

Petroleum Cleanup Program

REMEDIAL ACTION PLAN GUIDELINES

BUREAU OF PETROLEUM STORAGE SYSTEMS

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Topic of Guideline: Non-petroleum Contamination at Petroleum Contaminated Sites

Signature and Date
PE ADMINISTRATOR

Signature and Date
BUREAU CHIEF

There may be a significant number of petroleum contaminated sites where it has been determined the site has also been affected by other, non-petroleum contaminants including volatile organic halocarbons (VOH), pesticides or metals. In order to design an effective system for remediation of the petroleum contamination while complying with discharge standards, it is necessary to obtain a minimum amount of information related to the extent and degree of non-petroleum contamination. The purpose of this memo is to describe the assessment, technical design, and eligibility requirements for those sites which are eligible for funding from the Inland Protection Trust Fund (IPTF) under the preapproval program. For the purpose of this policy memo, these sites will be put in two categories: sites where the non-petroleum contamination originated on the petroleum contaminated site, and those petroleum contaminated sites which are affected by an off-site source of non-petroleum contamination.

Non-Petroleum Contamination From Off-site Source

If VOH or other non-petroleum contaminants have been detected in groundwater on the petroleum contaminated site from an apparent off-site source, the scope of the contamination assessment should be expanded as follows. All monitor wells installed to determine the extent of petroleum contamination that are suspected of non-petroleum contamination should be sampled for the non-petroleum constituents of concern. One additional off-site well should be installed to establish the off-site source and concentration. The analytical results should be evaluated to anticipate the degree that the petroleum cleanup

remedial action system will be affected by the off site non-petroleum source, and the likely location of the source of the non-petroleum contamination.

If this data is sufficient to proceed with remedial design, no additional investigation of the non-petroleum contamination should be conducted. If the assessment data based on the scope of assessment described above is not sufficient to proceed with remedial design due to unquantified future affects on the remediation system from non-petroleum contaminants, a proposal for additional off-site assessment of the source of the non-petroleum contamination should be submitted to the Bureau of Petroleum Storage Systems (or contracted local program). The Department (or local program) will review the scope of the proposed non-petroleum investigation and issue a letter approving the additional assessment or suggesting an alternate plan. Additional assessment costs approved by the Department will be allowable for funding under the preapproval program (assuming the site is in fundable range and the preapproval program procedures are followed) as this investigation is necessary to properly design a remediation system for petroleum cleanup.

Limited efforts should be made to identify and contact the responsible party and DEP program area to investigate the feasibility of a combined cleanup strategy. Unless the party responsible for the non-petroleum contamination is prepared to proceed with assessment and remediation of the non-petroleum site in a timeframe compatible with the cleanup schedule for the petroleum contaminated site and to pay a proportionate share of the assessment and cleanup costs, the groundwater remediation system should be designed to recover the horizontal and vertical extent of petroleum contamination, but should not be designed to attempt to recover the complete horizontal and vertical extent of the non-petroleum contamination. The treatment system should be designed to meet applicable discharge requirements for both petroleum hydrocarbons and non-petroleum constituents. All additional costs for the remediation system described above will also be allowable for submittal for funding in the preapproval program. Accurate records of the separate costs associated with assessment, remedial design, and treatment due to non-petroleum contamination should be maintained and organized so the Department may seek cost recovery from the responsible party for the non-petroleum contamination. If the scope and cost of the petroleum cleanup remediation system is increased due to the non-petroleum contamination, the Remedial Action Plan (RAP) should explain the affect on design due to non-petroleum contamination and provide separate cost estimates for a petroleum only and actual design to allow the Department to establish a method of proration for future cost recovery. If the RAP demonstrates that the remedial design would be the same regardless of the existence

of the non-petroleum contamination, no separate design or treatment costs need to be identified or established for cost recovery proration.

Non-Petroleum Contamination From On-site Source

If non-petroleum contamination exists due to an on-site source, the contamination assessment must be expanded by sampling all monitor wells suspected of non-petroleum contamination for the non-petroleum constituents of concern and taking representative soil samples for analysis to determine the extent of non-petroleum contamination which will have a bearing on the cleanup strategy for remediation of the petroleum contaminated soil and groundwater. The person responsible for conducting site remediation is required to do a complete assessment of the extent and degree of non-petroleum contamination. The person responsible for conducting site remediation may also wish to design a remediation system capable of cleanup of both petroleum and non-petroleum contamination. When developing preapproval program work orders, costs which are associated with non-petroleum contamination assessment, including additional monitor wells and deeper monitor wells than would be necessary for delineating the horizontal and vertical extent of the petroleum contamination plume, should be segregated and not included in the work order allowable costs.

If the RAP is designed to remediate both petroleum and non-petroleum contamination plumes, it must clearly indicate which aspects of groundwater and soil remediation are associated with the non-petroleum plume only. The RAP treatment system must be designed to meet all applicable discharge standards for both petroleum hydrocarbons and non-petroleum constituents. The RAP should identify design and implementation costs which are solely for the purpose of non-petroleum cleanup and should include cost estimates for petroleum plume cleanup only as well as actual design cost to allow the Department to establish a proration factor for allowable costs. If the RAP demonstrates that the remedial design, construction, and operation would be the same regardless of the existence of the non-petroleum contamination, no separate design or treatment costs need to be identified or established for cost proration. Operating costs related to non-petroleum cleanup after the system is operating (e.g.- sample analysis) should be separated and not included in preapproval proposals, or an appropriate proration factor established by the Department will be applied to the amount of the preapproval program work order.

Depending on the type, nature, and concentrations of non-petroleum contamination, RCRA requirements related to hazardous waste may apply. Nothing in this guideline is meant to imply any exemption from compliance with applicable federal requirements.

TC/tc