

F. EMISSIONS AND OTHER IMPACTS (75 points)

F.1 Air emissions (15 points)

Objective: Reduce air emissions.

<p>F.1.1 Are there low-NOx/low-CO boilers and furnaces whose NOx emissions do not exceed 30 ppm corrected to 3% O₂, and whose CO emissions do not exceed 400 ppm corrected to 3% O₂? <i>If there are no boilers or furnaces, mark “not applicable.” In the case of district heating, consider the emissions of the central plant.</i></p> <p><i>Bay Area Air Quality Management District Emission Limits of Regulation 9, Rule 7</i></p>	15 points or n/a
<p>Indicate Heat Input (BTU/hour.) _____</p> <p>Indicate NOx Emissions (ppm) corrected to 3% O₂. _____</p> <p>Indicate CO Emissions (ppm) corrected to 3% O₂. _____</p>	
<p>Provide references to specification. _____</p>	

Verification: Check specifications for boiler and furnace emissions. Verify that they meet the Bay Area Air Quality Management District emission limits of Regulation 9, Rule 7. NOx emissions must not exceed 30 ppm corrected to 3% O₂ and CO emissions must not exceed 400 ppm corrected to 3% O₂.

Final verification: Review boiler and furnace cut sheets documenting the NOx and CO emissions of the selected boilers (in units of mg/kWh delivered heating energy at full load and 0% excess air.)

F.2 Ozone depletion and global warming (30 points)

<p>F.2.1 Does the building avoid ozone depletion and global warming caused by refrigerants (i.e. There are no refrigerants or only absorption cooling is used.)</p>	30 points
<p>Provide references to specifications. _____</p>	

Verification: Check the type of refrigerants used.

Final verification: Conduct a visual verification.

<p>F.2.2 Where HFC (hydrofluorocarbon) or HCFC (hydrochlorofluorocarbon) refrigerants are specified, what is their ozone-depleting potential (ODP)? <i>Where there are no halocarbon refrigerants, mark “not applicable.”</i></p>	
<ul style="list-style-type: none"> • higher than 0.05 	0 points or n/a
<ul style="list-style-type: none"> • 0.05 or less 	10 points or n/a
<ul style="list-style-type: none"> • equal to 0 	15 points or n/a

Indicate which refrigerant is used and its ODP. _____
Provide references to specifications._____

Verification: Check the type of refrigerant specified and its ODP.

Final verification: Conduct a visual verification.

F.2.3 Is the global warming potential (GWP) of the refrigerant less than 150? Where there are no refrigerants, mark “not applicable.”	5 points or n/a
Provide references to specifications and calculations. _____	

Verification: Check the type of refrigerant used and its GWP.

Final verification: Conduct a visual verification.

F.2.4 Where cooling equipment uses HCFC or HFC refrigerant, does the mechanical room have the following features to detect leaks? If there are no HCFC or HFC refrigerants, mark “not applicable.”	
• Leak detection and local alarm	3 points
• Remote alarm	2 points
Provide design plans and specifications. _____	

Verification: Review the design of the mechanical room and specifications to verify that they meet ASHRAE 15 – 2001 requirements for leak detection and leak alarm.

Final verification: Conduct a visual verification.

F.3 Contamination of sewers or waterways (12 points)

Objective: Avoid contamination of waterways and reduce the burden on municipal waste water treatment facilities.

F.3.1 Are there the following measures to prevent contaminants from entering sewers or waterways?	
• Kitchen drains in commercial kitchens discharge into a grease interceptor before connecting into the sanitary sewer. Where there is no commercial or institutional kitchen, mark “not applicable.”	2 points or n/a
• There are silver recovery units and sampling boxes on drains in photo finishing facilities. Where there is no photo-finishing facility, mark “not applicable.”	2 points or n/a
• There are lint traps and filters on drains in laundry facilities. Where there is no laundromat, mark “not applicable.”	2 point or n/a
• There are drain traps in areas where there exists the risk of a toxic or hazardous material spill, such as in the plant room.	3 points or n/a
• There are interceptors/clarifiers in parking lots or garages. For buildings less than 2000 square feet that do not generate contaminants, or where there is no parking or garage, mark “not	3 points or n/a

<i>applicable.</i>	
Provide references to the drawings and specifications. _____	

Verification: Review drawings and specifications to check that there are measures to avoid the direct or indirect discharge of pollutants to sewers and natural waters, and to help ensure that storm water discharges are to be free of toxic waste, sludge, floating debris, oil or scum.

