

# ESPERANCE CLEANUP AND RECOVERY PROJECT

## MINUTES OF STEERING COMMITTEE MEETING

12 MAY 2009, ESPERANCE

### Present:

Mr Michael Jackson	Co-ordinator, Esperance Community Consultations (Chair)
Mr Martin Matisons	Department of Health (DOH)
Mr Peter Skitmore	Department Environment and Conservation (DEC)
Mr John Fischer	Department for Planning and Infrastructure (DPI)
Ms Pam Norris	Locals for Esperance Development (LED)
Dr Charles Douglas	Department of Health (DOH)
Mr Peter McCafferty	Chemistry Centre
Mr Paul Clifton	Shire of Esperance
Ms Samantha Parkyn	Esperance Cleanup and Recovery Program (ECRP)
Mrs Christine Smith	Community Representative
Mr Marcus Tromp	Esperance Chamber of Commerce and Industry (ECCI)

### Apologies:

Ms Michelle Crisp	Locals for Esperance Development (LED)
Mrs Jenny Brodie-Hall	Community Representative
Mr Lindsay Gillam	Department of Health (DOH)
Mr Adam Rayner	Department Environment and Conservation (DEC)
Mr Richard Grant	Esperance Port Authority (EPA)
Dr John Ottaway	Esperance Cleanup and Recovery Project (ECRP)

### 1. Opening of Meeting and Review of Agenda

The Chair welcomed Members and gave an overview of the agenda and anticipated outcomes of this meeting.

### 2. Membership of the Steering Committee

Ms Christine Smith was welcomed as a new member of the Committee. Ms Smith had been nominated as a representative of the Esperance Shire Council.

### 3. Minutes of Previous Meeting and Tables of Actions

- i. Page 6, item 10, point 4, delete the following:  
'Preliminary assessment of the results by Peter McCafferty indicates that only two homes had soil levels above the background level.'
- ii. Page 7, item 11, point 4, delete the following:  
*"but the results from this monitoring are unlikely to change the conclusion as they are further from the prime source & likely deposition areas and thus would show levels even lower than those currently located close to the Port."*

**Action: That the minutes of the meeting held 26 March 2009, with the above amendments, were accepted as a true record of the meeting. Amended Minutes to be circulated to Members and loaded onto the ECRP web page.**

#### **4. Clarification of the future direction of the ECRP**

Members reviewed the future direction of the ECRP as discussed at the last meeting under item 12.

It was agreed that the next steps would be as follows:

1. Project Director to convene a Working Group to examine what further survey and sampling is needed to determine the extent of the contamination in the Esperance townsite and in individual premises, and to make recommendations back to the Steering Committee.
2. A second Working Group to be convened by the Project Director to consider the issue of remobilisation of lead and nickel in the Esperance environment taking into consideration all available data and to make recommendations back to the Steering Committee.
3. Project Director to co-ordinate the development of sampling protocols through the Working Group on Sampling.
4. Project Director to develop cleaning protocols.
5. Project Director to implement cleaning of those homes, [requiring cleaning from the 21 homes sampled in the trial survey] and validate that the cleaning process has been effective.

#### **5. Update on Administrative Issues by Project Director**

Members noted:

- Advice from John Fischer that Dr. John Ottaway had resigned as the Project Director of the ECRP. Mr Wayne Winchester would be taking over the position of Project Director on an interim basis. Mr. Winchester is a Regional Manager of DPI based in Albany. He has had extensive experience with State Land Services, particularly in the management of Crown Land and contaminated sites.
- Interviews have been held for the ECRP Project Manager. The selection report has been finalised and it is anticipated the Project Manager will commence in Esperance in 3-4 weeks.

Members expressed their sincere thanks for Dr Ottaway's dedicated commitment to the ECRP and the people of Esperance. Members agreed that he had established good relations with the community, and his research and planning had ensured that sound direction and planning for the cleanup project are in place and can continue for the cleanup project. Members agreed to the following action.

**Action: Letter of thanks to be drafted to Dr. John Ottaway for his contribution to the ECRP on behalf of all members of the Steering Committee.**

#### **6. Terms of Reference of the Steering Committee**

Members noted:

- That the Minister for Transport had approved the Terms of Reference of the ECRP Steering Committee.
- That the document as approved included the following clause 6.4.

