

The Guinea Pigs

Women and men, the human guinea pigs of a failed experiment. The need to bring forward the criminal and civil protection of the victims.

Miteni Case No. 1 · Part 3 · The Guinea Pigs: the workers · part one · whitecollarcrimes.it · 17 July 2026

In the opening piece I spoke of a puppet and a puppet-master; in part one, of the two absentees from the judgment; in part two, of a single volcano with two mouths. Now I begin the count of the damage to health — the reckoning that no one has finished making. But first I must defend a word. I have called the men and women of this story "guinea pigs". It is not an image for effect: it is, I fear, the exact definition. And I want to show why, one reason at a time.

1. Why guinea pigs

A guinea pig has three traits: it did not choose, it does not know, and another decides over its body for his own ends. Here all three are present. To show it I proceed in three steps, and each one, on its own, would suffice: no one was able to choose; the operation was, in the technical sense, a clandestine experiment, removed from all oversight; and its outcome, as with every true experiment, was unknown even to those who were conducting it. The thread that binds them is always the same: someone else, for his own ends, was deciding — and no one, among those who carried it in their bodies, truly knew what was happening.

The first step: no one was able to choose. No one — neither inside nor outside the factories — was ever able to decide whether to let PFOA, and then its successors, enter their blood. The workers knew little; the population, beyond the gates, knew nothing. A worker can know the risk of the machine in front of him, not that of an invisible, odourless molecule that accumulates in his serum for years. The workers were badly informed both about the PFOA that was entering their veins and about its substitutes. And the citizens who turned on the tap did not even have the machine in front of them: they had a glass of water. The question, then, is one alone, and it is not rhetorical: *by what right* did two private companies — though the question holds in general for any company whose activity impinges on the bodies of unwitting women and men — decide to introduce into the bodies of tens of thousands of people a synthetic molecule, made for their profit?

That the answer is "by no right" is not a moral opinion. It is an ancient legal principle — and it was the law of the very country that invented those molecules (today, in fact, we

are still speaking of PFAS, but the point holds well beyond PFAS) that said it first. In 1914 a New York judge, Benjamin Cardozo, fixed the sentence that founds the right over one's own body: *"every human being of adult years and sound mind has a right to determine what shall be done with his own body"*. It is the root, in Anglo-Saxon law, of informed consent: no one touches your body without your knowing it and permitting it. And after the trial of the camp doctors, that principle became the first rule of every experiment on human beings. The Nuremberg Code, 1947, opens thus: *"the voluntary consent of the human subject is absolutely essential"*. Nor is that enough: that consent demands "sufficient knowledge and comprehension" of the nature of the experiment and information on "the effects upon health or person which may come from participation". Consent *and* knowledge. Here both were missing. That this Miteni affair is, in the proper sense, an experiment on human beings — and on a macroscopic scale at that — is my thesis, and I declare it as such; but it is a thesis that rests on a threshold the civilised world believed it had fixed for ever, after seeing where failing to respect it leads.

It will be said: work involves risks, and whoever enters a factory takes them into account. That is true, and precisely here lies the distinction the law has always known. A worker may accept the *known* risk — the machine, the height, the noise: he sees it, he understands it, and in exchange he has precautions, protective equipment, surveillance. He cannot accept the *unknown* risk of a molecule that was never even named to him — or, if it was, he was never told what the companies did not want divulged — and whose effects at twenty years' distance, or even ten or five, no one knew, not even those who had him handle it. The first is a risk assumed; the second is a risk imposed. And a risk imposed inside the body, without information and without the possibility of refusal, is not the physiology of a dangerous trade: it is another thing, and it has another name. The science that could have given warning, after all, existed: only it sat in the drawers of those who drew profit from silence, not on the table of those who were risking their skin. It is the same "factory of doubt" of which I wrote in the opening piece, seen however from its cruellest point: not the consumer kept in the dark, but the worker kept in the dark while his own blood was being drawn and read.

