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18 AUGUST 2010

Major Projects
PLANNING NSW
BOX 39
G.P.O.
SYDNEY
N.S.W. 2001

Attention Christine Chapman

Re NATIONAL CERAMIC INDUSTRIES. – Expansion at Rutherford.

Dear Christine

Thank you for the extension of time that you kindly allowed me in relation to the above matter.

My six pages of comments are enclosed plus a C.V. which details my involvement in relation to the effects of industrial pollution on rural production.

Yours Faithfully

ROBERT KERRIGAN

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Attention Christine Chapman

Re NATIONAL CERAMIC INDUSTRIES. – Expansion at Rutherford.

I wish to pass comment re the above document MP 09-006-Proposed Expansion of Ceramic Tile Manufacturing Facility (National Ceramic Industries Australia-NCIA), 175 Racecourse Road, Rutherford, N.S.W.

My comments are restricted to the matter of flourine output from the existing facility and its effect on vegetative growth within the area affected by gaseous emissions output from that facility.

We live at 709 New England Highway Lochinvar and have been resident on this rural property since 1970, some 40 years occupancy.

In 1970, we planted an ornamental grape vine, directly at the back of our house for two reasons. Firstly for protection from the summer sun by the vegetative growth and secondly as a diagnostic tool, being a biological indicator of possible excess fluoride emissions from the aluminium smelter at Kurri Kurri, located some 11 kilometres due south of our property. At that time there was considerable concern in the district as to fluoride output from that smelter. My previous experience, and on advice from others, had shown that grape vines were a very good indicator plant of excess fluoride being present in the atmosphere.

In the initial period from 1970 to 1980, the grape vine did, in fact, show reduced and abnormal growth from excess flouride concentrations at various times during that 10 year period. The aluminium smelter at Kurri improved their flouride emissions control in the early 1980's and we would appear to have had no obvious flouride damage to the grape vine since the early 1980s, until the recent detrimental signs of excessive flouride concentration which has coincided with the development of the tile manufacturing company at Rutherford.

My previous experience in fluoride damage to horticultural crops commenced in 1967, when I became involved as an expert witness in what was to become a significant legal matter where three stone fruit orchards had their physical production and hence income dramatically reduced from fluorine output from a nearby industrial complex. This matter continued until 1983, or for 16 years, the length of time that it took the stone fruit trees to recover completely from the excess fluoride in the atmosphere originating from the industrial complex.

As a result of this matter, I then became involved with assessment of fluoride damage in horticultural crops in many parts of Australia, using visual vegetative signs of excessive fluoride as the prime diagnostic tool, naturally followed by the relevant chemical analysis of horticultural species and adjacent vegetation species.

Complete details of my experience etc, is provided for you in the attached Curriculum Vitae.

The grape vine planted at 709 New England Highway at Lochinvar has shown evidence of mild fluoride affectation in the growing seasons of 2007/2008, 2008/2009, 2009/2010.

This grape vine is located approximately 4.8 kilometres from the tile manufacturing plant in a westerly direction and approximately 500 metres due west of existing Air Quality Receptor 12

As our practical experience, over some 43 years, has shown fluoride to accumulate, over time, measured in years, in perennial plants, and as grape vines are perennials, it is obvious from past experience that, existing flouride reduction/ control processes in operation at the National Ceramic Industries Rutherford plant are not adequate enough to reduce actual fluoride concentration in emissions to the atmosphere to levels which do not affect perennial horticultural plants at a distance of 4.8 kilometres in a westerly direction from the processing facility

Of all the emissions predicted to come from the eight production lines, Hydrogen fluoride emissions are ranked highest on TABLE 3 – PRIORITISATION OF ENVIRONMENTAL ISSUES. They have a severity ranking of 2, a consequence ranking of 3 and a Priority of 5, being ranked High and at the top of the table. Hydrogen Flouride Emissions are the only Environmental Issue that is ranked HIGH with a Priority of HIGH. I agree with this ranking as my practical experience, over many years, has shown fluoride to be a very insidious, "silent and non smelling" pollutant which has already caused significant damage to vegetation by the time that the initial physical symptoms of affected plants are noticed by experienced observers.

