MISSOULA COUNTY

Board of County Commissioners
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BCC 2018-077
March 28, 2018

Joe Vranka, Superfund Branch Chief
EPA, Region 8, Montana Office, Federal Building
10 West 15th St., Suite 3200
Helena, MT 59626

Tom Livers, Director
Montana Department of Environmental Quality
1520 E. 6th Ave.
Helena, MT 59620

Re: Draft HHRA OU2 and OU3, BERA OU2 and OU3

Dear Mr. Vranka and Mr. Livers,

Thank you for the opportunity to comment on the Human Health Risk Assessments for OU2 and OU3 and the Baseline Ecological Risk Assessments for OU2 and OU3. We ask that EPA specifically respond to each of the comments and concerns set forth in this letter.

The Missoula Board of County Commissioners remains concerned that the primary risks to human and ecological health are not being addressed in the risk assessments for OU2 and OU3 of the Smurfit-Stone, Frenchtown Mill Site. Missoula County has written repeatedly to both the EPA and DEQ since the mill closed in 2010 and requested that the risks posed by the unlicensed dumps at the site be evaluated. (See attached list of correspondence in which Missoula County, the City-County Health Board, Water Quality District Board, Water Quality Advisory Council and Missoula Valley Water Quality District made these requests.) We believe that the risks of floods eroding these dumps and the ongoing release of contaminants from the dumps to groundwater are the primary ecological and human health risks posed by this site.

Our concerns include the following:

- The remedial investigation completed to date has not adequately characterized the contents of the dumps.
    - We don't know the volume of industrial wastes in the dumps, which is information needed to evaluate reasonable alternatives for the cleanup.
    - The contents of the dumps are not well characterized because EPA and DEQ have required only sparse soil and groundwater samples.
    - The unlined dumps are saturated in groundwater, but the investigation has not determined when peak seasonal groundwater occurs or sampled monitoring wells at that time.
    - Landfill gases have not been assessed as required by state and federal law.
    - The stability of the inner gravel berms surrounding the dumps has not been assessed. A report on the outer berms has not yet been completed.

- The risks of the dumps to both groundwater and surface water cannot be evaluated at this time because the agencies have not required the responsible parties to investigate the dumps.
- Insufficient analysis regarding the geographic extent of and species of fish affected by PCBs, dioxins and mercury.
- Insufficient analysis of the logical contaminant sources and pathways on the site including conveyances and low-lying areas.

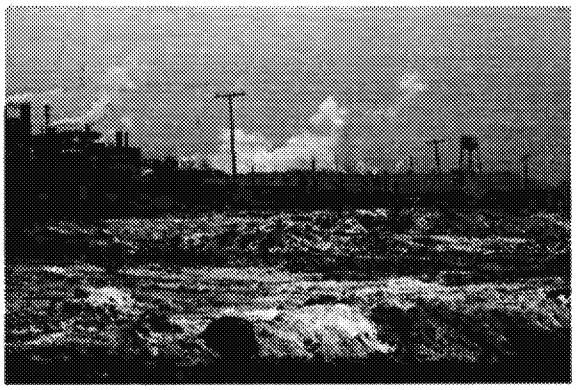
For these reasons, we respectfully request that these draft assessments not be finalized at this time because it is premature to complete adequate risk assessments based on limited data.

The dumps were used to dispose of virtually all industrial waste from the mill from 1957 to 1993, and disposal of sludge and ash continued until the mill closed in 2010. The dumps cover 160 acres. The dumps were never licensed to operate by the State of Montana. Only a small portion of the dumps were capped with 18 inches of local soil, without further investigation, in 1993. The dumps covered with topsoil included three of the six main mill dumps and none of the four sludge and ash dumps. The acreage covered with topsoil included about 32 of the 160 acres. The Department of Health and Environmental Sciences could not issue a landfill license because the wastes were located in proximity to groundwater and floodplain, and would be required to be moved to a properly designed Class II landfill with a liner and leachate collection system and properly designed cap.

Missoula County staff have previously written a detailed account of the state's failure to properly regulate these dumps in accordance with state and federal law. No substantive response has been provided in response to our staff's July 25, 2016, letter. DEQ's lack of proper regulation is one of the reasons we have insufficient information regarding the dumps.

