

Investigating Impacts from Contaminated Sites to a Surface Water

(November 25, 2015)

Clarification Statement:

Pursuant to the Site Remediation and Waste Management Program (SRWMP) enabling legislation, rules and implementing guidance, current and historic contaminant migration from all sites must be characterized and delineated to the extent of that site's contamination.

With regard to potential migration of contamination from upland sites to nearby or adjacent surface waters, including heavily industrialized rivers, SRWMP reaffirms the requirement to follow N.J.A.C. 7:26E, particularly Sections 1.16, Receptor Evaluation- Ecological; 3.6, Site Investigation – Surface Water and Sediment; and 4.8, Remedial Investigation for Ecological Receptors. For the purposes of this policy statement, the term surface water includes associated sediments. The extent of contamination from a site into a surface water from current and/or past discharges must be determined and will include, but is not limited to, investigation of areas associated with direct discharge/disposal, outfall discharges, migration of contaminated ground water, and/or overland surface water flow. Such investigations may involve collection of soil, ground water, sediment, pore water and surface water samples at appropriate locations relative to site-specific contaminant pathways and features. Characterization of an upland site's potential impact on an adjacent surface water is necessary to: 1) identify and control all ongoing site-related contaminant sources to the surface water and sediment and 2) design and implement a remedy to address the site-related contamination, including product and contaminated sediments, that has impacted the surface water, for the protection of human and ecological receptors.

This investigation involves the following steps:

1. Assure that all contaminant sources from the upland site are characterized and remediated/controlled such that they are no longer impacting the surface water;
2. Characterize and remediate any free and residual product emanating from the site that is impacting and/or detected in the surface water, pursuant to N.J.A.C. 7:26E-5.1(e);
3. Delineate all contamination related to the upland site that is detected within the surface water and sediment to the higher of the ecological screening criteria (including NJDEP Surface Water Quality Standards, N.J.A.C. 7:9B, where available), background contaminant levels, or levels of individual contaminants from specific regional sources; and
4. Conduct an ecological risk assessment and remediate all contamination related to the upland site that is detected above ecological screening criteria within the surface water and sediment that is not attributable to background and/or regional source contamination, as appropriate. Pursuant to N.J.A.C. 7:26E-4.8, sediment should be remediated to the ecological screening criteria or site-specific risk-based remediation goal. If documented background or regional source levels are greater, then remediation should be to these levels. For surface water, the New Jersey Surface Water Quality Standards, N.J.A.C. 7:9B, are the minimum remediation standards. For ground water discharging to surface water, the New Jersey Ground Water Quality Standards, N.J.A.C. 7:9C, require compliance with both the ground water and surface water quality standards.

The Department recognizes that some of the State's surface waters, especially in urban and industrial settings, may have become contaminated by numerous point and non-point discharges, making it difficult to distinguish which contaminants are from a particular site, background contamination, or other regional sources of contamination. However, N.J.A.C. 7:26E must be followed and supporting guidance considered, and the investigator must design the investigation to distinguish among contamination related to the upland site, background, and regional sources. Background contamination is not attributable to discharges from the upland site itself, but reflects contaminant levels that may have originated from either natural or anthropogenic sources (offsite discharges from diffuse anthropogenic or other unavoidable discharges, such as permitted wastewater discharges, combined sewer overflows or storm water). Regional sources of contamination may or may not reflect true background conditions. For additional information on assessing background conditions, refer to the Ecological Evaluation Technical Guidance (EETG), February 2015, Sections 4.0 and 5.3.4, at www.nj.gov/dep/srp/guidance/srra/ecological_evaluation.pdf.

For situations where distinguishing between a discharge from a particular upland site and that from either another upland site or regional source contamination becomes difficult (contaminant patterns between the sites approximate each other), the Licensed Site Remediation Professional (LSRP) may either request a formal Technical Consultation with the Department (www.state.nj.us/dep/srp/srra/technical_consultation/) or present appropriate documentation with the relevant submittals such as a Remedial Action Work Plan or Remedial Action Outcome (RAO), to be evaluated by the Department on a case-specific basis.

NJDEP regulations in N.J.A.C. 7:26E are clear that persons responsible for conducting remediation and LSRPs are obligated to characterize and delineate ongoing discharges from their site to nearby surface water, even if that surface water is part of an operable unit of a CERCLA National Priority List (NPL) site. This is necessary to ensure appropriate identification and remediation of these discharges. When such Remedial Investigations (RI) overlap with an ongoing CERCLA investigation or remediation in surface water (including river-wide study areas), the NJDEP RI process still applies. Adherence to the RI process is necessary because project goals may differ and the sampling and analysis programs for river-wide CERCLA investigations may not be designed to investigate discharges of contaminants from individual sites contributing to the waterbody. In these situations, the persons responsible for conducting remediation and LSRPs or other remediating parties (Federal, State, Local governments or private entities) must consult with the NJDEP and USEPA case teams for the CERCLA project to ensure early and continued coordination. This is required to avoid unnecessary duplication of effort, to share data and other findings, and for consultation regarding possible remedial actions. The USEPA should be notified of planned delineation sampling in the CERCLA-related surface water and coordination should occur before development of the Remedial Action Work Plan. The identification and assessment of background and regional source contamination shall be part of the coordination effort described above. If through this process it is determined that regional source levels of individual contaminants exist above background concentrations, delineation of site-related contamination may only be needed to the regional source concentrations.

This coordination will assist in ensuring compatibility among separately developed and proposed remedial actions since the nature, concentration, and extent of contamination may differ between the two studies. As part of the site's Remedial Action Outcome (RAO), the LSRP must submit documentation that demonstrates: 1) coordination with the CERCLA project and 2) remediation of site-related contamination (if found to be warranted) will be addressed through either their own remedial actions or through an existing or proposed CERCLA remedy for the surface water.