



**DENR ADMINISTRATIVE ORDER
NO. 2022 - _____**

SUBJECT : CHEMICAL CONTROL ORDER (CCO) FOR BENZENE

Pursuant to the provisions of the Republic Act 6969 otherwise known as the “Toxic Substances and Hazardous and Nuclear Wastes Control Act of 1990”, the DENR Administrative Order (DAO) No. 29, Series of 1992 otherwise known as the “Implementing Rules and Regulations of Republic Act 6969”, the DAO No. 05, Series of 2005 entitled “Toxic Chemical Substances for Issuance of Chemical Control Orders (CCO)”, and Republic Act 8749 also known as the “Philippine Clean Air Act of 1999” which mandates the conversion of the Environmental Management Bureau (EMB) from a staff bureau to a line bureau, the following pertinent rules and regulations with procedural requirements for Chemical Control Order (CCO) for benzene and its wastes are hereby promulgated.

SECTION 1. Basic Policy. It is the policy of the State to regulate, restrict or prohibit the importation, manufacture, handling, processing, storage, sale, distribution, use, and disposal of chemical substances and mixtures that present unreasonable risk and/or injury to human health and the environment; to prohibit the entry, even in transit, of hazardous and nuclear wastes and their disposal into the Philippine territorial limits for whatever purpose; and to provide advancement and facilitate research and studies on toxic chemicals.

SECTION 2. Objectives. Pursuant to the policy statement, this Order aims to do the following:

- 2.1. Reduce the risk of exposure to human health and the environment of benzene used in industrial processes;
- 2.2. Increase awareness of the toxicity of benzene and the availability of technically superior and safe alternatives;
- 2.3. Ensure the proper implementation of the existing framework and appropriate prevention-based programs to mitigate, reduce, and eliminate risks from the use of benzene; and
- 2.4. Provide guidelines to identify potential benzene release/exposure in industrial facilities to reduce workers’ benzene exposure.

SECTION 3. Scope and Coverage.

3.1. Coverage. This Order shall cover the following:

- 3.1.1. Importers
- 3.1.2. Distributors
- 3.1.3. Manufacturers
- 3.1.4. Industrial Users
- 3.1.5. Commercial Users
- 3.1.6. Waste Service Providers (TSD Facilities and Hazardous Waste Transporters)

3.2. Exemptions. The uses of benzene and benzene-containing mixtures that are regulated by other laws shall not be covered by this Order including, but are not limited to:

- 3.2.1. Fuels, fuel additives, and petroleum products under the Oil Industry Management Bureau of the Department of Energy (OIMB-DOE)
- 3.2.2. Foodstuff, pharmaceutical drugs, cosmetics, and household/urban hazardous substances under the Food and Drug Administration of the Department of Health (FDA-DOH)
- 3.2.3. Fertilizers, pesticides, and agricultural chemicals under the Fertilizer and Pesticide Authority of the Department of Agriculture (FPA-DA)

67 3.2.4. Benzene and benzene-containing mixtures that are part of an article or as
68 naturally occurring substances, as defined in EMB Memorandum Circular
69 (MC) 2020-005¹, shall be exempted from the CCO requirements, unless
70 otherwise specified in related policies.
71

