NEW MEXICO
ENVIRONMENT DEPARTMENT
and
OFFICE OF NATURAL RESOURCES TRUSTEE

SANTA FE, NEW MEXICO

James C. Kenney
Cabinet Secretary

Maggie Hart Stebbins
Trustee

June 25, 2020

Mr. Gregory Sopkin
Regional Administrator
U.S. EPA, Region 8
1595 Wynkoop Street
Denver, Colorado 80202

Submitted electronically to: sanchez.brian@epa.gov

RE: Terrestrial Baseline Ecological Risk Assessment, Bonita Peak Mining District, San Juan County, Colorado

Dear Mr. Sopkin,

On behalf of the New Mexico Environment Department and the New Mexico Office of the Natural Resources Trustee, attached please find our comments on the March 2020 Draft Terrestrial Baseline Ecological Risk Assessment, Bonita Peak Mining District, San Juan County, Colorado.

Please do not hesitate to contact us to discuss further.

Sincerely,

Digitally signed by James Kenney
Date: 2020.06.24 20:08:34 -06'00'

James C. Kenney
Cabinet Secretary
Environment Department

Maggie.HartStebbins Digitally signed by Maggie.HartStebbins
Date: 2020.06.25 08:52:25 -06'00'

Maggie Hart Stebbins
Trustee
Office of the Natural Resources Trustee

Attachment (1)

cc: Courtney Kerster, Director of Federal Affairs, Office of Governor Michelle Lujan Grisham
Rebecca Roose, Water Protection Division Director, NMED
Dennis McQuillan, Science Coordinator, NMED
Betsy Smidinger, Superfund and Emergency Management Division Director, EPA Region 8
Brian Sanchez, Technical Assistance Branch, EPA Region 8

Attachment

Introduction

The United States Environmental Protection Agency (EPA) is conducting a terrestrial baseline ecological risk assessment (terrestrial BERA) to characterize exposure and risks in terrestrial and semi-aquatic ecological receptors associated with natural and anthropogenic contamination sources originating from the Bonita Peak Mining District (BPMD). The terrestrial BERA characterizes ecological risks to plant communities, soil invertebrates, and wildlife receptors exposed to soils, surface water, and dietary items potentially contaminated by mine wastes and naturally mineralized materials within the BPMD assessment area, specifically, terrestrial exposure areas and floodplain exposure units in Mineral Creek, Cement Creek, and Animas River watersheds above Silverton, CO.

Comments

1. **EPA excludes New Mexico from the site area in the BPMD risk assessments and other Superfund activities, even though scientific reports by both EPA and the New Mexico Environment Department (NMED) demonstrate that contaminants from the BPMD site impacted rivers in New Mexico. This is inconsistent with the Superfund statute and with EPA's prior definition of the BPMD Superfund site.**

Superfund's definition of "facility" includes "any site or area where a hazardous substance has been deposited, stored, disposed of, or placed, or otherwise come to be located."[1] This definition clearly covers a situation like the BPMD, where contaminants from the site have migrated downstream to New Mexico and other jurisdictions.

EPA's report on metals in the Animas and San Juan Rivers states,

> "This river system has a long history of leaking mine waste contamination from hundreds of old and abandoned mines throughout the region. Acid mine waste contamination historically has settled along these river banks and in the sediment beds. High river flow or snow melt can remobilize the contaminants, impacting water quality throughout the river system to Lake Powell."[2]

A recent NMED investigation of the multiple sources of lead in the Animas River in New Mexico supports EPA's conclusion in 2017 that lead originating in the BPMD impacts the river system from Colorado to Lake Powell, Utah.[3] NMED's investigation analyzed water quality data for dissolved lead concentrations in the Animas River. The data was gathered by NMED, USGS or EPA between 2000 and 2019 at 20 different monitoring locations between the New Mexico-Southern Ute border and the San Juan River. Based on this investigation, NMED has determined that the Animas River from Estes Arroyo to the Southern Ute Indian Reservation boundary is impaired for Aquatic Life Use pursuant to New Mexico Surface Water Quality Standards (20.6.4 New Mexico Administrative Code). Based on NMED's analysis, probable sources of lead in these portions of the Animas River include sediment deposits resulting from the Gold King Mine Spill and legacy floodplain sediment

1 Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. § 9601(9).
2 Sullivan, Cyterski, Knightes, Kraemer, Washington, Prieto and Avant, 2017, Analysis of the Transport and Fate of Metals Released from the Gold King Mine in the Animas and San Juan Rivers, EPA/600/R-16/296, https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NERL&dirEntryID=325950.
3 Barrios, McQuillan, Longmire, Reid and Yurdin, 2020, Investigation into Lead Concentrations in the Animas River in New Mexico, abstract accepted for presentation, N.M. Water Resources Research Institute, 5th Annual Conference, Animas and San Juan Watersheds Week: Managing and Improving Water Quality in a Multijurisdictional Watershed, June 15-19, 2020, https://animas.nmwrri.nmsu.edu/2020/.

contamination in the Bonita Peak Mining District.

