



**US Agency for International Development (USAID)  
Ukraine  
Environmental Review Checklist (ERC) and  
Environmental Mitigation and Monitoring Plan (EMMP)**

### 1. Activity and Site Information

|                                       |  |
|---------------------------------------|--|
| Project Name: (as stated in the IEE): | Health Reform Support (HRS)  |
| Mission/Country:                      | Ukraine  |
| DCN of Original IEE:                  | 2017-UKR-020   |
| DCNs of IEE Amendments                | 2018-UKR-006<br>2019-UKR-022<br>2021-UKR-004<br>2017-UKR-020-001<br>2017-UKR-020-002   |
| Activity/Site/Grantee Name:           | Permanent Electrical Power Generator for Chernihiv Oblast Children's Hospital  |
| Activity Authorization from IEE:      | <b>Objective 4:</b> Enhancing transparency, accountability, and responsiveness of the health care system.<br><br><b>Sub Activity:</b> Procurement of technical equipment to provide uninterrupted power supply to the national health system in case of unexpected power cut-offs. |
| Type of Activity:                     | Generator Purchases and Generator Installations  |
| Implementing Partner:                 | Deloitte Consulting LLP  |
| Name and Organization of Preparer:    | Shirley Albritton, PE; Deloitte Consulting LLP   |
| Date Prepared:                        | August 20, 2024  |

The ERC/EMMP is intended for use by implementing partners to:

- assess activity-specific baseline conditions, including applicable environmental requirements;
- identify potential adverse environmental effects associated with planned activities; and
- develop EMMPs that can effectively avoid or adequately minimize the identified effects.

The IEE requirement to prepare an ERC/EMMP may be fulfilled by substituting a Simplified Environmental Review Form (SERF) for the ERC/EMMP, provided that the proposed activity meets all of the Restrictive Conditions in the SERF.

If implementing partners are in doubt about whether a planned activity requires preparation of an ERC, they should contact their Contracting Officer's Representative (COR)/Agreement Officer's Representative (AOR) for clarification. In turn, the COR/AOR should contact their Mission Environmental Officer (MEO) if they have any questions. In special circumstances and with approval of the BEO it is possible to have one very comprehensive ERC/EMMP for multiple sub-activities if they are similar in scope. *(When preparing the ERC/EMMP, please indicate "not applicable" for items that have no bearing on the activity.)* **The ERC/EMMP must be completed and approved prior to the activity beginning.**

### 2. Activity Description

#### 2.1. Activity purpose

- *USAID Health Reform Support (HRS) project supports a transparent, accountable, and effective health care system that is capable of meeting the health needs of the Ukrainian people. HRS aims to provide technical support and oversight for a construction subcontract that will provide backup power supply to the grantee, the Chernihiv Children's Hospital.*
- *Since the Chernihiv Children's Hospital already has a generator on site, USAID HRS will procure any related installation and construction services to provide backup power supply to the facility. The generator will power two Autoclaves (16kW), one Distiller (18 kW), and service the Sterilization Room.*

2.2. Direct Beneficiaries, e.g., size of community, number of school children, etc.

- *The Chernihiv Oblast Children's Hospital employs 628 people, including 113 doctors, 3 candidates of medical sciences, and 263 junior specialists with a medical education background. The direct beneficiaries are the staff that will be utilizing the sterilization room, autoclaves, and distiller when emergency power is needed.*
- *The indirect beneficiaries of the Chernihiv Oblast Children's Hospital would be the 150,000 patients that are associated with the overall services of the HCF.*

2.3. Number of existing employees and annual revenue, if this is a business

- *N/A, Chernihiv Oblast Children's Hospital is a public health care facility.*

2.4. Implementation timeframe and schedule

- *Generator installation services are estimated to begin in October 2024 and are estimated to be completed by March 2025.*

2.5. Detailed description of activity

- *The Caterpillar DE88E0 64 kW diesel generator (currently onsite) will be installed at the Chernihiv Oblast Children's Hospital. The generator will provide emergency power two Autoclaves (16kW), one Distiller (18 kW), and service the Sterilization Room.*
- *Associated infrastructure including a new concrete containment pit, cabling, and connection to the existing building structure will be installed.*
- *HRS will follow a design-bid-build procurement process and will notify USAID when a construction subcontractor is selected prior to award.*

2.5.1. Steps that will be taken to accomplish the activity, including mobilization, site preparation, site restoration, and demobilization, if applicable;

- *Inspection of the generator (on site) to confirm functioning condition;*
- *Construction of a temporary site perimeter fence and signage for safety measures;*
- *Site clearing including demolition of the existing exterior concrete infrastructure;*
- *Construction of a concrete containment pit for one diesel generator;*
- *Install above ground cable pathways from generator connection point to the electrical panels for the autoclaves, distiller, and sterilization room;*
- *Rough-in and final connection of the power and control cables;*
- *Commission the installed generator;*
- *Provide training to the hospital staff on the operation of the generator;*
- *Landscaping, as necessary to return the site to its original condition;*
- *Demobilization of the site to include removal of all materials and equipment that are not necessary for the operation of the generator; and*
- *Final handover including operating and maintenance (O&M) information.*

2.5.2. Items that will be purchased (This section should fully describe any items, materials, or supplies that will be purchased.)

