

HAZARDOUS PAINT MANAGEMENT

CAPABILITY STATEMENT

CTI CONSULTANTS PTY LTD

ABN 56 003 824 815

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INTRODUCTION

CTI Consultants Pty Ltd is recognised as Australia's leading consultancy in lead and hazardous paint management, having been active in this field since 1992. The directors and associates of CTI Consultants hold qualifications relevant to lead paint management and have extensive experience in this subject.

Fred Salome is a qualified chemist and corrosion technologist with more than 35 years experience in the heavy-duty coatings industry. He has completed training as a Competent Person/Supervisor for de-leading work under a US OSHA and US EPA accredited training program run by the SSPC. He is a NACE International Certified Coating Inspector (Marine) and a NACE Protective Coatings Specialist, and a lead lecturer in the NACE Coating Inspection Program.

Fred has been actively involved in lead paint management since 1991 and has published a number of articles on the subject. Since 1994 Fred has been running training courses on lead paint management, and he is a member of Standards Australia Committees MT/14 and CH/03, and is the current chairman of Subcommittee CH/3/11, "Lead paint management".

Carol Bodle holds an Honours Degree in Medical Science, a Masters Degree in Applied Science (Occupational Health and Safety), and a Graduate Certificate of Industrial Hygiene from Deakin University.

Carol has been a director of CTI since 1995, and is actively involved in carrying out assessments for lead hazards and performing risk assessments and safety training for workers exposed to hazardous substances.

Bill McEwan is one of Australia's foremost metallurgists with vast experience in protective coatings. Since 1994, Bill has also been actively involved in lead paint management and has provided the day-to-day supervision and monitoring of lead paint removal from road bridges.

EQUIPMENT

CTI possesses a range of specialised equipment for use in detecting and monitoring lead, including:-

- **Portable XRF Lead Analyser**

Niton XLp 300 portable XRF for field use in detecting and quantifying lead in paint.

- **High Volume Air Samplers**

Ecotech 3000 high volume air samplers for measuring the concentration of Total Suspended Particulate (TSP) lead, dust and other contaminants in ambient air (to AS 2724.3).

- **Occupational Exposure (Personal Air Samplers)**

Dupont Model P2500 personal air pumps, intrinsically safe, with full calibration, filter handling and sampling head support equipment.

- **Paint Inspection Equipment**

Full range of paint inspection equipment including electronic dry film gauges, paint inspection gauges, pull-off adhesion testers, holiday detection and surface profile gauges, and a range of equipment for determining levels of lead contamination on surfaces.

Low power field magnifiers and high power laboratory microscopes.

Laboratory equipped for basic chemical and paint testing procedures.

CAPABILITIES

CTI personnel are qualified and experienced in carrying out a wide range of lead paint management and related services, including:-

- **Surveys for Lead**

On-site surveys for the detection and quantification of lead in paint as well as surveys for lead in elements of the environment including soil, dust, water and air.

- **Lead Paint Management Specifications**

Preparation of specifications or work programs for the effective treatment of lead paint, in industrial settings as well as for domestic and commercial buildings. CTI can also recommend appropriate contractors or suppliers, and we can supervise and inspect all aspects of the work.

- **Environmental Monitoring**

Ground surveys for lead in soil & sediment, surveys for lead in water and ambient air monitoring programs. Assessment of lead contaminated wastes.

- **Occupational Risk Assessments**

Exposure monitoring for lead and other health risks; medical surveillance programs; risk assessments and design and implementation of control programs; lead awareness training and safety inductions; PPE and respiratory protection programs.

EXPERIENCE

Major clients and recent projects involving lead paint management are as follows.

INDUSTRIAL LEAD PAINT MANAGEMENT (SPECIFICATIONS AND/OR ENVIRONMENTAL MONITORING)

Survey background levels of lead in the environment; design and/or implementation of environmental monitoring programs for lead paint removal works, for a range of clients, including the Roads and Traffic Authority of NSW, NSW State Rail and Tasmanian Dept. of Transport.