EPA has stated that,

> "the Bonita Peak Mining District (National Priorities List, NPL) site presently extends from the San Juan caldera, down the Animas and San Juan Rivers, through New Mexico, and into Lake Powell in Utah."[4]

Moreover, EPA has previously recognized that "[u]ntil the site investigation process has been completed and a remedial action (if any) selected, the EPA [cannot] describe the ultimate dimensions of the site,"[5] and, further, that:

> The "Remedial investigation is an iterative process that builds upon and is directed by information throughout the Site study areas. Until such investigatory work is completed, the scope of the Site . . . cannot be fully defined." [6]

By artificially limiting the scope of the Human Health Risk Assessment and the aquatic and terrestrial BERAs, EPA risks short-circuiting this iterative process, thereby pre-determining the scope of the NPL site without an evidentiary basis. EPA has not justified the limited scope of the risk assessments in light of its previous positions.

2. Metals in the Animas River present risks to public health and environment in New Mexico.

The City of Farmington and other public drinking water systems in New Mexico use the Animas River as a water source. Concentrations of lead in the Animas River periodically exceed EPA's drinking water action level of 15 ug/L, especially during periods of surging flow in spring runoff and summer monsoons. Lead contamination originating from the BPMD, is a significant source water protection issue and creates concern about the ability of public water system to deliver safe reliable drinking water to their consumers. Based upon the positive correlation between turbidity and lead concentrations, the City of Farmington installed turbidity sondes with supervisory control and data acquisition (SCADA) at its drinking water intakes.[7] The SCADA system is programmed to close drinking water intakes when turbidity levels measured in the Animas River approach levels correlating with the EPA Action Level for lead in drinking water. However, while smaller public drinking water systems in New Mexico also divert Animas River water, they do not have sondes and SCADA systems installed to close their intakes during periods of high turbidity and associated high metals.

Lead concentrations in the Animas River in New Mexico also periodically exceed New Mexico's hardness-based stream standard to protect aquatic life. These exceedances may result in listing the Animas River in New Mexico as impaired for metals due to lead contamination.

4 *New Mexico v. EPA,* No. 1:16-cv-00465, (D. N.M.), ECF Doc. 183 at 14.
5 *Support Document for the Revised National Priorities List Final Rule – Bonita Peak Mining District,* September 2016, at 10.
6 Declaration of Rebecca Thomas, *In re: Gold King Mine Release in San Juan County Colorado on August 5, 2015,* No. 18-md-2824 (D. N.M.), ECF Doc. 44-5 at 3.
7 McQuillan, Agnew, Sypher, Montoia and Peterson, 2016, Turbidity as an Indicator of Heavy-Metal Contamination in the Animas and San Juan Rivers. Proceedings, New Mexico Water Resources Research Institute, Environmental Conditions of the Animas and San Juan Watersheds, With Emphasis on Gold King Mine and Other Mine Waste Issues, Farmington, NM, May 17-18, 2016, https://animas.nmwrri.nmsu.edu/2016/abstracts/oral-presentations/ (Abstract 21)

3. EPA inappropriately shifts EPA's financial responsibility under Superfund for BPMD costs to states, tribes and local governments in contravention of federal and EPA stated commitments to cooperation and shared accountability.

EPA's failure to include downstream communities and governments contravenes the stated fundamental principles of federalism in Executive Order 13132, including the policymaking criteria requiring "strict adherence to constitutional principles" that direct federal agencies to "closely examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of the States" such that "[t]o the extent practicable, State and local officials shall be consulted before any such action is implemented."[8] EPA must include New Mexico and other downstream communities impacted by the BPMD in the site area of the terrestrial BERA, and must consult with all affected groups as stakeholders in the Superfund process.