| Item Description  | Quantity            |
|---|---------------------|
| 4x25 mm <sup>2</sup> cable  | 73 m                |
| Power connector, 125A, 5 poles IP67   | 1                   |
| Metal sleeve  | 70                  |
| BM-50 box   | 1                   |
| Concrete (mixture of cement (M500) and granite sifting fraction 0-5 mm)   | 1.77 m <sup>3</sup> |
| Caterpillar DE88E0 (length 2.30 m, height 1.52 m, depth 1.13 m) – 64 kW diesel generator with an integral 57.9 gallon (219 liter) fuel tank base (already procured and on site) | 1                   |
| Copper grounding rod, 12 m  | 1                   |
| Copper tip, dia. 25 mm  | 32                  |
| Copper tip, 6 mm  | 2                   |
| Grounding strip, 40x4 mm  | 6                   |
| Grounding clamp, 25-40 mm   | 8                   |
| Non-woven thermally bonded geotextile   | 29 m <sup>2</sup>   |
| Crushed stone 5-20 mm   | 1.45 m <sup>3</sup> |
| Crushed stone 20-40 mm  | 2.9 m <sup>3</sup>  |
| Medium-grained compacted sand   | 0.73 m <sup>3</sup> |
| Anti-corrosion tape   | 1                   |

2.5.3. What entity will be responsible for the maintenance or sustainability of the activity after completion or handover?

- *Chernihiv Oblast Children's Hospital will use Compressors International LLC to maintain and service the generator.*

2.6. Location of activity, e.g. name of village or town, street address, province

- *16 Pyrohova St, Chernihiv, Chernihiv Oblast*

2.7. Detailed description of site

2.7.1. Existing setting, e.g., urban, village, agricultural, or undisturbed land

- *Urban*

2.7.2. Size of the facility or hectares of land

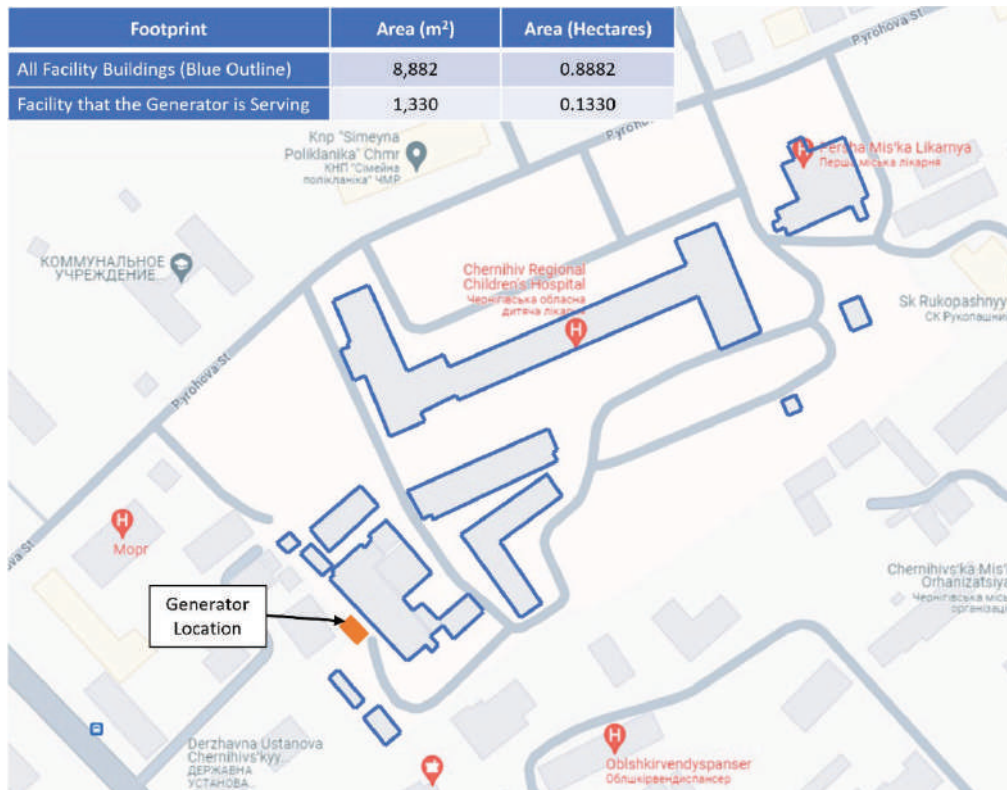
- *Using Google Maps' measuring tool, the facility footprint was measured at 0.8882 hectares.*

Site map, e.g., provide an image from Google Earth (or similar) of the project site (include latitude and longitude coordinates).

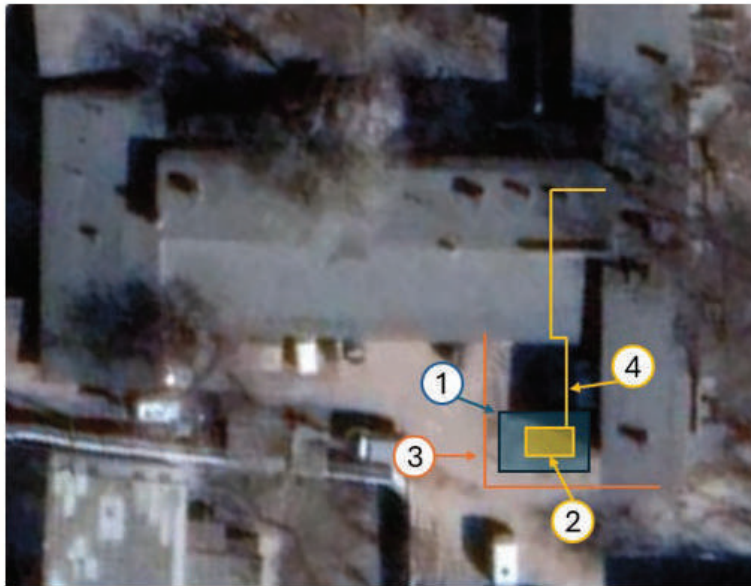
2.8. Photos of site, items to be purchased, engineering construction plans (*when available*)



Photos of current onsite storage of the generator (located in the area where it will be installed).  
The generator has an integral fuel tank.