Specific projects include:

- NSW RTA; Ryde Bridge, Background Environmental Monitoring and Review of contractor QA and Compliance (NSW RTA, 1993- 1995)
- NSW City Rail, Tempe Bridge, Environmental Monitoring (c/- Wilson Welders, 1994)

- Queensland Rail; Macrossan Railway Bridge; Environmental Monitoring (c/- Southern Steeplejacks; 1993 to 1996)
- National Rail, Two Wells Railway Bridge and Hutt River Bridge, SA (c/- Southern Steeplejacks; 1994-1997)
- Tasmanian Road Bridges Lead Paint Removal; Contract Administration and environmental monitoring (1994/95, 1996/97, 1997/98 and 1998/99)
- Dept. of Land & Water Conservation; Stevens Weir (Deniliquin) & Yarrawonga Weir (c/- Southern Steeplejacks; 1997)
- NSW RTA Bridge Section, Sydney Harbour Bridge, North Approaches (design of air monitoring program, 1995)
- NSW RTA Prince Alfred Bridge over Murrumbidgee River, Gundagai (design of environmental monitoring program, 1998)
- Queensland Rail; Alexandra Railway Bridge, Rockhampton, Qld, – provision of environmental monitoring services (c/- Lothway TBS, 1998)
- Queensland Rail; Charley's Creek Railway Bridge, Chinchilla, Qld – provision of environmental monitoring services (c/- Thomas Contracting, 1999)
- Queensland Rail; Antigua Railway Bridge, Maryborough, Qld, – provision of environmental monitoring services and on-site training of lead paint operators (c/- Diamond Protective Coatings; 1999)
- ESSO/BHP Longford Gas Plant reconstruction, Risk assessment and review of OH&S systems and practices, (c/- Lothway TBS, 1999).
- Queensland Main Roads; Review of environmental and OH&S specifications, Border Bridge and Captain Cook bridge/Riverside Expressway (1998/99).
- Queensland Main Roads; Border Bridge, Goondiwindi – provision of environmental monitoring services (c/- Gardner Perrott, 1999)
- VicRoads, Merri River Bridge, Warnambool – provision of environmental monitoring services (c/- TPC Painting Contractors, 1999)
- VicRoads, Albert River Bridge, South Gippsland – provision of environmental monitoring services (c/- Thomas Contracting, 1999)
- AWT Engineering (Sydney Water), specifications for lead paint removal, heritage Fence at Centennial Park, Pipe Bridges at Duck, Subiaco & Vineyard Creeks, Aqueducts at Wolli Creek, Cooks River & Khartoum Road (1998/99), Aqueducts at Mosman and Lane Cove (2000), Thackeray Street Aqueduct, Camellia (2001)
- Princess Bridge, Melbourne – Coating assessment and development of lead paint management specification, Maunsell Partners, 2000

