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## Plant X Portable Building Policy

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### Purpose

This policy provides details on how occupied buildings will be managed at [PLANT-X](#). Two specific areas will be addressed in this policy:

1. Placement of occupied portable buildings
2. Occupation of buildings (permanent and portable) during [Link to Elevated Risk Periods](#)

This policy covers buildings inside [PLANT-X](#) managed areas:

- [XXX block](#)
- [XXX block](#)
- [XXX block flare area](#)
- [XXX block south and west of XXX block](#)

This policy is NOT applicable to [Block X-XX](#) or [Block-XX](#) and areas that are outside of the Building Damage Level 2.5 Contours (as calculated by Baker-Risk) depending on the type of portable building.

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### Placement of Portable Buildings

All placements of occupied portable buildings at [PLANT-X](#) must comply with LPP 12.8. [Ethylene is a high fuel reactivity material](#). –Any exceptions must–require a variance to LPP 12.8

A Portable Building MOC must be completed prior to installing and occupying any portable building. The [PLANT-X](#) MOC database should be used. A Portable Building MOC form must be completed and included in the Portable Building MOC ([a link may be placed here](#)) documentation prior to sending out the Portable Building MOC ([a link may be placed here](#)) for review. This is considered to be a Level 2 change.

The Production Leader is responsible to ensure that a plan is developed to address existing occupied buildings (permanent and portable) in accordance with the timetables laid out by Process Safety requirements.

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### Placement of Portable Buildings for Turnarounds and Projects

LPP 12.8 allows portable buildings located near process areas to be occupied once the hazards have been removed (i.e. plant is shutdown and hydrocarbons are removed from process) and administrative controls are in place. See LPP 12.8 for more details.

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## Elevated Risk Periods

**PLANT-X Elevated Risk Periods** can be defined as one of the following periods:

1. **Plant Shutdown:** This period generally begins when a compressor trips or plant load is less than 200,000 lb/hr. This period generally ends when all the compressors are shutdown or in slow-roll and all shutdown hydrocarbon systems are de-pressured. Cutting rates in a controlled manner in preparation of shutdown is not part of this period.
2. **Plant Startup:** This period generally begins when hydrocarbons are being re-introduced to inventory plant systems (i.e. liquid or pressurized hydrocarbons are being reintroduced. Not necessarily intended to include low pressure purge gases). This period generally ends when all compressors are running and the plant is on-spec and stable. Increasing rates in a controlled manner once on-spec is not part of this period.
3. **Significant Process Upset:** This period generally begins when a significant process upset occurs and generally ends when the situation has been resolved and the plant is on-spec and stable. Examples of a significant process upset:
  - compressor trip
  - reactor exotherm
  - uncontrolled fire in a flammable area
  - multiple hydrocarbon PSVs relieving to the flare
  - gas release
  - any other situation the Crisis Response Leader deems a significant process upset

Offgas & fuel gas systems are not considered as hydrocarbon systems for the above criteria.

The current and previous condition of equipment shall be considered when determining when elevated risk status applies. Equipment that has been opened up and worked on has a higher risk of leaks or problems when starting up than equipment that was not worked on or not altered.

It is possible to have multiple shutdown or startup periods as part of one event. For instance, T-XX system can be inventoried, started up and stable significantly before the rest of the plant is started up. Once T-XX is considered in stable operation the Elevated Risk Period requirements would not apply.

**The above criteria should be used as guidance to determine Elevated Risk Periods. The Startup Shutdown Coordinator will make the official determination for any planned event when Elevated Risk Periods start and finish, while the Crisis Response Leader will make the determination for unplanned events.**

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**Activities in Adjacent Plants**

At this time there is no process to manage Elevated Risk Periods within [PLANT-X](#) managed areas which are the result of activities in adjacent plants, e.g. [Plant Y](#), [Plant Z](#), etc. This will be established sometime in the future.

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**Personnel Essential-to-Operations**

The [PLANT-X Ripple list](#) identifies the personnel (operators, run plant staff, etc) who are by default essential-to-operations.

The Startup Shutdown Coordinator (for planned events) and Crisis Response Leader (for unplanned events) will determine which additional personnel are essential-to-operations. Examples of others who may be required are: I&E and maintenance crafts, maintenance staff, Critical Rotating Equipment analysts, process control personnel, etc. This list should be communicated in advance if possible to allow non-essential personnel to make alternate arrangements and minimize the impact to contractors.