“The decisions of the Steering Committee should be implemented where practicable”

- That this clause was different to the wording as agreed at the 26 March meeting as follows:  
“The decisions of the Steering Committee will, as far as practicable, be implemented by the Project Team”.

Members requested that the Terms of Reference be amended accordingly.

**Action: Clause 6.4 of the Terms of Reference of the ECRP Steering Committee be amended to read: “The decisions of the Steering Committee will, as far as practicable, be implemented by the Project Team”.**

## **7. Confidentiality Agreements – Discussion of Confidential Information by Steering Committee Members**

Members noted a draft confidentiality agreement prepared by DPI based on a similar agreement used for the Oakajee project. Members suggested several amendments to this document such as the deletion of clauses 14 to 19.

Members considered that this document was not appropriate and very heavy handed and requested that a more succinct and relevant document should be prepared.

All members agreed that they would respect the confidentiality of information provided to them.

**Action: DPI to prepare a succinct and relevant confidentiality agreement/statement for consideration by Steering Committee members.**

## **8. Cleanup Standards for Esperance recommended by DOH**

Members noted:

- Correspondence from DOH recommending the following cleanup standards be adopted in Esperance:
  - Rainwater tanks: 0.01 mg/L for Lead; and 0.02 mg/L for Nickel.
  - Soils: 300mg/kg for Lead; and 600 mg/kg for Nickel
  - Internal surfaces readily accessed by young children: 0.04µg/cm<sup>2</sup> for lead. This includes floors, window ledges and other internal surfaces. It also includes external surfaces such as ‘cubby houses’ and play equipment used by young children.
  - Surfaces readily accessed by adults: 0.4µg/cm<sup>2</sup> for lead.
- That the previously advised standard for ‘other internal surfaces of 0.25µg/cm<sup>2</sup>’ had been deleted.
- DOH advised that there are no national or international standards or guidance for roof spaces and the DOH is not in a position to set cleanup standards for roof spaces based on health end points.
- There is very limited international work reported in the literature on cleaning of roof spaces which would be relevant to the situation in Esperance. Many of these results have been reported on a weight by weight basis [ppm] and these cannot be compared to the swab sample results reported in µg/cm<sup>2</sup>.
- DOH has advised that work by Brian Gulson on lead levels in Sydney homes shows that the range varied from 100 to 1600mg/kg with an average of 600mg/kg.

- This advice is consistent with the report on 'Lead and Nickel in House Dust in Esperance' July 2008 by M.L. Crisp and P.M Norris.
- That lead and nickel accumulation in roof spaces could enter internal areas of homes via downlights, ceiling fans, vents, 'manholes', cornice cracks or similar apertures and the risk will increase over time as houses age. It is also a problem for all tradesmen entering the roof space and in the case of major renovations Pam Norris expressed the importance of addressing contamination in roof spaces as it is the one area that cannot mitigate over time.
- A request from Pam Norris for a cleanup standard for roof surfaces as they can be a large repository for residual lead and nickel which could contaminate water tanks or possibly be remobilised in the community in dry windy conditions
- The limit for lead in soils in Sweden is 400mg/kg. However, in the case of soils likely to be contacted by highly vulnerable children, a limit of 50mg/kg applied.

Members considered that:

- It is necessary to determine a cleanup standard for roof spaces/ceiling voids and roof surfaces in Esperance.
- A further survey should be conducted in Esperance of lead concentrations in roof spaces and determined on a weight by weight basis. [This work could possibly be done in the 21 homes previously sampled]
- This further survey may be benchmarked by sampling roof spaces in Albany.
- This work should also assess the depth of the dusts and other debris in the roof space/ceiling voids.
- Contact should be made with Dr Brian Gulson to obtain direct advice on his research into lead in roof spaces and ceiling voids and the application of this work to the Esperance situation.

