

DSIWM GUIDANCE DOCUMENT
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SUBJECT: Diversion of Surface and Ground Waters at C&DD Facilities

GUIDANCE NUMBER: 0674

REFERENCES: OAC 3745-400-11(Q)(1)

CROSS REFERENCES:

DATE: September 17, 2002

TOTAL NUMBER OF PAGES: 3

I. PURPOSE

The purpose of this document is to provide guidance on how to comply with OAC 3745-400-11(Q)(1) which states:

- (Q) Surface and ground water management. The owner or operator shall control surface and ground water to minimize the generation of leachate in the following manner:
 - (1) The owner or operator shall divert surface and ground water from the active and inactive licensed disposal areas of the facility by nonmechanical means. The owner or operator shall not divert surface water under, over, or through disposal areas of a facility.

II. APPLICABILITY

This document applies to owners and operators of C&DD facilities. The diversion requirement does not apply to closed C&DD facilities.

III. BACKGROUND

The Division of Solid and Infectious Waste Management (DSIWM) has observed facilities which have diverted surface water or ground water under and over C&DD facility disposal areas. Management of surface and ground water in this manner has resulted in significant leachate generation, outbreaks, water contamination and operational and construction difficulties. Therefore in 2002, the rules were revised to prohibit such practices.

IV. PROCEDURE

There are a number of elements involved in the requirement to divert surface and ground waters at a C&DD facility. The end result is to minimize leachate generation during operation and closure (when compliance with the rule is required). For those facilities where Ohio EPA is the licensing authority, the following will be considered when determining compliance with OAC 3745-400-11(Q)(1).

(1) The rule applies to surface water running onto the facility. Precipitation falling into the disposal areas of the facility cannot be 'diverted,' however to avoid managing the water as leachate, that water which has not come in contact with debris should be removed from the ALDA or ILDA before infiltration occurs.

The rule applies to any aquifers and significant zones of saturation which are intercepted by the facility and which will introduce ground water to the disposed debris. Surface expressions of ground water should be managed in the same manner as precipitation, discussed above. Ground water flowing beneath the facility which is not coming in contact with debris is not subject to this diversion rule requirement.

(2) The rule requires diversion around the active licensed disposal area (ALDA) and the inactive licensed disposal area (ILDA). There are three types of ILDA established by OAC 3745-37-02. These are (i) areas that have no debris placed, (ii) areas that have not been filled since September 30, 1996, and (iii) areas that have been filled and capped. Because the purpose of surface and ground water diversion is to minimize leachate generation, diversion is necessary from all ALDAs, and those ILDAs where debris is present. Therefore diversion from ILDAs where no debris has been placed is not necessary.

(3) The rule requires diversion using nonmechanical means. The purpose of this requirement is to not rely on a mechanism which may break down or not work with lack of power, resulting in water infiltrating into the debris. Typically this limits management options for surface water diversion to berms, ditches, and culverts (DSIWM recommends trash racks at the upstream end of culverts to ease maintenance and prevent clogging); and for ground water diversion to gravity underdrains, daylighting (allowing ground water to express as surface water), dewatering or removal of the geologic unit, and construction of barriers (e.g. recompacted soil liner or added geologic material). Surface water, including the surface expression of ground water, which is trapped in the ALDA but not in contact with debris (e.g. separated from the debris using a berm), is not subject to this diversion rule requirement and therefore mechanical means may be used to direct this water to the surface water management system. Otherwise this water must be managed as leachate.

(4) Surface water shall not be diverted under, over, or through disposal areas of a facility. Any management option resulting in ponding or infiltration of water into debris is not acceptable. This eliminates options which include piping water under or through the facility. Diversion must be around the facility.

V. POINT OF CONTACT

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