



After Years of Anticipation, Lead is Back on the U.S. Regulatory Agenda

Thursday, June 22, 2023



ESSENTIAL ENERGY EVERYDAY

Battery Council International (BCI)

- Members **represent over 98%+** of U.S. lead battery production capacity.
- Establishes technical guidelines for battery manufacturing and promotes environmental, health and safety standards.
- **Goal:** To create and sustain the most successful circular economy on the planet.
- **Trade Association (Non-Profit)**
- Formed in 1924, represents U.S. and North American Battery Industry
- **Members:** Battery manufacturers and recyclers, marketers and retailers, suppliers of raw materials and equipment, and expert consultants. BCI members engaged in many battery chemistries.

An aerial photograph of a city. The foreground is dominated by a dense, lush green forest. In the middle ground, there are several residential buildings, some with solar panels on their roofs. The background features a dense skyline of modern skyscrapers under a blue sky with scattered white clouds. A semi-transparent blue overlay covers the left side of the image, where the text is located.

U.S. Regulatory Action

Critical Policy Areas Impacting Battery Industry

- **Federal Environmental Regulations (EPA)**
 - Strategy to Reduce Lead Exposures and Disparities in U.S. Communities
 - **National Emissions Standards for Hazardous Air Pollutants (NESHAP)**
 - New Source Performance Standards (NSPS)
 - **National Ambient Air Quality Standard (NAAQS)**
 - Toxic Substances Control Act (TSCA)
 - Superfund Soil Screening Levels
- **Federal and State OSHA**
 - **Lead Regulations (1910.1025)**
 - **Heat Stress (injury and illness)**
 - **State OSHA programs**
 - California
 - Washington
- **Biden Administration Policy Focus Areas**
 - Energy Storage Policy and Research
 - **Inflation Reduction Act (IRA)**
 - **Bipartisan Infrastructure Act**
 - Environmental Justice

NESHAP & NSPS

National Emission Standard for Hazardous Air Pollutants (NESHAP)
New Source Performance Standards (NSPS)

- **Final updated NESHAP and NSPS rule issued February 2023**
 - Clean Air Act (CAA) requires EPA to issue standards for emissions from new and existing battery manufacturers
 - Favorable response to BCI's objections to proposed rule (PR)
 - NGO's file suit against EPA, BCI intervenes
- **Implements changes and updates**
 - Regulates emissions of lead particulate from battery manufacturing facilities
 - PR included component part facilities
 - Final rule limited scope to cover **ONLY** parts facilities that use "primary" battery manufacturing processes as used in a complete assembly facility

