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Australian Government

Department of Education, Employment and Workplace Relations
Office of the Australian Safety and Compensation Council

DEPARTMENT OF EDUCATION, EMPLOYMENT & WORKPLACE RELATIONS

OFFICE OF THE AUSTRALIAN SAFETY & COMPENSATION COUNCIL

NANOTECHNOLOGY OHS RESEARCH & DEVELOPMENT PROGRAM TO SUPPORT THE NATIONAL NANOTECHNOLOGY STRATEGY

1. In support of the National Nanotechnology Strategy, a Nanotechnology OHS Research & Development program has been developed. Specific projects will be developed over the life of the workplan to reflect national priorities.

2. The program is Australia-focussed, and will also contribute to global efforts on nanotechnology OHS.

3. The program has federal government funding, and will be managed by the Department of Education, Employment & Workplace Relations, Office of the Australian Safety and Compensation Council (ASCC).

4. A plan for the program has been defined, covering:

- OHS support for Australian nanotechnology businesses and research organisations
- Research Coordination - covering Australian research projects and international collaborations
- Evaluation and Development of Workplace Controls
- Considering the OHS Regulatory Framework in relation to Nanotechnology – includes identifying the specific information and knowledge requirements to ensure the framework operates effectively

NANOTECHNOLOGY OHS RESEARCH & DEVELOPMENT PROGRAM TO SUPPORT THE NATIONAL NANOTECHNOLOGY STRATEGY

1. Business Support

PROGRAM 1.1

Work by an interdisciplinary field team to partner with employers and others in conducting field studies, to observe and assess OHS practices in facilities where nanotechnology processes and applications are used.

This initiative will help protect the health & safety of employees in the nanotechnology industry and nanotechnology research in the short, intermediate and long term, and will facilitate the development of guidance material and dissemination of best practices across the industry and research.

Assuming suitable measurement equipment is available, it will also enable increased understanding of the actual levels of workplace exposures.

PROGRAM 1.2

Development of guidance material for the management of nanoparticles to minimise health risks, and rollout of the information.

PROGRAM 1.3

Development of guidance material for the safe management of nanoparticles, and rollout of the information.

Support companies to evaluate potential unique safety risks (e.g. explosivity, flammability and catalytic properties) associated with engineered nanoparticles.

2. OHS Regulatory Framework in relation to Nanotechnology

PROGRAM 2.1

Considering the Australian OHS Regulatory Framework in relation to Nanotechnology.

Evaluating the ability of the OHS regulatory framework to deal with nanotechnology hazards.

Includes identifying the specific information and knowledge requirements to ensure the framework operates effectively.

3. Research Coordination

PROGRAM 3.1

This program aims to establish and participate in international collaborative research and development to optimise Australian nanotechnology OHS management.

It will not be possible for all research and development programs to be undertaken with rigour in Australia. Hence, Australian programs should be (a) Australia-focused, and (b) coherent with and complementary to work that is occurring globally.

It is necessary for Australia to be fully informed of international activities and to be involved in key international collaborative work, and to present our initiatives in key forums.

This work will be undertaken in close liaison with relevant Australian agencies.

PROGRAM 3.2

Watching Brief on current knowledge of OHS risks from nanotechnology – identified, actual OHS risks.

PROGRAM 3.3

Provide input and advice to help establish & manage research to understand the health effects associated with exposure to engineered nanoparticles.

This research should be applicable across health-related portfolios and agencies.

It is anticipated that this will be a cross-agency program.

4. Evaluation and Development of Workplace Controls

PROGRAM 4.1

Assisting the development of cost-effective and robust ambient air monitoring systems for nanotubes, nanopowders, quantum dots and similar materials in workplace environments, that can provide accurate information on worker exposures.

Link in with work at the National Measurement Institute (NMI).

Dependent on international advances in measurement.

PROGRAM 4.2

Examining the effectiveness of control equipment, e.g. filters, respiratory protective equipment, gloves, and engineering controls.

PROGRAM 4.3

Research on preventing work-related injury and illness, by using engineered nanomaterials to produce, for example, sensing and communication nanodevices, and nanomachinery.