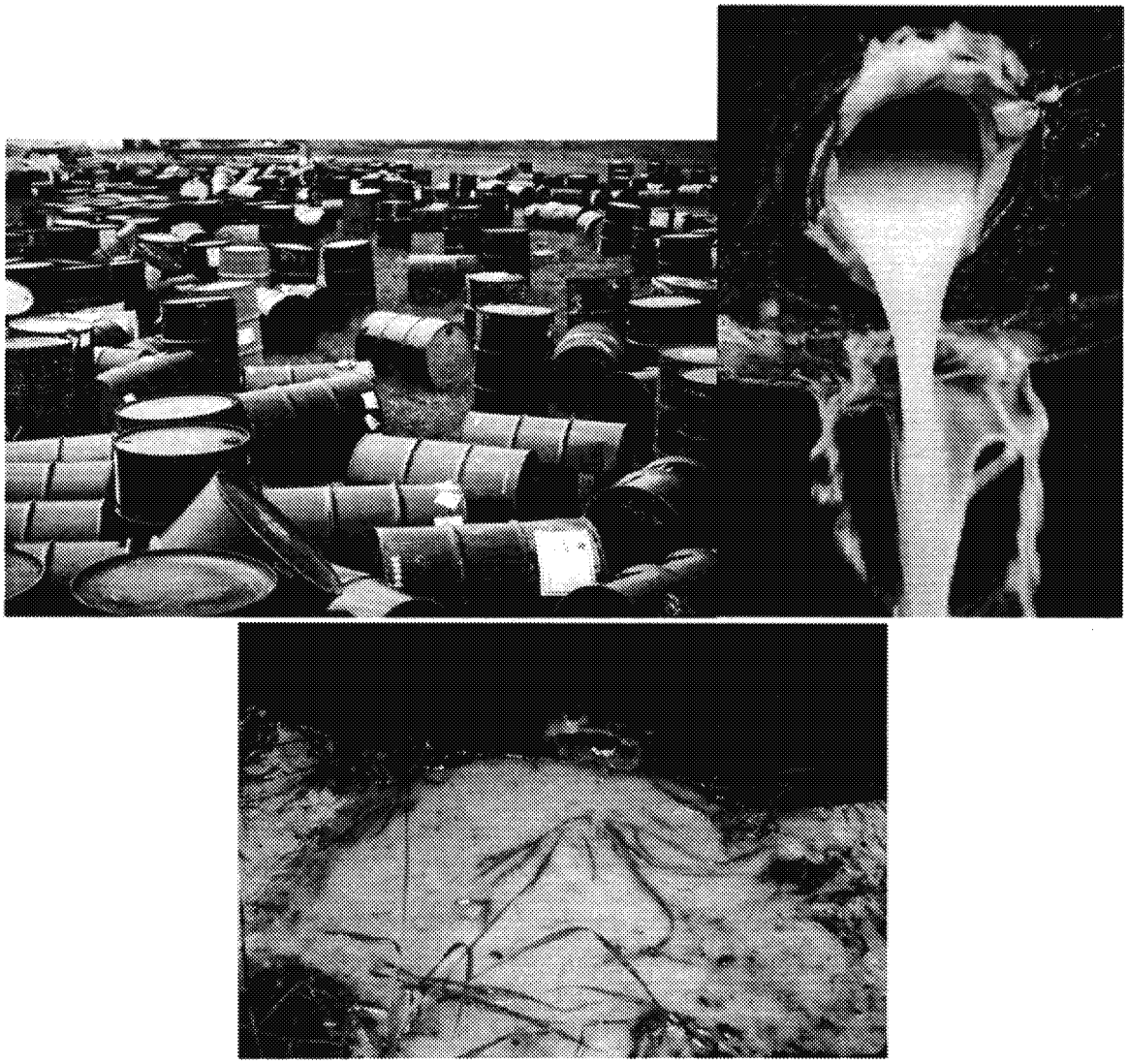
The dumps have been investigated with soil borings drilled at a density of about one per 10 acres, which is insufficient for wastes of this nature. The waste materials at depth in these dumps have not been investigated, including materials deposited in the early years of the mill's history, which are the most likely to be contaminated with substances such as dioxins and PCBs.