Non essential personnel shall indicate their temporary work location and a contact number in the location of non essentials spreadsheet [Location of Non Essential spreadsheet](#).

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**Signs / Barricades for Restricting Access**

During Elevated Risk Periods, signs should be placed on the entrance to the [B-XXX parking lot and west side of the maintenance shop \(between B-XXX and furnace\)](#) stating that access is restricted to essential-to-operations personnel only. These signs are stored in the fenced in area behind the maintenance shop when not in use.

Also, the entrances to the south portion of the [B-XX](#) block should be barricaded during Elevated Risk Periods. The gates should be closed or barricades installed to prevent entry. [Access to B-XX and B-XX](#) should not be restricted.

The Crisis Response Leader is responsible to make sure that the signs and barricades are installed.

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**Unplanned Events**

Plant horns will be sounded to clear process areas during unplanned Elevated Risk Periods.

During unplanned events the Crisis Response Leader is responsible for determining the start and end of the Elevated Risk Period.

The Crisis Response Leader is responsible to notify site ES&S by phone ([x2112](#)) at the start and end of Elevated Risk Periods. ES&S will make site PA announcements as appropriate.

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## Planned Events

For planned events the Startup Shutdown Coordinator is responsible for determining the start and end of the Elevated Risk Period.

The Crisis Response Leader is responsible to notify site ES&S by phone (x2112) at the start and end of Elevated Risk Periods. ES&S will make site PA announcements as appropriate. When possible the Startup Shutdown Coordinator shall notify ES&S, adjacent blocks, and other impacted personnel in advance of any planned Elevated Risk Period.

Mandatory Notifications (includes facilities within the 1200 ft zone):

- ES&S
- PLANT-X Operations, Improvement & Maintenance
- Block-XX for Plant D
- Block-XX for Plant E
- Block-XX for Plant F
- Block-XX for Plant G

Courtesy Notifications (other neighboring blocks):

- Block-XX for Plant H
- Block-XX for Plant I
- Block-XX for Plant J
- Block-XX for Plant K
- Block-XX for Plant L

A global distribution list has been created to assist with the notification. The distribution list name is [“.DL TX XX PLANTXNEIGHBORS”](#).

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## Occupation of Buildings during Elevated Risk Periods

During Elevated Risk Periods, only those personnel essential-to-operations should be within the PLANT-X managed areas. All those deemed non-essential should make alternate work arrangements (work in another building, work from home, etc.).

Essential-to-operations personnel who normally reside in portable buildings should temporarily relocate to Block-XX.

Portable buildings (offices, conference rooms, lunchrooms, etc) should not be occupied during Elevated Risk Periods.

During an Elevated Risk Period, non-essential personnel are allowed to temporarily enter the PLANT-X facility to remove their computers, tools, files, etc., but the time in the facility should be minimized.

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## Maintenance / Project Work during Elevated Risk Periods

Only maintenance or project work that is essential will be allowed during Elevated Risk Periods. Critical path work may be allowed during Elevated Risk Periods with adequate reviews and approval.

Non-essential work will not be allowed during Elevated Risk Periods regardless of who is performing the work or the cost structure of the work (T&M or lump sum). This includes normal planned maintenance work.

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**Adjacent Facilities,  
XX Plant**

The **XX plant**, located in the **south west corner** of the **Block-XX** is owned by the **YY business** and operated remotely out of **Block-XX**. They will be notified of all elevated risk periods as per the notifications required in this policy. During **PLANT-X** elevated risk periods, operations and maintenance individuals are allowed to enter the **XX plant** if deemed necessary by **Block-XX**.

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**Block-X Flare**

During Elevated Risk Periods, no one should be authorized to enter or work in the **Block-XX flare** block given the radiation hazard associated with flaring. All work must be immediately suspended during process upsets and will be initiated by sounding the horns in the flare block.

It is not necessary to communicate Elevated Risk Periods to the blocks within 1200 feet of the **Block-XX** flare block given this is an open area with little congestion and low risk of a contained explosion.

