Dear John:

We conducted a Departmental Safety Review of both campuses and walk-through inspections of some campuses buildings and maintenance shop areas on December 11, 2009 with the assistance of Kent Orr. The purpose of this review was to assess the current status of various required health, safety and environmental programs and to offer recommendations on how to improve those programs.

It is our intention that this report give you a plain language, useful document that you can use to determine how to improve your programs and regulatory compliance. Each section of the Safety Program Guide was reviewed for relevance to your department. The following is a summary of items we identified as missing or noncompliant per the OSHA standards and the USC EH&S Safety Program Guide.

Major areas that should be focused on are:

- Electrical Panels in the Magnolia Dorm with two different equipment identification numbers. (Serious)
- Employee fall hazard on the roof of HECC. (Serious)
- No evidence of work-related injuries investigated for "Root Cause" and "Corrective Measures".
- No evidence of written Roles and Responsibilities for OSHA and Environmental requirements.
- All employees should be trained on your Emergency Action Plan.
- No evidence of personal protective hazard assessment and complete program self-audit checklist. A written hazard assessment is required on each employee which documents the task requiring PPE and that the employee has been trained on use. PPE that is identified must be provided by the employer.
- Written Electrical Safety Program and training on NFPA 70-E for all employees working on or near energized electrical equipment.
- Forklift and Aerial Lift training for operating employees.
- Excavation "Competent Person" training for someone on campus.
- No evidence of employees who are or may respond to chemical spills having a minimum "Hazard Awareness Level" training.
- Chemical storage drums must be kept closed and free of spills.

We need your campus to develop an "Action Plan" to address all items which are marked "N" on the Departmental Safety Review and submit your department's "Action Plan" to Environmental Health and Safety by January 29, 2010.

If you have any questions about this report, please contact Buddy Harley @ 777-5255 or e-mail wharley@mailbox.sc.edu

Sincerely,

Tom Syfert, CHMM, CET
Associate Vice President for Health and Safety

CC: Kent Orr, Rick Puncke, Buddy Harley, Mike Bruce, Bob Connelly
**Departmental Safety Review Form**

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.2 Work Related Injuries and Illnesses</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Who maintains the Campus OSHA 300 Log?</td>
<td>Y</td>
<td></td>
<td></td>
<td>Human Resources</td>
</tr>
<tr>
<td>2. Who post the 300 Log Summary in February and where is it posted?</td>
<td>Y</td>
<td></td>
<td></td>
<td>Human Resources</td>
</tr>
<tr>
<td>3. Are work-related injuries or illnesses investigated for “Root Cause” and “Corrective Measures”?</td>
<td></td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Has a Medical Provider been established for work-related injuries or illnesses?</td>
<td></td>
<td>Y</td>
<td></td>
<td>Spartanburg Regional Health</td>
</tr>
<tr>
<td>5. Are all employees trained to report all work-related injuries or illnesses promptly to their supervisor?</td>
<td></td>
<td>Y</td>
<td></td>
<td>Annual Refresher Training</td>
</tr>
</tbody>
</table>

**Comments, Recommendations:**

<table>
<thead>
<tr>
<th><strong>A.4 Introduction To OSHA</strong></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Who is responsible for Campus compliance for all OSHA and Environmental requirements?</td>
<td>Y</td>
<td></td>
<td></td>
<td>Kent Orr</td>
</tr>
<tr>
<td>2. Does the Campus have a written document with Roles and Responsibilities for OSHA and Environmental requirements?</td>
<td></td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Does the Campus conduct OSHA and Environmental inspection and are they documented?</td>
<td></td>
<td>Y</td>
<td></td>
<td>USC EH&amp;S Audits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Eyewash and Safety Shower Inspections</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Fire Equipment inspections by contractors</td>
</tr>
<tr>
<td>4. Who is responsible for all reporting requirements for OSHA and Environmental issues?</td>
<td></td>
<td>Y</td>
<td></td>
<td>Kent Orr</td>
</tr>
<tr>
<td>5. Are required OSHA posters posted at a prominent location?</td>
<td></td>
<td>N</td>
<td></td>
<td>See HR for all required posters</td>
</tr>
</tbody>
</table>