National Ambient Air Quality Standards – NAAQS

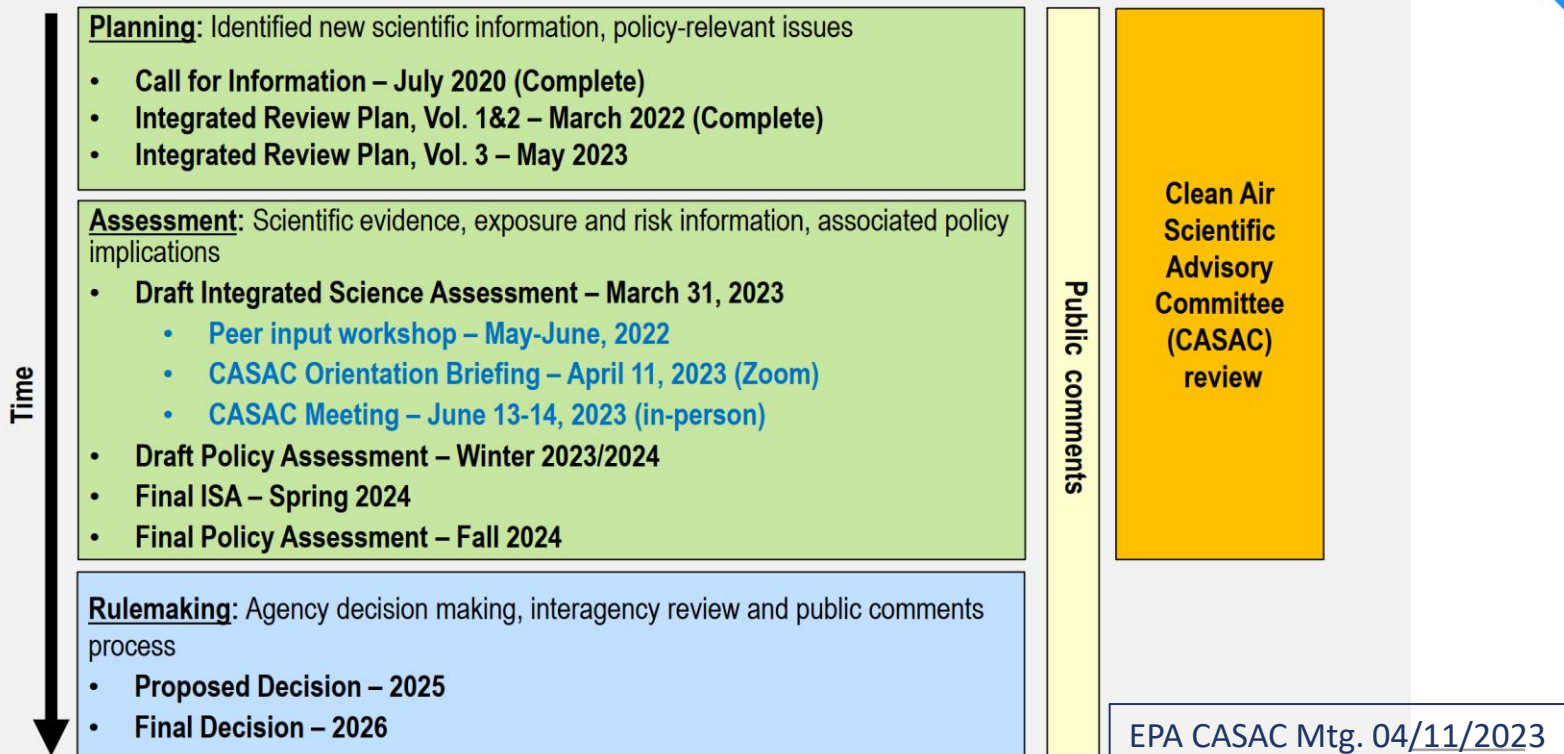
Lead NAAQS – Sets standard for appropriate level of lead allowed in ambient air

- Clean Air Act prohibits EPA from considering costs in setting NAAQS

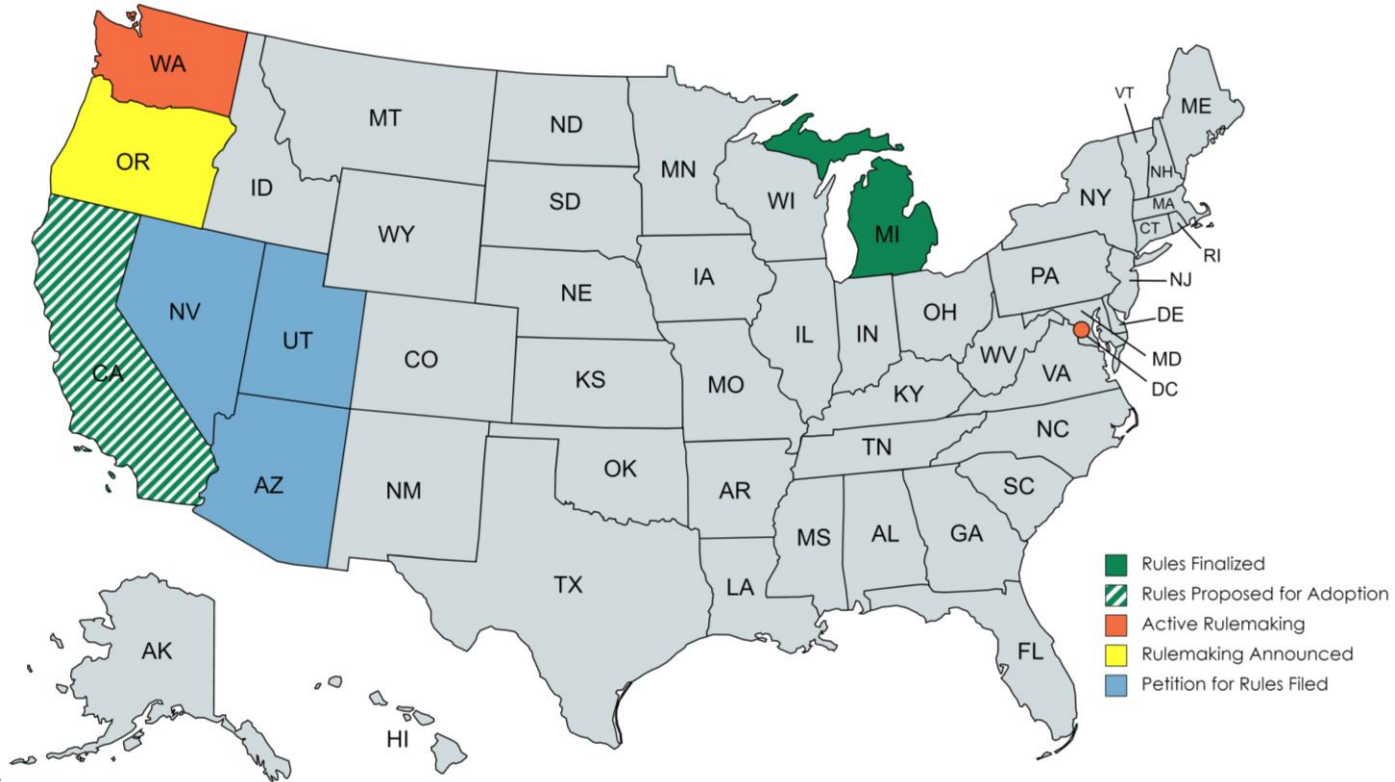
Past EPA Lead NAAQS Actions:

