Human Performance Improvement #219

Title Contractor Access Violation at NM3/4

Event Date 08/07/2018

Close Out Date 09/21/2018

Performed On Particle Physics Division, Engineering Support

Led By Particle Physics Division, Engineering Support

Department Manager Jonathan Lewis

Location NM3/4 Enclosure

ORPS No

Incident Category Unexpected Outcome

Entered By Jonathan Ylinen 08/21/2018 12:50

Updated By Dave Baird Jr. 07/14/2020 21:45

Incident Description On the afternoon of August 7th., a telecommunications subcontractor arrived onsite to investigate the malfunctioning PA system in the enclosure at NM3/4. The contractor was escorted into the enclosure by an individual from PPD. The contractor was without the RWP-required key and dosimeter badge. For untrained individuals, a radiological briefing by the Radiation Safety Officer (RSO) is required to obtain dosimetry, and the RSO can authorize the Main Control Room to issue a key. The subcontractor was issued a pocket dosimeter only by the PPD individual and received no dose upon exit. This was reported to the RSO for the Division who questioned why earlier instructions were not followed.

What Happened? On August 2nd the building manager had reached out to the telecommunications department with a request to have the PA system repaired in the enclosure for upcoming experimental work and ease of communication. It was communicated from the PPD individual to the telecommunications supervisor at this time that a key is required from the Main Control Room (MCR) to access the experimental hall. On the morning of the incident, the individual from PPD identified himself to the telecommunications supervisor as the local contact at NM4 for the telecommunications subcontractor, and that NM4 is under supervised access. It was stated that the subcontractor would need rad worker training, a key and there is a two man rule to enter, and that the subcontractor would not be able to get a key without the rad worker training. The MCR was contacted and told the Building Manager that a trained person can escort, but the RSO must be contacted. The RSO was contacted and gave instructions that the PPD individual can escort the subcontractor, but a rad briefing must be given and dosimetry issued. The subcontractor arrived onsite and was met by the PPD individual. An explanation of the radiological hazards was given to the subcontractor by the PPD individual and he was given a pocket dosimeter. They entered the enclosure for approximately 30 minutes to observe the condition of the cables and exited. The PPD individual reported no dose to the RSO. The RSO inquired why proper protocol was not followed, and the PPD individual responded that the subcontractor showed up late in the day and that he thought that someone had contacted the RSO, but did not verify. The PPD Deputy Division Head directed that all access and/or work in the enclosure be paused, and all keys be recalled. To ensure compliance, the RSO removed the RWP from the MCR, and instructed the MCR that no access will be granted until further investigation.

Immediate Actions Taken The PPD Deputy Division Head directed that all access and/or work in the enclosure be paused, and all keys be recalled. To ensure compliance, the RSO removed the RWP from the MCR, and instructed the MCR that no access will be granted until further investigation.

Why Did It Make Sense At The Time The PPD individual escorting the subcontractor had numerous activities going on throughout the day, and had planned on the building manager escorting the subcontractor based on the estimated time of arrival. When the subcontractor showed up later than originally estimated, the building manager was gone for the day. The PPD individual, working from his recollection of emails on the topic, concluded that he could escort the subcontractor into the enclosure on his long term issued key. There was therefore no visit to the Main Control Room to obtain an access key. He informed the subcontractor of the radiological hazards and gave him a pocket dosimeter. They entered into the enclosure with only one key, and the subcontractor was able to view the cables. They exited the enclosure and subsequently the PPD individual reported to the RSO that no dose was recorded on the pocket dosimeters.

Topic(s) Communication | General Management | Radiological Protection | Training

Lead Reviewer Ylinen, Jonathan 15897N (ES)

Review Team Chelidze, Nino 34887N (ES)

Review Team Joe, Cindy 15496N (ND)

Review Team Lewis, Raymond 07927N (ES)

Involved Person Baumann, Andrew 00852C ()

Involved Person Chelidze, Nino 34887N (AD)

Involved Person Larson, Nanette 05541N ()

Involved Person Richardson, Christopher 03648N (FE)

Involved Person Tesarek, Rick 12680N (PPD)

Organizational Weakness Organizational Interfaces: Poorly linked communication between PPD, CD, and ESH&Q did not include all appropriate individuals at the appropriate times.

Planning and Scheduling: There were multiple email chains discussing this event, but none placing the telecommunications coordinator and the RSO on the same chain.

Procedure Development or Use: The building Hazard Awareness Document is outdated and did not specify entry requirements since the enclosure configuration is changing from one experimental setup to another. There are no guidance documents that specify the frequency required to perform updates for short term changes.

Training: Requirements for service coordinators not periodically reinforced (no quarterly update like TM/CC).

Error Precursor Human Nature / Assumptions (inaccurate mental picture): The PPD individual assumed that the RSO had been contacted to approve entry/escort. Did not verify.

Human Nature / Habit patterns: The PPD individual is accustomed to entering the enclosure with a long term key, without having to visit the MCR each time an entry is made to obtain a key.

Individual Capabilities / Imprecise communication habits: Poorly linked communication between PPD, CD, and ESH&Q did not include all

appropriate individuals at the appropriate times.