**Comments, Recommendations:**
### A.3 Emergency Action Plan

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
<th>N/A</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has an emergency action plan been developed?</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Has an emergency coordinator been appointed?</td>
<td>Y</td>
<td></td>
<td></td>
<td>Public Safety</td>
</tr>
<tr>
<td>3. Have employees been trained?</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments, Recommendations:

### B.1 Computer Workstations

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th></th>
<th></th>
<th>Comments, Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has self-audit checklist been completed?</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How many employees are at risk?</strong> 50</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments, Recommendations:

### B.2 Back Safety

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N/A</th>
<th>Comments, Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Have &quot;at risk&quot; employees received training?</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. If back belts are in use, is a policy in place?</td>
<td></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>What types of activities present risk of back injuries?</strong>  General maintenance and custodial activities.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>How many employees are at risk?</strong> 50</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>What percentage of at risk employees have been trained?</strong>  95%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments, Recommendations:

### B.3 Office and Classroom Safety

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
<th></th>
<th>Comments, Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has self-audit checklist been completed?</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments, Recommendations:

### B.4 Personal Protective Equipment

<table>
<thead>
<tr>
<th>Question</th>
<th>Y</th>
<th>N</th>
<th></th>
<th>Comments, Recommendations:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Has a written hazard assessment been completed for each employee using PPE?</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Is the proper PPE provided to employees?</td>
<td>N</td>
<td></td>
<td></td>
<td>70-E PPE has not been identified.</td>
</tr>
<tr>
<td>3. Have all employees been trained on the proper use and care of PPE?</td>
<td>N</td>
<td></td>
<td></td>
<td>Have not completed 70-E training.</td>
</tr>
<tr>
<td>4. Are certifications of training kept on file?</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## B.5 Hazard Communication

1. Has a written departmental Hazard Communication program been developed? | Y | Revision date 9/19/07
2. Is a chemical inventory present and complete? | Y |
3. Is an MSDS available for each chemical on hand? | Y |
4. Have all employees received Hazard Communication training? | Y | Annual Refresher Training.
5. Has a self-audit checklist been completed? | N |

- **What types of chemicals are being used?** General Maintenance and custodial chemicals.

## C.1 Receiving Room Safety

- **What types of materials are handled in the receiving area?** Mail Room

Comments, Recommendations: Mail Room employees should receive Annual Refresher training.

## C.2 Electrical Safety-Related Work Practices

1. Have "qualified" and "un-qualified" workers received specific training? | N | Have not completed 70-E training.
2. Are necessary protective equipment and materials being provided? | N | 70-E required PPE
3. Has a written program been developed? | N |
4. Has a self-audit checklist been completed? | N |

- **What types of electrical work are employees performing?** General maintenance and custodial activities.
- **Number of "qualified" employees?** 7
- **Number of "unqualified" employees?** 43
- **What type(s) of protective equipment are being used?**

Comments, Recommendations: Serious safety violation at the Magnolia Dorm with two different equipment identification numbers on electrical control panels.
# Departmental Safety Review Form

**Department:** Upstate  
**Safety Contact:** Kent Orr  
**Date of Audit:** 12-11-99

## C.3 Lockout/Tagout

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<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>1. Have equipment-specific procedures been developed?</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>2. Are necessary protective equipment and materials being provided? Is program reviewed at least annually?</td>
<td>N</td>
<td>Program has not been reviewed.</td>
</tr>
<tr>
<td>3. Protective materials and hardware (locks, tags, hasps, etc.) provided?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>4. Have employees received general and specific training?</td>
<td>Y</td>
<td>Annual Refresher Training</td>
</tr>
<tr>
<td>5. Has a self-audit checklist been completed?</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

- What type(s) of equipment need lockout/tagout procedures? **Servicing and repairing equipment.**
- How many employees are at risk? **7**