We have no idea of what any measureable levels of flourine may have been in the past six or so years simply because there is no Air Quality Receptor data available for our location. Taking data from elsewhere and relating that date to our property will only produce "useless results" due to our many years of observations of physical atmospheric pollution results from stratified air flows across the flat area to the east of our property and west of the National Ceramics site.

The existence of air quality receptors and or any emission measuring program, operating from the start of production in Stage 1 of this facility was never made known to the general public. Secondly had those responsible for the location of the air quality receptors made inquiries of local residents, the writer and other residents could have provided them with information collected over 40 years of the effects of atmospheric pollution upon plants, both annual and perennial, as well as significant deterioration of gutters and fencing wire. We could have also indicated areas where air quality receptors have been installed, the actual results of which could have been predicted from experience, and are now a waste of time and resources.

Our property at 709 New England Highway Lochinvar has been subject to atmospheric industrial pollution for many years, initially from the high sulphur coal being used to fuel the boiler house at National Textiles and its predecessors as well as the other atmospheric emitters that exist in the Rutherford Industrial estate and operated prior to the commencement of production at National Ceramic Industries.

The report available on the PLANNING NSW WEB site states in:- TABLE 5 – SUMMARY OF COMPLIANCE EMISSION ASSESSMENT RESULTS - that Flourides emitted from the existing two operating production lines were only measured at the stacks servicing the drying kilns. There is no data presented which provides actual Flouride Readings at Air Quality Receptor Sites and or Emission Discharge Points

TABLE 6 – DISCHARGE CONCENTRATION MONITORING REQUIREMENTS details the emissions discharge points ,both within the property boundary and external to the property boundary. The pollutants to be measured for each discharge point are detailed and can be summarised as follows:-

For Discharge Points, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 18, 19, 20, 21, Pollutants able to be measured are:-

Velocity
Volumetric Flow Rate
Temperature
Moisture content in stack gases
Dry gas density
Molecular Weight of stack gases
Solid particles.

For Discharge Points 14, 15, 16, 17, Pollutants able to be measured are:-

H2SO4
Any fluorine compound (HF)
NO2 or NO or both
Hazardous substances (12 listed)
Cadmium
Mercury
Solid Particles
Velocity
Volumetric Flow Rate
Temperature
Moisture content in stack gases
Dry gas density
Molecular Weight of stack gases
CO2
O2

This information reveals that actual output of any Flouride compound can only be measured at four discharge points, being from the factory itself. This information clearly indicates that there is not available any information in relation to the actual measurement at any time of fluoride containing compounds at any of the air quality receptor measuring sites NOs 1-13 and 18-21 inclusive.

TABLE 10 – PROJECT MAXIMUM PREDICTED AIR EMISSIONS-GLCs for PM10, TSP and HF(ug/m3) provides Maximum Predicted Air Emissions for 8 production lines, or full production, for the three nominated pollutant sources with TOTAL FLOURIDE being represent as HF, as projected to be measured by the Sensitive Receptors being Boundary Receptors nos 1, 2 and 3, Existing Residential Receptors 4 to 19 inclusive and Potential Residential Receptors 20-22 inclusive.

There is no base data for these various sensitive receptors being number1 to13 inclusive and 18 to 21 inclusive, at any stage during the period of operation to one of two production lines.

There is also no explanation of how the predicted air emission were calculated in TABLE 10 so in the absence of that basic data, and method of calculation, it must be assumed that the MAXIMUM PREDICTED AIR EMISSIONS are a "guessetimate" of some kind and therefore should not be considered in any way in the evaluation of this report as the projected figures do not have any explained factual basis.