Final verification: Conduct a visual verification.

F.4 Land and water pollution (9 points)

Objective: Reduce the pollution of land or water and minimize risk to occupants’ health and impacts on the local environment.

F.4.1 Where there are existing buildings on the site or in the case of a retrofit, do storage tanks have the following features? <i>If there are no storage tanks, mark “not applicable.”</i> <i>Underground storage tanks -EPA 40 CFR 280 and 281</i>	
<ul style="list-style-type: none"> • Above ground or “day tanks” have secondary containment. 	1 point
<ul style="list-style-type: none"> • Fuel oil storage tanks are non-metallic double walled, or are contained in lined vaults. 	1 point
<ul style="list-style-type: none"> • There is a detection system with monitors and alarms for tanks and piping. 	1 point

Verification: Review the Construction Documents and specifications for all on-site storage tanks, indicating that they are designed and installed in accordance with good engineering practices and nationally recognized standards.

Final verification: Conduct a visual verification.

F.4.2 Where there are existing buildings on the site or in the case of a retrofit, do all PCBs present in the building meet applicable regulatory requirements? <i>If there are no PCBs present on-site, mark “not applicable.”</i>	1 point or n/a
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Verification: In retrofit projects, check specifications that any PCBs present in the building must meet regulatory requirements.

Final verification: Conduct a visual verification.

F.4.3 Where there are existing buildings on the site or in the case of a retrofit, is asbestos removed or abated as per the Asbestos Hazard Emergency Response Act (AHERA)? <i>If asbestos or asbestos-containing materials are not present in the building or on-site, mark “not applicable.”</i>	2 points or n/a
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Verification: In retrofit projects, check specifications to ensure that asbestos present in the building must meet applicable regulatory requirements.

Final verification: Conduct a visual verification.

F.4.4 Are there measures to prevent the accumulation of harmful chemicals and gases such as radon and methane in spaces below the substructure, and their penetration into the building? <i>If the building is located in a low risk region, mark “not applicable.”</i>	3 points or n/a
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Verification: Review evidence that the building is located outside a radon high risk area, or review construction details addressing radon venting.

Final verification: Conduct a visual verification in areas where there is radon.

F.5 Integrated pest management (4 points)

Objective: Eliminate infestations and reduce application of pesticides.

F.5.1 Are there the following measures to avoid pest infestations?	
<ul style="list-style-type: none"> • Pest resistant materials and building assemblies are used (e.g. against termites.) 	1 point
<ul style="list-style-type: none"> • Structural and mechanical openings have permanent protection (e.g. screening) and are sealed against infestation by rodents and insects. 	1 point
<ul style="list-style-type: none"> • Storage areas for food and kitchen waste are provided that are properly sealed against pest. Mark “not applicable” where there is no kitchen. 	1 point or n/a
<ul style="list-style-type: none"> • Pest-resistant vegetation and landscaping are used as recommended by the local plant society. Mark “not applicable” where there is no landscaping. 	1 point or n/a
Provide drawing and specification references to pest control measures. _____	

Verification: Review the design for best pest prevention facility practices. Review specifications to check that pest resistant materials and building assemblies are used (e.g. against rodents, termites, and carpenter ants.) Review drawings and details to check that structural and mechanical openings have permanent protection (e.g. screening) and are sealed (e.g. caulk); against infestation by rodents and insects that storage areas for food and kitchen waste are properly sealed, and that plants are selected that are pest-resistant.

Final verification: Conduct a visual verification.

F.6 Storage for Hazardous Materials (5 points)

Objective: Prevent pollution of water and indoor air.

F.6.1 Is storage provided for hazardous materials and janitorial supplies with walls that are continuous from floor-to-floor and mechanical ventilation with no return air?	3 points
<p>Describe locations for safe storage of hazardous and flammable materials._____</p> <p>Provide references to drawings and specifications. _____</p>	

F.6.2 Is storage provided for flammable materials with fire-rated walls and doors, and outlets that are fire-dampened? Where there are no flammable materials kept on-site, mark “not applicable.”	2 points or n/a
Describe locations for safe storage of hazardous and flammable materials. _____ Give references to drawings and specifications. _____	

Verification: Review construction drawings for secure, well-ventilated storage locations for the hazardous and flammable materials to be used during occupancy.

Final verification: Conduct a visual verification.