

Reporting of Unsafe or Unhealthful Working Conditions

NIST S 7101.02 Approval Date: 11/23/2024

Effective Date¹: 04/01/2015

89 1. PURPOSE

- a. The purpose of this suborder is to establish a formal mechanism to assure prompt analysis and response to employee and covered associates (hereafter referred to as "NIST staff") reports of possible unsafe or unhealthful working conditions (UWCs), *i.e.*, of conditions or practices, in any NIST workplace, that staff member believes may have a direct or immediate impact on safety or health. The formal mechanism comprises:
- (1) Reporting of possible UWCs to the designated agency safety and health official (DASHO)²;
 - (2) Inspections of reported UWCs by the Office of Safety, Health, and Environment (OSHE);
 - (3) The identification and implementation of abatement actions by the responsible Organizational Units (OUs), as necessary; and
 - (4) Notifications to OSHE and the reporting staff member when abatement actions have been completed.
- b. This suborder also outlines the process by which NIST staff and management should abate possible UWCs through direct staff member or management action. Before reporting UWCs to the Chief Safety Officer (CSO), as delegated by the DASHO, NIST staff should, whenever possible, abate the UWCs themselves or work with their management, OU/division safety personnel, OSHE, or others to abate the UWCs, as this will generally result in prompt analysis and abatement of UWCs. See Section 9a and Appendix B, Flow Chart for Staff Member/Management Actions in Response to Possible UWCs.

¹ For revision history, see Appendix A.

² For NIST, the designated agency safety and health official (DASHO) is the Associate Director for Management Resources. The specific responsibilities of the DASHO as they relate to this directive are delegated to the NIST Chief Safety Officer, who is also the Director of OSHE.



2. BACKGROUND

- a. NIST P 7100.00 articulates NIST's commitment to make occupational safety and health an
 integral core value and vital part of the NIST culture by, in part, fostering a work
 environment in which NIST staff are encouraged to report and raise safety and health issues
 without fear of reprisal (please also see NIST S 7101.01 Safety Rights and Responsibilities).
- b. NIST must meet the requirements of 29 Code of Federal Regulations (CFR) 1960.28,
 Employee Reports of Unsafe or Unhealthful Working Conditions, which states that
 employees [NIST staff] have the right and are encouraged to report UWCs to an agency
 safety and health official to request inspections of those conditions. Implementation of this
 suborder through the requirements in Section 6 and the roles and responsibilities in Section 9
 fulfills those requirements.
 - a. NIST must meet the requirements of 29 CFR 1960.26, Conduct of Inspections, and 29 CFR 1960.30, Abatement of Unsafe or Unhealthful Working Conditions, which establish minimum UWC inspection and abatement requirements. Implementation of this suborder through the requirements in Section 6 and the roles and responsibilities in Section 9 fulfills those requirements.

3. APPLICABILITY

- a. The requirements of this suborder apply to UWCs reported by NIST staff to the CSO to request inspections of those UWCs by OSHE.
 - b. The process outlined in Appendix B of this suborder applies to possible UWCs that can be addressed by NIST staff themselves or by NIST staff working with their line management, OU/division safety personnel, OSHE, or others.³ This process should be followed whenever possible, but its existence does not preclude NIST staff from reporting UWCs to the CSO at any point to request inspections by OSHE.

4. REFERENCES

- a. OSH Act of 1970, Section 19, Federal Agency Safety Programs and Responsibilities
- 69 b. Executive Order 12196, Occupational Safety and Health Programs for Federal Employees
- c. 29 CFR 1960.28, Employee Reports of Unsafe or Unhealthful Working Conditions

³ This suborder distinguishes between NIST staff communicating UWCs to OSHE to request safety assistance and NIST staff reporting UWCs to the CSO to request inspections by OSHE. OSHE will ascertain staff member intent when it receives staff member requests.