- Sydney Water Pipe Bridges at Subiaco Creek & Vineyard Creek, Provision of environmental monitoring services (Transfield Coatings, 2000)
- Burdekin River Bridge (Home Hill, Queensland); Preparation of Environmental Management Plan, Provision of Environmental monitoring and Review of Worker Protection Procedures including on-site inductions and training (2000- to 2016; ongoing).
- Sydney Water Aqueducts and Pipe Bridges at Cooks River and Wollie Creek; Provision of environmental monitoring services (Lothway TBS, 2001).
- Nepean River Railway Bridge at Penrith; Condition survey and specification; NSW Rail Infrastructure Corporation, 2001.
- Victoria Bridge at Picton; Lead Paint Management Study for RTA Southern Region (c/- Environmental Risk Management Pty Ltd, 2001).
- Sydney Water Centennial Park Heritage Fence, Provision of environmental monitoring services (Lothway TBS, 2001).
- Wayatinah Woodstave Pipeline, Hydro Electric Commission of Tasmania - Provision of environmental monitoring services and OH&S monitoring (Transfield Coatings, 2001).
- Sydney Water Reid Park Aqueduct (Mosman) – Provision of environmental monitoring services (Lothway TBS, 2002).
- Sydney Catchment Authority, Warragamba Dam Valve House – Lead Survey, specifications, REF, 2002, 2016.
- Hammerhead Crane at Garden Island Dockyard – Lead Survey, Condition Assessment and Demolition Hazard Management Implementation 2002 to 2015.
- Warragamba Pipeline Valves, Environmental Monitoring (Transfield Services, 2003)
- Roof of Digester, Sydney Water Hornsby STP (SEAT Corrosion, 2003)
- Lead and asbestos paint investigations, NSW RTA, Glebe Island Bridge, Unwins Bridge and Tom Ugly's Bridge, 2002-2003.
- Sydney Harbour Bridge southern approaches repainting, OH&S training and monitoring, NSW RTA Maintenance Section, 2003.
- Nepean River Railway Bridge refurbishment; Provision of environmental monitoring services NSW Railcorp, 2004-06.
- Tom Ugly's Bridge Refurbishment, Provision of environmental monitoring services Lothway-TBS, 2006/07.
- Manly Ferry Wharf Refurbishment, Provision of environmental monitoring services and coating inspection NSW Maritime, 2006/07.
- Minnamurra Railway Bridge refurbishment; Provision of environmental monitoring services and coating inspection NSW Railcorp, 2007.
- Paringa Bridge Refurbishment at Renmark, Provision of environmental monitoring services Thomas Contracting, 2007
- Thackeray Pipe Bridge Refurbishment, Provision of environmental monitoring services and coating inspection Networks Alliance 2007.
- Como Bridge Refurbishment, Provision of environmental monitoring services and coating inspection Networks Alliance 2008/09.
- Warragamba Dam Upgrade, Provision of environmental monitoring services Geotech Engineering, 2008/11.
- Port Adelaide Viaduct, Provision of environmental monitoring services, Boulderstone 2009/10.
- Herbert River Bridge, Provision of environmental monitoring services and training, Contract Resources, 2010.
- Bungambrawatha Bridge (Albury) Provision of environmental monitoring services and site audits NSW RTA, 2008.
- Swan Hill Bridge Provision of environmental monitoring services and site audits NSW RTA, 2008/09.
- Martin Bridge (Taree) Provision of environmental monitoring services, training and site audits NSW RTA, 2008/09.
- Elevated Water Tank (Railcorp) at Waterfall (SA) Provision of environmental monitoring services Giovenco Ind., 2009.
- Birkenhead Bridge (SA) Provision of environmental monitoring services and site audits (Thomas Contracting, 2009).
- Rothwell Road Aqueduct (Sydney) Provision of environmental monitoring services and site audits Lothway-TBS, 2009/10.
- Torrens River Bridge (SA) Provision of environmental monitoring services and site audits Thomas Contracting, 2010.
- Tuross River Bridge (NSW) Provision of environmental monitoring services and site audits Thomas Contracting, 2010-2011.
- Callington Railway bridge (SA), Provision of environmental monitoring services and training, (Eptec, 2010).
- Northern Aqueducts (Sydney Water) Provision of environmental monitoring services and site audits (Networks Alliance, 2009-2014).
- Wardell Bridge - Provision of environmental monitoring services and site audits - PES for NSW RTA, 2011-2012
- Ballina St Bridge Lismore - Provision of environmental monitoring services and site audits – RMS Northern, 2014-2016
- NSW RMS – Condition assessment and lead paint management plan, Hawkesbury River Bridge, 2014
- NSW RMS – Hazardous paint management services on numerous regional structures, 2012 to 2016 (ongoing)

LEAD PAINT MANAGEMENT POLICY DEVELOPMENT

Provide advice and training, and assist in policy development for lead paint management. Develop and review specifications for lead paint projects.

- NSW Roads and Maritime (formerly Roads & Traffic Authority of NSW)
- National Transmission Agency
- Broadcast Australia
- Sydney Water Corporation
- Sydney Catchment Authority
- NSW National Parks & Wildlife Service
- ACT Department of Works and Services (CAMMS)
- Main Roads Queensland/RTCS Northern
- Develop and implement Hazardous Paint Management Protocols wide range of private contractors engaged in industrial lead paint management.

