

Approved
SNA
23/9/25

REPUBLIC OF KENYA
THE NATIONAL ASSEMBLY


THIRTEENTH PARLIAMENT – FOURTH SESSION (2025)

PUBLIC PETITIONS COMMITTEE

PARLIAMENT
OF KENYA
LIBRARY

REPORT ON-

CONSIDERATION OF PUBLIC PETITION NO. 52 OF 2023 BY HON. IBRAHIM ABDI, M.P., ON BEHALF OF RESIDENTS OF WAJIR NORTH CONSTITUENCY AND OTHER PARTS OF THE COUNTY, REGARDING THE BAN ON THE USE OF ASBESTOS AS A ROOFING MATERIAL

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|  THE NATIONAL ASSEMBLY PAPERS LAID | |
| DATE: 23 SEP 2025 | DAY: <i>Tuesday</i> |
| TABLED BY: | <i>Hon. Muchangi Kambanda Chairperson</i> |
| CLERK-AT THE-TABLE: | <i>A. Shibusko</i> |

SEPTEMBER, 2025

Directorate of Audit, Appropriations and General Purpose Committees
Clerk's Chambers
Main Parliament Buildings
NAIROBI

NATIONAL ASSEMBLY
RECEIVED
23 SEP 2025
SPEAKER'S OFFICE
P. O. Box 41842, NAIROBI.

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LIST OF ACRONYMS

- ASALs - Arid and Semi-Arid Lands
- NEMA - National Environment Management Authority
- NG-CDF - National Government Constituencies Development Fund

CHAIRPERSON'S FOREWORD

On behalf of the Public Petitions Committee and pursuant to the provisions of Standing Order 227, it is my pleasant privilege and honour to present to this House the Report of the Public Petitions Committee regarding Public Petition No. 52 of 2023 regarding the ban on the use of asbestos as a roofing material. The petition was presented to the House pursuant to the provisions of Standing Order No. 225 (2) (a) by the Hon. Ibrahim Abdi, M.P., on behalf of the residents of Wajir North Constituency and other affected parts of the country.

The petitioner prayed that the Committee recommend to the relevant ministries to survey and identify all public buildings built using asbestos roofing materials, including the International Development Association-funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya. The petitioner also prayed that the ministries develop and implement a safe disposal plan for all asbestos materials. Lastly, the petitioners prayed that a medical survey be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effects of prolonged asbestos exposure and provide necessary health interventions to those who might be affected.

In consideration of the Petition, the Committee collected views from the petitioner and the Ministry of Environment, Climate Change & Forestry.


The Committee observed that the Ministry of Environment, Climate Change and Forestry through (National Environmental Management Authority) NEMA had undertaken various measures to mitigate against asbestos pollution including communicating to the public on the environmental and health risks associated with use of Asbestos, communicating with relevant Ministries on the need to replace asbestos roofing with modern roofing materials, licensing of asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2024); and licensing of the vehicles to transport asbestos/hazardous waste. NEMA conducted a survey and developed an inventory of buildings and facilities with asbestos material in 19 counties. The survey included schools, houses and hospitals.

The Committee recommended that six months after the tabling of this report, the Ministry of Environment, Climate Change and Forestry, through NEMA, conduct a survey and identify public buildings with asbestos roofs in the remaining 28 Counties. The Committee further recommends that NEMA continue sensitizing public institutions to replace the asbestos roofing materials with environmentally-friendly roofing materials.

The Committee further recommended that all stakeholders remove asbestos roofing from public institutions within one year of the adoption of this report. Additionally, the Committee recommended that NEMA supervise the removal process.

The Committee is thankful to the Offices of the Speaker and the Clerk of the National Assembly for the logistical and technical support offered during the consideration of the Petition. The Chairperson expresses gratitude to the Members of the Committee and the Secretariat for their devotion and commitment to duty during the consideration of the Petition.

On behalf of the Committee and pursuant to the provisions of Standing Order 199, I wish to table the report on the consideration of Public Petition No. 52 of 2023 by the Hon. Ibrahim Abdi, M.P., on behalf of the residents of Wajir North Constituency and other affected parts of the country, regarding the ban on the use of asbestos as a roofing material on the table of the House.

Signed:  Date: 23/09/2025
HON. MUCHANGI KAREMBA, CBS, M.P.
CHAIRPERSON, PUBLIC PETITIONS COMMITTEE

PART ONE

I. PREFACE

I.1 Establishment and Mandate of the Committee

The Public Petitions Committee was established under the provisions of Standing Order 208A with the following terms of reference:

- (a) considering all public petitions tabled in the House;
- (b) making such recommendations as may be appropriate with respect to the prayers sought in the petitions;
- (c) recommending whether the findings arising from consideration of a petition should be debated; and
- (d) advising the House and reporting on all public petitions committed to it.

1.2 Committee Membership

The Public Petitions Committee was first constituted in October 2022 and reconstituted in March 2025 and comprises the following Members:

Chairperson

Hon. Muchangi Karemba, CBS, M.P.
Runyenjes Constituency

United Democratic Alliance (UDA)

Vice Chairperson

Hon. Janet Jepkemboi Sitienei, CBS, M.P.
Turbo Constituency

United Democratic Alliance (UDA)

Hon. Patrick Makau King'ola, M.P.
Mavoko Constituency

Wiper Democratic Movement-Kenya (WDM-K)

Hon. Edith Vethi Nyenze, M.P.
Kitui West Constituency

Wiper Democratic Movement-Kenya (WDM-K)

Hon. Maisori Marwa Kitayama, M.P.
Kuria East Constituency

United Democratic Alliance (UDA)

Hon. Joshua Chepyegon Kandie, M.P.
Baringo Central Constituency

United Democratic Alliance (UDA)

Hon. Beatrice Kadeveresia Elachi, M.P.
Dagoreti North Constituency

Orange Democratic Movement (ODM)

Hon. Suzanne Ndunge Kiamba, MP
Makueni Constituency

Wiper Democratic Movement-Kenya (WDM-K)

Hon. Ntwiga Patrick Munene, M.P.
Chuka Igambang'ombe Constituency

United Democratic Alliance (UDA)

Hon. Bernard Muriuki Nebart, M.P.
Mbeere South Constituency

Independent

Hon. Bidu Mohamed Tubi, M.P.
Isiolo South

Jubilee Party (JP)

Hon. Peter Irungu Kihungi, M.P.
Kangema Constituency

United Democratic Alliance (UDA)

Hon. John Bwire Okano, M.P.
Taveta Constituency

Wiper Democratic Movement-Kenya (WDM-K)

Hon. Peter Mbogho Shake, M.P.
Mwatate Constituency

Jubilee Party (JP)

Hon. Sloya Clement Logova, M.P.
Sabatia Constituency

United Democratic Alliance (UDA)

I.3 Committee Secretariat

The secretariat comprises the following:

Mr. Leonard Machira
Principal Clerk Assistant II

Ms. Anne Shibuko
First Clerk Assistant

Ms. Miriam Modo
First Clerk Assistant

Mr. Willis Obiero
Clerk Assistant III

Mr. Benard Kipchumba
Clerk Assistant III

Ms. Patricia Gichane
Legal Counsel II

Ms. Nancy Ouma
Research Officer III

Ms. Roselyne Njuki
Principal Serjeant-at-Arms

Mr. Paul Shana
Serjeant-at-Arms

Mr. Calvin Karungo
Media Relations Officer III

Mr. Peter Mutethia
Audio Officer

PART TWO

2. BACKGROUND TO THE PETITION

1.4 Introduction

1. Public Petition No. 52 of 2023 regarding the Ban on the use of Asbestos as roofing material was presented to the House on 28th September 2023 by the Member for Wajir North Constituency, Hon. Ibrahim Abdi, MP, on behalf of the residents of Wajir North Constituency.
2. The Petitioner stated that shelter is one of the basic human needs that provides a sense of security, and the quality of construction material, including the safety of roofing materials, is very important as it guarantees dwellers' protection and healthy living, including the safety of rainwater harvested for domestic use.
3. The Petitioner averred that Article 42 of the Constitution recognizes the right of every Kenyan to a clean and healthy environment, and protection of the environment for the benefit of present and future generations.
4. He further stated that numerous public utilities, such as schools, dispensaries, hospitals, and police stations in Wajir North Constituency and other parts of the country, were in the past built using asbestos as roofing material.
5. He informed the Committee that the International Development Association, through the World Bank, funded the construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as Bute, Balambala, Kakuma and Rhamu Arid Zones Primary Schools, using asbestos as roofing material.
6. Further, research has revealed that asbestos exposure was hazardous to human health and could result in an aggressive cancer known as '*Mesothelioma*', which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses.
7. He also submitted that due to the impact of Mesothelioma cancer and related illnesses, fifty-five countries worldwide, including the USA, New Zealand, Australia, and Egypt have banned the use of asbestos as a roofing material. Kenya implemented this ban in 2006.
8. He further argued that the spiralling increase in cases of cancer had exerted unbearable financial strain on families and the country's health system, owing to the exorbitant costs associated with cancer treatment.
9. He noted that despite the ban on asbestos use in Kenya in 2006, asbestos continued to be used in many parts of the country.

1.5 Petitioner's Prayers

The Petitioner prayed that the National Assembly, through the Public Petitions Committee –

10. Recommends to the relevant Ministries to survey and identify all public buildings that were built using asbestos as roofing materials, including the International Development Association-funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya, with a view to removing asbestos and replacing it with galvanized iron sheets to mitigate asbestos-related effects and cancer;
11. Recommends to the relevant ministries to develop and implement a safe disposal plan for all asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;
12. Recommends for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effects of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected; and
13. Make any other appropriate recommendations it deems fit in addressing the plight of the petitioner.

PART THREE

3. STAKEHOLDERS' SUBMISSIONS ON THE PETITION

3.1. The Petitioners

The Hon. Ibrahim Abdi, MP appeared before the Committee, on behalf of the petitioners, on Tuesday 23rd April, 2024 and submitted as follows—

14. He informed the Committee that there was a need to involve agencies that possess the required expertise, such as the National Environment Management Authority (NEMA) and the Ministry of Health, to conduct the safe removal and disposal of asbestos, as asbestos, classified as a carcinogen, can enter the environment through wear and tear, contaminating both air and soil. The carcinogenic properties posed a risk through bio-accumulation and persistent exposure, potentially entering water systems, aquifers, and the food chain.
15. He suggested that funds from the National Government Constituencies Development Fund (NG-CDF) and from international donors could be used in the removal and replacement of the asbestos roofs with a non-carcinogenic material, such as galvanized iron sheets, to ensure the health and safety of residents.
16. He observed that since the ban on the use of asbestos in Kenya was made in 2006, there was a need to dispose of all asbestos present within the country to mitigate the health risks that come with asbestos exposure.
17. The Petitioner argued that, given the arguments for and against the ban of asbestos, scientific evidence proving its carcinogenic nature provides sufficient grounds to argue for the complete prohibition of its use in Kenya.
18. He further emphasized that Asbestos was considered one of the most significant occupational health risks to workers through indirect exposure, which eventually poses health risks to these individuals, causing them to bear financial strain owing to exorbitant financial costs for related treatment.

3.2. Ministry of Environment, Climate Change and Forestry

The Cabinet Secretary for the Ministry of Environment, Climate Change and Forestry, Hon. Aden Bare Duale, EGH, appeared before the Committee on 5th December, 2024 and submitted as follows –

19. The Cabinet Secretary submitted that the National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999, to exercise general

supervision and coordination of all matters relating to the environment, and this Act became operational in the year 2002.

20. He further explained that asbestos is classified as a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It is a chemically inert mineral that is fire-resistant and does not conduct heat or electricity, thus making it a commonly used insulator. It has high tensile strength, is insoluble and odourless. Due to these properties, asbestos has been used in a wide range of manufactured goods, including roofing materials, ceiling and floor tiles, and friction products such as automobile clutches and brakes. In the 1960s and 1970s, many industries, including food manufacturing industries, as well as residential homes, used asbestos as roofing material due to its characteristics of durability and fire resistance.
21. The Committee was also informed that when left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when, due to damage, disturbance or deterioration over time, the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing associated diseases such as asbestosis, lung cancer and *mesothelioma*. The roofing materials used in the 1960s and 1970s had deteriorated over time, necessitating their replacement with more environmentally safe methods and their removal and disposal.
22. He stated that there has been an increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets and increased drive towards roof water harvesting. This prompted the National Environment Management Authority (NEMA), as the environmental regulator, to develop guidelines for the safe removal and disposal of asbestos.
23. He submitted that the Ministry, through NEMA, had undertaken the following actions to mitigate against asbestos pollution—
 - (a) Communicated to the public on the environmental and health risks associated with the use of Asbestos.
 - (b) Communicated to several Ministries regarding the concern of asbestos roofing and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials.
 - (c) Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006); and
 - (d) Licensed the vehicles to transport asbestos/hazardous waste.

NEMA conducted a survey of buildings and developed an inventory of buildings with asbestos materials. The counties covered were as follows;

- | | |
|---------------------|--------------------|
| I. Nairobi County | IV. Vihiga County |
| II. Kakamega County | V. Busia County |
| III. Bungoma County | VI. Homabay County |

- VII. Kisii County
- VIII. Kisumu County
- IX. Migori County
- X. Nyamira County
- XI. Siaya County
- XII. Embu County
- XIII. Isiolo County

- XIV. Kitui County
- XV. Machakos County
- XVI. Makueni County
- XVII. Marsabit County
- XVIII. Meru County
- XIX. Tharaka Nithi

PART FOUR

4. COMMITTEE OBSERVATIONS

Upon hearing from the Petitioner and the Ministry of Environment, Climate Change & Forestry, the Committee observed that—

24. Despite the ban on asbestos roofing in Kenya since 2006, numerous government buildings, hospitals, schools, churches, residential homes, and water supply systems continue to use asbestos as roofing or construction materials, thereby exposing occupants to health risks associated with asbestos-related substances.
25. NEMA conducted a survey and developed an inventory of buildings and facilities with asbestos material in 19 counties. The survey included schools, houses and hospitals.
26. The Ministry of Environment, Climate Change and Forestry through NEMA had undertaken various measures to mitigate against asbestos pollution including communicating to the public on the environmental and health risks associated with use of Asbestos, communicating with relevant Ministries on the need to replace asbestos roofing with modern roofing materials, licensing of asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2024); and licensing of the vehicles to transport asbestos/hazardous waste.
27. There is a need for the National Environmental Management Authority to ensure the full implementation of Legal Notice No. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2024, which classifies wastes containing asbestos in the form of dust or fibres as hazardous waste.
28. The National Environmental Management Authority in consultation with the Ministry of Health, the Directorate of Occupational Safety and Health Services and the County Council of Nairobi, developed and published the National Guidelines on Safe Management and Disposal of Asbestos (the Guidelines) in 2011 whose main objectives highlighted the precautions necessary to mitigate risks of exposure and ensure environmentally sound disposal of asbestos and other wastes.
29. There was increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects. However, the process of removing asbestos in the country was relatively slow despite awareness of its risks and frequent communication made by relevant Government agencies.

| | |
|--|-----------------------|
|  THE NATIONAL ASSEMBLY PAPERS LAID | |
| DATE: 23 SEP 2025 | DAY: <u>Wednesday</u> |
| TABLED BY: <u>Hon. Muchangi Karumbangi</u> | PART FIVE |
| CLERK-AT-THE-TABLE: <u>Ashibuka</u> | |
| 5 COMMITTEE RECOMMENDATIONS | |

30. Pursuant to the provisions of Standing Order 227, the Committee responds to the petitioner as follows -

- (i) On the prayer that the Committee recommends to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view of removing asbestos and replacing it with galvanized iron sheets to mitigate asbestos-related effects and cancer, **the Committee recommends that within six months of the tabling of this report, the Ministry of Environment, Climate Change and Forestry through NEMA conducts a survey and identify public buildings with asbestos roofs in the remaining 28 Counties. The Committee further recommends that NEMA continue sensitizing public institutions to replace the asbestos roofing materials with environmentally-friendly roofing materials.**
- (ii) On the prayer that the Committee recommends to the relevant Ministries to develop and implement a safe disposal plan for all asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment, **the Committee recommends that within six months of the tabling of this report NEMA develops a disposal plan, in accordance with National Guidelines on the Safe Management and Disposal of Asbestos and Environmental Management and Coordination (Waste Management) Regulations, 2024 to fast track the removal asbestos materials.**
- (iii) On the prayer that the Committee recommends for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged asbestos exposure and provide necessary health interventions to those who might have been affected, **the Committee recommends that within six months of the tabling of this report the Ministry of Health conducts a medical survey to ascertain the extent and impact of asbestos exposure and provides appropriate health interventions.**
- (iv) **The Committee further recommends that all stakeholders remove asbestos roofing from public institutions within one year of the tabling of this report. Additionally, the Committee recommends that NEMA supervise the removal process.**

Signed:  Date: 23/09/25

THE HON. KAREMBA MUCHANGI, M.P.
CHAIRPERSON, PUBLIC PETITIONS COMMITTEE

ANNEXURES

Annex 1: The Adoption List

Annex 2: Public Petition No. 52 of 2023 regarding Ban of the use of Asbestos as a roofing material

Annex 3: Minutes of 28th Sitting of 2024 held on 23rd April, 2024

Annex 4: Minutes of the 65th Sitting of 2024 held on 5th December 2024

PUBLIC PETITIONS COMMITTEE

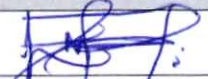


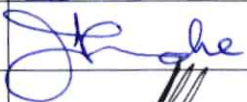

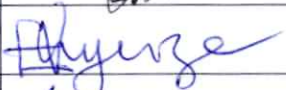
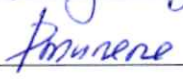

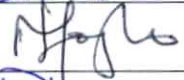
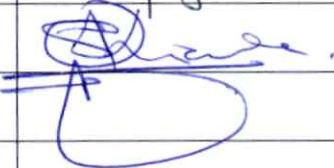


ADOPTION LIST

- (i) Consideration and adoption of the Report on Public Petition No. 52 of 2023 by Hon. Ibrahim Abdi, MP, regarding the banning of the use of asbestos as a roofing material.

We, the undersigned, hereby affix our signatures to this Report to affirm our approval:

DATE:

16/9/2025

| | HON. MEMBER | SIGNATURE |
|-----|---|---|
| 1. | Hon. Muchangi Karemba, CBS, M.P. (Chairperson) |  |
| 2. | Hon. Janet Jepkemboi Sitienei, CBS, M.P. (Vice Chairperson) |  |
| 3. | Hon. Patrick Makau King'ola, M.P. | |
| 4. | Hon. Beatrice Kadeveresia Elachi, CBS, M.P. |  |
| 5. | Hon. Joshua Chepyegon Kandie, M.P. |  |
| 6. | Hon. Maisori Marwa Kitayama, M.P. |  |
| 7. | Hon. Edith Vethi Nyenze, M.P. |  |
| 8. | Hon. Patrick Ntwiga Munene, M.P. |  |
| 9. | Hon. Bidu Mohamed Tubi, M.P. | |
| 10. | Hon. (Eng.) Bernard Muriuki Nebart, M.P. |  |
| 11. | Hon. Peter Mbogho Shake, M.P. |  |
| 12. | Hon. Suzanne Ndunge Kiamba, M.P. |  |
| 13. | Hon. John Bwire Okano, M.P. |  |
| 14. | Hon. Sloya Clement Logova, M.P. | |
| 15. | Hon. Peter Irungu Kihungi, M.P. |  |

REPUBLIC OF KENYA
THE NATIONAL ASSEMBLY

MINUTES OF THE 31ST SITTING OF THE PUBLIC PETITIONS COMMITTEE
HELD ON WEDNESDAY, SEPTEMBER 17, 2025, IN MASHUA CONFERENCE
ROOM, SERENA BEACH RESORT AT 02.00 PM

PRESENT

1. Hon. Eric Muchangi Karemba, M.P. Chairperson
2. Hon. Janet Jepkemboi Sitienei, CBS, M.P. Vice-Chairperson
3. Hon. Beatrice Kadeveresia Elachi, CBS, M.P.
4. Hon. Joshua Chepyegon Kandie, M.P.
5. Hon. John Bwire Okano, M.P.
6. Hon. Edith Vethi Nyenze, M.P.
7. Hon. (Eng.) Bernard Nebart Muriuki, M.P.
8. Hon. Peter Mbogho Shake, M.P.
9. Hon. Maisori Marwa Kitayama, M.P.
10. Hon. Suzanne Ndunge Kiamba, M.P.
11. Hon. Peter Irungu Kihungi, M.P.

APOLOGIES

1. Hon. Patrick Makau King'ola, M.P.
2. Hon. Bidu Mohamed Tubi, M.P.
3. Hon. Sloya Clement Logova, M.P.

SECRETARIAT

1. Mr. Leonard Machira Principal Clerk Assistant II
2. Ms. Miriam Modo Clerk Assistant I
3. Ms. Anne Shibuko Clerk Assistant I
4. Mr. Bernard Toroitich Clerk Assistant III
5. Ms. Patricia Gichane Legal Counsel II
6. Ms. Nancy Akinyi Research Officer III
7. Ms. Roselyn Njuki Senior Serjeant at arms
8. Mr. Peter Mutethia Audio Officer

MIN./PPC/2025/167:

PRELIMINARIES

The Chairperson called the meeting to order at 02:00 p.m. with a Prayer.

MIN./PPC/2025/168:

ADOPTION OF AGENDA

The Committee then adopted the agenda as listed hereunder on the proposal of Hon. Beatrice Kadeveresia Elachi, CBS, M.P. and seconded by Hon. Suzanne Ndunge Kiamba, M.P.

AGENDA

1. Prayer
2. Adoption of the Agenda
3. Confirmation of minutes of previous sittings
4. Matters Arising
5. **Consideration of Public Petition No. 52 of 2023 regarding Ban on the use of asbestos as a roofing material**
6. Any Other Business
7. Adjournment

The Agenda was adopted to constitute business of the meeting having been proposed by Hon. Beatrice Kadeveresia Elachi, CBS, M.P. and seconded by Hon. Suzanne Ndunge Kiamba, M.P.

MIN./PPC/2025/169:
PREVIOUS SITTINGS

CONFIRMATION OF MINUTES OF

The Agenda was deferred.

MIN./PPC/2025/170:

CONSIDERATION OF PUBLIC PETITION NO. 52 OF 2023 REGARDING BAN ON THE USE OF ASBESTOS AS A ROOFING MATERIAL

The Committee considered the draft report and noted the following-

- I. That NEMA is enforcing the removal of asbestos across the country and the process is ongoing.
- II. While there are gazetted removal persons, the disposal manner is not adhered to further it was noted that there no PPEs
- III. The Committee also noted that there is need to edit paragraph (iv) under the recommendations to include supervision and ensure removal of asbestos and to indicate the time frame

Committee Observations

The Committee observed as follows—

- (i) Despite the ban on asbestos roofing in Kenya since 2006, numerous government buildings, hospitals, schools, churches, residential homes, and water supply systems continue to use asbestos as roofing or construction materials, thereby exposing occupants to health risks associated with asbestos-related substances.
- (ii) NEMA conducted a survey and developed an inventory of buildings and facilities with asbestos material in 19 counties. The survey included schools, houses and hospitals.
- (iii) The Ministry of Environment, Climate Change and Forestry through NEMA had undertaken the various actions to mitigate against asbestos pollution including communicating to the public on the environmental and health risks associated with use of Asbestos, communicating with relevant Ministries on the need to replace asbestos roofing with modern roofing materials, licensing of asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2024); and licensing of the vehicles to transport asbestos/hazardous waste.
- (iv) There is a need for the National Environmental Management Authority to ensure the full implementation of Legal Notice No. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2024, which classified wastes containing asbestos in the form of dust or fibres as hazardous waste.
- (v) The National Environmental Management Authority in consultation with the Ministry of Health, the Directorate of Occupational Safety and Health Services and the County Council of Nairobi, developed and published the National Guidelines on Safe Management and Disposal of Asbestos (the Guidelines) in 2011 whose main objectives highlighted the precautions necessary to mitigate risks of exposure and ensure environmentally sound disposal of asbestos and other wastes.
- (vi) There was increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, but the process of removing asbestos in the country has been relatively slow despite awareness of its risks and frequent communication among relevant Government agencies.
- (vii) There is no budgetary allocation to the Ministry of Environment, Climate Change and Forestry for the removal of asbestos in the country.

Committee Recommendations

- i. On the prayer that the Committee recommends to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view of removing asbestos and replacing it with galvanized iron sheets to mitigate asbestos-related effects and cancer, **the Committee recommends that within six months of the adoption of this report, the Ministry of Environment, Climate Change and Forestry through NEMA conducts a survey and identify public buildings with asbestos roofs in the remaining 28 Counties. The Committee further recommends that NEMA continues sensitizing public institutions to replace the asbestos roofing materials with environmental-friendly roofing materials.**

- ii. On the prayer that the Committee recommends to the relevant Ministries to develop and implement a safe disposal plan for all asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment, **the Committee recommends that within six months of the adoption of this report NEMA develops a disposal plan, in accordance with National Guidelines on the Safe Management and Disposal of Asbestos and Environmental Management and Coordination (Waste Management) Regulations, 2024 to fast track the removal asbestos materials.**

- iii. On the prayer that the Committee recommends for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged asbestos exposure and provide necessary health interventions to those who might have been affected, **the Committee recommends that within six months of the adoption of this report the Ministry of Health conducts a medical survey to ascertain the extent and impact of asbestos exposure and provides appropriate health interventions.**

- iv. **The Committee further recommends that all Stakeholders needs to remove asbestos roofing in Public institutions and NEMA to supervise the removal of asbestos roofing in Public institutions within one year.**

Adoption of the Report

The Committee adopted the report having been proposed by Hon. Suzanne Ndunge Kiamba, M.P. and seconded by Hon. Patrick Munene, M.P.

MIN./PPC/2025/171:
MEETING

ADJOURNMENT AND DATE OF NEXT

The Chairperson adjourned the meeting at 04:00 p.m. The next meeting will be held on Thursday, 18th September 2025 at 10.00 a.m.

HON. MUCHANGI KAREMBA, CBS, M.P.
CHAIRPERSON, PUBLIC PETITIONS COMMITTEE

Date:  23/09/25



REPUBLIC OF KENYA
THE NATIONAL ASSEMBLY

MINUTES OF THE 28TH SITTING OF THE PUBLIC PETITIONS COMMITTEE HELD ON TUESDAY, APRIL 23, 2024, IN COMMITTEE ROOM 12, GROUND FLOOR, NEW WING, MAIN PARLIAMENT BUILDINGS AT 12.00. P.M

PRESENT

- | | | |
|---|---|------------------|
| 1. Hon. Nimrod Mbithuka Mbai, M.P. | - | Chairperson |
| 2. Hon. Janet Jepkemboi Sitienei, M.P. | - | Vice Chairperson |
| 3. Hon. John Walter Owino, M.P. | | |
| 4. Hon. Ernest Ogesi Kivai, M.P. | | |
| 5. Hon. Maisori Marwa Kitayama, MP | | |
| 6. Hon. Bidu Mohamed Tubi, M.P. | | |
| 7. Hon. Caleb Mutiso Mule, M.P. | | |
| 8. Hon. (Eng.) Bernard Muriuki Nebart, M.P. | | |

APOLOGIES

1. Hon. Patrick Makau King'ola, M.P.
2. Hon. Joshua Chepyegon Kandie, M.P.
3. Hon. Edith Vethi Nyenze, M.P.
4. Hon. Suzanne Ndunge Kiamba, M.P.
5. Hon. Peter Mbogho Shake, M.P.
6. Hon. John Bwire Okano, M.P.
7. Hon. Sloya Clement Logova, M.P.

SECRETARIAT

- | | | |
|-------------------------|---|-------------------------------|
| 1. Mr. Ahmad Kadhi | - | Clerk Assistant I |
| 2. Ms. Anne Shibuko | - | Clerk Assistant I |
| 3. Ms. Patricia Gichane | - | Legal Counsel II |
| 4. Mr. Isaac Nabiswa | - | Legal Counsel II |
| 5. Ms. Felistas Muiya | - | Public Communications Officer |
| 6. Mr. Martin Sigei | - | Research Officer III |
| 7. Mr. Calvin Karungo | - | Media Relations Officer III |
| 8. Mr. Peter Mutethia | - | Audio Officer |

IN ATTENDANCE

- | | | |
|--------------------------------|---|------------|
| 1. Hon. Ibrahim Abdi Saney, MP | - | Petitioner |
|--------------------------------|---|------------|

SPECIAL NEEDS TEACHERS (PETITIONERS)

- | | | |
|--------------------------|---|----------------------|
| 1. Mr. Edwin Juma Gituma | - | National Chairperson |
| 2. Mr. Kimani Kamande | | |

3. Mr. Samson Bitok
4. Ms. Edith Museywa
5. Mr. Stephen Achesa
6. Mr. Jeromy Mwendu
7. Mr. Kenneth Odhiambo

MIN./PPETC/2024/ 176: PRELIMINARIES

The Chairperson called the meeting to order at 12:00 p.m. and proceedings began with prayers by Hon. Ernest Kagesi, M.P.

MIN./PPETC/2024/177: ADOPTION OF AGENDA

AGENDA

1. Prayer
2. Adoption of the Agenda
3. Confirmation of minutes of previous sittings
4. Matters Arising
5. Consideration of Public Petition No. 52 of 2023 regarding Ban of Asbestos as roofing material in the Country
 - *Meeting with the Petitioner, Hon. Ibrahim Abdi, MP*
6. Consideration of Petition No. 54 of 2023 on Unlawful Deductions by TSC in Favor of Kenya Union of Special Needs Education Teachers (KUSNET)
 - *Meeting with the Petitioner, Mr. Roberts Njunukha Wekesa*
7. Consideration of Public Petition No. 45 of 2023 on Delayed Adjudication and Settlement of residents of Kidomaya/Miungoni Village in Vanga Ward in Lunga Lunga Constituency
 - *Meeting with CEC in Charge of Environment and Natural Resources, Kwale County, Ms. Saumu Beja*
8. Consideration of Public Petition No. 6 of 2024 on Delays in posting medical interns, Absorption of Universal Health Coverage (UHC) Contract staff, conclusion of Collective Bargaining Agreement (CBAs) and recognition of agreement in the Health Sector in the Country
 - *Meeting with Cabinet Secretary, Ministry of Health*
 - *Meeting with Cabinet Secretary, Ministry Public Service Performance and Delivery Management*
 - *Meeting with Cabinet Secretary, the National Treasury*
 - *Meeting with CEO, Salaries and Remuneration Commission (SRC)*
9. Consideration of Public Petitions on gazettelement of Hardship Areas
 - *Meeting with Cabinet Ministry Public Service Performance and Delivery Management*
10. Any Other Business
11. Adjournment

The Agenda was adopted to constitute business having been proposed Hon. Peter Mbogho Shake, M.P. and seconded by Hon. Bernard Muriuki, M.P.

MIN./PPETC/2024/178:

CONFIRMATION OF MINUTES OF PREVIOUS SITTINGS

The Agenda was deferred

MIN./PPETC/2024/179:

CONSIDERATION OF PUBLIC PETITION NO. 52 OF 2023 REGARDING BAN OF ASBESTOS AS ROOFING MATERIAL IN THE COUNTRY

Meeting with the Petitioner, Hon. Ibrahim Abdi, MP

The Petitioner, Hon. Ibrahim Abdi Saney, M.P. appeared before the Committee and submitted as follows:

1. Shelter is one of the basic human needs that secures human habitation and provides sense of security.
2. The quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use.
3. Numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were built using *asbestos* roofing materials in the past.
4. The International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as *Bute, Balambala, Kakuma and Rhamu Arid Zones Primary Schools* using *asbestos* roofing materials.
5. Research has revealed that exposure to asbestos is hazardous to human health and could result to an aggressive cancer called "*Mesothelioma*" which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses.
6. As a result of *Mesothelioma* Cancer and related illnesses, fifty-five countries all over the World, including the USA, New Zealand, Australia and Egypt have banned the use of *asbestos* as a roofing material, with Kenya banning its use in 2006.
7. The spiraling increase in cancer cases is exerting unbearable financial pressure on families and the country's health system owing to the exorbitant costs associated with treating cancer.
8. Despite the use of *asbestos* having been banned in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the Country.
9. The Petitioners pray that the National Assembly through the Public Petitions Committee recommends to the relevant Ministries to survey and develop and

implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment.

Committee concerns

1. The Committee sought clarification on whether the petitioner advocated for the **ban or disposal of asbestos**. The petitioner clarified that the ban on the use of asbestos had been in effect since 2006, leading to the cessation of its manufacturing. Consequently, the necessity for such a ban implied the removal and disposal of existing asbestos. However, numerous buildings, particularly government facilities like hospitals, schools, and other public offices, still had asbestos on their roofs, presenting significant environmental and health hazards that required safe disposal.
2. Regarding the proposed **ways and means of removal and disposal of the asbestos**, the Petitioner emphasized the importance of involving relevant agencies such as NEMA and the Ministry of Health, who possess the expertise required for the safe removal and disposal of asbestos. However, a basic procedure for asbestos disposal involves placing the material in a 6mm plastic bag and depositing it in a designated pit, managed by qualified professionals to prevent any seepage into the soil. Asbestos, classified as a carcinogen, can enter the environment through wear and tear, contaminating both air and soil. Its carcinogenic properties pose a risk through bioaccumulation and persistent exposure, potentially entering water systems, aquifers, and ultimately, the food chain.
3. Regarding the **costs associated with replacing asbestos roofs** in public buildings, the Petitioner suggested that funds from the NG-CDF could be utilized, considering that not all institutions had asbestos roofs. Additionally, donor funds and support from the national government could play a crucial role in financing the removal and disposal of asbestos, as well as the replacement of the roofs with noncarcinogenic materials for improved health and safety.
4. Regarding the **scientific evidence supporting the ban of asbestos**, the Petitioner clarified that while there were arguments both for and against the ban, the decision was not made impulsively. Instead, it was grounded in scientific research, leaving no doubt about asbestos being a carcinogen. Therefore, the behavioral aspect of individuals would drive the reduction of carcinogenic materials in the environment.
5. The Committee sought clarification on whether the Petitioner advocated for the **ban of asbestos solely as a roofing material or for all its uses**. The Petitioner clarified that the mere presence of asbestos in the environment posed a significant danger.

MIN./PPETC/2024/180:

CONSIDERATION OF PUBLIC PETITION NO. 54 OF 2023 REGARDING UNLAWFUL DEDUCTIONS BY TSC IN FAVOR OF KENYA UNION OF SPECIAL NEEDS EDUCATION TEACHERS (KUSNET)

Meeting with the Petitioners

The Petitioners lead by Mr. Edwin Juma Gituma, the National Chairperson of Special Needs Education teachers appeared to represent Mr. Roberts Njunukha Wekesa who was away. The petitioners presented as follows—

1. The petitioners, who were teachers employed by the Teachers Service Commission (TSC), were tasked with teaching learners with disabilities, encompassing special schools and special units across the country.
2. These teachers found themselves subjected to deductions of union dues by TSC, either in the form of agency fees or union dues without their explicit consent, in favor of KUSNET, a union of which they were unaware.
3. In response to this perceived injustice, the teachers initiated legal action against TSC for the alleged unlawful deductions, highlighting their coercion into subscribing to a union they were unfamiliar with, which eventually ceased. They later discovered that they were still being subject to deductions for agency fees in favor of the same union.
4. Seeking autonomy in their union affiliation, the teachers endeavored to investigate and requested the opportunity to join a union of their choice. However, TSC denied them this right, citing a recognition agreement with all three unions, which stipulated that primary school teachers be affiliated with KNUT, secondary schools and colleges with KUPPET, and special needs teachers with KUSNET. This denial was viewed by the teachers as an infringement of their constitutional and labor rights, which guarantee the freedom to join a union of their choosing.
5. Even after seeking legal intervention to halt the deductions by KUSNET, the teachers continued to face deductions for Social Welfare Associations (SWAS) KUSNET from new members without their consent. Consequently, a group of teachers found themselves subjected to illegal deductions for both agency fees and SWAS KUSNET dues, despite their lack of engagement with the union.
6. Furthermore, KUSNET lacks grassroots representation or identifiable regional offices. It does not hold Annual General Meetings (AGMs) or Annual Delegates Conferences (ADCs), and any elections that may occur are conducted clandestinely, known only to a select few individuals who claim to hold official positions within the union and TSC.
7. Previous attempts by the teachers to resolve the matter by seeking permission to join a union of their preference proved unsuccessful. The Chairperson of KUSNET remained unreachable to the concerned teachers, failing to provide clarification about the union's objectives and operations.
8. The petitioners urged the Committee to engage with the Teachers Service Commission (TSC) to ascertain the following:
 - (a) The registration date of KUSNET.
 - (b) The identities of the official representatives of KUSNET and the locations of their national and county offices.
 - (c) Whether the demarcation issue underwent public participation, involving all teachers.
 - (d) If TSC could permit teachers to join unions of their choosing and cease deductions of agency fees from teachers.

- (e) Recommend that both TSC and KUSNET refund all funds deducted from teachers who did not enter into any membership agreements with the union.
- (f) Determine whether TSC has the authority to dictate which union its employees must join.

Committee Concerns

9. Regarding whether the SNE teachers were involved in forming KUSNET, the petitioners clarified that they were not involved. That they were in other unions, KNUT and KUPPET before KUSNET which was formed later. Therefore, there was need to have SNE teachers to have freedom of choice of the union they want to belong to without being forced into KUSNET. There were other SNE teachers in KUSNET but not through their wish. The teachers requested KUSNET and TSC requesting to be excluded from the union but they declined. They indicated that in the recognition agreement, primary SNE teachers were placed under KUSNET and primary school teachers under KNUT as per the demarcation. Secondary, colleges and TIVET teachers were placed under KUPPET. The issue of demarcation was never brought to the teachers for public participation.
10. The Committee sought clarity on the SWAS KUSNET deductions, the petitioners clarified that SWAS was a Social Welfare Association which was a third-party deduction on the pay slip which may include contribution to burial and benevolent fund (BBF) SACCOs and teachers' unions. Authorization of such deductions are done online. Some of the SNE teachers inquired from KUSNET regarding deductions and they received acknowledgement. They were informed that all third-party deductions were managed by the funds through TSC portal and they were requested to ask TSC to terminate the deductions from their end. Some were deducted SWAS and others agency fee. However, the SWAS deductions was stopped by the court but after a few months, the TSC begun deducting agency fees for others.
11. Regarding the court ruling in favor of the SNE teachers, the petitioners stated that they requested the refund of the illegally deducted money (SWAS KUSNET) from their pay slips and the removal of KUSNET from future deductions. The court ruled in their favor, mandating that 80 percent of the deductions be returned to the teachers and that KUSNET be eliminated from their pay slips. However, despite the court ruling, TSC changed SWAS to an agency fee and persisted in making deductions.
12. Regarding the provisions enabling SNE teachers to join their preferred union, the petitioners emphasized that TSC's demarcation compelled SNE teachers to join KUSNET without public consultation. The teachers were distressed by the manner in which they were coerced into KUSNET membership and the union's formation process. Furthermore, some SNE teachers found themselves subjected to deductions by both KNUT and KUSNET, exacerbating their grievances.

