The following EHS program requirements were developed jointly by the Ronler Acres Site EHS organization and the Ronler Acres Projects EHS organization in an effort to standardize EHS construction procedures occurring on the Ronler Acres campus. These program requirements shall be implemented by all contractors/subcontractors operating on the Ronler Acres Campus irrespective if they are performing under a CS or construction project authorized contract. Changes to these program requirements will be controlled through the Ronler Acres Management Alignment Committee.
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<table>
<thead>
<tr>
<th>Title</th>
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<tbody>
<tr>
<td>Air Pollution Control Plan</td>
</tr>
<tr>
<td>Barricading and Safety Signage</td>
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<tr>
<td>CC/CM Incentive Administration</td>
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<td>Chemical Approval Program</td>
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<td>Confined Space Entry</td>
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<tr>
<td>Construction Incident Response</td>
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<tr>
<td>Control of Hazardous Energy (Lo/To)</td>
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<tr>
<td>Co-Occupancy Management</td>
</tr>
<tr>
<td>Cooling Tower Entry</td>
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<tr>
<td>Cranes, Rigging, and Hoists</td>
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<tr>
<td>Hoist Planning Worksheet</td>
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<tr>
<td>Cryogen Dewar Elevator Transportation</td>
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<td>EHS Program Improvement and Escalation</td>
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<tr>
<td>Electrical Demolition</td>
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<tr>
<td>Electrical Panel Penetration</td>
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<tr>
<td>Energized Electrical Work (EEW)</td>
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<td>Equipment Sign-Off (ESO)</td>
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<td>Ergonomics</td>
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<td>Fall Protection</td>
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<tr>
<td>Sub Fab Fall Protection - Alternatives</td>
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<td>Forklifts</td>
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<td>Forklift Daily Inspection Form</td>
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<td>Hand Protection</td>
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<td>Hazard Communication</td>
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<td>Hazard Material Control Plan/Waste Minimization and Pollution</td>
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<td>Hydrostatic and Static Testing</td>
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<td>Injury Free Environment</td>
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<td>Topic</td>
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<td>----------------------------------------------------------------------</td>
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<td>Ladders</td>
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<td>Liquid Management</td>
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<td>Notice: Containment In Progress (Signage)</td>
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<td>Mobile Elevated Work Platforms (MEWP)</td>
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<td>MEWP Initial and Daily Checklists</td>
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<td>Non-Electrical Hot Work (NEHW)</td>
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<td>Odor Notification</td>
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<td>Powder Actuated Tools</td>
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<td>Powered Work Vehicles (Golf Carts)</td>
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<td>Pre-Safety Level 1 Electrical Distribution Panel Connection Procedure</td>
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<td>Public/Community Relations</td>
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<td>Raised Floor: Fab</td>
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<tr>
<td>Raised Floor: Non-Fab</td>
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<tr>
<td>Pre-Entry Checklist and Stop Sign</td>
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<td>Respiratory Protection</td>
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<td>Revocation and Reinstatement of Access Privileges</td>
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<td>Safety Incident Investigation/Reporting</td>
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<td>Safety Self Assessment (SSA)</td>
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<td>Scaffolds</td>
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<td>Solid Waste Management Plan</td>
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<td>Spill Prevention and Control Plan</td>
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<td>Subcontractor Pre-Qualification</td>
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<td>Substance Abuse Management</td>
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<td>Sub Fab Catwalk Access</td>
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<td>Temporary Structures (E.G. Enclosures)</td>
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<td>Tool Install/Clean Room Safety</td>
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<td>Trenching and Excavation</td>
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<td>Waste Water and Storm Water Management</td>
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RONLER ACRES CONTRACTOR EHS PROGRAM

AIR POLLUTION CONTROL PLAN

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding the Air Pollution Control Plan.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for the design and implementation of an Air Pollution Control Plan to prevent/minimize the release of fugitive emissions of air pollutants and nuisance conditions. The program must meet or exceed all applicable federal, state and local regulations and standards. The applicable state regulations are Oregon Administrative Rules (OAR) 340-21-050 through 340-21-060 and in OAR 340-30-440 and in OAR 340-30-043.

   2.2. Specific program requirements are provided in the CS Construction Manual, Air Pollution Control Plan section.

   2.3. Fugitive emissions include the presence in the ambient air of dust, fumes, gases, mist, odorous matter, vapors or smoke. Nuisance conditions are defined as unusual or annoying amounts of fugitive emissions having characteristics and duration as to exceed or contribute to exceeding government laws, regulations and standards. Contractors are prohibited from conducting open burning on the Ronler Acres Campus.