**Actions:**

- 1. ECRP Project Director to organise a further survey of lead concentrations in Esperance roof spaces [and the results should be determined on a weight by weight basis] and roof surfaces.**
- 2. Contact should be made with Dr Brian Gulson to obtain direct advice on his research into lead in roof spaces and ceiling voids in Sydney and the application of this work to the setting of a cleanup standard for roof cavities in Esperance.**

## **9. Results of Sampling Benchmark Homes in Albany**

Members noted:

- A summary of the lead and nickel results, compiled by the ChemCentre, of sampling benchmark homes in Albany.
- Sampling was carried out by the DOH and the Chemistry Centre in March 2009.
- Samples were taken from a range of surfaces both indoors and outdoors.
- Results are summarised as follows:
  - carpeted floors: range less than the LOD to 0.032 $\mu\text{g}/\text{cm}^2$
  - internal surfaces over 1.4m: range from LOD to 0.052 $\mu\text{g}/\text{cm}^2$
  - external surfaces above 1.4m range less than LOD to 0.39 $\mu\text{g}/\text{cm}^2$
  - exterior soil samples range from less than 0.5mg/kg to 220mg/kg

- roof dust samples ranged from LOD to 8.2µg/cm<sup>2</sup>. Paint flakes collected from one site showed lead concentration of 240mg/kg.
- Of 3 water tanks tested, all were below the ADWG (0.01mg/L for lead and 0.02mg/L for Nickel)
- Playground samples: most were less than 0.008µg/cm<sup>2</sup> with one exception of the floor surface which was recorded at 8.2mg/kg lead.

**Action: DOH to forward a copy of the de-identified Albany data to members.**

## **10. Discussion of Sampling and Results of the Intensive Testing of 21 Homes**

Members noted:

- A copy of the analytical data from the Survey of 21 homes carried out in February 2009.
- In this survey eighteen homes were selected at approximately 500m intervals along four “transect lines” radiating out from the Esperance port to West Beach, Sinclair, Nulsen and Castletown and these included a range of old and new home types. Three homes previously cleaned was also sampled.
- The purpose of this initial sampling program was:
  1. To gain a general indication of the current concentrations of lead and nickel in relation to distance from the Port.
  2. To identify the likely locations of contamination in and around premises.
  3. To determine whether homes cleaned in 2007 are now free from contamination.
  4. To assist in the development of sampling and cleaning protocols.
- Approximately 20 samples were taken from each property by officers of the DOH, the ChemCentre and the Shire of Esperance. Samples were taken from areas such as outside areas, inside areas, ceiling voids, roof spaces, garages/carports, rainwater tanks and garden areas.
- Results of sampling of internal areas for lead were as follows:
  - 139 samples
  - 119 [86%] less than 0.04ug/cm<sup>2</sup>
  - 19 [14%] between 0.04 and 0.4ug/cm<sup>2</sup>
  - 1 [less than 1%] above 0.4ug/cm<sup>2</sup>
  - [Elevated levels of lead were found in areas which may not be normally cleaned such as: - top window cupboard, pantry cupboard, top display cabinet, and top rangehood]
- Results of sampling of carpets for lead were as follows:
  - 64 samples
  - 56 [87.5%] less than 0.04ug/cm<sup>2</sup>
  - 6 [9.4%] between 0.04 and 0.39ug/cm<sup>2</sup>
  - 2 [3%] samples above 0.4ug/cm<sup>2</sup>
  - Samples were taken from deep in the carpet pile.
- Results of sampling of rain water tanks for lead and nickel showed that one tank exceeded the Australian Drinking Water Guidelines for lead and nickel.
- All soil samples tested were below the Soil Investigation Level of 300mg/kg. The highest lead level in soil was found at the outlet of a downpipe.
- Results of sampling of external areas were as follows:
  - 73 samples
  - 45 [62%] less than 0.04ug/cm<sup>2</sup>

- 23 [31.5%] between 0.04 and 0.39ug/cm<sup>2</sup>
- 5 [6.8%] above 0.4ug/cm<sup>2</sup>
- [Elevated levels were found in areas such as top meter box, window sills x3, and top rainwater tank]
- In the case of samples taken from roof spaces the issues to be considered are as follows:
  - Swab samples were taken, and as indicated above under item 8, it would have been preferable if samples were taken on a weight by weight basis [ppm]
  - The volume of dust in roof spaces varied considerably. Dust volume influenced by the type of roof – tiles, asbestos cement, colorbond and whether sarking was present,
  - Lead levels, taken as swabs, in roof spaces in some homes were above 0.4ug/cm<sup>2</sup>
  - A case by case assessment is required to determine if there are 'pathways' from the roof spaces into the home
  - There is a need to develop a cleanup standard for roof spaces

