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## Gowanus Environmental Remediation Trust

### Safety Health and the Environment

### Management of Change Procedure

Rev. #	Date	Description
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1	10/2/2017	

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## 1.0 INTRODUCTION

This procedure outlines the systematic process to follow to verify that changes are risk evaluated before they are approved to be performed.

Changes could be experienced at any point during the lifecycle of the job including when the work is planned, designed and executed per original plan. When any deviation occurs from original plan, this is considered a change and requires assessment to determine the change's risk impact. This procedure covers potential risks that could change the safety risk profile of the project.

Potential changes need to be reviewed in a consistent manner with the type of risks. If process safety type risks are identified, both the consequences and likelihood should be evaluated as part of the PHA process. If personal safety type risks are identified, they should be evaluated via the Job brief process. Even small changes to safety systems can result in catastrophic failures.

**NOTE: All references to “Contractor” also apply to Subcontractors and all business entities working on site.**

## 2.0 PURPOSE

The purpose of a Management of Change (MOC) process is to ensure the assessment of the risk associated with a potential change from a Process or Personal Safety perspective prior to implementing the change.

### 2.1 Applicability

If a modification to any existing equipment or procedures takes place, the Management of Change procedures must be followed. Replacements in kind are not subject to the program.

Modification means any change in existing equipment or procedures which are directly involved with the process including additions or deletions. Modification does not include routine maintenance or replacement in kind.

Replacement in kind means the replacement of existing equipment with identical or equivalent equipment and installation.

### 2.2 Review/Revisions

Revisions to the procedure may be made as a result of a review or audit, regulatory changes, availability of new information, or a change in project policies or procedures.

Management of Change reviews will also take place if changes to the project may affect the validity of the existing assessment such as significant reorganizations and

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significant changes in workforce responsibilities.

### 2.3 Documentation

Management of Change reviews are documented on the MOC form (**Attachment A**). The completed forms are submitted to the Project Safety Manager (PSM).

### 2.4 Quality Assurance and Audit

The PSM is responsible for enforcing compliance with MOC reviews developed from this procedure. Implementation of this procedure is subject to audit.

## 3.0 DEFINITIONS

### 3.1 General Definitions

Shall – Indicates a mandatory requirement

Should – Indicates best practice and is the preferred option. If an alternative method is used then a suitable and sufficient risk assessment shall be completed to show that the alternative method delivers the same or better level of protection

Change & Modifications – Alterations in operational procedure or practices to the asset or process which may affect operational safety, system(s) reliability or compliance with applicable operation permits

Competent Person – A person demonstrating their capability to perform satisfactorily the assigned function by appropriate training in methods and equipment to be used or related experience and accomplishments

### 3.2 Defining the Asset Design Modification / Change

*The level of scrutiny and review required for any modification or repair shall be based on the risk and consider the consequence and likelihood of the modification or repair failing. This is not always financial as even small changes to safety systems can result in catastrophic failure*

**Major Projects** – Major Projects require a substantial amount of scrutiny and documentation in order to achieve the desired goal in a safe, reliable and efficient manner. Major projects tend to be a complex process, require a formal design / design review and approval process. For process safety risks, an MOC form shall be completed and an appropriate level safety, health and environmental assessment shall be carried out as part of it prior to approving the change.

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**Minor Projects** – Minor Projects can be initiated from an idea that makes an operating or maintenance function more efficient or from an equipment malfunction that requires repair or replacement. In any case the change would be determined to be simple and straight forward without impacting the overall original design criteria of the asset. For process safety risks, an MOC form shall be used unless the level of risk associated with the modification is assessed to have no impact on safety of the site.

**Replacement in Kind (RIK)** – Is an item, part or equipment that meets the original design specification, if one exists, of the item being replaced. This is not an exact replacement but does perform the function as set forth by meeting the original design specification. The RIK alternative must not in any way adversely affect functionality, reliability or safety of that item, or related items. For process safety risks, an MOC form shall be used to demonstrate the replacement meets the original design and operation requirements.

**Like for Like** – Is an exact replacement, in every detail. Records of the change should be kept.

**Emergency Change** – A change requiring immediate action to prevent an unacceptable safety hazard or other hazard. Such changes, if permanent, shall be reviewed by the Site Operations Manager and PSM or appropriate designee(s) prior to implementation. For process safety risks, an MOC form shall be completed following the implementation of the change.

**Temporary change** – A change that is implemented for a short period. A review shall be taken of the proposed change and if it is found that it could have potential impacts on major accident hazards, an MOC is required. If it is found that there are no potential impacts on major accident hazards, then no MOC form is required, although arrangements should be in place to assess the aggregated impact of a number of temporary changes.