The second step: it was a clandestine experiment, in the technical sense. An experiment, to call itself such and to call itself lawful, has overseers — a committee, a protocol, someone who can say "enough". This one evaded them. After decades of PFOA — which it is frightening now to observe passed in collective silence — came those of the next generation. Solvay's cC6O4 was being recovered at Trissino, by Miteni, and the public authorities did not know it: neither in Veneto nor in Alessandria. Solvay-Miteni operated at Trissino without authorisation at least from 2010 to 2014, and then under a regional authorisation — the Veneto AIA (integrated environmental permit) of 2014 — which, instead of preventing the pollution, covered it, because it set no limits on the discharges of the new substances. So much so that DuPont Chemours took advantage of the legal loophole and threw itself into it, given that at home, in Dordrecht, the air was no longer good. The unlawful situation was dragged out until 2018-19, when it was the magistrates, and not the overseers, who discovered the game. Then the other mouth of the volcano awoke

too. That of Spinetta Marengo. The story is the same. Decades of PFOA and then, the new one. The public overseers perhaps learned of PFOA by watching the film on the late-1990s saga of Bilott and the communities versus DuPont. The overseers noticed cC6O4, then, only because Solvay, after the closure of Trissino, asked to double its production at Spinetta. It was hungry for the extra cC6O4 that no longer arrived from Trissino. Authorise the doubling of a production that no one even knew existed? Yes. An AIA authorising cC6O4 there was — an old one. As far as the overseers knew, however, Solvay had never made use of it. There was Trissino. Which did not know. *Commedia dell'arte*, they would say in Veneto. In Italy this and more is possible. The Province of Alessandria authorised the AIA modification, which for Solvay did not even require a proper administrative procedure, because — had it been up to Solvay — producing twice the cC6O4 needed only a non-substantial modification. A little letter and away. The AIA arrived in the end and required Solvay to send to thermal destruction those resins it had previously sent to Trissino. If only they had done it sooner! Condition no. 1 of that AIA was a biblical commandment: "thou shalt pollute no more with cC6O4, otherwise we revoke thy AIA and thou shalt close". Then it was discovered, in 2024, that in the groundwater inside the Spinetta plant there was a quantity, without precedent in the world, of PFAS, PFOA and above all cC6O4, of which Solvay could say neither the date nor how it had ended up there. Almost as if it were not its own affair, in its own house. The Province closed the factory for a month and then reopened it. What the cause of the event was remains, I believe, mysterious to this day. Today the new AIA procedure has been under way for some years, but agreement on the new authorisation has still not been reached. The Province does not say no. It postpones. Meanwhile the workers and the population? They protest, and they are right. They call the State to account, and they are even more right.

No one can swear that cC6O4 is not like PFOA, or even worse. One hopes. An experiment without overseers is not science. It is its clandestine double.

The third step reverses the perspective: they did not know either. The trait that defines an experiment is that its outcome is not known. That is why every regulatory regime demands extreme caution before moving to human exposure. Well then: Solvay and DuPont did not know — do not know — what the new PFAS do to the human body in the medium and long term, all the more so when they add up in the blood with the old ones, the PFOA — and not only those (there is also ADV, which seems a nasty beast and of which, not by chance, nothing at all is said) — which are already there and remain there. The little that is known concerns the short term, and it is little.

There is more, and it is almost a technical confession: when Solvay registered cC6O4 in Europe, it declared that the substance remained in the human body for a few hours — a half-life of 4-7 hours, derived from animal studies. The true figure, later measured on the workers, is about seven and a half days: the substance accumulates in man far more than declared. Whoever presents to the authorities an estimate wrong by more than twenty times on the substance's persistence in the body is not hiding a detail: he is admitting that

he does not know his own creature. And whoever introduces into another's body a substance whose effects he does not know is not producing. He is experimenting.

Not only that. Solvay declared that cC6O4 was a production intermediate that would not spread into the environment. Today, if anyone looks for it in earnest, at least in northern Italy, in the water from the taps, he has a fair chance of finding it almost everywhere, because, as we know, it reached the Po years ago, and the volcano with two strategic mouths is capable of covering northern Italy from west to east, from Piedmont to Veneto. An experiment on the environment too, then. And indeed every day something new is discovered about the newcomer to the great PFAS family. Because Solvay knew — and said so to ECHA — that cC6O4 has one contraindication. It is soluble in water almost like table salt. The water goes, and the cC6O4 goes with it. And who stops it then? Hence the little lie: don't worry, the new PFOA stays inside the factory. It is a production intermediate; it does not get out. Quite. Yet cC6O4 is everywhere. Oh dear.