72 73	d.	29 CFR 1960.26, Conduct of Inspections
74	e.	29 CFR 1960.30, Abatement of Unsafe or Unhealthful Working Conditions
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76		
77	5.	APPLICABLE NIST DIRECTIVES
78	a.	NIST P 7100.00: Occupational Safety and Health Policy
79		
80	b.	NIST O 7101.00: Occupational Safety and Health Management System
81		
82	c.	NIST S 7101.01: <u>Safety Rights and Responsibilities</u>
83		
84	d.	NIST S 7101.03: <u>Stop Work</u>
85		
86	e.	NIST S 7101.23: <u>Safety Education and Training</u>
87	0	NYGER G ELOLO A V V V V
88	f.	NIST S 7101.24: <u>Incident Reporting and Investigation</u>
89		
90	6	REQUIREMENTS
91 92	0.	As indicated in Section 1, NIST staff should, whenever possible, abate UWCs themselves on
93		work with their management, OU/division safety personnel, OSHE, or others to abate the
94		UWCs before reporting them to the CSO to request inspections by OSHE. The present
95		section delineates the requirements of the formal mechanism for reporting UWCs to the
96		CSO, and Section 9 provides the associated responsibilities. Appendix C, Reporting of
97		UWCs to the CSO, presents most of this information in flow chart.
98		<i>/</i> 1
99	a.	Reporting of Possible UWCs to the CSO to Request Inspections by OSHE
100		
101		(1) Such possible UWCs should be reported by NIST staff to the CSO using the most
102		expeditious means available. ⁴
103		
104		(2) UWCs reported to the CSO shall be documented in writing and contain the following
105		information (please see Appendix D):
106		
107		(a) Name and contact information of the reporting staff member;
108		

⁴ For example, reports of possible UWCs may be made by calling x5375, Option 3.



109	(b) Indication of whether the reporting staff member desires that his or her name not be
110	disclosed to anyone outside of OSHE other than an Authorized Representative of the
111	Secretary of Labor, or as otherwise required by law;
112	
113	(c) Brief description of the UWC;
114	
115	(d) Date and time the UWC was first observed;
116	
117	(e) Where the UWC is located, e.g., site, building, room;
118	
119	(f) OU responsible for the space where the UWC is located, if known; and
120	
121	(g) Brief description of any immediate measures taken to abate the UWC and to notify
122	potentially affected NIST staff;
123	
124	(3) If it is determined by OSHE that there are not reasonable grounds to believe that a
125	reported UWC exists and that OSHE does not plan to conduct an inspection based on
126	such report, the reporting staff member shall be notified by the CSO of that determination
127	in writing within 15 calendar days of receipt of the report.
128	
129	b. Inspection of Reported UWCs by OSHE
130	(1) D
131	(1) Reported UWCs shall be characterized immediately by OSHE as imminent danger,
132	serious, or other than serious using the procedure provided in Appendix E. ⁵
133	(2) If an imminant danger LIWC is suggested by OSHE hased on the information reported a
134	(2) If an imminent-danger UWC is suspected by OSHE based on the information reported, a
135	responsible line manager in the responsible OU will be notified immediately by OSHE,
136 137	with instructions to remove NIST staff from the danger as quickly as possible. ⁶
138	(3) Reported UWCs shall be inspected by OSHE within the following timeframes:
130 139	(5) Reported 0 wes shall be hispected by OSTIE within the following time names.
139 140	(a) As soon as possible for suspected imminent-danger UWCs but always within 24
141	hours;
141	nours,
143	(b) 3 business days for suspected serious UWCs; and
144	
145	(c) 20 business days for suspected other-than-serious UWCs;

⁵ Technically, imminent-danger conditions are a subset of serious conditions. Nevertheless, serious conditions that present an imminent danger are referred to simply as "imminent danger conditions", and serious conditions that do not present an imminent danger are referred to as "serious conditions".

⁶ OSHE will attempt to contact the Group Leader first, followed by the Division Chief.



