



HJ18: PROGRESS OF FEDERAL REMEDICATION AT SMURFIT- STONE MILL SITE

DRAFT REPORT TO THE 69TH
MONTANA LEGISLATURE

Environmental Quality Council

J. Mohr

July 29, 2024



P.O. Box 201706
Helena, MT 59620-1706
Phone: (406) 444-3064
Fax: (406) 444-3971

Website: <https://leg.mt.gov/eqc>

TABLE OF CONTENTS

Summary.....	1
History and background.....	1
Cleanup process.....	2
Community concerns.....	4
Sampling.....	4
Pond berms.....	4
Outfall pipes.....	5
Fish health.....	6
Water rights.....	6
Council input.....	7
Additional sampling.....	7
Riverbed trespass.....	8
Other Superfund sites.....	9
Recommendations and legislation.....	10
Appendix A: Environmental Quality Council Members.....	i

This report is a summary of the work of the Environmental Quality

Council, specific to the 2023-2024 study as outlined in the Environmental Quality Council's 2023-24 work plan and House Joint Resolution 18 (2023). Members received additional information and public testimony on the subject, and this report is an effort to highlight key information and the processes followed by the Environmental Quality Council in reaching its conclusions. To review additional information, including audio minutes, and exhibits, visit the Environmental Quality Council website: www.leg.mt.gov/eqc.

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

SUMMARY

Toxins were used and produced at the Smurfit-Stone mill site, which is located southwest of Frenchtown and lies next to the Clark Fork River. Mill infrastructure—such as the pulp mill, berms containing sludge and wastewater, an on-site dump, and outfall pipes jutting into the river—are part of the 5-square mile site. The Environmental Quality Council attempted to clarify aspects of the U.S. Environmental Protection Agency’s Superfund cleanup process.

HISTORY AND BACKGROUND

The industrial history of the Smurfit-Stone mill site begins in 1957. First opened under the ownership of the Waldorf Paper Products Co. of St. Paul, Minn., the site produced linerboard (a thin cardboard) and pulp products (raw materials for tissues, books, baby wipes, et al) for nearly 53 years, before Smurfit Stone Container Co. (of Missouri and Chicago) declared bankruptcy and closed the site.

Remediation of the site began soon after the facility ceased operations in 2010. Former mill workers spoke of burying unlabeled drums and dumping mercury or “black liquor” down the drain.¹ Before the Environmental Protection Agency began its cleanup planning, various new uses for the site were promoted, such as converting the site to a biomass power plant, a manufacturer of wind mill parts and wood pellets, or selling off the mill for scrap.²



¹ Written testimony of Bob Culp and Chuck Frey to EQC, Nov. 13, 2023.

² Testimony of Jeri Delys, Frenchtown Smurfit Stone Community Advisory Group to EQC, Nov. 13, 2023.

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

Redevelopment of the site for industry, businesses or homes may be in the site’s future, but for now it is one of 19 Superfund sites in Montana.³ Site remediation is expected to last into the 2030s.

In 2023, the Montana Legislature passed House Joint Resolution 18 (Study remediation of Smurfit-Stone mill site). The resolution states that an advisory group believes the site risk analysis was inadequate and sampling should be increased. The resolution called for a “full cleanup of the waste repositories, berms, and site could return the mill site to full commercial use.”⁴

Later in 2023, the Legislative Council assigned the study to the Environmental Quality Council to:

- Examine past and ongoing investigations into the extent of contamination, assessment of risks to human health and environment, and proposed cleanup options
- Examine the creation, implementation, and operations of the Libby Asbestos Superfund Oversight Committee as a possible model for state involvement at the Smurfit Stone mill site
- Offer recommendations to ensure full cleanup of the mill site, mitigation of risks to downstream communities, determination of impacts to the state fishery, restoration of the floodplains, and rehabilitation of the site to drive the Frenchtown community economy.

CLEANUP PROCESS

The cleanup is following the EPA’s Superfund process (see Figure 1).⁵ During the HJ18 study, the agency was conducting remedial investigation and site feasibility to identify “what and where” the risks lie.⁶

Years of testing have determined that past contamination at the site poses some level of risk across the

Figure 1. Simplified federal Superfund remediation process



operable units,⁷ including most notably that:

- Groundwater contamination is moving toward the river and into the shallow aquifer
- Wastewater ponds pose some risk
- Industrial footprint poses possible risks for future uses

³ The site’s status on the EPA’s National Priorities List is pending.