My experience, over 43 years, has led me to be able to prove that the current flouride levels in emissions, allowed by the state authorities and required to be produced from industrial activities in NSW is, in many instances, simply too high to provide flouride levels in the atmosphere which will not adversely affect vegetative growth. This particularly is the case where weather conditions can be subject to rapid change and where "atmospheric layers" of polluted air can exist, as in the area of 709 New England Highway Lochinvar.

I have always found that plants can tell if flouride is in excess in the atmosphere, often well before the receptor or machine readings provide the slightest indication of such a situation.

It would appear that only two out of four production lines for ceramic tile manufacture have been used to date. With another two production lines to come "on stream" in buildings already approved and plus approval for the construction of another four production lines being sought in Document MP 09-006-Proposed Expansion of Ceramic Tile Manufacturing Facility (National Ceramic Industries Australia-NCIA), 175 Racecourse Road, Rutherford, N.S.W., it has to be obvious that the total flourine output will be 400% higher than current brief records show.

At this vastly increased level of flourine output from a production complex with eight production lines, there could well be flouride affectation of growing plants for not 400 metres from the plant location as is suggested but up to 1600 metres from that same site.

From experience, flourine does not stay in the atmosphere as hydrogen flouride but becomes stored in the vegetative material and, as detailed above, dependent on atmospheric fluoride concentration and stage of growth of the plant material, can affect plant growth for many years as well as animal growth and health of any animal species grazing pasture with flouride contamination in the plant tissue. We already have experience where it took 16 years, after fluoride contamination, for stone fruit trees affected by fluoride to get to a fluoride free status.

This whole document, namely Document MP 09-006-Proposed Expansion of Ceramic Tile Manufacturing Facility (National Ceramic Industries Australia-NCIA), 175 Racecourse Road, Rutherford, would appear to be a partial justification of previous emissions output and measurement practice for two production lines only and has simply transferred that emissions data, being generated from two production lines, to be exactly the same amount of emissions data as would be produced from eight (8) production lines. There appears to be no attempt to amplify the emissions material as presented on the Planning web site from an output for two production lines to a four fold increase of being emissions from eight production lines

There are three possible future scenarios for atmospheric emission control, neither of which is clearly spelt out in the submission. Unfortunately the submission consists of considerable amounts of duplicated material, the majority of which is irrelevant, having been already been mentioned in other parts of the report and as such makes the actual interpretation of the report much more difficult and confusing than it really should be.

The first scenario is when the Company expects the proposed two additional production lines in Stage 1 for which approval has been granted, but at this time not operational to produce nil (0) atmospheric emissions and for the additional four proposed production lines for which approval is being sought at this time to also produce nil (0) atmospheric emissions.

I personally doubt that atmospheric pollution levels could be reduced to zero but if that is technically possible, then there is no reason why the atmospheric pollution levels from the current two operational production lines could not be reduced to zero.

The second scenario would be that the emissions control for production lines 3 and 4 in Stage 1 and Production lines 5, 6, 7, and 8 in Stage 2 would produce the same quantity of atmospheric emissions per production line as detailed in the Report.

This would then mean a four fold total increase in atmospheric emissions when the eight (8) production lines were in operation.

Two further possibilities exist in this scenario.

The second possibility is a scenario where the atmospheric emissions from eight (8) production lines area equal to eight times those currently being produced from two operational production lines and that quantity of emissions only affecting that area which is currently affected being approximately 4 kilometres from the plant location. That is 8 times the pollutant concentration falling on an area roughly 4 kilometres in diameter from the plant location.

The third possibility would be that the atmospheric emissions from eight (8) production lines would affect an area 4 times that which is currently affected, that being all that area within a circle with a 1.6 kilometre radius from the plant location. This possibility assumes a pollutant concentration of the same level as currently exists from the two operational potlines.

There is nothing in the material analysed which can provided any sort of responsible answer to the above scenarios.

Further, the current submission does not produce any data that shows the effect of flouride on amenity plantings such as would normally occur in existing and or future residential areas.

