

Interoffice
Communication

To: File

From: Neil E. Rasmussen
Date: June 14, 1988

Subject: R&D Facilities Project: Sewer Systems Review Meeting
Secondary Containment

Attendees

Robert Martin	R&D	Mike Wisely	PED
David Cohen	Legal	Cindy Gross	GED
Tom Heller	PED	Joe Ledvina	Environmental
Neil Rasmussen	GED		

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PED

GED

Environmental

VISTA

A meeting was held yesterday to review the design basis for the sewer systems in the new R&D Facility. The major consideration of this meeting was to further discuss possible secondary containment for sewer systems.

The overall design of the sewer systems was reviewed. There are three separate systems 1.) Sanitary 2.) Laboratory and 3.) Process Development Lab. The sanitary system was not discussed. The Process Development lab system was reviewed. PED issued a Class A process design for this system. The basic elements include epoxy lined trenches with sump pumps that transfer to a small above ground holding tank. This is a total containment system in which discharges to the sanitary system from the holding tank are made only after R&D personnel have sampled water quality. If the material cannot be drained to the sanitary sewer, it is transferred to drums or a truck for proper disposal. Because of the system design, secondary containment in this area was not considered to be necessary.

The sewer system for the laboratories in the main building was then reviewed. The primary design of this sewer system was based on the decision by R&D early in the project to retain essentially all organics in the lab, and not pour these organic materials down the drain. Organics will be disposed of in the lab by transferring to storage cans located in the labs. Then these storage cans would be collected and drummed for proper disposal. The only organics that would go down the drain would be small amounts of soluble organics from washing and rinsing. This policy will require strict administrative controls by R&D.

With these administrative controls in place, the sewer basically becomes an acid sewer system. The material currently specified for this system is polypropylene above slab and Duriron type cast iron below slab. Duriron was considered the best material to use for the underground acid sewer system. The Duriron piping system employs a combination lead/chemical resistant packing type of joint for all connections. Some discussion was held regarding this joint and other possibilities such as o-ring type joints. Cindy Gross said the lead/packing joint is by far

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the best joint for this application. It has the greatest mechanical strength and excellent chemical resistance. Cindy also stated that the Duriron pipe is the best system we could use for underground acid waste.

The need for secondary containment for this underground acid waste system was then discussed. Several alternatives were reviewed. The major concern of secondary containment designs was how to find a leak once it was detected and then how to fix it when almost all piping is under the building slab. The consensus reached at the meeting was that secondary containment for the acid waste system should not be installed. The implementation of administrative controls over what gets dumped down the sewer and a high quality underground piping system combine to greatly reduce the risk of having any harmful material leak out of the system. Putting in secondary containment would provide essentially no additional protection for its great increase in cost.

One suggestion from this meeting that will be developed is to incorporate the ability to isolate the underground acid waste system so that it could be tested in the future to demonstrate the integrity of the underground pipe. We will also look at incorporating additional clean-outs into the system so that if a leak does develop, it would be easier to isolate and thus avoid having to tear up large portions of the slab to find it. These solutions will be reviewed with LAN.

David Cohen also reviewed his work with the City of Austin regarding additional permit requirements due to new government regulations. David was able to point out to the City that R&D Facilities are specifically excluded from the permit requirements of 40CFR, parts 414 and 416. David has just issued a memo summarizing his discussions with the City.


Neil

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cc: JES, GWI RLP, OCK, SEM
Attendees