



## **Good Neighbor Agreement Emergency Response Plan for ESCO Corporation - Portland Foundries**

*Revision Date: August 5, 2014*

### **Introduction**

ESCO Corporation entered into a Good Neighbor Agreement (GNA) to encourage open communications and mutual understanding between ESCO and neighbor groups. As part of the GNA, ESCO is required to develop an Emergency Response Plan, in cooperation with the Neighborhood Advisory Committee (NAC), to address threats to people and the environment in the event of a catastrophic event at ESCO. In addition, ESCO must implement a reverse 911 system to alert the neighborhood of emergencies subject to the plan. This plan satisfies these requirements.

This plan is intended to address threats to the neighborhood from catastrophic events at ESCO, and does not include equipment breakdowns, malfunctions, or routine events. It is also not intended to cover ESCO employee evacuations or incidents related to operations confined to ESCO's foundries, which are addressed in separate plans used by the facilities.

The City of Portland Basic Emergency Operations Plan<sup>1</sup> (BEOP) was consulted as a reference for potential natural disasters and affected areas, as well as for City of Portland response procedures. With NAC approval, the City's Reverse 911 system is being used in place of ESCO implementing a separate Reverse 911 phone and email system to accomplish the same objective.

### **Potential Catastrophic Events**

#### *Earthquake*

Per the City's BEOP there is moderate potential for a major earthquake to affect the entire Portland metropolitan area. The greatest hazards resulting from an earthquake are collapsing buildings and natural gas-fueled fires. ESCO has natural gas service throughout the facilities and many older buildings. However, a collapsing building would be an unlikely threat to the neighborhood, and fires are addressed as a separate event within this plan. ESCO facilities would not be an appropriate area to assemble or seek shelter during or after an earthquake. Open areas or newly constructed buildings are more appropriate for assembly or shelter.

#### *Landslide*

There is limited potential for a catastrophic landslide to affect the Northwest Portland neighborhood, including the Northwest Industrial District. A landslide may result from an earthquake, and depending on severity it would likely affect the residential neighborhood more than ESCO's foundries. In the event of a landslide there is no material threat to the neighborhood from ESCO's operations. This event type will not be considered further in the plan.

#### *Weather*

Wind storms and winter weather storms are the only likely weather related events, and neither is likely to result in a catastrophic event threatening the neighborhood. Since there

<sup>1</sup> City of Portland Basic Emergency Operations Plan, Bureau of Emergency Management, March 2013

are no specific threats presented to the neighborhood by ESCO resulting from weather extremes, it will not be considered further.

#### *Flood*

The ESCO facilities are located at or above 40 feet above sea level, with the Willamette River at a typical range of 10-25 feet above sea level. Per the City's BEOP, the Main Plant and Plant 3 foundries are both outside of the 100-year floodplain, and therefore, flooding is not considered a potential catastrophic event included in this plan.

#### *Explosion*

As discussed in the next section, there are substances stored at ESCO that have the potential for fire or explosion. It is very unlikely that an explosion would occur that threatens neighborhood safety. In the event of an explosion, the greatest risk to people and the environment would be fire resulting from the explosion.

#### *Fire*

With the presence of natural gas burning equipment, molten metal, welding and other hot-work operations, there is considerable risk of fire at the foundries. In the event of a large fire, material threats to the neighborhood would be smoke inhalation and the potential of fire spreading into the neighborhood. This is addressed as a potential reverse 911 event below.

#### *Chemical Spill/Release*

ESCO does not store large quantities of noxious or toxic chemicals which would present a threat to people and the environment if spilled or released into the air. Storage of hazardous substances is discussed in greater detail in the next section. The greatest risk from a spill would be any resulting fire, which is discussed above.

### **Hazardous Substances Stored at ESCO**

There are several chemicals stored and in use at ESCO, however the majority of materials used in large quantities are relatively inert, such as steel, sand, refractory brick, argon and carbon dioxide. ESCO operates according to Spill Prevention, Control and Countermeasure Plans at each of the facilities and is equipped to handle potential spills. Emergency response services are on contract for around-the-clock assistance in the unlikely event of a large chemical spill. The chemicals stored in large quantities are summarized below, including why they are unlikely to result in a catastrophic event.

#### *Liquid Oxygen*

Liquid oxygen tanks at the Main Plant and Plant 3 are located centrally within their respective facilities. Liquid Oxygen is not inherently hazardous, but in the presence of fuel and an ignition source, it poses risk of fire. It is very unlikely that a leak or failure of one of the tanks could occur, but since there are no substantial fuel sources or buildings within the immediate area, a fire would be very unlikely even in the event of a leak or failure. The tank at the Main Plant is protected from collision by a fence on all sides, and an elevated concrete pad on two sides. The tank at Plant 3 is protected on one side with a building, two sides with bollards and railing, and the front is protected with an elevated concrete pad.