**Latitude: 51° 29' 48.1" N**  
**Longitude: 31° 16' 49.3" E**



| Item # | Description                               |
|--------|---|
| 1      | Foundation                                |
| 2      | Caterpillar DE88E0 64 kW diesel generator |
| 3      | Construction Safety Fence                 |
| 4      | Electrical Cables                         |

*Generator, concrete containment pit, and associated infrastructure site layout.*

### 3. Activity-Specific Baseline Environmental Conditions

#### 3.1. Population characteristics

- *Chernihiv's total population is around 300,000.*

#### 3.2. Geography

- *Chernihiv is located northeast of Kyiv and is surrounded by the Dnieper River.*
- *In Chernihiv, the climate is characterized by distinct seasons with moderately warm summers and cold, lengthy winters. During the summer months, the weather is generally mild and partially cloudy, while the winters are characterized by considerable snowfall, strong winds, and predominantly cloudy skies. Per page 44 in the design documentation, temperatures in Chernihiv typically range from about -6.2°C to 27.3°C.*

#### 3.3. Natural resources, e.g., nearby forest/protected areas, ground and surface water resources

- *Chernihiv is an urban city surrounded by the Dnieper River.*
- *The Chernihiv Children's Hospital is located approximately 3 miles from the Desna River and just 1.5 miles from the city's Mena River. These nearby water bodies could potentially be impacted by the 64 kW generator in the event of a hazardous material spill, such as diesel, posing environmental risks and affecting the local ecosystem.*
- *The Chernihiv Children's Hospital is situated close to several parks and outdoor areas where people can gather, including:*
  - *Yuri Gagarin Park, located approximately 0.5 miles away from the HCF.*
  - *Victory Park, located approximately 1 mile from the HCF.*
  - *Shevchenko Park, located approximately 2 miles from the HCF.*

## 3.4. Current land use and owner of land

- *Land on which Chernihiv Children's Hospital is located is fully owned by the municipality.*

## 3.5. Other relevant description of current environmental conditions in proximity to the activity

- *As stated on Page 13 in the design documentation, the site is not adjacent to any protected area or other cultural or historic site as listed in State Register of Immovable Monuments of Ukraine.*

## 4. Legal, Regulatory, and Permitting Requirements

## 4.1. Does this activity require an EIA under a national law?

- *Yes, an Environmental Impact Assessment is required and was included in the design documentation provided by the designer of record for the Chernihiv Children's Hospital generator installation.*

## 4.2. Applicable National or local permits for this activity, responsible party, and schedule for obtaining them:

| Permit Type                      | Responsible party                               | Schedule   |
|----------------------------------|---|------------|
| <i>Zoning</i>                    | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |
| <i>Construction Notification</i> | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |
| <i>Waste Disposal</i>            | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |
| <i>Wastewater</i>                | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |
| <i>Storm Water Management</i>    | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |
| <i>Air Quality</i>               | <i>Chernihiv Oblast<br/>Children's Hospital</i> | <i>TBD</i> |

4.3. Will the activity be required to adhere to formal engineering designs/plans? **Yes**  
If yes, attach the designs or plans to this ERC/EMMP.

## 4.3.1. Have the designs or plans been or will they be developed by a qualified engineer?

- *Yes, the design plans were completed by a qualified engineer, FOP Yakovleva Olena Yuriivna. The design plans are attached for reference.*

## 5. Land use changes and land impacts

|   |     |
|---|-----|
| 5.1. Will the activity change the land use, e.g., undeveloped, agricultural, residential, commercial, or industrial?  | No  |
| 5.2. Will the activity require temporary or permanent property land taking?   | No  |
| 5.3. Will the activity involve site preparation, e.g., clearing and grubbing, grading?<br><i>Yes, the activity will involve site preparation because a concrete containment pit will need to be constructed to hold the generator. The location where the generator will be installed has existing concrete/asphalt pavement.</i> | Yes |

|       |  |     |
|-------|--|-----|
| 5.4.  | Will the activity involve onsite excavation or trenching?<br><i>Yes, the activity will involve excavation and trenching because a concrete containment pit will need to be constructed to hold the generator.</i>  | Yes |
| 5.5.  | Will the activity involve the use of borrow pits or quarries? If so, describe the siting, operation, and closure plans.  | No  |
| 5.6.  | Will the activity interfere with or connect to existing aboveground or below-ground utilities, e.g., electricity, communications, water, sewer, or natural gas?<br><i>Yes, the activity will connect to existing above ground electrical cables and switchboards both external and internal to the building.</i>   | Yes |
| 5.7.  | Will the activity involve installation of new aboveground or below-ground utilities, e.g., electricity, communications, water, sewer, or natural gas?<br><i>New above-ground electrical cables will be installed connecting the external generator to the Chernihiv Children's Hospital autoclaves, distiller, and sterilization room, adhering to the design documentation.</i> | Yes |
| 5.8.  | Will the activity result in mineral extraction, e.g., aggregate, stone, or coal?   | No  |
| 5.9.  | Will the activity result in hydrocarbon extraction, e.g., oil, or natural gas?   | No  |
| 5.10. | Are there known geological hazards, e.g., faults, landslides, or unstable soils which could affect the activity? If yes, how will the project ensure structural integrity?   | No  |