MIN./PPETC/2024/181:

CONSIDERATION OF PUBLIC PETITION NO. 45 OF
2023 REGARDING DELAYED ADJUDICATION AND
SETTLEMENT OF RESIDENTS OF
KIDOMAYA/MIUNGONI VILLAGE IN VANGA WARD
IN LUNGALUNGA CONSTITUENCY

Meeting with CEC in Charge of Environment and Natural Resources, Kwale County

The Committee was informed that Ms. Saumu Beja, the County Executive Committee member responsible for Environment and Natural Resources in Kwale County, was unable to attend the meeting but had submitted a written statement. Following deliberations, the Committee decided to arrange a meeting with the CEC in Kwale County during the planned site visit.

MIN./PPETC/2024/182:

CONSIDERATION OF PUBLIC PETITION NO. 6 OF 2024 REGARDING DELAYS IN POSTING MEDICAL INTERNS, ABSORPTION OF UNIVERSAL HEALTH COVERAGE (UHC) CONTRACT STAFF, CONCLUSION OF COLLECTIVE BARGAINING AGREEMENT (CBAS) AND RECOGNITION OF AGREEMENT IN THE HEALTH SECTOR IN THE COUNTRY

Meeting with Cabinet Secretary, Ministry of Health

The Committee received notification via a letter referenced as MOH/ADM/VOL III/93, dated 19th April 2024, wherein the Principal Secretary of the Ministry of Health requested rescheduling the meeting to 2nd May 2024 at 2:30 p.m. Following deliberation, the Committee decided to accommodate the rescheduling request but also agreed to accept written submissions on the petition in the event that the Cabinet Secretary was unable to attend the meeting.

Meeting with Cabinet Secretary, Ministry of Public Service, Performance and Delivery Management

The Committee was informed that the Ministry vide letter Ref No: MPSG&DM/3/7 and dated 22nd April 2024 had indicated that the issues regarding the petition were being addressed by a Whole of the Nation Approach Technical Committee sanctioned by the Employment and Labour Relations Court. The technical committee chaired by the Chief of Staff and Head of Public Service therefore had the mandate of resolving the instant long-running dispute in the country's health sector.

Meeting with Cabinet Secretary, the National Treasury

The Committee was informed that vide a letter Ref: TNT/CONF 268/019 "A" (65) dated 16th April 2024, the Principal Administrative Secretary, the National Treasury wrote to the Clerk of the National Assembly to inform the Committee that the Cabinet Secretary would not attend the meeting as he was out of the country on official duty. He therefore requested that the meeting be rescheduled to a later date.

Following deliberation, the Committee decided to accommodate the rescheduling request but also agreed to accept written submissions on the petition in the event that the Cabinet Secretary was unable to attend the meeting.

Meeting with CEO, Salaries & Remuneration Commission (SRC)

The Committee was informed that Vide a letter Ref: SRC/TS/8 dated 22nd April 2024, the Commission Secretary/ CEO of the Salaries and Remuneration Commission wrote to the Clerk of the National Assembly to inform the Committee that the whole Nation approach which the Commission is involved in was ongoing. Further, the matter was under consideration before court in Eldoret ELRC Petition E003 of 2024: Dr. Micheni Mike & others vs. SRC & others and Nairobi ELC Case No. E224 of 2024: Kenya National Union of Nurses vs SRC and therefore subjudice.

MIN./PPETC/2024/183:

CONSIDERATION OF PUBLIC PETITIONS ON
GAZETTEMENT OF HARDSHIP AREAS

Meeting with Cabinet Ministry Public Service Performance and Delivery Management

The Committee received information through a letter referenced as MPSG&DM/3/7, dated 22nd April 2024, from the Cabinet Secretary of the Ministry of Public Service, Performance, and Delivery Management. In the letter, the Cabinet Secretary requested time to allow the Ministry to complete the report of the Inter-Agency Committee. Upon approval by the Cabinet, the report would be submitted to the National Assembly, after which the Cabinet Secretary would provide a comprehensive response to the Committee regarding the categorization of hardship areas in the country. The Committee resolved to proceed with finalizing the four reports and tabling them, acknowledging the clarity provided by the Cabinet Secretary.

MIN./PPETC/2024/184:

ADJOURNMENT AND DATE OF NEXT MEETING

The Chairperson adjourned the meeting at 02:30 p.m. The next meeting will be held on Wednesday, 24th April 2024 at 12:00 p.m.

Sign: 

(CHAIRPERSON)

Date..... 05/06/2024



REPUBLIC OF KENYA
THE NATIONAL ASSEMBLY

MINUTES OF THE 65TH SITTING OF THE PUBLIC PETITIONS COMMITTEE HELD ON THURSDAY, DECEMBER 05, 2024, IN COMMITTEE ROOM 20 ON 3RD FLOOR, BUNGE TOWER AT 11.00. A.M

PRESENT

1. Hon. Nimrod Mbithuka Mbai, M.P. - Chairperson
2. Hon. Joshua Chepyegon Kandie, M.P
3. Hon. Maisori Marwa Kitayama, MP
4. Hon. John Walter Owino, M.P.
5. Hon. Edith Vethi Nyenze, M.P
6. Hon. John Bwire Okano, M.P.
7. Hon. Suzanne Ndunge Kiamba, M.P.

APOLOGIES

1. Hon. Janet Jepkemboi Sitienei, M.P. - Vice Chairperson
2. Hon. Patrick Makau King'ola, M.P.
3. Hon. Ernest Ogesi Kivai, M.P.
4. Hon. Bidu Mohamed Tubi, M.P.
5. Hon. Caleb Mutiso Mule, M.P.
6. Hon. Peter Mbogho Shake, M.P.
7. Hon. (Eng.) Bernard Muriuki Nebart, M.P.
8. Hon. Sloya Clement Logova, M.P.

SECRETARIAT

1. Mr. Ahmad Kadhi Principal Clerk Assistant II
2. Ms. Anne Shibuko Clerk Assistant I
3. Ms. Lenny Muchangi Legal Counsel II
4. Ms. Nancy Akinyi Research Officer III
5. Mr. Calvin Karungo Media Relations Officer III
6. Mr. Peter Mutethia Audio Officer
7. Ms. Wahu Mwirikia Audio Officer Intern

IN ATTENDANCE

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

1. Hon. Aden Duale, EGH Cabinet Secretary
2. Mr. Mugambi Gitonga, EBS Director, Legal Services
3. Mr. Mamo B. Mamo Director General NEMA
4. Mr. Alex Lemakoko Chief Conservator, Kenya Forest Service
5. Mr. George Tarus Ass. Secretary, State Department of Forestry
6. Mr. Benjamin Kiringili Ag. Manager, FS&IM
7. Mr. Omara Komora Head of Operations, KFS

8. Ms. Jeptoo Ruth
9. Mr. Rodney Omari

Parliamentary Liason Officer
Parliamentary Liason Officer

MIN./PPETC/2024/412: PRELIMINARIES

The Chairperson called the meeting to order at 11:00 a.m. and proceedings began with prayers by Hon. Suzanne Kiamba, M.P.

MIN./PPETC/2024/413: ADOPTION OF AGENDA

AGENDA

1. Prayer
2. Adoption of the Agenda
3. Confirmation of minutes of previous sittings
4. Matters Arising
5. Meeting with the Ministry of Environment, Climate Change & Forestry regarding—
 - *PI No. 4 of 2023 on Delayed adjudication and Settlement of Squatters after the expiry of Lease of Macalder Mines Ltd Land;*
 - *P/No. 15 of 2023 regarding Declaration of Mukutani Forest as a Public Forest;*
 - *P/No. 52 of 2023 on Ban of the Use Asbestos as a Roofing Material;*
 - *P/No. 59 of 2023 regarding Settlement of Ontulili Mount Kenya Forest Squatters*
 - *PI No. 69 of 2023 regarding Resettlement of Squatters in Koibem Village, Chepkumia Location, Nandi County.*
 - *P/No. 82 of 2023 on Degazettement of Boni-Lungi Forest in Lamu East Constituency;*
 - *P/No. 81 of 2023 on Gazettement of Kaya Forest as Forest areas under the Forest Conservation and Management;*
6. Meeting with the Ministry of National Treasury and Economic Planning regarding—
 - *P/No. 46 of 2023 regarding Payment of retirement Dues and Pension for retired Teachers; and*
 - *P/No. 80 of 2023 regarding release of the Free Day Secondary Education Capitation Deficit for the Academic Year 2019 and Financial Years 2020/2021/ to 2022/2023 by the National Treasury.*
7. Any Other Business
8. Adjournment

MIN./PPETC/2024/414:

CONFIRMATION OF MINUTES OF PREVIOUS SITTINGS

The agenda was deferred.

MIN./PPETC/2024/415:

MEETING WITH THE MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY

The Cabinet Secretary, Ministry of Environment, Climate Change & Forestry, Hon. Aden Duale, EGH appeared before the Committee and submitted as follows:

1. The case is under consideration before the Environment and Land Court in ELC Petition No. 1 of 2023 (Migori County Government V. Attorney General & 3 others), consolidated with ELC Petition No. 4 of 2023. The County Government of Migori along with other petitioners, is asserting ownership of 2,500 hectares of Macalder Forest.
2. The matter remains active in court and is pending judgment. The Cabinet Secretary was not at liberty to proceed with the petition until the matter is determined and concluded by the court.

B. P/No. 15 of 2023 regarding Declaration of Mukutani Forest as a Public Forest

1. The gazettelement referred to was undertaken openly, transparently and in accordance with the provisions of the Constitution of Kenya 2010 and the FCMA 2016.
2. The gazettelement process was a community driven initiative to reserve community land as a forest reserve.
3. The community approached the Forest Station Manager, Marigat Forest Station in the year 2013 asking for advice on reservation of the area for conservation. They cited destruction of the water catchment area as the main concern and security challenges.
4. The need for gazettelement of two hills was informed by environmental, economic, socio-cultural and security challenges experienced by the communities.
5. In March 2015, during the International Colloquium held in Eldoret, stakeholders convened to share knowledge and lessons on engaging forest-dependent communities in forest management and addressing related land use and land rights issues. The community, in their presentation, emphasized the need for gazettelement of the hills as a forest, highlighting specific reasons tied to forest management and the protection of their rights to forest resources, as documented in the event's concept note and detailed in the Colloquium Report.
6. The community initiated and sufficiently participated in the entire process. The National Land Commission gave its approval, the County Government of Baringo and Kenya Forest Service among other stakeholders were engaged in rigorous consultations that led to the gazettelement according to the Forest Conservation and Management Act (FCMA), 2016. The community elders made adequate attempts to sensitize members on the need to gazette Mukutani forest. The National Land Commission (NLC), other stakeholders and County Government were equally fully involved in the entire process and in accordance with FCMA 2016.

7. The following documents confirm that the necessary consultations and procedures were done before gazettement of the forest block. They include;
 - a) Minutes of the community meeting on gazettement dated 27th December, 2013, where the agenda was to discuss the hills to be gazetted as forest reserves as well as understanding the meaning of gazettement of hills and the implication to livelihood of the community. The resolution reached was that portions of Mukutani and Lemaitai (Karau) hills be set aside for forestry development under the then, Forest Act 2005.
 - b) Letter Ref. No. 10/1/1/140 dated 17th June 2014 from the Ecosystem Conservator (EC), Baringo County to the County Executive Committee; Ministry of Environment and Natural Resources, Energy and Mining informing the County Government of Baringo on the creation and reservation of new forests; Lemaitai and Mukutani Hills.
 - c) Letter from the Ilchamus Community to the National Land Commission dated 16th January 2015 where the Community sought assistance in the gazettement of Mukutani Forest for conservation of forest resources.
 - d) Letter Ref. NLC/CHAIRMAN/VOL.IX/145 dated 31st March, 2015 from the National Land Commission to Kenya Forest Service where the Commission consents to gazettement of the forest and requests KFS to undertake the gazettement process.
 - e) Copy of Legal Notice No. 265 of 27th October, 2017 which declared Mukutani Forest a Public Forest.
 - f) Copy of Boundary Plan No. 175/435 which shows the boundaries of Mukutani Forest.
8. The Gazettement of Mukutani forest guaranteed Peace, stability and security within the forest and region at large as the area is disturbed, dangerous and operation under multiagency security teams; and any action would require consultation with Nation Security Council Committee *to recall the decision of the then Cabinet Secretary of Environment, Natural Resources contained in the Legal Notice No. 265 dated 27/10/2017, interrogate the same and order that fresh exercise towards declaration of the alleged forest named Mukutani Forest be undertaken by the Cabinet Secretary, the Board of Kenya Forest Service, the National Land Commission and all the relevant stakeholders.*
9. The Gazettement of Mukutani Forest was done in line with the provisions of the Constitution of Kenya 2010 and FCMA 2016. The National Land Commission, the County Government of Baringo, the Mukutani Community, and all relevant stakeholders were consulted during the Gazettement process.
10. The requested reversal will:

the forest and its sustainable use for educational, recreational, health and research purposes;

- b) Endanger rare and threatened species within Mukutani Gazetted Forest;
- c) Interfere with the wildlife migratory corridor connecting Laikipia and Lake Baringo thus jeopardize community livelihood opportunities; and
- d) Negate the Presidential directive on acceleration, achievement and maintaining 30% tree cover by 2032, the 15 Billion Tree Growing; National Landscape and Ecosystem Restoration Programme.
- e) Mukutani forest is a critical state resource for strategic national interests. The gazettelement guaranteed and ensured that the interests of forest dependants are safeguarded through multiagency security teams and the Whole of Government Approach (WGA).

Committee concerns

The Committee observed that there was a gap in the level of public participation across the 3 communities in Mukutani.

Regarding the fate of the schools already established in Mukutani, the Cabinet Secretary said that the schools will be relocated.

Committee decision

The Committee resolved to schedule a site visit to Mukutani.

C. P/No. 52 of 2023 on Ban of the Use Asbestos as a Roofing Material

1. The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment and became operational in the year 2002.
2. Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, is insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.
3. When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or

deterioration over time as the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring their replacement with more environmentally safe methods necessitating their removal and disposal.

4. Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos.
5. Over time, the Ministry through NEMA has undertaken the following actions to mitigate against asbestos pollution:
 - a) Communicated to the public on the environmental and health risks associated with use of Asbestos.
 - b) Communicated to a number of ministries on the concern of the presence of asbestos roofing, and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials.
 - c) Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006)
 - d) Licensed the vehicles to transport asbestos/ hazardous waste.

In response to the prayer to recommend to relevant Ministries to survey and identify all public buildings with Asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer.

6. The Ministry, through NEMA, will place a public notice to advise the public on the environmental and health risks associated with asbestos roofs. Further, NEMA will continue to write to public institutions to advise them to replace the asbestos roofing materials with environmentally-friendly roofing materials.

In response to the prayer to recommend the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment.

7. NEMA will guide the concerned Ministries and other entities on the safe handling, transportation, and disposal of asbestos. This will be in accordance with national guidelines on the safe management and disposal of asbestos, and Environmental Management and Coordination (Waste Management) Regulations, 2006.

In response recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of

8. NEMA will advise the Ministry of Health and County Governments to carry out medical surveys and screening to ascertain the extent of impacts of exposure to asbestos and provide appropriate health interventions.

Committee concerns

Regarding why the process of removal of asbestos was slow despite awareness of its risks and frequent communication among relevant Government agencies, the Cabinet Secretary explained that the Ministry had a list of buildings managed by the Kenya Railways Corporation, Kenya Ports of Authority, Ministry of Defence and Ministry of Interior, which still has Asbestos roofing with their GPS Mapping and would continue engaging these agencies.

Regarding whether there was no budgetary allocation for removal and disposal of asbestos, the Cabinet Secretary explained that the Ministry was liaising with the National Treasury to secure funds for removal of asbestos.

D. P/No. 59 of 2023 regarding Settlement of Ontulili Mount Kenya Forest Squatters

1. Ontulili Forest is part of the Mount Kenya Forest Ecosystem that consists of Mount Kenya Forest Reserve and Mount Kenya National Park.
2. The Ontulili Forest was gazetted as a public forest vide Proclamation No. 48 of 1943 under the then Forest Department (FD) and declared a Central Forest vide Legal Notice No. 174 of 20th May 1964. The forest is composed of Natural Forest, Plantations, Bushland, Bamboo and other areas under infrastructure and institutions. Currently the area measures approximately 33,227.15 ha thus making it the largest forest ecosystem in Meru County.
3. The Ontulili squatters' resettlement was initiated by the late Hon. Harvester Angaine in 1975 with a view to resettle families of former Forest Department (FD) employees who were working within Mount Kenya forest in Ontulili Forest Station during the colonial period. Land was set aside from Mount Kenya forest through two legal amendments for this cause but later after excisions had been effected, the two parcels (L.R. No. 13269 and L.R. No. 12234) were registered in favour of an individual as opposed to favouring the intended beneficiaries.
4. The excisions comprised of two portions of land in total 930.3 ha excised in 1975 and 1977 which were authorized by the then Minister for Natural Resources, Hon. S. S. Oloitipitip, to resettle the squatters in Mount Kenya forest. The Legal Notices are as indicated here below;
 - a) Legal Notice No. 68 of April 1975 excising an area of 384.1ha within Ontulili forest station
 - b) Legal Notice No. 107 of April 1977 excising an area of 546.2ha within Ontulili forest station

5. The Ontulili squatters lived in Mount Kenya, Ontulili Forest Station as employees of the then Forest Department (FD) during the colonial era. In 1986, the late Hon. Angaine and the Provincial Administration allocated land to 668 squatters in Ontulili in an area known as Ngusishi (Karuri, Kienini and Kiriti) where each individual was to be allocated 2.5 acres approximately.
6. Of the 668 individuals, none of them was issued with ownership documents with respect to the allocated land. The blocks were located in ecologically sensitive areas which are also sources of rivers. Their stay in the forest caused a lot of deforestation and encroachment into the natural forest leading to the decrease in water levels and siltation downstream, it also became difficult to control grazing in the forest.
7. As time went by the population increased and the demand for land also increased. This led to encroachment deeper into the fragile water catchment area and inhabitable forest adversely affecting the environment through forest clearance hence affecting biodiversity in general and forest water function. This area had not officially been excised from Mount Kenya forest.
8. The presence of squatters in the forest also posed the challenge of forest fires occasioned by honey-hunting activities and deliberate burning for the grass to regenerate for their livestock. Additionally, there was increased illegal logging targeting the endangered *Juniperus procera* (Cedar).
9. In the year 2001, 796.04 Ha of forest land was excised within Sirimon block of Mount Kenya forest vide Legal Notice No. 29 of 2001. Each family that formerly occupied Karuri, Kienini and Kiriti areas was allocated 1.4 acres as opposed to 2.5 acres, a deficit of 1.1 acres. This did not go down well with the people since they felt short changed. On this ground some people chose to remain in Ngusishi prompting some to heading to the Law courts to seek redress.
10. An Environmental Audit Team was constituted to investigate the legal status of the land under dispute, Investigate and document the negative impacts of human settlement in Ngusishi and recommend suitable remedies to mitigate the problem.
11. The Environmental Audit Team visited the ground and conducted an environmental audit of the area that had been settled in Ngusishi and a report was drawn with the following recommendations: -
 - a) Degazette Sirimon area and issue titles to the current occupants;
 - b) Those who had sued the government were considered double dealers since they laid claim to both Sirimon and Ngusishi areas, therefore, the case to be dismissed with cost from their end; and

areas.

12. The Ontulili squatters were dissatisfied since they were not allowed to settle in the area intended as per the Legal Notice Nos. 68 of April 1975 (384.1 ha) and 107 of April 1977 (546.2 ha) in Ontulili forest block.
13. The late Hon. J. Harvester Angaine's family are the current occupants of the said land registered as L.R. No. 13269 (384.2 Ha) and L.R. No. 12234 (546.2 Ha) amounting to 930.3Ha approximately.
14. The Ndung'u report on irregular/illegal acquisition of public land recommended for revocation of the two Titles since they benefited an individual as opposed to Ontulili squatters.
15. The procedure involved in the degazettement of a public forest is provided in Section 34 of the Forest Conservation and Management Act 2016.
16. Kenya Forest Service then Forest Department (FD) had played a key role towards resettling Ontulili forest squatters from inception. The squatter's aspiration and wish were not met as the late Hon. Angaine and some officials from the Ministry of Lands and the then Provincial Administration changed the squatter's intended land by relocating the squatters elsewhere and re allocated the subject land to themselves.
17. The Ontulili excisions were meant to resettle the squatters but were hijacked by the late Hon. Harvester Angaine and processed the Titles in his favour.
18. The squatters felt that the late Hon. Angaine used his office as the Minister of Lands to allocate himself land that was meant to resettle them, some of them even went to court as this amounted to impunity and abuse of office.
19. However, Messrs. Patrick Muriuki and Robert Wanjau, mentioned in the Public Petition No. 59 of 2023, are not being honest in consideration of the fact that they were allocated land elsewhere (Sirimon) and settled.
20. The Petitioner refers to a recommendation made by the National Land Commission (NLC), in Historical Injustice Case No. NLC/HLI/025/2017. Consequently, the Petitioner raises concerns regarding information and/or implementation of the NLC's decisions. As a constitutional body, the NLC is the appropriate entity to address the matter, having already received and processed the Petitioner's complaint, conducted public hearings and consultations to verify the nature of the claim, and issued relevant recommendations.
21. The Survey of Kenya to be directed to start development of a Boundary Plan in favour of Kenya Forest Service (KFS) to assist in recovery of the 930.3 Ha

illegally and irregularly acquired by the late Hon. Angaine and now currently occupied by his family in Ontulili forest block, to revert to KFS as per Ndungu Report for forest conservation and reforestation to increase forest and tree cover under the 15 Billion Tree Growing for National Ecosystem and Restoration Programme.

E. P/ No. 69 of 2023 regarding Resettlement of Squatters in Koibem Village, Chepkumia Location, Nandi County

Introduction of Chepkumia Land Exchange Programme

1. The Ngerek Community has to date never been settled in the intended area of the gazetted forest for the reason that at the time for which resettlement was to be effected, other people had already been fraudulently and illegally settled in the proposed settlement area. This illegality is alleged to have been occasioned by the political class in the existing regime, a position established by the determination of the National Land Commission vide Historical Land Injustice Committee Ref. No. NLC/HLI/435/2018; NLC/HLI/256/2017, Kisumu Civil Suit No. 76 of 2003 and the Ndungú Report with a recommendation to the effect that the land reverts back to the Government.
2. Should the original intention of settling the Ngerek be realised, due process should and must be followed and a way out found for the illegally settled individuals.
3. In undertaking the de-gazettement and gazettement processes involved in the execution of the underlined land exchange, the provisions in the Forest Management and Conservation Act, 2016 shall apply.
4. The legal procedures involved in the exchange of gazetted public forest area with a private land is contained in the Forest Management and Conservation Act, 2016.

Gazettement of South Nandi Forest

5. South Nandi Forest was gazetted vide Proclamation No. 76 of 1936 and declared a Central Forest vide Legal Notice No. 174 of 1964 measuring approximately 17,960.50Ha. The South Nandi Forest is classified as a 'moist forest' under the Forest and Agricultural Organisation (FAO) of the United Nations.
6. In 1996, the Chepkumia land exchange was authorized to resettle people from the hilly Chepkumia areas of Ngerek and Koibem, i.e Ngerek and Koibem Communities. The Land exchange was to constitute 910.60Ha in Kaimosi Block of South Nandi Forest along the Yala River. The Land Exchange Programme was initiated as a result of a Presidential Pronouncement during a tour of the Nandi District in 1996. The area to be excised was to set aside land as follows; -

| | | |
|---|------------------|--------|
| 1 | KOIBEM HILL | 200.80 |
| 2 | Ngerek Hill | 455.45 |
| 3 | Public Utilities | 188.29 |
| | Total | 910.60 |

Genesis of Chepkumia Land Exchange

7. The genesis of Chepkumia Land Exchange program was initiated by the Chepkumia Locational Development Leaders Meeting chaired by the KANU Chairman- Chepkumia Location - Mr. Joel K Kitur who petitioned the District Commissioner then to prioritize the resettlement of the Koibem people in Kaimosi block - Chepkumia Forest Land as the community lacked adequate land for the development and expansion of public amenities in the Koibem Village. Another request for 600 ha land exchange was done by residents of Singoro Village-Kaptel Location, Nandi District.

Persons who have been settled so far under the Chepkumia Land Exchange in South Nandi Forest

8. The Chepkumia land exchange was meant to benefit the Koibem and the Ngerek Communities. They were to exchange the land they were living in with part of Kaimosi block land in Chepkumia Location. It was to be carried out in two phases, Phase 1- Koibem Village Residents and Phase 2- Ngerek Residents.

Phase 1- Koibem Village

9. Koibem residents are of Kalenjin origin and moved from their originally occupied area (Koibem Hills). By the year 2000, the Koibem Hills had 148 households. The settling of Koibem people was done in 2001/2002 after surrendering their original land and was settled in South Nandi Forest. During the process, seven people were not settled as the land they were allocated was swampy and rocky, and the matter was resolved in subsequent meetings.
10. The implementation of the program was coordinated by the District Commissioner and the District Surveyor under the guidance of the Provincial Commissioner/Rift Valley. The allocation was being done on the principle of an acre to an acre basis. The new Koibem (Yala) area was surveyed and the draft Boundary Plan, though developed, was not submitted to facilitate degazettment. The residents are still holding to their titles as the process of finalizing with the then Forest Department was stalled by court cases instituted by the Ngerek community.

Collapse of the proposed Chepkumia Exchange Program

11. The Chepkumia Land exchange, though targeted to benefit deserving communities, did not materialize and collapsed after tribal and political interests took center stage and several court cases undermined any meaningful progress. From the onset there was no political goodwill to settle the Ngereks and the issues have continued to this present day.
12. These complications stalled the process of exchange. The allocations in Kapkangani area were faced with multiple incidences of double allocations, selling of allocated plots, non - settlement of the original beneficiaries to the land, eviction orders and hence sought to be guided on the next course of action in streamlining the process of settlement.
13. It is evident that the Kenya Forest Service has made efforts to have these matters addressed by the relevant authorities, all of which have failed to give a satisfactory response.
14. The Ministry of Environment, Climate Change and Forestry together with Kenya Forest Service, have acted on the issues as required by law and with best intentions.
15. However, as detailed above, the success of these efforts depends on other parties and crucially honest and open participation of the communities on the ground in conjunction with the local leadership.
16. This therefore means that there is need to engage other stakeholders as demonstrated in the recommendations by the National Lands Commission.

Recommendations

17. The Chepkumia Land Exchange programme had good intentions to settle deserving people but was hijacked by political and tribal interests, there is need to engage broadly with other stakeholders to find a lasting solution to the disputed Chepkumia Land Exchange Programme with stakeholders from the County and National Government Agencies.
18. The Land Exchange involving the Koibem Community settlement was done without any conflicts, and the process of initiating surrender of Title Deeds from the beneficiaries should be commenced to the Government of Kenya (Kenya Forest service). The area they currently occupied should be surveyed and formalized as an exchange.
19. The Survey and development of cadastral map for the area they vacated and that in occupation currently should also be developed and the final process of gazettment and degazettment of the areas fast tracked to completion. This will enable KFS secure fully the Koibem Hills area which currently is without proper jurisdiction and lying in limbo.
20. The Ngerek Community continues to occupy their original land and there has never been any intention by the Kenya Forest Service to dispossess or evict them. The land they were supposed to benefit from was taken over for

21. The Government is assessing the matters raised by Ngerek to come up with an amicable and lasting solution with conservation of the moist rain forest being a priority.
22. NLC and Ministry of Interior and National Administration to address historical land injustice as manifested in this public petition.

F. P/No. 82 of 2023 on Degazettement of Boni-Lungi Forest in Lamu East Constituency

In response to the prayer that the National Assembly investigates the matter and compels the Ministry of Environment, Climate Change and Forestry to degazette Boni - Lungi as a State Forest;

1. The Ministry of Environment, Climate Change and Forestry takes cognizance of the fact that the recommendation for de-gazettement goes against the current government aspiration of increasing tree cover to 30% by 2032 to curb the three planetary crisis of forest degradation, biodiversity loss, climate change and pollution.
2. Boni Lungi Forest complex is a critical state resource for strategic national interests and territorial integrity. The gazettement guaranteed and ensured that the interests of forest dependants are safeguarded through multiagency security teams and the Whole of Government Approach (WGA).
3. The outcome of the investigations has revealed that the area is disturbed, dangerous and operations are being undertaken by multiagency security teams for peace and stability within the forest and transboundary region at large.

In response to the prayer that the Cabinet Secretary for Lands, Public Works, Housing and Urban Development in consultation with the County Government of Lamu to facilitate the registration of Boni-Lungi as community land pursuant to Article 63(5) of the Constitution and other applicable laws;

4. Following gazettement of Boni - Lungi Forest as stipulated in the FCMA, 2016, the registration of the forest as community land pursuant to Article 63(5) of the Constitution and other applicable laws would negate the government aspiration of achieving 30% tree cover by 2032.
5. The National Security Council and Ministry of Interior and National Administration are major stakeholders whose strategic national interest and territorial integrity are to be taken on board to guarantee peace, security and stability of the country.

In response to the prayer on other order and/or direction that it deems fit in the circumstances of the matter;

6. There are great opportunities for infrastructural development, roads, Lamu Port South Sudan Ethiopia Transport (LAPSSET) Corridor Project and general development which will be guaranteed through partnerships; while upholding the gazettelement of the Boni forest complex.
7. The Boni Forest Complex which borders Somalia is of both strategic National and cross border interest. This is necessitated the National Security Council concern relating to incursions by the Al Shabaab militants who are using the forest as a hide out for launching their attacks. The forest had suffered a state of degradation due to lack of adequate capacity and capability under the former community forest management arrangement. In view of this, there was need to manage this complex that cuts across the two counties (Lamu and Garissa) as one forest ecosystem. In order to ensure better conservation and management of these forests, there was need to put in place a legal instrument, which assisted towards achieving this goal.
8. Boni Forest complex comprises three blocks thus Boni Lungi, Panda Nguo and Boni Ijara blocks. The Boni complex strides between Lamu and Garissa Counties extending into Somali. The gazettelement process was a community driven initiative to reserve the forest from extinction as it serves as the source of their livelihood. The community since time immemorial have been depending on the forest reserve as their habitat and source of food.
9. The need for gazettelement of the complex was also informed by security, environmental, economic and socio-cultural challenges experienced by the local community, county, country and the world at large. According to the presentation at the Kenya Forest Service headquarters on the *Boni - Lungi Forest - the proposed gazettelement of Lungi Forest*, the community highlighted the specific reasons for gazettelement of the forest as clearly detailed in the referred document.
10. After concerted efforts by the community, the Al-Shabaab threats and fear by community that their ancestral land could be grabbed, the community through the help of development partners petitioned the Government to gazette the forest to ensure that the complex is protected for sustainable use.
11. The table below shows the process followed up to gazettelement of Boni Complex (Boni - Lungi).

| Item | Date | Action | Remarks |
|------|-------------|--|-----------------------------------|
| 1. | August 2003 | District Development Committee (DCC) Meeting | Approved minutes forwarded to KFS |

| | | and proposed gazettement of the forest. | |
|----|----------------------------|--|--|
| 2. | May 2008 | District Environmental Committee (DEC) meeting held at Ijara Commissioners' office. | Minutes forwarded to KFS HQs for action. |
| 3 | November 2010 - April 2011 | Kenya Secure Projects held consultative meetings with stakeholders on gazettement of Boni Complex. | Meetings held in Lamu and Mombasa - minutes forwarded to KFS for action on gazettement. |
| 4. | March 2013 | Stake holders forum for development of a strategic road map towards sustainable conservation of Boni Forest. | Meeting held at ALA inn hotel - Masalani. A report forwarded to KFS HQs for action on gazettement. |
| 5 | December. 2014 | Community representatives held a meeting with Director KFS where they presented a document on proposed gazettement of Boni Forest. | Minutes - Meeting was at Director's board room. |
| 6 | January 2014 | Reconnaissance survey by Kenya Forest Service in the company of community leaders | The three blocks identified and general outline agreed upon. |
| 7 | October - November 2014 | Consultative meetings with communities within and around Boni ecosystem on gazettement. | Minutes and a sensitization report forwarded to KFS for action. |
| 8 | June 2015 | Survey of boundary conducted by KFS Surveyors in the company of Boundary officers from Survey of Kenya and Community members. | The three blocks surveyed with a total area of 532,672.38 Ha Approximately. |
| 9 | June 2015 | Consultative/informative meetings with County Governments of Garissa and Lamu on gazettement. | Minutes forwarded to KFS for action. |
| 10 | July 2015 | Boundary Plans and Draft schedules prepared by KFS | Boundary Plan No. 175/437 Checked and |

| Item | Date | Action | Remarks |
|------|---------------|---|--|
| | | and forwarded to Director of Surveys for authentication. | Authenticated /Approved by Director of Surveys. |
| 11 | November 2017 | Boni - Lungi, Boni - Ijara and Panda Nguo Forest blocks gazetted. | Legal Notice No.261, 262 & 263 of 2017 published respectively. |

Conclusion and recommendation

12. Various stakeholders including members of the local community deliberated on the gazettement of the forest as tabulated above. Following the deliberations, it was decided that the gazettement process of the Boni forest complex (Boni - lungi) be undertaken and concluded.
13. The Cabinet Secretary beseeched the Committee to maintain the gazettement of the forest complex so as to address and protect the interests of the local Aweer community. Significant improvements of the forest functions in provision of environmental services (water flow, grazing pastures, climate mitigation, resilience and adaptation) have been noted.
14. The Cabinet Secretary requested the Committee to uphold the presence of multi-agency security teams within the gazetted forest that will continue to maintain the security of the region at large and enhance forest conservation and management efforts through Whole of Government and Society Approach.

G. P/No. 81 of 2023 on Gazettement of Kaya Forest as Forest areas under the Forest Conservation and Management

Creation and Management of Public Forests

1. The legal framework under Forest Conservation and Management Act 2016 Part IV–
Section 31(2): -
 - (1) *All public forests in Kenya are vested in the Service, subject to any rights of user in respect thereof, which by or under this Act or other written law, have been or are granted to any other person.*
 - (2) *The Cabinet Secretary may, on the recommendation of the Board and after consultation with the National Land Commission declare through a gazette Notice any un-alienated public land or any land purchased or otherwise acquired by the Service to be a public forest.*

Response to the Petition

Mombasa and Kilifi;

2. The Cabinet Secretary commended the Member of Parliament for Kilifi North Constituency (Hon. Owen Yaa Baya CBS, M.P.) for the noble public petition and called for action by other Members of Parliament to emulate and gazette more hilltops, degraded landscapes and biodiversity hotspots.
3. The Ministry of Environment, Climate Change and Forestry takes cognizance of the fact that the recommendation for gazette of the Kayas is a welcome idea. This will enhance conservation efforts being carried out by the government while contributing to overall forest and tree cover. Currently, there are few Kaya Forests that have already been gazetted and are under the management of the Kenya Forest Service, namely Kaya Chonyi, Kaya Jibana, Kaya Ribe and Kaya Kambe. Some of the Kayas are gazetted under National Museums and Heritage Act of 2006 as heritage sites and are managed by communities and the National Museums of Kenya (NMK).
4. The Ministry through KFS is undertaking the task of identifying, surveying and mapping, and gazette of all Kaya forests along the coastal counties of Kilifi, Mombasa and Kwale with involvement of local communities, Kaya Elders and other stakeholders.

In response to the prayer that Kaya forests be gazetted as forest areas under the Forest Conservation and Management Act, 2016;

5. The Ministry of Environment, Climate Change and Forestry will initiate the gazette process of the Kaya forests as guided by FCMA, 2016.
6. KFS Board of Directors has resolved and approve gazette of Kaya forests areas under FCMA, 2016.

In response to the prayer that that during gazette, management respects the needs of individual Kayas and to integrate the conservation of natural and cultural resources and traditional and non-traditional management practices;

7. Part V (Section 48 to 52) of the FCMA, 2016 recognizes community participation in sustainable forest management. In this regard, the needs of individual Kayas and integration of conservation of natural, cultural resources, traditional and non-traditional management practices will be taken care of and enhanced.
8. Upon gazette, the following management activities will be undertaken;
 - a. Preparation of Participatory Forest Management Plans for the Kaya forests;

- b. Establishment of forest protection camps and outposts (Forest Ranger camps);
- c. Establishment of applicable nature-based enterprises (NBEs) and Income Generating Activities (IGAs);
- d. Secure the boundaries of all the gazetted Kaya forests;
- e. Establishment of tree nurseries for seedlings production to address 15 billion National tree growing ecosystem and landscape restoration; and
- f. Rehabilitation and restoration of the degraded gazetted Kaya forests.

General concern on petitions relating to Degazettement of Forests

The Committee observed that most people in the villages are squatters with no place to call home nor any succession plan. Regarding what plans the Cabinet Secretary has in place to ensure by the end of his term, settlement is achieved, the Cabinet Secretary explained that a study, public participation and consultation had been done and revealed that people don't have relevant docs and title deeds. The Cabinet Secretary undertook to give title to communities living next to forests so that they become part of Communities Forest Association.

MIN./PPETC/2024/416:

MEETING WITH THE MINISTRY OF NATIONAL TREASURY AND ECONOMIC PLANNING

The Agenda was deferred.

MIN./PPETC/2024/417:

ADJOURNMENT AND DATE OF NEXT MEETING

The Chairperson adjourned the meeting at 02:00 p.m. The date of the next meeting will be communicated by notice.

Sign: 

(CHAIRPERSON)

Date..... 

Hon. Member,
You may approve.
asbestos
27/9/23



Approved
SNA
27/9/23

REPUBLIC OF KENYA
THE NATIONAL ASSEMBLY
THIRTEENTH PARLIAMENT (SECOND SESSION)

PUBLIC PETITION

(No. 52 of 2023)

BAN OF THE USE OF ASBESTOS AS A ROOFING MATERIAL

I, the **UNDERSIGNED** on behalf of concerned residents of Wajir North Constituency and other affected parts of the country;

DRAW the attention of the House to the following:

1. **THAT**, shelter is one of the basic human needs that secures human habitation and provides sense of security;
2. **THAT**, the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use;
3. **THAT**, Article 42 of the Constitution recognizes the right of every Kenyan to a clean and healthy environment, protection of the environment for the benefit of present and future generations;
4. **THAT**, numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past built using *asbestos* roofing materials;
5. **THAT**, the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as *Bute, Balambala, Kakuma* and *Rhamu Arid Zones Primary Schods* using *asbestos* roofing materials;
6. **THAT**, research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called "*Mesothelioma*" which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses;

BAN OF THE USE OF ASBESTOS AS A ROOFING MATERIAL

7. **THAT**, as a result of *Mesothelioma* Cancer and related illnesses, fifty five countries all over the World, including the USA, New Zealand, Australia and Egypt have banned the use of *asbestos* as a roofing material, with Kenya banning its use in 2006;
8. **THAT**, the spiralling increase in cancer cases is exerting unbearable financial pressure on families and the country's health system owing to the exorbitant costs associated with treating cancer;
9. **THAT**, despite the ban on the use of *asbestos* in Kenya in 2006 and the associated increase in cancer cases, *asbestos* is still in use in many parts of the Country;
10. **THAT**, the matter in respect of which this petition is made is not pending before any Court of law or constitutional or legal body.

