identify some possible follow-up actions. As you may recall, the WD facility is a permitted TSDF and large quantity generator.

**Voice of your supervisor:** Well, I heard you had a good visit to the WD facility. I've already spoken to others about the inspection and heard about the compliance issues. What were some compliance concerns that you found? **(pause)**

3.1 Which of the following issues are of compliance concern at the WD facility?

Issues	Is there a compliance concern?		Answer
	Yes	No	
Errors/omissions on LDR notices			(Yes is Correct.)
Immobilization of hazardous debris inside a landfill			(Yes is Correct.)
Failure to meet LDR treatment standard for arsenic in treated waste			(No is Correct.)
Storage of waste piles not meeting the LDR treatment standards			(Yes is Correct.)
Failure of hazardous debris contaminated with D012-D043 to meet UHCs under the alternative treatment standards			(No is Correct.)
Up to 1-year storage of waste piles meeting the LDR treatment standards			(No is Correct.)

**Voice of your supervisor:** I heard that some of the treatment batches failed for cyanides. This has been an on-going problem with them. Did you gather any information that might suggest a cause? **(pause)**

3.2 Based on facility personnel statements during the visit, which of the following could be a likely cause of the cyanide failures?

Select the likely cause	Answer
Inconsistent cyanide screening of incoming shipments of untreated waste	Correct. During your inspection of WD's receipt and acceptance of incoming shipments, the facility personnel indicated that cyanide screening is performed "if the generator's waste profile or other information indicates their presence." This contradicts the permit, which requires cyanide screening for all incoming shipments of untreated waste, and could be a likely cause.
Inconsistent cyanide screening of incoming shipments of treated waste	<p>Incorrect. Although it is true that incoming shipments of treated (i.e., "direct landfill") wastes are not screened for cyanides, this is not the cause of the cyanide failures. The cyanide failures were detected in <u>wastes treated by WD</u>. (Although WD does not perform tests on direct-landfill wastes, EPA guidance recommends at least annual testing of wastes certified by the shipper as meeting the LDR standards. For additional information, see EPA guidance "Waste Analysis Requirements in Incoming Waste Shipments – LDR" (RCRA Online Number 12943)).</p> <p>During your inspection of WD's receipt and acceptance of incoming shipments, the facility personnel indicated that cyanide screening is performed "if the generator's waste profile or other information indicates their presence." This contradicts the permit, which requires cyanide screening for all incoming shipments of untreated waste, and could be a likely cause.</p>
Failure to perform bench-scale tests to develop effective treatment recipes	<p>Incorrect. This issue was not raised by facility personnel during the inspection (although it could be a cause nonetheless).</p> <p>During your inspection of WD's receipt and acceptance of incoming shipments, the facility personnel indicated that cyanide screening is performed "if the generator's waste profile or other information indicates their presence. This contradicts the permit, which requires cyanide screening for all incoming shipments of untreated waste, and could be a likely cause.</p>
All of the above	Incorrect. During your inspection of WD's receipt and acceptance of incoming shipments, facility personnel indicated that cyanide screening is performed "if the

Select the likely cause	Answer
	generator's waste profile or other information indicates their presence." This contradicts the permit, which requires cyanide screening for all incoming shipments of untreated waste, and could be a likely cause.

**Voice of your supervisor:** Interesting, WD's failure to perform the cyanide screening consistently on incoming shipments could be the cause of their downstream treatment failures. Did your process-based inspection approach – where you inspected wastes as they moved onsite from one operation to the next -- help to uncover such problems and their potential consequences? **(pause)**

