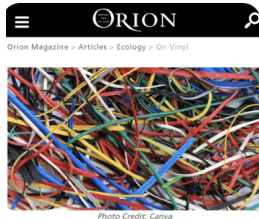


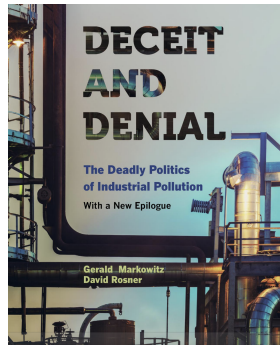
On Vinyl: A Brief History of the East Palestine Train Derailment
(digital)
April 2023



REBECCA ALTMAN

On Vinyl

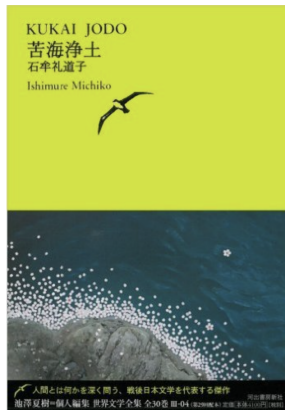
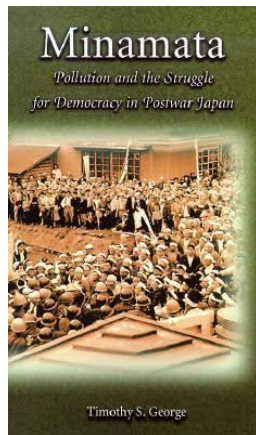
A brief history of East Palestine's toxic train disaster



Laura T. Murphy, Jim Vallette, Nyrola Elima

BUILT ON REPRESSION

PVC Building Materials' Reliance on Labor and Environmental Abuses in the Uyghur Region



Acknowledgements: to Timothy George, Bethanie Carney Almroth, Patricia Villarrubia Gomez, Jim Vallette, Ted Schettler, much appreciation for expert research, advice in preparing/reviewing this essay. **To follow the derailment, and its aftermath, consider keeping up with the following organizations via social media:**

River Valley Organizing: <https://www.rivervalleyorganizing.org/>

Ohio River Valley Institute: <https://ohiorivervalleyinstitute.org/>

Beaver County Marcellus Awareness Community: <https://www.marcellusawareness.org/>

Coming Clean: <https://comingcleaninc.org/>

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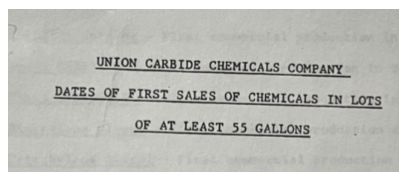
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1929	<p><u>Acetone</u> - Made by a new process still used for the bulk of the acetone produced today.</p> <p><u>Isopropanol</u> -</p> <p><u>Dichlorethyl Ether</u> - First commercial production in U. S. Solvent refining of lubricating oils. Textile finishing compounds.</p> <p><u>Dioxane</u> - First commercial production in United States.</p> <p><u>Ethylene Oxide</u> - First commercial production in United States.</p> <p><u>Methyl CELLOSOLVE</u> - First commercial production in United States.</p> <p><u>Vinyl Chloride</u> - First commercial production in United States.</p> <p><u>Propylene</u> -</p> <p><u>Butylene</u> -</p>
1930	<p><u>Vinyl Resins</u> - First commercial production in United States.</p>

I also recommend: Judith Helfand's film **Blue Vinyl**: <https://judithhelfand.com/films/blue-vinyl/>

And the documentary on Morrisville: **When Great Trees Fall**:
<http://www.mossvilleproject.com/>

On the significance of PVC in the chlorine market:

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On PVC plastics production and forced labor in the Uyghur region of China:

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On methymercury - acetaldehyde - vinyl chloride, DOP link to Minamata, Japan

