PROJECT NARRATIVE
JOHNSON AND WALES INN
SEEKONK, MASSACHUSETTS

PART II: SITE DESCRIPTION (EXISTING)

General Location

The Johnson and Wales Inn is located off of Taunton Avenue (Route 44) in the Town of Seekonk, approximately 1,200 feet east of the Route 44 and Route 114 intersection. It has the approximate coordinates of 41° 51' north latitude and 72° 20' west longitude (See Figure 1).

Leach Field

The Inn, formerly known as the Hearthstone, is owned and operated by Johnson and Wales College. The site contains banquet rooms, a hotel and a restaurant. The College is in the midst of upgrading these facilities and is proposing to replace the existing septic tank and leach field with a package treatment plant and reconditioned leach field.

The existing leach field is located in the upper fringes of glacial outwash deposit in close proximity to the till boundary. Large quantities of fill material and loam were used to mound up the leach field which has a level grade at elevation 57±. Beyond the west end of the field, the ground surface quickly drops off to elevation 47± near the access roadway which separates the Inn from the Firefly Country Club (See Existing Site Plan - Sheet 1).

Soils

Several test pits were excavated on July 21, 1986 within and immediately surrounding the leach field (See Existing Site Plan - Sheet 1). These pits indicated that the upper two to three feet is composed of loam as well as miscellaneous sand and gravel material. At about the three foot level the soil appeared light grey in color, indicative of carbon deposition, and wastewater effluent freely flowed into the excavation.

Test pits located to the west and southwest (Nos. 2, 4, and 7) contained orange colored sands below three feet. Grain size analysis performed on representative samples indicate coarse sand.

Vegetation

The leach field is predominantly composed of short grass, weeds, and scrub-type vegetation. Deciduous type tree line the eastern boundary of the Johnson and Wales property.

Open/Flowing Water Bodies

A small open water body is located at the extreme southern end of the property (See Existing Site Plan). The water surface has an area of approximately 6,200 square feet. It appears to be man-made, created by excavation activities in the past. Since it is located near a topographic high point, its drainage area is very limited. Surface runoff from the site collects in the open water body. There is no permanent outlet from the water body, which creates a stagnant condition. The water surface is presently covered with an algal mat, created by this stagnant condition.

The site itself is located in the Runnins River Watershed. Runoff collects in small streams located on the Firefly Country Club property prior to discharge to the Runnins River (See Figure 1).

Groundwater Levels

Two observation wells were installed immediately down gradient from the leach field as shown on sheet 1 of the existing site plan. Two and a half diameter PVC pipe with attached 5 foot long 0.010 inch screen sections were placed in test pit Nos. 1 and 7 and then carefully backfilled. Readings taken on July 25, 1986 indicated that the water table was 6.63 feet below ground surface at observation well No. 1 and 6.43 feet at observation well no. 2. This corresponds to an approximate elevation of 42.

An estimated depth to probable high water at the site was determined using a method developed by Frimpter (USGS O.F. Report 80-1205). High water estimate for the observation wells on site were made based on historic water level records from USGS Well SHW275 located in the middle of the median strip of I-195, 1.1 miles west of the Palmer River. Estimated probable high groundwater at the Johnson and Wales site is at elevation 44.2±.

Identification of Resource Areas

Based on the definitions for Resource Areas outlined in the Wetlands Protection Act Regulations (310 CMR 10.00), the previously described stagnant water body is defined as an "isolated land subject to flooding. As presented in Section 10.57, an "Isolated Land Subject to Flooding is an isolated depression or a closed basin which serves as a ponding area for runoff or high groundwater..."

It is our contention that this isolated land has been created by man-made activities and given its proximity to the leach field is likely collecting various amounts and concentrations of wastewater effluent. Presently, it serves no useful purpose with regard to flood control or storm drainage prevention, nor is it likely to be significant to the prevention of pollution.

PART III: WORK DESCRIPTION (PROPOSED)

The new leach field will be situated in the area of the present field. This will be accomplished by excavating the present field three feet below grade to remove all the unsuitable material. The area will be replaced with washed stone ranging in diameter form 3/4 to 1-1/2 inches. The leaching field will be composed of 10 rows of gallery trenches 108 feet long (See Proposed Site Plan).

Due to the design maximum discharge of the treated waste water effluent, the size of the new leach field must be extended 100 feet to the south. This will require the filling in of the isolated water body. The entire depression will be filled with suitable sand and gravel material which will serve as an excellent sub-base for the leach field. Final grading will be at elevation 60±. Approximately 3500 cubic yards of material will be needed to fill this isolated depression.

The volume of standing water is much less than the entire open volume of this isolated depression. Thus, as the fill material is placed into the depression, it will absorb any standing water as well as aid in the compaction of the fill material. Filling, therefore, will not cause lateral displacement of the ponded water onto adjacent properties nor will filling result in damage to those properties.