EPA's failure to include downstream affected communities impacted by the effects of BPMD also conflicts with the agency's stated focus on cooperative federalism. The EPA website on cooperative federalism emphasizes the rights and responsibilities of local jurisdictions, claiming that "EPA is embracing cooperative federalism and working collaboratively with states, local government, and tribes to implement laws that protect human health and the environment" by enhancing shared accountability and increasing collaboration through joint governance and working with impacted stakeholders.[9] However, by limiting the extent of the site area of the terrestrial BERA, EPA excludes New Mexico and other downstream communities and governments from participating as stakeholders in the Superfund activities and remedies, and further, has required those communities to incur costs to prevent and address public health and environmental impacts from the BPMD.

EPA's actions to date on the BPMD Superfund site are not sufficiently protective of human health, source waters used for public supply, plant communities, soil invertebrates, and wildlife receptors in New Mexico. Consequently, NMED and local governments must fund and conduct actions that EPA fails to take in order to protect public health and the environment. As such, EPA has inappropriately shifted its financial Superfund responsibility to states, tribes and local governments in contravention of the principle of cooperative federalism and EPA's stated commitment to cooperation and shared accountability. It is profoundly ironic that the City of Farmington, for example, must expend its own funds to protect its drinking water system from contaminants originating from the EPA-led BPMD Superfund site, in order to follow EPA's Source Water Protection Program requirements and to comply with EPA's Drinking Water Standards. EPA must fund and conduct investigations and remediation such that New Mexico local governments can provide safe drinking water. New Mexico communities should not incur additional costs of protecting their public drinking water systems from contaminants originating in the BPMD.

4. The BPMD terrestrial BERA contains a number of technical deficiencies that must be corrected and addressed.

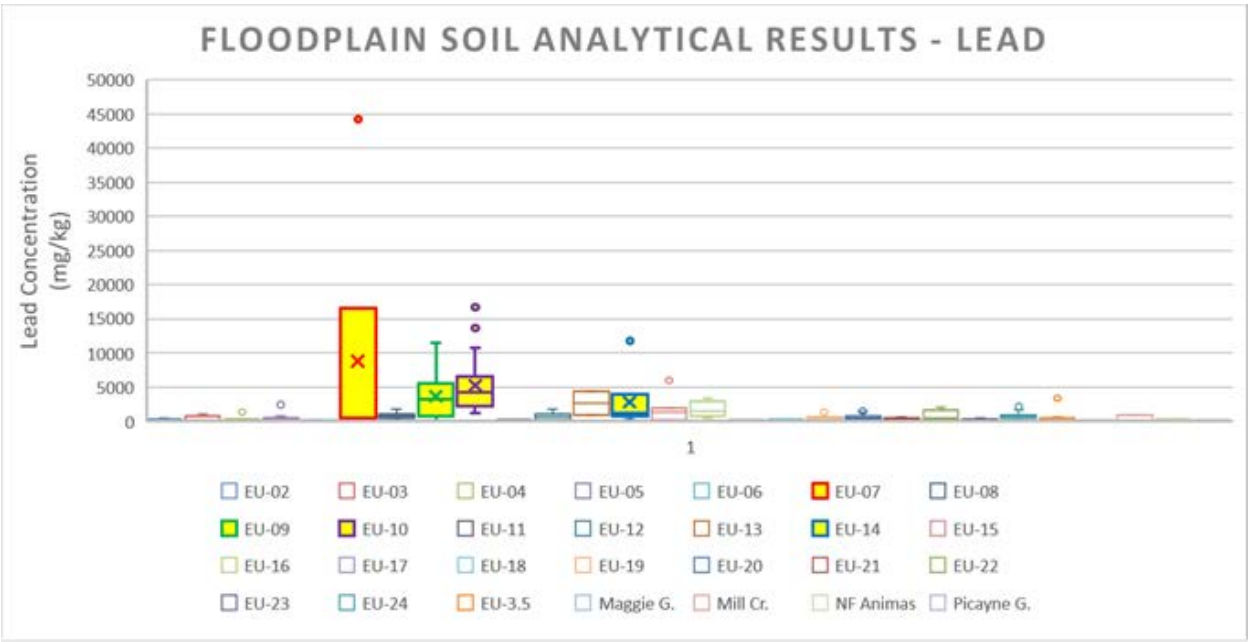
The terrestrial BERA does not address the potential for risks to ecosystems located in New Mexico and in other downstream jurisdictions. The downstream spatial extent of the terrestrial BERA is confined to a geographic area north of Silverton, Colorado and does not include the entire potential BPMD Superfund site, and certainly not the entire Animas River. As a result of this limited spatial extent, the terrestrial BERA does not provide a downstream geographic boundary where elevated concentrations of metals that are common in the BPMD mine wastes, such as lead, no longer pose a risk to terrestrial, aquatic, and semi-aquatic wildlife species. New Mexico disagrees with the conclusion that "Together, this BERA and the final aquatic BERA (EPA 2019a) provide a