72 **SECTION 4. Definition of Terms.** As used in this Order, the following terms shall be
73 defined as:
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- 75 4.1. Applicant – the person(s) or entities engaged in importation, manufacture, use,
76 distribution, transport, recycling, and providing waste service (treatment, storage,
77 and disposal) of benzene.
78 4.2. Benzene – the aromatic hydrocarbon C₆H₆ with CAS Registry No. 71-43-2². It is
79 a stable colorless liquid at room temperature and normal atmospheric pressure. It
80 has a characteristic aromatic odor, a relatively low boiling point (80.1 °C), and a
81 high vapor pressure, which causes it to evaporate rapidly at room temperature,
82 and is highly flammable. It is slightly soluble in water but miscible with most
83 other organic solvents³.
84 4.3. Benzene-containing Mixture - refers to a mixture the benzene content of which
85 exceeds one (1) percent by volume².
86 4.4. Benzene Waste – discarded material that contains or has been contaminated with
87 benzene or benzene-containing mixtures that are without any safe commercial,
88 industrial, agricultural, or economical usage as specified under Waste Code G704
89 for waste non-halogenated organic solvents of DAO 2013-22⁴.
90 4.5. Bureau – refers to the Environmental Management Bureau of the Department of
91 Environment and Natural Resources.
92 4.6. Commercial User – any juridical entity or corporation that uses benzene or
93 benzene-containing mixtures in a commercial enterprise providing saleable goods
94 or services, including laboratory facilities⁵.
95 4.7. Distributor – any juridical entity or corporation that is engaged in the sale and
96 distribution of benzene and benzene-containing mixtures.
97 4.8. Importer – any juridical entity or corporation that undertakes the entry of benzene
98 and benzene-containing mixtures into the Philippine territory.
99 4.9. Industrial User – any juridical entity or corporation that uses and processes
100 benzene and benzene-containing mixtures at its premises for which they are
101 consumed as a reactant; incorporated into a formulation, mixture, reaction product,
102 or article; or repackaged⁵.
103 4.10. Manufacturer – any juridical entity or corporation that undertakes the manufacture
104 or production of benzene and benzene-containing mixtures for commercial
105 purposes, including the extraction of a component chemical substance from a
106 previously existing chemical substance or complex combination of chemical
107 substances⁵.
108 4.11. Treatment, Storage, and Disposal (TSD) Facility – a facility wherein hazardous
109 wastes are transported, stored, treated, recycled, reprocessed, or disposed of.
110 4.12. Storage – containment area for supply or stock reserve kept for future use/
111 safekeeping, or disposal.
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113 **SECTION 5. Allowed Use.** The following are governed by the general requirements,
114 compliance monitoring procedures, specific standards, and penalty provisions on activities that
115 involve benzene and benzene-containing mixtures:
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- 117 5.1. Manufacture/production of benzene
118 5.2. Use of benzene for chemical synthesis
119 5.3. Use of benzene in motor fuel

¹ EMB MC 2020-005 (12 February 2020): Data Requirements for Pre-Manufacture and Pre-Importation Notification (PMPIN) Procedures.

² Adapted definition from the International Labor Organization (1971). Benzene Convention (No. 136): Convention Concerning Protection Against Hazards of Poisoning Arising from Benzene.

³ Adapted definition from the World Health Organization (1993). International Program on Chemical Safety: Environmental Health Criteria No. 150 on Benzene.

⁴ DENR AO 2013-22 (04 December 2013): Revised Procedures and Standards for the Management of Hazardous Wastes (Revising DENR AO 2004-36).

⁵ Adapted definition from the US Environmental Protection Agency (2012). 40 CFR Subchapter R – Toxic Substances Control Act, Part 711 – TSCA Chemical Data Reporting Requirements.

- 120 5.4. Use of benzene and benzene-containing mixtures for analytical or research work
121 carried out in laboratories
122 5.5. Industrial and commercial use of mixtures the benzene content of which is equal
123 to or less than one (1) percent by volume
124

125 **SECTION 6. Prohibited Use.** Unless no technically and economically feasible
126 alternative for replacement is available, this Order prohibits the importation, manufacture, or use
127 of benzene and benzene-containing mixtures in the following applications:
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- 129 6.1. Paints, varnishes, coatings, solvents, and thinners
130 6.2. Glues, cement, and rubber goods
131 6.3. Solutions for textiles, fabrics, and leathers
132 6.4. Inks and dyes
133 6.5. Cleaning and degreasing agents
134

135 **SECTION 7. General Requirements and Procedures.** In addition to the general
136 requirements under Title II of DAO 1992-29, the following requirements and procedures have
137 been established for any person or entity allowed in the importation, manufacture, distribution,
138 and use of benzene and benzene-containing mixtures, as well as waste service providers of
139 benzene wastes:
140