146 147		(4) Inspected UWCs shall be characterized by OSHE as imminent danger, serious, or other than serious using the procedure provided in Appendix E.
148 149 150 151		(5) If an imminent-danger UWC is identified during an inspection, an oral stop-work Order shall be issued by the OSHE inspector(s) in accordance with the requirements of NIST S 7101.03. ⁷
152 153 154 155		(6) A written inspection report that includes a description of the inspection procedures and details any findings and recommended abatement actions shall be prepared by OSHE for each reported UWC (please see Appendix D).
156 157	c.	Notices of UWCs
158 159 160 161 162		(1) If an inspection results in a finding of an imminent-danger or serious UWC, a written notice of an UWC shall be issued by OSHE to the responsible Division Chief and provided to the reporting staff member along with the inspection report.
163 164 165		(2) The UWC notice shall characterize and describe the nature of the UWC, indicate any regulations or other requirements it violates, and provide a timeframe for abatement.
166 167 168 169		(3) The UWC notice, or a copy of it, shall be posted immediately by the OU, either at or near the location where the UWC exists or existed; if that is not possible, it shall be posted in a prominent place where all affected NIST staff can read it.
170 171 172		(4) Any additional notices describing special measures in effect during abatement of the UWC shall also be posted by the OU.
173 174 175		(5) Each notice, or a copy of it, shall remain posted until it has been determined by the OU that the UWC has been abated or for 3 business days, whichever is longer.
176 177	d.	Abatement of UWCs
178 179 180		(1) Upon receipt by an OU of an inspection report confirming the existence of an UWC, abatement actions shall be identified and implemented by the OU.
181 182		(2) If it is determined by the OU that the abatement actions for imminent-danger or serious UWCs cannot be completed within 30 calendar days of receipt of the inspection report,

⁷ The issuance of an oral stop-work order starts a separate process that proceeds in parallel with the inspection process; that is, the stop-work process does not replace or supersede the inspection process. An oral stop-work order requires specific actions to be taken by the OU Director, CSO, and others. Refer to NIST S 7101.03 for details.



an abatement-action plan, including any interim measures necessary to protect NIST 183 staff, shall be developed and provided to OSHE by the OU before 30 calendar days have 184 elapsed and by the means specified in the inspection report. 185 186 187 (3) Abatement actions for imminent-danger and serious UWCs shall be developed and 188 implemented by the OU within the timeframe specified in the associated UWC notice. If this is not possible, a written request for an extension shall be submitted to OSHE by the 189 responsible Division Chief before the end of the timeframe specified in the notice and by 190 191 the means specified in the inspection report. 192 e. Communication 193 194 195 (1) Inspection reports shall be provided by OSHE to reporting NIST staff and responsible Division Chiefs within 15 calendar days of UWCs being inspected, unless there are 196 compelling reasons why such reports cannot be provided within 15 calendar days, in 197 which case reporting NIST staff and responsible Division Chiefs shall be informed of the 198 199 delay. 200 (2) When the abatement actions for abating UWCs have been completed, the abatement 201 actions and their completion dates shall be provided to OSHE by the responsible Division 202 Chief by the means specified in the inspection report. 203 204 (3) When the abatement actions for abating UWCs have been completed by the OUs, the 205 abatement actions and their completion dates shall be provided to reporting NIST staff by 206 OSHE. 207 208 f. Records Required by this Suborder 209 210 (1) For each reported UWC, records shall be maintained and retained for 5 years. 211 212 (a) Records shall be stored in NIST IT applications for event management and action 213 214 management. 215 (2) The following information shall be included for each record: 216 217 (a) The information listed in Section 6.a(2); 218 219 220 (b) Documentation of OSHE's determination that there are not reasonable grounds to 221 believe that a reported UWC exists and of its decision not to conduct an inspection 222 based on such report, when applicable;