LEAD SURVEYS (DOMESTIC & PUBLIC BUILDINGS)

Carry out surveys for lead in paint, soil and dust for private residents. Conduct surveys of public buildings for lead in paint, soil and dust. Specific larger projects include:

- Ambient air monitoring at child care centres (Strathfield and Blacktown).
- Lead survey for Sydney Airport Noise Insulation Project.
- Specialist Consultant on lead paint management on commercial buildings (Axiom, Arup Facade Engineering, and others).
- Lead assessments on numerous commercial and residential buildings and child care centres (1993 – 2000), including Ku-ring-gai Council Child Care centre at Gordon (99/2000), Hunters Hill Baby Health Centre (1999).
- Assist Department of Housing Tasmania to develop contractor training and assessment procedures, 1999/2000.
- Lead assessments and development of re-painting specifications, including St Francis Xavier Cathedral, Wollongong (1999), Sydney University Pharmacy Building (1998), Sydney University Camden Campus (1999), St. Aubins stud, Scone (2000), News Limited building, Surrey Hills (1999), 5 Cumberland Street, The Rocks (for Bridge-Climb, 1998).
- NSW Housing – Investigation and remediation of lead hazards in public housing, Macquarie Fields (2001).
- Arnotts Site Refurbishment, George Street Homebush – Surveys for lead in paint – Haslin Constructions (2002/3).

- NSW DPWS – Investigation, specification and inspection – refurbishment of Walsh Bay Finger Wharf 4/5 (2002/3).
- NSW DPWS – Investigation, specification and inspection – refurbishment of Walsh Bay Finger Wharf 2/3 (2010).
- Education Building – Sydney – lead assessments, specifications and monitoring of repairs to steel-framed windows, 2008 – 2010 (State Property Authority)
- Chief Secretary's Building, Sydney – Lead paint surveys, specifications and monitoring of lead paint removal from vaulted balconies (State Property Authority, 2009/2010)

CONTAMINATED SITE INVESTIGATIONS

Conduct site sampling programs, arrange analysis, reporting of results and interpretation, for contaminated sites or sediment;

- Investigation, remediation and validation of industrial site at Blacktown (Evic Pty Ltd),
- Investigate extent of reported soil contamination, Cockatoo Island (Allen Allen & Hemsley),
- Contaminated site study, vacant land (Ashfield Council),
- Sediment sampling for proposed dredging associated with marina developments at Exile Bay and Long Bay, Sydney Harbour (in association with Pollution Research Pty Ltd).
- Sediment sampling for contaminated underwater sediment; and sampling of wharf timbers for arsenic; Berry's Bay, Sydney Harbour (in association with Pollution Research Pty Ltd).
- Lead paint remediation and soil contamination surveys, South Head Signal Station, Sydney, NSW Dept of Commerce, 2006-08.

OCCUPATIONAL HEALTH AND SAFETY

Monitoring for occupational exposure on lead paint management projects, including:-

- Tasmanian Lead Paint Removal from Bridges (1994 to 2001)
- Sydney Harbour Bridge Maintenance Painting (1997/98)
- Macrossan Railway Bridge refurbishment (1993-95)
- Monitoring lead exposures from demolition activities, Woolloomooloo Finger Wharf development (1998)
- Research on correlation between occupational exposures and lead content of abrasives (1996)

- Monitoring for occupational exposure for lead when blast-cleaning with zinc slag abrasive (for RTA Technology) 1996.
- Monitoring for occupational exposure to silica when blast-cleaning with sand abrasive; 1998.
- OH&S Monitoring on numerous bridge projects, including Bungambrawatha Creek (Albury), SHB Bridge Alliance, Tom Ugly's Bridge, Nepean Rail Bridge and Thackeray ST Pipe Bridge.
- Survey for zinc chromate contamination from paint removal activities in RAN ships and weapons systems, Royal Australian Navy, 2001 to present.