Individual Capabilities / Lack of proficiency / Inexperience: The PPD individual had never escorted anyone into this enclosure before.

Task Demands / High Workload (Memory Requirements): Individual is the installation manager for the experiment.

Task Demands / Interpretation requirements: The PPD individual could not recall the exact requirements for escorting from earlier emails. Had mentally placed this task on the "back burner", thinking that the building manager would handle escorting the subcontractor.

Task Demands / Time Pressure: Subcontractor arrived at the end of the workday for the PPD individual. Sense of urgency to get the PA system repaired.

Work Environment / Changes / Departures from routine: Access requirements at the time of this incident were unusual due to the removal of the gate between NM3 & 4 and the rad posting of the area.

Causal Codes

Item ID	Causal Code	Narrative
99550	A3.B1.C03 Incorrect performance due to mental lapse	Had mentally placed this task on the "back burner" thinking that the building manager would handle escorting the individual. When the subcontractor did show up, he thought that the RSO had already been contacted.
99550	A4.B1.C01 Management policy guidance/expectations not well-defined, understood or enforced	The building Hazard Awareness Document is outdated and did not specify entry requirements since the enclosure configuration had changed from the previous experiment.
99550	A4.B3.C01 Insufficient time for worker to prepare task	The subcontractor showed up at the end of the work day and the PPD individual made assumptions that proper procedures had been followed without checking.
99550	A4.B3.C09 Work planning not coordinated with all departments involved in task	Poorly linked communication between PPD, CD, and ESH&Q did not include appropriate individuals at the appropriate times.
99550	A5.B2.C05 Ambiguous instructions/requirements	The instructions for entry requirements did not clearly spell out which individual needed to fill which role.
99550	A5.B4.C01 Communication between work groups LTA	Poorly linked communication between PPD, CD, and ESH&Q did not include appropriate individuals at the appropriate times. There was communication to the MCR and to the RSO as to the requirements for entry/escorting, but no confirmation as to who needed to fulfill those requirements. There was also an inquiry by the RSO as to the timing of the entry with no response.
99550	A5.B4.C05 Information sent but not understood	There was ambiguity in the instructions for escorting the subcontractor, which led to a misunderstanding. The instructions for entry requirements were not verified to confirm roles.
99551	A3.B1.C03 Incorrect performance due to mental lapse	Had mentally placed this task on the "back burner" thinking that the building manager would handle escorting the individual. When the subcontractor did show up, he thought that the RSO had already been contacted.
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iTrack Items

Item	Responsible Person	Categroy	Item Title	Item Description	Item Due Date	Item Status	CAP	CAP Scheduled Date	CAP Close Date	CAP Title	CAP Description	CAP Resolution	CAP Status
99550	Chelidze, Nino	Management Concern	Update RWP	Update RWP and add additional signage to the enclosure entrance stating that each individual entering the enclosure must have a key.	17-AUG-18	Closed	81168	17-AUG-18	17-AUG-18	RWP Updated		Wording on the RWP was updated and additional signs have been posted.	Closed
99551	Lewis, Raymond	Opportunity for Improvement	Update Building Hazard Awareness Document	DSO and installation manager to evaluate and update the building hazard awareness document	24-AUG-18	Closed	81169	24-AUG-18	24-AUG-18	Hazard Awareness Document updated		The Hazard Awareness Document has been reviewed and updated to reflect the current configuration of the enclosure.	Closed
99552	Larson, Nanette	Best Practice	Communications for unusual repair calls	Discuss protocol for communication chain when contractors will be visiting site and will be accessing unusual areas (Rad, ODH, Confined Space, etc.).	14-AUG-18	Closed	81170	14-AUG-18	14-AUG-18	Contractor access communication requirements		Discussion held to establish protocol when contractors visit site and will be working in ODH, Confined Space, Rad, etc. areas that the CD DSO will be	Closed

												contacted to verify unusual training requirements and access qualifications.	
99553	Niehoff, James	Opportunity for Improvement	Evaluate Frequency of Services Coordinator Updates	Evaluate the need to increase the refresher training/updates frequency for service coordinators similar to that of TM/CC's.	05-MAR-19	Closed	82769	05-MAR-19	05-MAR-19	Training/Refresher for Service Coordinator	The role of service coordinator is broad and also requires a service coordinator to take the 10 hour OSHA class as well. Most, if not all, of the Service Coordinators are building managers. The only exemption to this is the furniture service coordinator.	FESHM Chapter 7020 and Exhibit A for Services has been updated with a flow chart and a hazards table to clearly define when a Service Coordinator is required. Service Coordinator training is deemed adequate since it also requires the OSHA 10 hour class.	Closed
99554	Chelidze, Nino	Opportunity for Improvement	Evaluate the need for an additional checklist in unfamiliar situations	RP group to evaluate the need for a checklist when unfamiliar situations are encountered during entry into radiological areas.	30-AUG-18	Closed	81171	30-AUG-18	30-AUG-18	Need evaluated for checklist		The need for an additional checklist has been evaluated and found to be not necessary. The RWP serves this purpose to describe the conditions required for entry into enclosures and rad areas.	Closed

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