223 224		(c) OSHE's initial characterization of all other UWCs as imminent danger, serious, or other than serious;
225		
226		(d) OSHE's final characterization of the UWC, if different from the initial
227		characterization;
228		
229		(e) The names of the OSHE staff member(s) who conducted the inspection;
230		
231		(f) A copy of the inspection report;
232		
233		(g) Copies of any UWC notices issued by OSHE and any additional notices posted by the
234		OU;
235		
236		(h) A copy of the abatement action plan developed by the OU when it has been
237		determined by the OU that abatement actions cannot be completed within 30 calendar
238		days of receipt of the inspection report; and
239		
240		(i) The abatement actions taken by the OU to abate the UWC and their completion dates.
241		
242		
243	7.	DEFINITIONS
244		For definitions common to all NIST OSH suborders, see NIST O 7101.00. Definitions
245		specific to this suborder are as follows:
246		
247	a.	<u>Authorized Representative of the Secretary of Labor</u> – A person or agent of the Secretary of
248		Labor whose authority and jurisdiction originates from the Secretary of Labor; routinely a
249		Department of Labor employee.
250		
251	b .	Abatement-Action Plan - A set of planned actions to abate a recognized UWC and their
252		estimated completion dates.
253		
254	c.	Imminent Danger (Condition or Practice) – Any serious condition or practice in any
255		workplace which is such that a danger exists which could reasonably be expected to cause
256		death or serious physical harm immediately or before the imminence of such danger can be
257		eliminated through normal procedures.
258		
259	d.	Serious (Condition or Practice) – A condition or practice in any workplace such that there is
260		a substantial probability that death or serious physical harm could result.
261		



262263264	e.	<u>UWC</u> – Any condition or practice in any workplace that could have a direct or immediate adverse impact on safety or health. ⁸				
265 266 267	f.	Workplace – A physical location where NIST work is performed.				
268	8.	ACRONYMS				
269		For acronyms common to all NIST OSH suborders, see NIST O 7101.00. Acronyms specific				
270		or pertinent to this suborder are:				
271		•				
272	a.	CFR – Code of Federal Regulations				
273						
274	b.	CSO – Chief Safety Officer				
275						
276	c.	DASHO – Designated Agency Safety and Health Official				
277						
278	d.	OSH – Occupational Safety and Health				
279						
280	e.	OSHE – Office of Safety, Health, and Environment				
281	•					
282	f.	OU – Organizational Unit				
283						
284	g.	UWC – Unsafe or Unhealthful Working Condition				
285						
286 287	0	ROLES AND RESPONSIBILITIES				
288	7.	For roles and responsibilities applicable to all NIST OSH programs, see NIST O 7101.00.				
289		Roles and responsibilities specific to this suborder are as follows:				
290		reores and responsionates specific to ans suborder are as follows.				
291	a.	All NIST Staff are responsible for:				
292						
293		(1) Before reporting possible UWCs to the CSO to request inspections by OSHE, following				
294		the process outlined in Appendix B for abating possible UWCs; and				
295						

⁸ Note that UWCs are conditions or practices, not "events". As such, UWCs are not "incidents" as defined in NIST S 7101.24, *i.e.*, they are not work-related **events** in which any of the following, individually or in combination, occurred or could have occurred: an injury or illness; an unauthorized spill or release of hazardous or regulated material to the environment; damage or loss of equipment or property, and they are not reported in the NIST

Incident Reporting and Investigation System (IRIS).



296 297			When reporting UWCs to the CSO to request inspections by OSHE, indicating whether they desire that their names not be disclosed to anyone outside of OSHE other than an
298 299			Authorized Representative of the Secretary of Labor, or as otherwise required by law.
300 301	b.	<u>OU</u>	Line Management and OU/Division Safety Personnel are responsible for:
302 303 304		` ′	Upon receiving staff member communications of UWCs, following the process outlined in Appendix B for responding to the UWCs.
305 306	c.	<u>Div</u>	ision Chiefs are responsible for:
307 308 309			Upon receiving UWC notices from OSHE, ensuring those notices are posted in accordance with the requirements in Sections 6.c(3)-(5);
310 311 312			Upon receiving inspection reports from OSHE for UWCs in their respective divisions, ensuring those UWCs are abated in accordance with the requirements in Section 6.d; and
313 314 315 316		` /	When the abatement actions for abating UWCs have been completed, providing those abatement actions and their completion dates to OSHE by the means specified in the inspection report.
317 318	d.	DA	SHO (responsibilities delegated to the CSO) is responsible for:
319 320 321 322		(1)	Ensuring OSHE staff members receiving staff member communications regarding possible UWCs determine whether NIST staff are requesting safety assistance or reporting UWCs to the CSO to request inspections by OSHE; ⁹
323 324 325 326		(2)	Ensuring OSHE staff members do not disclose the names of reporting NIST staff who desire non-disclosure to anyone outside of OSHE other than an Authorized Representative of the Secretary of Labor, or as otherwise required by law;
327 328 329		(3)	Ensuring staff member oral reports of possible are documented in writing and retained per the requirements of this suborder;
330 331		(4)	If it is determined by OSHE that there are not reasonable grounds to believe that a reported UWC exists and that OSHE does not plan to conduct an inspection based on