   2.4. The Contractor is responsible for determining when and where Air Pollution Control measures are required to prevent/reduce fugitive emissions that are generated as a result of Contractor activities on either new construction or sustaining contractor projects.

   2.5. The Contractor is responsible for providing all training and equipment required for the Air Pollution Control Plan.

   2.6. The Air Pollution Control Plan shall be documented and available for Intel review.

RA Contractor BKMs Rev. 2  11/29/01
Owner: OR/WA/UT Projects EHS
BARRICADING AND SAFETY SIGNAGE

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors when using barricades and barricading signage.

2. PROCEDURES/EXPECTATIONS
   2.1. Barricading Procedures
      2.1.1. The contractor shall provide all necessary barricades, safety signs, safety cones, or safety tape as required to isolate or protect an unsafe work area from other workers, pedestrian or vehicle traffic.
      2.1.2. Barricades should completely enclose the hazardous area.
      2.1.3. Barricades must be maintained in good condition. Barricade tape shall not be used on the floor as this presents a slipping hazard of its own.
      2.1.4. In addition to using the proper warning tape, the contractor shall use the appropriate safety signage when barricading an area. All information on the signage must be filled out completely.
      2.1.5. Required Sign Usage:
         2.1.5.1. For all raised floor areas, the attached STOP sign with the Raised Floor Pre-Entry Checklist shall be used.
         2.1.5.2. For non-raised floor areas, the attached yellow CAUTION sign shall be used when using yellow CAUTION tape.
         2.1.5.3. For non-raised floor areas, the attached red DANGER sign shall be used when using red DANGER tape.
      2.1.6. All barricading/signage shall be removed after work is complete and hazard is eliminated.
      2.1.7. Barricading by hazard category:
<table>
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<tr>
<th>Color of Tape</th>
<th>Hazard Classification</th>
<th>Action</th>
<th>Example</th>
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<tr>
<td>Yellow</td>
<td>Occupational Hazard</td>
<td>Do not cross until hazard is identified and safe passage/access is assured. Use to identify the presence of a possible hazard</td>
<td>Overhead work&lt;br&gt;Tripping hazard</td>
</tr>
<tr>
<td>Red</td>
<td>High/Imminent Danger</td>
<td>Never cross. If access is required, coordinate with contact person identified on barricade signage</td>
<td>Energized Electrical Work&lt;br&gt;Overhead suspended load&lt;br&gt;Critical high pressure test&lt;br&gt;Chemical introduction&lt;br&gt;Fall exposure</td>
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<tr>
<td>Red/Yellow</td>
<td>ERT (Emergency Response Zone)</td>
<td>Never Cross If access is required, coordinate with the ERT leader</td>
<td>ERT response areas ONLY</td>
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CC/CM INCENTIVE ADMINISTRATION

1. PURPOSE

1.1. The purpose of an EHS incentive should be to motivate involved parties to embrace new challenges, continuously improve and introducing proven methods of doing business that will help in creating an Injury and Incident Free work environment. It has been found to be effective to view incentives as a process rather than a defined expectation with a final evaluation.

2. PROGRAM ELEMENTS

2.1. Incentive Decision Process (CM/GC) – At the commencement of each project, the evaluation to use incentives as a performance improvement tool should be conducted. Several key elements should be evaluated when making this decision:

2.1.1. Current EHS Program (Written and Executed) - Should include all five of the CII high impact EHS management techniques
2.1.2. Past Performance History
2.1.3. Experience with Intel
2.1.4. Experience with Local Labor Force
2.1.5. Willingness to Modify Current Program Elements
2.1.6. Demonstrated Ability to Modify Project Behavior

2.2. CM/GC Incentive – If it is decided to implement an incentive program (inclusive of EHS), the current INTEL PROJECTS EHS BKM incentive is generally broken into two pieces:

2.2.1. Lagging performance measures – may include injury rates, incident rates, SIPP incident histories, environmental audit performance or a combination of one or more of these elements. These are considered lagging indicators because they reflect past performance.

2.2.2. Leading Indicator/Continuous Improvement – portion of the incentive designed to have a proactive EHS management focus, generally measured quarterly. This incentive should be developed to ensure prevention through proactive program development and continuous improvement.
2.3. The EHS incentive should occupy a significant portion of the overall incentive value, with typical ranges of 30-60% of total allocation. It is recommended that CM/GC incentives include an at-risk value equal to the incentive value.