THEREFORE, your humble Petitioners pray that the National Assembly through the Public Petitions Committee –

- (1) Recommend to the relevant Ministries to survey and identify all public buildings with *asbestos roofs*, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using *asbestos* with a view to removing *asbestos* and replacing it with galvanized iron sheets in order to mitigate *asbestos*-related negative effects and cancer;
- (2) Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the *asbestos* materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;
- (3) Recommend for a medical survey to be carried out in all the regions with *asbestos* roofs to ascertain the extent of cancerous effect of prolonged exposure to *asbestos* and provide necessary health interventions to those who might have been affected; and
- (4) Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of *asbestos* related negative effects.

And **PETITIONERS** will forever pray.

PRESENTED BY:

A handwritten signature in black ink, starting with a large, stylized letter 'I' inside a square, followed by a long horizontal line and a wavy flourish at the end.

THE HON. IBRAHIM ABDI, MP
MEMBER FOR WAJIR NORTH CONSTITUENCY

DATE: 26.09.2023.
.....



THE NATIONAL ASSEMBLY

THIRTEENTH PARLIAMENT – THIRD SESSION – 2024

PUBLIC PETITIONS COMMITTEE

LEGAL BRIEF:

PUBLIC PETITION (*NO. 52 OF 2023*)

REGARDING BAN OF THE USE OF ASBESTOS AS A ROOFING MATERIAL

APRIL 2024

1. The petition is brought before the House by Hon. Ibrahim Abdi, Member of Parliament for Wajir North Constituency on behalf of residents of Wajir North Constituency.
2. The petitioner claims that the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use.
3. The petitioner claims that numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past using *asbestos* roofing materials.
4. The petitioner claims that the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as *Bute, Balambala, Kakuma* and *Rhamu Arid Zones Primary Schools* using asbestos roofing materials.
5. The petitioner claims that research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called "*Mesothelioma*" which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses.
6. The petitioner claims that as a result of *Mesothelioma* cancer and related illnesses, fifty-five countries all over the world, including the USA, New Zealand, Australia and Egypt have banned the use of asbestos as a roofing material, with Kenya banning its use in 2006.
7. The petitioner claims that despite the ban on the use of asbestos in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the country.
8. The petitioner seeks the intervention of the House to—
 - i. Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs region of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;
 - ii. Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

- iii. Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected; and Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.

ANALYSIS

Use of Asbestos

9. Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. Many products are in use that contain asbestos. Asbestos are also used in building materials such as roofing, sound proofing, ceilings and tiles.

Health effects of Asbestos

10. There was increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects. Due to the fibrous nature of the asbestos, airborne dust is likely to be present in the environment close to the premises where asbestos is handled or used. All people within that vicinity are likely to be exposed to the dust in the air. When the fibres are embedded in lung tissue over time it may cause serious lung diseases including asbestosis, lung cancer or mesothelioma.
11. The risk of using asbestos in building materials such as roofing is in the deterioration of asbestos sheets over time and increased drive towards roof water harvesting.

A. Constitution of Kenya

12. Article 42 of the Constitution guarantees every person has the right to a clean and healthy environment. Further, Article 43 of the Constitution guarantees every person has the right to the highest attainable standard of health.

B. Public Health Act Cap. 242

13. The Public Health Act Cap. 242 provides for a legal framework of provision for securing and maintaining health. Section 13 of the Act, states that it shall be the duty of every health authority to take all lawful, necessary and under its circumstances reasonably practicable measures for preventing the occurrence or dealing with any outbreak, or prevalence of any infections, communicable or preventable diseases or conditions to safeguard and promote the public health and to exercise the powers and perform the duties in respect of the public health conferred or imposed on it by this act or by any other law.

C. National Environmental Management Authority

14. The National Environmental Management Authority is established to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment. Its mandate includes implementation of Legal Notice No. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2006 which classified wastes containing asbestos in the form of dust or fibers as hazardous waste.
15. The National Environmental Management Authority in 2011 published the National Guidelines on Safe Management and Disposal of Asbestos (the Guidelines). In view of the adverse health effects posed by exposure to asbestos fibres, the Guidelines highlighted the precautions necessary to mitigate risks of exposure.
16. The Guidelines under the section on removal provide that the waste generator shall ensure that the following precautions are observed when removing asbestos materials from buildings or other structures:
- a) Secure the site to prevent unauthorized persons and to restrict movement
 - b) Wet the asbestos sheets before removal as breakage releases asbestos fibres. If asbestos sheets should begin to crack or crumble, immediately wet the cracked or broken areas with the pintsize spray bottle or garden pump sprayer.
 - c) Remove pieces of asbestos sheets by pulling any fasteners (nails, screws, rivets) or cutting fastener heads so as to minimize breakage. If necessary, carefully lift asbestos sheets with pry tools to expose the fasteners' heads.
 - d) Do not slide asbestos sheet over each other.

- e) Carefully lower removed asbestos sheets to the ground. Do not throw or drop it.
 - f) Care should be taken not to stand or sit on the asbestos sheets to avoid breakage.
 - g) The workers removing the asbestos must have the appropriate personal protective equipment which must be removed as they enter the shower room immediately after removal of the asbestos.
17. The Guidelines also provide for Disposal Operation in which it recommends that all asbestos sheets and the debris should be wrapped before it is hauled to the disposal site or transfer station in a covered vehicle. Further, all transportation vessels which have been in contact with asbestos waste shall be cleaned at the disposal site. The disposal site should be maintained, including the warning signs, the fence, the gate among others to prevent vandalism and interference.

D. Ministry of Health

18. The Ministry of Health under the State Department for Public Health and Professional Standards is responsible for critical functions related to public health and professional standards. They develop policies on public health and sanitation, ensuring the well-being of communities. They oversee preventive and promotive health services and contribute to safeguarding public health and promoting a healthier and safer society.

E. Ministry of Lands, Public Works, Housing and Urban Development

19. The State Department for Public Works under the Ministry of Lands, Public Works, Housing and Urban Development, is charged with the responsibility of Planning, Environment and Infrastructure Development.
20. The State Department has the mandate to profile buildings to ensure they meet safety standards and necessary approvals. This ensures maintenance of excellence in the construction and maintenance of public buildings and other public works. Assets in the built environment include hospitals, schools, colleges, technical institutes, prisons, courts etc. Assets in infrastructure development include footbridges, sea walls, breakwaters and jetties.

21. To undertake a conclusive inquiry into the issues raised in the petition, the Committee will have to hear from the National Environmental Management Authority, the Ministry of Health and the Ministry of Lands, Public Works, Housing and Urban Development.
22. The Committee should limit itself to the mandate of Parliament provided in Article 95 of the Constitution as it seeks the resolution of issues by listening to all parties involved and stakeholders and make appropriate recommendations.
23. In light of the foregoing in considering the Petition, the Committee should seek to interrogate the views of the—
 - a) Petitioner;
 - b) National Environmental Management Authority;
 - c) Ministry of Health; and
 - d) Ministry of Lands, Public Works, Housing and Urban Development.

PENNINAH SIMIREN
LEGAL COUNSEL



THE NATIONAL ASSEMBLY

THIRTEENTH PARLIAMENT – THIRD SESSION – 2024

PUBLIC PETITIONS COMMITTEE

LEGAL BRIEF:

PUBLIC PETITION (NO. 52 OF 2023)

REGARDING BAN OF THE USE OF ASBESTOS AS A ROOFING MATERIAL

APRIL 2024

1. The petition is brought before the House by Hon. Ibrahim Abdi, Member of Parliament for Wajir North Constituency on behalf of residents of Wajir North Constituency.
2. The petitioner claims that the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use.
3. The petitioner claims that numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past using *asbestos* roofing materials.
4. The petitioner claims that the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as *Bute, Balambala, Kakuma* and *Rhamu Arid Zones Primary Schools* using asbestos roofing materials.
5. The petitioner claims that research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called "*Mesothelioma*" which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses.
6. The petitioner claims that as a result of *Mesothelioma* cancer and related illnesses, fifty-five countries all over the world, including the USA, New Zealand, Australia and Egypt have banned the use of asbestos as a roofing material, with Kenya banning its use in 2006.
7. The petitioner claims that despite the ban on the use of asbestos in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the country.
8. The petitioner seeks the intervention of the House to—
 - i. Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs region of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;
 - ii. Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

- iii. Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected; and Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.

ANALYSIS

Use of Asbestos

9. Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. Many products are in use that contain asbestos. Asbestos are also used in building materials such as roofing, sound proofing, ceilings and tiles.

Health effects of Asbestos

10. There was increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects. Due to the fibrous nature of the asbestos, airborne dust is likely to be present in the environment close to the premises where asbestos is handled or used. All people within that vicinity are likely to be exposed to the dust in the air. When the fibres are embedded in lung tissue over time it may cause serious lung diseases including asbestosis, lung cancer or mesothelioma.
11. The risk of using asbestos in building materials such as roofing is in the deterioration of asbestos sheets over time and increased drive towards roof water harvesting.

A. Constitution of Kenya

12. Article 42 of the Constitution guarantees every person has the right to a clean and healthy environment. Further, Article 43 of the Constitution guarantees every person has the right to the highest attainable standard of health.

B. Public Health Act Cap. 242

13. The Public Health Act Cap. 242 provides for a legal framework of provision for securing and maintaining health. Section 13 of the Act, states that it shall be the duty of every health authority to take all lawful, necessary and under its circumstances reasonably practicable measures for preventing the occurrence or dealing with any outbreak, or prevalence of any infections, communicable or preventable diseases or conditions to safeguard and promote the public health and to exercise the powers and perform the duties in respect of the public health conferred or imposed on it by this act or by any other law.

C. National Environmental Management Authority

14. The National Environmental Management Authority is established to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment. Its mandate includes implementation of Legal Notice No. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2006 which classified wastes containing asbestos in the form of dust or fibers as hazardous waste.
15. The National Environmental Management Authority in 2011 published the National Guidelines on Safe Management and Disposal of Asbestos (the Guidelines). In view of the adverse health effects posed by exposure to asbestos fibres, the Guidelines highlighted the precautions necessary to mitigate risks of exposure.
16. The Guidelines under the section on removal provide that the waste generator shall ensure that the following precautions are observed when removing asbestos materials from buildings or other structures:
- a) Secure the site to prevent unauthorized persons and to restrict movement
 - b) Wet the asbestos sheets before removal as breakage releases asbestos fibres. If asbestos sheets should begin to crack or crumble, immediately wet the cracked or broken areas with the pintsize spray bottle or garden pump sprayer.
 - c) Remove pieces of asbestos sheets by pulling any fasteners (nails, screws, rivets) or cutting fastener heads so as to minimize breakage. If necessary, carefully lift asbestos sheets with pry tools to expose the fasteners' heads.
 - d) Do not slide asbestos sheet over each other.

- e) Carefully lower removed asbestos sheets to the ground. Do not throw or drop it.
 - f) Care should be taken not to stand or sit on the asbestos sheets to avoid breakage.
 - g) The workers removing the asbestos must have the appropriate personal protective equipment which must be removed as they enter the shower room immediately after removal of the asbestos.
17. The Guidelines also provide for Disposal Operation in which it recommends that all asbestos sheets and the debris should be wrapped before it is hauled to the disposal site or transfer station in a covered vehicle. Further, all transportation vessels which have been in contact with asbestos waste shall be cleaned at the disposal site. The disposal site should be maintained, including the warning signs, the fence, the gate among others to prevent vandalism and interference.

D. Ministry of Health

18. The Ministry of Health under the State Department for Public Health and Professional Standards is responsible for critical functions related to public health and professional standards. They develop policies on public health and sanitation, ensuring the well-being of communities. They oversee preventive and promotive health services and contribute to safeguarding public health and promoting a healthier and safer society.

E. Ministry of Lands, Public Works, Housing and Urban Development

19. The State Department for Public Works under the Ministry of Lands, Public Works, Housing and Urban Development, is charged with the responsibility of Planning, Environment and Infrastructure Development.
20. The State Department has the mandate to profile buildings to ensure they meet safety standards and necessary approvals. This ensures maintenance of excellence in the construction and maintenance of public buildings and other public works. Assets in the built environment include hospitals, schools, colleges, technical institutes, prisons, courts etc. Assets in infrastructure development include footbridges, sea walls, breakwaters and jetties.

21. To undertake a conclusive inquiry into the issues raised in the petition, the Committee will have to hear from the National Environmental Management Authority, the Ministry of Health and the Ministry of Lands, Public Works, Housing and Urban Development.
22. The Committee should limit itself to the mandate of Parliament provided in Article 95 of the Constitution as it seeks the resolution of issues by listening to all parties involved and stakeholders and make appropriate recommendations.
23. In light of the foregoing in considering the Petition, the Committee should seek to interrogate the views of the—
 - a) Petitioner;
 - b) National Environmental Management Authority;
 - c) Ministry of Health; and
 - d) Ministry of Lands, Public Works, Housing and Urban Development.

PENNINAH SIMIREN
LEGAL COUNSEL



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY

MINISTERIAL RESPONSE TO PUBLIC PETITION NO. 52 OF 2023 ON
THE BAN OF ASBESTOS AS A ROOFING MATERIAL

05TH DECEMBER, 2024

MINISTERIAL STATEMENT BY THE CABINET SECRETARY FOR ENVIRONMENT,
CLIMATE CHANGE AND FORESTRY TO PUBLIC PETITION NO. 52 OF 2023 ON THE
BAN OF ASBESTOS AS A ROOFING MATERIAL

Public Petition

1. THAT, shelter is one of the basic human needs that secures human habitation and provides sense of security;
2. THAT, the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use;
3. THAT, Article 42 of the Constitution recognizes the right of every Kenyan to a clean and healthy environment, protection of the environment for the benefit of present and future generations;
4. THAT, numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past building using asbestos roofing materials;
5. THAT, the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as Bute, Balambala, Kakuma and Rhamu Arid Zones Primary Schools using asbestos roofing materials;
6. THAT, research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called "Mesothelioma" which affects the membrane lining of the lungs and

abdomen and presents symptoms similar to those of respiratory illnesses;

7. THAT, as a result of Mesothelioma Cancer and related illnesses, fifty-five countries all over the World, including the USA, New Zealand, Australia and Egypt have banned the use of asbestos as a roofing material, with Kenya banning its use in 2006;
8. THAT, the spiraling increase in cancer cases is exerting unbearable financial pressure on families and the Country's health system owing to the exorbitant costs associated with treating cancer;
9. THAT, despite the ban on the use of asbestos in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the Country;

Prayers:

- 1) *Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;*
- 2) *Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;*
- 3) *Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;*
- 4) *Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.*

1.0 Introduction

The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment and become operational in 2002.

2.0 Background

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or deterioration over time the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling

the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring their replacement with more environmentally safe methods necessitating their removal and disposal.

Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos (Annex 1).

Over time, the Ministry through NEMA has undertaken the following actions to mitigate against asbestos pollution:

1. The National Environment Management Authority (NEMA) Mapped out and identified facilities, including schools and private establishments with asbestos roofing countrywide for removal and safe disposal.
2. Further, the Authority undertook the exercise and developed a National Inventory of both public and private facilities with asbestos identified by County, locations with GPS coordinates, addresses and the current status of removal/ management of asbestos (Annex 3).
3. NEMA developed a factsheet based on frequently asked questions on removal and safe disposal of all asbestos on roofs and posted on the website to help guide and inform the public and other stakeholders (Annex 2).

4. NEMA directed all its Field Officers to conduct public awareness campaign the public on the environmental and health risks associated with asbestos use through FM stations within the Counties, with the support of the County Environment Committees and the NGAO leadership.
5. NEMA wrote compliance letters to Key ministries (Education, Defence, Interior and Water) on the concern of the presence of asbestos roofing, and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials (Annexes III, IV, and V).
6. Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006) (Annex VI).
7. Licensed the vehicles to transport asbestos/hazardous waste (Annex VII).

Prayer 1. Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;

Response

Hon. Chair, the Ministry, through NEMA, placed a public notice to advise the public on the environmental and health risks associated with asbestos roofs.

Further, NEMA wrote to key Ministries and public institutions to advise them to replace the asbestos roofing materials with environmentally-friendly roofing materials.

NEMA conducted an inventory of buildings and facilities with asbestos material. The inventory shows huge quantities deployed in government (both national and county) and private facilities including schools, houses and hospitals.

Prayer 2: Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

Response

Hon. Chair, NEMA guided the concerned Ministries and other entities on the safe handling, transportation, and disposal of asbestos. This is in accordance with national guidelines on the safe management and disposal of asbestos, and Environmental Management and Coordination (Waste Management) Regulations, 2006. Pursuant to Section 3 of the Environmental Management and Coordination Act, 1999 and in accordance with the Legal Notice No. 121 of Environmental Management and Coordination (Waste Management) Regulations, 2006, management of wastes classified as hazardous requires that disposal is done in a specific manner as approved by NEMA.

Prayer 3. Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;

Response

Hon. Chair, NEMA advised the Ministry of Health and County Governments to carry out medical surveys and screening to ascertain the extent of impacts of exposure to asbestos and provide appropriate health interventions. Exposure to asbestos is not only an occupational problem, but also a risk for the general population due to air pollution, improper disposal, household exposure etc. There is thus need for the ministry of Health to introduce relevant policies, increased investments in health and Public safety education programs.

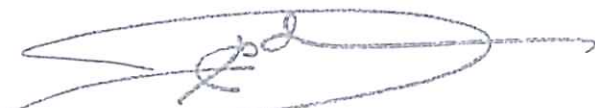
Prayer 4.

Other Recommendations;

Hon Chair, I wish to make three key recommendations.

1. Due to the risks associated with Asbestos fibres or dust, the guidelines on the safe handling and management and disposal must be adhered to by the affected public and private facilities.
2. The safe removal of asbestos, handling, transportation and safe disposal starts with the proponents or facility owners undertaking risk assessment, Environmental Impact Assessment and providing adequate notification to those who are likely to be affected by the activity.
3. All the 47 Counties need to establish sites for the disposal of asbestos and put in place appropriate systems for management and disposal of asbestos.

Thank you. Hon. Chair and Hon. Members.



HON. ADEN BARE DUALE, EGH

CABINET SECRETARY

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

DATE 5th December 2024



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

FREQUENTLY ASKED QUESTIONS ON ASBESTOS MANAGEMENT

1. What are the common uses of asbestos?

Some of the common uses of asbestos include building material (roofing; ceiling of old houses, industries, hospitals and schools); insulation of boilers; pipes for water supply and sewer; Personal Protective Gear used by firefighters; brake shoes & clutch fittings in motor vehicles.

2. What is asbestos waste?

Asbestos waste refers to any waste containing asbestos and may include waste from renovation, demolition and repair of asbestos roofing sheets, asbestos ceiling boards and asbestos clutch plates, brake pads and linings and insulation materials.

3. What are the dangers posed by asbestos?

Asbestos materials deteriorate over time and begin to release fine fibres into the air. The hazardous material can remain suspended in air for hours. If handled without caution, it may cause serious chronic health problems such as asbestosis, lung cancer and mesothelioma leading to long term serious social, economic and emotional problems.

4. Who is affected by the directive on the removal of asbestos?

The directive affects both the public and private facilities that have roofs and water pipes made of asbestos materials in Kenya. Therefore, Government ministries, Departments, Agencies, County Governments and individuals who have the material are expected to comply accordingly.

5. What is the process of the removal of asbestos?

- i. Before commencing any work, the owner/ operator of the premises containing asbestos identifies a disposal site for the asbestos, either on-site (within your premises); in a licensed County Government facility or a commercial disposal site.
- ii. After that, the owner/ operator engages a licensed Environmental Assessments expert to carry out an Environmental Impact Assessment (EIA) for removal, handling and disposal of asbestos and submit the report to NEMA for review and decision making.
- iii. Depending on the choice of disposal option picked, a hydrogeological survey is undertaken and its findings included in the EIA report to inform the best siting for the disposal site.
- iv. Works on the removal, handling and disposal of asbestos should not commence until an EIA license is issued by NEMA or any other decision communicated to the client.

6. After removal of asbestos containing roofing material, where can I dispose the asbestos waste?

We recommend that the waste be disposed either;

- a. On site upon approval by NEMA through the EIA process with strict adherence to the prescribed guidelines and in the presence of a NEMA Environmental Inspector;
- b. In designated asbestos disposal sites run by the county Government and licensed by NEMA or;
- c. In licensed commercial asbestos disposal sites run by the private sector players (list attached).

7. Which are the approved transporters and sites for disposing asbestos?

The list of approved transporters and commercial disposal sites for asbestos disposal are available on our website (www.nema.go.ke) with their contacts.

8. What documents do I need to prove that my asbestos was handled in accordance with NEMA's requirements?

You should maintain a copy of the EIA license that permitted the removal, handling and disposal of asbestos.

You should also maintain tracking documents with details on the quantities of asbestos transported, registration details of the transporter, name and stamp of the licensed disposal site. These documents shall be required during inspections by NEMA Inspectors. For onsite disposal, details of the company (registered by NEMA) that offered the service should be maintained on site.

9. Where can one report if you see asbestos mismanagement or illegal dumping?

- Report to NEMA office in any of our 47 county offices or the Headquarters at Popo Road, South C in Nairobi County.
- You could also report through our incident reporting line (hotline) number 0741101100; 0786101100.
- An email can also be sent to info@nema.go.ke; incidence@nema.go.ke.

NOTE: Seek Authority from NEMA before you engage a licensed asbestos handler.
Please Beware of fraudsters purporting to be licensed asbestos handlers

ASBESTOS LANDFILLS IN KENYA

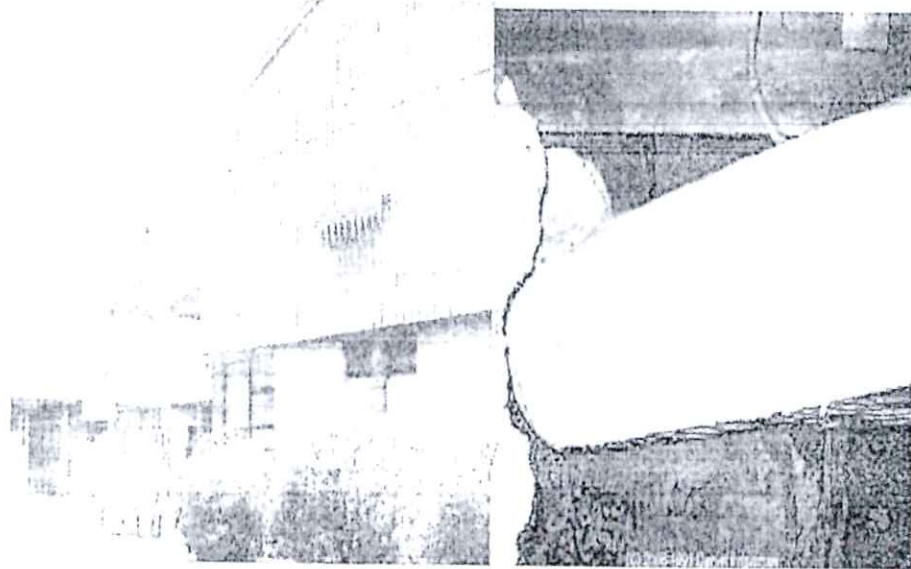
| NO | NAME | CONTACTS | COUNTY | TYPE OF FACILITY | DATE OF EXPIRY |
|----|-------------------------------------|---|--------------|------------------|----------------------------------|
| 1. | SERGEANT LOGISTICS LIMITED | P.O BOX 1549-80100, MOMBASA EMAIL: info@sergentgroup.com TEL:+254 784 204 939 | MOMBASA | LANDFILL | 11 TH SEPTEMBER 2024. |
| 2. | GREENROCK VENTURES | P.O. BOX 417 KALIMONI, JUJA TEL: 0722806926/ 0714835576 EMAIL: info@greenrockventures.co.ke , thubikahenya@gmail.com | KIAMBU | LANDFILL | 31 ST JANUARY 2025. |
| 3. | JOSAMI SMARTWASTE MANAGEMENT | P.O BOX 5963-80200, MALINDI TEL: +254702291540/ 0202440757 EMAIL: sajosami@gmail.com | KILIFI | LANDFILL | 1 ST APRIL 2025. |
| 4. | TAI LIFESTYLE LIMITED | P.O BOX 16620-80108, KILIFI TEL: +254 798777666 EMAIL: info@tailifestyle.co.ke | TAITA TAVETA | LANDFILL | 28 TH JULY 2025. |
| 5. | QUALITY INSPECTION SERVICES LIMITED | P.O.BOX 87222-80100, KILIFI qualityinspectionltd@gmail.com | KILIFI | LANDFILL | 21 ST JANUARY 2025. |
| 6. | KILINDINI WASTE HUB LTD | P.O BOX 99744-80107, MOMBASA pwaniwastehub001@gmail.com | KILIFI | LANDFILL | 21 ST JANUARY 2025. |
| 7. | SAIMBOT SHIP'S CONTRACTORS LIMITED | P.OBOX 40461-80100 MOMBASA TEL 0722388954 EMAIL saimbot@yahoo.com | MOMBASA | LANDFILL | 14 TH AUGUST 2024. |
| 8. | MARINE WASTE COLLECTION DEALERS | P.O BOX 1088 - 80100 TEL: 0721642850 EMAIL: info@marinewaste.co.ke/ keymoneyy2011@gmail.com | KILIFI | LANDFILL | 16 TH SEPTEMBER 2024. |
| 9. | JALI ECOSYSTEMS LIMITED | P.O BOX 46624-00100, NAIROBI. TEL: 0720751136 EMAIL: info@jaliecosystems.co.ke | MURANG'A | LANDFILL | 17 TH SEPTEMBER 2024. |

| | | | | | |
|-----|--|--|---------|-----------|----------------------------------|
| 10. | MOREFLOW ENTERPRISES | P.O. BOX 93280 – 80102, MOMBASA TEL: 0720678983 EMAIL: jose.mwendo@yahoo.com | MOMBASA | LANDFILL | 21 ST SEPTEMBER 2024. |
| 11. | LEGACY LA RELANCE (EA) LIMITED | P.O. BOX 42550-80100 MOMBASA EMAIL: legacylarelianceatd@gmail.com | MOMBASA | LANDFILL | 9 TH JANUARY 2025. |
| 12. | STEEN AGENCIES | P.O BOX 258-00232, THIKA TEL: 0702356422 EMAIL: info@steenagencies.co.ke | KILIFI | LANDFILL | 21 ST JANUARY 2025. |
| 13. | FADEMA CO. LIMITED | PO BOX 26501-00504, NAIROBI TEL: 0720306392/0727959215 EMAIL: fadema2014@gmail.com | KILIFI | LAND FILL | 1 ST APRIL 2025. |
| 14. | TARZON ENTERPRISES | P.O. BOX 92758 – 80100, MOMBASA TEL: 0722771174 EMAIL: jose.mwendo@yahoo.com | KWALE | LAND FILL | 6 TH JUNE 2025. |
| 15. | ENVIRONMENTAL AND COMBUSTION CONSULTANTS LTD | P.O BOX 72828 - 00200, NAIROBI EMAIL: james@ecc1kenya.com TEL: 0726315744/0722767949 | MIGORI | LAND FILL | 2 ND JULY 2025. |



MAMO B. MAMO, EBS
DIRECTOR GENERAL, NEMA

SAMPLES (PICTORIAL) OF ASBESTOS



A photo of asbestos used as roofing material and boiler insulation



Poorly managed asbestos: A licensed transporter preparing to transport the removed asbestos waste for disposal

7 11/11/2018

LIST OF FACILITIES WITH ASBESTOS ROOFING IN NAIROBI COUNTY IN NAIROBI COUNTY

| NAIROBI COUNTY | | | | NAME OF CDE: CATHERINE THAI | | |
|----------------|--------------------------------------|--|--|-----------------------------|--------------------------|-----------------------------|
| S/NO | FACILITY NAME | | LOCATION | PUBLIC/PRIVATE ENTITY | REMARKS | APPROXIMATE QUANTITY TONNES |
| 1 | Kenya National Trading Corporations | Proposed removal of asbestos roofing | LR No. 209/8607, Nairobi Complex, Embakasi Sub-County | Public | Ongoing removal-Licensed | |
| 2 | Kileleshwa covenant community church | Proposed removal, transportation and disposal of asbestos roofing sheets | LR No. 209/10589, Kileleshwa, Dagoretti North Sub-County | Private | Ongoing removal-Licensed | |
| 3 | Flamingo steel & Hardware ltd | proposed removal, handling and disposal of asbestos roofing sheets | LR No. 209/3920 & 3921, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed | |
| 4 | Nairobi City County | proposed asbestos roofing replacement | LR No. Jogoo road market, Makadara Sub-County | Public | Ongoing removal-Licensed | |
| 5 | Labchem ltd | Proposed decommissioning of asbestos | LR No.209/8816, Industrial area, Embakasi Sub-County | Private | Pending removal | |
| 6 | Kenindia Assurance CO.ltd | Proposed asbestos removal and storage site | Nairobi, Starehe Sub-County | Private | Pending removal | |
| 7 | Woolwich Properties kenya | Proposed removal of asbestos roofing material | LR No.209/8658,CBD, Starehe Sub-County | Private | Pending removal | |

| | | | | | |
|----|-------------------------------------|---|---|---------|--------------------------|
| 8 | Timber Corner Ltd | Proposed removal and disposal of asbestos | LR No.209/554, Industrial area, Embakasi Sub-County | Private | Pending removal |
| 9 | The Aga Khan Foundations | Proposed replacement of asbestos containing roofing sheets | LR No.209/5523, Pangani, Kamukunji Sub-County | Private | Ongoing removal-Licensed |
| 10 | Mantrac Kenya Ltd | Proposed asbestos roofing sheets and disposal | Lusaka road, Industrial area | Private | Pending removal |
| 11 | Secretary,Urban& metropolishan Dev. | Proposed safe removal and disposal of asbestos roofing sheets | Kahawa west, Roysambu Sub-County | Public | Pending removal |
| 12 | Secretary,Urban& metropolishan Dev. | Proposed asbestos removal and storage site | Makina market, Kibera Sub-County | Public | Pending removal |
| 13 | Secretary,Urban& metropolishan Dev. | Proposed asbestos removal and storage site | Kenyatta market, Kibera Sub-County | Public | Pending removal |
| 14 | Secretary,Urban& metropolishan Dev. | Proposed asbestos removal and storage site | Ngara market, Starehe Sub-County | Public | Pending removal |
| 15 | Pearl Industries Ltd | Proposed asbestos removal and storage site | Gilgil road, Embakasi Sub-County | Private | Pending removal |
| 16 | Silent Night Kenya LTD | Proposed asbestos removal and storage site | Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 17 | Jamal Abdi | Proposed asbestos removal and storage site | Kasarani Sub-County | Private | Pending removal |
| 18 | Universal Carriers ltd | Proposed Asbestos roofing removal and disposal | L.R No.209/12365, Embakasi Sub-County | Private | Ongoing removal-Licensed |

| | | | | | |
|----|---|---|---|---------|--------------------------|
| 19 | Susan Wambui Bizer | Proposed removal and safe disposal of asbestos roofing sheets | L.R No.HOUSE M-174 | Private | Ongoing removal-Licensed |
| 20 | The french school of Nairobi | Proposed Asbestos roofing removal and placement | L.R No.1/36, Dagoretti North Sub-County | Private | Pending removal |
| 21 | Sanghani Jadvā Bhimji | Proposed Asbestos roofing sheet removed and re-roofing | L.R No.209/106 | Private | Ongoing removal-Licensed |
| 22 | Sanghani Jadvā Bhimji | Proposed Asbestos roofing sheet removed and re-roofing | L.R No.209/106/1 | Private | Ongoing removal-Licensed |
| 23 | Rachna Vinodrai & Sonal Vinod | Proposed asbestos roofing sheets transportation, removal and disposal | L.R NO. 11871/8 | Private | Ongoing removal-Licensed |
| 24 | Director general, Nairobi metropolitan area transport authority | Proposed Removal & disposal of asbestos roofing sheets | Kasarani stadium, Kasarani Sub-County | Public | Pending removal |
| 25 | Premier Club | Proposed asbestos roofing sheets removal | L.R NO. 209/6559/2, Embu-Nrb Highway, Roysambu Sub-County | Private | Ongoing removal-Licensed |
| 26 | Sameer Africa PLC | Proposed removal, encapsulation, transport and off site disposal of asbestos roofing sheets | L.R NO. 12081/13, Mombasa RD, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 27 | Kenya Commercial bank ltd | Proposed Asbestos roofing replacement | L.R NO. 12856, Off Thika RD, Kasarani Sub-County | Private | Ongoing removal-Licensed |

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|----|--------------------------------------|---|---|---------|--------------------------|
| 28 | Specialized Aluminium Renovators Ltd | Proposed removal and disposal of Asbestos roofing sheets on Godowns | PLOT NO. 12596/114, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 29 | Packaging Industries Ltd | Proposed asbestos roofing removal | L.R NO. 209/9024, Embakasi, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 30 | Mann Manufacturing co.ltd | Proposed Removal & disposal of asbestos roofing sheets | L.R NO. 209/12461, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 31 | National Cereals & produce board | Proposed removal, transportation & disposal of Asbestos roofing sheets | L.R NO. 209/6535, Enterprise rd, Embakasi Sub-County | Public | Ongoing removal-Licensed |
| 32 | Toyota Kenya LTD | Proposed removal and replacement of Asbestos roofing material | Dagoretti/Riruta/3509, Along Ngong rd, Dagoretti South Sub-County | Private | Ongoing removal-Licensed |
| 33 | Supreme Properties LTD | Proposed removal, encapsulation, transport and off site disposal of asbestos roofing sheets | L.R NO. 209/3888, Nanyuki rd, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 34 | ECTA (Kenya) Limited | Proposed asbestos roofing sheets removal | L.R NO. 209/6857, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 35 | Pan Africa Christian Union | Proposed asbestos roofing sheets removal transportation and disposal | L.R NO. 8826/1 Roysambu area, Roysambu Sub-County | Private | Ongoing removal-Licensed |

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|----|--|--|--|---------|--------------------------|
| 36 | Jubilee Allianz General Insurance (K) LTD | Proposed Asbestos roofing sheets removal & disposal | L.R NO. 209/8975, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 37 | Zaya Properties Limited | Proposed removal of asbestos roofing material | L.R NO. 209/3438, Parklands, Westlands Sub-County | Private | Ongoing removal-Licensed |
| 38 | East Africa Cables Limited | Proposed asbestos cement roofing sheets repairs | L.R NO. 209/6982, Industrial area, Embakasi Sub-County | Private | Pending removal |
| 39 | Kenya Medical Training College | Proposed Asbestos Roof Removal, Replacement and Disposal | KMTC Mathari Campus, Kasarani Sub-County | Public | Ongoing removal-Licensed |
| 40 | Makongeni Primary School | Proposed removal of asbestos roofing material | L.R. No. 209/2570_Kaloleni, Makadara Sub-County | Public | Ongoing removal-Licensed |
| 41 | Zahra Sign System Limited | Proposed removal of asbestos roofing material | L.R. No. 209/8972 Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 42 | New Planters Co-operative Union Public Limited Company | Proposed removal, transportation & disposal of Asbestos roofing sheets | L.R. No. 12209 & 12210 Dandora Mowlem area, Njiru Sub-County | Public | Pending removal |
| 43 | Shree Cutch Satsang Swaminarayan Temple | Proposed Removal & disposal of asbestos roofing sheets | L.R. No. 24559 along Langata Link Road, Lang'ata Sub-County | Private | Ongoing removal-Licensed |
| 44 | Vishram Arjan Ramji | Proposed removal of asbestos roofing material | L.R. No. 209/9663 Lusengeti rd, Embakasi Sub-County | Private | Ongoing removal-Licensed |

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|----|--|---|---|---------|--------------------------|
| 45 | British High Commission | Proposed asbestos abatement | L.R. No. 3734/7 Lavington, Dagoretti North Sub-County | Private | Ongoing removal-Licensed |
| 46 | Kenya Horticultural Exporters (1977) Limited | Proposed Removal & disposal of asbestos roofing sheets | L.R. No. 12459/4 Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 47 | Vortex Holdings Ltd | Proposed asbestos roofing replacement | L.R. No. 1159/339 Karen, Lang'ata Sub-County | Private | Ongoing removal-Licensed |
| 48 | British High Commission | Proposed asbestos abatement | L.R. No. 1870/VIII/60 Spring Valley, Westlands Sub-County | Private | Ongoing removal-Licensed |
| 49 | Deliverance Church Umoja, Kangundo road Campus | Proposed asbestos roofing sheet removal & disposal | L.R. No. Kangundo road, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 50 | Still I Rise Foundation | Proposed removal, handling & disposal of asbestos roofing sheet | L.R. No. 217/8 Mathare area, Mathare Sub-County | Private | Ongoing removal-Licensed |
| 51 | Nestle Foods Kenya Limited | Proposed asbestos roofing sheets removal, transportation & disposal | L.R. No. 209/8754/1 Pate Road, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 52 | Sundries Bargains (Nairobi) Limited | Proposed asbestos roofing replacement | L.R. No. 336/1257 Baba Dogo area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 53 | Dawat E Hadiyah (Kenya) | Proposed removal, handling & disposal of asbestos roofing sheet | L.R. No. 209/2504 along Lagos Road, Embakasi Sub-County | Private | Ongoing removal-Licensed |

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|----|---------------------------------|---|---|---------|------------------------------|
| 54 | Kenya Pipeline Company Limited | Proposed removal and replacement of Asbestos roofing material | L.R. No. Nairobi Terminal PS 10 & Embakasi Aviation Dept PS9, Embakasi Sub-County | Private | Pending with Pending removal |
| 55 | Sanghani Jadva Bhimji Khimji | Proposed asbestos roofing sheets removal and disposal | L.R. No. 27881 & 27882 on Pemba Street, off Lusaka Road, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 56 | Kenya Medical Training College | Proposed asbestos roof removal and replacement | L.R. No. KMTTC Nairobi Campus, Kibera Sub-County | Public | Pending removal |
| 57 | Africa International University | Proposed rehabilitation of chapel roof and replacement of asbestos roofing sheets with corrugated iron sheets | L.R. No. 195/4 along Dagoretti Road, Dagoretti South Sub-County | Private | Ongoing removal-Licensed |
| 58 | Coca Cola Beverages Limited | Proposed asbestos roofing sheets removal, transportation and disposal | L.R. No. 18593 North Airport Road, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 59 | Switchgear Limited | Proposed asbestos roofing sheets removal, transportation and disposal | L.R. No. 209/8304/1 Dunga Close, off Dunga Road, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 60 | Kenya Railways Corporation | Proposed asbestos sheets removal and disposal | L.R. No. Kenya Railways Headquarters, Nairobi, Starehe Sub-County | Public | Ongoing removal-Licensed |