⁹ If it is determined that NIST staff are requesting safety assistance, OSHE will assist those NIST staff in promptly analyzing and abating the possible UWCs. As indicated in Section 3.b, the provision of such assistance is outside the scope of this suborder.



332 333 334			such report, ensuring the reporting staff member is notified of that determination in writing within 15 calendar days of receipt of the report;
335 336		(5)	Ensuring all other reported UWCs are characterized immediately as imminent danger, serious, or other than serious and inspected by OSHE in accordance with the
337 338			requirements in Sections 6.b(3)-(6);
339		(6)	If an imminent-danger UWC is suspected based on reported information, ensuring the
340		(-)	responsible supervisor or other official in the responsible OU is notified immediately to
341 342			remove NIST staff from the danger as quickly as possible;
342 343		(7)	Ensuring inspection reports are provided to reporting NIST staff and responsible
344			Division Chiefs within 15 calendar days of UWCs being inspected, or if there are
345			compelling reasons why such reports cannot be provided within 15 calendar days, that
346			reporting NIST staff and responsible Division Chiefs are informed of the delay;
347			
348		(8)	When an inspection results in a finding of an imminent-danger or serious UWC,
349			ensuring a written notice is issued in accordance with the requirements of Sections
350			6.c(1)-(2);
351			
352		(9)	When abatement actions for abating UWCs have been completed by the OUs, ensuring
353			the reporting staff member is provided with those abatement actions and their
354			completion dates;
355			
356		(10)	Ensuring training on this suborder is included in the training for line managers, safety
357			and health specialists, and OU/division safety personnel required by NIST S 7101.23;
358			and
359			
360		(11)	Ensuring case files of reported UWCs are made available to the Secretary of Labor or
361			the Secretary's authorized representative upon request.
362			
363			
364	10		THORITIES
365		For	authorities applicable to all NIST OSH suborders, see NIST O 7101.00. In addition:
366			
367	a.	<u>DA</u>	<u>SHO</u>
368			
369		(1)	Delegates responsibilities associated with this directive to the NIST CSO.
370			
371	b.	NIS	<u>T Staff</u> :



372	(1) Report UWCs directly to an authorized representative of the Secretary of Labor. 10, 11
373	
374	
375	11. DIRECTIVE OWNER
376	CSO
377	
378	
379	12. APPENDICES
380	A. Revision History
381	
382	B. Flow Chart for Staff Member/Management Actions in Response to Possible UWCs
383	
384	C. Flow Chart for Reporting of UWCs to the CSO
385	
386	D. Form – OSHE Inspection of Possible UWC
387	
388	E. Serious and Imminent Danger Determinations by OSHE
389	
390	

 $^{^{10}}$ The Secretary of Labor encourages employees to use agency procedures as the most expeditious means of achieving abatement of UWCs.

¹¹ UWCs may be reported to an authorized representative of the Secretary of Labor by calling 1-800-321-OSHA.