8 Executive Order 13132 Federalism, 64 FR 43255, Sec. 3(a).
9 https://www.epa.gov/home/cooperative-federalism-epa

comprehensive assessment of ecological risks from BPMD contamination throughout the BPMD and the Animas River." (terrestrial BERA Page 22)

The study area should include the floodplain downstream of the lowest exposure unit (EU) on the Animas River (EU07 – Arrastra Creek upstream to Cunningham Creek). By far, EU07 had the highest floodplain soil analytical result identified in Table A3. See box plot below (Mainstem Animas River EUs are in yellow shades). The study area must include the EU representing Silverton and other potentially impacted floodplain areas where soil lead concentrations increase downstream (from EU14 to EU07).

Downstream of Arrastra Creek, the Animas River valley opens and decreases in gradient. This causes a depositional environment resulting in a thickening of the alluvium. Since this area receives sediment deposition from all three of the major drainages investigated in the terrestrial BERA, it is important to characterize metals concentrations at this location, and other similar geomorphic features downstream, that may become repositories for heavy metals.



The lowermost section of the Animas River floodplain (EU07) evaluated in the Terrestrial BERA is assigned a "high-level" dose response category (Table 3.2) and exhibited higher risk for plant community, and swallow and robin bird species (Tables ES.1 and 6.1). This higher risk in the lowermost section of floodplain indicates downstream risk to terrestrial species. Therefore, the full geographic extent of the area in which hazardous substances may pose risk is not fully characterized.

With respect to the toxicity testing, the use of only short-term acute and sub-chronic toxicity tests is inadequate in the terrestrial BERA in that it limits analysis of the long-term chronic effects from exposure to BPMD-sourced contaminants. In downstream areas where the risk from acute toxicity may decrease, the potential for chronic toxicity may still exist for both aquatic and terrestrial biota. EPA should revise the terrestrial BERA to include examination of these potential risks.

5. The BPMD site threatens human health and the environment in areas of New Mexico that contain a high percentage of minority and low-income populations. The terrestrial BERA is the latest example of how EPA's actions on the BPMD Superfund site fail to comply with Executive Order 12898 requiring that all federal agencies achieve environmental justice for vulnerable populations that would be disproportionately affected by programs of the United States.

EPA's Environmental Justice Screening and Mapping Tool (EJSCREEN) shows that, along the San Juan River in New Mexico, below the confluence with the Animas River, the minority population is predominantly in the 95-100 percentile, and the low-income population is predominantly in the 80-90 and 90-95 percentiles. These percentiles stand out because by comparison, these San Juan and Animas River communities are among the 5-20% in the U.S. with the highest percentages of minority and low-income populations.

Minority and low-income populations living along the San Juan River may be more susceptible to environmental pollutants that are being transported through rivers in New Mexico from the BPMD site to Lake Powell. EPA, however, has excluded New Mexico from consideration in the Human Health Risk Assessment, the Aquatic BERA, and in the most recent Terrestrial BERA. EPA's exclusion of vulnerable populations in New Mexico from these Risk Assessments violates Executive Order 12898, as well as EPA's own policy on environmental justice.

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority and Low-Income Populations, February 11, 1994, states that "…. each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionally high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations of the United States."[10]

EPA's 2020-21 National Program Guidance for the Office of Land and Emergency Management requires that EPA "integrate environmental justice into its programs" and "mobilize resources to address the needs of disproportionately overburdened and underserved communities."[11]

EPA must immediately give proper consideration to all BPMD stakeholders downstream from Colorado with emphasis on the vulnerable populations in New Mexico. The BPMD Human Health Risk Assessment, the Aquatic BERA, and the Terrestrial BERA each must be re-written to correct the environmental justice deficiencies. The risk assessments must evaluate all possible exposure pathways and quantify BPMD-specific and cumulative impacts to vulnerable populations in New Mexico.

10 https://www.archives.gov/files/federal-register/executive-orders/pdf/12898.pdf
11 https://www.epa.gov/sites/production/files/2019-06/documents/fy-20-21-olem-np-guidance.pdf