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|----|---------------------------------|---|---|---------|--------------------------|
| 61 | Thames Electricals Limited | Proposed removal, transportation & disposal of roof asbestos | L.R. No. 209/8806/1 along Sasio Road, off Lunga Lunga road, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 62 | Kenya Pipeline Company Limited | Proposed removal and replacement of asbestos roofing sheets | L.R. No. PS 9, JKIA, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 63 | Kenya Pipeline Company Limited | Proposed removal and replacement of asbestos roofing sheets | L.R. No. Nairobi Terminus PS 10, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 64 | Kenya Railways Corporation | Proposed removal and replacement of asbestos roofing sheets | L.R. No. within Kenya Railways Numerical machining workshop centre, Starehe Sub-County | Public | Pending removal |
| 65 | Tech pak industries ltd | Proposed removal & replacement of asbestos roofing materials on selected building | L.R. No. 12596/110, 12596/111 & 12596/107 in ecto ville road off enterprise road industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 66 | Speech session | Proposed safe removal, transportation & offsite disposal of asbestos roofing sheets | L.R. No. 209/2570/12694 of 22/12/1966 | Private | Pending removal |
| 67 | PC Kinyanjui training Institute | Prop. Asbestos roofing sheets & ridge caps removal & disposal | Riruta, off Kabirira road, Dagoretti South Sub-County | Private | Ongoing removal-Licensed |
| 68 | Perpetual Muthoni Wanjiru | Prop. Asbestos Roof Removal & Disposal from a house | 60/222, Mugunoini, Langata Sub-County | Private | Ongoing removal-Licensed |

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|----|---|--|--|---------|---------------------------|
| 69 | Kalp Limited | Prop. Removal, Handling & Disposal of Asbestos roofing sheet | 209/8921, off Enterprise Road, Embakasi Sub-County | Private | Pending removal |
| 70 | Aga Khan Foundation | Prop. Removal, Transportation & Disposal of Asbestos Ceiling Materials | 209/134, River Road, Nairobi CBD, Starehe Sub-County | Private | Ongoing removal- Licensed |
| 71 | Impala Glass Industries Limited | Prop. Safe Removal, Transportation & Disposal of Asbestos Roofing Industry Sheet | 209/6997 Addis Ababa Road, Embakasi Sub-County | Private | Ongoing removal- Licensed |
| 72 | Comply Industries Limited | Prop. Safe Removal, Transportation & Disposal of Asbestos Roofing Sheets | 209/4474 Enterprise Road, Opposite Kampala Road, Embakasi Sub-County | Private | Pending removal |
| 73 | Christ is the Answer Ministries Registered Trustees | Prop. Removal & Disposal of Asbestos Roofing Sheets on Citam Woodley Church | 209/10837 Along Joseph Kang'ethe Road, Off Ngong Road in Woodley, Dagoretti South Sub-County | Private | Ongoing removal- Licensed |
| 74 | Balwinder Singh Sagoo | Prop. Safe Removal Transportation & Disposal Of Asbestos Roofing Sheets | Nairobi | Private | Ongoing removal- Licensed |
| 75 | Redeemed Gospel Church Huruma | prop. Asbestos roofing sheets removal, transportation and disposal | along Mathare north road, off juja road, Matahare Sub-County | Private | Ongoing removal- Licensed |

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|----|-------------------------------------|--|--|---------|---------------------------|---------|
| 76 | Highway stores | prop. Asbestos roofing replacement for highway stores | L.R NO 209/3515, along Butere road, Industrial area, Embakasi Sub-County | Private | Pending removal | |
| 77 | Musiara Limited | Prop. Asbestos roofing sheets removal, transportation and disposal | L.R.NO. 209/5017/23, Lusaka close off Lusaka road, Embakasi Sub-County | Private | Ongoing removal- Licensed | |
| 78 | Athi Water Works Development Agency | prop. Removal, transportation and disposal of asbestos roofing materials | Ruai area, Njiiru sub county | Public | Ongoing removal- Licensed | |
| 79 | Elephant watch safaris | prop.asbestos roofing sheets removal, transportation and disposal | along kikenni lane, kikenni road, mukoma estate, langata road, langata sub county | Private | Ongoing removal- Licensed | 800 kgs |
| 80 | British high commission | prop. Abatement of asbestos cement materials | L.R NO. 33/440 Nairobi along Mbazazi avenue in lavington, Dagoretti North Sub-County | Private | Pending removal | |
| 81 | Dataline international limited | prop. Asbestos roofing sheets and ridge caps removal, encapsulation, transportation and disposal | house no 26, Moi estate, Makina crescent, Mugumoini, Langata Sub-County | Private | Pending removal | |
| 82 | Kenyatta University | Prop. Removal and onsite disposal of asbestos | 11026/2 Along Thika road, Kasarani Sub-County | Public | Pending removal | |

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|----|-------------------------------|--|--|---------|--------------------------|
| 83 | Jitendra Kumar Wadia | prop. Asbestos roofing sheets and ridge caps removal, encapsulation, transportation and disposal | along old Mombasa road, Kyangombe, Embakasi Sub-County | Private | Ongoing removal-Licensed |
| 84 | Dandora millers limited | prop. Decommissioning and disposal of asbestos roofing sheets | plot no 10060/1 Mowlem area along Komarock road, Njiru Sub-County | Private | Pending removal |
| 85 | Mandeep singh | prop. Removal, handling and disposal of asbestos roofing sheet | Dakar road, Embakasi Sub-County | Private | Pending removal |
| 86 | Starehe Boys Centre & School | Prop. Removal & disposal of asbestos | 46589 Kariokor sub-location, Starehe Sub-County | Private | Pending removal |
| 87 | C&P Shoe industriew limited | prop.asbestos roofing sheets removal, transportation and disposal | L.R NO. Nairobi/Block160/17, along Mombasa rd, Embakasi Sub-County | Private | Pending removal |
| 90 | SBJ Investment limited | prop. Removal, handling and disposal of asbestos roofing sheet | L.R 19766 Dakar road, Embakasi Sub-County | Private | Pending removal |
| 91 | Kenyatta Hospital | | off Ngong road, Kibera Sub-County | Public | Ongoing removal-Licensed |
| 92 | A Plus PVC Technology Limited | | Lusingeti road, Industrial area, Embakasi Sub-County | Private | Ongoing removal-Licensed |

**INVENTORY OF ASBESTOS
KAKAMEGA COUNTY**

| Serial No. | Name of Institution & Contact | Location, Sub-county & GPS | Private/public | Approximate quantity In tonnes |
|------------|--|---|----------------|--------------------------------|
| 1. | Mumias Sugar Company | 0.362987, 34.503737, Mumias | Private | 366.34 |
| 2. | Likuyani Sub-County Hospital | 0.7110062, 35.1063619, Likuyani | Public | 8 |
| 3. | County Food Safety Lab Dr. Enock Sichangi (0725832273) | 0.272208, 34.760311 | Public | 1.94 |
| 4. | Public Health Parking Dr Olaka - 0710880770 | 0.271678, 34.759527 | Public | 4.5 |
| 5. | KMTC Kakamega (Hostels & Theatre Dr. James Mailu - 0726340608 | 0.272531, 34.758095 | Public | 9.9 |
| 6. | Catholic Church Amalemba Father Maurice- 0720142790 | 0.271383, 34.758802 | Private | 0.52 |
| 7. | St. Pauls Lugari- Joseph Rombosia 0722968600 | 0.39456. 34.54250, Lugari | Private | 2.724 |
| 8. | Sheywe Secondary School | 0.271778, 34.769701 | Public | 8 |
| 9. | Water Resources Authority Mr. Omuya (Regional Head) | 0.2761854, 34.7529176, Kakamega Central. | public | 10.5 |
| 10. | Makunga Level 4 | 0.298816, 34,620563, Mumias East | Public | 10 |
| 11. | Butere CH | 0.219990, 34.491956, Butere | Public | 0.12 |
| 12. | Iguhu Level 4 | 0.1633128, 34.7462599, Ikolomani | Public | 0.6 |
| 13. | Bukura Health Centre | 0.197078, 34.592614, Lurambi | Public | 16.89 |

| | | | | |
|----|-----------------------------------|-------------------------------|--------|-------|
| 4. | Bushiri Health Centre | 0.352890, 34.698482 | Public | 2.136 |
| 5. | Igotse Health Centre | 0.355406, 34.6977954 | Public | 1.08 |
| 6. | Turbo Forest Dispensary | 0.649703, 35.052577, Likuyani | Public | 3.6 |
| 7. | Mabusi Health Centre | 0.834509, 35.00472, Likuyani | Public | 1.8 |
| 8. | 80 County Houses- Amalemba Scheme | 0.267212, 34.757331, Lurambi | Public | 35 |
| 9. | County Houses- Otiende Scheme | | | |

**INVENTORY OF ASBESTOS
BUNGOMA COUNTY**

| Serial No. | Name of Institution & contact | Location, Sub-County & GPS | Private/Public | Approximate quantities in Tonnes |
|---------------|-------------------------------|----------------------------|----------------|--|
| | BUNGOMA HIGH SCHOOL | BUNGOMA, BUNGOMA SOUTH | PUBLIC | STAFF HOUSE - 3 CLASSROOM - 1 LABORATORY - 1 |
| | CHESAMISI BOYS | KIMILILI | PUBLIC | STAFF HOUSE - 6 CLASSROOM - 7 LABORATORY - 2 POWER HOUSE, KITCHEN |
| | LUGULU GIRLS H. SCH | WEBUYE WEST | PUBLIC | STAFF HOUSE - 7 DORMITORIES - 3 POWER HOUSE - 1 |
| | FRIENDS BOKOLI BOYS | WEBUYE WEST | PUBLIC | STAFF HOUSE - 3 CLASSROOM - 1 LABORATORY - 1 BATHROOMS 1 DOOR |
| | KHASOKO BOYS | BUMULA | PUBLIC | BATHROOMS 4 DOORS |
| | CHEPTAIS BOYS | CHEPTAIS | PUBLIC | DORMITORIES - 1 |

| | | | | |
|-----|-------------------------------|-----------|---------|-----------------|
| 7. | KAPSOKWONY BOYS | MT. ELGON | PUBLIC | STAFF HOUSE - 2 |
| 8. | FRIENDS SCHOOL KAMUSINGA | KIMILILI | PUBLIC | |
| 9. | NATIONAL CEREAL BOARD BUNGOMA | BUNGOMA | PUBLIC | OVER 20 TONNES |
| 10. | SANGALO INSTITUTE | BUNGOMA | PUBLIC | |
| 11. | NZOIA SUGA COMPANY | BUNGOMA | PUBLIC | OVER 100 TONNES |
| 12. | RAI PAPER | WEBUYE | PRIVATE | OVER 100 TONNES |
| 13. | KIMILILI LAW COURT | KIMILILI | PUBLIC | |

**INVENTORY OF ASBESTOS
VIHIGA COUNTY**

| | | | | |
|----|------------------------------------|-----------------------|--------|---------------|
| 1. | KMTC-Mbale Campus | 0.080646, 34.7185461 | Public | 2.3 |
| 2. | Mbale Rural Health Training Centre | 0.0807445, 34.7191418 | Public | 10.0 |
| 3. | Mbale Servants' Quarters | 0.0920912, 34.7274975 | Public | 0.8 |
| 4. | Mbale Offices | 0.0805545, 34.7193133 | Public | 5.0 |
| 5. | Vihiga National Housing | 0.1208515, 34.751338 | Public | 4.0 |
| 6. | Mbale GK Prison | 0.08543678, 34.791543 | Public | 0.8 |
| 7. | Hamisi Sub-County Office | 0.0542142, 34.7466006 | Public | 3.0 |
| 8. | Emuhaya Sub-County Hospital | 0.1207865, 34.654786 | Public | Not available |

BUSIA COUNTY ASBESTOS INVENTORY

MATAYOS SUB- COUNTY

| | NAME OF PREMISES/ HOME | GEO CODES/ Location | REMARKS | TONNES |
|----|---------------------------------|---|---------|--------|
| 1. | BCRH Hospital | 0.4601 ⁰ N, 34.1048 ⁰ E | In use | 3.2 |
| | | | | 3.0 |
| 2. | BCRH staff quarters (48 estate) | 0.4608 ⁰ N, 34.1032 ⁰ E | In use | 3.6 |
| 3. | BCRH staff quarters (flats) | 0.4601 ⁰ N, 34.1048 ⁰ E | In use | 1 |

| | | | | |
|----|--------------------------------------|---------------------------|----------------------------------|-------|
| | Slaughter house | 0.4539°N, 34.1094°E | In use | 1 |
| | Busia Catholic Church | 0.4501°N, 34.1051°E | In use | 1 |
| | Busia Catholic Priests Residence | 0.4501°N, 34.1051°E | In use | 1 |
| | Sarah Mkoko home | 0.4546°N, 34.1077°E | In use | 1.5 |
| | Forestry Dept' staff quarters- Busia | Busia | In use | 1.5 |
| | Zilpher Bett home | Behind OLA petrol station | In use | 1.5 |
| 1. | ATC offices | Busia Town | In use | 2 |
| | ATC staff quarters | Busia Town | In use | 2 |
| 2. | Busia GK prison Posho mill | 0.4445°N, 34.1447°E | Its use has since been condemned | 0.5 |
| 3. | Busia GK prison Manhole covers | 0.4445°N, 34.1446°E | In use | 0.01 |
| 4. | John Ondato | Khungungu A | In use | 0.015 |
| 5. | Brigedier Dindi | Khungungu A | In use | 0.015 |
| 6. | Clement Wandera | Buyende/ Khirale | Not in use | 0.015 |
| 7. | Wilberfoce Wanyama* | Bwamani village | In use | 0.015 |
| 8. | Quinto Onyango | Bulanda village | In use | 0.015 |
| 9. | Mary Anyango Nakhabi | Rakite vilage | In use | 0.015 |

| | | | | |
|-----|--------------------|-------------------|------------|-------|
| 20. | Andrew Mondoh | Namikoye village | In use | 0.015 |
| 21. | Water site I | Mundaya village | Not in use | 0.015 |
| 22. | Water site II | Namikoye village | In use | 0.015 |
| 23. | Water site Main | Matayos kwa water | In use | 0.015 |
| 24. | Amos Sichwila Wako | Nangoma / Buchami | In Use | 0.015 |
| 25. | Chrispinus Makhola | Nangoma / Mlipuko | Not in use | 0.015 |
| 26. | Ken Ouma | Burima | In use | 0.015 |

TESO CENTRAL SUB- COUNTY

| | | NAME OF PREMISES/ HOME | GEO CODES/ Location | NO. OF BUILDINGS/ STRUCTURES ASBESTOS |
|----|--------------|--------------------------------|-------------------------|--|
| 1. | AMUKURA WEST | Lukolis Model health centre | 0.5938833, 34.207434 | 5 Staff houses |
| 2. | | St. Paul's Amukura High School | 0.569210, 34.273761 | 4 classrooms |
| | | | | 2 Servant Quarters |
| | | | | 4 Dormitories |
| 3. | | Amukura Level 4 Hospital | 0.562443, 34.273344 | 6 Staff Houses |
| | | | | 2 OPD blocks |
| | | | | |

| | | | | |
|------------------------------|------------------------------|-----------------------------------|---|----------------------------|
| | | Teso Central Sub County HQs | 0.560464, 34.270619 | 1 Block |
| BUNYALA SUB- COUNTY | | | | |
| | BUNYALA WEST | Mukhobola hospital | 0.081873, 34.029929 | 10 |
| | | Port Victoria Sub County Hospital | Township village/ Bukani Sub location | 22 |
| TESO NORTH SUB-COUNTY | | | | |
| | WARDS | NAME OF PREMISES/ HOME | NO. OF BUILDINGS/ STRUCTURES WITH ASBESTOS | GEO CODES/ Location |
| | ANGURAI NORTH & ANGURAI EAST | Angurai Sub county hospital | 5 staff houses | N7089451, E34.35160 |
| | | | 1 pit latrine | |
| | | Moding Health Centre | 1 two door pit latrine | |
| | | | 1 social hall | |
| | | | 1 PHO's Office & Store | |
| | | | 8 Staff houses | |

| | | | |
|----|----------------------------------|--|-------------------|
| | Kolanya Boys High School | 1 Block - Physics & Biology laboratories | |
| 4. | Immigration Department | 22 Staff houses | 0.63521, 38.474 |
| 5. | Kenya Railways | 1 staff house | 0.63364, 34.27706 |
| 6. | National Police Service | 21 Staff houses | 0.63505, 342741 |
| 7. | National Cereals & Produce Board | 6 Staff houses | 0.63466, 34.27185 |
| | TOTAL | | |

TESO- SOUTH SUB- COUNTY

| | NAME OF PREMISES/ HOME | GPS | NO. OF BUILDINGS/ STRUCTURES ASBESTOS |
|----|---------------------------|--------------------------|--|
| 1. | Alupe Sub county Hospital | 0.4982546, 34.1288147 | 1 Office 1 Morgue 1 Kitchen shade 1 hall 2 pavements |
| 2. | KEMRI | 0.498353, 34.129093 | 16 Staff Quarters 1 store |

| | | | |
|--|--------------------------|--------------------------|-------------------|
| | KALRO | 0.496075, 34.131678 | 12 Staff Quarters |
| | Alupe School | 0.497750, 34.1292298 | 17 Staff houses |
| | Alupe University | 0.4978543, 34.1280825 | 2 Classes |
| | Chakol Girls High School | 0.517018, 34.153062 | 8 Class |
| | Adungosi Police Service | 0.516677, 34.147603 | 14 |
| | Chakol Catholic church | 0.518019, 34.155418 | 1 |

SAMIA SUB-COUNTY

| WARD | NAME OF PREMISES/ HOME | NO. OF BUILDINGS/ STRUCTURES WITH ASBESTOS | LOCATION/GPS |
|---------|-------------------------|--|-----------------|
| Nangina | Kabwodo AP Camp | 3 staff office 1 office | Kabwondo Market |
| | | | |
| | Funyula industrial area | Commercial buildings | Funyula town |

| | | | | |
|----|----------------|------------------------------|------------------------|--------------|
| | | Kennedy Oboki Building | Commercial building | Funyula town |
| | | Nangina Holy Family Hospital | 1 store/hall | Funyula town |
| 2. | Agenga/Nanguba | Sigalame High School | 1 Administration block | |
| | | | 2 Dormitories | |
| | | | 1 Dining hall | |
| | | | 2 classes | |
| | | | 3 laboratories | |
| | | | 1 library | |

BUTULA SUB-COUNTY

| | NAME OF PREMISES/ HOME | NO. OF BUILDINGS/ STRUCTURES WITH ASBESTOS | WARD | GPS CO-ORDINATES |
|----|------------------------------|--|---------------|-------------------|
| 1. | St. Catherine Special School | 2 blocks, dining hall and Kitchen | MARACHI NORTH | 0.00947, 34.33313 |
| 2. | Bumala B Health Centre | 2 Casting yard & Store | MARACHI EAST | 0.38995, 34.3501 |
| | | 1 Garage | | |
| | | 1. verandah | | |

| | | | |
|-------|--|--|--|
| TOTAL | | | |
|-------|--|--|--|

NAMBALE SUB-COUNTY

| NAME OF PREMISES/HOME | NO. OF BUILDINGS/ STRUCTURES WITH ASBESTOS | WARD | GPS CO-ORDINATES |
|-------------------------------------|--|----------|-------------------|
| James Lumachacha | 2 Residential Houses | TOWNSHIP | Kajaro Village |
| Cooperative houses at DCC Compound | 7 Houses | | 0.45644, 34.23725 |
| Cooperative Offices at DCC Compound | 1 block with offices | | 0.45644, 34.23725 |
| | | | |

| S/ N O | NAME OF INSTITUTION AND CONTACT | LOCATION, SUBCOUNTY AND GPS | PRIVAT E/ PUBLIC | APPROXIMATE QUANTITY IN TON |
|-----------------------|------------------------------------|---|------------------------|-----------------------------|
| HOMABAY COUNTY | | | | |
| 1. | County Commissioner Office Block | Homabay Town, Homabay Township East Sub County. GPS; Lat: -0.5319368; Long: 34.4612396 | Public | 2 Tonnes |
| 2. | Homabay County Referral Hospital | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°32'2.20"S Long: 34°27'41.94"E | Public | 1.7 Tonnes |
| 3. | Nurses Quarters | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°32'1.54"S Long: 34°27'37.67"E. | Public | 2.5 Tonnes |
| 4. | St. Paul Mission Referral Hospital | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°31'31.28"S; Long: 34°27'47.73"E | Private | 0.7 Tonnes |
| 5. | Mbita Sub County Referral Hospital | Suba Sub County, Within Mbita Town, Kasgunga Location. GPS; Lat: 0°25'22.13"S", Long: E 34°12'29.05"E" | Public | 0.2 Tonnes |
| 6. | Tom Mboya University | Homabay Town, Homabay Township East Sub County. | Public | 0.6 Tonnes |

| | | | | |
|----------------------|---------------------------------------|--|---------|------------|
| | | GPS; Lat: 0°31'50.38"S; Long: 34°27'46.96"E | | |
| 7. | Homabay Children's Orphanage and Home | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°32'9.96"; Long: 34°27'40.84"E | Private | 0.4 Tonnes |
| 8. | Homabay High School | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°32'13.80"S; Long: 34°27'35.52"E | Public | 0.4 Tonnes |
| 9. | Site Housing Residential Quarters | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°32'11.83"S; Long: 34°27'30.12"E | Public | 0.2 Tonnes |
| 10. | St. Paul Mission Referral Hospital | Homabay Town, Homabay Township East Sub County. GPS; Lat: 0°24'5.06"S; Long: 34°39'55.75"E | Private | 0.8 Tonnes |
| KISII COUNTY | | | | |
| 1. | Kisii Teaching and Referral Hospital | Kisii Central | Public | 4 tonnes |
| 2. | Kenya Medicval Training College | Kisii Central | Public | 13 tonnes |
| 3. | Agricultural Training Centre | Kisii Central | Public | 50 tonnes |
| 4. | PAG Church | Kisii Central | Public | 2 tonnes |
| 5. | National Housing | Kisii Central | Public | 30 tonnes |
| 6. | Nyamache Tea Factory | Nyamache | Private | 2 tonnes |
| 7. | Proposed Kisii Cancer Center | Kisii Central | Public | 2 tonnes |
| KISUMU COUNTY | | | | |

| | | | | |
|----|--|--|------------------------|------------|
| 1. | Maseno University Mack Hilda Estate manager 0711666482 | Maseno municipality Kisumu west Gps: 0.00276S , 34.60768E | public | 4 tonnes |
| 2. | Maseno School Rev Alila 0717868458 | Maseno municipality Kisumu west Gps: 0.00052S, 34.60573 | public | 4 tonnes |
| 3. | Chulaimbo Sub-County Hospital Med Supt Dr.Bernadette 0720699521 | Chulaimbo North-west Kisumu Gps: 0.03787S , 34.63838 | public | 6 tonnes |
| 4. | CMC Motors Group LTD Mr. Philip Cheruiyot-0722274751 Accounting Manager P.O Box 30135 Nairobi | Obote Rd -Kisumu county GPS: 0.550s , 34.453E | private compan y | 1.5 tonnes |
| 5. | Kisumu County Referral Hospital Email- medsuptkdh09@gmail.com Alex Ochieng | Kisumu County GPS – 0.620S, 34.452E P.O. Box 2738-40100, Kisumu. Email: info@kisumu.go.ke. Website: www.kisumu.go.ke. Quick Links. | Public Hospital | 1.5 tonnes |
| 6. | Kenya Railways Rachael Kanyiva Email – rkanyiva@krc.co.ke 0790792215 | Kisumu | public | 7.0 tonnes |
| 7. | National housing Nyange geoffery Director 0723983548 | Forodha house Kisumu conty Gps : 0.546s , 34.4515E Kenya Reinsurance Plaza, Oginga Odinga Rd, Kisumu | public | 5 tonnes |
| 8. | Kenya Police County commander Mr.kizito Mutoro | Kisumu municipality, Kisumu county. | public | 10 tonnes |

| | | | | |
|-----|---|--|--------|---|
| | Kisumu main police line 0722825426 Karani Njogu OCS 0726484041 Anne Jerotich Deputy OCS 0718413954 | | | |
| 9. | Kondele police line Onget OCS 0726700708 | Kisumu county | public | 3 tonnes |
| 10. | Muhoroni police line Oracha OCS 0713596216 | Muhoroni municipality Kisumu county | Public | 2.5 tonnes |
| 11. | Director of criminal investigations Kisumu regional offices | Kisumu county | public | 2.0 tonnes |
| 12. | POSTA | Kisumu county | public | 6.5 tonnes |
| 13. | Traffic police line | Kisumu county | public | 3 tonnes |
| 14. | Weights and Measures | Kisumu county | public | 1.5 tonnes |
| 15. | Muhoroni county hospital Dr. Okuom 07070144074 | locationcation ; County Kisumu ; Sub County Muhoroni ; Ward Muhoroni Koru ; Latitude -0.15112 ; Longitude 35.20573. | public | 25 tonnes |
| 16. | Nyakach sub-county hospital Mr.Omwenga 0721263079 | Location ; County Kisumu ; Sub County Nyakach ; Ward Central Nyakach ; Latitude -0.31293 ; Longitude 34.93741. | public | 50 tonnes |
| 17. | County director Education Rosemary Birenge 0720203490 | Huduma centre 3 rd floor 0.6340s , 34.452s | public | 15-Primary schools-300 tonnes 7-secondary schools-170 tonnes |

| | | | | |
|-----------------------|--|---|---------|-----------|
| 18. | Lake Quarry Joseph Katimbo 0729649019 Everlynea036@gmail.com | Mamboleo Kisumu East Sub-county Gps: 0.05639S , 34.79570E | public | 1 tonne |
| 19. | Kombewa County Hospital Medical supt Dr. Vincent Omondi 0743368211 | Seme-kombewa Gps: 0.103366S , 34.517570E | public | 2 tonnes |
| MIGORI COUNTY | | | | |
| 1 | St. Joseph Ombo Mission Hospital | Migori Town, Suna East Subcounty Lat -1.009814 Long 34,474958 ^o | Private | 30 tonnes |
| 2 | Migori TTC | Migori Town, Suna West Subcounty Lat -1.72980 Long 34,68700 ^o | Public | 12 tonnes |
| NYAMIRA COUNTY | | | | |
| 1 | Obwari Chiefs Office | Obwari Location, Nyamira North Sub County -0.528994/34.988254 | public | 1tonne |
| 2 | Matongo Boys High School | Bokeira Location, Nyamira North Sub County -0.441336/35.012491 | public | 3 tonnes |
| 3 | Matongo Theological Complex | Bokeira Location, Nyamira North Sub County -0.441295/35.012491 | private | 5 tonnes |
| 4 | Keroka Law Courts | Keroka Township Location, Masaba North Sub County -0.779245/34.948011 | Public | 4 Tonnes |
| 5 | Nyankoba Tea Factory | Keroka Location, Masaba North Sub County -0.453626/34.55114 | Public | 2 Tonnes |

| SIAYA COUNTY | | | | |
|--------------|---|--|--------|------------|
| 1. | County referral residential unit. 0758721993/0717197349 | Siaya Township, Alego Usonga Sub-county. 0°03.834'N 34°17.103'E | Public | 25.536 |
| 2. | Jaramogi Oginga Odinga University of Science and Technology 0704314648/0572058000 | Siaya town, Alego Usonga s Sub county, 0°03.336'N 34°17.120'E | Public | 21.336 |
| 3. | Bondo police station | Bondo sub county. 0°05.857'S 34°16.480'E | Public | 3 tonnes |
| 4. | Residential unit adjacent to KMTC Bondo | 0°05.747'S 34°16.492E | Public | 0.5 tonnes |
| 5. | County government residences opposite County environment office | 0°03.444'N 34°16.896'E | Public | 200 tonnes |
| 6. | DCC residential areas | 0°03.560'N 34°17.487'E | Public | 12 tonnes |

A.

Name of County: Embu

| S/ No | Name Of Institution & Contact | Location, Sub-County & GPS | Private /Public | Approximate Quantity In Tonnes |
|----------|-------------------------------|--|--------------------|--------------------------------|
| 1. | Embu Level 5 Hospital | Embu Municipality, Embu West, -0.523210,37.453223 | Public | Roofing 1 Storage 7 |

| | | | | |
|----|--|---|--|-------------------------|
| 2. | State Department of Housing - Kirimari Estate | Embu Municipality, Embu West, -0.526336, 37.457447; -0.526768,37.458680 | Public (State Department Of Housing) | Roofing (30 Houses) 1.5 |
| 3. | ACK St. Paul Cathedral | Embu Municipality, Embu West, -0.527760, 37.451298 | Private | Roofing 5 |
| 4. | State Department of Housing - Kaunda Estate | Embu Municipality, Embu West, -0.532326, 37.452943 | Public (State Department Of Housing) | Roofing 10 |
| 5. | Ministry Of Roads & Transport Infrastructure (Mechanical And Transport Division), James Njagi | Majimbo, Embu West, -0.547880,37.467486 | Public (State Department Of Roads And | Roofing 2 |

| | | | Infrastru cture) | |
|----|---|---|---------------------|--------------------------------|
| 6. | Don Bosco Girls Secondary School, Sr.Laurensia W Ndwiga, 0718848972 | Gachoka, Mbeere South, - 0.581839,37.493557 | Public | Roofing 20 |
| 7. | Don Bosco Boys Secondary School, | Gachoka, Mbeere South, - 0.53861, 37.45988 | Public | Roofing 60 Storage 20 |
| 8. | Runyejes Level 4 Hospital | Runyenjes, Embu East, - 0.5425428,37.572199 | Public | Storage 2 |
| 9. | Karurumo Rural Health Centre, Joseph Kariuki | Karurumo, Embu East - 0.467590,37.653205 | Public | Roofing 37 |
| 10 | Ishiara Level 4 Hospital | Evurori, Mbeere North, - 0.457644, 37.788276 | Public | Roofing 16 Poorly Stored 48 |
| 11 | St. Bhakita Siakago Girls High School, Ann Mwangagi, 0712497424 | Siakago, Mbeere North, - 0.58397, 37.64619 | Public | Roofing 4 |
| 12 | Siakago Level 4 Hospital, Samwel Wangai, 0721284619 | Siakago, Mbeere North, - 0.58391, 37.64619 | Public | Roofing 5 Poorly Disposed 5 |
| 13 | Siakago Boys High School, Ephantus Runji, 0720464185 | Siakago, Mbeere North, - 0.57803, 37.64596 | Public | Roofing 100 |
| 14 | Tana And Athi Rivers Development Authority (TARDA), Charles Mwabusa, 0722314187 | Masinga, Machakos -0.87947, 37.59705 | Public | Roofing 16 |

| | | | | |
|----|---|---|---------|-------------|
| 15 | Tana And Athi Rivers Development Authority (TARDA) | Kiambere, Mbeere South | Public | Roofing 5 |
| 16 | ACK St. James Njukiri Church, John Nyaga Njeru, 0721586257 | Koimugo, Manyatta,- 0.51946,37.45163 | Private | Roofing 5 |
| 17 | St. Mark Teachers College Kigari, Dorothy P.M Aderi, 0726573408 | Kigari, Manyatta,-0.57946, 37.45163 | Public | Roofing 140 |
| 18 | Kianjokoma Health Centre, Immaculate Mukami, 0714711109 | Kianjokoma, Manyatta,- 0.42772, 37.47926 | Public | Storage 10 |
| 19 | Rukuriri Tea Factory, Lawrence Mburu, 0722280047 | Runyejes, Embu East, -0.38442, 37.5191 | Private | Roofing 10 |
| 20 | Runyenjes ACK Kagaari | Runyejes, Embu East, | Private | Roofing 5 |
| 21 | Jeremiah Nyaga National Polytechnic | Rwika, Mbeere South, | Public | Roofing 10 |
| 22 | Mungania Tea Factory, Ann Gitau, 0717128989 | Runyejes, Embu East,- 0.42772,37.47926 | Private | Roofing 5 |
| 23 | Water Resources Authority (WRA)- Embu Office | Embu West Sub-County -0.52921, 37.45243 | Public | Roofing 2 |
| 24 | National Government Affirmative Action Fund Office- Embu | Embu West Sub-County -0.52901, 37.45232 | Public | Roofing 0.5 |
| 25 | Kenya School of Government – Embu Campus | Embu West Sub-County -0.51304 , 37.45943 | Public | Roofing 6 |
| 26 | Nyangw'a Boys Sec School | Mbeere South Sub County | Public | Roofing 8 |

| | | | | |
|----|--|--|--------|------------|
| | | -0.67629, 37.63517 | | |
| 27 | Gitaraka Sec School | Mwea Sub County -0.80973, 37.33531 | Public | Roofing 17 |
| 28 | Wachoro Secondary School | Mwea Sub County -0.76421, 37.27579 | Public | Roofing 20 |
| 29 | Karaba Secondary School | Mwea Sub County -0.76269, 37.37879 | Public | Roofing 5 |
| 30 | St. Mary Girls – Kiangima Secondary Schhol | Embu West Sub County -0.47729, 37.47120 | Public | Roofing 14 |
| 31 | St. Paul's Kevote Secondary School | Embu West Sub County -0.43805, 37.53262 | Public | Roofing 10 |
| 32 | Kangaru School | Embu West Sub County -0.50886, 37.46094 | Public | Roofing 10 |

B.

Name of County: Isiolo

| S/N | NAME OF THE INSTITUTION /CONTACT | LOCATION, SUB COUNTY, G.P.S (All sites are in Isiolo South Sub-County) | PRIVAT E/PUBLI C | APPROXIMATE QUANTITY IN TONNES |
|-----|----------------------------------|---|------------------|--------------------------------|
| 1 | | Isiolo township N 0° 21' 10" E 37° 35' 22" | Public | 6 |

| | | | | |
|---|---|---|----------------|---|
| | National Housing Corporation | Tullu Roba, Isiolo N 0° 21' 30" E 37° 35' 19" | Public | 6 |
| | | Tullu roba, Isiolo N 0° 21' 29" E 37° 35' 19" | Public | 3 |
| | | Opposite Ardhi House, Isiolo N 0° 21' 10" E 37° 35' 14" | Public/Private | 2 |
| | | Water area, Isiolo N 0° 20' 49" E 37° 35' 17" | Public/private | 3 |
| 2 | Isiolo Water and Sewerage Company: Abdullah Sora 0723729935{Managing Director} | Kambi ya juu, Waso N 0° 19' 53" E 37° 33' 36" | Public | 6 |
| 3 | Fatuma 0722252725 | Behind CID, Isiolo N 0° 21' 29" E 37° 35' 25" | Public/private | 4 |
| | | Behind police station N 0° 21' 21" E 37° 35' 19" | Private | 3 |
| 4 | National Police Service-County Commander | Administration police station, Isiolo township N 0° 21' 29" E 37° 35' 11" | Public | 4 |
| | | Police station, Isiolo township N 0° 21' 22" E 37° 35' 15" | Public | 3 |
| 5 | | Isiolo township N 0° 21' 20" E 37° 35' 9" | Public | 2 |

| | | | | |
|---|---|--|--------|----|
| | Postal Corporation of Kenya | Huduma Centre, Isiolo township N 0° 21' 13" E 37° 35' 5" | Public | 9 |
| 6 | Isiolo County Government | County offices, Isiolo N 0° 21' 14" E 37° 35' 11" | Public | 10 |
| | | Isiolo Main stage, Isiolo township N 0° 20' 45" E 37° 34' 48" | Public | 2 |
| | | Department of water and sanitation, Kiwanjani, Isiolo N 0° 20' 52" E 37° 35' 21" | Public | 5 |
| 7 | Oil Com Petrol Station Rose Maina: 0705168408 | Isiolo township N 0° 21' 5" E 37° 35' 1" | Public | 4 |

Name of County: Kitui

| S/NO | NAME OF INSTITUTION & CONTACT | LOCATION, SUB-COUNTY& GPS | PRIVATE /PUBLIC | APPROXIMATE QUANTITY IN TONNES |
|------|-------------------------------|---------------------------|-----------------|--------------------------------|
|------|-------------------------------|---------------------------|-----------------|--------------------------------|

| | | | | |
|---|---|---|--------|-----|
| 1 | Kitui Multipurposes Development Training Institute Mobile: 0722- 687364 | Township Location ,Kitui Central Sub-County | Public | 1.6 |
| 2 | Kauwi Sub-County Hospital Dr. Winnie Muange Mobile:0719790211 | Kitui West Sub-County | Public | 50 |
| 3 | Kitui County Referral Hospital Dr. John Mungai Mobile:0722313049 | Kitui Central Sub-County | Public | 12 |
| 4 | Miambani Health Centre Alex Kakai Mobile:0718982707 | Kitui Central Sub-County | Public | 5 |
| 5 | Migwani Sub- County Hospital | Mwingi West Sub-County | Public | 10 |

| | | | | |
|---|---|---|--------|-------|
| | Dr. Benjamin Mwanza Mobile:0727577353 | | | |
| 6 | Ikanga Sub-County Hospital Dr. Dominic Kavindu Mobile:0720242207 | Kitui South Sub-County | Public | 50 |
| 7 | Kyuso Sub-County Hospital Dr. Curtis Kamau Mobile:0723927964 | Mwingi North Sub-County | Public | 50 |
| 8 | Kitui Water &Sanitation Co.Ltd P.O Box 341-90200 Kitui Tel.0701545554 Email:Kitwasco@G mail.Com | Kitui Central Sub-County Gps Coordinates -1.362486 38.017605 | Public | 32.47 |
| 9 | Kisasi Sub- County Education Office | Kisasi Location ,Kisasi Sub-County | Public | 10 |

| | | | | |
|----|---|--|--------|--|
| | Mobile:0720595826 | | | |
| 10 | Kyuso Sub-County Education Office Mobile:0723827958 | Kamuwongo Location,Kyuso Sub-County | Public | 10 |
| 11 | Kavingo Primary, Kinyua Dedan Mobile:0729471431 | Kangweni Location ,Nzambani Sub-County | Public | 1.2 |
| 12 | Ukasi Girls Mobile:0724501186 | Ukasi Location ,Mwingi East Sub-County | Public | 50 (11houses) |
| 13 | Kitui School Mobile:0700550532 | Township Location ,Kitui Central Subcounty | Public | 65 |
| 14 | Sombe Girls Mobile:0729897871 | Zombe Location,Mutitu Sub-County | Public | Laboratory 12 |
| 15 | Mulango Girls Mobile:0722254362 | Mulango Location,Katulani Sub-County | Public | 2labs,1power House & 2 Staff Quarters 10 |
| 16 | Telkom Kenya | Mbuvu, Mwingi East S50.46, E38.25 | Public | 0.2 |

| | | | | |
|----|--|--|--------|-----|
| | Mobile :0722298176 | | | |
| 17 | Ministry Of Water Mobile:0714692849 | Nguni, Mwingi East -0.807792, 38.314970 | Public | 0.3 |
| 18 | Mwingi Town Slaughter House Mobile:0729349871 | Kavuvwani, Mwingi, 0.9374°S,38.0605°E | Public | 75 |
| 19 | Mwingi Old Market Mobile: 0729349871 | Kavuvwani, Mwingi, 0.9374°S,38.0605°E | Public | 100 |
| 20 | Curriculum Support Office Mobile:0722760153 | Waita, Waita 0.7786°S,38.0922°E | Public | 25 |
| 21 | National Cereals And Produce Board Mobile:0726299651 | Mwingi, Kyanika 0.770°S,38.143°E | Public | 100 |

Name of County: Machakos

Name of CDE: Parnwell Simitu

| S/NO. | INSTITUTION/C ONTACT PERSON | GPS | SECTO R | TONNES (approximate) |
|-------|---|-------------------------|------------|-------------------------|
| 1. | Kenya Meat Commission (KMC) offices Contact person Sarah C. 0790199668 Quality Assurance Officer | -1.446926, 36.993516 | Public | 50 |
| 2. | Kenya meat commission housing units (KMC Staff houses) Contact person Sarah C. 0790199668 Quality Assurance Officer | -1.453776, 36.986654 | Public. | 60 |

- | | | | | |
|----|--|-------------------------|---------|----|
| 3. | Ministry of Agriculture.(M.O. A) State Department of Livestock and Veterinary Services-Athi River CECM Agriculture Machakos County | -1.451735, 36.988597 | Public. | 20 |
| 4. | Mavoko sub- county Administration police (AP) line/camp /houses next to Athi River police station. The Inspector General of Police | -1.452517, 36.986694 | Public. | 10 |
| 5. | Law Firm –SWAN Swan Advocates 0722794836 MITAN | -1.451924, 36.984301 | Private | 3 |

| | | | | |
|----|--|-------------------------|---------|-----|
| 6. | East African Portland Cement (PLC) | -1.457383, 36.978420 | Public. | 100 |
| | CEO Chairman of the Board | | | |
| 7. | Kenya Railway Athi River staff Houses. Near Oryx petrol station | -1.451541, 36.979989 | Public. | 15 |
| | CEO-Kenya Railways | | | |
| 8. | Ministry of Housing at MIDP- Machakos town. | -1.512661 37.266405 | Public. | 25 |
| | Managing Director/CEO | | | |

| | | | | |
|-----|---|-------------------------|----------|-----|
| 9. | Kenya Industrial Estate. | -1.52502, 37.263384. | Public. | 70 |
| | Managing Director | | | |
| 10. | Machakos Level 5 Hospital. | -1.523852, 37.265942 | Public. | 100 |
| | County Secretary Machakos County | | | |
| 11. | Bomani area 0721953466 (Tenant) | -1.522922, 37.262721 | Private. | 4 |
| 12. | Opposite Good News church of Africa Bomani | -1.523264, 37.262892 | Private. | 4 |
| | House private Gate was closed no contact person | | | |
| 13. | 3 houses private at Bomani estate near river view house nursery school (no one was around) | -1.523798, 37.263115 | Private. | 12 |

Gate was closed no
contact person

14. Riverview House -1.523798,
Nursery School. 37.263115
Director of the
school
0721275606
Opposite AIC
Bomani
Machakos town

Private 3
school.

