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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF SR-6J

MEMORANDUM

DATE: November 20, 2002

SUBJECT: CSTAG Recommendations on the Allied Paper, Inc./Portage Creek/Kalamazoo River Superfund Site

FROM: Shari Kolak, Remedial Project Manager
Region 5

TO: Stephen J. Ells
Judith McCulley, Co-chairs
Contaminated Sediments Technical Advisory Group (CSTAG)

Region 5 appreciates the time spent by the Contaminated Sediments Technical Advisory Group (CSTAG) and thanks them for their comments and recommendations on the Allied Paper/Portage Creek/Kalamazoo River Superfund site. The CSTAG comments and this response letter will be part of the Administrative Record for the site.

Principle #1, Control Sources Early

CSTAG Comment #1

For the Landfill OUs, investigate the groundwater contributions to PCB loading into the river and determine whether existing or planned source control measures are sufficient to prevent sediment recontamination.

Region 5 Response to Comment #1

Record Of Decisions (RODs) have been signed for two of the four landfill operable units (OU) with construction complete at the King Highway Landfill. The 12th Street Landfill ROD was signed on September 28, 2001, which includes the excavation and consolidation of contaminated material back into the landfill and installation of a cap and sidewall containment system to control erosion. A groundwater monitoring program will

be designed to detect any groundwater contamination from the landfill and will be developed consistent with federal and state requirements. Institutional controls such as deed restrictions, fencing, and sign posting will also be implemented.

The remaining two landfill operable units, Willow Boulevard/A-Site Landfill and the Allied Paper Landfill are still in the investigative phase and will address polychlorinated biphenyls (PCB) contaminated groundwater, as appropriate.

CSTAG Comment #2

Evaluate other upstream surface water and sediment sources such as Morrow Lake in order to determine whether there is a significant ongoing source(s); suggest sampling dissolved and particulate (or total) PCBs in surface water.

Region 5 Response to Comment #2

Region 5 is currently investigating the potential impact of upstream sediment sources such as Morrow Lake on downstream reaches of the river. The Michigan Department of Environmental Quality (MDEQ) and the Potentially Responsible Parties (PRPs) have already conducted PCB sampling in surface water upstream of Morrow Lake. Region 5 will consider continued sampling of dissolved and particulate PCBs in surface water as appropriate, and will address this as part of the River OU cleanup.

CSTAG Comment #3

Evaluate the extent to which paper waste in formerly inundated areas is an ongoing source to help determine if it should be addressed prior to or concurrently with in-stream sediment remediation.

Region 5 Response to Comment #3

Region 5, MDEQ and the PRP's consider the exposed paperwaste in the formerly inundated areas as the most significant on-going source of PCBs to the river. The PRPs estimate the PCB loading to the river from the formerly inundated areas to be 31 kilograms/year. Region 5's cleanup approach for the Site is to first addressed the exposed paper wastes in the formerly inundated areas and then address in-stream sediments. Before evaluating cleanup options for in-stream sediments, Region 5 will investigate upstream sources of PCBs to Morrow Lake and ensure that existing landfills and paper mill properties are not a source of PCBs to the river.

Principle #2, Involve the Community Early and Often

CSTAG Comment #4

Although recreational fishing is common in the river, work with the communities to

determine the nature and extent, if any, of subsistence fishing. Consider gathering this information on a reach-specific basis.

Region 5 Response to Comment #4

The Agency for Toxic Substances and Disease Registry published its findings of the Michigan Department of Community Health's Kalamazoo River Angler Survey and Biological Testing Study in May 2000. The survey and testing was conducted within Kalamazoo and Allegan Counties and not on a reach by reach basis. Subsistence anglers were identified as a potential receptor and evaluated as part of the human health risk assessment for the site.

CSTAG Comment #5

Engage the community in discussions about risk assessment assumptions and uncertainties, especially with regard to local fish consumption practices.

Region 5 Response to Comment #5

At a February 2002 public meeting, Region 5 discussed and answered questions regarding the human health and ecological risk assessments for the site. Since the CSTAG meeting in April 2002, Region 5 participated in numerous public meetings sponsored by the Kalamazoo Watershed Council (KRWC) and Kalamazoo River Protection Association (KRPA) to discuss project schedules and revisions to the most recent human health and ecological recent risk assessments. Region 5 also met with the Technical Assistance Grant's (TAGs) technical advisors to specifically discuss issues related to the ecological risk assessment. This winter, Region 5 will hold a public meeting to explain the role of ecological risk assessments at Superfund sites and answer questions regarding risks at the site. Region 5 is also considering holding future public meeting and/or workshops on local fish advisories and the Superfund remedy selection process.