**Comments, Recommendations:**

## C.4 Noise and Hearing Conservation

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
<tbody>
<tr>
<td>1. Noise minimized through use of engineering controls?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>2. Are a variety of hearing protectors provided?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3. Have all employees received training within the past year?</td>
<td>Y</td>
<td>Annual Refresher Training</td>
</tr>
<tr>
<td>4. Have all employees received audiograms within the past year?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>5. Has a written Departmental Hearing Conservation Program been established?</td>
<td>Y</td>
<td>Written Program should be sent to Ken Mixon his review and approval.</td>
</tr>
<tr>
<td>6. Has a self-audit checklist been completed?</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

- What types of equipment/jobs pose risk of noise exposure? **Use of mowers, weedeaters, leaf blowers, and etc.**
- How many employees are at risk? **20**
### C.5 Machine Guarding

1. Are all machines equipped with appropriate safeguards?  
   - Y

2. Is machine specific training provided to operators?  
   - Y

3. Has a self-audit checklist been completed?  
   - N
   - **What types of equipment require guarding?** Equipment with rotating or moving parts.

### C.6 Fall Protection

1. Areas identified where fall protection is needed?  
   - Y

2. Appropriate fall protection systems in place?  
   - N  
   
   - Serious fall condition on the roof of the HEC.

3. All at risk employees trained?  
   - Y

   - **What types of jobs require fall protection?** Working on roofs, general maintenance and custodial activities.
   - **What types of fall protection equipment are provided?** Harness and Lanyards.
   - **How many employees are at risk?** 14

**Comments, Recommendations:** Need to eliminate employee Fall Hazard on the roof of HEC immediately.

### C.7 Ladder Safety

1. Are appropriate type(s) of portable ladder(s) provided?  
   - Y

2. Is specific training provided for ladder users?  
   - Y  
   
   - Annual Refresher Training

3. Are ladder inspection guidelines established?  
   - N

4. Has self-audit checklist been completed?  
   - N

   - **What types of jobs require the use of portable ladders?** General maintenance and custodial activities.

**Comments, Recommendations:**

### C.8 Cutting and Welding Operations

1. Has a hot work permit developed?  
   - Y
### Departmental Safety Review Form
Department: Upstate
Safety Contact: Kent Orr
Date of Audit: 12-11-09

#### C.9 Construction and Renovations
- Do department employees perform construction and/or renovation work? Yes
- Does the department manage or oversee construction/renovation projects? Yes

**Comments, Recommendations:** Employee's who manage or oversee construction/renovation projects should at a minimum the OSHA 30 Hour Construction course.

#### C.10 Forklift Safety
1. Have all forklift operators been trained? N

**Comments, Recommendations:** Aerial Lift training for all operating employees.

#### C.11 Support Staff Activities in Laboratories
1. Have all support staff working in laboratories received training? Y

**Comments, Recommendations:**

#### C.12 Respiratory Protection
1. Have respiratory hazards identified and evaluated? N/A
2. Are appropriate respirators and associated equipment provided? N/A
3. Has a written Respiratory Protection Program been developed and implemented? N/A
4. Is EHS being notified of new individuals requiring respiratory protection? N/A
5. Are new individuals requiring respiratory protection receiving training, fit testing and medical clearance? N/A
Departmental Safety Review Form

| Department: Upstate | Safety Contact: Kent Orr | Date of Audit: 12-11-09 |

6. Has self-audit checklist been completed? N

   - What jobs/hazards require the use of respirators?
   - What types of respirators are being worn?
   - How many people are wearing respirators?

   Comments, Recommendations:

C.13 Confined Space Entry

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. All confined spaces identified and hazards evaluated for each?</td>
<td>N</td>
<td>90% complete.</td>
</tr>
<tr>
<td>2. Has a written program, with entry procedures, been developed and implemented?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>3. Are necessary protective equipment and materials being provided?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>4. Have all affected employees received general and specific training for confined space entry?</td>
<td>Y</td>
<td></td>
</tr>
<tr>
<td>5. Has self-audit checklist been completed?</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

   - What types of confined spaces are present? Pits, sumps, and etc.
   - What hazards are associated with these confined spaces? Y
   - How many people enter confined spaces? 8