There remains the point that weighs more than any other, and that gives the word "guinea pig" its full weight. The supreme good — the body — was violated, and without the knowledge of the person who bore it; and that body, today, cannot expel what has entered it. PFAS remain: PFOA is measured in human blood in years of half-life, not in days. *What has gone in cannot be made to come out.* The worker or citizen who wrote Solvay a courteous letter — "Dear Sirs, I have learned that you have introduced, without my consent, a certain dose of PFOA and cC6O4 into my body. I have read on the internet that PFOA is carcinogenic, that is, capable of causing cancer. Kindly now take back all your PFAS. The body is mine and I manage it, if you don't mind" — would raise a smile.

Yet whoever tried to write would be right to do so, and Solvay would have the legal duty to reply.

The Swedish Supreme Court, in 2023, said it in the driest way, and it deserves to be quoted because it marks the direction of the law: *"the mere elevated presence of PFAS in the blood is, in itself, a personal injury — a deterioration of the body, temporary or permanent, visible or invisible"*.

There is no need to wait for the disease: the harm is the invasion. To this — to the body as a boundary that no one may cross without consent — I shall return in full in the part devoted to the law. Here it is enough for me to have defended the word. Guinea pigs: because they did not choose, because they did not know, and because someone decided over their bodies something that can no longer be undone.

Disease, in the criminal-law sense, is any anatomical or functional alteration in the human body. 10, 100, 1,000 micrograms per litre of PFOA do not sit there in the blood doing nothing, idling. They work every day; they produce measurable alterations in the blood, well known in the literature. Then, in the end, if things go badly, the cancer arrives. Let any citizen who knows he has in his blood, as an unwanted guest, PFOA or cC6O4 of certain Solvay provenance try going to his lawyer and asking him to file a criminal com-

plaint for intentional (not negligent) personal injury, for the anatomical (PFAS are not part of the genetic endowment of *Homo sapiens*) and functional alteration.

Criminal law is waiting for nothing else in order to modernise its arsenal and confront the dramatic new risks to human health, as its mission requires.

An absolute prohibition on invading another's body without that body's consent.

2. One poison, two mouths: the production

But there is not only exposure.

There are the dead and the injured, the sick.

The count begins, following the criterion of always — the volcano with two mouths. But here I must go down one level, to the production, because it is there that one sees that the story really is a single one; and because it is from there that the most important consequence of this whole part follows.

The first mouth of the volcano.

Let us begin with who Miteni was before it became a scapegoat for faults that were not to be paid for by the culprits more culpable than it. Until 2009, Miteni was an autonomous and robust company: a primary producer of PFAS, with a dominant position in the Italian market, some fifty million in turnover a year, direct clients in many sectors. It produced, at Trissino, PFOA and PFOS by electrofluorination. And among its best clients, when it still sold what it produced, was Solvay itself: the relationship between the two companies is attested at least from 2003. This alone says something: the bond was not born with cC6O4; it comes from far back. The same with DuPont, well before 2014.

It introduced into the blood of thousands of human beings first PFOA, then its successors. The effect is there, and it shows. The disaster uncovered by the investigation and punished by the Court of Assize.

Now let us look at the other mouth. At Spinetta Marengo, the Solvay plant — first Montedison, then Ausimont — is one of the few in the world to produce fluoropolymers, and to do so it long used PFOA itself, as a surfactant. Responsibility for the pollution is to be apportioned between Ausimont and Solvay, the latter owner of the factory since 2003.

Pollution known only too well.

Not by chance, when the CNR went back up the course of the Po to find the origin of the pollution of the aqueducts' waters, it pointed to Spinetta as the *main source* of PFOA in Italy's largest river.

So, even before cC6O4, the two mouths were erupting the same first poison: PFOA. The same to the east, from Trissino, and to the west, Spinetta. And PFOA is no ordinary poison: it is one of the progenitors of the *forever chemicals*, the "for ever" substances.

Once it has entered a body, it stays there for years; once it has entered an aquifer, in practice it does not leave.

It is the first — eternal — layer on which everything else then settled.

2009 is the year of the break. The two mouths are the same volcano.

Mitsubishi sells Miteni to the Luxembourg fund ICIG for one euro — a figure that makes no commercial sense for a company that was worth tens of millions, and the due diligence during the negotiations had already found a foretaste of the very grave contamination. Yet Mitsubishi gives no environmental warranty, though both, buyer and seller, knew the dramatic situation inside the factory and outside. And this too says a great deal. Only a madman would buy Miteni in 2009, when the PFOA ban would shortly mean that Miteni could no longer produce it — thereby acquiring a company that promises no profit but is exposed to the risk of having to pay the cost of an environmental catastrophe that, sooner or later, will explode. Unless, somehow, there is someone who is no madman standing behind ICIG suggesting the purchase, having in mind a use of Miteni very different from that of an autonomous company devoted to profit: that of a convenient screen — and the reader will already have understood who, for me, that someone might be, and why.