2.4. Roles And Responsibilities:

2.4.1. Intel Project Manager – Responsible to work with Intel Projects EHS representative to assess current CM/GC capabilities and assess incentive programs potential effectiveness in driving improvement.

2.4.2. Intel Projects EHS Representative – Shall work with Project Manager to communicate current CM/GC capabilities, to communicate incentive BKM’s and to propose various incentive strategies.
RONLER ACRES CONTRACTOR EHS PROGRAM

CHEMICAL APPROVAL PROGRAM

1. OBJECTIVE

1.1. To establish control systems for the introduction of hazardous material associated with onsite construction and build out activities at Ronler Acres. These systems apply to all project contractors and their subcontractors involved in transportation, handling, storage, and disposal of hazardous material on the Intel site.

2. PROCEDURES/EXPECTATIONS

2.1. The “CS Hazardous Material Control Plan”, document outlines the full program to be followed by each contractor and their subcontractors. This document can be found on the CS EHS web site or obtained from the Intel Projects EHS organization.

2.2. The following are prohibited from use at the Ronler Acres site (any exceptions must be worked with Site and Projects EHS):

   2.2.1. Carcinogenic, acutely hazardous materials (asbestos containing materials; PCB containing materials, FRP adhesives containing antimony);
   2.2.2. Class 1 ozone depleting substances (all CFC chemicals including CFC-11, 12, 13, 111, 112, 113 etc., Halon 1211, 1301, 2402, carbon tetrachloride, methyl chloroform), and;
   2.2.3. Spray paints and architectural coatings that do not comply with Oregon Administrative Rules (OAR) 340-22-900 through -1130.

2.3. The contractor shall manage the introduction of new materials into the workspace and shall coordinate all such work with all potentially impacted trades and Intel personnel.

2.4. Prior to introduction on Intel site, materials that:

   2.4.1. Exceed 55 gallons or 500 pounds;
   2.4.2. Have an NFPA rating of 3 or greater;
   2.4.3. Are spray paints or architectural coatings, or;
   2.4.4. Will result in generation of chemical waste (e.g., spent acetone from FRP work) shall require advanced written notice to be sent to Intel EHS.

2.5. Intel will audit contractor records of hazardous material use, MSDSs, and Hazardous Material Information Sheets on a regular basis.
2.6. For waste disposal, refer to Ronler Acres Contractor EHS Program: Waste Management.

2.7. For all spray paints and architectural coatings used at Ronler Acres the following requirements must be followed:

2.7.1. Product must be used only for intended purpose as indicated on Chemical Request Form.
2.7.2. Product must be stored in closed containers when not being accessed, filled, emptied, maintained, repaired or otherwise used.
2.7.3. Architectural coatings should be applied under the conditions and with the application techniques recommended by the coating's manufacturer.
2.7.4. Ensure that spray paint and coating products are completely used before disposal of their containers. “Completely used” for spray paint cans means that there no longer is any paint or propellant coming from the can (i.e., can is depressurized and there is no more “hiss”).
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 2 06/03

CONFINED SPACE ENTRY

1. OBJECTIVE

1.1. To define the Ronler Acres expectations of contractors regarding entry into Confined Spaces.

2. PROCEDURES/EXPECTATIONS

2.1. Contractors that perform Permit-Required Confined Space (PRCS) Entry are responsible for having a written PRCS Program which meets or exceeds OR OSHA 1910.146. This program must be available for Intel review.

2.2. The Contractor is responsible for all training and equipment needs for the entry team.

2.3. Prior to entry into any area labeled as a Confined Space, the contractor will notify an Intel EHS representative.

2.4. Specific procedures must be followed for the following confined spaces:

   2.4.1. D1C Plenum, RB1 Lab Lid and Bridge Interstitial – Follow Posted Sign Procedures at Entry Point
   2.4.2. RP1 – Contact the Room Owner for Specific Procedures
   2.4.3. Fab RMF – Refer to the Current BKM
   2.4.4. Sort RMF – Refer to the Current BKM
   2.4.5. PCD – Contact the Room Owner for Specific Procedures
   2.4.6. BCD – Contact the Room Owner for Specific Procedures
   2.4.7. CUB – Contact the Room Owner for Specific Procedures
   2.4.8. All Trenches – Refer to Intel’s Trench Entry Procedures

2.5. Procedures that must be followed prior to entry into a Confined Space:

   2.5.1. The contractor will develop and review a confined space work plan.

   2.5.2. The Contractor’s plan for entry will be reviewed with the Intel EHS representative and Intel area and system owner. Intel
specific information about the space will be communicated to the Contractor entry team.