15. Prestige Guest -1.522073,
house 37.263682
Near Beams towers

Private. 4

Gate was closed no
contact person

Was not in
operation at the
time

| | | | | |
|-----|---|-------------------------|--------------------------------|----|
| 16. | 8 Private Houses near Prestige Guest House. Bomani area | -1.522073, 37.263682 | Private. | 32 |
| | Gate was closed no contact person | | | |
| 17. | Ministry of housing Machakos | -1.507484, 37.267093 | Public. | 60 |
| | National Director of Urban Development | | | |
| 18. | Machakos Agricultural Training Centre | -1.568404, 37.254138 | Public used for fencing. | 15 |
| | Contact Person The Principal | | | |
| 19. | Ministry of housing (Veterinary area) Machakos town | -1.640329, 37.189051 | Public. | 20 |
| | Contact person National Director | | | |

| | of Urban Development | | | |
|-----|---|-------------------------|----------|----|
| 20. | Apex Steel Limited Rolling Mill 0785900298 | -1.453494, 36.977911 | Private. | 10 |
| 21. | Managing Director Machakos Teachers College | -1.509319, 37.257538 | Public. | 20 |
| 22. | The Principal Machakos High School | -1.514166, 37.256973 | Public. | 40 |
| | Deputy Principal Academics contact person (Nyamancha Jacob) 0722598430 0722911402-Mr. Benson Manoa | | | |

| | | | | |
|-----|---|-------------------------|---------|----|
| 23. | Machakos County Government (Municipality) behind Susu Centre | -1.518147, 37.263222 | Public. | 15 |
| 24. | St. Mary's Girls Susu Center Primary School | -1.516725 37.264471 | Public. | 5 |
| 25. | The Principal Land Survey Office and two adjacent buildings (Machakos) | -1.514659, 37.269080 | Public. | 5 |
| 26. | Machakos County Government (Mjini Area) Residences Housing (under Municipality of Machakos) | -1.517121, 37.269692 | Public. | 20 |

| | | | | |
|-----|---|--------------------------|---------|----|
| 27. | Machakos Police Station Residences. | -1.515402, 37.270236 | Public. | 15 |
| 28 | OCS Machakos Police Ministry Of Agriculture & Food Security Development (offices) | -1.515116, 37.268975. | Public. | 5 |
| 29. | Mwala Level IV Hospital | -1.348759, 37.452464 | Public. | 30 |
| 30. | County Secretary Machakos Kabaa High School The Principal | -1.233065, 37.446006 | Public. | 10 |

| | | | |
|-----|---|---------|---------|
| 31. | Machakos -1.536510,37.259048 Children Rescue -1.536844,37.258003 Center (Building -1.534524,37.260233 along Elimu Walk) | Public | 80 |
| 32. | Machakos County -1.505760, 37.264407 Government (open dumping) site opposite small claims court Site hoarded with a concrete perimeter wall with an unsecured entrance County Secretary- Machakos County | Public | Unknown |
| 33. | Orbit Chemical -1.389094, 36.933400 Industries | Private | 50 |

| | | | | |
|-----|---------------------------|----------------------|---------|----|
| 34. | African Cotton Industries | -1.383567, 36.941417 | Private | 60 |
|-----|---------------------------|----------------------|---------|----|

E

Name of County: Makueni

| S.NO. | Name & contacts Institution/Facilit | Location & GPS | Private/P ublic | Approximated quantity in tonnes |
|-------|---|-----------------------------------|--------------------|--|
| 1. | Makueni County Referral Hospital. Joshua Mutuku | -1.78350,37.62802 | Public | Unverified huge piles in the compound |
| 2. | Masongaleni Health Center | -2.41039,37.96793 | Public | 1.4 |
| 3. | Kilungu Sub County Hospital | Kaiti -1.78591,37.36061 | Public | 16.9 |
| 4. | Kilome Sub County Hospital & staff | Sultan Hamud -1.65865,37.45447 | Public | 16.9 |
| 5. | Mbooni Sub County Hospital & staff | Mbooni -1.65865,37.45447 | Public | 18.2 |
| 6. | Tawa Sub County Hospital | Mbooni -1.54634, 37.46642 | Public | 14.3 |

F.

Name of County: Marsabit

| Institution & contact | Location, Sub-County & GPS | Private /Public | Approximate quantity in tonnes |
|---|---|---|--------------------------------|
| Moyale Sub County referral Hospital & Hospital Quarters CEO Abshiro Hapicha Mobile: 0721303056, 0723921398 | Moyale Sub County GPS: 3.521905; 39.049292 | Public | 8000 |
| Residence of the Ministry of Housing Muywoki – Deputy County Commissioner, Moyale Mobile: 0722-474697 | Moyale Sub County GPS: 3.521933; 39.049457 | Public | 500 |
| Moyale KRA Border Post Station Manager Moyale OSBP Mobile: 0780274224 | Moyale Sub County GPS: 3.3134; 39.316 | Public *The Asbestos is already disposed *Disposal not undertaken | 1000 |

| | | | |
|---|---|-------------------------|---|
| | | ken to standar ds | |
| Kargi Catholic Dispensary Fr. Thomas Khomothe Mobile: 0702599343 | Kargi/South Horr Ward Laisamis Sub County GPS:2.5062699; 37.5779833 | Private (FBO) | 3 |
| Marsabit County commissioners Compound_ Grain store Safina M. Aga Sub County Director of Education Mobile No_0723811900 | Marsabit Central, Saku sub county GPS: 2.324877; 37.9863309 | Public | 5 |
| Marsabit Police Station Edward Mabonga – Officer Commanding Station (OCS) Mobile No. 0725327039 | Marsabit Central, Saku sub county GPS: 2.324028; 37.987264 | Public | 4 |
| Marsabit County Water Department Office and Staff Quarters Rob Galma (Chief Officer - Water) Mobile No. 0722524843 | Marsabit Central, Saku sub county GPS: 2.323606; 37.987264 | Public | 4 |
| Marsabit Municipal Office Boru Golicha – Municipal Manager Mobile No. 0726560836 | Marsabit Central, Saku sub county GPS: 2.32717; 37.985469 | Public | 4 |

| | | | |
|--|---|--------|----|
| Marsabit County Referral Hospital Staff Quarters Omar Mohamed (Chief Officer- Public Health) Mobile No. 0721915109 | Marsabit Central, Saku sub county GPS: 2.321379; 37.989572 | Public | 20 |
|--|---|--------|----|

G.

Name of County: Meru

| SERIAL NO. | NAME OF INSTITUTION & CONTACT | LOCATION, SUB COUNTY & GPS COORDINATES:: | PUBLIC / PRIVATE | APPROXIMATED QUANTITIES. (Tonnes) |
|------------|-------------------------------|---|------------------|-----------------------------------|
| 1. | Maundu House | Maundu Imenti North Sub County GPS COORDINATES: Latitude: 0.036879 Longitude: 37.64639 | Private | 0.6 |
| 2. | Rubis Kathita | Imenti North Sub County. GPS COORDINATES: Latitude: 0.045409 Longitude: 37.65341 | Private | 1 |
| 3. | CMC Motors | Meru Town Imenti North Sub County GPS COORDINATES: Latitude: 0.047550 Longitude: 37.65648 | Private | 1 |
| 4. | AP Canteen | Imenti North Sub County GPS COORDINATES: Latitude: 0.052049 Longitude: 37.64528 | Public | 0.2 |
| 5. | Meru Teachers College | Imenti North Sub County GPS COORDINATES: | Public | 5 |

| | | | | |
|-----|--|---|---------|------|
| | | Latitude: 0.066632 Longitude 37.646132 | | |
| 6. | Kaaga Girls High School | Imenti North Sub County GPS COORDINATES: Latitude: 0.068716 Longitude: 37.64838 | Public | 0.25 |
| 7. | Meru Cancer Centre Houses, Mjini Government House. | Imenti North Sub County GPS COORDINATES: Latitude: 0.051805 Longitude: 37.65168 | Public | 1 |
| 8. | Kimuline Hospital | Tigania West Sub County GPS COORDINATES: Latitude: 0.19765 Longitude: 37.79039 | Public | 2 |
| 9. | Poster Meru | Meru Town, Imenti North Sub County GPS COORDINATES: Latitude: 0.047933 Longitude: 37.64932 | Public | 1 |
| 10. | Mutindwa Toyota Meru | Meru Town, Imenti North Sub County GPS COORDINATES: Latitude: 0.058234 Longitude: 37.60453 | Private | 1.5 |
| 11. | Thimangiri Slaughter House | Mulathankari- Thimangiri in Imenti North Sub County GPS COORDINATES: Latitude: 0.058292 Longitude: 37.60132 | Private | 0.5 |
| 12. | Meru Teaching and Referral Hospital | Imenti North Sub County GPS COORDINATES: Latitude: 0.0506 Longitude: 37.6534 | Public | 1 |
| 13. | Githongo Tea Factory | Imenti Central Sub County GPS COORDINATES: Latitude: 0.05505 Longitude: 37.58577 | Private | 2 |

| | | | | |
|-----|---|---|---------|------|
| 14. | Meru Central Police Station | Imenti North Sub County GPS COORDINATES: Latitude: 0.04716 Longitude: 37.65219 | Public | 1.5 |
| 15. | Anwamba Primary School | Igembe South Sub County GPS COORDINATES: Latitude: 0.1944 Longitude:37.9326 | Public | 2 |
| 16. | Michimikuru Tea Factory Staff Quarters. | Tigania East Sub County GPS COORDINATES: Latitude: 0.186249 Longitude: 37.85368 | Private | 0.5 |
| 17. | Afya Maize Millers | Imenti North Sub County GPS COORDINATES: Latitude: 0.053543 Longitude: 37.64839 | Private | 1 |
| 18. | Ithimbari Dispensary | Imenti South Sub County, Nkuene Ward GPS COORDINATES: Latitude: -0.131 Longitude: 37.61 | Public | 5.8 |
| 19. | Timau Sub County Hospital | Timau, Buuri West Sub County GPS COORDINATES: Latitude: 0.09212 Longitude: 37.24762 | Public | 0.7 |
| 20. | Giaki Sub County Hospital | Giaki, Nyaki east, Imenti North Sub County GPS COORDINATES: Latitude :0.030311 Longitude:37.762795 | Public | 0.2 |
| 21. | Mitunguu Health Centre | Imenti South Sub County, Mitunguu Ward GPS COORDINATES: Latitude: -0.10886 Longitude: 37.7826 | Public | 11.5 |

| | | | | |
|-----|-------------------------------------|--|---------|------|
| 22. | Our Lady of Fatima Catholic Church | Kiirua, Buuri East Sub County GPS COORDINATES: Latitude: 0.1266 Longitude: 37.5633 | Private | 1 |
| 23. | ST. Lawrence Igoji Teachers College | Igoji Sub County GPS COORDINATES: Latitude: -0.18022 Longitude: 37.66386 | Public | 0.5 |
| 24. | Gaatia Primary School | Abogeta Division Imenti South Sub County GPS COORDINATES: Latitude: -0.083100 Longitude: 37.64069 | Public | 0.2 |
| 25. | DEB Mucheene Primary School | Buuri East Sub County GPS COORDINATES: Latitude:0.0878219 Longitude:37.536297 | Public | 0.2 |
| 26. | Nkiriana Primary School | Igembe North Sub County GPS COORDINATES: Latitude: 0.3560 Longitude: 37.9453 | Public | 0.2 |
| 27. | Kilalai Primary School - Maua | Igembe South Sub County GPS COORDINATES: Latitude: 0.234554 Longitude: 37.95184 | Public | 0.25 |
| 28. | Athiru Gaiti Primary School | Igembe South Sub County GPS COORDINATES: Latitude: 0.212603 | Public | 0.25 |

| | | | | |
|-----|----------------------------------|---|--------|------|
| | | Longitude: 37.97337 | | |
| 29. | Baitigitu Primary School | Imenti South Sub County GPS COORDINATES: Latitude: -0.032598 Longitude: 37.57968 | Public | 0.25 |
| 30. | Kianjogu Primary School | Imenti South Sub County GPS COORDINATES: Latitude: -0.408317 Longitude: 37.06697 | Public | 0.25 |
| 31. | Gacero Primary School - Mitunguu | Imenti South Sub County GPS COORDINATES: Latitude: -0.108039 Longitude: 37.76155 | Public | 0.2 |
| 32. | Kanyakine High School | Abogeta division, Imenti North Sub County GPS COORDINATES: Latitude: 0.1225 Longitude: 37.6705 | Public | 1 |
| 33. | Ndagene Boys Secondary School | Imenti South Sub County GPS COORDINATES: Latitude: -0.07965 Longitude: 37.58801 | Public | 0.5 |
| 34. | Ruiri Girls High School | Buuri East Sub County GPS COORDINATES: Latitude: 0.1577 Longitude: 37.6702 | Public | 0.5 |

| | | | | |
|-----|---|---|--------|------|
| 35. | Miruriiri Boys Secondary School | Igoji Sub County GPS COORDINATES: Latitude: 0.1539 Longitude: 37.6667 | Public | 0.5 |
| 36. | St. Mary's Girls High School | Igoji Sub County GPS COORDINATES: Latitude: 0.1930 Longitude: 37.6686 | Public | 1 |
| 37. | Meru School | Imenti North Sub County GPS COORDINATES: Latitude: 0.0680 Longitude: 37.6480 | Public | 1 |
| 38. | Munithu Secondary School | Imenti North Sub County GPS COORDINATES: Latitude: 0.0850 Longitude: 37.6865 | Public | 0.5 |
| 39. | Mulathankari Girls Secondary School | Imenti North Sub County GPS COORDINATES: Latitude: 0.0480 Longitude: 37.6865 | Public | 0.5 |
| 40. | Ukuu Girls High School | Imenti South Sub County GPS COORDINATES: Latitude: 0.0647 Longitude: 37.6679 | Public | 0.25 |
| 41. | Kathera Boys Secondary | Imenti South Sub County GPS COORDINATES: Latitude: 0.0555 | Public | 0.25 |

| | | | | |
|-----|------------------------------------|---|--------|-------|
| | | Longitude: 37.6014 | | |
| 42. | Nkubu Boys High School | Imenti South Sub County GPS COORDINATES: Latitude: -0.068125 Longitude: 37.67026 | Public | 0.5 |
| 43. | St. Pius X Seminary Secondary | Imenti South Sub County GPS COORDINATES: Latitude: -0.0655 Longitude: 37.6682 | Public | 0.5 |
| 44. | St. Peter Nkuene Boys Secondary | Imenti South Sub County GPS COORDINATES: Latitude: -0.02238 Longitude: 37.58581 | Public | 0.5 |
| 45. | Mary Mother of God Mikinduri Girls | Tigania Central Sub County. GPS COORDINATES: Latitude: 0.1199 Longitude: 37.8380 | Public | 0.250 |

H.

Name of County: Tharaka Nithi Name of CDE: Siaji James

| S/NO | Name of Institution | Location of Facility | Government Department | Approximate Quantity in tonnes |
|------|---------------------------|----------------------|-----------------------|--------------------------------|
| 1. | Chiakariga Police station | Chiakariga | Interior | 1.5 |

| | | | | |
|-----|--|------------------------------------|-------------------|-----|
| 2. | Matiri Girls | Chiakariga | Educatio n | 2.2 |
| 3. | Chogoria Girls Boarding Primary | Maara | Educatio n | 2.2 |
| 4. | PCEA Chogoria Hospital | Maara | Health | 3 |
| 5. | Kiurani Primary School | Maara | Educatio n | 1.5 |
| 6. | Kaare Dispensary {staff house} | Maara Subcounty ,Mwimbi Ward | Health | 1 |
| 7. | Governor's Office | Chuka | Devolve d Unit | 3 |
| 8. | Units No. MG7, MG9, MG8A, MG8B, MG22, MG23, LG5A, LG5B | Chuka | Housing | 5.5 |
| 9. | Kajuki Health Centre {outpatient block, 2 staff houses} | Igambango'mbe ward | Health | 4 |
| 10. | Chuka Subcounty Referral Hospital {hospital registry, HPTU and Management Offices} | Chuka Subcounty, Karingani Ward | Health | 5 |
| 11. | Kaanwa Dispensary {2 staff houses and abolition block} | Mariano Ward Igambang'ombe | Health | 2 |
| 12. | Chuka Boys High School | Meru South | Educatio n | 2 |
| 13. | Mukuuni Boys High School | Meru South | Educatio n | 2.5 |
| 14. | Chogoria Girls High school | Maara | Educatio n | 2.5 |

| | | | | |
|-----|----------------------------|-----------|---------------|-----|
| 15. | Chogoria Boys High school | Maara | Educatio n | 2 |
| 16. | Muthambi Girls High School | Mutharubi | Educatio n | 1.5 |

MINISTERIAL RESPONSE TO PUBLIC PETITION NO. 52 OF 2023
ON THE BAN OF ASBESTOS AS A ROOFING MATERIAL



REPUBLIC OF KENYA

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE & FORESTRY

MINISTERIAL RESPONSE TO PUBLIC PETITION NO. 52 OF 2023 ON
THE BAN OF ASBESTOS AS A ROOFING MATERIAL

5TH DECEMBER, 2024

MINISTERIAL STATEMENT BY THE CABINET SECRETARY FOR
ENVIRONMENT, FORESTRY AND CLIMATE CHANGE TO PUBLIC PETITION
NO. 52 OF 2023 ON THE BAN OF ASBESTOS AS A ROOFING MATERIAL

Hon. Chair and Hon. Members,

The Public Petition States that;

1. **THAT**, shelter is one of the basic human needs that secures human habitation and provides sense of security;
2. **THAT**, the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use;
3. **THAT**, Article 42 of the Constitution recognizes the right of every Kenyan to a clean and healthy environment, protection of the environment for the benefit of present and future generations;
4. **THAT**, numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past building using asbestos roofing materials;
5. **THAT**, the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as Bute, Balambala, Kakuma and Rhamu Arid Zones Primary Schools using asbestos roofing materials;
6. **THAT**, research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called “Mesothelioma” which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses;
7. **THAT**, as a result of Mesothelioma Cancer and related illnesses, fifty-five countries all over the World, including the USA, New Zealand, Australia

Kenya banning its use in 2006;

8. THAT, the spiraling increase in cancer cases is exerting unbearable financial pressure on families and the Country's health system owing to the exorbitant costs associated with treating cancer;

9. THAT, despite the ban on the use of asbestos in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the Country;

Prayer

- 1) *Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;*
- 2) *Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;*
- 3) *Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;*
- 4) *Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.*

1.0 Introduction

Hon. Chair and Hon. Members,

The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment and become operational in 2002.

2.0 Background

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.

Hon. Chair and Hon. Members,

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or deterioration over time the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring

removal and disposal.

Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos (**Annex 1**).

Hon. Chair and Hon. Members,

Over time, the Ministry through NEMA has undertaken the following actions to mitigate against asbestos pollution:

- i. Communicate to the public on the environmental and health risks associated with asbestos use.
- ii. Communicated to a number of ministries on the concern of the presence of asbestos roofing, and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials (**Annexes II, III, IV, and V**).
- iii. Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006) (**Annex VI**).
- iv. Licensed the vehicles to transport asbestos/hazardous waste (**Annex VII**).

Prayer 1

Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos

sheets in order to mitigate asbestos-related negative effects and cancer;

Response

Hon. Chair and Hon. Members,

The Ministry, through NEMA, will place a public notice to advise the public on the environmental and health risks associated with asbestos roofs. Further, NEMA will continue to write to public institutions to advise them to replace the asbestos roofing materials with environmentally-friendly roofing materials.

Prayer 2

Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

Response

Hon. Chair and Hon. Members,

NEMA will guide the concerned Ministries and other entities on the safe handling, transportation, and disposal of asbestos. This will be in accordance with national guidelines on the safe management and disposal of asbestos, and Environmental Management and Coordination (Waste Management) Regulations, 2006.

Prayer 3

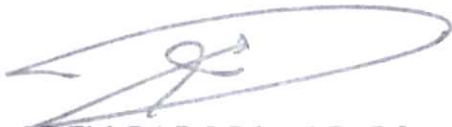
Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;

Response

(*) No 2024/1

Hon. Chair, NEMA will advise the Ministry of Health and County Governments to carry out medical surveys to ascertain the extent of impacts of exposure to asbestos and provide appropriate health interventions.

Thank you, Hon. Chair and Hon. Members.



HON. ADEN BARE DUALE, EGH

CABINET SECRETARY

MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

DATE

5th Dec 2024



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

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REF: NEMA/77/VOL.VII

21st June 2024

Hon. Sofyan Tiya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry
P O Box 30126 - 00100
NAIROBI

Throⁿ

Dr. Eng. Festus K. Ng'eno, PhD, MIEK
Principal Secretary
State Department for Environment & Climate Change
Ministry of Environment, Climate Change & Forestry
P O Box 30126 - 00100
NAIROBI

Dear *Hon. CS,*

RE: RESPONSE TO PUBLIC PETITION NO. 52 OF 2023 ON THE BAN OF ASBESTOS AS A ROOFING MATERIAL

Reference is made to the National Assembly letter Ref: KNA/DLPS/PPETC/CORR/2024/086 dated 5th June 2024 on meeting with the Public Petitions Committee on various petitions.

Attached, kindly find NEMA's response on Public Petition No.52 on the Ban of Asbestos as a roofing material.

Yours *Sincerely,*

Mamo B. Mamo
MAMO B. MAMO, EBS
DIRECTOR GENERAL

End.

**PUBLIC PETITION No. 52 OF 2023 ON THE BAN OF ASBESTOS
AS A ROOFING MATERIAL**

1.0 INTRODUCTION

The Public Petitions Committee of Parliament requested the Principal Secretary, State Department for Forestry to provide information to facilitate consideration of a Public petition NO. 52 of 2023 on the ban of asbestos as a roofing material.

The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment and become operational in 2002.

2.0 BACKGROUND

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.

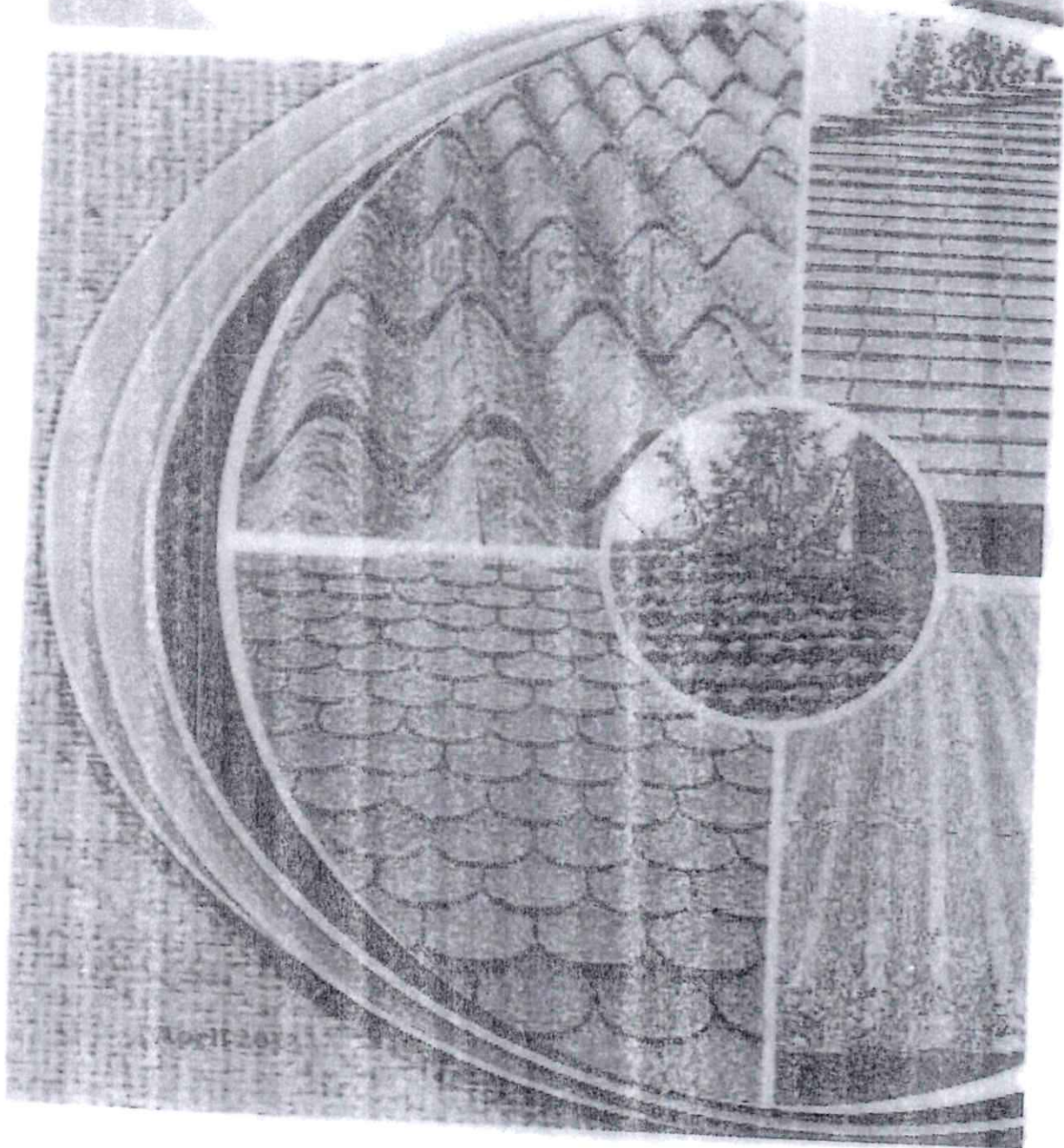
When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or deterioration over time the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring their replacement with more environmentally safe methods necessitating their removal and disposal.

Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos (Annex 1).



NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

**NATIONAL GUIDELINES ON SAFE MANAGEMENT
AND DISPOSAL OF ASBESTOS**



April 2012




National Guidelines On Safe Management And Disposal Of Asbestos

Prepared by: Taskforce on Asbestos Guidelines

Creation Date: 10/10/2011

Last Revised: April, 2013

Version: 1.0

Towards achievement of Vision 2030 KEVITA  2030



ISO 9001:2008 Certified

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| | |
|-------|--|
| CCN | City Council of Nairobi |
| CDE | County Director of Environment |
| DOSHS | Directorate of Occupational Safety and Health Services |
| EIA | Environmental Impact Assessment |
| EMC | Environmental Management and Coordination |
| EMCA | Environmental Management and Coordination Act, 1999 |
| MoPHS | Ministry of Public Health and Sanitation |
| NEMA | National Environment Management Authority |
| OSHA | Occupational Safety and Health Act, 2007 |
| PPE | Personal Protective Equipment |
| SWSI | Surface Water Supply Index |

DEFINITION OF TERMS

In these guidelines:

"Asbestos waste" means waste containing asbestos and may include waste from renovation, demolition and repair of asbestos roofing sheets, asbestos ceiling boards and asbestos clutch plates, brake pads and linings and insulation materials.

"Authority" means the National Environment Management Authority established under section 7 of Environmental Management and Coordination Act (EMCA), 1999.

"County Director of Environment" means an officer of the National Environment Management Authority in charge of a County.

"Disposal site" means any area licensed by the Authority for disposal of Asbestos waste.

"Employee" means a person who works under contract or employment and related expressions shall be construed accordingly.

"Contractor" means any person or firm engaged in handling, removal and disposal of asbestos.

"Safe management" means the handling of asbestos materials in a manner that minimizes risk of exposure.

"Asbestos material" means any material that contains asbestos.

"Waste generator" means any person carrying out activities that generate asbestos waste.

"Encapsulation" means a process in which a material containing asbestos is treated with a product that covers the material and prevents the fibres from being released.

"Friable materials" means materials that, when dry, can be easily crumbled or powdered by hand when disturbed

"Asbestos-containing materials" means any manufactured articles or other materials that contain 1 % or more asbestos by weight at the time of manufacture.

FOREWORD

The Government of Kenya is committed to ensuring a clean and healthy environment for its citizenry. The constitution of Kenya espouses the tenets, duties and responsibilities of the state and its institutions to eradicate all forms of environmental degradation to promote sustainable development. As Kenya develops towards achieving Vision 2030 its imperative that all forms of development and waste associated with it is managed in a responsible manner.

The development of Guidelines on Safe Management and Disposal of Asbestos has been necessitated by the need to safeguard human health and environment from adverse impacts related to asbestos materials. According to the Legal Notice No. 121 of the Environmental Management and Coordination (Waste Management) Regulations, 2006, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes. In addition, the Legal Notice requires that hazardous waste be disposed off in a specific manner as approved by the National Environment Management Authority (NEMA). Due to the risks associated with Asbestos fibre or dust, there the need to give clear guidelines on the safe handling management and disposal of Asbestos material.

In the 1960s and 1970s, Asbestos was a material of choice in the construction industry. A number of facilities including food manufacturing industries as well as residential homes used asbestos roofing material due to its durability and fire resistance characteristics. These roofing materials have deteriorated over time requiring their replacement with more environmentally safe materials necessitating their removal and disposal. Due to the lack of appropriate and licensed disposal facilities and the increased demand for the safe disposal, NEMA as the principal environmental regulator found it prudent to inform the public and manage Asbestos material by formulating operational guidelines. This process has been through a multi-sectoral as well as interdisciplinary approach.

I recognize the effort that NEMA has put in formulating necessary regulations and guidelines to serve the interest of the citizens of Kenya to ensure better management of the environment.

Hon. Amb. Chirau Ali Mwakwere, EGH, FCILT, MP

Minister for Environment and Mineral Resources

PREFACE

This guideline is one of the tools for environmental management in Kenya under the Environmental Management and Coordination Act (EMCA), 1999 and the Environmental Management and Coordination (Waste Management) Regulations, 2006.

The guideline is aimed at a broad readership, which will include government agencies (who are responsible for decision making, formulating policies, and enforcing health and safety aspects on asbestos management in the country), manufacturers and assemblers of asbestos materials, garage operators, contractors and all institutions that have asbestos material in their premises and other interested stakeholders.

This guideline provides direction for safe management of Asbestos waste and shall be the main regulatory reference material for Asbestos waste in Kenya. The document has been designed to apply common approaches on safe handling, packaging, transportation and final disposal of asbestos waste. The guideline will be reviewed from time to time as deemed necessary.

Mr. Ali D. Mohamed, CBS
Permanent Secretary
Ministry of Environment and Mineral Resources

ACKNOWLEDGEMENT

The Asbestos Guidelines have been produced through consultative and collective efforts of NEMA and the relevant lead agencies namely; Ministry of Public Health and Sanitation, Directorate of Occupational Safety and Health Services and City Council of Nairobi.

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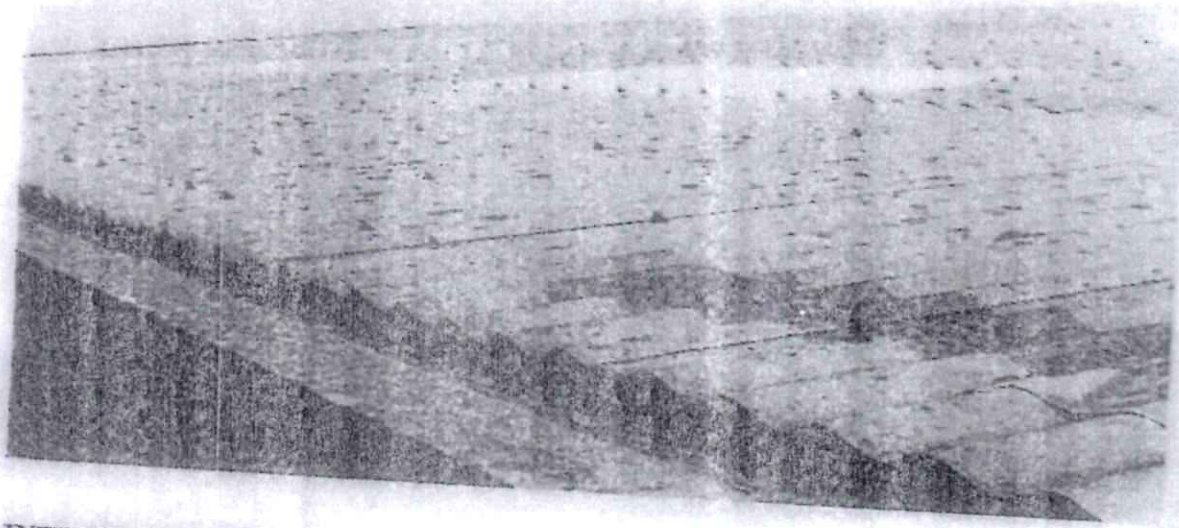
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Director General

National Environment Management Authority (NEMA)

CHAPTER 1



INTRODUCTION

1.1 Background Information on Asbestos

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite, actinolite, anthophyllite, chrysotile, amosite and crocidolite. The major producers of asbestos include Canada, Kazharkstan, Ukraine, Russia, India, South Africa and Zimbabwe. Asbestos used to be mined in Kenya in the past but was stopped.

Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, asbestos has been used in a wide range of manufactured goods, including roofing materials, ceiling and floor tiles, paper and cement products, textiles, coatings and friction products such as automobile clutch, brake, transmission parts and sewer pipes. When used due to its resistance to fire or heat, it is woven into fabrics or mats while when used for building material such as roofing sheets, it is often mixed with cement.

Asbestos is a hazardous material with extremely fine fibres and can remain suspended in air for hours. If handled without caution, it may cause serious chronic health problems such as asbestosis, lung cancer and mesothelioma. The diseases cause long term serious social, economic and emotional problems.

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when, due to damage, disturbance, or deterioration over time, the material releases fibres into the air. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases.

There is increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets over time and increased drive

towards roof water harvesting. The removal and disposal of asbestos has not been done in accordance with any guideline. In order to increase awareness and to reduce or eliminate the risk of exposure to asbestos fibres and thus the risk of disease, a consistent approach to management of asbestos especially handling, demolitions, renovations and repairs is therefore required.

The Authority in consultation with relevant lead agencies namely the Ministry of Public Health and Sanitation (MoPHS), Directorate of Occupational Safety and Health Services (DOSHS) and City Council of Nairobi (CCN) developed these guidelines.

1.2 Objectives

The main objective of these guidelines is to protect the environment and minimise risk to workers and public from asbestos fibers.

Specific objectives of the guidelines are:

1. To ensure environmentally sound disposal of asbestos
2. To provide assistance compliance with Environmental Management and Coordination (EMC) Waste Management Regulations, 2006
3. To ensure safe removal, handling, packaging and transportation of asbestos.
4. To create and raise awareness on hazards of asbestos.

1.3 Scope

These guidelines will apply to all persons or firms operating in facilities and premises in which asbestos materials may be handled during installation, demolition, renovation, repair or removal for disposal.

1.4 Regulatory and Institutional Framework

1.4.1 Regulatory Framework

Environmental Management and Coordination Act, 1999 section 91 (1-7)

The EMCA, 1999 requires the Authority to categorize hazardous wastes on the recommendation of Standards Enforcement and Review Committee (SERC) and to issue guidelines and regulations for the management of each category of hazardous wastes. The categorization has been done under the EMC (Waste Management) Regulations, 2006, while these guidelines provide for safe management of asbestos and its wastes.

Environmental Management and Coordination (Waste Management) Regulations, 2006.

Asbestos has been classified as hazardous waste under the Waste Management Regulations, 2006

- 1) Every person who generates toxic or hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators prescribed in the Third Schedule to these Regulations or any other appropriate technology approved by the Authority.
- 2) Any leachate or other by-products of such treated waste shall be disposed of or treated in accordance with the conditions laid down in the license or in

accordance with guidelines issued by the Authority in consultation with the relevant lead agency.

- 3) In issuing a licence for the disposal of waste, the Authority shall clearly indicate the disposal operation permitted and identified for the particular waste

Public Health Act, Cap 242 Sections 11-13 -

An act of parliament to make provision for securing and maintaining health. Section 13 states that it shall be the duty of every health authority to take all lawful, necessary and under its circumstances reasonably practicable measures for preventing the occurrence or dealing with any outbreak, or prevalence of any infections, communicable or preventable diseases or conditions to safeguard and promote the public health and to exercise the powers and perform the duties in respect of the public health conferred or imposed on it by this act or by any other law.