### 3.3 What is your response?

Yes or No	Answer
Yes	<p>Correct. In this exercise, the inspector performed a process-based inspection, whereby the inspection began at the start of WD's operations, i.e., waste receipt and acceptance. The inspection then followed the wastes as they moved from operation to operation onsite. Using this approach, the inspector discovered upfront that cyanide screening is not being performed consistently on incoming shipments of untreated waste. This finding, in turn, tells the inspector to look for downstream consequences, such as treatment failures.</p> <p>More generally, this exercise shows that a problem occurring at a particular operation at a facility (e.g., failed waste treatment) may not be localized but the result of a problem elsewhere at the facility (ineffective waste screening). Inspectors should understand the inter-relationship among the various facility operations and how they affect each other.</p>
No	<p>Incorrect. In this exercise, the inspector performed a process-based inspection, whereby the inspection began at the start of WD's operations, i.e., waste receipt and acceptance. The inspection then followed the wastes as they moved from operation to operation onsite. Using this approach, the inspector discovered upfront that cyanide screening is not being performed consistently on incoming shipments of untreated waste. This finding, in turn, tells the inspector to look for downstream consequences, such as treatment failures.</p> <p>More generally, this exercise shows that a problem occurring at a particular operation at a facility (e.g., failed waste treatment) may not be localized but the result of a problem elsewhere at the facility (ineffective</p>

	waste screening). Inspectors should understand the inter-relationship among the various facility operations and how they affect each other.
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**Voice of your supervisor:** I also heard that there were some troubling test results for arsenic in the treated waste piles. The first TCLP test for both batches showed a very low arsenic concentration, whereas the second round of tests showed very high concentrations – pretty much a 10-fold increase from the first verification to the second. Do you have any ideas on how to remedy this? **(pause)**

3.4 True or False: Although the permit calls for one grab sample from each pile, the inconsistent test results suggest that one grab sample may be insufficient for accurate measurement.

Yes or No	Answer
Yes	Correct. It is possible that the one grab sample is insufficient, particularly if the waste pile is not homogenous. <b>A key point here is that inspectors should evaluate a facility's compliance with its permit as well as the effectiveness/appropriateness of the permit requirements themselves.</b>
No	Incorrect. It is possible that the one grab sample is insufficient, particularly if the waste pile is not homogenous. <b>A key point here is that inspectors should evaluate a facility's compliance with its permit as well as the effectiveness/appropriateness of the permit requirements themselves.</b>

3.5 The table below presents a list of concerns found during your inspection in one column and primary stakeholders in the other. Click on each concern and drag it to the stakeholder who is in the best position to take follow up action if necessary.

Concerns Found During Inspection	Primary Stakeholder	Answer
A. Inconsistent testing of incoming shipments of untreated waste for cyanides B. Oleum found in lab packs C. Insufficient number of grab samples obtained from treated waste piles for LDR verification testing	1. Responsible permit writer 2. Local government personnel 3. Enforcement personnel for your hazardous waste program 4. Enforcement personnel for the federal/state transportation agency	A and 3. Your compliance/enforcement office should be informed that WD is violating its permit, which requires cyanide testing of each incoming shipment. This could require further enforcement action.  B and 5. During your inspection, you learned that WD was

<p>D. Insufficient screening of incoming shipments of treated waste</p>	<p>5. Enforcement personnel for your program <u>as well as</u> the federal/state transportation agency</p>	<p>transporting oleum in lab packs in violation of DOT regulations. This could possibly be conveyed to the relevant transportation agency. In addition, some RCRA requirements may be violated, which your enforcement office may need to be notified about (e.g., section 262.30 requires generators to comply with DOT packaging requirements before transport offsite).</p> <p>C and 1. Based on the inconsistent arsenic test results, you and the permit writer may want to discuss the need for additional grab samples of treated waste (among other possible solutions) and resolve it through permit modification if needed. (Note: This concern is not a permit violation because the facility is complying with its permit.)</p> <p>D and 1. As mentioned earlier, EPA recommends at least annual testing of treated wastes received from offsite sources. WD's permit does not require such testing. This inconsistency with EPA guidance could be discussed with the permit writer and resolved through a permit modification if needed. (Note: This concern is not a permit violation because the facility is complying with its permit.)</p>
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