Photos from DEQ files and photos provided by past workers show that drums were buried in these dumps in 1978 and 1992. This has not yet been evaluated.



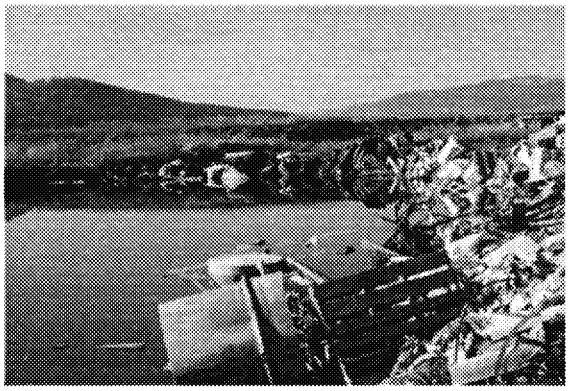
1978 photo showing buried drum

1992 photo from DEQ files, showing wastes, including drum, in the main dump

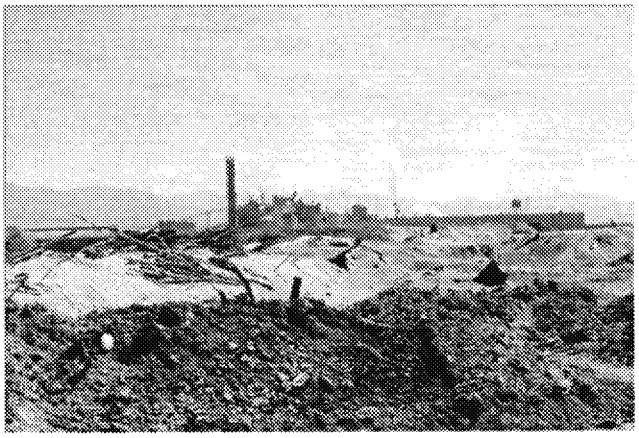


1978 photos, drums in boneyard (Tony Hoyt)

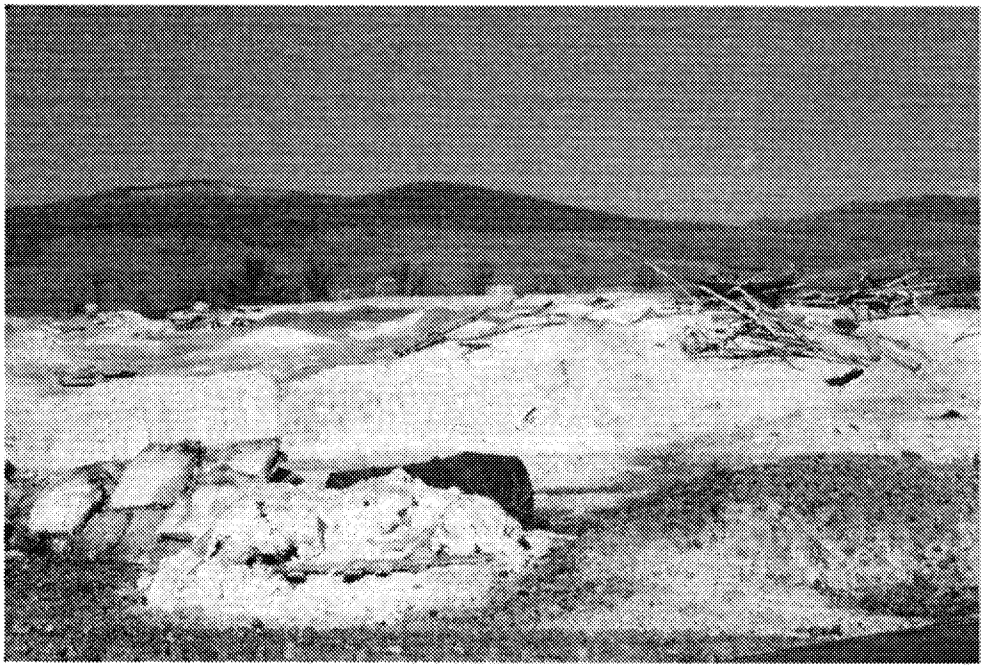
1978 photos – boneyard (Tony Hoyt)