## 6. Impacts to forestry, biodiversity, protected areas, and endangered species

|      |   |    |
|------|---|----|
| 6.1. | Is the site located adjacent to or near a protected area, national park, nature preserve, or wildlife refuge?   | No |
| 6.2. | Is the site located in or near threatened or endangered (T&E) species habitat?  | No |
|      | 6.2.1. If yes, describe the plan for identifying T&E species during activity implementation. (Non-yes/no question)  |    |
|      | 6.2.2. If yes, describe the formal process for halting work, avoiding impacts, and notifying authorities if T&E species are identified during implementation. |    |
| 6.3. | Is the site located in a migratory bird flight or other animal migratory pathway?   | No |
| 6.4. | Will the activity involve harvesting of non-timber forest products, e.g., mushrooms, medicinal and aromatic plants (MAPs), herbs, or woody debris?            | No |
| 6.5. | Will the activity involve tree removal or logging?  | No |
| 6.6. | Will activities result in increased outdoor noise on a continuous or frequent basis at sound levels that disturb wildlife?                                    | No |
| 6.7. | Will activities result in light pollution, which could adversely affect the natural environment?  | No |

## 7. Water and water quality impacts

|      |   |  |
|------|---|--|
| 7.1. | List any National, European Union, or other international water discharge regulations or standards applicable to this activity. (Non-yes/no question)<br><i>No water regulations are applicable to this activity.</i> |  |
| 7.2. | How far is the site located from the nearest river, stream, or lake? (Non-yes/no question)  |  |

|   |   |     |
|---|---|-----|
| <i>Chernihiv Children's Hospital is located approximately 3 miles from the Desna River and 1.5 miles from the Mena River.</i> |   |     |
| 7.3.  | Is the site located in a floodplain?  | No  |
| 7.4.  | Will the activity increase the risk of flooding at the site or on other property?   | No  |
| 7.5.  | Will the activity disturb wetland, lacustrine, or riparian areas?   | No  |
| 7.6.  | Will the site require excavation within, placing of fill in, or substrate removal (e.g., gravel) from a river, stream, or lake?   | No  |
| 7.7.  | What is the depth to groundwater at the site? (Non-yes/no question)<br><i>The depth of groundwater in the northern region of Ukraine is approximately 4 meters (m) or 4000 millimeters (mm).</i>  |     |
| 7.8.  | Will the activity cause interference with the current drainage systems or conditions?   | No  |
| 7.9.  | Will the activity result in new or increased ground or surface water extraction? If yes, describe the expected volumes and the permit requirements.   | No  |
| 7.10.   | Will the activity discharge domestic or industrial sewage to surface water, groundwater, or a publicly owned treatment facility?  | No  |
| 7.11.   | Will the activity change storm water runoff volume, intensity, or locations? If so, describe how the designs/plans effectively and comprehensively address the management of storm water runoff and its effects.  | No  |
| 7.12.   | Is there potential for discharge of potentially contaminated (including suspended solids) runoff?   | No  |
| 7.13.   | Will the activity result in the runoff of pesticides, fertilizers, or toxic chemicals into surface water or groundwater?  | No  |
| 7.14.   | Will the activity involve the use or onsite storage of liquid fuels? If yes, describe the fuel type(s), quantities, storage conditions, and spill control procedures.<br><i>The activity will involve the onsite storage of 200 liters of diesel fuel, stored within the integrated generator fuel tank. The HCF facility management staff will refuel the generator with diesel fuel obtained from a local gas station on an as-needed basis. The integrated fuel system has 110% spill protection based on the specifications of the generator. The concrete containment pit that is constructed for the generator will assist in containing fuel spills, helping prevent soil contamination.</i> | Yes |
| 7.15.   | Will the activity result in discharge of effluent containing livestock wastes such as manure or blood?  | No  |

## 8. Atmospheric and air quality impacts

|      |   |  |
|------|---|--|
| 8.1. | List any National, European Union, or other international air emission regulations or standards applicable to this activity.<br><i>Chernihiv Children's Hospital will confirm all required permits for the generators are acquired in accordance with all National, European Union, and other international air emission regulations.</i><br><i>The National regulations and standards applicable to this activity as summarized as follows:</i> <ul style="list-style-type: none"> <li><i>Order of the Ministry of Environmental Protection of Ukraine dated 17.09.2010 No. 407</i></li> </ul> |  |
|------|---|--|



|      |   |     |
|------|---|-----|
|      | <ul style="list-style-type: none"> <li><i>Order of the Ministry of Environmental Protection of Ukraine No. 309 dated 27.06.2006 DBN A.2.2-1-2021 "Composition and content of environmental impact assessment materials (EIA) in the design and construction of enterprises, buildings and structures".</i></li> </ul>   |     |
| 8.2. | <p>Will the activity result in increased emission of air pollutants from a vent or as fugitive releases, e.g., soot, sulfur dioxide, oxides of nitrogen, volatile organic compounds, or methane?</p> <p><i>Yes, the activity will result in increased emission of air pollutants due to the diesel generator producing carbon dioxide (CO<sup>2</sup>), nitrogen oxide (NOx), and particulate matter.</i></p> | Yes |
| 8.3. | <p>Will the activity involve burning of fossil fuels?</p> <p><i>Yes, the activity will involve the burning of diesel fuel.</i></p>  | Yes |
| 8.4. | <p>Will the activity involve burning of wood or biomass?</p>  | No  |
| 8.5. | <p>Will the activity install, operate, maintain, or decommission systems containing ozone depleting substances, e.g., freon or other refrigerants?</p>  | No  |
| 8.6. | <p>Will the activity generate an increase in carbon emissions?</p> <p><i>Yes, the activity will generate an increase in carbon emissions as the generator will produce carbon dioxide (CO<sup>2</sup>).</i></p>   | Yes |
| 8.7. | <p>Will the activity increase odor on a continuous or frequent basis?</p> <p><i>Yes, the activity will increase odor only during the operation of the generator due to diesel exhaust.</i></p>  | Yes |
| 8.8. | <p>Will the activity generate dust on a continuous or frequent basis?</p>   | No  |
| 8.9. | <p>Will the activity increase the risk of fire, explosion, or hazardous airborne chemical releases?</p> <p><i>Yes, the activity will increase the risk of fire or explosion as the generator consumes flammable fuel.</i></p>   | Yes |

