

NPI

UPDATE

information on the National Pollutant Inventory — a national internet database of pollutant emissions

Issue 4 May 1999

MINERALS COUNCIL TO DEVELOP NPI MANUALS

In a significant step the Minerals Council of Australia (MCA) in conjunction with Environment Australia is preparing to develop NPI Emission Estimation Technique (EET) Manuals for the copper, lead and zinc smelting industries.

It is hoped that by developing the EETs through the MCA, they will be highly regarded by industry. They will have MCA endorsement and industry support—factors that contribute greatly to the success of the NPI.

Late last year the MCA wrote to Environment Australia offering to draft EETs for lead and zinc smelting. Environment Australia responded by asking the MCA to submit a proposal to prepare not only lead and zinc manuals, but also manuals for copper smelting.

The result is a proposal for Environment Australia to fund National Environmental Consulting Services to develop the EETs on behalf of the MCA. Pasminco will project manage the work on

the zinc and lead manuals and Western Mining Corporation Copper and Uranium will project manage the work on the copper manual. The companies will oversee the consultancies and coordinate industry consultation during the public consultation process and the final approval process.

Through its members, Pasminco and Western Mining Corporation Copper and Uranium, MCA is offering substantial in-kind support to Environment Australia which has responsibility to develop the EETs.

The MCA has pledged that its members will start estimating emissions for the NPI from June 1999.

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This and past issues of NPI Update can be found on the internet at: www.environment.gov.au/epg/npi/npi_update.html

The National Pollutant Inventory is funded by Environment Australia, and is being cooperatively implemented by the Commonwealth, State and Territory Governments.

WESTERN MINING'S NPI EXPERIENCE

Trialing of the NPI reporting process at Western Mining Corporation Resources' (WMCR) Kalgoorlie Nickel Smelter is well advanced, with data collection due for completion by early April.

WMCRs' nickel smelter processes nickel sulfide concentrates from a number of Goldfields' nickel mines and converts them into high grade granulated matte. An acid plant converts up to 90 percent of the sulfur dioxide generated by the smelting process into sulfuric acid for sale and re-use.

The process for estimating emissions of NPI listed substances from the Kalgoorlie Nickel Smelter involves several stages:

- *ascertain the amount of each of the relevant substances held in storage*
- *identify the production stages where emissions occur*
- *apply the relevant data to the spreadsheets set out in the appropriate Emission Estimation Technique (EET) Manual.*

Seven draft EET Manuals were used in the trial. The Manuals are in varying stages of completion and cover all aspects of the smelting process from flux mining to acid production. WMCRs' experience has shown that some of the Manuals for the mining sector require substantial fine-tuning because of the differences between coal and metalliferous mining and the differences between equipment and processes. Inconsistencies between the Manual methodologies have also added to the difficulties in data collection.

As a part of the trial, WMCR is monitoring the costs incurred from reporting. This will provide useful information on the costs to business incurred from reporting for the NPI.

WMCRs' experience from producing four environmental reports has helped it participate in the NPI trial.

The data collected from the Kalgoorlie Nickel Smelter will be combined with other information collected in the trial.

NEWS FROM THE KALGOORLIE TRIAL

The NPI Kalgoorlie trial entered its data collection phase in December 1998.

A workshop for environmental and metallurgical staff from the four mining companies voluntarily participating in the trial was held in late November. Participants were given an overview of the NPI Guide and worksheets and the relevant Emission Estimation Technique (EET) Manuals.

The four companies participating in the trial are:

*Western Mining Corporation Resources
Kalgoorlie Consolidated Gold Mines
Kanowna Belle Gold Mines
Normandy Mining Kaltails Project*

A number of non-mining companies in the region using more than the specified amounts of the substances listed on the NPI have also volunteered to participate in the trial.

The mining companies are estimating their emissions of NPI listed substances using EET Manuals in draft format. Staff are required to be familiar with and be able to extract relevant information from the NPI Guide and worksheets and the following EET Manuals:

*Mining
Nickel or Gold
Fossil Fuel Electric Power Generation
Combustion in Boilers
Combustion Engines
Fuel and Organic Liquid Storage
Sewage and Water Treatment*

Staff from the Western Australian Department of Environmental Protection are meeting regularly with the four mining companies to work collectively through the NPI reporting procedure. The result will be a refined reporting process for others in the mining industry.

The Kalgoorlie NPI trial is being conducted to test the parameters of the NPI in a regional mining environment through a partnership between the Western Australian Department of Environmental Protection and Western Mining Corporation Resources (WMCR). It is funded by Environment Australia and has a significant in-kind contribution from WMCR. The trial is centred on the twin mining towns of Kalgoorlie – Boulder, which are in the Goldfields region approximately 600 kilometres east of Perth.

