

<b>CONTENTS</b>	<b>ACKNOWLEDGEMENTS .....</b>	<b>5</b>
	<b>ABSTRACT .....</b>	<b>6</b>
<b>1 INTRODUCTION .....</b>		<b>7</b>
<b>2 STATE OF THE ART .....</b>		<b>8</b>
<b>2.1 Stabilization/solidification of waste .....</b>		<b>8</b>
<b>2.2 Asphalt .....</b>		<b>9</b>
<b>2.3 Asphalt emulsions .....</b>		<b>11</b>
<b>2.3.1 The breaking process .....</b>		<b>11</b>
<b>2.3.2 Application of asphalt emulsions.....</b>		<b>12</b>
<b>2.3.3 Asphalt emulsion modification.....</b>		<b>13</b>
<b>2.4 Assessment of stabilization efficiency.....</b>		<b>16</b>
<b>2.4.1 Leaching procedures .....</b>		<b>16</b>
<b>2.4.2 Long-term behavior .....</b>		<b>18</b>
<b>3 AIMS OF WORK .....</b>		<b>19</b>
<b>4 MATERIALS AND METHODS .....</b>		<b>20</b>
<b>4.1 Asphalt emulsions .....</b>		<b>20</b>
<b>4.2 Wastes .....</b>		<b>22</b>
<b>4.2.1 Waste A.....</b>		<b>23</b>
<b>4.2.2 Waste B .....</b>		<b>25</b>
<b>4.2.3 Waste C .....</b>		<b>26</b>
<b>4.3 Stabilization/solidification techniques.....</b>		<b>30</b>
<b>4.3.1 One-step addition .....</b>		<b>30</b>
<b>4.3.2 Two-step addition .....</b>		<b>30</b>
<b>4.3.3 Three-step addition .....</b>		<b>30</b>
<b>4.3.4 Four-step addition .....</b>		<b>31</b>
<b>4.4 Leaching tests.....</b>		<b>31</b>
<b>4.4.1 Toxicity Characteristic Leaching Procedure .....</b>		<b>31</b>
<b>4.4.2 Aqueous leaching test .....</b>		<b>32</b>
<b>4.5 Applied instruments .....</b>		<b>32</b>

5 MATHEMATICAL MODEL OF LEACHING .....	34
5.1 Analytical solution of the model.....	38
5.2 Kinetics of the leaching process .....	39
6 RESULTS AND DISCUSSION .....	41
6.1 Comparison of different asphalt emulsions .....	41
6.1.1 Comparison of asphalt emulsions for S/S of waste A .....	41
6.1.2 Comparison of asphalt emulsions for S/S of waste B .....	43
6.1.3 Comparison of asphalt emulsions for S/S of waste C .....	44
6.2 Stabilization/solidification of individual wastes.....	45
6.2.1 S/S of waste A.....	46
6.2.2 S/S of waste B .....	53
6.2.3 S/S of waste C .....	57
6.3 Long-term release .....	62
6.3.1 Stabilization technique.....	62
6.3.2 Leaching procedure.....	63
6.3.3 Long-term experiment .....	63
6.3.4 Estimate of pollutant release to the environment .....	67
7 CONCLUSIONS .....	71
REFERENCES.....	73
LIST OF TABLES .....	80
LIST OF FIGURES .....	82
ACRONYMS .....	83
ACRONYMS .....	83
LIST OF PUBLICATIONS .....	86
CURRICULUM VITAE.....	88