CSTAG Comment #6

Continue to engage the community and local interested groups such as the Kalamazoo River Watershed Council and the Kalamazoo River Protection Association, especially in discussions about the criteria and considerations EPA uses in its remedy selection process. Brainstorm with various parties about how to meet their seemingly opposing needs and to address constraints (i.e., group problem-solving).

Region 5 Response to Comment #6

Region 5 participated in numerous public meetings sponsored by the KRWC and KRPA to hear public concerns, discussed criteria EPA uses in its remedy selection process, risks associated with the site, current status of the project, and schedules for addressing the

river and remaining landfill OUs. Region 5 will also be discussing the criteria and considerations EPA uses in its remedy selection process during the upcoming public meeting on the Proposed Plan for the Willow Boulevard/A-Site landfill. In addition to public meetings, Region 5 has also met with local Tribes, Michigan Department of Natural Resources (MDNR), Michigan Department of Environmental Quality (MDEQ), U.S. Fish and Wildlife Service (USFWS), Michigan State Attorney General, and the National Oceanic and Atmospheric Association (NOAA). Visions for river cleanup, perspectives on remediation, coordination issues, as well as EPA constraints were extensively discussed during these meetings.

CSTAG Comment #7

Consider ways to increase local outreach, e.g., develop a web site, provide information to Realtors about existing areas of contamination to disclose to potential buyers, conduct workshops, sponsor forums, etc.

Region 5 Response to Comment #7

Region 5 has developed a web site for the Allied Paper/Portage Creek/Kalamazoo River Superfund Site which can be accessed by going to www.epa.gov/region5/sites/kalproject. Region 5 is also considering ways to provide information to local Realtors about existing areas of contamination. Since the CSTAG meeting, Region 5 has held community involvement workshops, participated in public meetings sponsored by the KRWC and KRPA, and will hold future meetings on topics of interest to the community.

Principle #3, Coordinate with States, Local Governments, Tribes, and Natural Resource Trustees

CSTAG Comment #8

Continue discussions with Trustees on coordinating trustee restoration and Superfund remediation efforts. Clarify who the Trustees are, what are their Trust resources, and encourage them to designate a lead Trustee.

Region 5 Response to Comment #8

Region 5 is working closely with the MDNR, and the Trustees including the MDEQ, USFW, NOAA, and the Michigan Attorney General. Region 5 recently met with the Trustees to discuss natural resource damage claim issues and coordinating restoration with Superfund remedial decisions. Since the CSTAG meeting, Region 5 has encouraged the trustees to designate a lead Trustee at the site.

CSTAG Comment #9

Clarify Tribal interests in the site.

Region 5 Response to Comment #8

Region 5 is working closely with local tribes including the Pokagon Band of Potawatomi Indians and the Nottawaseppi Huron Band of Potawatomi Indians. Since the CSTAG meeting, Region 5 met with the tribes to discuss their concerns including historical preservation, contingency plans, and tribal involvement and coordination during future Superfund remediation efforts.

CSTAG Comment #9

Encourage the State to revise the fish advisory signs to make them more understandable and to place them at popular fishing areas.

Region 5 Response to Comment #9

Region 5 will work with the state and encourage revisions to the fish advisory signs to make them more understandable and place them at appropriate locations along the river.

CSTAG Comment #10

Continue to work with MDNR on issues with regard to financing dam removal and/or maintenance and on coordinating sediment management as part of any dam project.

Region 5 Response to Comment #10

Region 5 will continue to work with MDNR and the Trustees regarding the potential removal of the dams and their impact on site remediation. Region 5 and MDEQ are working with the U.S. Geological Survey (USGS) to evaluate sediment loading and resuspension if the dams were removed. However, Region 5 has made it clear to MDEQ, MDNR and the local community that EPA will move forward with decision-making at the first two formerly inundated areas (Plainwell and Otsego City Impoundments) assuming the dams will remain in place. If information is presented to EPA that indicates the dams are going to be removed, EPA will evaluate its impact to the remedy.

CSTAG Comment #11

Consider the need for a cultural resources survey in areas that may be impacted by remediation activities.

Region 5 Response to Comment #11

Region 5 will consider the need for a cultural resources survey if the site data and information suggest that this is necessary.

Principle #4, Develop and Refine a Conceptual Site Model that Considers Sediment Stability

CSTAG Comment #12

Include the fate of dams in the conceptual site model and sediment stability analysis; i.e. evaluate removal, failure, and maintenance scenarios separately.

Region 5 Response to Comment #12

As mentioned earlier, Region 5 is working with USGS to evaluate the effects of dam removal and/or failure on the transport and fate of sediment and geomorphology of the river. Results from this study will be used in developing future fate and transport models for the River OU (in-stream sediment).

