

## Coordination of NJDEP and USEPA PCB Remediation Policies

June 15, 2007

The Site Remediation Program has established residential and non-residential direct contact soil cleanup criteria (RDCSCC/NRDCSCC) for polychlorinated biphenyls (PCBs) based upon a legislatively mandated  $1 \times 10^{-6}$  cancer end-point. The current RDCSCC value is 0.49 ppm and the NRDCSCC is 2 ppm. Utilizing more updated toxicity and exposure pathway information, revised values have been proposed in the Soil Remediation Standards. The proposed RDCSCC is 0.2 and the NRDCSCC is 1 ppm. Upon promulgation of the Soil Remediation Standards these new PCB soil standards will be applicable and as a low mobility organic contaminant, site specific leach test may need to be run to determine the potential for impacts to ground water.

Under current Site Remediation Program policy, PCBs detected below 0.49 ppm would not require remediation. In a residential use scenario, PCBs above 0.49 ppm and less than 2 ppm requires institutional (deed notice) and engineering (cap) controls. In a non-residential or restricted use scenario, PCBs found above 0.49 ppm requires a deed notice and when above 2 ppm, requires a deed notice and cap. Site Remediation Program policy since 1993 allows for contaminants with appropriate institutional and engineering controls to be non-permanently remediated as long as the remedy is found to be protective of human health and the environment.

The USEPA Toxic Substances Control Act (TSCA) provides federal PCB remediation policy that must be coordinated with Site Remediation Program policy during PCB remediation projects. This coordination often will allow for and in fact require permanent remediation of PCBs dependent on future use and concentrations detected. The TSCA regulations also known as the "Final PCB Rule" or the "Mega Rule" dealing with the remediation of soil as "bulk remediation waste" are principally found in 40 CFR 761.61(a – c). TSCA does not regulate PCBs at concentrations less than 1 ppm. Above 1 ppm PCBs, TSCA stipulates a range of self-implementing cleanup levels based upon future high and low occupancy scenarios that are identified in 40 CFR 761.61 (a) 4. These self-implementing remediation scenarios fall within PCB soil contamination ranges from 1 to 100 ppm. Where concentrations above 100 ppm are present or where the occupational use requirements will not be met, Risk-Based Disposal Approval proposals must be submitted to the USEPA and a written response must be received before proceeding.

It is important to note the low and high occupancy self-implementing cleanup criteria are differentiated by the anticipated future use exposure time frame, by an individual not wearing dermal and respiratory protection, for more or less than an average of 6.7 hours/week. Self-implementing PCB remediation requires a minimum 30-day advance written notification by the party conducting the remediation to the USEPA Regional Administrator and other involved regulatory agencies. The party submitting the notification may assume that the proposed remediation is acceptable if the Regional Administrator does not respond within 30 calendar days of receiving the notice.

**TSCA Self -Implementing Criteria In Defined High Occupancy Areas** – PCBs may remain between 1 and less than or equal to 10 ppm with a cap. This would be applicable to residential, unrestricted use or other uses where occupancy will exceed an average of 6.7 hours/week. Note

that this would require capping of PCBs at non-residential sites between 1 and 2 ppm, whereas Site Remediation Program policy requires a cap when above 2 ppm and a deed notice in all situations where PCBs will remain above 0.49 ppm.

**TSCA Self-Implementing Criteria In Defined Low Occupancy Areas** – Where occupancy will not exceed an average of 6.7 hours/week, PCBs up to 25 ppm may remain without engineering or institutional controls. PCBs may remain at between 25 and 50 ppm when access is restricted by fencing and warning signs are provided. PCBs may remain at levels between 25 and 100 ppm when appropriately capped (note no fencing required). 40 CFR 761.61(a)7 defines a cap as being a minimum of 6” of asphalt or concrete (or similar material), or 10” of compacted soil. The TSCA cap requirements may be somewhat different than that required by the Site Remediation Program in terms of other geotechnical properties. A consultant or responsible party proposing to cap a PCB contaminated site should state that their proposal is in compliance with 40 CFR 761.61(a)7 to cover any potential additional EPA geotechnical requirements.

Site Remediation Program policy does not recognize these occupancy and concentration based scenarios and requires a deed notice above 0.49 ppm and a cap when PCBs exceed 0.49 ppm or 2 ppm residential/non-residential scenarios, respectively. Where post-excavation sampling is being conducted to assure attainment of Site Remediation Program/TSCA soil cleanup criteria, the guidance provided in N.J.A.C. 7:26-6.4(a) must be followed. Note that when EPA is directly involved in a PCB cleanup they may have additional sampling and post-excavation PCB sampling requirements.

In situations where PCBs exist or may be left in excess of the existing 50 ppm Impact to Groundwater Soil Cleanup Criteria, the current and potential future impacts to ground water must be evaluated. Upon promulgation of the Soil Remediation Standards, leachate testing may be required to evaluate potential impacts to ground water.