## **4.0 RESPONSIBILITIES**

### **4.1 Risk Assessment Management Committee**

The Risk Assessment Management Committee (RAMC) will be comprised of representatives from the Gowanus Environmental Remediation Trust (ERT). The RAMC and the PSM will make final decisions on the Change and may participate in the Management of Change review as it deems necessary.

### **4.2 Project Safety Manager (PSM)**

The PSM has overall responsibility for this procedure and will make the initial review of the MOC.

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The PSM has the responsibility to facilitate the MOC process with the various contractors on site.

The Change Control Form (included in **Attachment A**) must be signed by the PSM prior to the implementation of the Change.

#### **4.3 All Employees**

All project personnel are responsible for adhering to the MOC procedure and initiating the process prior to making any changes to a process or piece of equipment.

### **5.0 PROCESS**

The following considerations are required for Design modifications, Construction and Maintenance modifications. Design modifications include changes in equipment, process technology and change in operation outside the current normal operating limits. Construction and Maintenance modifications include changes to the work scope, work process or facility siting that could result in an increased risk.

- The original Design, Construction or Maintenance documents and the proposed change shall be conducted by a Competent Person(s) and shall consider all original design and scope criteria.
  - The original Design, Construction or Maintenance documents and the proposed change shall be approved by the Risk Assessment Team (see Risk Assessment Procedure). An independent assessment by the Risk Assessment Team may be required for major design changes depending on the scope of work.
- A Change Control risk assessment will be one of the following types:
  - Process Safety – Review of change must be consistent with the requirements outlined in the Process Safety PHA Guidance
  - Personal Safety– Changes must be discussed and documented as follows:
  - Engineering – Scope or design changes
  - Construction & Maintenance– Field condition changes as part of job brief
- The Design, Construction or Maintenance scope shall include an appropriate assessment of all potential hazards related to the proposed process change and/or construction activities. The process safety risk matrix or other suitable tool shall be used to evaluate the severity and likelihood of changes with process safety type consequences.
- All designs shall include a detailed review of permit requirements (external permits required for construction e.g. environmental permits or safety permits for the site / asset) and shall be conducted in accordance with all applicable operating procedures.
- Time limits shall be put in place as part of MOC for any temporary changes and the MOC process shall ensure the process goes back to its original design condition.

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- Training / employee awareness programs shall be reviewed and modified to reflect changes in operations and maintenance resulting from any equipment or process design changes.
- All review requirements with involved workers shall be completed and approved before the change is put into operation.

## **6.0 TRACKING, ROUTING, AND DOCUMENTATION**

Projects and tasks with PHAs must follow the procedures outlined in the **Process Safety PHA Guidance** procedure.

For projects and tasks that do not have a PHA, the following procedure must be implemented:

### **6.1 Changes During Preconstruction**

- Engineering identifies and analyzes change
- Communications occur to all project team
- Documentation as part of change control process

### **6.2 Changes During Construction**

- Contractor/Subcontractor Project Manager and SSO identifies and analyzes change
- Communications occur to Operations Manager and Changes impacting job brief

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**ATTACHMENT A: MANAGEMENT OF CHANGE FORM**

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<b>Change Control #</b>	<b>Date:</b>	<b>Region:</b> <input type="checkbox"/> DSNY <input type="checkbox"/> USNY <input type="checkbox"/> NE
<b>Change Requestor</b>		<b>Project Information</b>
Name:		Project Name/Address:
Title:		
<b>Change Order Category</b>		
<input type="checkbox"/> 1. Major Project		<input type="checkbox"/> 4. Emergency Change
<input type="checkbox"/> 2. Minor Project		<input type="checkbox"/> 5. Temporary Change
<input type="checkbox"/> 3. Replacement in Kind		

**Description of Change and Potential Process Safety Risks:**

Change review completed by:

Risk assessment of proposed change completed by:

Process Safety **Severity** of change: 1, 2, 3, 4, 5

Process Safety **Likelihood** of change: 1, 2, 3, 4, 5

Process Safety **Risk:**                      Low, Medium, High

If Temporary change, latest date before temporary change must be removed:

**Reason for Change:**    Field Conditions    Scope Change    Design Change    Other

Explanation:

**Change Notification**

Name	Title/Position	Method	Date
	Originating Organization	<input type="checkbox"/> Verbal <input type="checkbox"/> Writing	/ /
	Other	<input type="checkbox"/> Verbal <input type="checkbox"/> Writing	/ /
	Other	<input type="checkbox"/> Verbal <input type="checkbox"/> Writing	/ /
	Other:	<input type="checkbox"/> Verbal <input type="checkbox"/> Writing	/ /

**Approval of Change**

Signature(s)			(use for additional approvals if necessary)		
Authoriz ed by:	Print:  X_____	Date	Authoriz ed by:	Print:  X_____	Dat e