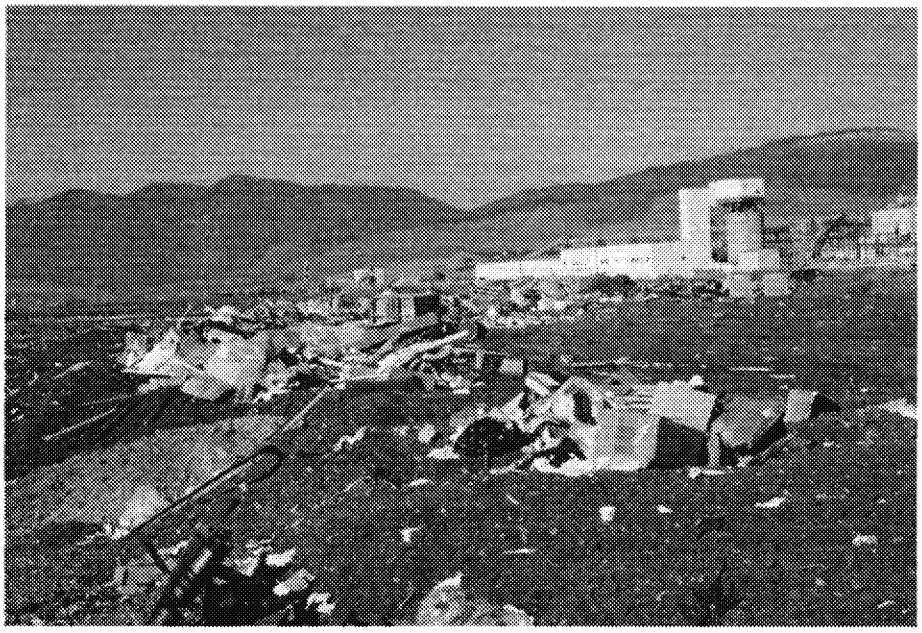
1992 DEQ file photo, showing waste buried in groundwater



1992 DEQ file photo – note drums buried in ash dump



1992 DEQ file photo



1992 DEQ file photo, note drums

A large flood has the potential to erode 53 years of accumulation of sludge, ash and industrial waste that has yet to be properly characterized. These photos are evidence of the materials that may be currently affecting groundwater and are certainly vulnerable to floods.

Missoula County urges the EPA to conduct more in-depth fish tissue analysis to document the geographic extent and species of fish affected by PCBs, dioxins and mercury. It is also imperative to examine logical contaminant pathways on the site including conveyances and low-lying areas.

It is premature to complete accurate risk assessments until all risks have been identified through a complete remedial investigation. The current risk assessments do not reflect the

actual risks at the site due to insufficient testing. We request that these draft assessments not be finalized until a proper evaluation of the dumps, other on-site source areas and fish tissues are completed.

We also request that the agencies provide a detailed response to the comments provided by the Missoula Valley Water Quality District staff in October and July 2017, which include detailed recommendations for further site investigation, and the Water Quality District's July 2016 comments regarding the unlicensed dumps.

Missoula County's goals remain: Eliminate all public safety and health risks; restore the river and the floodplain; hold the polluter responsible for the financial and environmental liabilities at the site; and incentivize concurrent development of the site and continue economic development efforts. We are hopeful that EPA and DEQ will help us achieve these goals.

Respectfully,

BOARD OF COUNTY COMMISSIONERS
NOT AVAILABLE FOR SIGNATURE

David Strohmaier, Chair

Jean Curtiss, Commissioner

Nicole Rowley, Commissioner

enc. Cumulative list of correspondence from Missoula County Commissioners, Health and Water Quality Boards, Water Quality Advisory Council and Water Quality District

BCC/ac
Cc: Congressional delegation members Daines, Tester and Gianforte

BCC 2018-077
March 27, 2018
Enclosure

Correspondence from Missoula County, Missoula City-County Board of Health, Missoula Valley Water Quality District Board, Missoula County Water Quality Advisory Committee, and Water Quality District to EPA and DEQ regarding unlicensed dumps at the former Smurfit-Stone mill site and the threat to groundwater and surface water

1. March 1, 2011. Letter from Board of County Commissioners to DEQ Director Richard Opper and Attorney General Steve Bullock.