Comments, Recommendations:

C.14 Asbestos Containing Materials

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Y</td>
</tr>
<tr>
<td>Awareness Training</td>
<td>Y</td>
</tr>
</tbody>
</table>

Comments, Recommendations:

C.15 Lead in Construction

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Assessment</td>
<td>Y</td>
</tr>
<tr>
<td>Awareness Training</td>
<td>Y</td>
</tr>
</tbody>
</table>

Comments, Recommendations:

C.16 Scaffold Safety

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1. Have employees working on scaffolds been trained on the safe erection, use and dismantling of scaffolding?</td>
<td>Y</td>
</tr>
<tr>
<td>2. Who is the onsite &quot;Competent Person&quot; and have they been trained on their roles and responsibilities?</td>
<td>Y</td>
</tr>
</tbody>
</table>

Comments, Recommendations:

C.17 Excavations

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Who is the onsite &quot;Competent Person&quot; and have they been trained on the requirements for Excavations?</td>
<td>N</td>
</tr>
<tr>
<td>Are all excavations inspected daily?</td>
<td>N</td>
</tr>
</tbody>
</table>

Comments, Recommendations: Employee's who manage or oversee construction/renovation projects and any employees who would do any excavation work should at a minimum attend Excavation training.

EHS-F-DIR-001

Page 7

Destroy Previous Revisions

Issue Date: 09/18/09

Approved: 8/8/09
### C.18 Hand Tools
1. Are hand tools used? | Y |
2. Have all affected employees received general and specific training on hand tool safety? | Y |
   - Annual Refresher Training.

**Comments, Recommendations:**

### C.19 Walking and Working Surfaces
1. Are workplaces kept clean, orderly, and sanitary? | Y |
2. Have employees been trained on walking and working surfaces safety to include platforms or openings which an employee could pass through? | Y |
   - Annual Refresher Training.

**Comments, Recommendations:**

### C.20 Flammable and Combustible liquids
1. Are all flammable and combustible chemicals stored in a flammable storage cabinet or approved safety cans? | Y |
2. Have employees been trained on the safe use of flammables and combustibles? | Y |
   - Annual Refresher Training.

**Comments, Recommendations:**

### C.21 University Vehicle Safety
1. Does the Campus have written safety guides for vehicle safety and have they been trained? | N |
2. Are all drivers of state vehicles been approved through USC Vehicle Management? | Y |

**Comments, Recommendations:**

### D.1 SARA Title III Reporting
1. Have all reportable quantities of "extremely hazardous substances" been identified and reported? | N/A |

**Comments, Recommendations:**

### D.2 Laboratory Safety
1. Has a Chemical Hygiene Officer been appointed? | N/A | Not verified during this audit. |
2. Are records of training, exposure monitoring and medical examinations being maintained? | N/A | Not verified during this audit. |
3. Are all laboratory personnel receiving chemical and procedure-specific training? | N/A | Not verified during this audit. |
4. Has a written Chemical Hygiene Plan been developed for each laboratory? | N/A | Not verified during this audit. |
5. Is each Chemical Hygiene Plan reviewed and updated least annually? | N/A | Not verified during this audit. |
6. Are accidents and chemical exposures being investigated? | N/A | Not verified during this audit. |
Departmental Safety Review Form

7. Has a self-audit checklist been completed? | N/A | Not verified during this audit.
   - How many laboratories are in the department?
   - How many employees work in laboratories?

Comments, Recommendations:

D.3 Emergency Eyewashes and Safety Showers

1. Are emergency eyewash stations and safety showers provided where corrosive chemicals are used? | Y |
2. Are these units tested and maintained periodically? | Y | Monthly inspections completed by maintenance.
   - Where are eyewashes/safety showers located, and for what purpose? Use and mixing chemicals in labs and maintenance areas.
   - In what areas are corrosive chemicals being used? Verity of cleaning and general maintenance chemicals.