141 7.1. **Registration and Permitting.** All applicants covered under Section 3 shall
142 accomplish the CCO Registration (CCOR) module of the Online Permitting and
143 Monitoring System (OPMS), submit the required documents, and secure the
144 corresponding Registration Certificate.
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146 7.1.1. Any person or entity that is a new applicant and/or newly involved in the
147 importation, manufacture, distribution, and use of benzene;
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149 7.1.2. Any person or entity with an existing Priority Chemical List (PCL)
150 Compliance Certificate, with PCL exemptions issued under EMB MC 2014-
151 003⁶, or users of benzene whose PCL fall under EMB MC 2017-007⁷; and
152

153 7.1.3. Any person or entity involved in the transport, recycling, treatment, storage
154 and disposal of benzene wastes must register and comply all applicable
155 provisions of RA 6969 rules and regulations on hazardous waste management.
156

157 7.2. **Importation and Permitting.** Any person or entity that imports benzene shall apply
158 for an Importation Clearance online through the Online Permitting and Monitoring
159 System (OPMS) of the Bureau. The validity of importation clearance shall be for a
160 period of six (6) months.
161

162 7.3. **Required Documents.** The application for registration and importation clearance,
163 including importation clearance renewal, must be accompanied by the following
164 documents:
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166 7.3.1. Environmental permits, including:

167 7.3.1.1. Hazardous Waste Generator (HWG) Registration Certificate

168 7.3.1.2. Valid Wastewater Discharge Permit (DP)⁸

169 7.3.1.3. Valid Permit to Operate (PTO) Air Pollution Source Equipment or
170 Installation (APSE/APSI)⁹

171 7.3.1.4. Environmental Compliance Certificate (ECC)¹⁰

172 7.3.1.5. Valid Pollution Control Officer (PCO) Accreditation¹¹

173 7.3.2. Globally Harmonized System (GHS) compliant Safety Data Sheet (SDS)

⁶ EMB MC 2014-003 (13 March 2014): Supplemental Guidelines for the DENR AO 2007-23 (Prescribing Additional Requirements for the Issuance of the Priority Chemical List (PCL) Compliance Certificate).

⁷ EMB MC 2017-007 (13 October 2017): Clarification on the Coverage of Laboratory Facilities under the Requirements of DENR AO 2007-23 (Prescribing Additional Requirements for the Issuance of Priority Chemical List (PCL) Compliance Certificate).

⁸ DENR AO 2005-10 (16 May 2005): Implementing Rules and Regulations of the Philippine Clean Water Act of 2004 (Republic Act 9275).

⁹ DENR AO 2000-81 (08 November 2000): Implementing Rules and Regulations of the Philippine Clean Air Act of 1999 (Republic Act 8749).

¹⁰ DENR AO 2003-30 (30 June 2003): Implementing Rules and Regulations for the Philippine Environmental Impact Statement (EIS) System (Presidential Decree 1586).

¹¹ DENR AO 2014-02 (03 February 2014): Revised Guidelines for Pollution Control Officer Accreditation.