## 9. Energy efficiency, pollution prevention, and cleaner production

|      |  |    |
|------|--|----|
| 9.1. | <p>Does the activity use renewable energy sources? If yes, describe the energy sources.</p>  | No |
| 9.2. | <p>Does the activity require use of energy efficiency equipment? If yes, describe the energy efficiency requirement.</p>           | No |
| 9.3. | <p>Does the activity promote pollution prevention and cleaner production measures? If yes, describe the measures.</p>              | No |
| 9.4. | <p>Does the activity promote maximum reliance on green building or green land-use approaches? If yes, describe the approaches.</p> | No |

## 10. Waste management

|       |   |  |
|-------|---|--|
| 10.1. | <p>List any National, European Union, or other international solid waste disposal or storage regulations or standards applicable to this activity. (Non-yes/no question)</p> <ul style="list-style-type: none"> <li><i>Decree of the Cabinet of Ministers of Ukraine of November 8, 2017 No. 820-r "On the approval of the National strategy for waste management in Ukraine until 2030";</i></li> <li><i>Order of the CMU "On approval of the National Waste Management Plan until 2030" dated February 20, 2019.</i></li> </ul> |  |
|-------|---|--|

|   |     |
|---|-----|
| <p>10.2. List any National, European Union, or other international hazardous waste disposal or storage regulations or standards applicable to this activity. (Non-yes/no question)</p> <ul style="list-style-type: none"> <li>• <i>Decree of the Cabinet of Ministers of Ukraine of November 8, 2017 No. 820-r "On the approval of the National strategy for waste management in Ukraine until 2030";</i></li> <li>• <i>Order of the CMU "On approval of the National Waste Management Plan until 2030" dated February 20, 2019.</i></li> </ul>   |     |
| <p>10.3. Describe the local capabilities and facilities for solid, hazardous, and recyclable wastes. (Non-yes/no question)</p> <ul style="list-style-type: none"> <li>• <i>The estimated total volume of household waste generated is roughly 0.0045 tons per page 25 in the design documentation.</i></li> <li>• <i>The local capabilities and facilities related to solid waste are as follows:</i> <ul style="list-style-type: none"> <li>• <i>Waste will be removed for disposal and taken to disposal sites, such as: a local solid waste landfill called "Chernihiv Solid Waste Landfill D5."</i></li> </ul> </li> <li>• <i>The local capabilities and facilities related to hazardous waste are as follows:</i> <ul style="list-style-type: none"> <li>• <i>There are designated collection points for hazardous waste.</i></li> </ul> </li> <li>• <i>The local capabilities and facilities related to recyclable waste are as follows:</i> <ul style="list-style-type: none"> <li>• <i>Roughly 19 private enterprises provide relevant services in the country of Ukraine for plastic and paper waste.</i></li> </ul> </li> </ul> |     |
| <p>10.4. Will the activity generate nonhazardous solid wastes such as construction debris, packaging material, or nontoxic byproducts? If yes, describe expected types and quantities of solid waste and the plans for reuse, recycling, and disposal.</p> <p><i>The activity will produce nonhazardous solid wastes such as construction debris (concrete, wood, &amp; metal scraps), packaging materials (cardboard, plastic, &amp; wooden pallets), and nontoxic byproducts (excess adhesives). The construction contractor will manage disposal of these materials by reusing or donating (to other projects) the wooden pallets and metal parts. Cardboard, plastics, and metal scrap will be recycled through local facilities, and non-recyclable waste will be disposed of.</i></p>   | Yes |
| <p>10.5. Will the activity involve the generation and disposal of hazardous waste, such as solvents, acids, caustics, toxics, or other chemicals? If yes, describe the plans for disposal of these hazardous chemicals.</p> <p><i>The used oil will be disposed of by UkrEkoProm, a waste management and recycling company that was procured by the HCF. UkrEkoProm has its own incineration complex (meeting all the environmental and sanitary standards in Ukraine as well as requirements of European Union Directive EU 76/2000), which allows for safe elimination of waste that cannot be subject to recycling and land disposal. UkrEkoProm will abide by their established protocols for used oil collection and disposal.</i></p>   | Yes |
| <p>10.6. Will the activity involve lead paint or lead-painted building components? If yes, describe the plans for disposal of lead paint containers or lead-painted debris.</p>   | No  |
| <p>10.7. Will the activity involve the installation, use, or removal of asbestos-containing materials or building materials that may contain asbestos? If yes, describe the plans for disposal of waste asbestos containing materials.</p>  | No  |

|       |  |    |
|-------|--|----|
| 10.8. | Will the activity involve disposal or retrofitting of equipment containing polychlorinated biphenyls (PCB), e.g., electrical transformers or fluorescent light ballasts? If yes, describe the plans for disposal of PCB materials.                           | No |
| 10.9. | Will the activity generate any other solid or hazardous wastes requiring specific recycling or waste management plans, such as batteries, fluorescent tubes, aerosol cans, or electronic wastes? If yes, describe the plans for disposal of these materials. | No |