⁴ <https://bills.legmt.gov/#/bill/20231/LC4160>

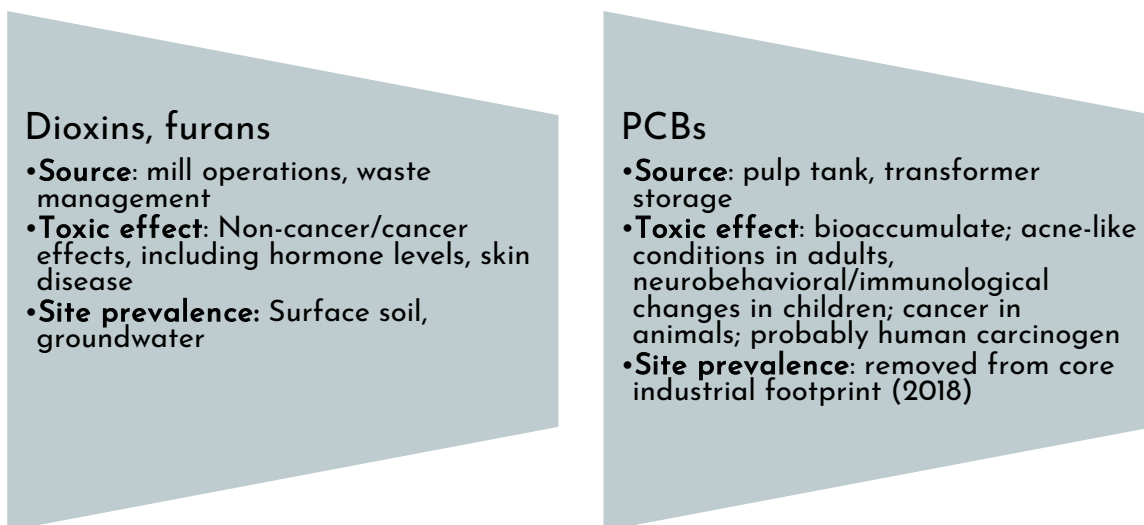
⁵ More specifically named the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. 9601 et seq.

⁶ EPA web site for mill site, <https://cumulis.epa.gov/supercpad/cursites/csinfo.cfm?id=0802850>

⁷ Testimony of Allie Archer, remedial project manager (EPA) to EQC, Nov. 13, 2023.

A 2011 preliminary assessment and site investigation discovered a range of potential contaminants, such as arsenic, manganese, and chromium. More than 900 soil and water samples identified dioxins, furans, and polychlorinated biphenyls (PCBs) as the most-toxic on site—and the biggest health threat to humans, plants, and wildlife (see Figure 2).⁸

Figure 2. Sources, effects, prevalence of site contaminants.



Experts use the sampling and monitoring data of groundwater, soil, surface water, air, and plants and animals (macroinvertebrates, fish, mice) to create health risk assessments. These assessments will inform the final cleanup plan. (A small amount of PCB-contaminated soil was removed in 2017.)

As shown in figure 3, the site has been organized into three operable units (OUs):

- OU1: agricultural lands (1,200 acres)
- OU2: core industrial footprint, including the mill, recycling plant, wood chipping area, hog fuel area, and equipment storage areas (255 acres)
- OU3: wastewater treatment facilities (including various ponds and basins; 1,700 acres)

The site is proposed for the federal National Priorities List; this list is based on a hazard ranking system and helps guide the agency in future investigation and remediation.⁹ Superfund laws authorizes two responses: short-term removal and long-term remedial response actions, which may only be done at sites on the National Priorities List.