With existing residential areas, being some 550 to 600 metres from the existing plant boundary and with the possibility of the Heritage Green residential development that there will be considerably more residences existing much closer than 500 metres to the plant boundary. There is therefore a strong possibility than the occupants of such residences will be unable to maintain attractive amenity horticultural plantings due to the high ambient fluoride levels.

If such is correct and there is no reason why the statement should be otherwise, current landholders whose existing houses are within 1.6 kilometres of the plant should be advised of the likely affect of pollutants on amenity horticultural plantings and that operation of vegetable gardens within that area, that is likely to be contaminated especially by flourine should be permanently prohibited. For future residential developments that may occur within 1.6 kilometres of the plant site, the landholders should be advised by real estate agents selling such lots that no amenity horticultural plantings of any description including vegetable gardens should ever by carried out on such residential blocks while ever the ceramic tile manufacturing plant is in operation.

There is also the very important point that this ceramic tile production facility shares a common western boundary (as in the case of NCI) and a common eastern boundary (in the case of Jurox). Jurox is a reasonably large manufacturer of veterinary chemicals of all kinds and I feel that they should be concerned about the possibility of any type of emission contamination from NCI of their veterinary chemical production. It is also not unusual in the human and veterinary chemical production facilities that medicines etc. for human uses are also manufactured in veterinary chemical plants, with specific production facilities.

Those people assessing this report should recognise this very important point as there exits the possibility of some one or some animal being dramatically affected by chemical products which have been contaminated by emissions coming from NIC.

CONCLUSION

The material presented on PLANNING NSW web site in relation to this matter is more a summary of the results of the previous four or five years pollution control measures and other similar matters of a ceramic production facility operating with two production lines for which previous approval has been obtained. There is repeated repetition of the same or similar material throughout reports on the web site which makes it very difficult to ascertain where and in what section is the material submitted which indicates the total expected emissions from an increased physical operational stage of 8 production lines, or four times the size of the existing operation of two production lines.

In addition, there is no consideration of the effects of vastly increased atmospheric emissions production on amenity horticultural activities and or home vegetable garden activities where fluorine levels could be increased to levels in home grown vegetables that can affect human health or on the safety of veterinary and human chemical products that may be manufactured in a neighbouring existing production facility.

Thank you for your consideration and please advice if you seek clarification or expansion on any part of this submission.

YOURS FAITHFULLY

ROBERT KERRIGAN

R.H.KERRIGAN & ASSOCIATES
Agricultural & Equine Consultants
MAROOAN
LOCHINVAR. N.S.W. 2321
Telephone 049-307286 Fax 049-342655

CURRICULUM VITAE – AUGUST 2010

ROBERT HARRY KERRIGAN

MARRIED, 3 adult daughters.

ACADEMIC QUALIFICATIONS B.Sc.Agr. (Sydney University) 1959

Major in Animal Husbandry – Nutrition.

Animal subjects studied included Veterinary Anatomy and Veterinary Physiology, same as Vet. Science students plus 3 years Biochemistry. Vet Students did 1 year Biochemistry.

PROFESSIONAL ASSOCIATIONS

M.A.I.A.S. (Australian Institute of Agricultural Science) (1958-to date)

Leading Professional (Stage 3) A.I.A.S.T.

M.A.A.A.C. (Australian Association of Agricultural Consultants).(1963-1992)

C.P.Ag (Certified Practicising Agr) 1988 to date

PROFESSIONAL & EMPLOYMENT ACTIVITIES

1959-1960 Livestock Research Officer N.S.W. AGRICULTURE.

1961-1962 Livestock Buyer Tancred & Company Queensland

1963-1965 Technical Officer Wellcome Australia Ltd.

1966-1967 Agricultural Consultant McGowan & Associates, Narrandera & Albury N.S.W.

1967 to date Self employed Agricultural Consultant – Hunter Valley N.S.W.

1972-1980 – Consultant JOHN P. YOUNG and ASSOCIATES –
MANAGEMENT CONSULTANTS-Newcastle

PRINCIPAL CONSULTING ACTIVITIES

The provision of independent professional advice on matters relating to agriculture, especially with reference to, :-

Technical matters relating to all forms of rural production in the Hunter Valley and adjacent areas of N.S.W.

