

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION I

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HAZARDOUS MATERIALS  
MANAGEMENT UNIT

DATE: June 3, 1986  
SUBJ: Avco Lycoming CME of April 18, 1986  
FROM: Terrence Conlon, Environmental Scientist -  
CT Waste Regulation Section  
TO: John Hackler, Chief  
CT Waste Regulation Section

On April 18, 1986, I accompanied Jack Gelting and Ken Feathers from CT DEP on a groundwater sampling evaluation of Avco Lycoming. This inspection was the groundwater portion of a Comprehensive Monitoring Evaluation (CME). Peter Zack of DEP will perform the non-groundwater portion of the CME during June 1986.

Because this visit at Avco was part of DEP's commitment for FY'86, the inspection and evaluation was lead by DEP. Furthermore, my interest in attending this part of the CME was to acquaint myself with Avco which intends to close its surface impoundments this summer. Consequently, DEP will be responsible for logging any violations on the Hazardous Waste Data Management System (HWDMS).

My comments concerning the inspection are listed below:

- ° I had requested that Avco's consultants, Leggette, Brashears, and Graham, Inc. (LBG), measure water levels at all wells during low tide. The purpose of this request was to minimize tidal effects in determining groundwater flow. LBG informally agreed to measure water levels at all wells before sampling to insure that measurements are related to the same tidal elevation and cycle. The consultant failed to carry out this request.
- ° The use of PVC bailers is not encouraged by EPA. Teflon or stainless steel (316) is recommended.
- ° A dedicated string was used to lower and raise the PVC bailer. While raising the bailer, the string was allowed to be contaminated with surface soil. In retrieving another sample from the same well, the string may possibly contaminate the groundwater sample. This practice does not insure the sample is:
  - a) representative of background [265.91 (a)(1)(i)] or;
  - b) will be able to detect contamination migrating from the waste management area to the uppermost aquifer [265.91(a)(2)].

- Avco intended to use a different laboratory for the analysis of groundwater samples than was used in the past. In the past, Environmental Science Corporation (ESC) was used for laboratory services. For consistency in analytical results, it was recommended that Avco retain ESC for this round rather than switching to Milford Labs as planned. Jack Gelting reported that Milford Labs may not be certified by the State of Connecticut.
- Avco reported that on May 9, 1984, wells had sediment accumulations as follows:

<u>Well</u>	<u>Sediment thickness in feet</u>	<u>installation date</u>
1	1.20	November, 1981
2	2.09	"
3	2.26	"
4	0.51	"
5	1.87	"
6	2.14	June, 1983
7	0.03	"

As in well 6, the sediment accumulation rate can be high (2.14 feet in 10 months or 2.57 feet/year). At a sediment accumulation rate of 2.57 feet/year, the 10 foot screened sampling interval would be filled with sediment in less than four years. Although the actual accumulation rate may be less than 2.57 feet/year, the integrity of the well and validity of the analytical results would be questionable if a large portion of the screened interval was filled with sediments. For this reason future monitoring must include sounding of wells to evaluate the ability of the wells to provide valid samples throughout the post-closure care period if necessary.

- Because well 4 is located in an area where cars may park over the well head, the well could not be inspected or sampled by DEP or EPA. In the past, the well was reported to have its PVC well pipe flush or below the surface grade. Future inspections should address well 4.
- The casing of well 13 was bent so that the bailer could not be inserted into the PVC tubing. The seal of cement between the casing and parking lot asphalt was broken providing possible contamination

of groundwater in the well by runoff. Automobiles hitting the steel casing was probably the cause of damage. Avco employees attempted to straighten the casing by pushing it with the bumper of a truck. After this attempt the bailer still could not be used. It was suggested that a shorter bailer be used, and protection from cars in the future be provided. The PVC pipe was not visibly affected by the damage sustained by car collisions or the attempt to straighten the casing. We did not observe the sampling of well 13. Unless precautions are taken to prevent damage to well 13 and other wells located in the parking lot, the integrity of the monitoring wells cannot be insured [265.91(c)].

- According to a telephone conversation with John Fleming of Avco Lycoming, the groundwater monitoring procedures followed are contained in the "Groundwater Assessment Program" dated September 30, 1985. This document was prepared by Metcalf and Eddy. I was also told by John Fleming that all sampling and analytical methods not described in the "Groundwater Assessment Program" were described by LBG in past documents. Avco should prepare a document describing the groundwater assessment program under one cover. It must either contain all necessary information or incorporate existing information by specific reference.
- Specific conductance and pH replicates as required in 265.93(b) were sampled improperly. The consultants failed to record replicates after evacuation was complete. Instead replicate measurements were recorded as evacuation proceeded.