   "We request that a comprehensive evaluation of the sediments and materials in the wastewater ponds, sludge ponds and landfills be conducted."

   "The mill's pond system was built in the historic channel and floodplain of the river. The levees and dikes do not protect the site from floods. The river will reclaim its channel in the future and migrate into the former floodplains of the Clark Fork and O'Keefe Creek. If the site is not cleaned up before this occurs, it will result in potentially catastrophic releases of contaminants to the river, affecting aquatic life, water quality and downstream communities."

2. April 21, 2011. Letter from Board of County Commissioners to DEQ Director Richard Opper and Attorney General Steve Bullock.

   "As we stated in our March 1 letter, we would like to see the wastewater ponds, sludge ponds, aeration basins and landfills at the property cleaned up, freeing it for future beneficial use. The wastewater system has been regulated by the State since 1968. Now that the mill will be dismantled, the State should ensure that it is decommissioned and the site cleaned of contaminants. Removal of the levees and ponds along the river would restore the historic Clark Fork channel and floodplain, and a large area of wetland and riparian habitat. Levee removal would also reduce flood velocities and benefit upstream and downstream property owners affected by flooding."

3. Oct. 4, 2012. Letter from Board of County Commissioners to DEQ Director Richard Opper.

   "Heavily contaminated areas are not capped and vegetated, or protected from erosion during catastrophic flooding or ice jam events. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands"

   "Wastes are located in unlined landfills and sludge ponds buried in groundwater adjacent to the floodplains of the Clark Fork River and O'Keefe Creek. Earthen dikes built into the historic channels of the Clark Fork and O'Keefe Creek separate the wastes from floods, ice and debris in the river. Large scale surface water, soil and groundwater contamination could occur during a large flood event that breached the earthen dikes, with impacts that could extend downstream many miles, potentially beyond State borders. Contamination at the site is manageable now. If spread over miles of the river's floodplain downstream, it will not be manageable in the future."

4. Nov. 13, 2012. Letter from Missoula County Water Quality Advisory Council to DEQ Director Richard Opper.

"Heavily contaminated areas in the floodplain environment are not capped and vegetated, or protected from erosion during catastrophic flooding or ice jam events. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands."

5. Nov. 15, 2012. Letter from Board of County Commissioners to DEQ Director Richard Opper.

   "We are especially concerned that there are large sludge ponds and landfill areas with soil and groundwater contamination located within the floodplain of the Clark Fork River and these areas are at risk of catastrophic release by a large flood. Contamination at the site needs to be managed now, before a large flood creates a more wide-spread problem. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands."

6. Nov. 15, 2012. Letter from Missoula City-County Board of Health and Missoula Valley Water Quality District Board of Directors to Montana DEQ Director Richard Opper.

   "We are especially concerned that there are large sludge ponds and landfill areas with soil and groundwater contamination located within the floodplain environment of the Clark Fork River and O'Keefe Creek, and these areas are at risk of catastrophic release by a large flood. Contamination at the site needs to be managed now, before a large flood creates a more wide-spread problem. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands."

7. Nov. 27, 2012. Letter from Board of County Commissioners to DEQ Director Opper.

   "We are especially concerned that there are 138 acres of sludge ponds and landfill with soil and groundwater contamination located within the floodplain environment of the Clark Fork River and these areas are at risk of catastrophic release by a large flood. Contamination at the site needs to be managed before a large flood creates a more wide-spread problem. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands. We request that the industrial waste and sludge be removed from the floodplain environment and disposed in a lined and capped facility as a time-critical action. Our goal is to restore the river and its floodplain function while protecting County residents from environmental and public health risks."