The Public Health Act Cap 247, Section 3 gives provisions for use of poisonous substances. It refers to regulations for protection of persons against risk of poisoning, imposing restrictions or conditions on the importation, sale, disposal, storage, transportation or use of poisonous substances. This Act also requires persons concerned with importation, sale, disposal storage, transportation or use of poisonous substances to be registered and licensed and provides measures for detecting and investigating cases in which poisoning has occurred.

The Public Health Act Sec 126 A, empowers municipal councils, urban and area councils to make by laws for all or any of the following matters with regards to buildings for -

- controlling the construction of buildings and the materials to be used in the construction of buildings;
- Preventing the occupation of a new or altered building until a certificate of the fitness thereof for occupation or habitation has been issued by such local authority.
- To compel owners to repair order to demolish unsafe, dangerous or dilapidated buildings.

The Act further gives the municipal Urban or area councils power to require removal or alteration of work in certain cases the local authority may by notice to the owner either require him to pull down or remove the work, or if he so elects to comply with any other requirements.

The Occupational Safety and Health Act, No. 15 of 2007

The purpose of the Occupational Safety and Health Act (OSHA) is to provide for the safety, health and welfare of workers and all persons lawfully present at workplaces and to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes.

Though not explicitly provided, the act and the rules made there under have various sections on hazardous materials that apply to Asbestos.

The OSHA stipulates that an employer shall not require or permit his employee to engage in the manual handling or transportation of a load which by reason of its nature is likely to cause the employee to suffer bodily injury.

It also states that any person supplying, distributing, conveying or holding in chemicals or other toxic substances shall ensure that they are packaged, conveyed, handled and distributed in a safe manner so as not to cause any ill effect to any person or the immediate environment.

The Factories (Building, Operations and Work of Engineering Construction) Rules, 1984

Asbestos has been listed as a hazardous substance and its threshold limit values given, therefore these rules apply to all workplaces where asbestos is present.

The Factories (Building, Operations and Work of Engineering Construction) Rules, Legal Notice No. 40 of 1984

The Factories (Building, Operations and Work of Engineering Construction) Rules, Legal Notice No 40 of 1984, rules 20 and 21 prohibit any inhalation of dust and fumes. In any building operation or work of engineering construction where dust or fumes likely to be injurious to the health of persons employed are given off, all reasonably practicable measures shall be taken to prevent the inhalation of dust or fumes by the person employed by ensuring adequate ventilation or providing suitable respirators at the place where the operation or work is carried on.

The Local Government Act, Chapter 265

Section 160 (a) of The Local Government Act, Chapter 265 empowers every municipal council, town council and every urban council to establish and maintain sanitary services for the removal and destruction of, or otherwise dealing with, all kinds of refuse and effluent and, where any such service is established, to compel the use of such service by persons to whom the service is available.

Section 201(1) – (4) expands the jurisdiction of local authority to make by-laws in respect of all such matters as are necessary or desirable for the maintenance of the health, safety and well-being of the inhabitants of its area or any part thereof and for the good rule and government of such area or any part thereof and for the prevention and suppression of nuisances. The by-laws so made may control, regulate, prevent, prohibit or compel certain activities to be undertaken and prescribe offences in case of contraventions.

1.4.2 Institutional Framework

National Environment Management Authority

The Authority is established to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment. Its mandate includes implementation of Legal Notice no. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2006 which stipulates the disposal of Hazardous waste such as asbestos.

Local Authorities

The ministry of local government is charged with the responsibility of providing guidance, supervisory and monitoring services of local authorities in matters of infrastructure development and service delivery including solid waste.

Directorate of Occupational Safety and Health Services

The department is mandated to implement all rules pertaining to the protection and prevention of workers from occupational hazards and ensure safe working environment. The Directorate implements the OSHA, 2007 and various rules made there under.

Ministry of Public Health and Sanitation

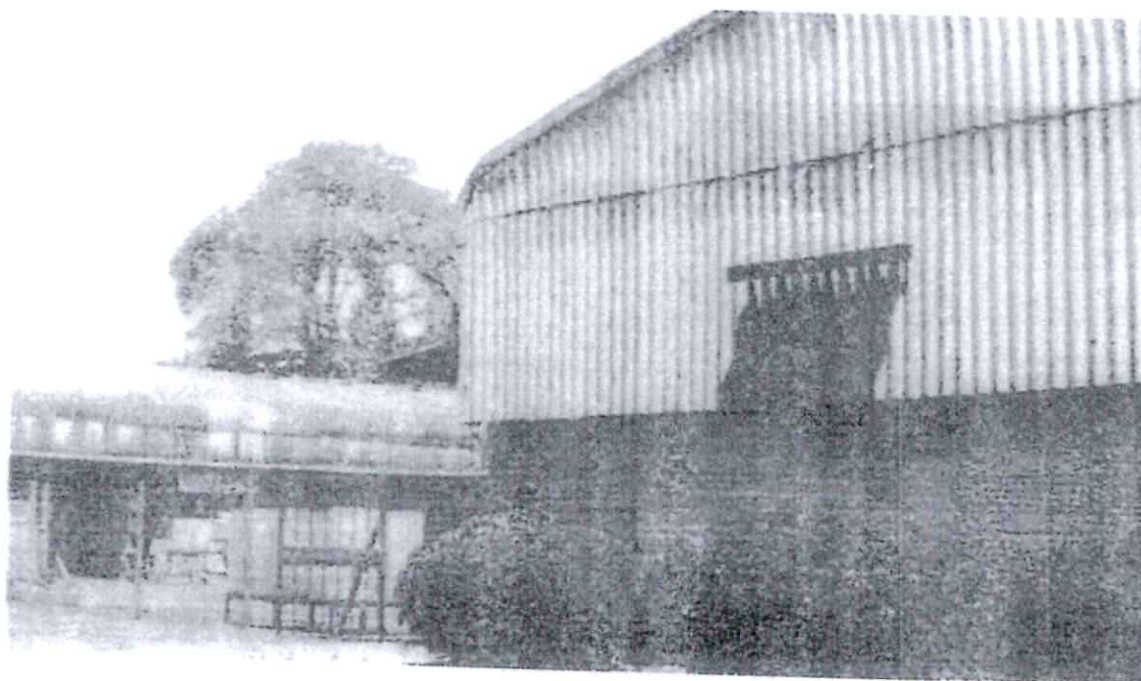
The mandate of MoPHS is to support the attainment of the health goals of the people of Kenya by implementing priority interventions in public health, guided by the strategic framework provided from the medium-term Plan 2008-2012 and the wider health sector.

The ministry is involved in prevention of communicable and non-communicable diseases, health promotions, and curative services at all levels.

The department of environmental health and sanitation aims to reduce disease burden arising from environmental pollution, by preventing disease transmission from general environmental health pollutants.

CHAPTER 2

EXPOSURE AND EFFECTS OF ASBESTOS

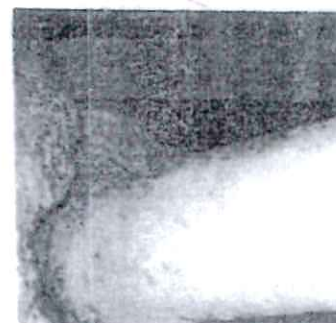


2.1 What is Asbestos?

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite, actinolite, anthophyllite, chrysotile, amosite and crocidolite (see Annex 1).

2.2 Uses of Asbestos

Asbestos fibres are incredibly strong and have properties that make them resistant to heat. Many products are in use today that contain asbestos. Most of these materials are used in buildings as roofing, sound proofing, ceilings and tiles; as insulation materials in boilers, steam pipes, water heaters, brake linings, clutch plate, bonnet lining; and in protective gears as fire resistant blankets, jackets and gloves.



2.3 People at risk

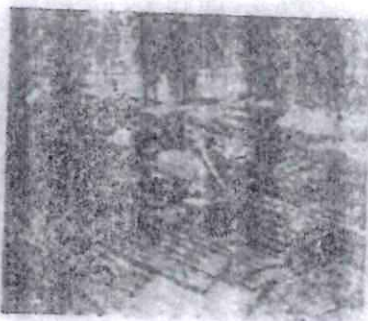
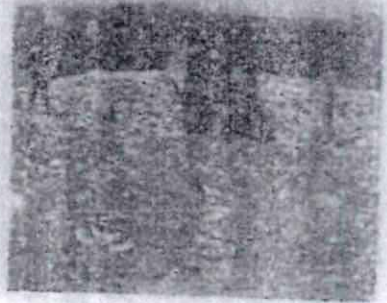
Historically, asbestos exposure has been of greatest concern to those involved in mining and milling of the raw material, people in the construction trades, and workers engaged in manufacturing or using products containing asbestos.

Secondary exposure occurs when people who do not work directly with asbestos are inadvertently exposed to fibres as a result of sharing workspaces where others handle asbestos.

In addition to people who work with asbestos either directly or indirectly, workers' families and other household contacts are also at risk from asbestos workers who go home covered in asbestos dust; family and household members are then exposed via inhalation of the dust from workers' skin, hair, and clothing, and during laundering of contaminated work clothes.

Asbestos is released into the air and soil around facilities such as refineries, power plants, factories, shipyards, steel mills, vermiculite mines, and building demolitions. People living around these sites are also exposed to asbestos.

Other groups at risk of developing an asbestos-related disease are the people who are involved in rescue, recovery, and cleanup of disaster sites where construction materials used contain asbestos.

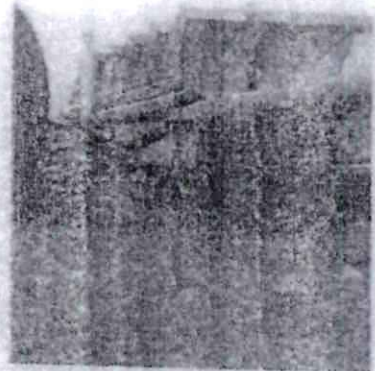


2.4 Sources of Exposure

Currently, the people most heavily exposed to asbestos are those in construction trades, and most occupational exposures occur during repair, renovation, removal or maintenance of asbestos that was installed years ago.

2.4.1 Installation and Repair

As brake pads and linings with asbestos material wear down, asbestos is exposed and fibres are released into the air. The dust can also gather on other brake parts. Mechanics often blow dust away with an air hose or by mouth, oblivious of the inherent dangers. It is impossible to tell whether or not a car has asbestos-containing brake pads merely by looking at it, mechanics should always exercise caution when working on a car's brake system by wearing a respirator or other protective mask.



Technicians involved in either installation or repair works of materials containing asbestos such as buildings and boilers should always observe the precautions.

2.4.2 Manufacturing

The ore contains only about 10% asbestos, which must be carefully separated from the rock to avoid fracturing the very thin fibres. The most common method of separation is called dry milling. In this method, the primary separation is done in a series of crushing and vacuum aspirating operations in which the asbestos fibres are literally sucked out of the ore.

Manufacturing processes involve mixing asbestos materials with cement, ceramics e.t.c. during which dust is likely to be generated. Machining and cutting activities during manufacturing will generate substantial dust that will cause exposure of asbestos dust to the workers and people nearby. In Kenyan situation, however, only machining and cutting processes take place.

2.4.3 Removal and Disposal Operations

During the removal operations there are bound to be breakages that will generate dust therefore inhalation will occur.

2.4.4 Environment

Due to the fibrous nature of the asbestos, airborne dust is likely to be present in the environment close to the premises where asbestos is handled. All people within that vicinity are likely to be exposed to the dust in the air.

2.4.5 Mining

The asbestos ore deposits are loosened from the surrounding rock by careful drilling and blasting with explosives. The resulting rocky debris is loaded into large rubber-tired haul trucks and brought out of the mine. Some operations use an excavation technique called block caving, in which a section of the ore deposit is under-cut until it crumbles under its own weight and slides down a chute into the waiting haul trucks. During the process, asbestos dust will be generated, hence exposing the workers and people nearby. However, mining is not a major source of exposure in Kenya since it was stopped.

2.5 Effects of Asbestos Exposure

2.5.1 Health Effects

Fibres embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer or mesothelioma. Smoking increases the risk of developing illness from asbestos exposure. Disease symptoms may take several years to develop following exposure.

The major health effects associated with asbestos exposure includes:

- **Asbestosis** -- Asbestosis is a serious, progressive, long-term non-cancer disease of the lungs. Symptoms of asbestosis include shortness of breath and a dry, crackling sound in the lungs while inhaling. There is no effective treatment for asbestosis.

- **Lung Cancer** -- People who work in the mining, milling, manufacturing of asbestos, and those who use asbestos and its products are more likely to develop lung cancer than the general population. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anaemia.
- **Mesothelioma** --this is a rare form of cancer that is found in the lung, chest, abdomen, and heart and almost all cases are linked to exposure to asbestos. This disease may not show up until many years after asbestos exposure.

2.5.2 Socio-Economic Effects

Asbestos is considered as one of the biggest occupational health risk faced by workers, and the related diseases are reaching epidemic proportions in many parts of the world. Studies carried out in Canada, Australia and the UK indicate that death continues to be one of the worst consequences of asbestos exposure which is the most common cause of asbestos related diseases in the workplace. Death due to asbestos may be as high as 100,000, assuming that the world labor force is about 2.7 billion (Takala, 2002). Experts suggest that the number of deaths from asbestos related diseases will rise in future.

The social and emotional impacts of people affected by asbestos disease and associated issues were demonstrated by Walker and LaMontagne in 2004. Workers' and community members' knowledge and awareness about asbestos grew as a result of increased deaths, fear of living with risk of the past exposure and experience with medical professionals. Living with asbestos related disease has been identified as capable of affecting identity by the conversion from being a healthy and independent person to being physically limited and reliant on family and others, this leads to feelings of anger, frustration, fear and uncertainty (Walker and LaMontagne (2004).

The economic impacts in terms of medical costs, legal costs and scientific investigations are enormous. In short, asbestos disease is a serious public health worldwide whose impacts are only starting to emerge after 100 years of misuse and therefore deserve commensurate public health response. The primary strategy to address this problem is prevention, with worldwide elimination of asbestos use and replacement of asbestos by safe substitutes (Tushar K.J. et al., 2003).

CHAPTER 3

PRE-REMOVAL AND PRE-DISPOSAL ACTIVITIES

This chapter covers the activities to be undertaken before the removal and disposal of the asbestos.

3.1 General Measures

In view of the adverse health effects posed by exposure to asbestos fibres, the Guidelines highlights the precautions necessary to reduce or mitigate risks of exposure. It is therefore necessary that the facility owners undertake the following:

- 1) Keep an updated inventory of all asbestos containing materials in the work place;
- 2) Notify the Authority by filling in the notification form (ANNEX 2);
- 3) Ensure that all asbestos containing materials are clearly marked and visible;
- 4) Develop safe work procedures including the correct use of personal protective equipment (PPE) for workers who may work near asbestos containing materials(ANNEX 3);
- 5) Instruct all workers who would be exposed in all aspects of the asbestos management;
- 6) Prepare written work procedures specific to each job site and make them available to all workers;
- 7) Ensure that work is carried out under the supervision of experienced and qualified personnel;
- 8) Keep accurate and complete records regarding asbestos management;
- 9) Conduct a risk assessment of the potential for exposure to any of the asbestos containing materials;

3.2 Risk Assessment Requirements

A risk assessment must be conducted prior to the disturbance, repair or removal of asbestos containing materials to determine which action is to be taken. The purpose is to identify the location and gauge the condition of the material prior to the work, as well as any other potential hazards that might affect the workers.

Risk assessment report should include but not limited :

- a) Type of asbestos present and the percentage
- b) Friability of the material
- c) Condition of the material (good, poor etc)
- d) Potential for occupant exposure
- e) Other potential hazards present (biological, chemical, electrical, confined spaces, heat, cold etc)
- f) Risk rating or classification and rationale
- g) Personal protective equipment to be used

- h) How the work area will be isolated from any occupants
- i) Person completing the risk assessment, signature, date and phone number.

The Risk Assessment should only be conducted by a qualified person such as officers serving as Safety, Health and Environment Managers, Property Managers or a consultant

In any building which is being altered or renovated, materials that have the potential for releasing asbestos fibres can either be removed, enclosed or encapsulated which includes coating or painting.

3.3 Environmental Impact Assessment (EIA)

- a) The asbestos waste generator should ensure that a disposal site is identified and an EIA is done for removal, handling and disposal of asbestos before commencing the work process
- b) The findings of the risk assessment must be included in the EIA report submitted to the authority.
- c) The EIA shall specify safe conditions for removal, handling and disposal of asbestos
- d) A hydrogeological report must be done to inform on the best siting of the disposal site and be included in the EIA report
- e) The EIA should be carried out by experts who are registered by NEMA.
- f) The EIA report should be submitted to NEMA for processing.
- g) The removal, handling and disposal of asbestos shall not commence until an EIA licence is issued.

3.4 Notification

- When asbestos waste is to be generated or removed from a site, parties that may be affected shall be notified the time and nature of work to be done.
- The parties to be affected must be given at least seven (7) days notice of the intention to remove and dispose asbestos by the waste generator
- The staff, neighbors and any other person who might be at risk within the premises shall also be notified to prevent their exposure. (annex 2)

CHAPTER 4

HANDLING

This chapter outlines the steps necessary for the employer to ensure, as far as is practicable, the prevention of contamination by asbestos from any workplace; to ensure that asbestos-containing materials are stored, labelled and disposed of appropriately.

4.1 Removal

The waste generator shall ensure that the following precautions are observed when removing asbestos materials from buildings or other structures:

- Secure the site to prevent unauthorized persons and to restrict movement
- Wet the asbestos sheets before removal. If asbestos sheets should begin to crack or crumble, immediately wet the cracked or broken areas with the pintsize spray bottle or garden pump sprayer. **NB. Breakage releases asbestos fibres.**
- Remove pieces of asbestos sheets by pulling any fasteners (nails, screws, rivets) or cutting fastener heads so as to minimize breakage. If necessary, carefully lift asbestos sheets with pry tools to expose the fasteners' heads.
- Do not slide asbestos sheet over each other.
- Carefully lower removed asbestos sheets to the ground. **Do not throw or drop it.**
- Care should be taken not to stand or sit on the asbestos sheets to avoid breakage.
- The workers removing the asbestos must have the appropriate Personal protective equipment which must be removed as they enter the shower room immediately after removal of the asbestos.

4.2 Temporary Storage.

If the asbestos must be stored before disposal they must be stored in such a way that its containers are secure from accidental or deliberate damage, access by staff and the general public.

- Temporary storage refers to the time between removal and final disposal of asbestos waste. The duration for temporary storage of asbestos waste should not exceed thirty (30) days from the time of removal.
- The temporary site should be within the premises where the asbestos are being removed.
- The removed bulky asbestos, such as roofing sheets, beams, joists, and studs, should be stacked and wrapped, into stacks which can be easily loaded into the transportation vessel, in a plastic sheet of a minimum of 500 gauge double wrapped and secured with tape and labeled
- Any debris (broken pieces) should be collected in a sealed polythene woven bag or any other air tight container. The bags should then be wrapped, into stacks which can be easily loaded into the transportation vessel, in a polythene sheet awaiting final disposal.

- The bags should be considered full when half full and should be tightly sealed or when filled up to a level where the open neck can be twisted tightly, folded over into a "gooseneck," and the ends sealed to the side of the bag with heavy plastic tape such as duct tape.
- Care should be taken to ensure that sharp pieces do not puncher the bags/ wrappers
- Removed asbestos sheets should not be allowed to lie about the site where they may be further broken or crashed by machinery or site traffic.
- The storage area must have restricted entrance and locked or secured on a 24 hour basis.
- Warning label ("Asbestos hazard area, keep out") and danger signs should be affixed to each wrapped stack or storage area using English, Swahili and Local language.

4.3 Handling of Asbestos materials in garages

This section applies to activities involving relining of brake and clutch assemblies, motor vehicle repair and maintenance and commercial garages and service stations.

1. Wherever possible, brake and clutch parts that do not contain asbestos fibre should be used.
2. Where products containing asbestos are being handled, the number of people in the area should be kept to the lowest possible figure.
3. Workshops should be isolated from other occupied parts of the building or areas that the public have access to.
4. Under no circumstances should compressed air or drybrushing be used for cleaning purposes.

4.3.1 Servicing of brakes and clutches in garages or workshops

Airborne asbestos fibre is most likely to be produced when parts are worked on by cutting or machining. The dust that accumulates during usage also contains asbestos and handling or cleaning such parts will produce airborne asbestos fibre.

1. If the brake or clutch parts are to be sent out for specialist servicing, they should be sealed in a bag to prevent the release of asbestos fibres.
2. When products are machined, the employer should ensure that the release of dust into the work environment is reduced to the lowest practicable level.
3. An effective dust-extraction system with appropriate treatment to prevent air pollution must be fitted to all equipment that is used to cut, grind or otherwise machine the asbestos materials.
4. Mechanics should always exercise caution when working on a car's brake system by wearing a respirator or other protective mask.
5. Provide air tight containers for storage of the removed parts awaiting disposal.
6. All the waste containing asbestos generated should be disposed of as stipulated in these guidelines.

CHAPTER 5

TRANSPORTATION AND DISPOSAL

This chapter deals with preparation for transportation, transportation and the actual disposal of Asbestos waste

5.1 Preparation for Transportation

Material containing asbestos or contaminated with asbestos must be viewed as hazardous and packaged to keep fibres from getting into the air. Containers used for packaging may be hard or flexible and must seal airtight. The following are some of the precautions that should be observed in the packaging.

- The waste transporting vessel must be lined with a 500 gauge double wrapped plastic sheet with every seam sealed with a tape and covered.
- The transportation vessel should be labeled "**Danger - Contains Asbestos Fibres, Cancers and Lung Disease Hazard**" and contain the following information: (i) the identity of the hazardous waste, (ii) the name, physical address and telephone contact of the generator of waste
- The bags and stacks should be gently loaded into transportation vessel.
- The goosenecks should not be used as handles for carrying the bags, because that might unseal the ends or tear the bags. Tossing the bags into a waste transporting vessel must be avoided because of the risk of rupture.
- The asbestos waste should be transported to a prepared disposal site that is authorized by NEMA.

5.2 Transportation

- The vehicle transporting the asbestos waste should be licensed as per the EMC (Waste Management) Regulations 2006 and must be accompanied by a tracking document (Annex 4)
- The waste shall be transported to the disposal site in an enclosed vehicle or container, capable of being washed without lodgment of debris and fibres, and secure from escape of fibres to the atmosphere.
- The contractor should ensure that all persons involved in handling and disposal of asbestos are trained in emergency operating procedures. These procedures shall include how the waste is to be handled, services to be contacted during such an exposure, and additional personal protective equipments. (Annex 5)

5.3 Disposal Site

Disposal of asbestos must be at a site:

- Designated by the local authorities and licenced by NEMA;
- Privately owned disposal facility licenced by NEMA;
- Designated by the waste generator (on-site disposal).

Where a designated site by the local authorities or privately owned facility does not exist the waste generator shall identify an appropriate site, undertake an EIA and be duly licensed.

The Disposal site should be as per specifications in the EIA report. However the following minimum conditions must be observed:

- i. The optimal distance of the disposal pit shall be as far as practicable from the nearest human settlement and as it shall be determined by the Ministry of Public Health and Sanitation.
- ii. A lined pit that does not reach the water table or according to other standards that may be approved by NEMA.
- iii. Disposed material to be one metre below ground level.
- iv. Disposal site should be fenced off appropriately and the gate locked.

5.4 Disposal Operation

The waste generator shall ensure that the following precautions are observed when disposing asbestos wastes:

- i. The waste generator shall notify the Authority on commencement of disposal activities. (Annex 3)
- ii. Asbestos materials **must not** be reused or offered for sale.
- iii. All asbestos sheets and the debris should be wrapped before it is hauled to the disposal site or transfer station in a covered vehicle.
- iv. Asbestos waste must be disposed of at approved disposal sites only.
- v. The depth of the disposal pit shall be as deep as practically possible to accommodate more asbestos waste but at least one (1) metre above water table.
- vi. The asbestos should be lowered gently into the disposal site and should not be dropped from any height to avoid breakage.
- vii. When all available asbestos has been lowered into the pit, cover with polythene paper followed by 6 inch layer of soil. Continue doing this until the pit is full or the waste is finished.
- viii. The pit shall be considered full when the asbestos waste is **one meter** below the ground level or the asbestos waste is exhausted.
- ix. After the pit is full, cover with 500 gauges double wrapped polythene sheet and fill the pit with layer of soil up to the ground level.
- x. Disposal site should be completely fenced off with at least chain link and a lockable gate which shall be locked at all times. The fence should be at least one (1) metre from the edge of the pit.
- xi. Warning notices stating "Asbestos hazard area, keep out" shall be placed at the disposal site. These signs, with lettering of minimum 150mm in height, are to be placed so that they are clearly visible.

5.5 Post - Disposal

1. All transportation vessels, re-useable containers or any other similar article which have been in contact with asbestos waste shall be cleaned at the disposal site.
2. The disposal site should be maintained including the warning signs, the fence, the gate among others to prevent vandalism and interference.

3. Human activities which might interfere with the buried asbestos waste such as construction and pitting should not be allowed at the disposal site.
4. The waste generator shall notify the Authority in writing on completion of disposal of asbestos waste.



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- Kenya, G. o. (XXXX). *The local government Act, Chapter 265*. Nairobi: Government Priter.
- Walker, H. a. (2004). *Work and Health in the Latrobe Valley: Perspectives on Asbestos Issues*. Centre for the Study of Health & Society. University of Melbourne Design & Print Centre.

ANNEX I

Types of Asbestos

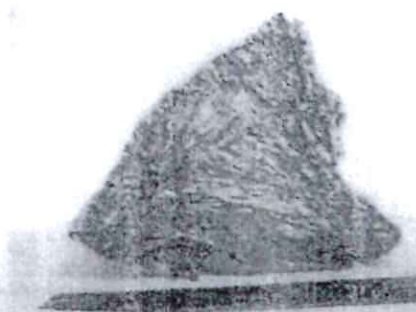
Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite asbestos, actinolite asbestos, anthophyllite asbestos, chrysotile asbestos, amosite asbestos and crocidolite asbestos. Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity (making it a commonly used insulator), is insoluble and is without odor. Asbestos' combination of properties made it a valuable resource, regularly used in buildings, automobiles, shipyards and a variety of household products.

Tremolite Asbestos



Tremolite asbestos was not often used industrially or commercially; though it could be found (uncommonly) in products such as certain talcum powders in limited amounts.

Actinolite Asbestos



Actinolite asbestos was not often used industrially or commercially. Airborne actinolite fibres are easily inhaled and severely damaging to the lungs.

Anthophyllite Asbestos



Plate 3: Anthophyllite

Like tremolite and actinolite, anthophyllite was not often used industrially or commercially; though it could occasionally be found in certain vermiculites.

Chrysotile Asbestos



Plate 4: Chrysotile

Also called white asbestos, chrysotile asbestos is unique in that it has a serpentine fiber-formation (curled fibres) compared to the amphibole fiber-formation (straight, needle-like fibres) of the other five asbestos types. Chrysotile asbestos is less friable (less-likely to be inhaled) than other types of asbestos. Chrysotile asbestos is less likely to be

inhaled and therefore viewed by many to be the safest of the asbestos types.

Amosite Asbestos

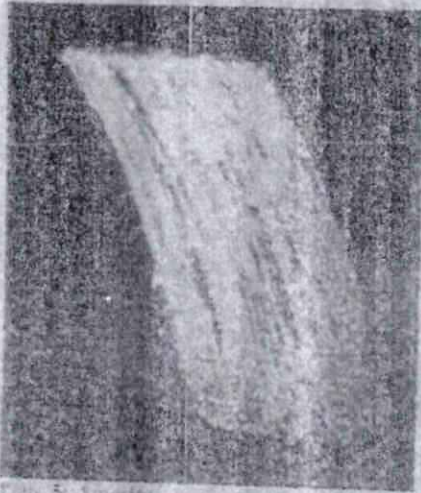


Fig. 5. Amosite

Also called *Cornierite* or brown asbestos, amosite asbestos is an amphibole originating in Africa. Amosite was used industrially for various purposes such as cement sheet and pipe insulation.

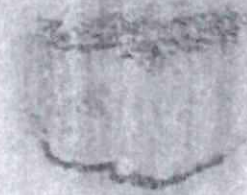


Fig. 6. Crocidolite

Also called blue asbestos, crocidolite asbestos is an amphibole mineral that can be found in Africa and Australia. On the opposite end of the spectrum than chrysotile asbestos, crocidolite is viewed to be the most dangerous type of asbestos.

Crocidolite Asbestos

ANNEX 2

ASBESTOS MATERIALS NOTIFICATION FORM

ASBESTOS MATERIALS NOTIFICATION FORM

(To be filled in triplicate)

1. GENERAL INFORMATION

a) Name of the Person/Organization

b) Contact Person

c) Postal Address

d) Physical Address

e) Telephone contact (Landline and Mobile)

f) Email address

g) ID Number

h) PIN NO.

2: PARTICULARS OF ASBESTOS MATERIAL/WASTE

a) Present use of asbestos (roofing, boilers, brake pads etc)

b) Quantity of asbestos in possession (Kg./number)

c) Status of the asbestos (friable, intact, broken, removed and how it is stored)

d) Quantity intended for disposal (Kg./ number)

d) Site Location (*Latitude and Longitude should be given to five decimal places*)

GPS Coordinates – Geographic WGS84, Latitude _____ Longitude _____

LR No. _____

e) Village/Town

f) Sub Location

g) Location

h) Division

i) District/County

Signature:

Date:

Official Stamp:

ANNEX 3

PERSONAL PROTECTIVE EQUIPMENTS

Personal Protective Equipment (PPE) refers to clothing and respiratory apparatus designed to shield or protect individuals from chemical, physical or biological hazards. PPE assists in providing preventive measures when used correctly. All PPE must be suitable for the person using it and provide effective protection for its intended purpose.

The following are some of the protective equipment that can be used:

- Respirators - half-face, dual-cartridge respirators, each equipped with a pair of High Efficiency Particulate Air filters (HEPA).
- Coveralls - should be with built-in booties and disposed off properly in sealed asbestos disposal bags after use.
- Rubber boots - These are highly recommended so that coverall booties do not wear through. Rubber boots can be washed off later or disposed of as contaminate debris.
- Eye protection - Each person removing asbestos materials should wear non-fogging goggles or safety glasses.

should be worn with each re-entry.

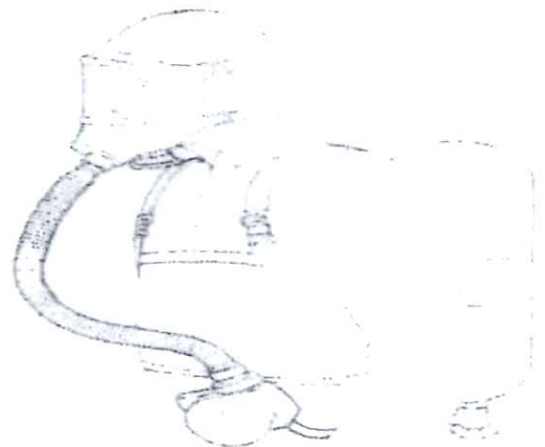


A dust-mask respirator

A half-face cartridge respirator



A self-contained breathing apparatus (SCBA)



Coveralls



ANNEX 4
TRACKING DOCUMENT

FORM III
(To be completed in Five Copies)
TRACKING DOCUMENT
(Regulation 3)

| | |
|---|--|
| <p>A Transporter</p> | <p>Serial No. Registered Name of Transporter..... Usual Municipality/District of operation..... License number..... Issuing Authority.....</p> |
| <p>CONSIGNMENT NOTE FOR THE CARRIAGE AND DISPOSAL OF SOLID WASTE</p> | |
| <p>B Description of the waste</p> | <p>Area collected/facility/ person..... Type of Waste..... Description and physical nature of waste..... Quantity/size of waste..... Number of containers.....</p> |
| <p>C Disposer's Certificate</p> | <p>I certify that I have received the waste as described in A and B above. The waste was delivered in vehicle _____ (Registration No.) at _____ (time) on _____ (date) and the carrier gave his/her name as _____ on behalf of _____. The waste shall be disposed off as per disposal licence issued by the Authority. Signed: _____ Name: _____ Position: _____ Date: _____ On behalf of: _____</p> |

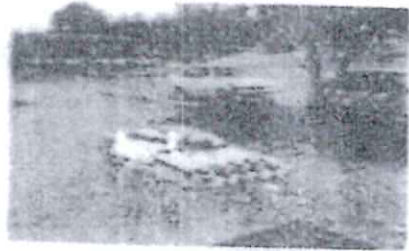
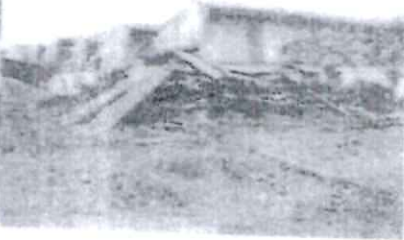
ANNEX 5

EMERGENCY OPERATING PROCEDURES FOR ASBESTOS INCIDENTS

- The contractor must have written emergency procedures with details on the collection and handling of contaminated materials in such a situation.
- Contractors must give clear instructions, provisions and the means to adequately decontaminate or clean up themselves and the injured worker(s) before leaving the work site.
- Injured workers who have not been decontaminated must be covered in such away as to minimize contamination of clean areas.
- The cover should not hinder access to the worker(s) by first aid or ambulance personnel.
- An employee familiar with the handling and disposal of asbestos contaminated clothing should accompany the injured worker(s) to the hospital. In case the worker is still contaminated upon arrival at the hospital, the employee must inform the hospital staff of this and instruct them on appropriate disposal of contaminated clothing.

Emergency Operating Procedures during Transportation

- Notify the police, fire brigade and NEMA immediately.
- Erect warning signs to road users
- Keep the public away from the area
- Secure the area





nema
NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

Tel: 020-214573, 020-2145719
Mobile Line: 0724 219 198, 0773 293 810, 0775 013 845
Incident Line: 0735 101 100, 0791 101 100

P.O. Box 30250
P.O. Road, Nairobi, Kenya
E-mail: info@nema.go.ke
Website: www.nema.go.ke

Ref: NEMA/EL/IS/VOL.1

14th February 2011

Hon. Alito Waithira, RFR
Cabinet Secretary,
Ministry of Lands, Pacific Works, Housing and Urban Development,
P.O. Box 30113 - 00102,
NAIROBI.

Dear *Waithira*,

REMOVAL OF ASBESTOS ROOFING IN GOVERNMENT AGENCIES OFFICES, HOMES AND LEARNING INSTITUTIONS PREMISES

The National Environment Management Authority (NEMA) is established under the Environmental Management and Coordination Act (EMCA), 1992 to exercise general supervision and coordination over all matters relating to the environment. It is the principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities including those being carried out by national lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are adhered to.

The Authority has noted with concern the presence of asbestos roofing in some of the institutions under your Ministry. According to the Environmental Management and Coordination (Waste Management) Regulations, 2002, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and possibly carcinogenic. Due to the risks associated with Asbestos fibres or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

The Authority wishes to draw your attention to the Constitution of Kenya 2010 which lists Environment as a right and fundamental freedom (Article 42) and provides that "Every person has a right to a clean and a healthy environment". In addition, article 69 (2) states that "Every person has a duty to cooperate with state organs and other

...sustainable
In view of the foregoing, the Authority advises that Government Institutions take lead
in replacing any existing asbestos roofing with modern roofing materials in full
compliance with the provisions of EMCIA and its attendant Regulations by 31st
December 2024.

NEEA will provide appropriate guidelines in the removal of the said asbestos.
Your prompt action on this matter is highly appreciated.

W. S. S. S.

M. M. M.
MAMO B. MEMO, ES
DIRECTOR GENERAL

- Copied to:
- Hon. Sejan Tuya, EGN
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry
 - Mr. Charles Hinga
Principal Secretary
State Department of Housing and Urban Development,
 - Eng. Festus Ny'ano
Principal Secretary
State Department of Environment & Climate Change



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NATIONAL ENVIRONMENTAL MANAGEMENT AUTHORITY

Telcom Wireless: 020-2101370, 020-2103710
Mobile Lines: 0724 343 200, 0723 343 010, 0735 013 046
Incident Lines: 0786 101 100, 0741 101 100

PO Box 6039, 01000
P.O. Box 6039, Nairobi, Kenya
E-mail: info@nema.go.ke
Website: www.nema.go.ke

Re: NEMA/ZI/TB/VOL.I

14th February 2004

Hon. Aden Duale, BGE
Cabinet Secretary
Ministry of Defence
Upper House
P O Box 40668 -- 00100
NAIROBI

Dear Sir

Hon. Patrick Minniti, CBS
Principal Secretary
Ministry of Defence
Upper House
P O Box 40668 -- 00100
NAIROBI

Dear Sir

REMOVAL OF ASBESTOS ROOFING IN GOVERNMENT AGENCIES (OFFICES, SCHOOLS AND LEARNING INSTITUTIONS) PREMISES

The National Environment Management Authority (NEMA) is established under the Environmental management and coordination act (EMCA), 1999 to exercise general supervision and co-ordination over all matters relating to the environment and is the principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities including those being carried out by relevant lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are achieved to.

The Authority has noted with Concern the presence of asbestos roofing in some of the institutions under your Ministry. According to the Environmental Management and

Asbestos containing materials, such as wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and possibly carcinogenic. Due to the risks associated with Asbestos fiber or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

The Authority wishes to draw your attention to the Constitution of Kenya 2010 which has Environment as a right and fundamental freedom (Article 42) and provides that "Every person has a right to a clean and a healthy environment". In addition, article 62 (2) states that "Every person has a duty to cooperate with state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of Natural resources".

In view of the foregoing, the Authority advises that Government institutions take lead in replacing any existing asbestos roofing with modern roofing materials in full compliance with the provisions of EMCA and its attendant Regulations by 31st December 2024.

NEMA will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours

MEMO B. MEMO, EBS
DIRECTOR GENERAL

Copied to: Hon. Solpan Tuya, EGB
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry



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NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

Tel: 020-2101970, 020-2185718
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Incident Lines: 0706 701 100, 0701 100 100

P.O. Box 6330, Nairobi
P.O. Box, Nairobi, Kenya
E-mail: enema@kenya.go.ke
Website: www.nema.go.ke

Ref: NEMA/ZI/18/VOLI

14th February 2014

Hon. Prof. Kibuka King'wa, PCSE
Cabinet Secretary,
Ministry of Interior and National Administration,
P.O. Box 30510 - 00100,
Nairobi.

Dear *Waziri*,

REMOVAL OF ASBESTOS HOODING BY GOVERNMENT AGENCIES (OFFICES, HOUSES AND LEARNING INSTITUTIONS) PREMISES

The National Environment Management Authority (NEMA) is established under the Environmental Management and Coordination Act (EMCA), 1992 to exercise general supervision and co-ordination over all matters relating to the environment in the principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities involving those being carried out by relevant lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are adhered to.