From that moment Miteni changes nature: it ceases to be a producer and becomes a *processor* — it recovers PFAS from the resins and spent filters that reach it from outside. And its main clients become almost two alone: Solvay almost at once, and from 2014 Chemours-DuPont. At the top arrives a man who came from the Solvay plant at Spinetta. Guarracino. Another was already there.

The autonomous producer has become someone else's dirty department.

It is within this frame that the dispersal of the poison takes place, and it takes place at *both* mouths, in the same order.

The overseers?

In June 2010 Solvay obtains the authorisation to produce cC6O4 at Spinetta; but it does not start the most polluting cycle there: it sends it to Trissino, where Miteni recovers the cC6O4 from the resins that arrive from Spinetta and returns it, keeping the waste. At Spinetta it uses Miteni's PFOA and above all, more and more, cC6O4 recovered by Miteni, which in turn pollutes.

The same transition — from the old poison to the new — is accomplished at the two epicentres almost in parallel.

A single molecule, a single directing hand, a single succession: first PFOA, then cC6O4.

It is worth pausing a moment on the "resin cycle", because it bears, in my view, the design of premeditation, written in industrial language. Solvay produced at Spinetta the resins laden with cC6O4, loaded them onto a lorry and sent them almost three hundred kilo-

metres away, to Trissino, so that Miteni would extract the product from them and return it — keeping the waste.

For a giant that has every technology in house, shipping hazardous materials back and forth across half of Italy is an economic absurdity: it costs more, not less, and multiplies the risks of transport. I see only one plausible explanation, and it is not industrial: to shift *physically* the dirtiest phase, and its discharges, onto another company in another region, so that the pollution would show up at Trissino and the liability would remain with Miteni. Spinetta unscathed, because there the cC6O4 was invisible. No one noticed the coming and going of tankers on the Spinetta-Trissino route. The poison was Solvay's; the blame, as the system was built, was to appear another's — Miteni's — and the trick has worked, until today. Chapeau.

The operation reveals what the anthropological reading of the crime of multinationals has always known. Whoever controls it can relocate the risk wherever it seems most opportune, and that Trissino was better than Spinetta, for Solvay, takes no genius to understand — at least until 2018.

I repeat: a single volcano and two mouths — Trissino extracting cC6O4 and throwing into the environment the waste that still contains cC6O4, Spinetta using the cC6O4 and therefore in turn throwing it into the environment.

And the scale of the experiment is measured by what came out of those two mouths.

And indeed, would you believe it, in 2024 at Spinetta cC6O4 is found in concentrations that frighten even the analysts. Spinetta earns the title of "most polluting and most polluted factory in Europe". The overseers?

Repetita iuvant.

cC6O4 — Solvay's signature alone — has been found in the Po, down which quantities of the order of kilos a day have flowed towards the Adriatic; in the drinking water of Turin and of dozens of municipalities; in Milan, a city with no PFAS factories; and even at Bardonecchia, above a thousand metres, where groundwater does not reach — which can be explained only by transport through the air. At least three hundred and fifty thousand people, in the Veneto area alone, drank contaminated water for years. These numbers, which the next part will count one by one, serve here for one thing only: to fix the size of the "subject" on which the experiment was conducted. Not a few hundred workers, but a population; and the workers were merely its hardest-hit core, the one where the dose was highest and the defence nil.

There is a detail which, more than any diagram, shows the unity of the volcano: the health surveillance of the workers. I say it with the exactness the evidence allows. That the health data on the Trissino workers passed to Solvay is in the trial records. That behind the two factories, Spinetta and Trissino, there was a single surveillance, with the same occupational physician, is what emerges from the reconstruction I have filed, and it

must be investigated further with means I do not have — as must the overall number of blood samples, thousands, taken from several hundred workers.

The problem is that, if it were not true that Solvay took charge of the health surveillance of the workers exposed to cC6O4 at Trissino too, its fault would be graver still.