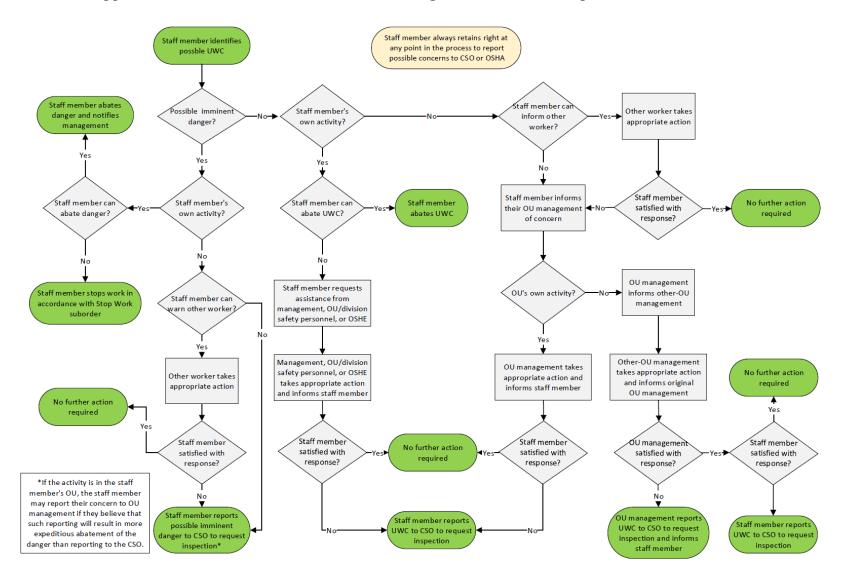
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Appendix A. Revision History

Version No.	Approval Date	Effective Date of Revision	Brief Description of Change; Rationale	
1	10/2/14	NA	Initial Document	
2	1/5/21	1/5/21	Updated suborder links.	
3	04/02/2024	04/02/2024	 Clarified applicability of the requirements as applying to both federal employee and covered associates. Removed requirements previously found in Section 9.d(3) to Section 6.a(2) Removed requirements previously found in Section 9.d(10) to Section 6.f Editorial fixes. 	
4	11/23/2024	11/23/2024	 Replaced "corrective actions" with "abatement actions" throughout document. Replaced "perceived" with "possible" throughout the document. Modified Footnote 2 to indicate the ADMR is the DASHO and has delegated responsibilities to CSO. Modified Section 10 to indicate the DASHO has delegated responsibilities associated with this directive to the CSO. Added new Appendix D – form for OSHE to use to inspection UWCs Added requirement to store records in NIST IT applications Updated Appendix A Table, third column from "Responsible Party" to "Effective Date of Revision" and updated entries for Versions 1-3 as appropriate. Editorial fixes 	

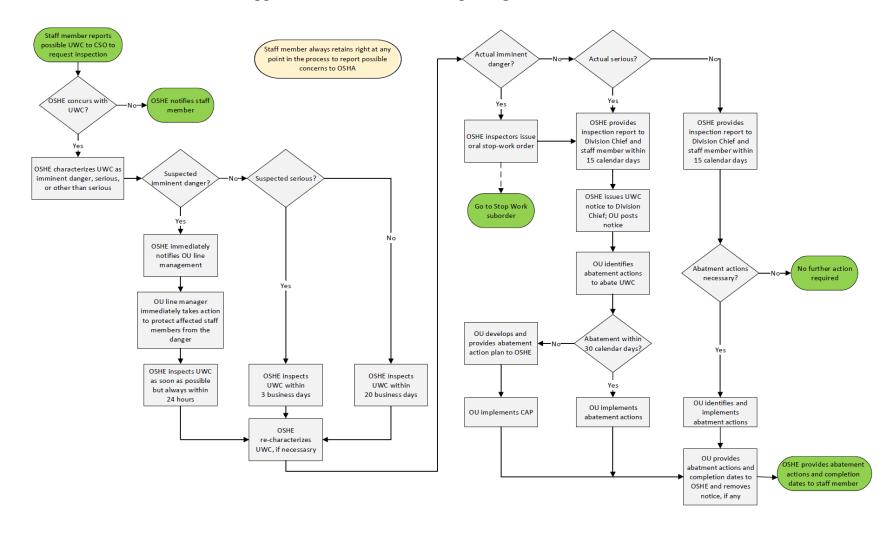


Appendix B. Flow Chart for Staff Member/Management Actions in Response to Possible UWCs