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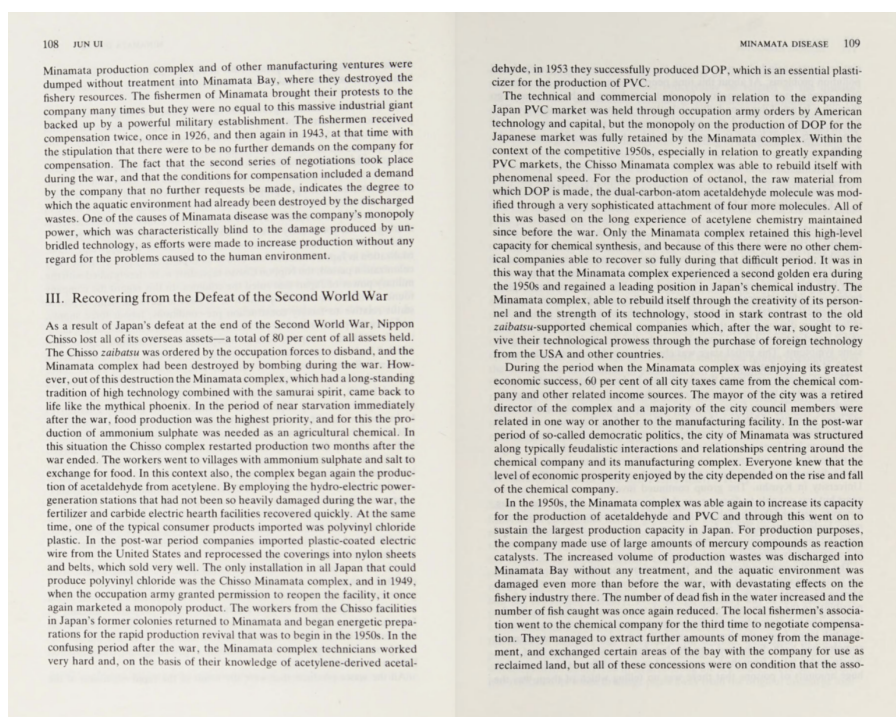
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Jun Ui. 1992. Chapter 4: Minamata Disease. In J. Ui (Ed.), *Industrial Pollution in Japan*, pp. 103–132. Tokyo: United Nations University Press, University of Okinawa. – Spells out production process to get to DOP/plasticizer. (See below).



Ishimure Michiko. 2003. *Paradise in the Sea of Sorrow: Our Minamata Disease*. Translated by Livia Monnet. University of Michigan Press.

Reviewed here:

<https://www.asianstudies.org/publications/ea/archives/paradise-in-the-sea-of-sorrow-our-minamata-disease/>

Also see: Karen Thornber. Ishimure Michiko and Global Ecocriticism. *The Asia-Pacific Journal* 14(113). <https://apjif.org/2016/13/Thornber.html>

For more on Ishimure Michiko (Michiko Ishimure) – the piece links to two obituaries.

Excerpt from Ishimure's *Paradise in the Sea of Sorrow*, via Archive.org

we ended up contracting huge debts. Thus my plans to publish in this magazine the sequel to the book I was writing on Minamata Disease came to nought. Reflecting on my actions, the little writing I had done and the meaning of my life I concluded that I was an irresolute, confused woman, often missing the point and wasting her energies in useless undertakings.

I had a vision of myself trying to swallow Japanese capitalism ; the unwritten history and beautiful poetry of the countless poor fishermen, farmers and laborers who formed the living basis for Japan's successful leap into modernity and the story of my native Minamata's exemplary development in the present century. These highly significant historical moments stuck in my throat.

I began doing research on the Ashio Copper Mine Pollution Incident,¹¹ the first instance in modern Japanese history of the systematic annihilation of a traditional farming community by private capital. The more I learned about Ashio, the more momentous the lessons bequeathed to posterity by the inhabitants of Yanaka Village seemed to me.

Expanding endlessly into space, I became the tide of Japan's modern century itself.