- 1978 – EPA issued initial standards at $1.5 \mu\text{g}/\text{m}^3$
- 2008 – EPA reduced 10x, to the current level of $0.15 \mu\text{g}/\text{m}^3$
- 2016 – EPA determined to retain the 2008 standards
- 2022-2026 – EPA's estimated timeline for current review

Process and Current Schedule for this Review of the Pb NAAQS



Federal & State OSHA Activity



OSHA Activity – An overview

Federal OSHA – Started 2022

- ANPRM published in 2022

California OSHA – Proposed 2023

- Statutory mandate to adopt rule (delayed due to Covid)
- Started in 2011

Washington DOSH – Started 2013

- Pursuing complete re-write of lead rule

Oregon DOSH – Started 2017

- Likely to align with either Washington or California (or Fed)

Michigan OSHA – Finalized 2018

Federal OSHA Rulemaking Underway

- **OSHA Advance Notice of Proposed Rulemaking (ANPRM)**
 - Issued June 28, 2022
 - Notice that OSHA is to revise lead standard for medical removal – public comment period
 - OSHA focused ANPRM questions on three areas:
 - Blood lead levels for medical removal
 - Triggers for placing worksites / employees into program requirements
 - Engineering Control requirements for lead in air
 - Majority of questions asked for comment on California and Washington draft rules
 - **BCI filed extensive comments**

Fed OSHA ANPRM Focus Areas

61 Separate Questions

- Significant overlap

First ~31 questions

- California and Washington draft rule changes and science

Remaining 30 questions

- Current practices for covered employers, estimated costs

Clear focus on three areas:

- Blood lead levels for medical removal
- Triggers for placing worksites / employees into program requirements
- Engineering Control requirements for lead in air

California Moving Ahead

- **Proposed rule issued March 3, 2023**
 - APA: California must issue **Final Rule by March 3, 2024** (or restart)
 - Also, statutory mandate to complete rule by Sept. 2020
- **BCI filed extensive comments**
 - ILA and ABR filed as well
 - BCI and coalition with 10+ industries filed
 - BCI-led coalition filed letters in Nov. 2022 and April 2023
 - Pushing for rational phase-in schedule and other non-substantive/technical issues
- **Public hearing held April 20th**
- **Cal OSHA expected to publish changes to PR in July**
 - 15-day public comment period

State and Federal Rule Landscape

	California Proposed (2023)	Washington Draft (2023?)	Michigan Final (2018)	Federal Under Review (1978)
Removal	20 µg/dL (2025) 30 µg/dL (2024)	20/30 µg/dL	20/30 µg/dL	50/60 µg/dL
Return to Work	15 µg/dL (2024)	15 µg/dL	15 µg/dL	40 µg/dL
PEL	10 µg/m ³ (2024)	20 µg/m ³	50 µg/m ³ (No Change)	50 µg/m ³
Action Level	2 µg/m ³ (2024) >10 days / year "Presumed Hazardous" Tasks	10 µg/m ³ > 10 days / year Task Triggers	30 µg/m ³ (No Change)	30 µg/m ³
PEL Exception	SECAL 40 µg/m ³ (2029) 30 µg/m ³ (2029)	SPEL 50 µg/m ³	n/a	n/a