⁸ Various risk assessments found listed on “site documents & data” page at <https://cumulis.epa.gov/supercpad/SiteProfiles/index.cfm?fuseaction=second.docdata&id=0802850>

⁹ Montana has 18 NPL sites. <https://www.epa.gov/superfund/national-priorities-list-npl-sites-state#MT>

COMMUNITY CONCERNS

In the 14 years since the closure of the mill, community members have actively participated in the site assessment and cleanup plan development. Some expressed concerns to the EQC on how risk sampling is done, aging outfall pipes, an extensive berm system build around wastewater ponds, toxics in fish, and water rights.¹⁰

SAMPLING

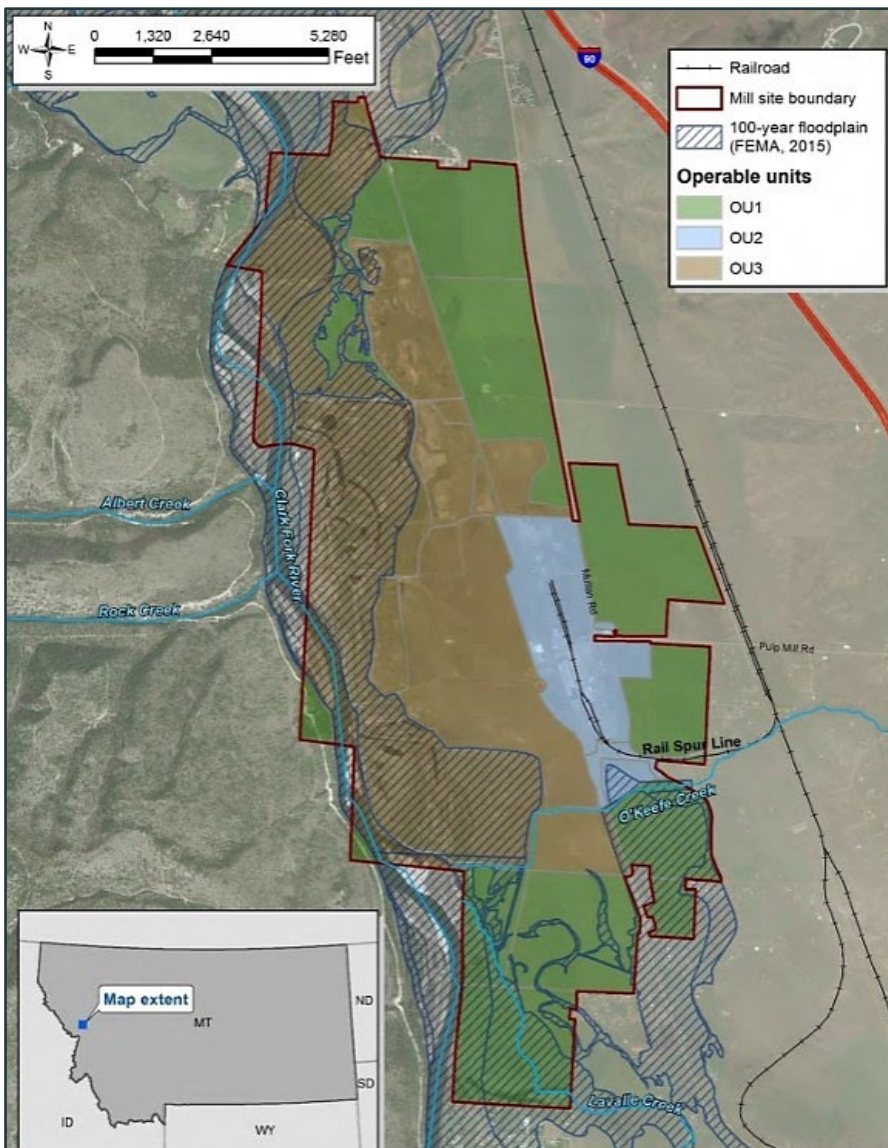
The EPA, its contractors and other agencies have sampled soil, groundwater, sediment, surface water, and fish for at least 10 years.¹¹ But some say not enough sampling has been conducted—nor in the correct places. An incomplete cleanup could limit future uses and opportunities at the site, they say.