8. June 12, 2013. Letter from Missoula County Water Quality Advisory Council to U.S. EPA, regarding proposed NPL listing.

   "We are especially concerned that there are large sludge ponds and landfill areas with soil and groundwater contamination located within the floodplain of the Clark Fork River and these areas are at risk of catastrophic release by a large flood. Contamination at the site needs to be managed now, before a large flood creates a more wide-spread problem.

9. June 23, 2013. Letter from Missoula City-County Board of Health and Water Quality District Board to EPA regarding NPL listing.

"We are especially concerned that there are large sludge ponds and landfill areas with soil and groundwater contamination located within the floodplain of the Clark Fork River and these areas are at risk of catastrophic release by a large flood. Contamination at the site needs to be managed now, before a large flood creates a more wide-spread problem."

10. July 19, 2013. Letter from Missoula Valley Water Quality District to EPA regarding NPL listing.

    "Contaminated areas are not lined, capped or protected from erosion during catastrophic flooding or ice jam events. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands. Aerial photos from 1955 pre-dating the mill's construction in 1957 show that a portion of the ponds and levees were constructed beginning in 1958 in the historic channel of the Clark Fork River. Most of the pond system lies within the floodplain of the Clark Fork River or O'Keefe Creek. The floodplain extends up to three-fourths of a mile landward from the outer levees. The ponds significantly constrict the Clark Fork floodway for approximately two miles, increasing flood velocities and heights in this reach of the river. Unlined sludge ponds and landfills have been placed adjacent to the Clark Fork and O'Keefe Creek floodplain, with wastes buried below 100-year flood elevations in shallow groundwater."

11. July 18, 2013. Letter from Board of County Commissioners to EPA regarding NPL listing.

    "Missoula County's goals for the former Smurfit-Stone mill site are:
    -Eliminate all public safety and health risks
    -Restore the river and the floodplain;
    -Hold the polluter responsible for the financial and environmental liabilities at the site so the burden is not shifted to the tax payers and residents of the area;
    -Incentivize concurrent development of the site and continue economic development efforts, and;
    ... -Provide public involvement throughout the process of investigation and cleanup."

12. July 22, 2013. Letter from Missoula Valley Water Quality District to EPA regarding NPL listing.

    "Contaminated areas are not lined, capped or protected from erosion during catastrophic flooding or ice jam events. Erosion of contaminated materials from the site during floods would have potentially significant impacts on fish and wildlife, wetlands, human health and agricultural lands. Aerial photos from 1955 pre-dating the mill's construction in 1957 show that a portion of the ponds and levees were constructed beginning in 1958 in the historic channels of the Clark Fork River and O'Keefe Creek. Most of the pond system lies within the floodplain of the Clark Fork River or O'Keefe Creek. The floodplain extends up to three-fourths of a mile landward from the outer levees. The ponds significantly constrict the Clark Fork floodway for approximately two miles, increasing flood velocities and heights. Unlined sludge ponds and landfills are in the Clark Fork and O'Keefe Creek floodplain environment, with wastes buried below 100-year flood elevations in shallow groundwater. O'Keefe Creek has also been channelized and relocated from its historic channel, which flowed through the area now occupied by the sludge ponds. Uncapped contaminated soils also present a risk of wind erosion, which has been reported by area citizens."

13. Aug. 26, 2015. Letter from Board of County Commissioners to EPA Regional Administrator Shaun McGrath.

    "The presence of toxic and hazardous materials in the floodplain and shallow groundwater areas near the Clark Fork River pose a substantial threat to public health and safety and environmental quality. These materials include industrial wastes, sludge, fly ash, boiler dregs, asbestos and drums buried in shallow groundwater in a large area near the river. These wastes are protected from floods by uncertified and unmaintained gravel dikes that constrict the floodplain of the Clark Fork River. The dikes were first constructed in 1958, and occupy former active channels of the river. Groundwater is highly polluted, and contaminants have been found in fish in the Clark Fork River. These problems require immediate attention and remediation before a large flood washes these waste materials downstream into the river, affecting downstream communities and causing further damage to natural resources of the Clark Fork River."