Comments, Recommendations:

D.4 Emergency Information Posters

1. Are posters provided for all rooms or spaces for which they are required? | Y |
2. Have all of the posters been adequately completed and updated bi-annually? | Y |

Comments, Recommendations:

D.5 Chemical Spill Clean-up Procedures

1. Are adequate spill control materials provided? | N | Need to complete Hazard "Awareness" and "Operation" training to determine adequate spill control materials.
2. Have individuals received appropriate ("Hazard Awareness" and "Operations") training? | N |

Comments, Recommendations: Non-hazard chemicals such as used oil drum must be kept closed and area free of spills.

D.6 Chemical Waste Disposal

1. Have departmental activities that could result in the generation of hazardous waste been identified? | Y |
   - What kinds of waste(s) are generated? Paint waste, some broken florescent bulbs, and etc.

Comments, Recommendations: Non-hazard chemicals such as, used oil drum must be kept closed and area free of spills. Florescent bulbs must be kept in closed and marked containers.

D.7 Relocation of Hazardous Materials

1. Is the science department moving into different rooms or buildings? | N/A | Not verified during this audit.

Comments, Recommendations:
### D.8 Occupational Exposure to Formaldehyde

1. Is formaldehyde use? & N/A & Not verified during this audit.

### D.9 Shipping of Hazardous Chemicals

<table>
<thead>
<tr>
<th>Comments, Recommendations:</th>
</tr>
</thead>
</table>

### E.1 Biosafety

1. Is all research involving biohazards approved by the Biohazards Committee? & N/A & Not verified during this audit.
2. Is it ensured that all safety procedures are being followed in the laboratory? & N/A & Not verified during this audit.
3. Is training and orientation provided to laboratory workers? & N/A & Not verified during this audit.
4. Are all laboratories containing biohazards properly posted? & N/A & Not verified during this audit.
5. Is personal protective equipment and engineering controls provided? & N/A & Not verified during this audit.

- Which researchers are working with biohazards?
- How many employees are affected?

### E.2 Infectious Waste Disposal

1. Have departmental activities that could result in the generation of infectious waste been identified? & Y &

- What kinds of waste(s) are generated? Blood and body fluid from injuries or as part of general custodial actives.

### E.3 Bloodborne Pathogens

1. Have individuals at risk of exposure been identified and EHS notified? & Y &
2. Has a written departmental Exposure Control Plan been developed? & Y &
3. Is the written plan reviewed on an annual basis or as exposure conditions change? & Y &
4. Are all "at-risk" employees attending the required initial and annual training? & Y &
5. Is personal protective equipment and engineering controls provided?  Y

- What types of jobs/activities pose a risk of infection? Blood and body fluid from injuries or as part of general custodial actives.
- How many employees are affected? 35

Comments, Recommendations:

E.4 Shipping of Infectious Materials

Comments, Recommendations:

F.1 Radiation Safety

Comments, Recommendations:

Other Recommendations:

<table>
<thead>
<tr>
<th>Safety Concern</th>
<th>Recommendation(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Lack of new and community service employee's safety training.</td>
<td>Facility Service Management must conduct and document safety training before new or community service employees start work.</td>
</tr>
<tr>
<td>2. Need for equipment specific training.</td>
<td>Facility Service Management must develop and document specific equipment training.</td>
</tr>
<tr>
<td>3. Need for dedicated resource to be responsible for day to day safety and environmental activities within the department.</td>
<td>Facility Service Management should identify a dedicated resource to insure compliance for safety and environmental regulatory requirements.</td>
</tr>
<tr>
<td>4. Concern that the current 2 way radio communication system does not allow staff to communicate effectively. This would delay &quot;First Responders&quot; being notified in a timely manner responding to injuries or other emergencies.</td>
<td>Facility Service Management should review and evaluate their current system.</td>
</tr>
<tr>
<td>5. Need a system / method to track / answer any suggestions / violations for safety and environmental items identified.</td>
<td>Facility Service Management should develop a system to track and document all safety and environmental items.</td>
</tr>
<tr>
<td>6.</td>
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<td>7.</td>
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<td>8.</td>
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<td>9.</td>
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<tr>
<td>10.</td>
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</table>