Specifically, Missoula County Water Quality District said to-date sampling was more appropriate for a much-smaller site.¹² And proposed ongoing groundwater testing did not consider seasonal variations, such as Spring runoff compared to the state’s driest months, August and September.¹³

POND BERMS

The mill site wastewater treatment system included clarifier and settling ponds, aeration basins, polishing ponds, treated water holding ponds, and infiltration

Figure 3. Map of Smurfit-Stone mill site (Montana Natural Resource Damage Program, 2021)



¹⁰ Testimony of Elena Evans, division manager, Missoula Valley Water Quality District (Missoula Co.) to EQC, Nov. 13, 2023.
¹¹ Testimony of Allie Archer, remedial project manager (EPA) to EQC, Nov. 13, 2023.
¹² Testimony of Elena Evans, division manager, Missoula Valley Water Quality District (Missoula Co.) to EQC, Nov. 13, 2023.
¹³ EPA did agree in Dec. 2023 to additional testing. See page 7.

basins. All of these are proximate to the Clark Fork River—some separated from the river by a rock and earthen berm.

Although the Missoula Conservation District approved 10 maintenance permits to allow repair or armoring of the berm system from 1974-2007,¹⁴ the berms may be problematic:

- The berms effectively cordon off parts of the river plain that flowed in the 1950s—and an active river like the Clark Fork is continually changing course. Since 2017, the river has migrated eastward against Pond No. 2, forcing more water into a berm that has been bolstered by additional riprap, barbs, and other repairs five times in the past five decades
- The river is guarded on the west by Cambrian Dolomite, forcing high-flow velocities into the river plain—and into the berms, including a 2018 boil or “volcano” that threatened to breach a settling pond
- The berms may be trespassing within a state-owned riverbed

Missoula Conservation District supervisors do not want the final cleanup plan to include “maintenance and upkeep of the berm in perpetuity.”¹⁵

OUTFALL PIPES

The Smurfit-Stone mill site includes various outfall pipes, directing waste and wastewater from the industrial footprint and the ponds into the Clark Fork River. At least six outfall pipes extend from the mill site into the river.¹⁶ These pipes range from one- to 3-feet in diameter. Certain permits or authorizations are necessary for such incursions into waterways—although not all of today’s laws were in effect during the lifetime of the mill operation.

For example, federal law requires a permit for pollution outflows into the nation’s lakes or rivers.¹⁷ Montana agencies issued three pollution discharge permits for the mill, the first in 1995 and the last in 2014.¹⁸ (Treated wastewater not released into the river was placed in infiltration ponds or galleries.)

But while the Department of Natural Resources and Conservation issues a land use license or lease for use of (or trespass onto) state land, no licenses or leases were issued related to mill.¹⁹ It is also unclear if the mill secured or needed a federal “dredge and fill” permit, county floodplain permit, or a permit under the Montana Stream Protection Act.

Although no longer used or permitted to discharge waste or pollutants, many groups seek removal of these pipes.

¹⁴ Testimony of Tim Hall, chairman, Missoula Conservation District to EQC, Nov. 13, 2023.

¹⁵ Testimony of Tim Hall, chairman, Missoula Conservation District to EQC, Nov. 13, 2023.

¹⁶ Memo from Ryan Weiss, deputy trust lands administrator (DNRC) to EQC, Dec. 8, 2023.

¹⁷ Clean Water Act, 33 U.S.C. 1251 et seq.

¹⁸ Memo from Montana Natural Resources Damage Program to DNRC, March 1, 2018.

¹⁹ See p. 8 for further discussion of trespass

FISH HEALTH

Due to the bioaccumulation of PCBs, scientists collected fish for evidence of toxicity soon after the mill's closure. In 2010, FWP issued fish consumption advisories for rainbow trout and northern pike downstream of the mill.

Studies have continued, and scientists later collected rainbow trout and northern pike to analyze fillet and carcass samples for dioxin, furan, and PCBs. These examinations showed that these toxins did not produce unacceptable risks to fish.²⁰

However, human consumption of these fish continues to be more problematic. In 2019, three state agencies²¹ issued guidance against consuming fish in the Clark Fork River. The agencies updated the guidance in 2020, recommending avoiding consumption of all species of fish from the Clark Fork River at the Bitterroot River to the confluence of the Flathead River, a 148-mile reach.²² Testing at the time indicated high levels of contaminants in the fish tissue, but noted "the source of all the contaminants found in the fish has not been attributed."