- 174 7.3.3. Process flow chart specific to the use of benzene
175 7.3.4. Certificates of worker training on benzene safety
176 7.3.5. Photos of storage and/or process facility
177 7.3.6. Latest Self-Monitoring Report (SMR)¹²
178 7.3.7. For importers: Proof of import entry, e.g. Bill of Lading, BOC Single
179 Administrative Document, and/or Packing List
180 7.3.8. Proof of payment of application fee
181
182 7.4. **Chemical Management Plan.** As integrated into the CCOR module, the applicant
183 shall provide information on how benzene and benzene-containing mixtures are
184 managed in its facility to eliminate or minimize their risk to human health and the
185 environment, subject to the requirements in Sections 7.6 to 7.9. The information
186 includes:
187
188 7.4.1. General chemical exposure prevention and release control program
189 7.4.2. Housekeeping and occupational hygiene practices implemented
190 7.4.3. Equipment and devices used in handling the chemical
191 7.4.4. Personal Protective Equipment (PPE) provided to the workers
192
193 7.5. **Contingency and Emergency Plan.** As integrated into the CCOR module, the
194 applicant shall provide information on their incident response procedure in case of
195 accidents and calamities leading to benzene exposure or unintentional release e.g.,
196 chemical spill, fire, explosion, earthquake, etc. It shall follow the requirements under
197 Section 8.2.3 of DENR AO 2013-22⁴ and in conformity with the SDS (Refer to
198 Annex E, Sections 4 to 6 of EMB MC 2015-011¹²).
199
200 7.6. **Handling and Storage Requirements.** The applicant shall ensure that its facility
201 complies with the following:
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203 7.6.1. Availability and accessibility of the SDS at all times
204 7.6.2. Proper stacking/stockpiling, packaging, chemical compatibility arrangement,
205 containment, and storage conditions, including good security practices, in
206 conformity with the SDS (Refer to Annex E, Sections 7 to 8 of EMB MC
207 2015-011¹²)
208 7.6.3. Adequate engineering controls with proper signage and labeling of chemicals
209 7.6.4. Maintain an updated inventory of stored chemicals
210
211 7.7. **Labeling Requirements.** Storage containers and packaging of benzene shall be
212 properly classified and labeled following the current GHS implementation. On the
213 other hand, benzene wastes labelling shall be in accordance with current procedural
214 manual on hazardous waste management.
215
216 7.8. **Manufacturing Requirements.** The applicant shall ensure that its facility and
217 workers comply with the following:
218
219 7.8.1. Operation flow chart and process description where benzene is used. All
220 necessary measures and procedures by means of engineering controls, good
221 work practices, and industrial hygiene to reduce dispersion of benzene into the
222 environment and to minimize employee exposure to benzene.
223 7.8.2. Properly wear Personal Protective Equipment (PPE) in hazardous areas as
224 prescribed by the Occupational Health and Safety Center of the Department of
225 Labor and Employment (OSHC-DOLE).
226 7.8.3. Establish regulated areas to be classified as hazardous zones wherever an
227 employee's exposure to concentrations of benzene is high and shall ensure
228 that these areas are demarcated from the rest of the workplace, thereby
229 alerting the workers of the boundaries where PPEs should be worn.
230 7.8.4. Secure environmental permits as enumerated in Section 7.3.1.
231 7.8.5. Conduct self-monitoring of potential sources of benzene in compliance with
232 DENR-EMB standards for wastewater effluents⁸ and air emissions⁹ and report
233 them accordingly in the SMR.
234

¹² DENR AO 2003-27 (04 July 2003): Amending DAO 26, DAO 29, and DAO 2000-81 Among Others on the Preparation and Submission of Self-Monitoring Report (SMR).

235 7.9. **TSD and Hazardous Waste Transport Requirements.** All waste service providers
236 of benzene and benzene-containing shall comply with the procedural manual on
237 hazardous waste management.⁴
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239 7.10. **Training Requirements.** Basic awareness training, knowledge-sharing, and other
240 capacity-building activities shall be conducted regularly for workers involved in
241 handling benzene. They shall include discussions on the health and environmental
242 hazards of benzene, safe handling, risks in the workplace, proper disposal, incident
243 response, and other regulatory requirements.
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245 7.11. **Substitution and Phase-out Plan.** The Department, through the Bureau, may
246 develop a phase-out plan for the allowed uses of benzene, subject to consultations
247 with relevant stakeholders and government agencies.
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249 **SECTION 8. Information, Education, Communication (IEC).** The Department,
250 through the Bureau, in collaboration with the chemical industry, concerned government agencies,
251 the academe, and non-government organizations, shall promote industrial compliance and public
252 awareness of this Order's requirements and the hazards posed by using benzene in the workplace
253 and its release into the environment.
254

255 The proper handling and disposal of benzene shall be included in the IEC activities to
256 highlight such safety protocol. The use of benzene-free substances and materials shall also be
257 promoted to minimize the exposure to human health and release of benzene into the environment.
258

