Appendix C – Clean Air Act Analysis

NEPA ID EAXX-007-21-001-1736758141

Record of Non-Applicability (RONA)
Clean Air Act General Conformity Determination
United States Army Garrison (USAG) Fort Hamilton New Childcare Development Center (CDC), Brooklyn, Kings County, New York

Description of the Proposed Action: The United States Department of the Army (Army) is planning to construct and operate a new CDC facility (Proposed Action) on United States Army Garrison Fort Hamilton (herein referred to as "Fort Hamilton" or the "Installation") in Brooklyn, Kings County, New York. The Proposed Action includes the construction of a 16,632 square feet (ft^2) single story building, three outdoor playgrounds totaling 16,667 ft^2, 20 new parking spaces, paved pedestrian pathways, perimeter fencing and lighting, landscaping, a truck delivery space, utility connections, stormwater management, and security features. White Avenue and Schum Avenue would be repaved within the alignment of the proposed CDC facility. Accessibility and force protection measures would be provided, as required.

The purpose of the Proposed Action is to better meet the Installation's needs for childcare services. The current CDC facility has an enrollment capacity of approximately 76 children and is housed in an outdated building. The Proposed Action would increase enrollment capacity from approximately 76 to 126 children by building a larger facility. In addition, the modernized facility would support the Fort Hamilton CDC's mission to offer a consistent, safe, and nurturing environment for children between six weeks and five years of age. The new CDC facility would have amenities such as a kitchen, changing areas, administrative support space, mothers' nursing room, staff lounge, laundry, storage, and supply rooms.

Alternatives Considered:
The consideration of reasonable alternatives is required in accordance with the National Environmental Policy Act (NEPA; 42 United States Code [USC] § 4321 *et seq.*), 2024 President's Council on Environmental Quality (CEQ) NEPA Regulations (40 Code of Federal Regulations [CFR] §§ 1500–1508), and Army Regulations (AR) 200-2 "Environmental Analysis of Army Actions" as promulgated by 32 CFR Part 651. Site selection standards were developed for the Proposed Action and used to identify, compare, and evaluate reasonable alternatives. The selection standards were developed to be consistent with the purpose and need for the Proposed Action and to address pertinent mission, environmental, safety, and health factors. The following site selection standards were used:

- Adequate space and infrastructure to accommodate the new facility;
- Compatible with the CDC's mission;
- Compatible with the 2019 Fort Hamilton Area Development Plan (ADP);
- Complies with Army design standards and regulations;
- Protects children from environmental health and safety risks;
- Developable with minimal preparation, relocation, or demolition.

No Action Alternative: Under the No Action Alternative, the Army would not construct a new CDC facility on Fort Hamilton. The Preferred Alternative site would remain as a landscaped area and closed gravel parking lot. Child enrollment capacity would not be increased from 76 children to 126 children. The CDC would continue to be operated out of an outdated building.

Preferred Alternative: The Preferred Alternative site for the Proposed Action is an approximately 95,000 ft^2 site bounded by White Avenue, the Verrazzano-Narrows Bridge, Holiday Inn Express, and Garrison Headquarters in northwestern Fort Hamilton. Approximately half of the site is a closed gravel parking lot with paved pedestrian pathways and the other half contains is a landscaped turf lawn area with several trees and shrubs. The Preferred Alternative site has sufficient land area to accommodate the Proposed Action and would require minimal preparation, relocation, and demolition of existing services and facilities. The Preferred Alternative site is compatible with the 2019 Fort Hamilton Area Development Plan and would allow easy access and connections to existing infrastructure and utilities. The Preferred Alternative site does not pose any known health and safety risks to children and is consistent with the CDC's mission. The Preferred Alternative site complies with the applicable Army standards and regulations, such as minimum distances to access control points (ACPs).