OH&S Training in lead awareness and site specific safety and hygiene procedures for workers carrying out hazardous paint management paint management tasks, including:-

- Macrossan River Bridge and sundry bridges in SA, (for Southern Steeplejacks Pty Ltd).
- West Ryde Railway Bridge over Victoria Road, Sydney (for Transfield Construction).
- Tasmanian Road Bridges (for Lothway TBS, 1995 and TPC Painting Contractors, 1997/98).
- Conduct OH&S audit of Old Ryde Bridge Refurbishment contractor (for Roads and traffic Authority of NSW).
- Lead survey and advice on environmental and OH&S aspects of demolition of oil storage tanks, BP Oil, Waverton.
- Workshop seminars (full day) in environmental and OH&S monitoring of lead paint removal projects, for ACA (Adelaide, Melbourne, Launceston, Perth and Brisbane)
- Lead Paint Management Training Program, in conjunction with Macquarie University, 3-day program, 1996-1998.
- "Responsible Person for Lead Paint Management Training Course", endorsed by CSIRO/APAS as meeting the training requirements for PCCP Class 5 accreditation (> 700 people trained 1998 to present)
- Safety inductions for lead work, various contractors involved in demolition work (lead dust hazards) and lead paint removal.
- "Responsible Person for Cavity Dust Removal Training Course", endorsed by Australian Dust Removalist Association (ADRA), 2000.
- Safety inductions and safe work practices for Zinc Chromate Paint, RAN and its contractors, Garden Island Dockyard (NSW), 2001.
- Safety inductions and safe work practices for Lead and Zinc Chromate Paint, Broadcast and its contractors, Brisbane, 2010.

INDUSTRY INVOLVEMENT

CTI Consultants has participated directly in the following industry activities.

- Participation in Value Management Study into RTA strategy for managing lead paint removal from bridges (1993), and assisting the RTA on environmental monitoring on such projects. Participation in VM Study for Grafton Bridge (jointly organised by RTA and NSW State Rail Authority, 1996).
- Participation of the Lead-in-Paint Working Group of the NSW Govt. Interdepartmental Lead Taskforce (representing the LEAD Group), 1993/94.
- Member of Standards Australia Sub-Committee CH/3/11, Lead Paint Management, 1996-98.
- Participation in Panel Discussion on Lead Paint Removal at the NSW BCCA Industry Forum, September 1994. Presentation at BCCA National Conference, Gold Coast, August 1997.
- Presentation at various seminars and conferences on the subject of lead paint removal from structures, including Standard Australia launch of AS 4361.2, June 1998.
- Workshop Leader, one-day workshops on "Environmental and OH&S Monitoring for Lead Paint Removal", Australasian Corrosion Association, Adelaide December 1994, Launceston, Melbourne, Brisbane and Perth, 1995.
- Attendance at Commonwealth EPA Meeting of Experts to discuss advice to community on lead in paint (1995).
- Presentation of training workshop "Managing Lead Paint in Old Buildings" to ACT Asset Management Services, August 1995.
- Contribution and ongoing review, Environment Australia brochure "Lead-alert – Six Step Guide to painting Your Home".
- Development and presentation of "Lead Paint Management" training course which has been approved by the CSIRO/APAS for "Responsible Person" as part of PCCP Class 5 & Class 6 accreditation, 1998 to 2016 (ongoing).

Fred Salome also holds (or has held) the following positions within the industry

- President, Australasian Corrosion Association, 2007
- Director (Membership), Australasian Corrosion Association, 2008 – present
- NSW Branch of the Australasian Corrosion Association; Secretary 1997 – 2001, President 2001-3. Committee member 2003 to present.
- Protective Coatings Technical Group of the Australasian Corrosion Association, Secretary (1996-97); Chairman, (1998/9)
- ACA representative on the board of Abrasive Blast Cleaning & Coating Association Australia Ltd (1998 – 2005)
- President and Public Officer, The LEAD Group Inc. (1996 to 2004)
- Committee Member, BCCA-of NSW, Inc (2001)
- Standards Australia Committees Chairman, CH/3/11, Lead Paint Management (to present), Member, CH3 and CH3/10 Site Testing of Protective Coatings (to present), Member, CH14 and CH/14/2 Corrosion Protection of Steelwork (to present),
- NACE and ACA accredited lecturer in Coating Inspection

CTI Consultants Pty Ltd

For more information, contact:

HEAD OFFICE (SYDNEY)

28 Moxhams Road, Northmead NSW 2152
PO Box 25, Northmead NSW 2152

Directors

Fred Salome (0418 276 819)
fred@cticonsultants.com.au

Carol Bodle (0418 207 106)
carol@cticonsultants.com.au

Or visit us at

www.cticonsultants.com.au