Specialised agronomic and nutritional advice to the equine industry Australia wide.

Specialised services relating to agricultural litigation, planning and various legal problems relating to the rural and equine industry as well as specialised financial advice, including mediation, to rural, equine and non rural businesses, insurance companies and financial institutions, Australia wide.

Australian Bankers Association/National Farmers Federation ACCREDITED AGRICULTURAL CONSULTANT/MEDIATOR since 1988.

Australian Veterinary Chemicals Association ACCREDITATION NUMBER 5497.

DETAILS OF MAJOR PROJECT INVOLVEMENT

1. MULTI - VINEYARD STUDIES

Supervised numerous technical/financial studies on vineyard and or winery development over the past 29 years, in both the Hunter Valley of N.S.W. and other parts of Australia.

VINEYARD DISTRICT TOURISM STUDY - Cessnock City Council responsible for all the agricultural and viticultural content.

PHYSICAL AND FINANCIAL ASSESSMENT OF EFFECT OF INDUSTRIAL FLOURIDE EMISSIONS ON HORTICULTURAL PRODUCTION

2 MULTI-DISCIPLINARY STUDIES

Involved as a team member, responsible for agricultural and economic sections of studies relating to :-

ENVIRONMENTAL IMPACT STATEMENTS - OPEN CUT COAL MINES

AGRICULTURAL REHABILITATION STUDIES - OPEN CUT COAL MINES & SEWERAGE DISPOSAL

ECONOMIC EFFECT OF COAL MINES ON AGRICULTURAL PRODUCTION

EFFLUENT DISPOSAL STUDIES.

FLOOD MITIGATION STUDIES.

RURAL SOCIAL SURVEYS.

LOCAL GOVERNMENT ENVIRONMENTAL PLANS.

LAND RESUMPTION VALUATIONS AND ASSOCIATED MATTERS.

AGRICULTURAL MATTERS re GLENNIES CREEK DAM

VARIOUS MATTERS FOR R.T.A. OF NSW involving land use and highway conflicts.

As an ABA/NFF mediator I have been involved in numerous financial assessments of both rural and non rural businesses over the past 20 years and was doing that type of work for many years before that accreditation came into effect.

Due to confidentiality aspects, it is not possible for me to name the clients or the industries involved in these matters.

CONTINUED NEXT PAGE

3. FINANCIAL & LEGAL APPRAISALS , MEDIATIONS & OTHER SIMILAR ACTIVITIES.

As an expert witness, working with other professionals of various disciplines, involvement in numerous matters, now over 900, over the past 40 years, involving assessment of financial loss, economic viability and similar economic, social and financial matters relating to rural and equine activities.

Professional interests have covered the three eastern States of Australia. Due to confidentiality aspects, it is not possible for me to name the clients, the industries, and physical location or the individual subjects of these matters.

* at end of each topic indicates more than one matter.

Topics and areas of interest have included:-

Physical and financial development of vineyards, - Hunter Valley, Orange and Griffith N.S.W.*
Day to day vineyard management – Hunter Valley, Mudgee N.S.W.*
Weedicide damage to grape vines.*
Use of polluted water for irrigation.*
Poor quality plastic in strawberry production
Effect of gaseous industrial emissions on stone fruit production.*
Incorrect installation of irrigation equipment. *
Reduction in farm income due to personal accidents.*
Erosion from roadworks affecting farm income.*
Supply of incorrect vegetable seed varieties.
Bushfire damage. *
Boundary fencing disputes *
Various disputes re share-farming & property leasing agreements.*
Compensation cases, especially Mining Wardens court.*
Water licence applications.*
Effect of coal mine pollutants on physical livestock and pasture production.*
Financial loss in agriculture due to coal mining activities *
Reduction in milk income due to supply of contaminated feed.*
Rural rating applications. *
Supply of seed contaminated with noxious weeds.
Planning and subdivisional matters relating to agriculture and land zoning. *
Loss of income from destruction of stud beef herd due to introduced disease.*
Loss of income as a result of personal injury. *
Effect on rural income as a result of financial embezzlement.
Effect of road resumption and construction on primary production *
Numerous matters relating to the horse industry, involving management, insurance and financial considerations *