### **11. Investigation whether Remobilisation of lead and nickel is occurring in the Esperance environment**

Members noted:

- That the Project Brief for the investigation into whether remobilisation of lead and nickel is occurring in Esperance, had been prepared. It was agreed that this Brief should be circulated to all members. This Brief is provided in Attachment 1.
- It was proposed to employ Mr. Jim Malcolm as a consultant to investigate this matter and to report to the Working Group on Remobilisation. It was agreed that the members of that Working Group are as follows:
  - Mr. Wayne Winchester [ECRP Project Director]
  - Mr. Jim Malcolm [Consultant]
  - Mr. Anthony Stuart [DEC]
  - Ms Michelle Crisp [LED representative]
  - Mr Paul Clifton [Shire of Esperance]

**Action: Circulate Project Brief on Remobilisation to Steering Committee Members**

**Proceed with engagement of Jim Malcolm to investigate this issue.**

### **12. Project Plan for ECRP - Future Planning and Timelines for the Cleanup and Recovery Project**

Members noted a Gantt chart for the ECRP setting out the various sub-projects, the sequences and proposed timelines.

Ms Norris questioned if it was practical to set up a laboratory in Esperance for the duration of the project for analyses of samples. It was explained that this was not possible as it required an accredited laboratory with appropriate analytical equipment which was very expensive and hence was not logistically or financially practical.

Peter McCafferty commented that the time allocated for chemical analysis should be increased from 5 days to about 14 days.

**Action: Amend the Gantt chart to increase the allocated time for chemical analysis.**

### **13. ECRP Data Management System**

Members noted that DPI officers were working with officers of the DOH Epidemiology Branch to set up a data base management system for the ECRP. It was proposed to base this system on that used for the UWA/DOH Esperance rain water tank survey.

### **14. OnCue Website**

Members noted that DPI had set up the OnCUE website for the ECRP. The reference to OnCue referred to Cleaning Up Esperance. Community Members commented they had not been sent any of the website information to comment on before being published. DPI undertook to review the existing information on the website in light of members' comments and agreed that, where appropriate, future information would be circulated to all Steering Committee members, for comment, prior to publishing.

**Action: Provide Members with the web address of the OnCUE website.**

[The website address is [www.oncue.org.au](http://www.oncue.org.au)]

### **15. Working Group on Sampling**

Members agreed:

- That the Members of the Working Group on Sampling should be as follows:
  - Mr. Wayne Winchester [ECRP Project Director]
  - Ms. Pam Norris [LED Representative]
  - Mr. Peter McCafferty [Chemistry Centre]
  - Mr. Paul Clifton [Shire of Esperance]
  - Mr. Martin Matisons [Department of Health]
- That the Working Group should be responsible for development of the Sampling Protocols, and Type 'A', 'B' and 'C' Sampling.

### **16. Esperance Port Authority Environmental Emission Data and Vegetation Monitoring for lead and nickel**

Members noted:

- A presentation of the most recent data on lead and nickel monitoring results Dated 12 May 2009.
- No lead had been recorded in any of the community depositional gauges for the last few months.
- Nickel levels had reduced over the last few months and were well below the daily target of  $0.14\mu\text{g}/\text{m}^2$
- Funding had been allocated for three additional HiVols and these would be located at sites within the Esperance community. One of these sites would be on the site of the Shire for Esperance. [Paul Clifton advised that the actual site would be considered at the next Council meeting]. It is proposed that these new monitors will test for particle sizes less than PM10. DOH advised that the existing monitors should continue to record total suspended particulates.
- A summary was provided of the latest data on vegetation monitoring in Esperance. This work had been carried out by DEC at the same 17 sites sampled in 2008 across Esperance as well as 24 new sites on four transects which use the same plant species. Fifteen additional deciduous

tree sample sites were established to assist in assessing if remobilisation of lead is an issue of concern. The latest data was for samples taken in March 2009. Samples were taken of old growth, new growth and flowers and analysed for lead and nickel. The 2009 data was compared with 2008 data and in general showed a significant reduction in almost all cases. This was part of an ongoing five year monitoring program and a further series of samples would be taken in March 2010. Future program samples would also include those from the 15 deciduous trees.