On dioxins, see resources available via the United Nations Stockholm Convention on Persistent Organic Pollutants, “Polychlorinated dibenzo-p-dioxins (PCDD)” and “Polychlorinated dibenzofurans (PCDF).” Here’s a brief primer, but there is extensive documentation found via the treaty website:

<http://chm.pops.int/TheConvention/ThePOPs/The12InitialPOPs/tabid/296/Default.aspx>

On the UN plastics treaty and related topics:

Simon, N., Raubenheimer, K., Urho, N. et al. 2021. A Binding Global Agreement to Address the Life Cycle of Plastics. *Science*. 373(6550): 43-47. DOI: [10.1126/science.aba9010](https://doi.org/10.1126/science.aba9010)

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On the manifest of the train that derailed in East Palestine:

East Palestine, Norfolk Souther manifest of derailed or burned cars available via the EPA (“Train 32N - East Palestine.xlsx”). Available as of time of publication (April 2023) at the following link: <https://www.epa.gov/system/files/documents/2023-02/TRAIN%2032N%20-%20EAST%20PALESTINE%20-%20derail%20list%20Norfolk%20Southern%20document.pdf>

Can cross-reference “Car ID” with any good table on “[reporting marks](#)” – the codes used to ID who owns a given railroad car– could be a corporate owner, or the car could be leased from a company that owns the cars. Can search reporting marks via RailInc: <https://findusrail.railinc.com/#/marks/search>

LINE #	CAR ID	LOAD/MTY	CAR TYPE	COMMODITY	TANK CAR SPEC	UN ID	HAZ CLASS	Status of Car
23	ARSX 4145	LOADED	HOPPER	POLYPROPYLENE				Not in derailment pile
24	BRKX 66738	LOADED	HOPPER	POLYPROPYLENE				Not in derailment pile
25	GPLX 75465	LOADED	HOPPER	POLYETHYLENE				lading destroyed by fire
26	ECUX 860375	LOADED	HOPPER	POLYETHYLENE				lading destroyed by fire
27	UTLX 684543	EMPTY	TANK CAR	residue lube oil	DOT 117I100W			scrap pending C&P
28	TILX 402025	LOADED	TANK CAR	VINYL CHLORIDE, STABILIZED	DOT 105J300W	UN1086	2.1 (FLAMMABLE GAS)	car did not leak/cars vent product through the PRD and ignited/vent and burn performed
29	OCPX 80235	LOADED	TANK CAR	VINYL CHLORIDE, STABILIZED	DOT 105J300W	UN1086	2.1 (FLAMMABLE GAS)	car did not leak/cars vent product through the PRD and ignited/vent and burn performed
30	OCPX 80179	LOADED	TANK CAR	VINYL CHLORIDE, STABILIZED	DOT 105J300W	UN1086	2.1 (FLAMMABLE GAS)	car did not leak/cars vent product through the PRD and ignited/vent and burn performed
31	GATX 95098	LOADED	TANK CAR	VINYL CHLORIDE, STABILIZED	DOT 105J300W	UN1086	2.1 (FLAMMABLE GAS)	vent product through the PRD and ignited/vent and burn
32	RACX 51629	LOADED	TANK CAR	DIPROPYLENE GLYCOL	DOT 111A100W1			fire impingement/no signs of tank breach
33	LYBX 5191	LOADED	TANK CAR	PROPYLENE GLYCOL	DOT 117I100W			flame impingement, no tank breach found
34	RACX 51435	LOADED	TANK CAR	PROPYLENE GLYCOL	DOT 111A100W1			tank breached/lost most of load
35	UTLX 671772	LOADED	TANK CAR	DIETHYLENE GLYCOL	DOT 111A100W1			had small leak from BOV, unknown amount of product in car
36	SHPX 211226	LOADED	TANK CAR	COMBUSTIBLE LIQ., NOS (ETHYLENE GLYCOL MONOBUTYL ETHER)	DOT 111S100W1	NA1993	COMBUSTIBLE LIQUID	unknown status
37	TILX 331319	LOADED	HOPPER	SEMOLINA				in pile, destroyed by fire
38	DOWX 73168	LOADED	TANK CAR	COMBUSTIBLE LIQ., NOS (ETHYLHEXYL ACRYLATE)	DOT 111S100W1	NA1993	COMBUSTIBLE LIQUID	Car breached on head end/amount of product still in car pending
39	ROIX 57036	LOADED	HOPPER	POLYVINYL				burned
40	NCUX 40057	LOADED	HOPPER	POLYVINYL				actively burning
41	UTLX 100055	LOADED	TANK CAR	PETROLEUM LUBE OIL	DOT 111A100W1			double comp car/both breached/entire load lost
42	XOMX 110664	LOADED	TANK CAR	PETROLEUM LUBE OIL	211A100W1			tank breached/lost most of load
43	UTLX 684798	LOADED	TANK CAR	PETROLEUM LUBE OIL	DOT 117I100W			flame impinged, may have had a small leak/will be determined when car is off loaded
44	UTLX 671310	LOADED	TANK CAR	PETROLEUM LUBE OIL	DOT 111A100W1			flame impinged, small leak from top fittings, unknown amount left in tank
45	CERX 30072	LOADED	TANK CAR	POLYPROPYL GLYCOL	DOT 111A100W1			flame impinged, tank breached/ most of load lost
46	SHPX 211106	LOADED	TANK CAR	PROPYLENE GLYCOL	DOT 111S100W1			flame impinged, no signs of breach
47	NATX 231335	LOADED	TANK CAR	DIETHYLENE GLYCOL	DOT 111A100W1			flame impinged, tank breached/ load lost
48	UTLX 671913	LOADED	TANK CAR	DIETHYLENE GLYCOL	DOT 111A100W1			flame impinged, lost unknown amount at this time from damaged BOV
49	NATX 35844	LOADED	TANK CAR	ISOBUTYLENE	DOT 105J300W	UN1055	2.1 (FLAMMABLE GAS)	some flame impingement/no signs of breach
50	UTLX 205907	LOADED	TANK CAR	BUTYL ACRYLATES, STABILIZED	DOT 111A100W1	UN 2348	3 (FLAMMABLE LIQUID)	Head breach/lost entire load (spill& fire)
51	UTLX 661296	LOADED	TANK CAR	PETRO OIL, NEC	DOT 111A100W1			flame impinged, small leak from VRV stopped, car still loaded

