

# Advanced Photon Source

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## APS Protocol for Reporting Construction Vibration Issues for Beamlines

### Section where used:

This procedure describes the process for reporting and resolving suspected construction-related vibration issues at the APS.

### Changes made in this revision:

- Removed references to Vibration Task Force
- Removed B. Glagola as Preparer
- Reassigns responsibilities from Task Force Sub-Teams to AES personnel and line management
- Tightens and clarifies throughout
- Added link to the Construction Vibration Monitor, established in 12/2020
- Added link to Vibration Data Logs

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## APS Protocol for Reporting Construction Vibration Issues for Beamlines

### 1 INTRODUCTION

#### 1.1 Purpose

This procedure defines a process for mitigating construction vibrations to ensure they do not disrupt beamline and/or accelerator operations.

#### 1.2 Scope

This procedure applies to vibrations caused by construction activities in or around the APS.

#### 1.3 Reference

- MCR Vibration Alarm Levels ([APS 1439112](#))
- Construction Vibration Monitor for Beamlines (<https://ops.aps.anl.gov/VMS/VMS.html>)
- Vibration Monitoring System Data Logs (<https://ops.aps.anl.gov/logging/VMS.html>)

### 2 BACKGROUND

To identify the presence and extent of vibration in and around the facility, the APS has deployed vibration sensors in ten locations on the experiment hall floor. They are in sectors 5, 19, 21, 23, 26, 29, 31, 33, 34, and the CNM, and their data are monitored continuously by the MCR. In December of 2012, a monitoring tool was developed for beamlines to see their data across multiple frequencies, updated every 60 seconds.

### 3 PROCEDURE

If a beamline believes it is being negatively impacted by construction related vibration, a spokesperson is to call the On Shift Floor Coordinator (FC) at either 2-0101 or 630-863-0808. If the On Shift FC cannot be reached, the spokesperson is to contact the MCR at 2-9424.

The FC or MCR Operator will notify the AES and XSD Division Directors and ADDs about the complaint.

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If the MCR registers a vibration alarm or believes accelerator operations are being negatively impacted by construction vibration, the MCR will promptly notify the AES and XSD Division Directors and ADDs that potentially disruptive vibrations are present.

AES Division management (DD, ADD, or Deputy ALD) shall then:

- Evaluate the complaint and the impact on beamline, accelerator, and construction activities
- Notify (or delegate notifications to) APS and beamline personnel of potential vibration issues
- Determine whether vibration causing construction activity should be suspended. If it is to be, coordinate the suspension and resumption of the activity through ANL Infrastructure Services (IS).
- Notify APS staff and beamline personnel of any actions taken
- Where necessary, identify follow-on actions that will help avoid future disruption to accelerator of beamline operations

## 4 FEEDBACK AND IMPROVEMENT

If you are using this procedure and have comments or suggested improvements for it, please go to the [APS Policies and Procedures Comment Form](#)\* to submit your input to a Procedure Administrator. If you are reviewing this procedure in workflow, your input must be entered in the comment box when you approve or reject the procedure.

Instructions for execution-time modifications to a policy/procedure can be found in the following document: Field Modification of APS Policy/Procedure ([APS\\_1408152](#)).

\* <https://www.aps.anl.gov/Document-Central/APS-Policies-and-Procedures-Comment-Form>