FWP biologists recently conducted a longer study of the Clark Fork River, extending the scope up the river to Silver Bow Creek near Butte, and downstream to Cabinet Gorge Reservoir near the Idaho border. Initial water quality study results found toxic compounds prevalent throughout the Clark Fork River. Sources may include the paper industry, like the Smurfit Stone mill, but also natural sources like forest fires.²³ Fish tissue sampling results may result in changes to the fish consumption advisory.

Community groups said the fish consumption advisory was impacting the local economy.²⁴

WATER RIGHTS

Forty-six water rights are associated with the core industrial footprint of the Smurfit-Stone mill site. In 2022, the DNRC preliminarily approved a change of use for 17 of these water rights, allowing a redevelopment company, MLH Montana, LLC, to change mostly industrial water rights to marketing water rights, which would essentially allow sale of the water.

The Missoula Valley Water Quality District objected to the change due to potential water quality issues. State law allows a water right to be changed if it does not adversely affect the water quality of other appropriators.

Ultimately, the redeveloper and the water quality district agreed²⁵ to:

- report the sale of water rights

²⁰ Environmental Protection Agency, *Final Baseline Ecological Risk Assessment* (2021), 60.

²¹ Departments of fish, wildlife and parks; environmental quality; and public health and human services.

²² Department of Fish, Wildlife and Parks, *Fish consumption guidance updated for portions of Clark Fork, Bitterroot and Blackfoot Rivers in western Montana* (2020).

²³ Department of Fish, Wildlife and Parks, *Study shows impact of pollution on water quality of Clark Fork River* (2024).

²⁴ Testimony of Elena Evans, division manager, Missoula Valley Water Quality District (Missoula Co.) to EQC, Nov. 13, 2023.

²⁵ Stipulated settlement agreement, *In the Matter of Change Application Nos. 76M-30150596 and 76M-30151160 by MLH Montana LLC* (2023)

- not market 20 percent of the water rights’ volume until the EPA issues a cleanup plan. This plan may or may not include a requirement to “treat and pump” water on the site
- test for furans and dioxins any of their groundwater wells within one miles of the mill site perimeter and comply with water quality standards, if necessary

COUNCIL INPUT

ADDITIONAL SAMPLING

EPA’s approach to site investigation and characterization is to “chase contamination.”²⁶ For example, the agency does discrete and compound sampling of soil to mimic a person traveling through the site. The site’s 52 monitoring groundwater wells show contamination is moving toward the Clark Fork River and into the shallow aquifer. Future uses of land at the pond site and the industrial footprint show varying levels of future risk (see Figure 4).

The EPA proposed biannual groundwater sampling during high- and low-groundwater conditions to capture highest concentrations of contaminants.²⁷ Groundwater modelling at the site does not show a strong relationship between groundwater levels and contamination or risk levels, according to agency consultants.²⁸

However, in response to complaints from site neighbors, former employees, and local officials, the EPA agreed to quarterly sampling “in the spirit of moving the site forward.”²⁹ Seasonal testing may capture contaminants left by groundwater flowing through the site.³⁰

In addition, the agency agreed to drill 15 more groundwater monitoring wells. The pond berms will be assessed as part of a climate vulnerability assessment.³¹

Under federal Superfund laws, the EPA negotiates with those responsible for contamination of a site to clean up (or pay to clean up). These “potentially responsible parties” may be people, businesses, or government agencies. They may or may not have owned a site. And they may have inherited cleanup responsibility when purchasing a site—and its liabilities. Bankrupt entities remain responsible for environmental liabilities.

Potentially responsible parties	
International Paper Co.	Memphis, Tenn.
WestRock CP, LLC	Sandy Springs, Ga.
M2Green Redevelopment, LLC	Alton, Ill.
BNSF Railway Co.	Ft. Worth, Tex.
Montana Rail Link	Missoula

²⁶ Testimony of Allie Archer, remedial project manager (EPA) to EQC, Nov. 13, 2023.

²⁷ Readout from Smurfit-Stone Mill Technical Working Group meeting (2023).

²⁸ Ibid.

²⁹ Ibid.

³⁰ Ibid.

³¹ Testimony of Allie Archer, remedial project manager (EPA) to EQC, Nov. 13, 2023.