Implementation of the Proposed Action at the Preferred Alternative site would create 20 new paved parking spaces. Up to 14 trees would be removed during site preparation. Tree removals would be recorded, and replacement trees would be planted on Fort Hamilton in compliance with Fort Hamilton's 2009 *Tree Replacement Guidelines.* Construction is expected to start in 2026. Approximately 55 parking spaces in the White Avenue parking lot across from the Preferred Alternative site would be temporarily used for staging and material laydown during construction.

General Conformity Determination:

General Conformity (40 CFR 51 and 93) "prohibits a federal agency from interfering with the ability of a state or tribe to achieve the National Ambient Air Quality Standards [(NAAQS)]". Only actions that cause emissions in designated non-attainment and maintenance areas are subject to these regulations. A vast majority of federal actions do not result in a significant increase in emissions and therefore, include several exemptions. Applicability to General Conformity is determined by:

1. Whether the action will occur in a non-attainment or maintenance area,
2. Whether one or more of the specific exemptions apply to the action,
3. Whether the federal agency has included the action on its list of "presumed to conform" actions,
4. Whether the total direct and indirect emissions are below or above the *de minimis* levels, and/or,
5. Where the facility has an emission budget approved by the state or tribe as part of the SIP or Tribal Implementation Plan, the federal agency determines if the emissions from the proposed action are within the budget.

To provide the upper limit of a conservative estimate, emissions were first calculated on the project as a whole, assuming that construction would be completed within the same calendar year, and additionally estimated on an average yearly basis for the designs current estimation that construction would be conducted over a duration of 850-days (approximately 2.3 years). Should the emissions under this assumption exceed the *de minimis* quantities, then a yearly emissions estimate would provide a more precise calculation on a yearly basis, providing for a comparison of the two for the Preferred Alternative.

As Fort Hamilton is located within a maintenance zone for CO and $PM_{2.5}$ and is within the Ozone Transportation Region and in non-attainment area for ozone, these criteria pollutants were compared to the applicable *de minimis* quantities emission thresholds, including the more stringent ozone (VOC and NOx) threshold, as follows:

Air Quality Emissions compared to De Minimis Quantities Thresholds

Criteria Pollutant	Estimated Construction Emissions for the Total Project (tons/year)	Applicable De Minimis Quantities (tons/year)[1]
Ozone (VOC)	**0.025**	**25**
Ozone (NOx)	**1.267**	**25**
$PM_{2.5}$	**0.021**	**100**
CO	**0.001**	**100**

Note: Green highlight indicates emissions estimate is below the applicable *de minimis* quantities. Red highlight indicates emissions estimate is above the applicable *de minimis* quantities.

Record of Non-Applicability:

Project related emissions for Alternatives, including the No Action Alternative, were estimated to evaluate the applicability of General Conformity regulations (40 CFR 93 Subpart B).

The estimated construction emissions were calculated for Ozone (VOC, NOx), $PM_{2.5}$, and CO, and found to be well below the applicable *de minimis* quantities thresholds for the entire project and for the average yearly emissions; therefore, the Preferred Alternative construction and operation of the CDC is considered exempt and not applicable to General Conformity. Refer to the attachment for the CAA calculations.

The project is presumed to conform with General Conformity requirements and is considered to be exempt from Subpart B under 40 CFR 93.153(c)(1).

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Director, DPW

[1] While the recent ozone (2015) nonattainment designation was classified as “moderate” and is being redesignated as “serious”, the ozone (2008) nonattainment designation is “severe”; therefore, the more stringent *de minimis* threshold of “severe” is the applicable threshold for NOx and VOC within this nonattainment area, at 25 tons per year.

