MEMORANDUM

TO: NHDES and USEPA
FROM: Woodard & Curran
DATE: April 29, 2005
RE: Decommissioning of Underground Water Storage Structures
    Keefe Environmental Services Site, Epping, New Hampshire

The purpose of this memorandum is to detail our recommendation for the decommissioning of three (3) underground structures currently in place at the KES site located in Epping, New Hampshire. Each of the structures were originally installed at the onset of the construction of the treatment plant in 1992. Each structure is proposed for decommissioning because they are either no longer in use or no longer necessary for the continued treatment of groundwater at the site. Because the site is preparing to transfer from the Long Term Response Action (LTRA) phase to a long-term Operation and Maintenance (O&M) phase, these activities are proposed to be conducted as part of the ongoing transfer process.

The structures proposed for decommissioning consist of the following:

1. Recharge Chamber / Groundwater Leaching Bed – located south of the former lagoon area, this structure consists of an approximate 110 ft X 25 ft X 2 ft concrete-lined tank (cover and sides only) with a filter bed bottom (consisting of sand). Originally designed to maintain a hydraulic head on the on-site soils to create soil flushing conditions, the chambers were determined to be ineffective. This structure is no longer needed and is therefore planned to be decommissioned.

2. Diversion Box – located outside the northwest corner of the treatment plant, this structure consists of a 5 ft X 5 ft X 8 ft concrete sump and was used to divert treated effluent from the plant to the recharge chamber as well as the infiltration trench. With the decommissioning of the recharge chamber, the diversion box is also no longer necessary and will be decommissioned. Plant effluent will be pumped to a standpipe that is directly piped to a modified effluent storage tank (backwash tank and spray irrigation) and the existing infiltration trench piping.

3. Backwash UST – approximate 1500 gallon steel tank positioned approximately 5 feet north of the treatment plant (northeast corner). For plant optimization purposes, this UST is planned to be replaced with an at grade polyethylene storage tank. As a result, this UST will also be decommissioned as part of transfer process.

In summary, the structures will either be “closed in-place” (i.e., filled with sand) or removed and recycled. The specific decommissioning plan for each tank is detailed below.
Scope of Work

Consistent with NHDES guidance on UST closures, the following procedures will be used to close each of the underground structures.

Closed In-Place Procedure – Both of the concrete underground structures (Recharge Chamber and Diversion Box) will be decommissioned in place by breaking up the structures with a pneumatic hammer. The purpose of this is to ensure future groundwater infiltration to the subsurface. For the recharge chamber, which has a concrete top and sidewalls, pieces from the top and sidewalls of the chamber will be allowed to fall into itself. The concrete sides and bottom to the diversion box will also be broken up and allowed to fall into itself. Following the fracturing of the concrete, all void space will be filled with inert material (i.e., sand) followed by a layer of topsoil and grass seed.

UST Removal Procedure – The 1500-gallon steel UST will be removed from subsurface through excavation with a backhoe or excavator. Once removed the UST will be transported offsite for recycling and the tank grave will be filled with sand and a layer of topsoil and grass seed.

All excavation/removal activities will be conducted by W&C personnel. All work will be conducted in accordance with the Site Specific Health and Safety Plan (HASP, revised June 2003). Digsafe has been contacted for these activities and Approval Number #20051810083 was issued.

Documentation

All activities will be recorded in the field logbook and photographs of each closure will be collected. Following the completion of the work, a memorandum to the file will be prepared describing the activities as they occurred.

Schedule

The work is scheduled to commence on May 2, 2005 and is anticipated to take approximately 5 days to complete.