CA – Non-Air Work Task Triggers

- **Action Level for “Altering or Disturbing” any material > 0.5% (5,000 ppm) lead**
 - A process that may result in the release of lead dust, lead mist, lead fume, or other lead particles.
 - Such processes include, but are not limited to, welding, torch cutting, brazing, torch soldering, melting, pouring, spraying, cutting, shredding, crushing, baling, grinding, polishing, machining, drilling, scraping, sanding, abrading, sweeping, raking, and shoveling.



California SECAL

- **Secondary Engineering Control Air Limits (SECALs)**
 - Separate SECAL area has a higher air-lead limit, but mandatory respiratory PPE

Qualifying Processes	SECAL and Implementation
-Oxide production -Paste mixing -Grid pasting and parting -Battery assembly	<u>50 $\mu\text{g}/\text{m}^3$</u> effective date <u>40 $\mu\text{g}/\text{m}^3$</u> after 5 years
-Grid production -Small parts casting -Plate formation	<u>50 $\mu\text{g}/\text{m}^3$</u> effective date <u>30 $\mu\text{g}/\text{m}^3$</u> after 5 years

Battery Facility Cost Impact (2015\$)

- **Economic Feasibility Analysis - California**

- Cost of meeting 10 $\mu\text{g}/\text{m}^3$, in 6 highest cost areas

- 45.2% of profits, every year, for 10 years

- Cost of meeting SECALs

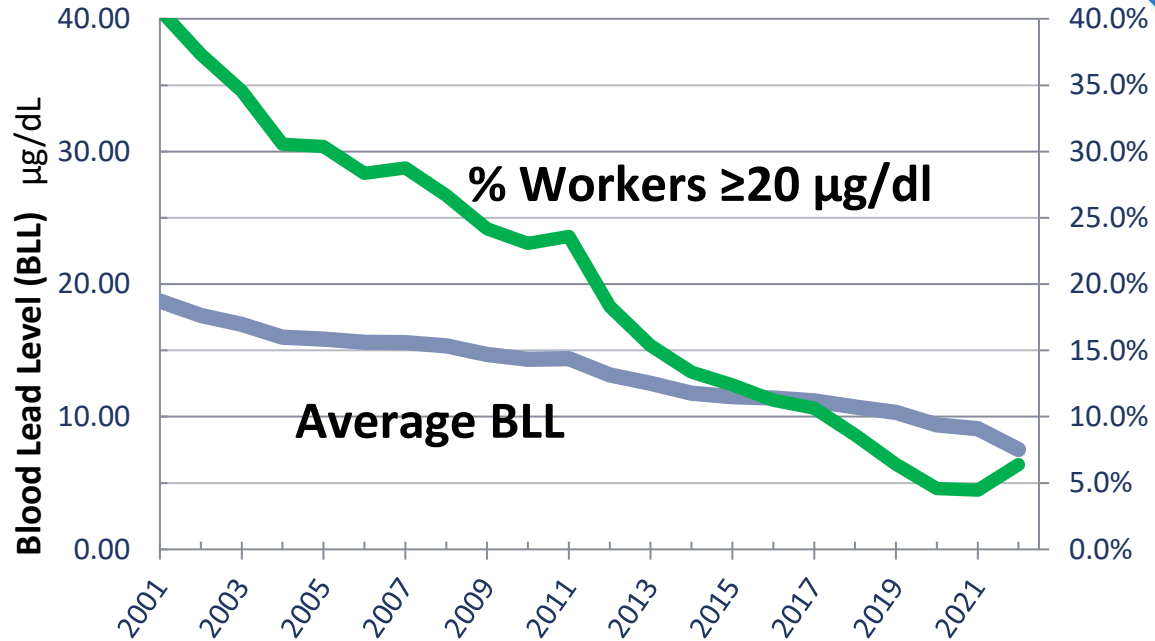
- 10.65% of profits, every year, for 10 years
- PLUS cost of PEL in all other areas
- PLUS cost of more BLL testing and MRP
- PLUS cost of more training, shower facilities, PPE, etc.