- Lead levels in deciduous trees were very low and similar to the levels found in Albany.
- Samples of the whole leaf/flower were analysed. It is not possible to analyse lead residues on the surface of the leaves and the lead within the leaf structure because it is very difficult, if not impossible, to remove any lead from the surface of leaves because the lead is retained in the surface of the leaf structure.
- The vegetation survey report would be published in about 6 to 8 weeks.
- This data will be provided to Mr. Jim Malcolm and to the Working Group on Remobilisation.
- It was noted this data had been taken in transect lines very similar to the house testing and Pam Norris commented it would be useful to see this data plotted alongside the 21 homes sampling as it could be very helpful in establishing a contaminated area. It was agreed that this data will be provided to the Steering Committee once it is ready.

**Action: Peter Skitmore to provide data on lead and nickel residues in Esperance vegetation to members of the Working Group on Remobilisation.**

## **17. Other issues**

### **a) Prescribed Method for Determination of the Annualised Guideline for Nickel**

Members noted:

- That the Chemistry Centre is developing the prescribed method for the determination of the annualised guideline for nickel. Members considered that this was a priority issue.
- Pam Norris referred to Professor Odland's presentation in which he stated that particle sizes between 10 and 25 microns are of health concern and should be measured. [DOH has subsequently advised that particles less than 10 microns can be inhaled into the respiratory tract and hence are of health concern. Particles less than 2.5 (ie two and a half) microns can be inhaled deep into the lungs and hence are of particular health concern. Therefore DOH advise that particle sizes less than 10 microns should be measured.]
- Martin Matisons advised that the daily target was protective for irritant effects and that particle sizes of 25 microns would not be penetrate into the lungs.
- The current HiVol monitors used by the Esperance Port Authority would continue to monitor for TSP [total suspended particulates]. This would enable continued comparison with historical data.

**18. Next Meeting**

Members noted that a series of proposed meeting dates for the Steering Committee had been prepared for the remainder of 2009. These dates would be circulated to members for comment.

[The suggested meeting dates are as follows:

- |                      |              |
|----------------------|--------------|
| 1. 11 December 2008  | Convened     |
| 2. 8 February 2009   | Convened     |
| 3. 26 March 2009     | Convened     |
| 4. 12 May 2009       | This meeting |
| 5. 25 June 2009      |              |
| 6. 13 August 2009    |              |
| 7. 1 October 2009    |              |
| 8. 11 November 2009] |              |

**ATTACHMENT 1****REMOBILISATION OF LEAD AND NICKEL IN ESPERANCE****Project Scope****1. Objective**

The purpose of the Consultancy is to determine if lead and/or nickel residues in the Esperance townsite are being remobilised and if so by what mechanism.

**2. Background**

The town of Esperance was contaminated with lead carbonate during handling and loading of lead carbonate concentrate during the period April 2005 to March 2007.

The Parliamentary Inquiry into the cause and extent of lead pollution in the Esperance Area by the Education and Health Standing Committee, tabled in the Legislative Assembly on 6 September 2007 provides definitive background.

The Inquiry showed that as a result of emissions of lead from the Port of Esperance, residential and commercial premises in the town of Esperance, as well as the environment, have been contaminated by lead dust, with consequential impacts on the environment and community including elevated blood lead levels in children.

There remains some lead, and to a lesser extent, nickel contamination in the town of Esperance.

The Government has given a commitment to a comprehensive cleanup of the Esperance townsite. The Premier's statements to the Legislative Assembly on 3 December 2008 refer.

A Steering Committee has been established to oversee the Esperance Cleanup and Recovery Project [ECRP]. This Steering Committee includes officers from relevant government agencies [Department of Health DOH), Department of Environment and Conservation (DEC), LandCorp, the Department for Planning and Infrastructure], the Shire of Esperance and community representatives [including the Esperance Chamber of Commerce and Industry].