CSTAG Comment #13

Evaluate the relative risk contribution of PCBs into the river and into mink and fish from the PCB-contaminated paper waste in the flood plains and formerly inundated areas as compared to the contribution from the in-stream sediments through water column transport or via sediment transport.

Region 5 Response to Comment #13

According to a PRP analysis of recent and historical aerial photographs, eroding sediments in the former impoundments have contributed an overall average of 21 kg/year of PCB since the water levels were drawn down in the 1970s. Previous bank erosion estimates based on surveys in 1999 of transects originally established in 1993/1994 resulted in an estimated PCB loading rate of approximately 30 kg/year from the three former impoundments. Surface water samples collected by the PRPs in 2000 - 2001 from the river, just below Morrow Lake, contained PCB concentrations ranging from non-detect to 0.0049 ug/L. The PRPs have estimated that 2.7 kg of PCB are transported from upstream sources into the site on an annual basis. Therefore, according to PRP estimates approximately 8 to 11 times more PCB mass is entering the river from the impoundments versus from upstream sources. Therefore, the relative risk contribution of PCBs into the river and into mink and fish from the paper-waste in the flood plains and formerly inundated areas is an order of magnitude greater than from the in-stream sediments from a sediment loading perspective.

CSTAG Comment #14

Based upon the information presented to the CSTAG by the MDNR, determine if the Indiana bat is a threatened or endangered species in the area.

Region 5 Response to Comment #14

According to the USFWS, the Indiana Bat is a federally-listed endangered species whose occurrence is probable but not confirmed in Allegan and Kalamazoo Counties where the site is located. Region 5 will be consulting with USFWS to determine whether any endangered or threatened species are present within the formerly inundated areas that (Plainwell/Otsego City Impoundments) that will be undergoing future remedial actions.

CSTAG Comment #15

Analyze the effects of high flow events, recreational boat traffic, and bioturbation on sediment stability.

Region 5 Response to Comment #15

Region 5 will analyze the effects of high flow events, recreational boat traffic, and bioturbation, as appropriate, on in-stream sediment prior to making decisions on the River (OU5).

CSTAG Comment #16

The site investigation for the second phase of OU5 should evaluate the release of contaminated sediments into Lake Michigan.

Region 5 Response to Comment #16

Region 5 will evaluate the release of contaminated sediments into Lake Michigan as part of the second phase of the River investigation.

Principle #5, Use an Iterative Approach in a Risk-Based Framework

CSTAG Comment #17

The CSTAG supports the general approach of starting upstream and moving downstream, and incorporating lessons learned as remedial actions progress.

Region 5 Response to Comment #17

Comment noted.

Principle #6, Carefully Evaluate the Assumptions and Uncertainties Associated with Site Characterization Data and Site Models

CSTAG Comment #18

Continue to evaluate the fate and transport modeling and probabilistic risk assessment being performed by the PRPs.

Region 5 Response to Comment #18

Region 5 will consider and evaluate the fate and transport modeling and any other supporting documentation the PRP's have to offer prior to making remedial decisions at the site. Region 5 is currently evaluating the PRP's June 2001, probabilistic risk assessment and the September 2002 update report for the site.

CSTAG Comment #19

In subsequent updates to the 11 principals "consideration memo", the RPM should provide more information about the major exposure parameters selected for the human health and ecological risk assessments and input parameters to the fate and transport model, and discuss the uncertainties associated with them.

Region 5 Response to Comment #19

Region 5 will provide more information about the major exposure parameters for human health and ecological risk assessments and input parameters to the fate and transport model in subsequent updates to the 11 principles "consideration memo".

CSTAG Comment #20

Provide information about the estimated baseline non-cancer human health risks.

Region 5 Response to Comment #20

Region 5 will provide the estimated baseline non-cancer human health risks in the next update.

CSTAG Comment #21

Consider collecting surface water data, including total suspended solids, and dissolved and particulate PCBs, during and after high flow events for use in the fate and transport model.

Region 5 Response to Comment #21

The PRPs have collected this data as part of the remedial investigations. MDEQ has collected the above surface water data as part of their long-term monitoring program.

Region 5 will be requiring the PRPs to continue to obtain this type of information for the site and to used in fate and transport model(s) and monitoring contaminant trends.

CSTAG Comment #22

If, as expected, a fate and transport model will be relied upon heavily to assist in remedy selection, begin planning for its peer review.

Region 5 Response to Comment #22

Region 5 will consider the peer review of any fate and transport model used in the remedy selection process of the in stream sediment prior to decision-making for the River OU.