OTHER ACTIVITIES AND INTERESTS

1. PART TIME TEACHER N.S.W. TAFE 1975-1989 Equine and Rural Subjects.

2. Educational Course Designer – Equine and Rural Courses – NSW TAFE, NZ POLYTECHNICS, and U.K. Agricultural Colleges.

3. Author – PRACTICAL HORSE NUTRITION, HORSE FEEDING SIMPLIFIED, EQUINE ILLUSTRATED ENCYCLOPAEDIA, HORSE BREEDING videos Parts 1, 2 3 and 4, HORSES, THE BUYERS GUIDE, NATURAL HEALTHY HORSE CARE,

4. Co Author – PRACTICAL HORSE BREEDING, FARMING FACTS, FINANCES & FAILURES, PRACTICAL HORSE SENSE AND SAFETY, MUM'S AND DADS HORSE BOOK, HORSES, BASICS FOR BEGINNERS.

5. Publisher and Wholesaler – THE MARCH OF THE WALLABIES, THE KANGAROO KIDS, GYMNASTIC EXERCISES FOR HORSES, TIPPY TEACHES EMMA TO RIDE, FOALING MARE AND FOAL MANAGEMENT, DRESSAGE ILLUSTRATED, DRESSAGE TERMS DEFINED, SHOWJUMPING TERMS DEFINED, THE HORSE THAT CALLS AUSTRALIA HOME, DRESSAGE ARENAS THE RIDERS GUIDE, PRACTICAL HORSE NUTRITION, HORSE FEEDING SIMPLIFIED, EQUINE ILLUSTRATED ENCYCLOPAEDIA, HORSE BREEDING videos Parts 1, 2 3 and 4, HORSES, THE BUYERS GUIDE, NATURAL HEALTHY HORSE CARE, PRACTICAL HORSE BREEDING, FARMING FACTS, FINANCES & FAILURES, PRACTICAL HORSE SENSE AND SAFETY, MUM'S AND DADS HORSE BOOK, HORSES, BASICS FOR BEGINNERS.

6. Owner EQUINE EDUCATIONAL 1967-2007- publisher, importer, exporter and wholesaler of horse related books to the saddlery and book trade – catalogue of over 1300 titles.

7. Owner TUXEDO BOOKSHOP 1996-2008 – mail order retail horse and rural books, videos and computer programmes, etc. Catalogue of 1900 products making TUXEDO the largest web site in the world servicing these subjects. Refer www.tuxedo.com.au

8. DIRECTOR – NSW HORSE COUNCIL 1991 – 1996

9. Contributor monthly articles relating to the horse industry to HOOFS AND HORNS, HORSE AUSTRALIA, THE BLOODHORSE REVIEW all in Australia and PACEMAKER in the U.K.

10. STEWARD – ROYAL EASTER SHOW 1959-1997 (38 years)

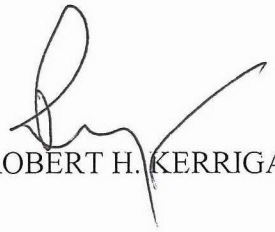
11. Judge – RAS OF NSW – FARM SOFTWARE COMPETITION

12. Primary Producer – 1966-1989 – beef cattle lucerne growing and haymaking and dairy farming. Physical injury in 1987 led to cessation of these activities.

13. Specialist timber wholesaler – Australian native species.

14. Horse owner, exhibitor and competitor from 1959 to 1986 in rodeo, campdrafting, eventing, dressage and stock horse events.

Additional details and further clarification can be provided if required.



ROBERT H. KERRIGAN