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

In response to questions, EPA officials said they do not believe the potentially responsible parties are driving the testing and science behind the remediation work, as the agency must engage and negotiate with those parties to fund much of the work.³²

The EPA estimated a record of decision for a proposed cleanup plan by 2028. It is unclear if additional testing may delay the plan and eventual remediation of the site.

Figure 4. Summary of assessed risk by Smurfit-Stone operating unit

Waste treatment areas (ponds) (OU3)		Agricultural lands (OU1)	
metals, dioxins/furans in soil	certain metals in groundwater	select metals (low risk to ecological receptors) in soil	Mn (in 2 groundwater wells)
Mn (fish) in surface water/sediment	dioxins/furans, PCBs from eating fish		
		Core industrial (OU2) (chromium) in soil	certain metals in groundwater

RIVERBED TRESPASS

As discussed in previous pages, mill operators installed outfall pipes, pond berms, and riprap to maintain their waste and runoff system. These structures extend either into the river or into the historic flood plain of the river.

During the study, the council advocated for a cleanup that “upholds the state’s interest and rectifies the trespass on state trust lands.”³³ The council asked the DNRC to:

- Determine extend of trespass of berms and riprap
- Advise how to mitigate trespass at Smurfit Stone site during Superfund process

³² Testimony of Allie Archer, remedial project manager (EPA) to EQC, Nov. 13, 2023.

³³ Letter from EQC to DNRC, Feb. 14, 2024.

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

- Suggest legal strategies to remove all outfall pipes, berms, riprap and other unauthorized trespasses from state lands
- Provide guidance on how to prevent similar instances of trespass
- Work with DEQ to ensure mitigation of trespass is standard procedure at state and federal Superfund sites

In response, the department determined that while the outfall pipes, berms, and riprap at the Smurfit Stone site may “occur on or beneath the riverbed,” agency does not consider those to be in trespass.³⁴ The state is unable to show ownership of the riverbed, and thus cannot enforce trespass. Because the riverbed adjacent to the Smurfit Stone mill site has not been adjudicated as “navigable,” the state’s regulatory leverage is essentially diminished. And actions to assert state ownership, such as by quiet title action, would likely be snarled in the courts for years, like the “riverbed rent” case over hydroelectric dams on the Missouri, Clark Fork, and Madison rivers.

Absent state ability to enforce trespass, it appears that removal the outfall pipes, berms, and rip rap is more contingent upon negotiations primarily with the responsible parties. The DNRC may need to authorize other parties to remove the structures from the riverbed.³⁵

OTHER SUPERFUND SITES

During the 2023-24 interim, the council offered a mix of advice, support, and “lessons learned” at federal Superfund sites in Columbia Falls, Butte, and Libby.

The three sites are at different stages of the federal Superfund process: the Columbia Falls Aluminum Co. plant does not yet have a cleanup plan; cleanup at Libby began in 2000 with much of the work completed; and the extensive Silver Bow Creek/Butte area cleanup began in the 1980s, covering 7 separate operating units and 26 miles of creek bed.

At the request of Columbia Falls-area residents, the council requested the EPA pause its decision on a final cleanup plan, owing to concerns over the agency’s proposal to cap—rather than remove—a dumping site containing cyanide, flouride, and polycyclic aromatic hydrocarbons.³⁶ The council also lent its support for a federal technical grant for the Coalition for a Clean CFAC. The EPA responded by agreeing to additional opportunities for information-sharing³⁷, and promised aid to the coalition.³⁸

The council also supported an effort by a Butte mining company to further test the feasibility of filtering out rare earth elements (REEs) and critical minerals from water pooling in the Berkeley Pit.³⁹ Preliminary tests by Montana Resources Inc. indicate high levels of REEs and critical minerals, especially zinc, gadolinium, dysprosium, and erbium. Recovery of these and others in a produced rare earth oxide compound may reduce current reliance on

³⁴ Memo from Ryan Weiss, deputy trust lands administrator (DNRC) to EQC, July 15, 2024.

³⁵ Testimony of Ryan Weiss, deputy trust lands administrator (DNRC) to EQC, Jan. 18, 2024.

³⁶ Letter from EQC to EPA, April 10, 2024.

