

- What is the value chain for your company? For example, in what products are your carbon nanotubes used by others? In what quantities? Who are your major customers?
- What sampling, detection and measurement methods are you using to monitor (detect and measure) the presence of your chemical in the workplace and the environment? Provide a full description of all required sampling, detection, measurement and verification methodologies. Provide full QA/QC protocol.
- What is your knowledge about the current and projected presence of your chemical in the environment that results from manufacturing, distribution, use, and end-of-life disposal?
- What is your knowledge about the safety of your chemical in terms of occupational safety, public health and the environment?
- What methods are you using to protect workers in the research, development and manufacturing environment?
- When released, does your material constitute a hazardous waste under California Health & Safety Code provisions? Are discarded off-spec materials a hazardous waste? Once discarded are the carbon nanotubes you produce a hazardous waste? What are your waste handling practices for carbon nanotubes?

Cheap Tubes is a nanomaterial distributor and we understand Industrial Health and Safety. We take it very seriously for our employees and customers alike. We can confirm that we follow standard laboratory safety procedures, have implemented most of the nanosafety guidelines issued by the National Institute for Occupational Safety and Health (NIOSH), and that we treat nano-waste as “hazardous waste” for disposal purposes. We use N100 particle respirators, Nitrile gloves, Tyvek lab coats, shoe covers, tacky mats, and other safety protocols. Cheap Tubes has had a TSCA inspection by US EPA in Sept 2009.

In response to DTSC’s first “value chain” question, Cheap Tubes provides our CNTs to academic and corporate researchers around the world. They are being sold in small quantities under the R&D exemption to the PMN’s. We clearly label our CNTs “For R&D Use only!”, not only on the product label, but also on the Invoice, MSDS, and Nanomaterial Safety Considerations Addendum that we send with all shipments. Research is being done with our CNTs in a wide variety of fields including composite materials, transparent conductive coatings, conductive inks, electronics, energy storage, and fundamental material science research. We do not disclose our customer information. We can tell you that the largest amount we typically sell is 1-2 kgs. Also, we do our own research for emerging applications and future products.

Regarding DTSC’s second “monitoring” question, because there are only minimal risks of exposure and release of carbon nanotubes in its laboratories, we have not yet developed or implemented any quantitative sampling or detection methods. All CNT handling is done in a room that is closed off from the rest of our facility.

Responding to DTSC’s third question concerning the “projected presence” of carbon nanotubes in the environment which may result from our activities, there could conceivably be (i) accidental releases and spills, (ii) routine releases from laboratory handling, and (iii) the presence of carbon nanotubes in its laboratory waste stream. Cheap Tubes is now 5 years old and has properly stored its CNT contaminated waste in 50 gallon drums to be sent out to Saftey Kleen or another hazardous materials remediation company. The total waste produced in 5 years is less than 4, 50 gallon drums.

Regarding DTSC's fourth question concerning knowledge of the possible environmental, health, and safety effects of its carbon nanotubes, we take "a precautionary, but reasonable approach" and uses good laboratory safety practices when working with nanoscale materials. All nano materials are handled in house by the company founder. We closely follow the nano-EHS literature posted on [NIOSH's website](#), as well as the comprehensive [nano-EHS website](#) of the International Council on Nanotechnology at Rice University.

In response to DTSC's fifth question concerning the nano-specific workplace safety measures implemented by Cheap Tubes, we use N100 particle respirators, Nitrile gloves, Tyvek lab coats, tacky mats, show covers, and other safety protocols. Cheap Tubes has had a TSCA inspection by US EPA in Sept 2009. We follow the key points from NIOSH's "Approaches to Safe Nanotechnology" document.

Finally, regarding DTSC's sixth "hazardous waste" question, Cheap Tubes Inc does treat its carbon nanotube waste stream as "hazardous waste," whether or not such material actually constitutes "hazardous waste" from a scientific and/or regulatory perspective. We believe it is best to be proactive regarding CNT waste disposal.