## 11. Pesticide Health and Safety Impacts

|       |  |    |
|-------|--|----|
| 11.1. | Will the activity involve use or onsite storage of pesticides? Pesticide use includes but is not limited to procurement, transportation, storage, mixing, loading, or application. | No |
|       | 11.1.1. If yes, identify the applicable PERSUAP, including DCN and expiration date.  |    |
|       | 11.1.2. If yes, describe the types and quantities of pesticides.   |    |
|       | 11.1.3. If yes, describe the pesticide storage conditions.   |    |
|       | 11.1.4. If yes, describe the worker training requirements.   |    |
|       | 11.1.5. If yes, describe the personal protective equipment (PPE) to be worn workers.   |    |
|       | 11.1.6. If yes, describe public safety precautions.  |    |
| 11.2. | Will chemicals be used or stored at the site? If yes, describe the chemicals, quantities, and storage conditions.  | No |
| 11.3. | Will the activity potentially disturb soil contaminated with toxic or hazardous materials?   | No |

## 12. Further Analysis of Recommended Actions (Most activities will have a threshold determinations of negative determination with conditions.)

- 12.1.  **Categorical Exclusion:** The activity is not likely to have an effect on the natural or physical environment. No further environmental review is required.\* (This is rarely used in the ERC/EMMP.)
- 12.2.  **Negative Determination with Conditions:** The activity does not have potentially significant adverse environmental, health, or safety effects, but may contribute to minor impacts that can be eliminated or adequately minimized by appropriate mitigation measures. ERC/EMMPs shall be developed, approved by the Mission Environmental Officer (MEO) and the BEO **prior to beginning the activity**, incorporated into workplans, and then implemented. For activities related to the procurement, use, or training related to pesticides, a PERSUAP will be prepared for BEO approval, PERSUAPS are considered amendments to the IEE and usually Negative Determination with Conditions. See Sections H and I below.\*
- 12.3.  **Positive Determination:** The activity has potentially significant adverse environmental effects and requires further analysis of alternatives, solicitation of stakeholder input, and incorporation of environmental considerations into activity design. A Scoping Statement (SS) must be prepared and be submitted to the BEO for approval. Following BEO approval of the SS an Environmental Assessment (EA) will be conducted. The activity may not be implemented until the BEO clears the final EA. If the Parent IEE does not have Positive Determination as one of the threshold determinations, the IEE needs to be amended.
- 12.4.  **Activity Cancellation:** The activity poses significant and unmitigable adverse environmental effects. Adequate ERC/EMMPs cannot be developed to eliminate these effects and alternatives are not feasible. The project is not recommended for funding.

**\*Note regarding applicability related to Pesticides (216.2(e):** The exemptions of §216.2(b)(l) and the categorical exclusions of §216.2(c)(2) ***such as technical assistance, education, and training*** are not applicable to assistance for the procurement or use of pesticides.

Pesticide use is broadly defined at USAID and includes assistance with any of the following:

- Procurement, transportation, storage, mixing, loading, and application
- Management
- Fuel needed to transport pesticides
- Technical assistance in pesticide application
- Special payments, donations, free samples, and other forms of subsidies
- Credit provisions to beneficiaries

### 13. EMMPs and ROCs

- 13.1. Activity-specific environmental mitigation and monitoring plan (EMMP): Using the table provided below, list the processes that comprise the activity, then for each process, identify impacts requiring further consideration. For each impact, describe the mitigation and monitoring measures that will be implemented to avoid or to adequately minimize the impacts. All questions in Sections 5 through 12 with Yes or Maybe answers should be addressed. Upon request, the MEO may be able to provide your project with example EMMPs that are specific to your activity.
- 13.2. Annually (or more frequently if required by the Activity Manager/AOR /COR) and at the closeout of the activity, the IP shall prepare a Record of Compliance (ROC) to be submitted to the Activity Manager/AOR/COR. The ROC shall document how the mitigation and monitoring requirements were met. As appropriate, attachments such as site photos, permits, verification of local inspections, product warranties, etc. should be included in the ROC. The ROC shall be posted to the USAID Environmental Compliance Database (ECD).

