



THREE-YEAR SECTOR SAFETY REVIEW REPORT

ICMS Document Number APS_2167825

Review Number	Review Title	Review Date
PSC-2020-TYSSR-XSD-MPE	Three Year Sector Safety Review of XSD-MPE Beamlines 01-ID and 06-BM	July 9, 2020
Scope / Agenda		Review Team
XSD-MPE ES&H Plan Implementation Sector 1-ID, 6-BM Specific Safety Issues PSC/AES Configuration Control Records RSS Component Survey & Alignment Update RSS Interface Identification PSS User Requirements Specification Ray Traces, Operational Envelope, Design Reviews Health Physics Survey Records ES&H Inspection Records ES&H Walk-Through LOM 431A, 432B office areas, laboratories Sector 1ID, 6BM beamlines, control areas, egress aisles	John Connolly Nena Moonier Patti Pedergrana Elizabeth Schmidt Paul Rossi Mike Fries Cassandra Hayden Steve Davey Ken Belcher Merrick Penicka Beth Heyeck Steve Bogdan Bruno Fieramosca Jon Almer Ali Mashayekhi John Okasinski Sarvjit Shastri	
Review Chair	ESH/QA Representative	Responsible Manager
Nena Moonier	Mike Fries	John Connolly

Executive Summary:

The XSD-MPE Three-Year Sector Review was conducted on July 9, 2020. The beamlines reviewed were 1-ID and 6-BM. 1-BM is no longer a part of XSD-MPE. XSD-MPE is noted as having a good safety program and can be commended for their proactive approach to safety issues. Any Action Items noted in this review report were placed in the APS Action Item Tracking System.

Section 1: TYSSR criteria are based upon APS User Safety Policies and Procedures, APS Procedure 3.1.102, Section Beamline Facilities Reviews (Formerly AP&P 3.1.18, APS document number APS_118581)

Agenda Items / Review Criteria	Discussion / Objective Evidence	Action Required
1. Date of last TYSSR	January 24, 2017	None

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2.	Beamline management presents a summary of the ES&H program and notes changes, if any, since the last TYSSR.	Ali Mashayekhi and Jon Almer presented the XSD-MPE TYSSR Safety Presentation.	Presentation will be uploaded to ICMS
3.	Committee records concerns raised by Sector Personnel	None	None
4.	Committee reports outstanding action items, if any, from last TYSSR	From the 2017 review, Sector 1 asked for rodent control and sealing of the LOM buildings. Previously P. Pedergnana contacted R. Janik who met with ANL maintenance about sealing the APS LOMs. P. Pedergnana also entered a Vector request on August 18, 2015 regarding this issue and the project status was listed as "ON HOLD" in the Vector system.	Facilities Request FMS0011602 was changed from "On Hold" to "Completed" as of June 9, 2018 with completion code "Request Fulfilled."
5.	Each partner user group operating a beamline shall:	<i>See sub-items.</i>	
6.	Review beamline safety program and ES&H plan at least once every thirty-six months; revise them, as needed, and provide ES&H plan to APS User Safety Officer for approval.	The XSD Beamline Safety Plan is APS_1270900 in ICMS and is valid through September 2020.	None
7.	Review beamline safety assignments annually and reassign responsibilities or create new roles, as needed; notify USO of changes in personnel assigned to ES&H roles.	Communicated through monthly data check of Beamline HR Admin application.	None

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8.	The committee verifies that the following records are on file and consistent with the beamline:	<i>See sub-items.</i>	
9.	Review/approval records for modifications to beamline safety systems since last TYSSR	There have been no changes to 1-ID or 6-BM since the TYSSR in 2017.	None
10.	Configuration control list	Current as of the beginning of the last run.	None
11.	Administrative Restrictions	There is one AR at 1-ID. 1-ID cannot run in white beam until Type C Surveys are completed and a Routine Radiation Survey is performed while in white beam. 6-BM has no ARs.	If 1-ID wishes to run in white beam, Type C Surveys and a Routine Radiation Survey must be performed while operating in white beam.
12.	RSS component survey and alignment worksheets	1-ID and 6-BM were both last surveyed during the April/May 2019 shutdown.	None
13.	RSS interface Document	1-ID: APS_1218051 6-BM: APS_1704971	None
14.	PSS user requirements specification	1-ID: APS_1181469 6-BM: APS_1121892	None
15.	Sector floor plan, including egress aisles and work areas	1-ID: APS_1441910 6-BM: APS_1437616, FDR, sheet 6	None
16.	Beamline layouts showing major radiation safety shielding components	1-ID: APS_1441910 6-BM: APS_1437616, FDR, sheet 6	None
17.	Synchrotron and Bremsstrahlung ray trace drawings for all operating modes	1-ID: APS_1407659 6-BM: APS_1413675	P. Pedernana uploaded RTs from TN13-021 to ICMS folio APS_1413675 7/7/2020.