Principle #7, Select Site-specific, Project-specific, and Sediment-specific Risk Management Approaches that will Achieve Risk-based Goals

CSTAG Comment #23

The CSTAG supports the Region's planned approach of setting cleanup levels and remedial approaches on a reach-specific basis to achieve site-wide Remedial Action Objectives.

Region 5 Response to Comment #23

Comment noted.

Principle #8, Ensure that Sediment Cleanup Levels are Clearly Tied to Risk Management Goals

CSTAG Comment #24

Background information and briefing packages should make it clearer that sediment cleanup levels are surrogates for fish tissue concentrations that would be protective for both human health and fish-eating mammals such as mink.

Region 5 Response to Comment #24

Region 5 regrets the lack of clarity in the CSTAG briefing package. The sediment clean up levels presented were surrogates for fish tissue concentrations that would be protective for both human health and ecological receptors. Specific parameters used in the risk assessments will be presented to the group concurrent with or shortly after the internal peer review takes place.

Principle #9, Maximize the Effectiveness of Institutional Controls and Recognize their Limitations

CSTAG Comment #25

Conduct outreach to educate the public about the existing fish consumption advisories.

Region 5 Response to Comment #25

Region 5 will work with local communities to educate the public about the state's fish consumption advisories.

CSTAG Comment #26

If an alternative is proposed that assumes one or more of the dams will stay in place, develop mechanisms to ensure dams are maintained, or consider developing a contingency remedy that would address the fate and transport of the impounded sediments if one or more of the dams are removed.

Region 5 Response to Comment #26

As mentioned previously, Region 5 has tasked USGS to conduct a geomorphic study of the river which includes an evaluation of the impact of the removal of the three state-owned dams. However, since MDNR has had a long history of requesting funds for dam removal without them being appropriated, Region 5 has little choice but to assume that the dams will remain and make remedy decisions accordingly. Any site decision that includes the long-term operation and maintenance of the dams will include a contingent component. Region 5 is currently investigating the legal matters associated with who would undertake the long-term operation and maintenance of the dams.

Principle #10, Design Remedies to Minimize Short-term Risks while Achieving Long-term Protection The CSTAG recognizes that site investigations are still going on, that data is still being evaluated, and that the Region is not ready to propose a remedy for the site. Nevertheless, the CSTAG felt it was appropriate to make the following recommendations on designing a remedy at this time.

CSTAG Comment #27

Select remedies that avoid or minimize impacts to aquatic habitat, or provide for habitat mitigation to compensate for unavoidable impacts. For example, if sheet piling is proposed, more habitat friendly alternatives should also be considered.

Region 5 Response to Comment #27

MDEQ is already considering more habitat friendly alternatives in addition to sheet piling at the Willow Boulevard/A-Site Landfill. Region 5 has recently met with the U.S. Department of Interior to discuss these types of issues. Region 5 has the lead on the Feasibility Study for the Allied Landfill OU and the River OU and will consider these alternative types of bank stability/source control measures as appropriate.

CSTAG Comment #28

In order to minimize short-term risks from dredging, consider excavating the sediments after diverting the river.

Region 5 Response to Comment #28

Region 5 will consider diverting of the river and excavation of the river sediments and any other remediation approaches/technologies to minimize short-term risks. This approach was already used by EPA during the cleanup of the former Bryant Mill Pond area and Portage Creek.

CSTAG Comment #29

Evaluate on-site placement of dredged material and use of existing landfills to the extent possible.

Region 5 Response to Comment #29

On-site placement of dredged material and use of existing landfills has already been widely used at the site. This was done during the 1998, EPA cleanup of the former Bryant Mill Pond area and Portage Creek. Approximately 150,000 cubic yards of PCB contaminated sediments were excavated and placed in on-site disposal areas within the Allied Paper landfill OU. The ROD for the12th Street Landfill also requires placement of dredged material (from a former discharge channel and the river) back into the landfill. At the King Highway landfill, dredged material from the river has already been placed into the landfill. Finally, at theWillow Boulevard/A-Site landfill, 7,300 tons of contaminated sediments were removed from the shoreline of the river and Olmsted Creek and placed back into the landfill. Region 5 will continue to evaluate on-site placement of dredge material and use of existing landfills for the Allied Paper Landfill and River OU.

Principle #11, Monitor During and After Sediment Remediation to Assess and Document Remedy Effectiveness The CSTAG recognizes that the Region will not be developing a long-term monitoring program for this site for some time, but offers the following recommendation on monitoring to be considered in the future.

CSTAG Comment #30

Since the State has a mussel monitoring program in-place, consider using mussels as part of a long-term monitoring program.

Region 5 Response to Comment #30

Region 5 will consider mussels and other ecological measures when developing the long-term monitoring program to document remedy effectiveness.