³⁷ Letter from Kathleen Becker, Region 8 administrator (EPA) to EQC, April 23, 2024.

³⁸ Email from Sisay Ashenafi, Regional Technical Assistance Grant coordinator (EPA) to Legislative Environmental Policy Office, June 17, 2024.

³⁹ Letters from EQC to Montana Congressional delegation, April 10, 2024.

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

foreign countries, such as China, for the elements necessary for uses ranging from electric cars to special forces gear. The company is attempting to get a U.S. Department of Defense grant to continue their work.

At the time of writing this report, the council was scheduled to visit an operating unit at the Libby Asbestos Site, and to hear from the Libby Asbestos Superfund Oversight Committee.⁴⁰ The oversight committee was set up in 2017 to primarily monitor activities related to the Libby asbestos Superfund site. The oversight committee also provides recommendations to government agencies, including for a cleanup trust fund and operation maintenance account. The oversight committee may serve as a model for future legislative involvement at the Smurfit-Stone mill site.

RECOMMENDATIONS AND LEGISLATION

At the time of drafting this report, the council had not offered recommendations or potential legislation related to HJ18.

⁴⁰ Section 75-10-1601, MCA

HJ18: PROGRESS AT FEDERAL REMEDIATION OF SMURFIT-STONE MILL SITE

APPENDIX A: ENVIRONMENTAL QUALITY COUNCIL MEMBERS

Before the close of each legislative session, House and Senate leadership appoint lawmakers to interim committees. The members of the Environmental Quality Council, like most other interim committees, serve one 20-month term. Members who are reelected to the Legislature, subject to overall term limits and if appointed, may serve again on an interim committee. This information is included in order to comply with 2-15-155, MCA.

Sen. Dan Bartel
P.O. Box 1181
Lewistown, MT 59457
(406)366-4160
Dan.Bartel@legmt.gov

Sen. Willis Curdy
11280 Kona Ranch Road
Missoula, MT 59804
(406)546-0523cell
Willis.Curdy@legmt.gov

Sen. Pat Flowers
11832 Gee Norman Road
Belgrade, MT 59714
(406)580-0035
Pat.Flowers@legmt.gov

Rep. Steve Gunderson
P.O. Box 200400
Helena, MT 59620
(406)334-4370
Steve.Gunderson@legmt.gov

Rep. Jedediah Hinkle
1700 Drummond Blvd.
Belgrade, MT 59714
(406)451-2028private
Jedediah.Hinkle@legmt.gov

Jim Keane
2131 Wall St.
Butte, MT 59701
(406)491-4267
d.keane@bresnan.net

Sen. Theresa Manzella
640 Gold Creek Loop
Hamilton, MT 59840
(406)546-9462
Theresa.Manzella@legmt.gov

Jon Metropoulos
1 S. Montana Ave., Suite L-3
Helena, MT 59601
(406)461-4296
jon@metropouloslaw.com

Sen. Mike Lang
P.O. Box 104
Malta, MT 59538
(406)654-7357
Mike.Lang@legmt.gov

Rep. Paul Fielder
P.O. Box 2558
Thompson Falls, MT 59873
(406)210-5943
Paul.Fielder@legmt.gov

Dave Galt
4575 Liberty Drive
Helena, MT 59602
(406)461-1314
galtdavidmt@gmail.com

Sen. Steve Hinebauch
610 Road 118
Wibaux, MT 59353
(406)989-1372private
Steve.Hinebauch@legmt.gov

Rep. Jonathan Karlen
P.O. Box 2960
Missoula, MT 59806
(406)851-9226
Jonathan.Karlen@legmt.gov

Rep. Rhonda Knudsen
P.O. Box 734
Culbertson, MT 59218
(406)489-5253
Rhonda.Knudsen@legmt.gov

Rep. Marilyn Marler
1750 S. 8th St. W.
Missoula, MT 59801
(406)544-7189
Marilyn.Marler@legmt.gov

Dan Vermillion
44 Adair Creek Road
Livingston, MT 59047
(406)223-0066
danvermillion@gmail.com

Jason Mohr, Legislative Environmental Analyst

Joe Carroll, Attorney | Katy Callon, Legislative Research Analyst | Jolanda Songer, Secretary