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18.	Design drawings of RSS components that show functionality, shielding and aperture dimensions, and shielding material	1-ID: APS_1419210 6-BM: APS_1426494	None
19.	Thermal analysis for RSS components connected to PSS water flow	1-ID: APS_1201560 6-BM: APS_1256118 (Thermal Analysis of Bending Magnet Beamline Components)	None
20.	Assembly drawings for x-ray shielded enclosures	<p>From the 2017 TYSSR:</p> <p>Beamline Design Library in these directories:</p> <p>1-ID</p> <p>http://bdl.aps.anl.gov/bin/Listing.pl?dir=/Hutch/H1</p> <p>1-ID-A P41050903-230000-00 (8 sheets) 1-ID-B P41050903-220000-01 (9 sheets) 1-ID-C P41050903-210000-02 (10 sheets) 1-ID-E ANL-1-ID-E Folio (APS_1688913)</p> <p>6-BM</p> <p>BM hutch records on file, including validation records.</p>	<p>From the 2017 TYSSR: User Technical Interface to locate drawings within the BDL directories or design review BOX files, create Beamline Enclosure Drawing Folios for 1-ID and 6-BM, and upload the folios to ICMS.</p> <p>As of 7/7/2020: Drawing lists with links to the BDL for 1-ID-A,B,C are in ICMS. However the drawings remain to be uploaded to ICMS. 6-BM enclosure drawings still need to be located and uploaded to ICMS. Assigned to P. Pedergrana in the APS Action Item Tracking System (# 2342) with a completion date of 01/11/2021.</p>

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21.	Date of last Health Physics routine survey	The 1-ID annual HP routine survey was completed on 2/5/2020. There is a known small leak where the transport line enters the C hutch. Remediation was done at this location with Plexiglas for the dose to be background. The 6-BM annual HP routine survey was performed on 2/21/2020 and no issues were noted during the survey.	None
22.	ES&H coordinator provides recent ES&H inspection reports and identifies open safety issues, if any.	1-ID: Completed January 8, 2020 6-BM: Completed January 28, 2020	The presence of combustibles (cardboard, used oil, etc.) was noted in the 6-BM-A,B hutches during the last ESH walk-through. Corrective action has been taken by the beamline to remove the combustibles from the hutches.
23.	Committee and beamline personnel discuss opportunities for improving the process	Nothing noted.	None

Section 2: Safety walk-through was not completed on the day of the review.

ICMS Workflow Approvals Required

Nena Moonier (Assessment Team Leader)
 Paul Rossi (Assessment Team Member)
 Mike Fries (Assessment Team Member)
 Patti Pedergnana (Assessment Team Member)
 Elizabeth Schmidt (Assessment Team Member)
 John Connolly (Responsible Manager)

<u>File / Distribution:</u>	PSC Deputy Assoc. Lab Director - Operations (Approver)
	XSD Division Director
	Sector Personnel and Safety Coordinator
	User Safety Officer
	PSC ESH/QA Representative
	User Experiment Oversight
	APS User Technical Interface
	AES-EFO Group

Supporting Documents:

XSD-MPE Sector 1-ID, 6-BM Three-Year Sector Safety Review Notification Letter (APS_2167821)

XSD-MPE Sector 1-ID, 6-BM Three-Year Sector Safety Review Agenda (APS_2167822)

XSD-MPE Sector 1-ID, 6-BM Three-Year Sector Safety Review Meeting Minutes (APS_2167823)

XSD-MPE Sector 1-ID, 6-BM Three-Year Sector Safety Review Presentation (APS_2167824)