| Processes   | Identified Environmental Impacts  | Mitigation Measures   | Monitoring Indicators   | Monitoring and Reporting Frequency  | Responsible Parties  | Records Generated   |
|---|---|---|---|---|--|---|
| Procurement of appropriate and sustainable construction materials   | <p>Increased carbon footprint due to energy intensive processes to extract and install materials.</p> <p>The use of materials containing asbestos can cause respiratory issues to the HCF occupants and construction workers.</p> <p>The use of lead-based materials can result in lead poisoning issues to the HCF occupants and construction workers.</p> | <p>Develop a design plan validating the use of appropriate and sustainable (e.g., recycled products, energy-efficient materials) building materials and compliance with best management practices and host country laws and regulations.</p> <p>Avoid materials that cause health impacts, such as asbestos-containing materials, lead-based paint, and materials that off-gas unsafe levels of formaldehyde.</p> | <p>Recurring site reports provided by the technical supervisor and contractor will include updates on materials used.</p> <p>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.</p> <p>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.</p> <p>Include photos from site visits.</p> | <p>Monitor weekly, and report in quarterly reports.</p> <p>Review the design plan at least once prior to starting construction activities, or more frequently if appropriate.</p> <p>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate.</p> | <p>Chernihiv Children's Hospital is responsible for the monitoring and reporting of all identified environmental impacts noted in this EMMP.</p> <p>HRS and the technical supervisor will be responsible for monitoring EMMP measures during construction.</p> | <p>Site condition records will be kept on file by Chernihiv Children's Hospital. These documents will confirm that all mitigation measures were followed in this EMMP.</p> <p>Records of materials purchased will be included in the project files.</p> |
| Construction of concrete containment pit and strip foundation to house the generator and integral fuel tank | <p>Potential soil erosion during construction of the concrete containment pit.</p> <p>Potential contamination of soil or nearby water during the installation of the concrete containment pit.</p>  | <p>Use vehicle ingress and egress to minimize soil and site disruption.</p> <p>Utilize geotextiles between concrete containment pit materials to help prevent future soil erosion.</p> <p>Use a perimeter leak-proof concrete containment pit design that minimizes the</p>   | <p>Recurring site reports provided by the technical supervisor and contractor will include updates on the installation of the concrete containment pit and strip foundation.</p>  | <p>Monitor weekly, and report in quarterly reports. If significant errors and omissions occur, immediately inform USAID COR/AOR.</p> <p>Review the design plan at least once prior to starting construction activities, or more</p>   | <p>Chernihiv Children's Hospital is responsible for the monitoring and reporting of all identified environmental impacts noted in this EMMP.</p> <p>HRS and the technical supervisor will be responsible for monitoring EMMP measures during construction.</p> | <p>Site condition records will be kept on file by Chernihiv Children's Hospital. These documents will confirm that all mitigation measures were followed in this EMMP.</p> <p>Photos from site visits will be provided to the facility and</p>          |

| Processes  | Identified Environmental Impacts   | Mitigation Measures   | Monitoring Indicators   | Monitoring and Reporting Frequency   | Responsible Parties  | Records Generated   |
|--|--|---|---|--|--|---|
|  |  | <p>need for a full concrete footprint for the foundation to keep hazardous materials above ground and prevent spills, even during natural disasters.</p>  | <p>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.</p> <p>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.</p> <p>Include photos from site visits.</p>   | <p>frequently if appropriate.</p> <p>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate.</p>  |  | <p>maintained in the project records.</p>   |
| <p>Installation of new above-ground piping and wires connecting generator to Chernihiv Children's Hospital autoclaves, distiller, and sterilization room</p> | <p>Potential runoff or soil erosion during trenching for wire install if and when trenching is required.</p> <p>Potential noise pollution to the surrounding environment due to the drilling of the existing building infrastructure to create the pathway for the piping.</p> <p>If underground piping is required, potential risk of damaging existing utilities, including water, sewer, and electrical lines, causing contamination to the surrounding environment or resulting in a fire.</p> | <p>When required, the trench created for the wires will be no bigger than it needs to be and dug over the shortest possible span, minimizing unnecessary sitework.</p> <p>Any equipment used for the drilling should be checked to make sure they meet the proper sound decibels to not impact the surrounding environment. PPE such as noise protective earplugs will be used.</p> <p>If underground piping is required, the construction footprint will be checked for any existing utility lines that service the adjacent</p> | <p>Recurring site reports provided by the technical supervisor and the contractor will include updates on piping.</p> <p>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.</p> <p>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.</p> | <p>Monitor weekly, and report in quarterly reports. If significant safety issues occurs, immediately inform USAID COR/AOR.</p> <p>Review the design plan at least once prior to starting construction activities, or more frequently if appropriate.</p> <p>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate.</p> | <p>Chernihiv Children's Hospital is responsible for the monitoring and reporting of all identified environmental impacts noted in this EMMR.</p> <p>HRS and the technical supervisor will be responsible for monitoring EMMR measures during construction.</p> | <p>Site condition records will be kept on file by Chernihiv Children's Hospital. These documents will confirm that all mitigation measures were followed in this EMMR.</p> <p>Photos from site visits will be provided to the facility and maintained in the project records.</p> |

| Processes  | Identified Environmental Impacts  | Mitigation Measures   | Monitoring Indicators   | Monitoring and Reporting Frequency   | Responsible Parties   | Records Generated  |
|--|---|---|---|--|---|--|
| Disposal of construction debris and waste          | Overburdening existing landfills preventing land from being preserved for other purposes such as agriculture and wildlife habitats.<br>Improper recycling of excess construction material/waste can result in the need to use natural resources to extract and produce raw materials for future projects.<br>Hazardous materials such as asbestos, lead, and other materials when improperly disposed can contaminate the air and water. This can also result in increased health risks for the workers and surrounding community.<br>Not following local regulations properly which goes against the promotion of sustainable practices. | building structures. All electrical systems will be de-energized before starting work.<br>The construction contractor will use proper waste management to identify and separate what waste can be reused/donated or recycled prior to disposing.<br>Materials like wooden pallets and metal parts will be reused or donated to other projects. Cardboard, plastics, and metals are to be recycled through local facilities.<br>The construction contractor will use a third-party vendor, UkrEkoProm, to dispose of any hazardous materials.<br>The construction contractor will provide their health and safety plan to include how they will abide to local regulations. The plan will be reviewed and used for the duration of the construction. | Include photographs from site visits.<br>Recurring site reports provided by the technical supervisor and the construction contractor will include updates on construction debris.<br>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.<br>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.<br>Include photos from site visits. | Monitor weekly, and report in quarterly reports.<br>Review the design plan at least once prior to starting construction activities, or more frequently if appropriate.<br>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate. | Chernihiv Children's Hospital is responsible for the monitoring and reporting of all identified environmental impacts noted in this EMMP.<br>HRS and the technical supervisor will be responsible for monitoring EMMP measures during construction. | Site condition records will be kept on file by Chernihiv Children's Hospital. These documents will confirm that all mitigation measures were followed in this EMMP.<br>Photos from site visits will be provided to the facility and maintained in the project records. |
| Operation and Maintenance of the diesel generators | The generator will produce carbon dioxide through the combustion of diesel fuel.  | The generator will be regularly serviced by Compressors International LLC so  | Recurring site reports provided by the technical supervisor and   | Monitor weekly, and report in quarterly reports.   | Chernihiv Children's Hospital is responsible for the monitoring and reporting of all  | Site condition records will be kept on file by Chernihiv Children's Hospital.  |

