

**CHEMICAL AND BIOLOGICAL PROPERTIES
OF LEONARDITE AND ITS POTENTIAL USE
FOR SOIL FERTILITY AND RICE
YIELD IMPROVEMENTS**

CHANYUT RATANAPROMMANEE

**DOCTOR OF PHILOSOPHY
IN SOIL SCIENCE AND NATURAL RESOURCES
MANAGEMENT**

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**GRADUATE SCHOOL
CHIANG MAI UNIVERSITY
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**A THESIS SUBMITTED TO CHIANG MAI UNIVERSITY IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF
DOCTOR OF PHILOSOPHY
IN SOIL SCIENCE AND NATURAL RESOURCES MANAGEMENT**

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THIS THESIS HAS BEEN APPROVED TO BE A PARTIAL FULFILLMENT OF
THE REQUIREMENTS FOR THE DEGREE OF
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IN SOIL SCIENCE AND NATURAL RESOURCES MANAGEMENT

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