    "We seek a thorough investigation of the site's contamination, permanent and effective cleanup of the site, and restoration of the damaged natural resources of the Clark Fork River."

14. July 25, 2016. Letter from Missoula Valley Water Quality District to DEQ and EPA.

    "The sludge and ash landfills at the former Smurfit-Stone site have not been regulated pursuant to the Montana Solid Waste Management Act or RCRA Subtitle D regulations. The landfills contain contaminants of concern and pose a risk to human health and the environment. The landfills must be properly regulated, monitored, managed and closed in accordance with state and federal laws and regulations. The landfills constitute open dumps, which violate federal and state regulations, including RCRA, the Clean Water Act and the Solid Waste Management Act.

    "We request that the EPA and DEQ now require the landfills at the site be removed, and the contents disposed of in a properly sited, designed and regulated landfill with cap, liner and leachate collection system isolated from groundwater and surface water."

15. Oct. 13, 2016 public meeting. Missoula County Comments to EPA/DEQ.

    "Missoula County's priority is for the primary public health and environmental risks be evaluated and remedied. We believe that the focus should be on the 140-acre area of landfills that were buried in groundwater near the river."

16. Oct. 11, 2016. Letter from Board of County Commissioners to DEQ Director Tom Livers and EPA Superfund Branch Chief Joe Vranka.

    "The EPA and DEQ have focused thus far on the less contaminated portions of the site, with the intent of fostering site redevelopment. This assessment of agricultural lands surrounding the mill is a first step. However, Missoula County's priority is that the primary public health and environmental risks be evaluated and remedied. We therefore believe that the focus should be on the 140-acre area of landfills that were buried in groundwater near the river."

17. Oct. 12, 2016. Letter from Missoula County Water Quality Advisory Council to EPA's Joe Vranka and DEQ's Tom Livers.

"We believe it is inappropriate to label the waste disposal areas at the site as 'landfills.' This includes sludge impoundments and other solid waste disposal areas that are located near the river and in shallow groundwater. These waste disposal areas were not designed, operated or regulated in accordance with Montana Solid Waste Management statues and regulations, or RCRA, and as a result should not be considered to be landfills that are in compliance with state and federal regulations. We suggest that they be referred to as waste dumps or disposal areas instead of landfills."

18. April 28, 2016. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding remedial investigation.

    "Missoula County and the Water Quality District remain very concerned about the stability of the gravel dikes separating the industrial waste dumps, sludge impoundments and wastewater facilities located within and near the Clark Fork River and O'Keefe Creek floodplains."

    "We understand that EPA and DEQ will consider risks associated with site contamination while selecting a remedy for this site. This may include risks to site workers associated with surface soil contamination, or risks of fish consumption in the Clark Fork River. We request that EPA also consider the risks associated with the industrial waste dumps, sludge impoundments and former wastewater facilities, which are separated from the Clark Fork and O'Keefe Creek by non-engineered and poorly maintained gravel dikes. We are concerned about the risks of a catastrophic release of materials in the dumps and impoundments during a large flood or of contaminant leaching to groundwater.

    "We request that the EPA and DEQ require further characterization of the waste materials located in the dumps and impoundments. These wastes were buried over a long period of mill operation, and placed directly in groundwater when the mill operated."

19. July 22, 2016. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding channel migration zone study.

    "The report demonstrates that the development of industrial infrastructure has encroached on the historic channel migration zone and erosion hazard area at the mill site. About 257 acres of the core channel migration zone are now occupied by the former Smurfit-Stone facilities, plus another 13 acres outside the former wastewater ponds that have been armored and isolated from the channel migration zone. The active river corroder has been narrowed by more than 40 percent through the site."

20. March 1, 2017. Letter from Board of County Commissioners to Joe Vranka at EPA and Tom Livers at DEQ.

    "We conclude that the Green Investment Group and M2 Green Redevelopment were in fact established by Smurfit-Stone, acquired by PRP West Rock, in order to distance the company from its environmental liabilities at its closed mill sites. These liabilities include the serious concerns surrounding the dump sites protected by the gravel berms at the mill site in Missoula County."