### *Binders*

Various binders are stored at both facilities, with storage and use of binders in several areas at each facility. The binders are stored inside buildings or inside secondary containment designed to capture leaks or spills. Binder storage and dispensing areas are generally segregated from hot work, and only quantities of binders to support production are maintained on-site. Our supplier stores binder off-site, limiting quantities at the foundries to what is needed for production within a reasonable delivery window (1-2 drums of each chemical for each area in storage).

The binders do not present a substantial threat to the neighborhood in the event of a fire since the areas using combustible binders are located centrally within the plants. The smoke would be similar to poured molds but should not present an additional threat to the neighborhood beyond a large building fire, as the binders are not especially toxic.

### *Propane*

There are storage tanks of propane at each facility for filling smaller tanks used in portable heaters or forklift trucks. The tanks are designed with relief valves to prevent explosion, are surrounded by concrete bollards and steel railings to prevent collision, and are centrally located within the facilities. There is no realistic threat to the neighborhood.

### *Molten Metal*

The foundries each have furnaces for melting metal prior to casting. There is no possible pathway for molten metal to pose a threat to the neighborhood. The furnaces have large concrete pits designed to contain leaks and spills during tapping. Molten metal spills from holding vessels would be contained within the property boundary, though a fire may result, which is addressed in this plan.

### *Lime*

Each facility has a lime storage tank near the furnace area. Lime is calcium oxide that is used in the melting process to remove impurities. It is non-flammable and non-toxic. Breathing lime dust can be irritating to the respiratory system, yet a dust cloud is unlikely, even in a catastrophic event.

### *Sulfuric Acid*

There is a single 55-gallon drum typically stored at the Main Plant in secondary containment, and it is not feasible for it to be released in a manner that would threaten the neighborhood, even during a catastrophic event.

A specific concern raised by neighbors was the potential time needed for ESCO to shut down operations in the event of a catastrophic event, and whether this leads to greater risk to the neighborhood. Another concern was whether ESCO stores or uses chemicals that have the potential for a runaway reaction resulting in a release of noxious or dangerous chemicals. There are no processes at ESCO that cannot safely be shut down in the event of an emergency, though damage would result to any vessel holding molten metal. There are also no processes that could undergo a runaway reaction and lead to dangerous emissions.

Taking into consideration the chemicals stored at the site and the potential catastrophic events, the only incident type that would affect the neighborhood and require activation of the reverse 911 system would realistically be a large fire.

## **Emergency Response Procedures and Communications**

In the event of an emergency at ESCO, ESCO will contact the Portland Fire Bureau to respond. The Fire Bureau is informed of the address of the site, the location of the incident within the site, a description of the incident, and any other requested information. The city follows their plan as detailed in the following section, *City of Portland Reverse 911*, and according to the BEOP.

As required by the GNA, in the event of a plant upset condition that requires notification of emergency services or a governmental authority, ESCO has an established process to notify NAC representatives. This includes fires requiring outside assistance to manage, pollution control equipment breakdowns that result in excess emissions, or chemical releases that require reporting to a governmental agency. These events may or may not require activation of the Reverse 911 system, depending on their severity. This public alert determination is made by the City of Portland as discussed in the following section.

### *City of Portland Reverse 911*

During a response the Portland Fire Bureau determines whether to activate the PublicAlerts system based on the size and scope of the emergency, the weather pattern, and the potential impact to surrounding areas. This decision is made by the City's Incident Commander at the scene of the emergency.

The alert instructs the public to either shelter in place or evacuate the area through one of three methods: email, text message or voicemail. The system requires cell phone users to sign up for the service to receive either email or text notifications. Voicemail to either cell phone or land-lines requires more time to accomplish, while text and email notifications take only a few minutes.

In the event of an emergency at ESCO requiring activation of the PublicAlerts system, the alert would instruct the public whether to evacuate the area, shelter in place, or avoid the area near ESCO, or any special circumstances or instructions necessary for public safety.

## **Conclusion**

The Good Neighbor Agreement Emergency Response Plan provides the necessary information for neighbors to understand the potential risks posed by ESCO and the procedures in place to notify neighbors if an event at ESCO threatens the neighborhood.

*If you have questions about the Good Neighbor Agreement or this plan, contact the following:*

Shannon Huggins, Community Affairs, ESCO Corporation:	503-778-6772
Travis Quarles, Environmental, ESCO Corporation:	503-778-6493

*If you have questions about the procedures used by the City, contact:*

Carmen Merlo, Emergency Management, City of Portland:	503-823-4375
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