Appendix C. Flow Chart for Reporting of UWCs to the CSO





Appendix D: OSHE Inspection of Possible UWC Template

REPORT OF POSSIBLE UWC							
Reporting Staff Member							
Name:	OK to disclose name? Yes	ONo					
Email Address:	Telephone number:						
How was report received? (e.g., verbal, email, IT application; in	nclude date and time of contact)						
Description of Possible UWC							
Location (e.g., campus, building, room, general location)							
Description							
Date and time first observed as possible UWC							
OU responsible for the space (if known)							
Did reporting staff member notify their line management?	Yes No						
If yes , who was notified when?							
W	O v O v						
Were any immediate measures taken to abate the UWC?	Yes No						
If yes, what actions were taken, by whom, and when.							
	Ou Ou						
Inspection required by OSHE based upon information provided? Yes No							
If inspection not required, why?							
If inspection required initial vist /it	and upon information was de-						
If inspection required, initial risk/severity characterization ba Imminent Danger	Other than Serious						
(immediate action required)	0						
		Page 1 of 3					



Appendix D: OSHE Inspection of Possible UWC Template (cont.)

OSHE INSPECTION OF POSSIBLE UWC						
OSHE Staff Member(s) Inspecting-lead listed first						
Date of Inspection						
Description of Inspection						
Inspection Finding(s)						
Is it determined to be a UWC?						
If yes, type:						
Actions						
If necessary, immediate abatement action(s) taken by OSHE:						
Is a Stop Work Order (SWO) required? Yes No						
If yes, description of SWO (what was communicated to who and when)						
If Imminent Danger or Serious, Notice of UWC was provide (to who, when, and where it was posted)						
in minimient Bunger of Serious, Notice of the has provide (to whis), when, and where it was posted)						
Additional recommended abatement actions for OU responsible (what provided to who and when)						
Documentation and Communication						
SELS ID:						
Communication provide to reporting staff member & responsible line management (what, when, and how)						
Page 2 of 3						



Appendix D: OSHE Inspection of Possible UWC Template (cont.)

FOLLOW-UP FOR UWC					
Completed abatement actions (action and closed da	ite)				
Did abatement actions remediate the UWC?	O Yes	O No			
If no, what additional abatement actions are requir	eur				
If required, has the Stop Work Order been lifted?	Yes	○ No			
If required, has the Notice of UWC been removed?	O Yes	○ No			
Additional Comments					
Please upload this form in SELS when completed.			Dogo 2 of 2		
If required, has the Notice of UWC been removed? Additional Comments			Page 3 of 3		



Appendix E. Serious and Imminent Danger Determinations by OSHE

A Notice of Unsafe or Unhealthful Working Conditions (Notice) is required when a workplace inspection identifies a situation that meets the definition of a serious unsafe working condition. In addition, a serious condition that poses an imminent danger requires issuance of a Stop Work Order, except when it is immediately corrected and controls are in place to make its recurrence unlikely. This appendix outlines the procedure that shall be followed by OSHE inspectors for making serious unsafe working condition and imminent danger determinations.

Determination of a "Serious" Condition.

A serious unsafe working condition is one where a safety deficiency presents a hazard to one or more persons in which there is a substantial probability that death or serious physical harm could result. Inspectors and investigators will consider whether there is a substantial probability ¹² that death or serious physical harm could result from an incident or exposure relating to the safety deficiency using the following three step process:

<u>Step 1.</u> Identify the type of potential hazards that the safety deficiency presents. If the deficiency presents more than one type of hazard, the inspector/investigator will determine which hazard could reasonably be predicted to result in the most severe injury or illness and will use that as the basis for the determination.

The following examples illustrate this step:

Example A: NIST staff are observed working at the unguarded edge of an open-sided floor 30 feet above the ground. The type of hazard is a fall from the edge of the floor to the ground below.

Example B: NIST staff are observed working in an area in which debris is located. The type of hazard is tripping on debris.

Example C: NIST staff are observed working with methylene chloride without ventilation or respiratory protection. The type of hazard is inhalation exposure to methylene chloride.

<u>Step 2.</u> Identify the most serious injury or illness that could reasonably be expected to result from the potential hazardous exposure identified in Step 1. In making this determination,

¹² NOTE: The key determination is the likelihood that death or serious harm will result **IF** an accident or exposure occurs. **The likelihood of an accident occurring is not addressed in making this determination.**



inspectors/investigators shall consider all factors that would affect the severity of the injury or illness that could reasonably result from the exposure to the hazard.

