



State of North Carolina
 Department of Environment
 and Natural Resources
 Wilmington Regional Office
 Division of Water Quality
 Groundwater Section

James B. Hunt, Jr., Governor
 Wayne McDevitt, Secretary

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To	Nikki Hall	From	Bruce Parris		
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February 1, 1999

Ms. Nikky Hall
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Subject: Post Treatment Disposal Options for
 Contaminated Soils Treated in Permitted Biocells
 USMC - Camp Lejeune
 Onslow County

Dear Ms. Hall:

You recently called to discuss disposal options for soils which have been successfully treated at the Camp Geiger Biocell (SR#0800066). During this conversation you requested a summary of the accepted procedures on this topic for use in your next "partnering meeting".

A permit for remediation of petroleum contaminated soils typically requires that treatment result in soils which exhibit no more than 10 parts per million (ppm) for gasoline, 40 ppm for diesel, and 250 ppm for oil and grease as Total Petroleum Hydrocarbons (TPH). After soils fall below these limits, they are considered "treated" by the Division of Water Quality. These TPH concentration limits are based on the "action limits" for petroleum contaminated soils as discussed in the "Groundwater Section Guidelines for the Investigation and Remediation of Soil and Groundwater - Volume I" (Guidelines).

A legal technicality creates a problem for disposal of treated soils that exhibit concentrations of TPH below the "action limits", but above laboratory method detection limits (mdl). The "Oil Pollution and Hazardous Substances Control Act of 1978" - General Statute 143-215.75 et seq (OPHSCA), does not define a minimum limit for "oil" or "oil" contaminated soils which would be allowable for discharge onto the lands or waters of the State. A discharge of contaminated soil which was treated to below the action limits but which still exhibited concentrations above the TPH method detection limits would technically be in violation of the OPHSCA.

As a reasonable strategy to alleviate this conflict, we advise permit holders that treated soils, which are below the action limits but above the TPH mdls, can be disposed of at the discretion of the permit holder as long as the final disposition meets the following conditions:

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- 1) The permittee should provide information to our office which tracks the final disposition of the soils and,
- 2) The final disposition of those soils meets the same buffer requirements that would be necessary for obtaining a "Certificate of Approval" for the disposal of petroleum contaminated soils. Those buffer requirements are:

- 100 feet from any habitable residence under separate ownership or to be sold;
- 100 feet between the disposal location and any public or private water supply, including wells;
- 100 feet between the disposal location and waters classified as WS-II, WS-III, or B;
- 100 feet between the disposal location and the normal high water levels of waters classified as SA or SB;
- 100 feet between the disposal location and any stream, lake, river, or natural drainage way;
- 50 feet between the disposal location and property lines;
- 10 feet between the disposal location and any surface water interceptor drains or diversions (upslope); and
- 25 feet between the disposal location and any surface water interceptor drains or diversions (downslope) and any groundwater drainage systems.

The buffer requirements are also listed in the Guidelines and apply to any permitted land application of non-hazardous petroleum contaminated soils. The buffer requirements are based on the 15A NCAC 2H .0200 (.0219 Minimum Design Requirements) rules which regulate permitting activities involving contaminated wastewater and soils. Under 15A NCAC 2H .0219 (e), the disposal of an "industrial waste", such as petroleum contaminated soils, requires a minimum separation of three feet between the waste and the seasonal high water table.

During our conversation we also discussed recent "Guideline" changes which define Soil-to-Groundwater maximum soil contaminant values for individual petroleum constituents. After doing some additional research on these criteria it appears that these values do not apply to treated soil. Further, the soil-to-groundwater values are intended to apply to situations where soil contamination is left "in-place", not for contaminated soils that have been removed from the spill site. The values were partly calculated based on specific conditions which exist with "in-place" soil structures, and vertical and horizontal permeabilities for undisturbed materials. Another reason these values do not apply is because, from a regulatory perspective, contaminated soils which have been removed from the spill site are classified as a waste and thereafter fall under the regulations which govern waste discharges in addition to the regulations that dealt with their original release at the spill site. The soil-to-groundwater values in the guidelines were essentially never intended to be applied to the physical and regulatory situations we discussed involving a permitted situation.

The actual permit issued for the Camp Geiger biocell has language regarding disposition and handling of treated soils which have detectable TPH values below the action limits. Those permit conditions can be found in section II, **OPERATION AND MAINTENANCE REQUIREMENTS** (con't), item 10. The permit requirements in condition 10 essentially state that the buffer requirements, discussed above, should be followed if treated soils, found to be contaminated but below the action limits, are to be moved from the biocell.

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I sincerely hope you find this information helpful. If you have any further questions please contact me at (910) 395-3900, Ext. 239.

Sincerest Regards,



Bruce R. Parris
Hydrogeologist I

BRP/CFS/brp

cc: WIRO-GWS Files

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