2.5.3. During the review process, the Intel EHS representative will communicate specific notification requirements prior to entry (i.e., security, ERT, area owner).

2.5.4. The Contractor is responsible for notifying security and obtaining a log number prior to entry into a Confined Space.

2.5.5. The Contractor is responsible for notifying outside rescue services and confirming their availability to perform a PRCS rescue prior to entry into an OR-OSHA defined Permit-Required Confined Space.

2.6. Procedures that must be followed upon completion of confined space entry work:

2.6.1. The Contractor must contact the Intel EHS representative and Security upon completion of confined space work.

2.6.2. Upon completing PRCS work and canceling the permit, the Intel EHS representative shall conduct a debriefing with the crew that performed the PRCS work as required by OR-OHSA 1910.146.

2.7. For “Greenfield” construction, the contractor that will be performing confined space entry shall interface with the GC/CM EHS representative (rather than the Intel EHS representative) for all procedures (2.5 through 2.6.1) identified above.
CONSTRUCTION INCIDENT RESPONSE

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Construction Incident Response.
   1.2. To outline incident notification procedures within projects. See Addendum A.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for ensuring that its employees respond properly in any construction incident.
   2.2. Contractor shall contact project management prior to commencement of work, to define, document, and communicate clear roles and responsibilities of each in the event of an emergency.
   2.3. At a minimum, contractor agrees to communicate and ensure that all employees shall comply with any instructions or directions of Intel’s Emergency Response Team (ERT) or Incident Commander during an emergency situation.
   2.4. Contractor shall ensure training is provided to employees which adequately informs all of site specific emergency response procedures, including, but not limited to:
       2.4.1. Emergency notification procedures, including emergency phone numbers and contacts.
       2.4.2. Emergency evacuation procedures, including routes of egress and designated assembly points.
       2.4.3. Location of emergency medical treatment facilities and means of obtaining medical support in the event of an emergency.
       2.4.4. Emergency job safe shut-down procedures.
   2.5. In the event of an evacuation, employees shall be instructed to NOT stop to remove clean room attire, Personal Protective Equipment (PPE) or to retrieve personal belongings - evacuate immediately to the designated assembly point.
   2.6. In the event of an area power outage, you may have to wait up to 20 seconds to allow emergency power to illuminate the area once the facility has achieved beneficial occupancy. Stay calm and move when
safe to do so. A power outage may or may not result in an evacuation. If an evacuation is needed, the evacuation system will be activated.

2.7. In the event of an emergency or chemical spill / release, proceed to a safe area and contact the Ronler Acres Security Control Center by dialing X-44444 from an internal phone, or 613-4444 from a cell or external phone. When talking with security, stay on the line until told to hang up. Be prepared to tell security the location and nature of the emergency and answer all questions. DO NOT CALL 911.

2.8. If required by contract scope of work that contractor shall create and maintain a formal emergency response team for the project, a documented project emergency response plan shall be completed, reviewed and approved by Intel project management and maintained on site. In the event of any chemical spills/releases on the campus, Intel ERT will still need to be involved and a call to the emergency line will still be necessary.
Addendum A

INCIDENT NOTIFICATION PROCEDURE
BKM Rev 09/99

Note: This procedure does not replace any internal General Contractor notification procedures but should be used in conjunction.

1. PROCEDURE

1.1. In the event of any of the following incidents:

   1.1.1. Near misses with potential for property damage/fab impact/serious injury
   1.1.2. Any spills/environmental releases beyond deminimus
   1.1.3. Any fire
   1.1.4. Emergency vehicles on site (fire, medical, etc.)
   1.1.5. Serious injury (OSHA recordable/lost day case)
   1.1.6. EHS SBI/SFYI, EHS EMI/EFYI
   1.1.7. Any event news worthy to press (i.e. lightning strike)

1.2. Determine if Intel Security has been informed of the incident. If they have not been informed:

   1.2.1. Contact Intel Security at 4-4444
   1.2.2. Briefly describe event to security
   1.2.3. Request outside support if needed (ERT assistance, Intel medical, COH emergency response forces, etc.)
   1.2.4. Request that security notify an ERT member of the event
   1.2.5. An ERT member will notify the appropriate RA campus personnel

1.3. Contact Intel EHS representative

1.4. The Intel EHS rep will transmit the following information to the attached Incident Notification List:

   Subject: Project EHS Incident Notification + Date
   Location:
   Time:
   Incident: Provide brief description of event and impact. Do not include names of injured personnel

1.5. Incident Investigation: Date, time and location of incident review (if information is not known at the time of initial notification, the
individual responsible for scheduling the review shall send out the information to the incident notification list prior to the incident investigation)

1.6. Final incident review report which includes the root cause and corrective actions

*See attached instructions on how to use the Outlook "vote" tool to ensure attendance response to the review.*

1.7. Intel EHS will notify Greg Danowski, Rick Balcom, Milt Coleman and Brett Phillips via phone/pager of any major incident: EHS SBI/EMI, factory impact, lost day injuries, etc.