21. March 4, 2016. Letter from Missoula County Water Quality Advisory Council to EPA and DEQ.

"The gravel berms and dikes that separate the wastewater settling and sludge ponds, treatment ponds and industrial waste dumps (solid waste basins) from the Clark Fork and O'Keefe Creek were not engineered and constructed to withstand a significant flood. Contamination in those ponds could be catastrophically released to the river in a large flood. Industrial waste dumps and sludge ponds at the site must be adequately characterized. Contaminants must be removed from contact with groundwater and disposed of appropriately. Industrial waste dumps at the site are known to contain mill waste, asbestos and other chemical wastes, which are disposed of in contact with groundwater. Industrial waste dumps should be assigned a separate operable unit (OU) for characterization and remedy, not lumped with wastewater treatment and holding ponds, which have different contaminant characteristics and remedy needs. Drums containing unknown industrial waste are known to have been disposed in these dumps. The existence of these drums is not clearly acknowledged or addressed in the November 2015 Remedial Investigation Work Plan. These areas need careful investigation and sampling to identify the nature and toxicity of these buried wastes. Locations to be investigated should be targeted based on interviews with former mill workers who are familiar with the disposal of substances at the mill during the 1960s and 1970s."

22. July 24, 2017. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding PCB investigation.

    "We strongly recommend further investigation of PCB subsurface soil and groundwater contamination in the area of this ditch, around NFMW-2, in sludge Pond 4 and in the areas where PCBs have previously been detected in surface soils in Operable Unit 2."

23. Feb. 12, 2017. Letter from Missoula Valley Water Quality District to Sara Sparks at EPA and Keith Large at DEQ.

    "Ecological and human health risk assessments cannot be completed without an understanding of the stability of the gravel berms that separate the Clark Fork River and O'Keefe Creek from these industrial waste dumps."

24. March 1, 2017. Letter from Board of County Commissioners to EPA and DEQ regarding berm stability.

25. "We are grateful that EPA and DEQ have sought a thorough investigation of the berms as part of the remedial investigation for the site. Please continue to uphold this requirement. We also request that the PRPs be required to implement a rigorous inspection program for the gravel berms, and to develop an approved contingency plan for any damage that may occur to the berms."

26. July 14, 2017. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding PCB investigation.

    "One other area that warrants additional investigation is near monitoring well NFMW2. This well was sampled for PCBs in 2014 and June 2016 and had Aroclor-1260 concentrations of 0.31 and 0.12 micrograms per liter. Monitoring well NFMW2 is located near a solid waste disposal area, a historic wastewater ditch and downgradient of the wastewater clarifier and Northwestern Energy transformer area. The source and magnitude of PCB contamination of soil and groundwater in the area of NFMW2 requires further investigation."

27. Oct. 13, 2017. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding Addendum 6.

    "In order to assess the potential for erosion of materials contained in the solid waste dumps, the inner berms must also be assessed. This is necessary to evaluate the potential risk of erosion of the landfilled materials, much of which are buried in or near groundwater and at or below base flood elevations."

28. Oct. 27, 2017. Letter from Missoula Valley Water Quality District to EPA and DEQ regarding Addendum 7.

    "We agree that the density of sampling conducted to date is not sufficient, particularly in potential contaminant source areas such as the 160 acres of landfills/dumps in OU3. We have worked on both state and federal contaminant sites in Missoula County, including Milltown, White Pine, Missoula Sawmill, Bonner PCBs and many others. We have never witnessed an effort to characterize a site with such a low density of soil and water samples. The landfill/dump areas have had soils sampling at about one sample per 10 acres. We are accustomed to seeing more like 10 samples per acre at other sites in Missoula County, in some cases more than that."

    "This conceptual model ignores the significant threat of erosion of contaminated material into the Clark Fork River and downstream depositional areas, such as the Frenchtown Valley. We believe that this risk should be evaluated as part of the human health and ecological risk assessments. This type of risk was accounted for in EPA and DEQ's work on the Milltown Reservoir site, where continuing releases and potential dam breach scenarios were evaluated in risk assessments, and downstream screening studies were conducted to evaluate contaminated sediment deposition. We request that these risks be carefully evaluated for this site."