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**Turnarounds**

For turnarounds a safe work plan shall be established to manage work activities and building occupancy during elevated risk periods.

See example: [PLANTX Secure\Turnaround\Key Element Teams\Plant Preparation\Work\Safe Work Plan.doc](#)

[please add your facility link here](#)

Once the high fuel reactivity components (i.e. all liquid and pressurized ethylene) has been removed from the plant the separation distance for elevated risk can be downgraded from 1200 ft to 430 ft, the required separation distance for medium fuel reactivity components (i.e. most hydrocarbons including propylene, benzene, etc).

The 1200 ft separation distance shall be re-established when liquid or pressurized ethylene is reintroduced to the plant.

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**Responsibilities associated with Elevated Risk Periods**

Startup / Shutdown Coordinator:

- Determine the start and end of the Elevated Risk Period for planned events
- Determine which personnel are essential-to-operations for planned events.
- Make advance notifications for planned events
- Communicate the essential-to-operations list as far in advance as possible.

Crisis Response Leader:

- Clear block during unplanned Elevated Risk Periods
- Determine the start and end of the Elevated Risk Period for unplanned events
- Determine which personnel are essential-to-operations for unplanned events.
- Notify ES&S when an Elevated Risk Period begins and ends.
- Ensure the appropriate signs and barricades are installed to restrict access to the [Block-XX and south side of Block-XX](#) during Elevated Risk Periods.

[PLANT-X](#) Office Professional ([Block-XX](#), [Block-XX](#), [Block-XX](#), [Block-XX](#), [Block-XX](#)):

- Review conference room calendars and notify [Block-XX](#) meeting organizers [Block-XX](#) that their meetings will need to be moved during Elevated Risk Periods.
- Cancel unnecessary deliveries/services during the Elevated Risk Period

[Block-XX](#) Office Professional ([Block-XX](#), [Block-XX](#), [Block-XX](#), [Block-XX](#), [Block-XX](#)):

- Review conference room calendars and notify meeting organizers that their meetings will need to be moved during Elevated Risk Periods.
- Cancel unnecessary deliveries/services during the Elevated Risk Period

Owner's Representatives:

- Communicate to all impacted contractors if they are essential or not.
- Ensure contractors are aware of the access restrictions.

Work Activity Coordinator:

- Communicate to all maintenance workers if they are essential or not.
- Make arrangements for those who are non-essential.

Essential-to-Operations Personnel:

- Support operations as requested during all Elevated Risk Periods.
- Temporarily relocate to [Block-XX](#) if necessary.
- Monitor [PLANT-X](#) areas for non-essential individuals
- Do not be present in the control room unless your assistance is needed.

Non-Essential Personnel:

- Make alternate work arrangements for Elevated Risk Periods.
- Move or cancel any meetings planned during the Elevated Risk Period.
- Do not enter [PLANT-X](#) managed areas during Elevated Risk Periods unless requested.
- Update the [Location Critical Personnel or Roles Non Essential](#) with your location and contact number. [Note to reader – you must add a link here for your plant with a list of these roles and personnel names.](#)

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## References

LPP 12.2 Occupied Plant Buildings Subject to External Hazards  
<[http://ehs.intranet.dow.com/library/standards/0603\\_lpp/#12](http://ehs.intranet.dow.com/library/standards/0603_lpp/#12)>

LPP 12.8 Occupied Portable Plant Buildings Subject to External Hazards  
<[http://ehs.intranet.dow.com/library/standards/0603\\_lpp/#12](http://ehs.intranet.dow.com/library/standards/0603_lpp/#12)>

PLANT-X Ripple List [add link for your facility](#)

[Location Critical Personnel: Add link here](#)

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## Goedkeuring

Naam:

Datum: 26 mrt 2018

MOC: [EH&STNZ2018010010](#)

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## Document historie

Overzicht van tenminste de laatste 3 wijzigingen van dit document, inclusief alle wijzigingen van de afgelopen 6 maanden. De meest recente wijziging staat bovenaan.

Datum	Naam	Wijzigingen
17 januari 2019	Nd09252	Namen vervangen door mannummers ivm privacywetgeving
26 mrt 2018	U360303	Review bij MOC <a href="#">EH&amp;STNZ2018010010</a> , geen wijzigingen.