| Processes  | Identified Environmental Impacts   | Mitigation Measures  | Monitoring Indicators   | Monitoring and Reporting Frequency  | Responsible Parties  | Records Generated   |
|--|--|--|---|---|--|---|
|  | <p>The generator will increase odor on a continuous basis as the generator produces pollution from diesel exhaust while in use.</p> <p>When performing maintenance activities, the improper disposal of used oils can contaminate the surrounding environment.</p>   | <p>production of carbon dioxide can be monitored.</p> <p>The generator will be regularly serviced by Compressors International LLC so production of odor can be monitored.</p> <p>The HCF will use a third-party vendor, UkrEkoProm, to safely dispose of any used oils.</p>   | <p>the construction contractor.</p> <p>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.</p> <p>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.</p> <p>Include photos from site visits.</p>                         | <p>Review the design plan at least once prior to starting construction activities, or more frequently if appropriate.</p> <p>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate.</p>   | <p>identified environmental impacts noted in this EMMP.</p> <p>HRS and the technical supervisor will be responsible for monitoring EMMP measures during construction.</p>  | <p>These documents will confirm that all mitigation measures were followed in this EMMP.</p>  |
| <p>Operation and Maintenance of the integral fuel tank</p> | <p>Onsite storage of liquid fuel could cause spills which can contaminate the surrounding soils and environment.</p> <p>Improper handling of the liquid fuel can result in increased health risks for the workers maintaining the generator.</p> <p>Close access to the generator for the local community can result in increased health risks and can cause fires that could result in damage to the surrounding environment.</p> | <p>The design plan includes a concrete containment pit to house the generator and integral fuel tank.</p> <p>Per the generator specifications, the integral fuel system has 110% spill protection.</p> <p>PPE such as protective clothing, gloves, eye protection, and foot wear will be required for construction and O&amp;M.</p> <p>The generator's fuel tank is integral and will be contained in a secured perimeter enclosure. Warning</p> | <p>Recurring site reports provided by the technical supervisor and the construction contractor.</p> <p>Conduct site visits to evaluate if design and construction specifications in the plan were properly implemented.</p> <p>Include dates of visits, findings, and any non-compliance issues in the annual EMMR.</p> | <p>Monitor weekly, and report in quarterly reports.</p> <p>Review the design plan at least once prior to starting construction activities, or more frequently if appropriate.</p> <p>The Technical Supervisor will conduct weekly site visits, or more frequently if appropriate.</p> | <p>Chernihiv Children's Hospital is responsible for the monitoring and reporting of all identified environmental impacts noted in this EMMP.</p> <p>HRS and the technical supervisor will be responsible for monitoring EMMP measures during construction.</p> | <p>Site condition records will be kept on file by Chernihiv Children's Hospital.</p> <p>These documents will confirm that all mitigation measures were followed in this EMMP.</p> <p>Photos from site visits will be provided to verify proper safety signs are included at the site.</p> |



| Processes     | Identified Environmental Impacts | Mitigation Measures   | Monitoring Indicators                                   | Monitoring and Reporting Frequency                  | Responsible Parties | Records Generated |
|---------------|----------------------------------|---|---|---|---------------------|-------------------|
| All processes |                                  | signs will clearly mark areas where there is "No Smoking" or there are "Flammable Materials." | in the annual EMMR.<br>Include photos from site visits. | Annually or as required by Activity Manager/AOR/COR | IP                  | ROC               |

**Certification of No Adverse or Significant Effects on the Environment**

I, the undersigned, certify that activity-specific baseline conditions and applicable environmental requirements have been properly assessed; that environmental impacts and pesticide-related health and safety impacts requiring further consideration have been comprehensively identified; and that adverse impacts will be effectively avoided or sufficiently minimized by proper implementation of the EMMP(s). If new impacts requiring further consideration are identified or new mitigation measures are needed, I will be responsible for notifying the USAID COR/AOR, as soon as practicable. Upon completion of activities, I will submit a **Record of Compliance with Activity-Specific EMMPs** using a format approved by the MEO.

/S/ David Elkins

*David Elkins*  
Implementer Project Director/COP

21 August 2024

Date

**Approvals:**

Paola Pavlenko

Digitally signed by Paola Pavlenko  
Date: 2024.08.22 09:00:23 +03'00'

*Paola Pavlenko*  
USAID COR/AOR

Date

Mission Environmental Officer

Date

**Concurrence:**

Not required per DCN: 2017-UKR-020  
Bureau Environmental Officer  
Europe and Eurasia Bureau

Date

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