The Authority has noted with concern the presence of asbestos hooding in some of the institutions under your Ministry. According to the Environmental Management and Coordination (Waste Management) Regulations, 2008, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and possibly carcinogenic. Due to the risks associated with asbestos fiber or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

The Authority wishes to draw your attention to the Constitution of Kenya, 2010 which sets Environment as a right and fundamental freedom (Article 42) and provides that "Every person has a right to a clean and a healthy environment". In addition, article 68 (2) states that "Every person has a duty to cooperate with state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of Natural resources."

compliance with the provisions of ERMCA and its attendant regulations by 31st December 2024.

MEMA will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours Sincerely,


MEMO B. MEMO, ERS
DIRECTOR GENERAL

- Copied to:
- Hon. Soipan Taya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry
 - Dr. Raymond Grullo, CBS
Principal Secretary
Ministry of Interior and National Administration
 - Eng. Festus Ny'eno
Principal Secretary
State Department of Environment & Climate Change



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NATIONAL ENVIRONMENTAL MANAGEMENT AUTHORITY

Toll-free Numbers: 020-2381370, 020-2187713
Mobile Lines: 0724 253 248, 0723 369 612, 0735 013 946
Incident Lines: 0786 101 100, 0741 101 100

P.O. Box 50400, 2008
Pretoria, South Africa
Email: communications@nema.gov.za
Website: www.nema.gov.za

Ref: NEMA/21/18/VOL I

14th February 2021

Hon. Dr. Ezekiel Mchaga, BAK
Cabinet Secretary,
Ministry of Education,
P.O. Box 50400 - 2008,
PRETORIA

Dear *Wazim*,

REMOVAL OF ASBESTOS ROOFING IN GOVERNMENT AGENCIES (OFFICES, HOUSES AND CERTAIN EXEMPTIONS) PREMISES

The National Environmental Management Authority (NEMA) is established under the Environmental Management and Coordination Act (EMCA), 1994 to exercise general supervision and co-ordination over all matters relating to the environment. The principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities including those being carried out by relevant lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are adhered to.

The Authority has noted with concern the presence of asbestos roofing in some of the institutions under your Ministry. According to the Environmental Management and Coordination (Waste Management) Regulations, 2006, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and are highly carcinogenic. Due to the risks associated with asbestos fiber or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

The Authority wishes to draw your attention to the Constitution of Kenya 2010 which has Environment as a right and fundamental free from Article 42 and provides that "Every person has a right to a clean and healthy environment". In addition, article 42 (2) states that "Every person has a duty to cooperate with state organs and other persons to protect and conserve the environment and ensure ecologically sustainable development and use of Natural resources".

compliance with the provisions of EMCA and its attendant Regulations by 31st December 2024.

MEME will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours Sincerely,


NAMO B. MAMO, EBS
DIRECTOR GENERAL

- Copied to:
- Hon. Seipen Tuya, EGM
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry
 - Dr. Richard Bett Kipsang
Principal Secretary
Ministry of Education
 - Eng. Pastus Ny'eno
Principal Secretary
State Department of Environment & Climate Change

ASBESTOS LANDFILLS IN KENYA

ANNEX 1

| NO | NAME | CONTACTS | COUNTY | TYPE OF FACILITY | DATE OF EXPIRY |
|-----|-------------------------------------|--|--------------|------------------|----------------------------------|
| 1. | SERGEANT LOGISTICS LIMITED | P.O BOX 1549-80100, MOMBASA EMAIL: info@sergentgroup.com TEL:+254 784 204 939 | MOMBASA | LANDFILL | 11 th SEPTEMBER 2024. |
| 2. | GREENROCK VENTURES | P.O. BOX 417 KALIMONI, JUJA TEL: 0722806928/ 0714835576 EMAIL: info@greenrockventures.co.ke, thukutehenya@gmail.com | KIAMBU | LANDFILL | 31 st JANUARY 2025. |
| 3. | JOSAMI SMARTWASTE MANAGEMENT | P.O BOX 5963-80200, MALINDI TEL: +254702291540/ 0202440757 EMAIL: smjosami@gmail.com | KILIFI | LANDFILL | 1 st APRIL 2025. |
| 4. | TAI LIFESTYLE LIMITED | P.O BOX 16620-80108, KILIFI TEL: +254 798777668 EMAIL: info@tailifestyle.co.ke | TAITA TAVETA | LANDFILL | 5 th MAY 2025. |
| 5. | QUALITY INSPECTION SERVICES LIMITED | P.O.BOX 87222-80100, KILIFI qualityinspectionltd@gmail.com | KILIFI | LANDFILL | 21 st JANUARY 2025. |
| 6. | KILINDINI WASTE HUB LTD | P.O BOX 99744-80107, MOMBASA pwaniwastehub001@gmail.com | KILIFI | LANDFILL | 21 st JANUARY 2025. |
| 8. | JARIBUNI QUARRY LIMITED | P.O BOX 3340-80100, MOMBASA sphjqltd@yahoo.com | MOMBASA | LANDFILL | 12 th JULY 2024. |
| 9. | SAIMBOT SHIP'S CONTRACTORS LIMITED | P.OBOX 40461-80100 MOMBASA TEL 0722398954 EMAIL saimbot@yahoo.com | MOMBASA | LANDFILL | 14 th AUGUST 2024. |
| 10. | MARINE WASTE COLLECTION DEALERS | P.O BOX 1088 - 80100 TEL: 0721642850 EMAIL: info@marinewaste.co.ke/ keymoneyy2011@gmail.com | KILIFI | LANDFILL | 16 th SEPTEMBER 2024. |
| 11. | JAM ECOSYSTEMS LIMITED | P.O BOX 46624-00100, NAIROBI. TEL: 0720781136 EMAIL: info@jaliecosystems.co.ke | MURANG'A | LANDFILL | 17 th SEPTEMBER 2024 |
| 12. | MOREFLOW ENTERPRISES | P.O. BOX 93280 - 80102, MOMBASA Tel:0720678983 | MOMBASA | LANDFILL | 21 st SEPTEMBER 2024. |

| | | | | | |
|-----|------------------------------------|--|---------|-----------|--------------------------------|
| 13. | LEGACY IA RELIANCE (EA) LIMITED | P. O. BOX 42550-80100 MOMBASA legacyiarelianceahd@gmail.com | MOMBASA | LANDFILL | 9 TH JANUARY 2025. |
| 14. | STEEM AGENCIES | P. O BOX 288-00232, THIKA muwasuedgar@gmail.com | KILIFI | LANDFILL | 21 ST JANUARY 2025. |
| 15. | FADEMA CO. LIMITED | PO BOX 26501-00504, NAIROBI fadesina2014@gmail.com | KILIFI | LAND FILL | 1 ST APRIL 2025. |
| 16. | TARZON ENTERPRISES | P. O. BOX 92758 - 80100, MOMBASA lose.mwendo@yahoo.com | KWALE | LAND FILL | 6 TH JUNE 2025. |

ANNEX 1

LIST OF HAZARDOUS WASTE TRANSPORTERS

| NO. | NAME OF TRANSPORTER | VEHICLE REGISTRATION | DATE OF ISSUE | EXPIRY DATE |
|-----|---|----------------------|-----------------------------|-----------------------------|
| 1. | COLNET LIMITED | KDG 166V | 16 TH MAY 2024 | 16 TH MAY 2025 |
| 2. | WAYERS ENVIRONMENTAL CONSULTANCY | KBA 881H | 9 TH APRIL 2024 | 8 TH APRIL 2025 |
| 3. | UNICARE LOGISTICS LTD | KCB 076F | 3 RD JUNE 2024 | 2 ND JUNE 2025 |
| 4. | GREENCITY INCINERATORS LTD | KCD 834Z | 23 RD MAY 2024 | 22 ND MAY 2025 |
| 5. | ENVIROSAFE LIMITED | KBB 304T | 16 TH APRIL 2024 | 15 TH APRIL 2025 |
| 6. | ECOCARE MEDICAL DISPOSAL LTD | KCP 677Q | 6 TH JUNE 2024 | 3 TH JUNE 2025 |
| 7. | DOLYDAC INVESTMENT LIMITED | KDB 194Z | 16 TH APRIL 2024 | 15 TH APRIL 2025 |
| 8. | MOREFLOW ENTERPRISES | KCB 743G | 6 TH MAY 2024 | 3 RD MAY 2025 |
| 9. | TRANBIZ ENTERPRISES LTD | KCY 254Z | 13 TH JUNE 2024 | 12 TH JUNE 2025 |
| 10 | CLEAN EDGE HYGIENE SOLUTIONS LIMITED. | KAS 820Y | 22 ND MAY 2024 | 21 ST M AY 2025 |
| 11. | ISIKISHO GARBAGE TRANSPORTERS AND CLEANING SERVICES LTD | KCX 049Y | 18 TH APRIL 2024 | 17 TH APRIL 2025 |

LIST OF ASBESTOS TRANSPORTERS

| NO. | NAME OF TRANSPORTER | RECEIVING FACILITY | VEHICLE REGISTRATION | DATE OF ISSUE | EXPIRY DATE |
|------------|----------------------------|--|-----------------------------|---------------------------|---------------------------|
| 1. | MOREFLOW ENTERPRISES | MOREFLOW ENTERPRISES LANDFILL (ASBESTOS) | KDN 024Z | 7 TH MAY 2024 | 6 TH MAY 2025 |
| 2. | FADEMA CO LIMITED | FADEMA COMPANY LIMITED LANDFILL (ASBESTOS) | KBP 851Q | 3 RD JUNE 2024 | 2 ND JUNE 2025 |



MINISTRY OF ENVIRONMENT, CLIMATE CHANGE AND FORESTRY

MINISTERIAL STATEMENT BY THE CABINET SECRETARY FOR ENVIRONMENT, FORESTRY AND CLIMATE CHANGE TO PUBLIC PETITION NO. 52 OF 2023 ON THE BAN OF ASBESTOS AS A ROOFING MATERIAL

The National Assembly Public Petitions Committee through letter ref: KNA/DLPS/PPETC/CORR/2024/086 dated 5th June, 2024 by the Clerk of the National Assembly invited the Cabinet Secretary for Environment, Climate Change and Forestry to respond to a Public Petition No. 52 of 2023 on the Ban of Asbestos as a roofing material.

Public Petition

1. **THAT**, shelter is one of the basic human needs that secures human habitation and provides sense of security;
2. **THAT**, the quality of construction material, including the safety of roofing materials is important as it guarantees dwellers protection, healthy living, including safety of rain water harvested for domestic use;
3. **THAT**, Article 42 of the Constitution recognizes the right of every Kenyan to a clean and healthy environment, protection of the environment for the benefit of present and future generations;

4. **THAT**, numerous public utilities such as schools, dispensaries, hospitals and police stations in Wajir North Constituency and other parts of the country were in the past building using asbestos roofing materials;
5. **THAT**, the International Development Association (IDA) through the World Bank funded construction of some public hospitals and schools in Arid and Semi-Arid Lands (ASALs), such as Bute, Balambala, Kakuma and Rhamu Arid Zones Primary Schools using asbestos roofing materials;
6. **THAT**, research has revealed that exposure to asbestos is hazardous to human health and could result in an aggressive cancer called “Mesothelioma” which affects the membrane lining of the lungs and abdomen and presents symptoms similar to those of respiratory illnesses;
7. **THAT**, as a result of Mesothelioma Cancer and related illnesses, fifty-five countries all over the World, including the USA, New Zealand, Australia and Egypt have banned the use of asbestos as a roofing material, with Kenya banning its use in 2006;
8. **THAT**, the spiraling increase in cancer cases is exerting unbearable financial pressure on families and the Country’s health system owing to the exorbitant costs associated with treating cancer;
9. **THAT**, despite the ban on the use of asbestos in Kenya in 2006 and the associated increase in cancer cases, asbestos is still in use in many parts of the Country;

Prayer

1. *Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development*

Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;

- 2. Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;*
- 3. Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;*
- 4. Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.*

1.0 Introduction

The Public Petitions Committee of The National Assembly requested the Principal Secretary, State Department for Forestry to provide information to facilitate consideration of a public petition NO. 52 of 2023 on the ban of asbestos as a roofing material.

The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general

supervision and coordination over all matters relating to the environment and become operational in 2002.

2.0 Background

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or deterioration over time the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring their replacement with more environmentally safe methods necessitating their removal and disposal.

Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water

harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos (**Annex 1**).

Over time, the Ministry through NEMA has undertaken the following actions to mitigate against asbestos pollution:

- i. Communicate to the public on the environmental and health risks associated with asbestos use.
- ii. Communicated to a number of ministries on the concern of the presence of asbestos roofing, and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials (**Annexes II, III, IV, and V**).
- iii. Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006) (**Annex VI**).
- iv. Licensed the vehicles to transport asbestos/hazardous waste (**Annex VII**).

3.0 Response

1. *Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;*

The Ministry, through NEMA, will place a public notice to advise the public on the environmental and health risks associated with asbestos roofs. Further, the Authority will continue to write to public institutions to advise them to replace the asbestos roofing materials with environmentally-friendly roofing materials.

2. Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

The Authority will guide the concerned ministries and other entities on the safe handling, transportation, and disposal of asbestos. This will be in accordance with national guidelines on the safe management and disposal of asbestos, and Environmental Management and Coordination (Waste Management) Regulations, 2006.

3. Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;

The Authority will advise the Ministry of Health and County Governments to carry out medical surveys to ascertain the extent of impacts of exposure to asbestos and provide appropriate health interventions.

4. Make any other appropriate recommendations with respect to ensuring the safety of residents in affected regions from exposure of asbestos related negative effects.

The Authority, as the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment will continue to play its role of supervision and shall sensitize the public on critical environmental matters such as this.

Thank you, Hon. Chair and Hon. Members,

A handwritten signature in black ink, appearing to read 'Soipan Tuya', with a large, stylized flourish at the end.

Hon Soipan Tuya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change and Forestry

Date 21st June 2024

**PUBLIC PETITION No. 52 OF 2023 ON THE BAN OF ASBESTOS
AS A ROOFING MATERIAL**

1.0 INTRODUCTION

The Public Petitions Committee of Parliament requested the Principal Secretary, State Department for Forestry to provide information to facilitate consideration of a Public petition NO. 52 of 2023 on the ban of asbestos as a roofing material.

The National Environment Management Authority (NEMA) is the principal instrument of government established under Section 7 of the Environmental Management and Co-ordination Act (EMCA), 1999 to exercise general supervision and coordination over all matters relating to the environment and become operational in 2002.

2.0 BACKGROUND

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. It's a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, it has been used in a wide range of manufactured goods including roofing materials, ceiling and floor tiles, friction products such as automobile clutch and brakes. In the 1960s and 1970s, asbestos was a material of choice in the construction industry. A number of industries including food manufacturing industries as well as residential homes used asbestos roofing materials due to its durability and fire resistance characteristics.

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when due to damage, disturbance or deterioration over time the material releases fibres into the air, causing air pollution. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases (asbestosis, lung cancer and mesothelioma). The roofing materials used in the 1960s and 1970s have deteriorated overtime requiring their replacement with more environmentally safe methods necessitating their removal and disposal.

Over time, there has been increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets overtime and increased drive towards roof water harvesting. This promoted the National Environment Management Authority (NEMA) as the environmental regulator to develop guidelines to aid in the safe removal and disposal of asbestos (**Annex 1**).

Over time, the Ministry through NEMA has undertaken the following actions to mitigate against asbestos pollution:

- i. Communicate to the public on the environmental and health risks associated with asbestos use.
- ii. Communicated to a number of ministries on the concern of the presence of asbestos roofing, and advised them to take the lead in replacing any existing asbestos roofing with modern roofing materials (**Annexes II, III, IV, and V**).
- iii. Licensed asbestos disposal sites as per the Environmental Management and Coordination (Waste Management Regulations 2006) (**Annex VI**).
- iv. Licensed the vehicles to transport asbestos/hazardous waste (**Annex VII**).

3.0 RESPONSES

1) Recommend to the relevant Ministries to survey and identify all public buildings with asbestos roofs, including the International Development Association (IDA) funded primary schools in Wajir North Constituency and other ASALs regions of Northern Kenya that were roofed using asbestos with a view to removing asbestos and replacing it with galvanized iron sheets in order to mitigate asbestos-related negative effects and cancer;

The Ministry, through NEMA, will place a public notices to advise the public on the environmental and health risks associated with asbestos roofs. Further, the Authority will continue to write to public institutions to advise them to replace the asbestos roofing materials with environmentally-friendly roofing materials.

2) Recommend to the relevant Ministries to develop and implement a safe disposal plan for all the asbestos materials that will be removed from buildings to avoid seepage of the carcinogen into the environment;

The Authority will guide the concerned ministries and other entities on the safe handling, transportation, and disposal of asbestos. This will be in accordance with national guidelines on the safe management and disposal of asbestos, and Environmental Management and Coordination (Waste Management) Regulations, 2006.

3) Recommend for a medical survey to be carried out in all the regions with asbestos roofs to ascertain the extent of cancerous effect of prolonged exposure to asbestos and provide necessary health interventions to those who might have been affected and;

The Authority will advise the Ministry of Health and County Governments to carry out medical surveys to ascertain the extent of impacts of exposure to asbestos and provide appropriate health interventions.



MAMO B. MAMO, EBS

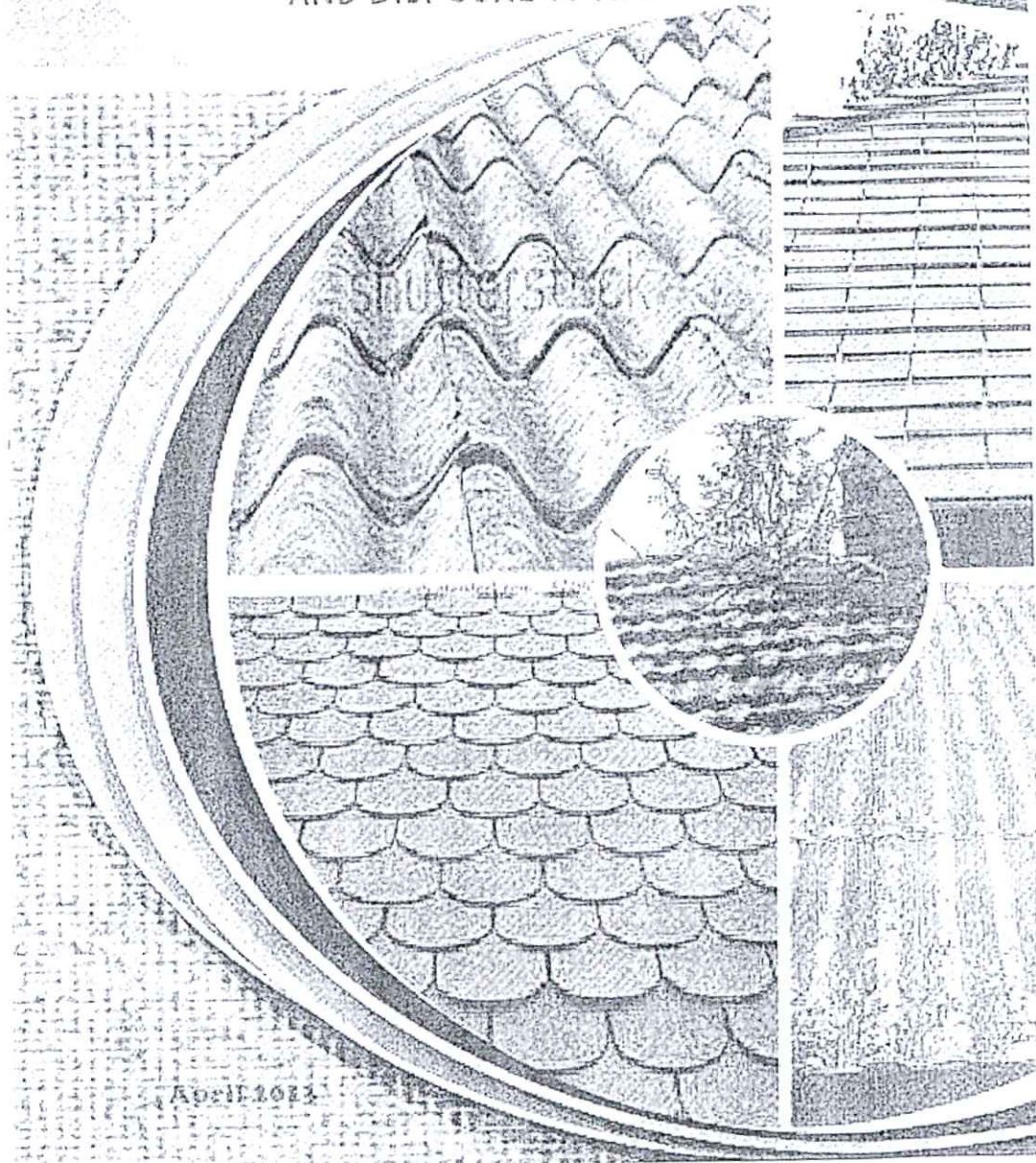
DIRECTOR GENERAL, NEMA



nema

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

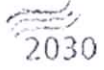
NATIONAL GUIDELINES ON SAFE MANAGEMENT AND DISPOSAL OF ASBESTOS





National Guidelines On Safe Management And Disposal Of Asbestos

Prepared by: Taskforce on Asbestos Guidelines
Creation Date: 10/10/2011
Last Revised: April, 2013
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Towards achievement of Vision 2030 ^{KENYA} 



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Acronyms

| | |
|-------|--|
| CCN | City Council of Nairobi |
| CDE | County Director of Environment |
| DOSHS | Directorate of Occupational Safety and Health Services |
| EIA | Environmental Impact Assessment |
| EMC | Environmental Management and Coordination |
| EMCA | Environmental Management and Coordination Act, 1999 |
| MoPHS | Ministry of Public Health and Sanitation |
| NEMA | National Environment Management Authority |
| OSHA | Occupational Safety and Health Act, 2007 |
| PPE | Personal Protective Equipment |
| SWSI | Surface Water Supply Index |

INTERPRETATION OF TERMS

In these guidelines:

“**Asbestos waste**” means waste containing asbestos and may include waste from renovation, demolition and repair of asbestos roofing sheets, asbestos ceiling boards and asbestos clutch plates, brake pads and linings and insulation materials.

“**Authority**” means the National Environment Management Authority established under section 7 of Environmental Management and Coordination Act (EMCA), 1999.

“**County Director of Environment**” means an officer of the National Environment Management Authority in charge of a County.

“**Disposal site**” means any area licensed by the Authority for disposal of Asbestos waste.

“**Employee**” means a person who works under contract or employment and related expressions shall be construed accordingly.

“**Contractor**” means any person or firm engaged in handling, removal and disposal of asbestos.

“**Safe management**” means the handling of asbestos materials in a manner that minimizes risk of exposure.

“**Asbestos material**” means any material that contains asbestos.

“**Waste generator**” means any person carrying out activities that generate asbestos waste.

“**Encapsulation**” means a process in which a material containing asbestos is treated with a product that covers the material and prevents the fibres from being released.

“**Friable materials**” means materials that, when dry, can be easily crumbled or powdered by hand when disturbed

“**Asbestos-containing materials**” means any manufactured articles or other materials that contain 1 % or more asbestos by weight at the time of manufacture.

FOREWORD

The Government of Kenya is committed to ensuring a clean and healthy environment for its citizenry. The constitution of Kenya espouses the tenets, duties and responsibilities of the state and its institutions to eradicate all forms of environmental degradation to promote sustainable development. As Kenya develops towards achieving Vision 2030 its imperative that all forms of development and waste associated with it is managed in a responsible manner.

The development of Guidelines on Safe Management and Disposal of Asbestos has been necessitated by the need to safeguard human health and environment from adverse impacts related to asbestos materials. According to the Legal Notice No. 121 of the Environmental Management and Coordination (Waste Management) Regulations, 2006, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes. In addition, the Legal Notice requires that hazardous waste be disposed off in a specific manner as approved by the National Environment Management Authority (NEMA). Due to the risks associated with Asbestos fibre or dust, there the need to give clear guidelines on the safe handling management and disposal of Asbestos material.

In the 1960s and 1970s, Asbestos was a material of choice in the construction industry. A number of facilities including food manufacturing industries as well as residential homes used asbestos roofing material due to its durability and fire resistance characteristics. These roofing materials have deteriorated over time requiring their replacement with more environmentally safe materials necessitating their removal and disposal. Due to the lack of appropriate and licensed disposal facilities and the increased demand for the safe disposal, NEMA as the principal environmental regulator found it prudent to inform the public and manage Asbestos material by formulating operational guidelines. This process has been through a multi-sectoral as well as interdisciplinary approach.

I recognize the effort that NEMA has put in formulating necessary regulations and guidelines to serve the interest of the citizens of Kenya to ensure better management of the environment.

Hon. Amb. Chirau Ali Mwakwere, EGH, FCILT, MP
Minister for Environment and Mineral Resources

PREFACE

This guideline is one of the tools for environmental management in Kenya under the Environmental Management and Coordination Act (EMCA), 1999 and the Environmental Management and Coordination (Waste Management) Regulations, 2006.

The guideline is aimed at a broad readership, which will include government agencies (who are responsible for decision making, formulating policies, and enforcing health and safety aspects on asbestos management in the country), manufacturers and assemblers of asbestos materials, garage operators, contractors and all institutions that have asbestos material in their premises and other interested stakeholders.

This guideline provides direction for safe management of Asbestos waste and shall be the main regulatory reference material for Asbestos waste in Kenya. The document has been designed to apply common approaches on safe handling, packaging, transportation and final disposal of asbestos waste. The guideline will be reviewed from time to time as deemed necessary.

Mr. Ali D. Mohamed, CBS
Permanent Secretary
Ministry of Environment and Mineral Resources

ACKNOWLEDGEMENT

The Asbestos Guidelines have been produced through consultative and collective efforts of NEMA and the relevant lead agencies namely; Ministry of Public Health and Sanitation, Directorate of Occupational Safety and Health Services and City Council of Nairobi.

NEMA profoundly acknowledges the noble role played by NEMA Board of Management by providing the necessary resources and conducive environment which cannot be gainsaid to have tremendously contributed to the finalization of this document.

The Authority greatly appreciates the commitment and dedication demonstrated by the Director Compliance and Enforcement and the Task Force that led to the successful completion of the Guidelines.

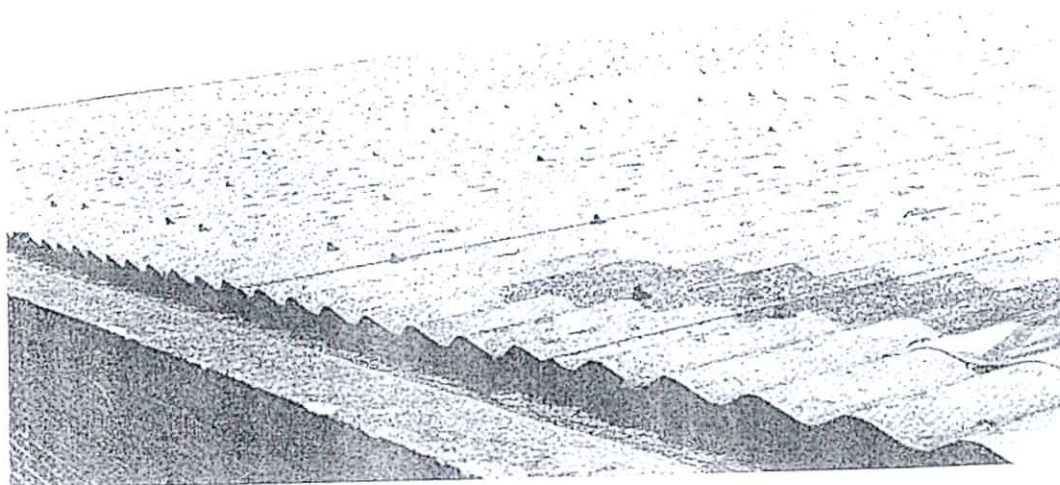
Sincere gratitude goes to the task force members; Benjamin M. Langwen (Director Compliance and Enforcement-NEMA) (Chair); Salome Machua (Deputy Director Enforcement-NEMA); Samuel Munene (Principal Compliance and Enforcement Officer-NEMA); Immaculate Simiyu (Senior Compliance & Enforcement Officer-NEMA); Oceanic Sakwa (Senior Compliance and Enforcement Officer - NEMA) Molu Huqa (Senior Process Engineer) Joel Nkako (Public health); Andrew Muruka (Directorate of Occupational Safety and Health Services); Margaret Kariuki (City Council of Nairobi) for their tireless efforts towards development of the guideline.

Special thanks goes to Gabriel Sanya (GIS-NEMA) for his editorial and layout and Felix Mugambi for Computer Graphic Design (DTP).

The contributions by the following experts that lead to the development of the guideline is highly appreciated: Dickson Njora (Principal Compliance and Enforcement Officer) Marrian Kioko (Senior Compliance and Enforcement Officer - NEMA) Selelah Okoth (Senior Compliance and Enforcement Officer - NEMA); Naomi Gitau (Senior Compliance and Enforcement Officer - NEMA); Jane Nyandika (Senior Compliance and Enforcement Officer - NEMA); Maureen Njeri (Compliance and Enforcement Officer).

Prof. Geoffrey Wahungu
Director General
National Environment Management Authority (NEMA)

CHAPTER 1



INTRODUCTION

1.1 Background Information on Asbestos

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite, actinolite, anthophyllite, chrysotile, amosite and crocidolite. The major producers of asbestos include Canada, Kazharkstan, Ukraine, Russia, India, South Africa and Zimbabwe. Asbestos used to be mined in Kenya in the past but was stopped.

Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity thus making it a commonly used insulator. It has high tensile strength, insoluble and odourless. Due to these properties, asbestos has been used in a wide range of manufactured goods, including roofing materials, ceiling and floor tiles, paper and cement products, textiles, coatings and friction products such as automobile clutch, brake, transmission parts and sewer pipes. When used due to its resistance to fire or heat, it is woven into fabrics or mats while when used for building material such as roofing sheets, it is often mixed with cement.

Asbestos is a hazardous material with extremely fine fibres and can remain suspended in air for hours. If handled without caution, it may cause serious chronic health problems such as asbestosis, lung cancer and mesothelioma. The diseases cause long term serious social, economic and emotional problems.

When left intact and undisturbed, asbestos materials do not pose a health risk. It becomes a problem when, due to damage, disturbance, or deterioration over time, the material releases fibres into the air. Exposure to air containing the fibres increases the risk of inhaling the fibres and developing the associated diseases.

There is increased removal and disposal of asbestos roofing materials due to global awareness of its negative health effects, deterioration of asbestos sheets over time and increased drive

towards roof water harvesting. The removal and disposal of asbestos has not been done in accordance with any guideline. In order to increase awareness and to reduce or eliminate the risk of exposure to asbestos fibres and thus the risk of disease, a consistent approach to management of asbestos especially handling, demolitions, renovations and repairs is therefore required.

The Authority in consultation with relevant lead agencies namely the Ministry of Public Health and Sanitation (MoPHS), Directorate of Occupational Safety and Health Services (DOSHS) and City Council of Nairobi (CCN) developed these guidelines.

1.2 Objectives

The main objective of these guidelines is to protect the environment and minimise risk to workers and public from asbestos fibers.

Specific objectives of the guidelines are;

1. To ensure environmentally sound disposal of asbestos
2. To provide assistance compliance with Environmental Management and Coordination (EMC) Waste Management Regulations, 2006
3. To ensure safe removal, handling, packaging and transportation of asbestos.
4. To create and raise awareness on hazards of asbestos.

1.3 Scope

These guidelines will apply to all persons or firms operating in facilities and premises in which asbestos materials may be handled during installation, demolition, renovation, repair or removal for disposal.

1.4 Regulatory and Institutional Framework

1.4.1 Regulatory Framework

Environmental Management and Coordination Act, 1999 section 91 (1-7)

The EMCA, 1999 requires the Authority to categorize hazardous wastes on the recommendation of Standards Enforcement and Review Committee (SERC) and to issue guidelines and regulations for the management of each category of hazardous wastes. The categorization has been done under the EMC (Waste Management) Regulations, 2006, while these guidelines provide for safe management of asbestos and its wastes.

Environmental Management and Coordination (Waste Management) Regulations, 2006.

Asbestos has been classified as hazardous waste under the Waste Management Regulations, 2006

- 1) Every person who generates toxic or hazardous waste shall treat or cause to be treated such hazardous waste using the classes of incinerators prescribed in the Third Schedule to these Regulations or any other appropriate technology approved by the Authority.
- 2) Any leachate or other by-products of such treated waste shall be disposed of or treated in accordance with the conditions laid down in the license or in

accordance with guidelines issued by the Authority in consultation with the relevant lead agency.

- 3) In issuing a licence for the disposal of waste, the Authority shall clearly indicate the disposal operation permitted and identified for the particular waste

Public Health Act Cap 242 Sections 11-13 –

An act of parliament to make provision for securing and maintaining health. Section 13 states that it shall be the duty of every health authority to take all lawful, necessary and under its circumstances reasonably practicable measures for preventing the occurrence or dealing with any outbreak, or prevalence of any infections, communicable or preventable diseases or conditions to safeguard and promote the public health and to exercise the powers and perform the duties in respect of the public health conferred or imposed on it by this act or by any other law.

The Public Health Act Cap 247, Section 3 gives provisions for use of poisonous substances. It refers to regulations for protection of persons against risk of poisoning, imposing restrictions or conditions on the importation, sale, disposal, storage, transportation or use of poisonous substances. This Act also requires persons concerned with importation, sale, disposal storage, transportation or use of poisonous substances to be registered and licensed and provides measures for detecting and investigating cases in which poisoning has occurred.

The Public Health Act Sec 126 A, empowers municipal councils, urban and area councils to make by laws for all or any of the following matters with regards to buildings for -

- controlling the construction of buildings and the materials to be used in the construction of buildings;
- Preventing the occupation of a new or altered building until a certificate of the fitness thereof for occupation or habitation has been issued by such local authority.
- To compel owners to repair order to demolish unsafe, dangerous or dilapidated buildings.

The Act further gives the municipal Urban or area councils power to require removal or alteration of work in certain cases the local authority may by notice to the owner either require him to pull down or remove the work, or if he so elects to comply with any other requirements.

The Occupational Safety and Health Act, No. 15 of 2007

The purpose of the **Occupational Safety and Health Act (OSHA)** is to provide for the safety, health and welfare of workers and all persons lawfully present at workplaces and to provide for the establishment of the National Council for Occupational Safety and Health and for connected purposes.

Though not explicitly provided, the act and the rules made there under have various sections on hazardous materials that apply to Asbestos.

The OSHA stipulates that an employer shall not require or permit his employee to engage in the manual handling or transportation of a load which by reason of its nature is likely to cause the employee to suffer bodily injury.

It also states that any person supplying, distributing, conveying or holding in chemicals or other toxic substances shall ensure that they are packaged, conveyed, handled and distributed in a safe manner so as not to cause any ill effect to any person or the immediate environment.

The Factories and Other Places of Work (Hazardous Substances) Rules, 2007

Asbestos has been listed as a hazardous substance and its threshold limit values given, therefore these rules apply to all workplaces where asbestos is present.

The Factories (Building, Operations and Work of Engineering Construction) Rules, Legal Notice No. 40 of 1984

The Factories (Building, Operations and Work of Engineering Construction) Rules, Legal Notice No 40 of 1984, rules 20 and 21 prohibit any inhalation of dust and fumes. In any building operation or work of engineering construction where dust or fumes likely to be injurious to the health of persons employed are given off, all reasonably practicable measures shall be taken to prevent the inhalation of dust or fumes by the person employed by ensuring adequate ventilation or providing suitable respirators at the place where the operation or work is carried on.

The Local Government Act, Chapter 265

Section 160 (a) of The Local Government Act, Chapter 265 empowers every municipal council, town council and every urban council to establish and maintain sanitary services for the removal and destruction of, or otherwise dealing with, all kinds of refuse and effluent and, where any such service is established, to compel the use of such service by persons to whom the service is available.

Section 201(1) – (4) expands the jurisdiction of local authority to make by-laws in respect of all such matters as are necessary or desirable for the maintenance of the health, safety and well-being of the inhabitants of its area or any part thereof and for the good rule and government of such area or any part thereof and for the prevention and suppression of nuisances. The by-laws so made may control, regulate, prevent, prohibit or compel certain activities to be undertaken and prescribe offences in case of contraventions.

1.4.2 Institutional Framework

National Environment Management Authority

The Authority is established to exercise general supervision and co-ordination over all matters relating to the environment and to be the principal instrument of Government in the implementation of all policies relating to the environment. Its mandate includes implementation of Legal Notice no. 121 on Environmental Management and Coordination (Waste Management) Regulations, 2006 which stipulates the disposal of Hazardous waste such as asbestos.

Local Authorities

The ministry of local government is charged with the responsibility of providing guidance, supervisory and monitoring services of local authorities in matters of infrastructure development and service delivery including solid waste.

Directorate of Occupational Safety and Health Services

The department is mandated to implement all rules pertaining to the protection and prevention of workers from occupational hazards and ensure safe working environment. The Directorate implements the OSHA, 2007 and various rules made there under.

Ministry of Public Health and Sanitation

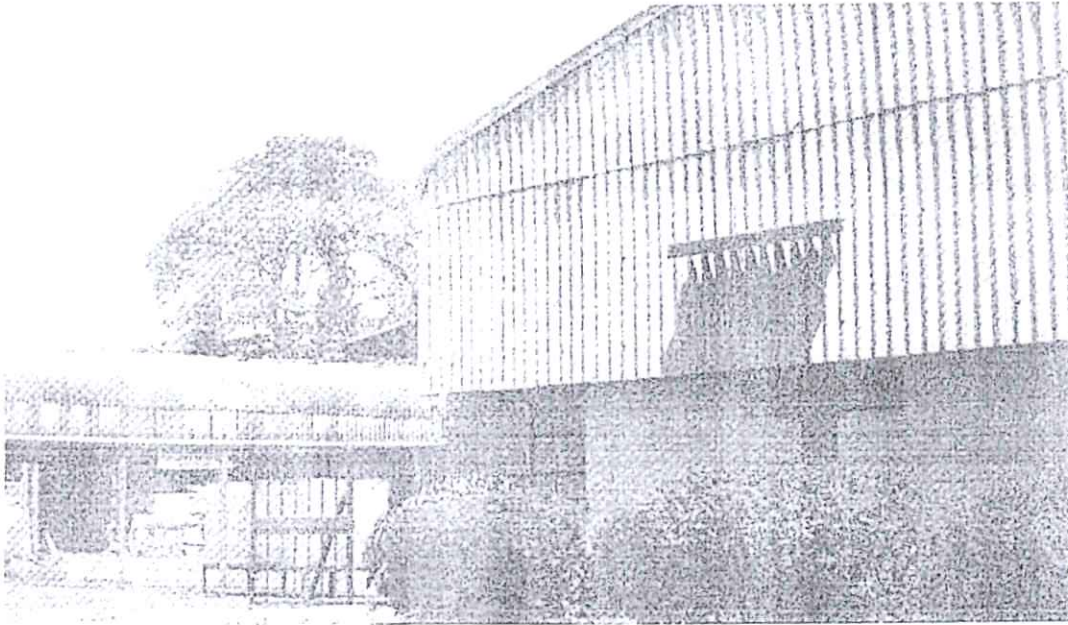
The mandate of MoPHS is to support the attainment of the health goals of the people of Kenya by implementing priority interventions in public health, guided by the strategic framework provided from the medium-term Plan 2008-2012 and the wider health sector.

