

27-39/JAS/85/09/30

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DGoode

RLee

RBrowning

MBell

MEMORANDUM FOR: Leo B. Higginbotham, Chief  
Low-Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management

FROM: James A. Shaffner, Project Manager  
Low-Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management

SUBJECT: TRIP REPORT: TRAVEL TO SHEFFIELD ILLINOIS

Enclosed is a trip report documenting my visit to Sheffield Illinois, on  
September 18 - 19, 1985.

/s/

James A. Shaffner, Project Manager  
Low-Level Waste and Uranium  
Recovery Projects Branch  
Division of Waste Management

Enclosure: As stated

WM Record File

WM Project

Docket No. 27-39

PDR

LPDR

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(Return to WM, 623-SS)

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TRIP REPORT  
TRAVEL OF JAMES A. SHAFFNER  
SHEFFIELD, ILLINOIS  
SEPTEMBER 18-19, 1985

Purpose: Visit Low-Level Waste Disposal Facility - Sheffield, IL

NRC Participants: James A. Shaffner, WMLU  
Richard Lee, WMGT  
Dan Goode, WMGT

Persons Contacted:	Mark Bowen, US Ecology	Doug Long, US Ecology
	Patrick Seger, US Ecology	Dayne Brown, State of N.C.
	Melanie Hamel, IDNS	Keith Owenby, ORNL
	Bob Williamson, IDNS	Kenny Edwards, ORNL
	Richard Ketelle, ORNL	

Summary:

Richard Lee and I arrived at the Sheffield site at 11:30 a.m. on September 18th. We contacted the site manager, Mark Bowen who informed us that Dan Goode and the ORNL team was in the process of purging wells and collecting samples for hazardous constituent analysis. He informed us, also, that a Mr. Dayne Brown from North Carolina was expected at the site at 3:30 p.m. Lee and I decided to postpone our site tour until Brown arrived.

We visited the ISGS infiltration study south of the site. We were met there by a representative of ISGS who showed us the monitoring devices which had been installed since 1983. Each trench has a nest of tensiometers which provide moisture data at various elevations in various soil media. The tensiometers are hard wired to a data processing device. Hourly moisture data is recorded on magnetic tape for processing in Champaign. The trenches are also equipped with access ports for neutron probes. Because of dry conditions tensiometers in the upper soil strata were yielding little data at this time.

Lee and I walked part of the perimeter of the strip mine spoil lake adjacent to the site. Our purpose was to observe any gravel beds which daylighted in the bank of the pond and served as ground water conduits. No such beds were apparent at this time. This was probably due to the presence of heavy vegetation and the dry soil conditions.

When Mr. Brown arrived at the site we accompanied him and Mark Bowen on a walking tour of the site. The site appeared to be in very good shape. For the most part the surface had been stabilized with vegetation which appeared to have established a good root mat. There were only a few instances of rill erosion, primarily on the north face of Trench 14 A. Surface drainage systems appeared to be in good repair although some improvements are still necessary, particularly with regard to the outlet culvert at the northeast corner of the site. There was no evidence of present subsidence and little evidence of recent past subsidence, although according to the site manager, subsidence continues to be a problem during wet Springtime. The site fence is in need of some minor repairs. The site manager noted this fact himself without any mention of the fact by NRC personnel. The biggest "problem" on site currently appears to be burrowing animals. There was considerable evidence of burrowing by small mammals. To date none have been harvested and assayed but this would probably be warranted.

Before we returned to our motel for the evening, Lee and I stopped at the Elms, a bar and restaurant in the town of Sheffield. We engaged in casual conversation with some of the local citizens. Without asking leading questions we attempted to solicit their opinion about the presence of the site near their town. The people we talked to had nothing negative to say about the site. They were more concerned with some nonpublicized hazardous material located elsewhere nearby.

On Thursday, September 19th, Lee and I spent the morning watching ORNL collect samples for hazardous chemical analysis. It struck me that current procedures for doing this are very cumbersome and labor intensive. Wells had to be purged using hand bailing techniques. This involved repetitious bailing of wells as many as 175 times. Moreover, after the wells were purged it took several hours (or sometimes days) for the wells to recover enough to yield a sample volume of water. It seems that, unless this process is streamlined, environmental sampling for hazardous constituents will be prohibitively costly.