52	COCX 287059	LOADED	TANK CAR	ADDITIVES, FUEL	DOT 111A100W1			flame impinged, no sign of breach
53	ROIX 59396	LOADED	HOPPER	POLYVINYL				involved in fire
54	ROIX 57782	LOADED	HOPPER	POLYVINYL				involved in fire
55	OCPX 80370	LOADED	TANK CAR	VINYL CHLORIDE, STABILIZED	DOT 105J300W	UN 1086	2.1 (FLAMMABLE GAS)	car did not leak/cars vent product through the PRD and ignited/vent and burn performed
56	TBOX 640019	LOADED	BOX CAR	BALLS, CTN, MEDCL				burning or has burned
57	BKTY 152621	LOADED	BOX CAR	SHEET STEEL				burning or has burned
58	LINX 7278	LOADED	BOX CAR	VEGETABLE, FROZEN				burning or has burned
59	DPRX 259013	EMPTY	TANK CAR	BENZENE	DOT 111A100W1	UN 1114	3 (FLAMMABLE LIQUID)	damaged, fire impinged/ no breach
60	DPRX 258671	EMPTY	TANK CAR	BENZENE	DOT 111A100W1	UN 1114	3 (FLAMMABLE LIQUID)	damaged, fire impinged/ no breach
61	XOMX 110236	LOADED	TANK CAR	PARAFFIN WAX	DOT 211A100W1			flame impingement/no signs of breach
62	ELTX 7458	LOADED	HOPPER	FLAKES, POWDER				burned, extinguished
63	ELTX 3421	LOADED	HOPPER	FLAKES, POWDER			b	in line, upright, impinged
64	NDYX 892049	LOADED	HOPPER	HYDRAULIC CEMENT				
65	TTGX 953815	LOADED	AUTORACK	AUTOS PASSENGER				
66	TBOX 889334	LOADED	BOX CAR	MALT LIQUORS				
67	NOKL 603412	LOADED	BOX CAR	MALT LIQUORS				
68	NS 472751	LOADED	BOX CAR	MALT LIQUORS				
69	TBOX 676291	LOADED	BOX CAR	MALT LIQUORS				
70	TBOX 670331	LOADED	BOX CAR	MALT LIQUORS				
71	TBOX 662599	LOADED	BOX CAR	MALT LIQUORS				
72	KCS 112405	LOADED	BOX CAR	MALT LIQUORS				
73	TBOX 666771	LOADED	BOX CAR	MALT LIQUORS				
74	TBOX 664264	LOADED	BOX CAR	MALT LIQUORS				