The ministry is involved in prevention of communicable and non-communicable diseases, health promotions, and curative services at all levels.

The department of environmental health and sanitation aims to reduce disease burden arising from environmental pollution, by preventing disease transmission from general environmental health pollutants.

CHAPTER 2

EXPOSURE AND EFFECTS OF ASBESTOS

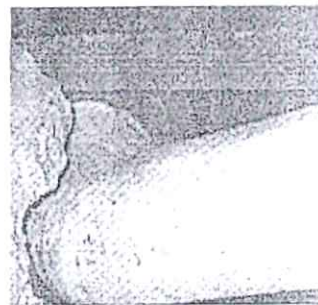


2.1 Types Of Asbestos

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite, actinolite, anthophyllite, chrysotile, amosite and crocidolite (see Annex 1).

2.2 Uses of Asbestos

Asbestos fibres are incredibly strong and have properties that make them resistant to heat. Many products are in use today that contain asbestos. Most of these materials are used in buildings as roofing, sound proofing, ceilings and tiles; as insulation materials in boilers, steam pipes, water heaters, brake linings, clutch plate, bonnet lining; and in protective gears as fire resistant blankets, jackets and gloves.



2.3 People at risk

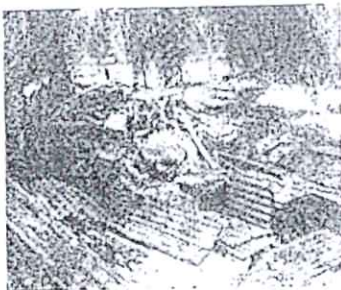
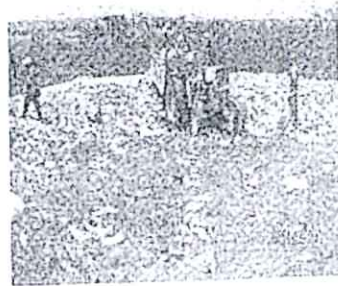
Historically, asbestos exposure has been of greatest concern to those involved in mining and milling of the raw material, people in the construction trades, and workers engaged in manufacturing or using products containing asbestos.

Secondary exposure occurs when people who do not work directly with asbestos are inadvertently exposed to fibres as a result of sharing workspaces where others handle asbestos.

In addition to people who work with asbestos either directly or indirectly, workers' families and other household contacts are also at risk from asbestos workers who go home covered in asbestos dust; family and household members are then exposed via inhalation of the dust from workers' skin, hair, and clothing, and during laundering of contaminated work clothes.

Asbestos is released into the air and soil around facilities such as refineries, power plants, factories, shipyards, steel mills, vermiculite mines, and building demolitions. People living around these sites are also exposed to asbestos.

Other groups at risk of developing an asbestos-related disease are the people who are involved in rescue, recovery, and cleanup of disaster sites where construction materials used contain asbestos.

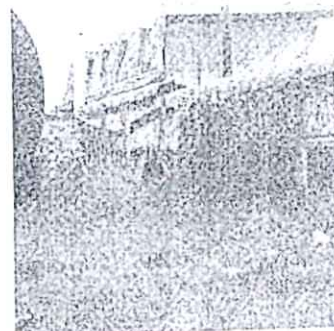


2.4 Sources of Exposure

Currently, the people most heavily exposed to asbestos are those in construction trades, and most occupational exposures occur during repair, renovation, removal or maintenance of asbestos that was installed years ago.

2.4.1 Installation and Repair

As brake pads and linings with asbestos material wear down, asbestos is exposed and fibres are released into the air. The dust can also gather on other brake parts. Mechanics often blow dust away with an air hose or by mouth, oblivious of the inherent dangers. It is impossible to tell whether or not a car has asbestos-containing brake pads merely by looking at it, mechanics should always exercise caution when working on a car's brake system by wearing a respirator or other protective mask.



Technicians involved in either installation or repair works of materials containing asbestos such as buildings and boilers should always observe the precautions.

2.4.2 Manufacturing

The ore contains only about 10% asbestos, which must be carefully separated from the rock to avoid fracturing the very thin fibres. The most common method of separation is called dry milling. In this method, the primary separation is done in a series of crushing and vacuum aspirating operations in which the asbestos fibres are literally sucked out of the ore.

Manufacturing processes involve mixing asbestos materials with cement, ceramics e.t.c. during which dust is likely to be generated. Machining and cutting activities during manufacturing will generate substantial dust that will cause exposure of asbestos dust to the workers and people nearby. In Kenyan situation, however, only machining and cutting processes take place.

2.4.3 Removal and Disposal Operations

During the removal operations there are bound to be breakages that will generate dust therefore inhalation will occur.

2.4.4 Environment

Due to the fibrous nature of the asbestos, airborne dust is likely to be present in the environment close to the premises where asbestos is handled. All people within that vicinity are likely to be exposed to the dust in the air.

2.4.5 Mining

The asbestos ore deposits are loosened from the surrounding rock by careful drilling and blasting with explosives. The resulting rocky debris is loaded into large rubber-tired haul trucks and brought out of the mine. Some operations use an excavation technique called block caving, in which a section of the ore deposit is under-cut until it crumbles under its own weight and slides down a chute into the waiting haul trucks. During the process, asbestos dust will be generated, hence exposing the workers and people nearby. However, mining is not a major source of exposure in Kenya since it was stopped.

2.5 Effects of Asbestos Exposure

2.5.1 Health Effects

Fibres embedded in lung tissue over time may cause serious lung diseases including asbestosis, lung cancer or mesothelioma. Smoking increases the risk of developing illness from asbestos exposure. Disease symptoms may take several years to develop following exposure.

The major health effects associated with asbestos exposure includes:

- **Asbestosis** -- Asbestosis is a serious, progressive, long-term non-cancer disease of the lungs. Symptoms of asbestosis include shortness of breath and a dry, crackling sound in the lungs while inhaling. There is no effective treatment for asbestosis.

- **Lung Cancer** -- People who work in the mining, milling, manufacturing of asbestos, and those who use asbestos and its products are more likely to develop lung cancer than the general population. The most common symptoms of lung cancer are coughing and a change in breathing. Other symptoms include shortness of breath, persistent chest pains, hoarseness, and anaemia.
- **Mesothelioma** --this is a rare form of cancer that is found in the lung, chest, abdomen, and heart and almost all cases are linked to exposure to asbestos. This disease may not show up until many years after asbestos exposure.

2.5.2 Socio-Economic Effects

Asbestos is considered as one of the biggest occupational health risk faced by workers, and the related diseases are reaching epidemic proportions in many parts of the world. Studies carried out in Canada, Australia and the UK indicate that death continues to be one of the worst consequences of asbestos exposure which is the most common cause of asbestos related diseases in the workplace. Death due to asbestos may be as high as 100,000, assuming that the world labor force is about 2.7 billion (Takala, 2002). Experts suggest that the number of deaths from asbestos related diseases will rise in future.

The social and emotional impacts of people affected by asbestos disease and associated issues were demonstrated by Walker and LaMontagne in 2004. Workers' and community members' knowledge and awareness about asbestos grew as a result of increased deaths, fear of living with risk of the past exposure and experience with medical professionals. Living with asbestos related disease has been identified as capable of affecting identity by the conversion from being a healthy and independent person to being physically limited and reliant on family and others, this leads to feelings of anger, frustration, fear and uncertainty (Walker and LaMontagne (2004).

The economic impacts in terms of medical costs, legal costs and scientific investigations are enormous. In short, asbestos disease is a serious public health worldwide whose impacts are only starting to emerge after 100 years of misuse and therefore deserve commensurate public health response. The primary strategy to address this problem is prevention, with worldwide elimination of asbestos use and replacement of asbestos by safe substitutes (Tushar K.J. et al., 2003).

CHAPTER 3

PRE-REMOVAL AND PRE-DISPOSAL ACTIVITIES

This chapter covers the activities to be undertaken before the removal and disposal of the asbestos.

3.1 Precautionary Measures

In view of the adverse health effects posed by exposure to asbestos fibres, the Guidelines highlights the precautions necessary to reduce or mitigate risks of exposure. It is therefore necessary that the facility owners undertake the following:

- 1) Keep an updated inventory of all asbestos containing materials in the work place;
- 2) Notify the Authority by filling in the notification form (ANNEX 2);
- 3) Ensure that all asbestos containing materials are clearly marked and visible;
- 4) Develop safe work procedures including the correct use of personal protective equipment (PPE) for workers who may work near asbestos containing materials(ANNEX 3);
- 5) Instruct all workers who would be exposed in all aspects of the asbestos management;
- 6) Prepare written work procedures specific to each job site and make them available to all workers;
- 7) Ensure that work is carried out under the supervision of experienced and qualified personnel;
- 8) Keep accurate and complete records regarding asbestos management;
- 9) Conduct a risk assessment of the potential for exposure to any of the asbestos containing materials;

3.2 Risk Assessment Requirements

A risk assessment must be conducted prior to the disturbance, repair or removal of asbestos containing materials to determine which action is to be taken. The purpose is to identify the location and gauge the condition of the material prior to the work, as well as any other potential hazards that might affect the workers.

Risk assessment report should include but not limited to:

- a) Type of asbestos present and the percentage
- b) Friability of the material
- c) Condition of the material (good, poor etc)
- d) Potential for occupant exposure
- e) Other potential hazards present (biological, chemical, electrical, confined spaces, heat, cold etc)
- f) Risk rating or classification and rationale
- g) Personal protective equipment to be used

- h) How the work area will be isolated from any occupants
- i) Person completing the risk assessment, signature, date and phone number.

The Risk Assessment should only be conducted by a qualified person such as officers serving as Safety, Health and Environment Managers, Property Managers or a consultant.

In any building which is being altered or renovated, materials that have the potential for releasing asbestos fibres can either be removed, enclosed or encapsulated which includes coating or painting.

3.3 Environmental Impact Assessment (EIA)

- a) The asbestos waste generator should ensure that a disposal site is identified and an EIA is done for removal, handling and disposal of asbestos before commencing the work process
- b) The findings of the risk assessment must be included in the EIA report submitted to the authority.
- c) The EIA shall specify safe conditions for removal, handling and disposal of asbestos
- d) A hydrogeological report must be done to inform on the best siting of the disposal site and be included in the EIA report
- e) The EIA should be carried out by experts who are registered by NEMA.
- f) The EIA report should be submitted to NEMA for processing.
- g) The removal, handling and disposal of asbestos shall not commence until an EIA licence is issued.

3.4 Notification

- When asbestos waste is to be generated or removed from a site, parties that may be affected shall be notified the time and nature of work to be done.
- The parties to be affected must be given at least seven (7) days notice of the intention to remove and dispose asbestos by the waste generator
- The staff, neighbors and any other person who might be at risk within the premises shall also be notified to prevent their exposure. (annex 2)

CHAPTER 4

HANDLING

This chapter outlines the steps necessary for the employer to ensure, as far as is practicable, the prevention of contamination by asbestos from any workplace; to ensure that asbestos-containing materials are stored, labelled and disposed of appropriately.

4.1 Removal

The waste generator shall ensure that the following precautions are observed when removing asbestos materials from buildings or other structures:

- Secure the site to prevent unauthorized persons and to restrict movement
- Wet the asbestos sheets before removal. If asbestos sheets should begin to crack or crumble, immediately wet the cracked or broken areas with the pintsize spray bottle or garden pump sprayer. **NB. Breakage releases asbestos fibres.**
- Remove pieces of asbestos sheets by pulling any fasteners (nails, screws, rivets) or cutting fastener heads so as to minimize breakage. If necessary, carefully lift asbestos sheets with pry tools to expose the fasteners' heads.
- Do not slide asbestos sheet over each other.
- Carefully lower removed asbestos sheets to the ground. **Do not throw or drop it.**
- Care should be taken not to stand or sit on the asbestos sheets to avoid breakage.
- The workers removing the asbestos must have the appropriate Personal protective equipment which must be removed as they enter the shower room immediately after removal of the asbestos.

4.2 Temporary Storage

If the asbestos must be stored before disposal they must be stored in such a way that its containers are secure from accidental or deliberate damage, access by staff and the general public.

- Temporary storage refers to the time between removal and final disposal of asbestos waste. The duration for temporary storage of asbestos waste should not exceed thirty (30) days from the time of removal.
- The temporary site should be within the premises where the asbestos are being removed.
- The removed bulky asbestos, such as roofing sheets, beams, joists, and studs, should be stacked and wrapped, into stacks which can be easily loaded into the transportation vessel, in a plastic sheet of a minimum of 500 gauge double wrapped and secured with tape and labeled
- Any debris (broken pieces) should be collected in a sealed polythene woven bag or any other air tight container. The bags should then be wrapped, into stacks which can be easily loaded into the transportation vessel, in a polythene sheet awaiting final disposal.

- The bags should be considered full when half full and should be tightly sealed or when filled up to a level where the open neck can be twisted tightly, folded over into a "gooseneck," and the ends sealed to the side of the bag with heavy plastic tape such as duct tape.
- Care should be taken to ensure that sharp pieces do not puncher the bags/ wrappers
- Removed asbestos sheets should not be allowed to lie about the site where they may be further broken or crashed by machinery or site traffic.
- The storage area must have restricted entrance and locked or secured on a 24 hour basis.
- Warning label ("Asbestos hazard area, keep out") and danger sign should be affixed to each wrapped stack or storage area using English, Swahili and Local language.

4.3 Handling of Asbestos materials in garages

This section applies to activities involving relining of brake and clutch assemblies, motor vehicle repair and maintenance and commercial garages and service stations.

1. Wherever possible, brake and clutch parts that do not contain asbestos fibre should be used.
2. Where products containing asbestos are being handled, the number of people in the area should be kept to the lowest possible figure.
3. Workshops should be isolated from other occupied parts of the building or areas that the public have access to.
4. Under no circumstances should compressed air or drybrushing be used for cleaning purposes.

4.3.1 Servicing of brakes and clutches in garages or workshops

Airborne asbestos fibre is most likely to be produced when parts are worked on by cutting or machining. The dust that accumulates during usage also contains asbestos and handling or cleaning such parts will produce airborne asbestos fibre.

1. If the brake or clutch parts are to be sent out for specialist servicing, they should be sealed in a bag to prevent the release of asbestos fibres.
2. When products are machined, the employer should ensure that the release of dust into the work environment is reduced to the lowest practicable level.
3. An effective dust-extraction system with appropriate treatment to prevent air pollution must be fitted to all equipment that is used to cut, grind or otherwise machine the asbestos materials.
4. Mechanics should always exercise caution when working on a car's brake system by wearing a respirator or other protective mask.
5. Provide air tight containers for storage of the removed parts awaiting disposal.
6. All the waste containing asbestos generated should be disposed of as stipulated in these guidelines.

CHAPTER 5

TRANSPORTATION AND DISPOSAL

This chapter deals with preparation for transportation, transportation and the actual disposal of Asbestos waste.

5.1 Preparation for Transportation

Material containing asbestos or contaminated with asbestos must be viewed as hazardous and packaged to keep fibres from getting into the air. Containers used for packaging may be hard or flexible and must seal airtight. The following are some of the precautions that should be observed in the packaging.

- a) The waste transporting vessel must be lined with a 500 gauge double wrapped plastic sheet with every seam sealed with a tape and covered.
- b) The transportation vessel should be labeled "**Danger - Contains Asbestos Fibres. Cancers and Lung Disease Hazard**" and contain the following information: (i) the identity of the hazardous waste. (ii) the name, physical address and telephone contact of the generator of waste
- c) The bags and stacks should be gently loaded into transportation vessel.
- d) The goosenecks should not be used as handles for carrying the bags, because that might unseal the ends or tear the bags. Tossing the bags into a waste transporting vessel must be avoided because of the risk of rupture.
- e) The asbestos waste should be transported to a prepared disposal site that is authorized by NEMA.

5.2 Transportation

- a) The vehicle transporting the asbestos waste should be licensed as per the EMC (Waste Management) Regulations 2006 and must be accompanied by a tracking document (Annex 4)
- b) The waste shall be transported to the disposal site in an enclosed vehicle or container, capable of being washed without lodgment of debris and fibres, and secure from escape of fibres to the atmosphere.
- c) The contractor should ensure that all persons involved in handling and disposal of asbestos are trained in emergency operating procedures. These procedures shall include how the waste is to be handled, services to be contacted during such an exposure, and additional personal protective equipments. (Annex 5)

5.3 Disposal Site

Disposal of asbestos must be at a site;

- Designated by the local authorities and licenced by NEMA;
- Privately owned disposal facility licenced by NEMA;
- Designated by the waste generator (on-site disposal).

Where a designated site by the local authorities or privately owned facility does not exist the waste generator shall identify an appropriate site, undertake an EIA and be duly licensed.

The Disposal site should be as per specifications in the EIA report. However the following minimum conditions must be observed:

- i. The optimal distance of the disposal pit shall be as far as practicable from the nearest human settlement and as it shall be determined by the Ministry of Public Health and Sanitation.
- ii. A lined pit that does not reach the water table or according to other standards that may be approved by NEMA.
- iii. Disposed material to be one metre below ground level.
- iv. Disposal site should be fenced off appropriately and the gate locked.

5.4 Disposal Operation

The waste generator shall ensure that the following precautions are observed when disposing asbestos wastes:

- i. The waste generator shall notify the Authority on commencement of disposal activities. (Annex 3)
- ii. Asbestos materials **must not** be reused or offered for sale.
- iii. All asbestos sheets and the debris should be wrapped before it is hauled to the disposal site or transfer station in a covered vehicle.
- iv. Asbestos waste must be disposed of at approved disposal sites only.
- v. The depth of the disposal pit shall be as deep as practically possible to accommodate more asbestos waste but at least one (1) metre above water table.
- vi. The asbestos should be lowered gently into the disposal site and should not be dropped from any height to avoid breakage.
- vii. When all available asbestos has been lowered into the pit, cover with polythene paper followed by 6 inch layer of soil. Continue doing this until the pit is full or the waste is finished.
- viii. The pit shall be considered full when the asbestos waste is one meter below the ground level or the asbestos waste is exhausted.
- ix. After the pit is full, cover with 500 gauges double wrapped polythene sheet and fill the pit with layer of soil up to the ground level.
- x. Disposal site should be completely fenced off with at least chain link and a lockable gate which shall be locked at all times. The fence should be at least one (1) metre from the edge of the pit.
- xi. Warning notices stating "**Asbestos hazard area, keep out**" shall be placed at the disposal site. These signs, with lettering of minimum 150mm in height, are to be placed so that they are clearly visible.

5.5 Post - Disposal

1. All transportation vessels, re-useable containers or any other similar article which have been in contact with asbestos waste shall be cleaned at the disposal site.
2. The disposal site should be maintained including the warning signs, the fence, the gate among others to prevent vandalism and interference.

3. Human activities which might interfere with the buried asbestos waste such as construction and pitting should not be allowed at the disposal site.
4. The waste generator shall notify the Authority in writing on completion of disposal of asbestos waste.



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ANNEX I

Types of Asbestos

Asbestos is a group of six fibrous minerals that occur naturally in metamorphic deposits located around the world. Of the hydrous magnesium silicate variety, the six types include tremolite asbestos, actinolite asbestos, anthophyllite asbestos, chrysotile asbestos, amosite asbestos and crocidolite asbestos. Asbestos is a chemically inert mineral that is fire resistant and does not conduct heat or electricity (making it a commonly used insulator), is insoluble and is without odor. Asbestos' combination of properties made it a valuable resource, regularly used in buildings, automobiles, shipyards and a variety of household products.

Tremolite Asbestos



Plate 1: Tremolite

Tremolite asbestos was not often used industrially or commercially; though it could be found (uncommonly) in products such as certain talcum powders in limited amounts.

Actinolite Asbestos

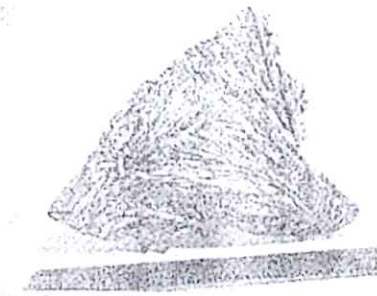


Plate 2: Actinolite

Actinolite asbestos was not often used industrially or commercially. Airborne actinolite fibres are easily inhaled and severely damaging to the lungs.

Anthophyllite Asbestos



Plate 3: Anthophyllite

Like tremolite and actinolite, anthophyllite was not often used industrially or commercially; though it could occasionally be found in certain vermiculites.

Chrysotile Asbestos



Plate 4: Chrysotile

Also called white asbestos, chrysotile asbestos is unique in that it has a serpentine fiber-formation (curled fibres) compared to the amphibole fiber-formation (straight, needle-like fibres) of the other five asbestos types. Chrysotile asbestos is less friable (less-likely to be inhaled) than other types of asbestos. Chrysotile asbestos is less likely to be

inhaled and therefore viewed by many to be the safest of the asbestos types.

Amosite Asbestos

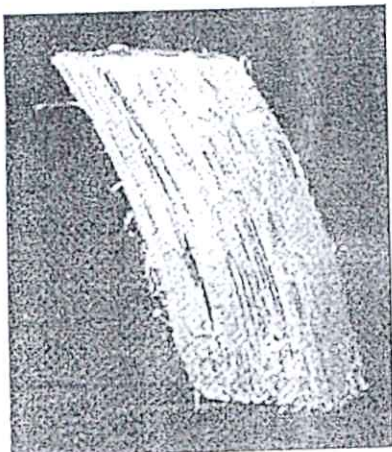


Plate 5: Amosite

Also called Grunerite or brown asbestos, amosite asbestos is an amphibole originating in Africa. Amosite was used industrially for various purposes such as cement sheet and pipe insulation.



Plate 6: Crocidolite

Also called blue asbestos, crocidolite asbestos is an amphibole mineral that can be found in Africa and Australia. On the opposite end of the spectrum than chrysotile asbestos, crocidolite is viewed to be the most dangerous type of asbestos.

Crocidolite Asbestos

ANNEX 2

ASBESTOS MATERIALS NOTIFICATION FORM

ASBESTOS MATERIALS NOTIFICATION FORM

(To be filled in triplicate)

1. GENERAL INFORMATION

a) Name of the Person/Organization

b) Contact Person

c) Postal Address

d) Physical Address

e) Telephone contact (Landline and Mobile)

f) Email address

g) ID Number

h) PIN NO.

2: PARTICULARS OF ASBESTOS MATERIAL/WASTE

a) Present use of asbestos (roofing, boilers, brake pads etc)

b) Quantity of asbestos in possession (Kg./number)

c) Status of the asbestos (friable, intact, broken, removed and how it is stored)

d) Quantity intended for disposal (Kg./ number)

d) Site Location (*Latitude and Longitude should be given to five decimal places*)

GPS Coordinates – Geographic WGS84, Latitude _____ Longitude _____

LR No. _____

e) Village/Town _____

f) Sub Location _____

g) Location _____

h) Division _____

i) District/County _____

Signature _____

Date _____

Official Stamp

ANNEX 3

PERSONAL PROTECTIVE EQUIPMENTS

Personal Protective Equipment (PPE) refers to clothing and respiratory apparatus designed to shield or protect individuals from chemical, physical or biological hazards. PPE assists in providing preventive measures when used correctly. All PPE must be suitable for the person using it and provide effective protection for its intended purpose

The following are some of the protective equipment that can be used:

- Respirators - half-face, dual-cartridge respirators, each equipped with a pair of High Efficiency Particulate Air filters (HEPA).
- Coveralls – should be with built-in booties and disposed off properly in sealed asbestos disposal bags after use.
- Rubber boots - These are highly recommended so that coverall booties do not wear through. Rubber boots can be washed off later or disposed of as contaminate debris.
- Eye protection - Each person removing asbestos materials should wear non-fogging goggles or safety glasses.

should be worn with each re-entry.

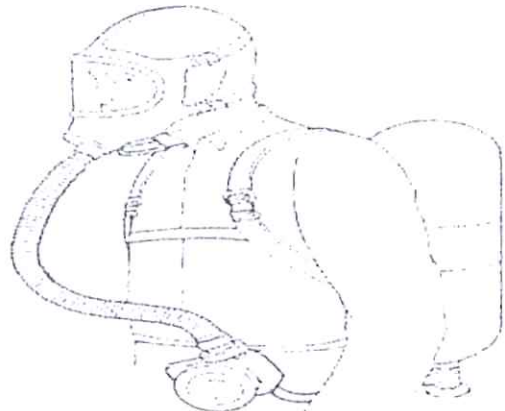


A dust-mask respirator

A half-face cartridge respirator



A self-contained breathing apparatus (SCBA)



Coveralls



ANNEX 4

TRACKING DOCUMENT

FORM III
 (To be completed in Five Copies)
 TRACKING DOCUMENT
 (Regulation 8)

| | |
|---|---|
| <p>A Transporter</p> | <p>Serial No. Registered Name of Transporter..... Usual Municipality/District of operation..... License number..... Issuing Authority.....</p> |
| <p>CONSIGNMENT NOTE FOR THE CARRIAGE AND DISPOSAL OF SOLID WASTE</p> | |
| <p>B Description of the waste</p> | <p>Area collected/facility/ person..... Type of Waste..... Description and physical nature of waste..... Quantity/size of waste..... Number of containers.....</p> |
| <p>C Disposer's Certificate</p> | <p>I certify that I have received the waste as described in A and B above.. The waste was delivered in vehicle _____ (Registration No.) at _____ (time) on _____ (date) and the carrier gave his/her name as _____ on behalf of _____. The waste shall be disposed off as per disposal licence issued by the Authority. Signed: _____ Name: _____ Position: _____ Date: _____ On behalf of: _____</p> |

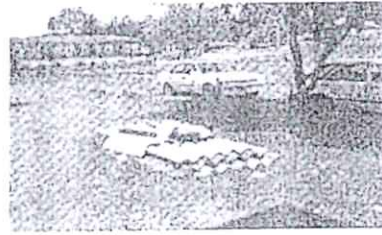
ANNEX 5

EMERGENCY OPERATING PROCEDURES FOR ASBESTOS -INCIDENTS

- The contactor must have written emergency procedures with details on the collection and handling of contaminated materials in such a situation.
- Contractors must give clear instructions, provisions and the means to adequately decontaminate or clean up themselves and the injured workers(s) before leaving the work site.
- Injured workers who have not been decontaminated must be covered in such away as to minimize contamination of clean areas.
- The cover should not hinder access to the worker(s) by first aid or ambulance personnel
- An employee familiar with the handling and disposal of asbestos contaminated clothing should accompany the injured worker(s) to the hospital. In case the worker is still contaminated upon arrival at the hospital, the employee must inform the hospital staff of this and instruct them on appropriate disposal of contaminated clothing.

Emergency Operating Procedures during Transportation

- Notify the police, fire brigade and NEMA immediately.
- Erect warning signs to road users
- Keep the public away from the area
- Secure the area





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14th February 2024

Ref: NEMA/21/18/VOL.I

Hon. Alice Wahome, EGH
Cabinet Secretary,
Ministry of Lands, Public Works, Housing and Urban Development,
P.O. Box 30119 - 00100,
NAIROBI.

Dear *Wahome,*

REMOVAL OF ASBESTOS ROOFING IN GOVERNMENT AGENCIES (OFFICES, HOUSES AND LEARNING INSTITUTIONS) PREMISES

The National Environment Management Authority (NEMA) is established under the Environmental management and coordination act (EMCA), 1999 to exercise general supervision and co-ordination over all matters relating to the environment is the principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities including those being carried out by relevant lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are adhered to.

The Authority has noted with Concern the presence of asbestos roofing in some of the institutions under your Ministry. According to the Environmental Management and Coordination (Waste Management) Regulations, 2006, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and possibly carcinogenic. Due to the risks associated with Asbestos fiber or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

The Authority wishes to draw your attention to the Constitution of Kenya 2010 which lists Environment as a right and fundamental freedom (Article 42) and provides that "Every person has a right to a clean and a healthy environment". In addition, article 62 (2) states that "Every person has a duty to cooperate with state organs and other

persons to protect and conserve the environment and ensure ecologically sustainable development and use of Natural resources".

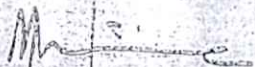
In view of the foregoing, the Authority advises that Government Institutions take lead in replacing any existing asbestos roofing with modern roofing materials in full compliance with the provisions of EMCA and its attendant Regulations by 31st December 2024.

NEMA will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours

Sincerely


MAMO B. MAMO, EBS
DIRECTOR GENERAL.

Copied to: Hon. Soipan Tuya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry

Mr. Charles Hinga
Principal Secretary
State Department of Housing and Urban Development,

Eng. Festus Ng'eno
Principal Secretary
State Department of Environment & Climate Change



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14th February 2024

Hon. Aden Duale, EGH
Cabinet Secretary
Ministry of Defence
Ulinzi House
P O Box 40668 -- 00100
NAIROBI

Thro"

Hon. Patrick Marim, CBS
Principal Secretary
Ministry of Defence
Ulinzi House
P O Box 40668 - 00100
NAIROBI

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MIAMO B. MIAMO, EBS
DIRECTOR GENERAL

Copied to: Hon. Solpan Tuya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry





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14th February 2024

Hon. Prof. Kithure Kindiki, EGH
Cabinet Secretary,
Ministry of Interior and National Administration,
P.O. Box 30510 - 00100,
NAIROBI.

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In view of the foregoing, the Authority advises that Government Institutions take lead in replacing any existing asbestos roofing with modern roofing materials in full compliance with the provisions of EMCA and its attendant Regulations by 31st December 2024.

NEMA will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours

Sincerely,



MAMO B. MAMO, EBS
DIRECTOR GENERAL

Copied to: Hon. Soipan Tuya, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry

Dr. Raymond Omollo, CBS
Principal Secretary
Ministry of Interior and National Administration,

Eng. Festus Ng'eno
Principal Secretary
State Department of Environment & Climate Change



nema
nema.go.ke | 020-2101370 | 020-2183718

NATIONAL ENVIRONMENT MANAGEMENT AUTHORITY

Telkom Wireless: 020-2101370, 020-2183718
Mobile Lines: 0724 253 398, 0723 363 010, 0735 013 046
Incident Lines: 0786 101 100, 0741 101 100

P.O. Box 67839, 00200
Pogo Road, Nairobi, Kenya
E-mail: dghema@nema.go.ke
Website: www.nema.go.ke

14th February 2024

Ref: NEMA/21/18/VOL.I

Hon. Dr. Ezekiel Machogu, EGH
Cabinet Secretary,
Ministry of Education,
P.O. Box 30400 - 00100,
NAIROBI.

Dear *Waziri*,

REMOVAL OF ASBESTOS ROOFING IN GOVERNMENT AGENCIES (OFFICES, HOUSES AND LEARNING INSTITUTIONS) PREMISES

The National Environment Management Authority (NEMA) is established under the Environmental management and coordination act (EMCA), 1999 to exercise general supervision and co-ordination over all matters relating to the environment is the principal instrument of Government in the implementation of all policies relating to the environment. It is further mandated to monitor and assess activities including those being carried out by relevant lead agencies in order to ensure that the environment is not degraded by such activities and to ensure environmental management objectives are adhered to.

The Authority has noted with Concern the presence of asbestos roofing in some of the Institutions under your Ministry. According to the Environmental Management and Coordination (Waste Management) Regulations, 2006, wastes containing asbestos in the form of dust or fibres are classified as hazardous wastes and possibly carcinogenic. Due to the risks associated with Asbestos fiber or dust, it requires special handling and disposal as approved by NEMA. There is need to safeguard human health and environment from adverse impacts related to asbestos materials.

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In view of the foregoing, the Authority advises that Government Institutions take lead in replacing any existing asbestos roofing with modern roofing materials in full compliance with the provisions of EMCA and its attendant Regulations by 31st December 2024.

NEMA will provide appropriate guidelines in the removal of the said asbestos.

Your prompt action on this matter is highly appreciated.

Yours

Sincerely,


MAMO B. MAMO, EBS
DIRECTOR GENERAL.

Copied to: Hon. Soipan Tuyu, EGH
Cabinet Secretary
Ministry of Environment, Climate Change & Forestry

Dr. Richard Belio Kipsang
Principal Secretary
Ministry of Education

Eng. Festus Ng'eno
Principal Secretary
State Department of Environment & Climate Change

ASBESTOS LANDFILLS IN KENYA

| NO | NAME | CONTACTS | COUNTY | TYPE OF FACILITY | DATE OF EXPIRY |
|-----|-------------------------------------|---|--------------|------------------|----------------------------------|
| 1. | SERGEANT LOGISTICS LIMITED | P.O BOX 1549-80100, MOMBASA EMAIL: info@sergentgroup.com TEL: +254 784 204 939 | MOMBASA | LANDFILL | 11 th SEPTEMBER 2024. |
| 2. | GREENROCK VENTURES | P.O. BOX 417 KALIMONI, JUJA TEL: 0722806926/ 0714835576 EMAIL: info@greenrockventures.co.ke., thukukahenya@gmail.com | KIAMBU | LANDFILL | 31 st JANUARY 2025. |
| 3. | JOSAMI SMARTWASTE MANAGEMENT | P.O BOX 5963-80200, MALINDI TEL: +254702291540/ 0202440757 EMAIL: smjosami@gmail.com | KILIFI | LANDFILL | 1 st APRIL 2025. |
| 4. | TAI LIFESTYLE LIMITED | P.O BOX 16620-80108, KILIFI TEL: +254 798777666 EMAIL: info@talifestyle.co.ke | TAITA TAVETA | LANDFILL | 5 th MAY 2025. |
| 5. | QUALITY INSPECTION SERVICES LIMITED | P.O.BOX 87222-80100, KILIFI qualityinspectionltd@gmail.com | KILIFI | LANDFILL | 21 st JANUARY 2025. |
| 6. | KILINDINI WASTE HUB LTD | P.O BOX 99744-80107, MOMBASA pwaniwastehub001@gmail.com | KILIFI | LANDFILL | 21 st JANUARY 2025. |
| 8. | JARIBUNI QUARRY LIMITED | P.O BOX 3340-80100, MOMBASA sphiqld@yahoo.com | MOMBASA | LANDFILL | 12 th JULY 2024. |
| 9. | SAIMBOT SHIP'S CONTRACTORS LIMITED | P.O BOX 40461-80100 MOMBASA TEL 0722388954 EMAIL saimbobot@yahoo.com | MOMBASA | LANDFILL | 14 th AUGUST 2024. |
| 10. | MARINE WASTE COLLECTION DEALERS | P.O BOX 1088 - 80100 TEL: 0721642850 EMAIL: info@marinewaste.co.ke/ keymoneyy2011@gmail.com | KILIFI | LANDFILL | 16 th SEPTEMBER 2024. |
| 11. | JALI ECOSYSTEMS LIMITED | P.O BOX 46624-00100, NAIROBI. TEL: 0720751136 EMAIL: info@jaliecosystems.co.ke | MURANG'A | LANDFILL | 17 th SEPTEMBER 2024 |
| 12. | MOREFLOW ENTERPRISES | P.O. BOX 93280 - 80102, MOMBASA Tel:0720678983 | MOMBASA | LANDFILL | 21 st SEPTEMBER 2024. |

| | | | | | |
|-----|------------------------------------|--|---------|-----------|--------------------------------|
| 13. | LEGACY LA RELIANCE (EA) LIMITED | P. O. BOX 42550-80100 MOMBASA legacylarelianceald@gmail.com | MOMBASA | LANDFILL | 9 TH JANUARY 2025. |
| 14. | STEEN AGENCIES | P. O BOX 258-00232, THIKA muyesuedgar@gmail.com | KILIFI | LANDFILL | 21 ST JANUARY 2025. |
| 15. | FADEMA CO. LIMITED | PO BOX 26501-00504, NAIROBI fadema2014@gmail.com | KILIFI | LAND FILL | 1 ST APRIL 2025. |
| 16. | TARZON ENTERPRISES | P. O. BOX 92758 - 80100, MOMBASA jose.nwendu@yahoo.com | KWALE | LAND FILL | 6 TH JUNE 2025. |

LIST OF HAZARDOUS WASTE TRANSPORTERS

| NO. | NAME OF TRANSPORTER | VEHICLE REGISTRATION | DATE OF ISSUE | EXPIRY DATE |
|-----|---|----------------------|-----------------------------|-----------------------------|
| 1. | COLNET LIMITED | KDG 166V | 16 TH MAY 2024 | 15 TH MAY 2025 |
| 2. | WAYERS ENVIRONMENTAL CONSULTANCY | KBA 551H | 9 TH APRIL 2024 | 8 TH APRIL 2025 |
| 3. | UNICARE LOGISTICS LTD | KCB 076F | 3 RD JUNE 2024 | 2 ND JUNE 2025 |
| 4. | GREENCITY INCINERATORS LTD | KCD 534Z | 23 RD MAY 2024 | 22 ND MAY 2025 |
| 5. | ENVIROSAFE LIMITED | KBB 304T | 16 TH APRIL 2024 | 15 TH APRIL 2025 |
| 6. | ECOCARE MEDICAL DISPOSAL LTD | KCP 677Q | 6 TH JUNE 2024 | 5 TH JUNE 2025 |
| 7. | DOLYDAC INVESTMENT LIMITED | KDB 194Z | 16 TH APRIL 2024 | 15 TH APRIL 2025 |
| 8. | MOREFLOW ENTERPRISES | KCB 743G | 6 TH MAY 2024 | 5 TH MAY 2025 |
| 9. | TRANBIZ ENTERPRISES LTD | KCX 254Z | 13 TH JUNE 2024 | 12 TH JUNE 2025 |
| 10 | CLEAN EDGE HYGIENE SOLUTIONS LIMITED. | KAS 820Y | 22 ND MAY 2024 | 21 ST M AY 2025 |
| 11. | ISIKISHO GARBAGE TRANSPORTERS AND CLEANING SERVICES LTD | KCX 049Y | 18 TH APRIL 2024 | 17 TH APRIL 2025 |

LIST OF ASBESTOS TRANSPORTERS

| NO. | NAME OF TRANSPORTER | RECEIVING FACILITY | VEHICLE REGISTRATION | DATE OF ISSUE | EXPIRY DATE |
|-----|----------------------|--|----------------------|---------------------------|---------------------------|
| 1. | MOREFLOW ENTERPRISES | MOREFLOW ENTERPRISES LANDFILL (ASBESTOS) | KDN 024Z | 7 TH MAY 2024 | 6 TH MAY 2025 |
| 2. | FADEMA CO LIMITED | FADEMA COMPANY LIMITED LANDFILL (ASBESTOS) | KBP 851Q | 3 RD JUNE 2024 | 2 ND JUNE 2025 |