The Kalgoorlie trial is testing the process for collecting emission data from facilities using more than the specified amount of NPI listed substances and goes beyond testing the NPI model specified in the NPI National Environment Protection Measure (NEPM). Data for the full list of 90 substances and for annual transfers of wastes is also being collected. This will provide useful information for the review of the NPI NEPM which is set to take place later this year.

A project to estimate emissions from sources other than the four reporting facilities within the Kalgoorlie–Boulder region has been completed. This includes emissions from motor vehicles, aircraft, rail, small industries and households, as well as

emissions from natural sources, including vegetation and soils.

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Western Mining Corporation's sulphuric acid plant.

REPORTING OF AGGREGATED EMISSIONS UNDERWAY

When the NPI data becomes available in January next year, it will include emissions data from industrial facilities and data on aggregated emissions of NPI listed substances.

To compile this data the state and territory environment authorities have begun estimating aggregated emissions in their jurisdictions for the first NPI reporting year.

The NPI National Environment Protection Measure defines aggregated emissions as the combined total of annual estimates of emissions for each NPI listed substance from both:

- facilities not required to report for the NPI, such as retail dry-cleaners and bakeries; and
- diffuse source activities, such as from driving cars and mowing the lawn.

Aggregated emissions data puts the emissions data from the larger industrial facilities reporting for the NPI into perspective. It allows NPI database users to make regional comparisons of the amounts of emissions coming from various sectors. For example, users can compare carbon monoxide emissions from cars to those from a nearby industrial facility.

Handbooks are being developed to help state and territory environment agencies estimate aggregated emissions. However, in this first reporting year they may be limited in their ability to report because many of the aggregated emission handbooks are not yet finished. To counter this, the best known emission estimation techniques will be used until the handbooks are finalised.

The Implementation Working Group (IWG), which is made up of representatives from the Commonwealth, State and Territory environment authorities, has established air and water sub-groups with technical experts. These sub-groups will work on complex aggregated emission issues and report to the IWG.

Following is a list of the aggregated emission sources that will be estimated by state and territory environment authorities:

CORE SOURCES—EMISSIONS TO BE ESTIMATED BY ALL STATE AND TERRITORY ENVIRONMENT AUTHORITIES

- | | |
|--|---|
| • <i>Mobile Sources (Motor Vehicles and Commercial and Recreational Boating)</i> | • <i>Lawn Mowing and Domestic utility engine use (chain saws, whipper-snippers etc)</i> |
| • <i>Domestic and Commercial Solvents</i> | • <i>Service Stations</i> |
| • <i>Domestic Fuel Use for Heating and Cooking (Solid Fuel—oil optional)</i> | • <i>Architectural Surface Coating</i> |
| | • <i>Motor Vehicle Refinishing</i> |
| | • <i>Dry Cleaning</i> |

COMMON NON-CORE SOURCES—

EMISSIONS TO BE ESTIMATED BY THE MAJORITY OF STATE AND TERRITORY ENVIRONMENT AUTHORITIES

- | | |
|--|--|
| • <i>Printing</i> | • <i>Mobile Sources—Railways</i> |
| • <i>Fuel Combustion—Sub-reporting Size Facilities</i> | • <i>Paved and Unpaved Roads</i> |
| • <i>Burning</i> | • <i>Solvent Use—Sub-reporting size facilities</i> |
| • <i>Mobile Sources—Aeroplanes</i> | • <i>Cutback Bitumen</i> |
| • <i>Barbeques</i> | • <i>Domestic Gaseous Fuel Burning</i> |

OTHER SOURCES—

EMISSIONS TO BE ESTIMATED BY SOME STATE AND TERRITORY ENVIRONMENT AUTHORITIES

- | | |
|--|--|
| • <i>Biogenics</i> | • <i>Backyard Incinerators</i> |
| • <i>Town Gas Leakage</i> | • <i>Agriculture (livestock)</i> |
| • <i>Cigarettes</i> | • <i>Bread Making</i> |
| • <i>Carpet Manufacture</i> | • <i>Pets and Humans (ammonia emissions)</i> |
| • <i>Swimming Pools</i> | • <i>Carpet Cleaners</i> |
| • <i>Construction</i> | • <i>Domestic Liquid Fuel Consumption.</i> |
| • <i>Road Line Marking</i> | |
| • <i>Agriculture (PM10 from harvest tilling etc)</i> | |

Production of national handbooks for estimating emissions from these sources has not been scheduled at this stage.

With \$50 000 in Commonwealth funding, the NSW Environment Protection Authority is working on a project to identify data from existing water catchment inventories so that it can be incorporated into the NPI. The project will provide the jurisdictions with information on how to incorporate existing information into the NPI and guidelines for establishing quality estimates.