By the mere fact that the two cohorts of workers were exposed to cC6O4, Solvay had the duty to inform itself and hence to monitor the effects on human health of its compound — registered by it with ECHA, promised to be less toxic than PFOA, patented, and a source of profit through the joint effect of Spinetta and Trissino.

Solvay has, and had, a primary duty of knowledge; and if by chance at Trissino the exposure had been higher and had generated previously unknown effects, the responsibility for not having informed ECHA and the supervisory authorities, as well as the judicial authority, would have fallen entirely on Solvay.

Spinetta, Trissino or Mumbai — it makes no difference.

From here follows the consequence that holds this whole instalment together.

The history of the exposure is *identical* at the two mouths: the same molecules (first PFOA, then cC6O4), the same order, the same directing hand — and it holds for the workers as for the residents. When two populations have suffered the same exposure, in the same order, from the same substance, science has an instrument of choice for measuring its effects: a *single multicentre epidemiological study*, which brings them together and compares them, and a *coordination of the monitoring programmes* between the two regions.

Who is doing it? A badly put question: who must do it? Have a guess.

It is not an organisational detail: it is the method.

Keeping the two sides separate — as has been done and continues to be done — means breaking a single experiment into two halves too small for anyone to see its true size, that is, the real effects that emerge with large numbers. Not doing it is, once again, the way to render invisible the enormous sin of the experiment that went wrong.

Did the experiment go wrong? Who says so? Well now — Solvay says so, having in fact promised urbi et orbi that in 2026 it will cease production of cC6O4. If the molecule were the godsend it had been promised to be, one would not stop producing and using it. Or would one?

Who will come after cC6O4?

Let us hope it does not bear the ugly name of its predecessor, even though that name reminds me, at least, of one of those likeable little robots from early Star Wars.

The same, if not worse, holds for Chemours, which feeds Trissino with poison produced in the Netherlands. Its GenX looks very much like a molecule that came out badly in the

multinational's laboratories. It is on the point of being banned. An appeal to the European Court to try to avert this went badly.

Of GenX there is plenty in human blood and in the Veneto environment.

To this I shall return at the end, because it is the request that gives meaning to all the rest.

Here part one ends. I have defended a word and shown the machine that made it exact: a single volcano, two mouths, a single directing hand. In part two the real count begins — how much poison, in which bodies, with what damage already written in the studies — and the one piece of news that overturns the story: the guinea pigs who have ceased to be guinea pigs.

The moral of this instalment is simple.

A toxic and possibly carcinogenic substance may not remain in the body of a man who has not consented to it.

It is one of the Commandments of the Bible.

The calendar of the coming instalments

This third investigation of the Miteni case — "The Guinea Pigs" — comes out in several instalments. The design, subject to adjustments along the way, is this:

— Part one (this one) — Why guinea pigs; one poison, two mouths. The reason for the word and the machine of the production.

— Part two — The doses, the signals, the revolt: how much poison in the bodies, what the studies already say, and the guinea pigs who have ceased to be guinea pigs.

— The count of the dead — the population beyond the gates: the numbers of the disaster, and the nearly four thousand dead that a single study has dared to count.

— The present — today's blood, the biomonitoring programmes, the protests, the science, and the State that postpones.

— The law — new avenues for the criminal and civil protection of the victims: consent, injury by contamination, health surveillance, the comparison with the United States.

A note on sources and method (part one)

I distinguish, as always, the three levels. Established: the legal principles invoked (Schloendorff/Cardozo, 1914; the Nuremberg Code, 1947); the judgment of the Swedish Supreme Court of 2023; the facts contained in judgment no. 1/25 of the Vicenza Court of Assize (the production of PFOA/PFOS at Trissino; Spinetta as the source of PFOA in the Po; the resin cycle; the 2009 sale; the authorisations of 2010-2014). Stated: the passing to Solvay of the health data on the workers (court records, p. 685) and the reconstruction of the clandestine nature of the operation, referred to in my complaint. Inferred: the charac-

terisation of the affair as an "experiment" on human beings and of the workers as "guinea pigs"; the reading of the resin cycle as a manoeuvre aimed at making pollution and liability fall on Miteni; the identification with Miteni of the factory not named in the studies. The studies cited are public; the complaints to the Public Prosecutors of Alessandria and Vicenza, not covered by secrecy, will be published alongside the investigation. The treatment of consent and of injury by contamination is taken up in full in the instalment devoted to the law.

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