### **TSCA Risk-Based Disposal Approval**

Taking into account a future low occupancy use scenario with appropriate deed notice and engineering controls, PCB concentrations up to 100 ppm may remain on site under both Site Remediation Program and TSCA guidelines. A responsible party may elect to request a Risk-Based Disposal approval under 40 CFR 761.61(c) from the USEPA Regional Administrator for any situation not covered by the self-implementing cleanup guidance. This requires submission of a request and a written response from the EPA Regional Administrator before any remedial actions may be taken. Such Risk-Based Disposal proposals may include requests to waive the more restrictive high occupancy limitations or to leave PCB concentrations in excess of 100 ppm. However, please note that the federal regulations pertaining to risk-based disposal approvals are silent on the issue of occupancy level, and there is no need by the responsible party to request a specific occupancy level. All risk-based approvals as well as other questions on TSCA PCB issues should be coordinated with the EPA. The EPA regional contacts are Daniel Kraft and James Haklar. Dan can be contacted at [kraft.daniel@epa.gov](mailto:kraft.daniel@epa.gov) or (732) 321-6669, and Jim can be reached at [haklar.james@epa.gov](mailto:haklar.james@epa.gov) or (732) 906-6817.

### **Other PCB Coordination Issues - Concrete**

Another Site Remediation Program/TSCA PCB coordination issue that frequently arises is how to sample and remediate contaminated porous materials such as concrete. The Mega Rule acknowledges that surficial wipe sampling and decontamination of concrete is only applicable where a spill has occurred within a 72-hour time frame. Beyond that time frame, PCBs will have soaked into the concrete making decontamination unsuccessful and wipe sampling unreliable. The Mega Rule establishes cleanup levels for concrete in the same manner as for soil as a bulk remediation waste. As such, concrete sample results can be compared to both the NJDEP Soil Cleanup Criteria and TSCA bulk remediation waste regulations in 40 CFR 761.61(a) 4.

In normal site remediation situations where contaminated concrete is suspected, sampling must include core (depth to be site specifically determined) or chip samples to evaluate the horizontal and vertical extent of contamination in concrete. Remediation that achieves the RDCSCC of 0.49 ppm would warrant issuance of an NFA, as would levels meeting the 2 ppm NRDCSCC with deed notice on an industrial site.

Where someone wishes to continue using concrete contaminated by spills of liquid PCBs, the concrete may be cleaned, covered and labeled in accordance with 40 CFR 761.60(p). Such cover may include a solid barrier or a double layer of solvent resistant coatings (ex. epoxy paint) applied in contrasting colors to provide a visual indication of wear. When the contaminated concrete is eventually taken out of service as in demolition, disposal must be in accordance with the bulk remediation waste criteria. Subsequent to the Mega Rule, guidance has been provided by EPA that has eased the restrictions that were in place for the sale of structures with contaminated concrete.

Note that disposal and/or reuse of PCB contaminated concrete should be done in conjunction with the current Guidance for the Sampling and Analysis of Concrete available at <http://www.nj.gov/dep/dshw/resource/techman.htm - concrete> . The EPA PCB Q&A Manual (revised 2001) is a good source for answers related to PCB site remediation and disposal questions. This document can be found at <http://www.epa.gov/pcb/pubs/qacombined.pdf>.

**See figures that follow.**



## Soil Cleanup Criteria

### NJDEP Soil Cleanup Criteria for PCBs

(Last Revised - 5/12/99)  
[www.state.nj.us/dep/srp/regs/scc/](http://www.state.nj.us/dep/srp/regs/scc/)

- ▶ **Residential Direct Contact Soil Cleanup Criteria**
  - **RDCSCC = 0.49 mg/kg**
- ▶ **Non-Res. Direct Contact Soil Cleanup Criteria**
  - **NRDCSCC = 2 mg/kg**
- ▶ **Impact to Groundwater Soil Cleanup Criteria**
  - **IGWSCC = 50 mg/kg**

## TSCA Bulk Remediation Waste Cleanup Criteria

### CFR 761.61 – Bulk Remediation Waste

#### ▶ (a)4 – Self-Implementing Cleanup Criteria

- $\leq 1$  ppm – Unrestricted Use for High Occupancy:  $> 6.7$  Hours per Week
- $> 1 - \leq 10$  ppm - High Occupancy Requires Cap, Deed Restriction

## TSCA Bulk Remediation Waste Cleanup Criteria

### ▶ Low Occupancy $< 6.7$ hours per week

- $\leq 25$  ppm – Unrestricted Cleanup Level
- $> 25$  ppm and  $\leq 50$  ppm – Fence, Signs
- $> 25$  ppm and  $\leq 100$  ppm – Cap and Deed Restriction
- $> 100$  ppm – Risk-Based Disposal Approval  
Pursuant to CFR 761.61(c) – Not self-implementing.  
Requires Written Approval

## Coordination of NJDEP/TSCA PCB Criteria

- ▶  $< 0.49$  ppm RDCSCC – Unrestricted use
- ▶  $> 0.49$  ppm – Residential Use – Cap, Deed Notice
- ▶  $> 0.49$  to 2 ppm – Non-Residential Use – Deed Notice
- ▶  $\leq 1$  ppm - TSCA Cleanup Level for Unrestricted High Occupancy Use
- ▶  $> 2$  ppm - Non-Residential use - Cap, Deed Notice
- ▶  $> 1 - \leq 10$  ppm – TSCA Cleanup Range for High Occupancy Use with a Cap and Deed Restriction
- ▶  $> 50$  ppm IGWSCC – Dependent on Ground Water Classification and Impacts
- ▶ 100 ppm – Maximum TSCA Self-Implementing criteria
- ▶  $> 100$  ppm – TSCA Risk-Based Disposal Approval