USACE - New York District
Fort Hamilton Child Development Center
Air Quality Assessment
1-Aug-24

E = hrs x LF x EF
E = hphr x g/hphr / 1,000,000g/tons

Emission estimates	Metric Tons of Criteria Pollutants NOx	VOC	SO2	PM2.5	CO
E					
Construction emissions, metric tons	**1.267**	**0.025**	**0.001**	**0.021**	**0.001**

			LF	HRS		EF	EF	EF	EF	EF				
			Load	Operating		NOx	VOC	SO2	PM2.5	CO	NOx	VOC	SO2	PM2.5
Equipment Type	**hp**	**Count**	**Factor**	**hours**	**hphr**	**g/hphr**	**g/hphr**	**g/hphr**	**g/hphr**	**g/hphr**	**MT**	**MT**	**MT**	**MT**
Compactor	250	2	0.43	61	6,558	9.50	0.19	0.005	0.16	1.21	0.062	0.001	3.28E-05	1.05E-03
Compressor	75	2	0.43	117	3,773	9.50	0.19	0.005	0.16	1.21	0.036	0.001	1.89E-05	6.04E-04
Compressor	100	1	0.43	3	129	9.50	0.19	0.005	0.16	1.21	0.001	0.000	6.45E-07	2.06E-05
Concrete saw	50	1	0.59	22	649	9.50	0.19	0.005	0.16	1.21	0.006	0.000	3.25E-06	1.04E-04
Crane	225	3	0.43	31	2,999	9.50	0.19	0.005	0.16	1.21	0.028	0.001	1.50E-05	4.80E-04
Crane	300	3	0.43	83	10,707	9.50	0.19	0.005	0.16	1.21	0.102	0.002	5.35E-05	1.71E-03
Dozer	100	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Dozer	250	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Dozer	340	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Excavator	300	2	0.59	52	9,204	9.50	0.19	0.005	0.16	1.21	0.087	0.002	4.60E-05	1.47E-03
Excavator	325	1	0.59	7	1,342	9.50	0.19	0.005	0.16	1.21	0.013	0.000	6.71E-06	2.15E-04
Excavator	350	1	0.59	15	3,098	9.50	0.19	0.005	0.16	1.21	0.029	0.001	1.55E-05	4.96E-04
Excavator	400	1	0.59	4	944	9.50	0.19	0.005	0.16	1.21	0.009	0.000	4.72E-06	1.51E-04
Generator	10	4	0.43	1133	4,872	9.50	0.19	0.005	0.16	1.21	0.046	0.001	2.44E-05	7.80E-04
Grader	135	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Off-road truck	100	2	0.59	34	2,006	9.50	0.19	0.005	0.16	1.21	0.019	0.000	1.00E-05	3.21E-04
Off-road truck	200	6	0.59	287	33,866	9.50	0.19	0.005	0.16	1.21	0.322	0.006	1.69E-04	5.42E-03
Off-road truck	250	1	0.59	7	1,033	9.50	0.19	0.005	0.16	1.21	0.010	0.000	5.16E-06	1.65E-04
Off-road truck	300	1	0.59	15	2,655	9.50	0.19	0.005	0.16	1.21	0.025	0.001	1.33E-05	4.25E-04
Off-road truck	350	2	0.59	15	3,098	9.50	0.19	0.005	0.16	1.21	0.029	0.001	1.55E-05	4.96E-04
Off-road truck	400	1	0.59	69	16,284	9.50	0.19	0.005	0.16	1.21	0.155	0.003	8.14E-05	2.61E-03
Pump	50	2	0.43	117	2,516	9.50	0.19	0.005	0.16	1.21	0.024	0.000	1.26E-05	4.02E-04
Rubber tired loader	175	6	0.59	223	23,025	9.50	0.19	0.005	0.16	1.21	0.219	0.004	1.15E-04	3.68E-03
Skid Steer Loader	175	2	0.21	39	1,433	9.50	0.19	0.005	0.16	1.21	0.014	0.000	7.17E-06	2.29E-04
Other diesel engines	150	2	0.59	36	3,186	9.50	0.19	0.005	0.16	1.21	0.030	0.001	1.59E-05	5.10E-04
Other diesel engines	200	1	0.59	0	0	9.50	0.19	0.005	0.16	1.21	0.000	0.000	0.00E+00	0.00E+00
Totals		**51**		**2,370**	**133,375**						**1.267**	**0.025**	**0.001**	**0.021**

*Emissions Factors sourced from a recent USACE (Rahway River (Tidal) Coastal Storm Risk Management Study) project utilizing similar equipment and estimated conservatively.