The Commonwealth is also providing \$150 000 to a consultant to prepare an inventory for aggregated emissions of total nitrogen and total phosphorus in the Murray-Darling Basin water catchment. This data is to be incorporated into the NPI database with the rest of the first year's data.

For more information:

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HANDBOOKS PUBLISHED

To help industry estimate its emissions for the NPI, Environment Australia has published 15 new handbooks.

The Queensland Environmental Protection Agency and the NSW Environment Protection Authority developed the handbooks.

Each handbook has been subject to an intensive national consultation process.

NPI handbooks are tailored for specific sectors and are designed to guide industry in estimating its emissions.

The NPI Guide and one or more Emission Estimate Technique Manuals comprise a Handbook.

The NPI Guide helps facilities determine whether they are required to report and the manuals describe the procedures and recommended approaches for estimating emissions arising from different industrial processes.

Facilities operating in the sectors covered by the published handbooks are required to estimate their emissions of the substances listed on the NPI. The state and territory environment agencies can assist facilities in their jurisdictions to do this.

Copies of the handbooks are available from the state and territory environment authorities and are also on the internet in .pdf format from: www.environment.gov.au/epg/npi/eet_manuals.html

THE 15 NEW HANDBOOKS ARE:

- *Waste Disposal Services: Sewage Sludge and Biomedical Waste Incineration*
- *Concrete Product Manufacturing*
- *Sugar Manufacturing*
- *Bakery Product Manufacturing*
- *Beer and Malt Manufacturing*
- *Petroleum Refining*
- *Oil and Gas Extraction*
- *Alumina Production*
- *Aluminium Smelting*
- *Mining*
- *Dry Cleaners and Laundries*
- *Petroleum Product Wholesaling*
- *Electricity Supply*
- *Organic Industrial Chemical Manufacturing.*
- *Sewerage and Drainage Services.*

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NPI AT A GLANCE

The National Pollutant Inventory

- *is an Internet database designed to provide the community, industry and government with information on the types and amounts of certain chemicals being emitted to the environment.*
- *trial database can be found on the web at*
www.environment.gov.au/net/npi.html
The first national database will be available in early 2000.
- *requires industrial facilities using more than a certain amount of the substances listed on the NPI to estimate and report emissions of these substances.*
- *data will come from industry and non-industry sources. This means that data on estimated emissions from household sources and small industry will be on the database alongside data from industrial facilities.*
- *database will include contextual information to give meaning to the raw emissions data. This information is designed to help people understand where emissions come from, why they occur and what happens to them in the environment.*
- *is being cooperatively implemented by the Commonwealth, State and Territory governments. It was developed as a National Environment Protection Measure, by the National Environment Protection Council.*

FINDING THE BALANCE FOR APPROPRIATE CONTEXTUAL DATA

An extensive consultation phase has taken place to ensure that the NPI contextual data meets the needs of both industry and community stakeholders.

Environmental consultants Atech (formerly Aquatech) have been contracted by Environment Australia to develop the contextual information for the 90 substances that will eventually be listed on the NPI. This project has included consultation with prospective users to ensure that the final product meets a diverse range of needs. Finding the balance between providing a suitably sophisticated context for the data and providing simple, concise, and meaningful information has proven difficult.

A needs analysis survey and public demonstrations of the work in progress have been undertaken. Contextual information on six substances has been developed and is on the NPI web site alongside an electronic feedback form at www.environment.gov.au/epg/npi/contextual_info/road_test.html

The structure and presentation of the contextual information has been refined and further developed based on feedback received at a briefing seminar in mid-April. The seminar was attended by key stakeholders from industry, the community and government. The draft information for the remaining 84 substances will be provided on the NPI database in stages. Three weeks is being allowed for feedback on these groups of substances.

Environment Australia's Environment Resource Information Network is also contributing to this process, bringing a high level of internal technological expertise.

The project is due to be completed by June 30 1999.

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MAJOR NPI PLAYER DEPARTS

In this issue of *NPI Update* we bid farewell to the Manager of the Commonwealth's NPI Unit, Mary Mertin.

Mary has played a major role in the development of the NPI, coordinating the development of the National Environment Protection Measure for the National Environment Protection Council in 1996 and 1997. When she returned to Environment Australia in early 1998 she took on the pivotal role of managing the NPI's implementation from the Commonwealth's perspective.

In this time Mary has been a strong and consistent advocate for the NPI. She has done a great job juggling the needs and interests of jurisdictions, community groups and industries in a balanced and professional way.

On behalf of the NPI Implementation Working Group, I would like to thank Mary for all her hard work, and wish her the best in her new position with SMS Consulting.

John Denlay

NPI Officer & member of the NPI Implementation Working Group
NT Department of Lands, Planning and Environment

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