

Guidelines for Petroleum Spill Site Inactivation

In the “Closing Out a Spill” section of the Spill Guidance Manual (SGM) (Section, 1.7, page 1.7-2) it states the following: *Overall, your objectives for each spill cleanup are to ensure adequate protection of human health and the environment and to mitigate environmental damage, to the extent it has occurred.*

The SGM is the official policy and procedures manual for the Petroleum Spill Response Program. From time to time issues arise which require clarification or interpretation. To address these issues, it is necessary to review the SGM to determine how the issue in question was addressed and what guidelines are available for implementation.

Site Inactivation can be defined as the termination of all remedial and monitoring activity at a spill site without having met standards. The steps to determine when a spill site may be inactivated are an issue which the Regional Spill Engineers have requested clarification. The Bureau of Spill Prevention and Response has reviewed the SGM and determined that, prior to the issuance of a site inactivation letter (a.k.a., “no further action letter”), the following procedures, described in the manual, should be used to evaluate petroleum contaminated sites.

These guidelines follow existing policies described in the SGM. References to applicable portions of the SGM are provided and it is recommended that the reader review these sections for further clarification. As used in these guidelines, the term “project manager” means the Department of Environmental Conservation’s (DEC) project manager.

1. SITE CHARACTERIZATION

Every site will require a complete site characterization to determine the full extent of contamination in all affected media. Groundwater plumes must be defined in their entirety without regard to property lines. Soil contamination must be identified to describe the full volume and concentration of the contaminants (SGM, Part I, Section 4, “Site Investigation Procedures”).

2. SOURCE REMOVAL

- a) Free-product will be removed to the maximum extent feasible as determined by the project manager, (SGM, Part I, Section 1.6.7, Page 1.6-185 to 234). Physical and/or technological limitations can be considered when making this determination.
- b) Grossly contaminated soil will be removed or treated where it is practically and technically feasible. Whether removing the soil or applying a technology to remove the contaminant, the project manager must use reasonable judgement in determining how much material needs to be addressed. The intent here is to remove as much of the mass as possible which may contribute to additional contamination in the future (See SGM, Volume I, Section 1.6, page 154).

3. REMEDIATION

Project managers will consider remediation at all sites without regard to risk. If, in the project manager's judgement, residual contamination can be effectively reduced, a corrective action plan will be developed and implemented.

When developing a corrective action plan the project manager may consider such factors as implementability, long-term effectiveness, and cost-effectiveness (SGM Volume 1, Section 1.6, pages 1.6-2 to 1.6-12). If a corrective action plan is instituted, it will be operated for a period of time suitable to determine its effectiveness. It will be the project manager's decision, based on site operation data, when the remediation may be terminated. Periodic assessment of the efficiency and effectiveness of the corrective action plan is recommended. Once the above is completed or if it is determined that a remediation effort will not significantly or effectively reduce contamination beyond the existing condition, and there are no other impacts, the site may be inactivated.

4. EXPOSURE ASSESSMENT

If the project manager is unclear whether a site, which has not met standards, is protective of human health and the environment, they should conduct an exposure assessment to better quantify the impact of any residual contamination. It is highly recommended that exposure assessments be conducted for all but the simplest sites where the project manager is confident that contamination has been removed and poses no additional threat.

Exposure assessments are used to quantify the risk left by residual contamination. The SGM (Part 1, Section 1.6.1, "Corrective Action - Exposure and Risk Assessment"), authorizes the use of exposure and risk assessments. It identifies personnel, within and outside the Department, authorized to conduct, review and approve these assessments.

Titled "Applications of Exposure and Risk Assessments in Spill Response," Vol. 1, Section 1.6.2, specific guidance is provided as to who may conduct risk and exposure assessments as follows:

"As noted earlier, the various types of exposure and risk assessments are applied to some degree in each spill response. Given our preferred definition of these terms, spill responders do conduct exposure assessments and do not conduct risk assessments. Quantitative risk assessments are conducted for spill responders by the health department (local or state). Responsible parties may submit a quantitative risk assessment for review as part of their spill clean-up documentation. The health department and/or BSPR Central Office staff will review these assessments as well."

In conducting an exposure assessment you must:

- a) Identify potential receptors, pathways and exposures and decide which pathways are complete. Receptors and exposures should also have been considered in the site characterization process.
- b) Determine exposure levels for each receptor. Using either the methodology provided by the Technical

Assistance Section (attached) or an approved method provided by the responsible party, calculate the exposure levels for each receptor.

A responsible party who submits their own exposure/risk assessment method will have to provide supporting documentation. Alternative methods and models are subject to review and approval by the New York State Department of Health (See SGM, Volume I, Section 1.6, "Corrective Action-Exposure and Risk Assessment").

5. INACTIVATION

If monitoring is the recommended course of action, the responsible party must implement an approved monitoring program. This decision does not result in a "Site Inactivation" letter.

If Steps one and two and three or four do not result in achieving standards or satisfying exposure criteria, remedial action will begin or be continued to satisfy the exposure criteria at a minimum.

If standards are not met but Steps one, two and three or four are satisfied, a "Site Inactivation" letter may be issued.

If, at any time during the course of a spill site investigation or remediation, it is determined that the site meets values listed in CP-51, Tables 2 and 3, and groundwater standards, the site may be given a "closed meets standards" designation.

6. DOCUMENTATION

Proper case documentation for all spills is important to support decisions in case of litigation and to justify cost recovery and/or imposition of penalties. Therefore project managers will document all spills by recording reasons for decisions made in the course of inactivating a spill (SGM, Part 4, Section 4.1). The documentation will be a permanent entry into the project file.