For conditions involving exposure to air contaminants or harmful physical agents, inspectors/investigators will consider the concentration levels of the contaminant or physical agent in determining the types of illness that could reasonably result from the exposure. Inspectors/investigators will also consider the nature of the operation from which the exposure results, such as:

- Whether the exposure is regular and ongoing or is of limited frequency and duration;
- How long NIST staff have worked at the operation in the past;
- Whether NIST staff are performing functions which can be expected to continue; and
- Whether work practices, engineering controls, production levels, and other operating parameters are typical of normal operations.

The following examples align with the previous examples to illustrate this step:

Example A: If a staff member falls from the edge of an open-sided floor 30 feet to the ground below, the staff member could die, break bones, suffer a concussion, or experience other serious injuries that would substantially impair a body function.

Example B: If an staff member trips on debris, the trip may cause abrasions or bruises, but it is only marginally predictable that the staff member could suffer a substantial impairment of a bodily function. If, however, the area is littered with protruding rebar, broken glass, or other sharp objects, it is reasonably predictable that a staff member who tripped on debris could suffer deep cuts/punctures which could require suturing.

Example C: If a staff member is exposed regularly to methylene chloride at 100 ppm, it is reasonable to predict that cancer could result.

Step 3. Determine whether the type of injury or illness identified in Step 2 could include death or a form of serious physical harm. In making this determination, utilize the following definition of serious physical harm: Impairment of the body in which part of the body is made functionally useless or is substantially reduced in efficiency on or off the job. Such impairment may be permanent or temporary, chronic or acute. Injuries involving such impairment would usually require treatment by a medical doctor or other licensed health care professional.

Injuries that constitute serious physical harm include, but are not limited, to:

- Amputations (loss of all or part of a bodily appendage);
- Concussion:



- Crushing (internal, even though skin surface may be intact);
- Fractures (simple or compound);
- Burns or scalds, including electric and chemical burns;
- Cuts, lacerations, or punctures involving significant bleeding and/or requiring suturing;
- Sprains and strains; and
- Musculoskeletal disorders.

Illnesses that constitute serious physical harm include, but are not limited, to:

- Cancer;
- Respiratory illnesses (silicosis, asbestosis, byssinosis, etc.);
- Hearing impairment;
- Central nervous system impairment;
- Visual impairment; and
- Poisoning.

The following examples align with the previous examples to illustrate this step:

Example A: If a staff member falls from the edge of an open-sided floor 30 feet to the ground below, the likely result (i.e. death, broken bones, a concussion, or other serious injuries that would substantially impair a body function) would support a "serious" determination.

Example B: If a staff member trips on debris in an area without other hazards (e.g. impalement) where it is unlikely that the staff member could suffer a substantial impairment, a determination of "other than serious" would be warranted. If, however, the area is littered with protruding rebar, broken glass, or other sharp objects that would likely cause deep cuts/punctures which could require suturing, a determination of "serious" would be more appropriate.

Example C: Routine exposure to methylene chloride at levels that could reasonably result in cancer would support a "serious" determination.

Determination of an "Imminent Danger" Condition.

An imminent danger is one where a safety deficiency presents a hazard which could reasonably be expected to cause death or serious physical harm immediately or before the imminence of such danger can be eliminated through normal procedures.

When making an imminent danger determination, inspectors and investigators will consider whether the following conditions are present:



- The deficiency constitutes a serious 13 condition as outlined above; and
- It is reasonably likely that a serious incident could occur immediately or, if not immediately, then before abatement would otherwise be implemented.

This determination is highly dependent upon the specific activities, co-located hazards, work practices, and other factors present in the work environment.

¹³ For a health hazard, exposure to the toxic substance or other hazard must cause harm to such a degree as to shorten life or be immediately dangerous to life and health (IDLH) or cause substantial reduction in physical or mental efficiency or health, even though the resulting harm may not manifest itself immediately.