US Industry Impact Estimates

- **California Regulatory Impact Assessment - Cal/OSHA estimates**
 - Cal-OSHA identified 21 3-digit NAICS codes that would be subject to its draft proposed rules
 - 228,000+ workers subject to rule (1.2% of workforce)
 - 200,000+ subject to medical surveillance (blood lead testing every 6 months)
- **5x increase in BLL testing – equates to ~ 1.8+ million workers nationwide**
 - General Industry: ~142,000
 - Justice/Public Order (police), Scrap metal dealers, Fabricated metal products (machine shops), Primary metal manufacturing (foundries)
 - 7% of Fabricated Metal Product Manufacturing (NAICS 332)

BCI Member BLL Impacts of Removal

- **Medical removal @ 20 $\mu\text{g}/\text{dL}$**
 - Nationwide: 6.4%
- **BUT:**
 - Combined with Action Level changes, may not have anywhere to reassign workers
 - Renders AL infeasible



Looking forward: Predicted OSH Rule Schedule

2023

- **Industry engagement with Fed OSHA**
- Industry health data & economic analyses

2024-
2025

- **CA Final Rule**
- **WA Proposed Rule**
- **Fed OSHA Proposed Rule**
- Major formal industry comments
- Industry formal economic and Feasibility analyses
- **WA Final Rule**

2028-
2032

- **Fed OSHA Final Rule**

Inflation Reduction Act (IRA) (2022)

- **Commitment building clean energy economy while strengthening U.S. domestic supply chain**
 - Grants, loans, rebates, incentives and investments into U.S. economy
- **Compliments investments provided for in the 2021 Bipartisan Infrastructure Law**
 - Provided funding for transportation, climate, clean energy, and other sectors
 - Almost \$16B in LDES demonstrations alone
- **Includes manufacturer and consumer incentives and tax credits**
- **Invested \$433 billion in overall spending:**
 - \$369 billion in various energy security and climate change investments; and
 - \$64 billion through an extension of the Affordable Care Act.

IRA Battery-related Provisions

- **Clean Vehicle Tax Credit**
 - Authorized vehicles with domestically-produced components (critical minerals and batteries) to receive \$7,500 in Clean Vehicle Tax Credits
 - \$3,750 for domestic battery components and \$3,750 for domestic or allied critical mineral components
- **Advanced Manufacturing Production Credit**
 - Established new Advanced Manufacturing Production Tax Credit that can apply to several components, including batteries, effective on 12/31/22
 - For battery related materials, tax credits calculated based on electrode-active materials, cell capacity, and module capacity
 - Includes critical mineral tax credit
- **Clean Electricity Production Credit**
 - Established new Clean Electricity Production Tax Credit (PTC) for domestically produced electricity with climate/greenhouse gas impacts in mind.
 - The tax credit is set to be calculated through a formula that combines the product's kWh of electricity and the facility's maximum net output.
- **Clean Electricity Investment Credit**
 - Established new Clean Electricity Investment Tax Credit (ITC) (6% to 30%) for domestically produced electricity with climate/greenhouse gas impacts in mind.
 - Available January 1, 2025

Miscellaneous Provisions

Section 13703: Cost Recovery for Energy Storage Technology

Allows facilities that receive either the Section 13701 PTC or the Section 13702 ITC to be classified as five-year property that would be eligible for the Modified Accelerated Cost Recovery System (MACRS).

Section 13704: Clean Fuel Production Tax Credit

Creates a Clean Fuel Production Tax Credit for domestic fuel production, through a formula that considers the type of fuel and the emissions factor of the fuel. The credit is available from January 1st, 2025, to December 31st, 2027.

Section 30001: Enhanced Use of Defense Production Act

Appropriates \$500 million to be available through September 30th, 2024. This will be used for “domestic mining, beneficiation, and value-added processing of strategic and critical materials for the production of large-capacity batteries.”



Outlook for 2023 and Beyond

California will continue to drive key agenda items

- Cal OSHA is leading the national lead EHS conversation

Federal environmental and OSHA efforts will continue

- OSHA: Lead Rule
- EPA: NAAQS, NESHAP/NSPS, TSCA, Superfund

New and Ongoing Federal opportunities

- Continued attention to domestic manufacturing and batteries
- DOE interest in federal participation in R&D efforts
- Infrastructure investments coming online

Thank you!



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