The Department for Planning and Infrastructure [DPI] is the responsible agency to manage the cleanup project. Other Government agencies involved in this cleanup project include DOH, DEC and the ChemCentre.

### **3. Description of the project task.**

In order for the cleanup project to be effectively carried out, it is essential to establish whether lead and/or nickel is recirculating within the Esperance environment and if so the mechanisms by which this may be occurring. The assessment should determine whether there are implications of any remobilisation to public health and the project of cleaning the premises in the townsite.

There are several existing data sets which can be interrogated in order to assess this issue. Those data sets include:

- The ongoing high vol and depositional gauge environmental monitoring program conducted by the Esperance Port Authority,
- The ongoing environmental monitoring program conducted by the Department of Environment and Conservation [DEC]. This includes annual [March] monitoring of vegetation.
- Recent [February 2009] intensive monitoring of 21 homes in Esperance which includes re-sampling of homes previously cleaned.
- The DOH/University of WA Survey of Lead and Nickel Levels in Esperance Rain Water Tanks
- Locals for Esperance Development (LED) survey of lead and nickel residues in Esperance homes,
- Risk Assessment Report by Golder Associates [April 2009]
- Studies by the Conservation Council of WA on lead content in bird feathers.
- Monitoring of lead concentrations in Esperance playgrounds by the Shire of Esperance.

This listing of data sets is not exclusive. Further studies are planned or in the course of implementation. The relevance of these further studies should be assessed in relation to the question of remobilisation.

The Consultant will be required to investigate the issue with relevant agencies and NGO's including:

- Department of Environment and Conservation.
- Department of Health - Environmental Health Branch
- Conservation Council
- Esperance Port Authority and its relevant consultants
- Locals for Esperance Development
- Shire of Esperance

The Consultant will provide advice and recommendations on whether the existing data is adequate to provide a definitive answer to the question or whether additional studies are required or desirable.

#### **4. Accountability and Key Stakeholders**

The Consultant will be directly accountable to the Project Director, Esperance Cleanup and Recovery Project.

A small Working Group is to be established by the Project Director to coordinate the work of the Consultant. The Working Group includes representatives from DEC, DOH, the Shire of Esperance and the Esperance Community [LED]. The Consultant will report in the first instance to this Working Group.

#### **5. Project Deliverables**

The consultant is required to prepare a report of the assessment and to provide a presentation of the findings to the ECRP Steering Committee.

#### **Format of Report**

The *Consultant* shall provide an electronic copy (suitable for use with Microsoft Windows 2000) of any drafts and for the final report. The Report shall be of a professional standard and include:

- a summary;
- introduction;
- documentation of the findings of all investigations;
- assumptions made and their basis;
- consultation undertaken;
- conclusions and recommendations and the rationale behind these;  
and
- relevant figures
- references to or and appendix of data accessed.

#### **6. Timing and Contract Period**

It is anticipated that the *Consultant* will commence around late May and submit a final report by 30 June 2009. This is a period of approximately 6 weeks though the *Contract* will remain in place until the *Services* are completed to the satisfaction of the Principal.

It is estimated that up to 100 hours will be sufficient to complete the required investigation.

## **7. Travel Expenses and Disbursements**

The Consultant may need to undertake travel outside the Perth Metropolitan Area (mainly Esperance) in the performance of the Services, the *Consultant* shall be entitled to claim reasonable travel, accommodation expenses and disbursements

- Travel disbursements including accommodation, meals etc. will be paid to the *Consultant* up to a maximum value of the Public Service Rates and *Client's* policy (06.07 Travel Allowance) current at that time. A copy will be made available on request;
- Airfares will be reimbursed up to the maximum value of economy rates or equivalent for chartered air flights; and
- Travel outside the Perth metropolitan area, will be paid in accordance with the applicable Australian Taxation Office rate per kilometre.
- Car parking expenses, will be reimbursed subject to the production of receipts and/or other supporting documentation to the satisfaction of the *Principal*

The *Consultant* is required to obtain the approval of the *Client's* representative prior to incurring costs for disbursements.

The *Consultant* is to provide the *Client's* representative with invoices/receipts of the approved disbursements prior to any reimbursement being made by the *Client*.

The above shall also apply, where applicable to any additional work agreed to by the Department.