259 **SECTION 9. Public Access to Records and Confidential Business Information (CBI).**
260 The public shall have access to records, reports, or information obtained by the DENR upon
261 request pursuant to this Order, in accordance with Section 12 of RA 6969 except information
262 regarding trade secrets (formulations), sales figures, methods of production, or industrial
263 processes, distributions that would adversely affect the competitive position of such importers,
264 manufacturers and industrial users.
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266 Exemptions to this "no disclosure of information" shall be made subject to the conditions
267 of Section 40 of the IRR of RA 6969 or as may be amended.
268

269 **SECTION 10. Compliance Monitoring Procedure.** The EMB Regional Offices shall
270 monitor compliance based on duly accomplished and submitted Self-Monitoring Report (SMR)
271 per DAO No. 2003-27¹³ or its revision or amendment. The EMB-CO shall integrate the regional
272 monitoring report for management action. In any complaints of non-compliance, sampling and
273 testing shall be made, as necessary, using a method that conforms with international and/or
274 national standards.
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276 **SECTION 11. Devolution of CCO Applications to EMB Regional Offices.** The
277 issuance of the CCOR and CCOIC shall be devolved to the EMB Regional Offices three (3)
278 years from the effectivity of this Order.
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280 **SECTION 12. Revision of Requirements.** The Department may amend, modify, and/or
281 supplement the requirements and standards in this Order after prior consultation with the
282 stakeholders and after due notice and hearing with the public on matters to be revised. The
283 Bureau may issue clarificatory guidelines, if necessary.
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285 **SECTION 13. Capacity Building.** The EMB Central Office shall develop and conduct
286 continuing training program for both the regulated community and regulators to ensure proper
287 compliance with this Order.
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289 **SECTION 14. Liability.** The Secretary or his duly authorized representative may cause
290 the impoundment or confiscation of any chemical substance and its conveyance and container if
291 there is reasonable ground to believe that the sale, storage, possession, use, manufacture,
292 transport, or import of the chemical substance does not comply with this CCO following the
293 guidelines under EMB MC 2020-12¹³. Any importer or distributor selling to non-authorized
294 persons or end-users shall be held liable under RA 6969.
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296 Chemicals may be confiscated, and storage fees of confiscated chemicals shall be
297 charged jointly and solidarily to the importer and/or distributor and end-user. The importer and

¹³ EMB MC 2020-012 (12 March 2020): Rules on the Confiscation of Illegal Chemicals, Chemicals Substances, and Apprehension of Hazardous Waste under RA 6969.

298 distributor shall likewise be held liable together with the end-user in cases of injury or damage to
299 public health and the environment and shall properly compensate the affected parties and restore
300 the damaged area or areas resulting from any incident or accident involving the use, sale,
301 manufacture, and distribution of benzene and storage, transport, treatment, and disposal of
302 benzene wastes.

303
304 **SECTION 15. Penalty Provision.** Any violation of the requirements specified in this
305 Order shall subject the person(s) liable thereof to the applicable administrative and criminal
306 sanctions as provided for under Section 14 of RA 6969, Sections 41 and 43 of DENR AO 1992-
307 29, and DENR MC 2005-003¹⁴.

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309 **SECTION 16. Separability Clause.** If any provision of this Order shall be held invalid
310 or unconstitutional, the other portions or provisions hereof which are not affected shall continue
311 in full force and effect.

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313 **SECTION 17. Repealing Clause.** All Orders and other similar issuances inconsistent
314 herewith are hereby revoked, amended, or modified accordingly.

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316 **SECTION 18. Effectivity.** This Order shall take effect fifteen (15) days after its
317 publication in a newspaper of general circulation and upon acknowledgment of the receipt of the
318 copy thereof by the Office of the National Administrative Register (ONAR).

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322 **MA. ANTONIA YULO-LOYZAG**
323 Secretary

¹⁴ DENR MC 2005-003 (21 April 2005): Prescribing Graduated Administrative Fines Pursuant to Republic Act No. 6969 and DENR Administrative Order No. 29, Series of 1992.