<table>
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<th>Name</th>
<th>Description</th>
<th>Phone/Cell</th>
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<th>Email</th>
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<tr>
<td>Greg Danowski</td>
<td>Construction Manager</td>
<td>503.613.6485</td>
<td>1.800.357.7542</td>
<td><a href="mailto:Greg.Danowski@intel.com">Greg.Danowski@intel.com</a></td>
</tr>
<tr>
<td>Rick Balcom</td>
<td>Construction Manager</td>
<td>503.816.2639</td>
<td>503.499.8099</td>
<td><a href="mailto:Rick.Balcom@intel.com">Rick.Balcom@intel.com</a></td>
</tr>
<tr>
<td>Milt Coleman</td>
<td>EHS Manager</td>
<td>503.702.0325</td>
<td>503.514.0002</td>
<td><a href="mailto:Milton.Coleman@intel.com">Milton.Coleman@intel.com</a></td>
</tr>
<tr>
<td>Brett Phillips</td>
<td>Projects EHS</td>
<td>503.703.4545</td>
<td>503.514.1983</td>
<td><a href="mailto:Brett.E.Phillips@intel.com">Brett.E.Phillips@intel.com</a></td>
</tr>
</tbody>
</table>

1.8. Intel EHS representative will send out any EHS SBI/SFYI, EMI/EFYI
### Incident Notification Distribution List:

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<th>Name</th>
<th>Email</th>
<th>Name</th>
<th>Email</th>
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<td>Afghan, Ali</td>
<td><a href="mailto:ali.afghan@intel.com">ali.afghan@intel.com</a></td>
<td>Hendel, Robert</td>
<td><a href="mailto:robert.hendel@intel.com">robert.hendel@intel.com</a></td>
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<td>Arand, John</td>
<td><a href="mailto:john.arand@intel.com">john.arand@intel.com</a></td>
<td>Horwath, Bruce</td>
<td><a href="mailto:bruce.horwath@intel.com">bruce.horwath@intel.com</a></td>
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<td>Balcom, Rick</td>
<td><a href="mailto:rick.balcom@intel.com">rick.balcom@intel.com</a></td>
<td>Jones, Bruce</td>
<td><a href="mailto:bruce.jones@intel.com">bruce.jones@intel.com</a></td>
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<td>Bell, Jim</td>
<td><a href="mailto:jim.bell@intel.com">jim.bell@intel.com</a></td>
<td>Kilian, Elaine</td>
<td><a href="mailto:elaine.kilian@intel.com">elaine.kilian@intel.com</a></td>
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<td>Benjamin, Donnie</td>
<td><a href="mailto:donnie.benjamin@intel.com">donnie.benjamin@intel.com</a></td>
<td>Krick, David T</td>
<td><a href="mailto:david.t.krick@intel.com">david.t.krick@intel.com</a></td>
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<tr>
<td>Blum, Steve</td>
<td><a href="mailto:steve.blum@intel.com">steve.blum@intel.com</a></td>
<td>Kroon, Rick</td>
<td><a href="mailto:rick.kroon@intel.com">rick.kroon@intel.com</a></td>
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<td>Bonnot, Ed</td>
<td><a href="mailto:ed.bonnot@intel.com">ed.bonnot@intel.com</a></td>
<td>Krueger, Keith</td>
<td><a href="mailto:keith.krueger@intel.com">keith.krueger@intel.com</a></td>
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<td>Braschayko,</td>
<td><a href="mailto:michael.braschayko@intel.com">michael.braschayko@intel.com</a></td>
<td>Litkie, Dean</td>
<td><a href="mailto:dean.litkie@intel.com">dean.litkie@intel.com</a></td>
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<td>Braun, James E</td>
<td><a href="mailto:james.e.braun@intel.com">james.e.braun@intel.com</a></td>
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<td>Bryan, Re</td>
<td><a href="mailto:re.bryan@intel.com">re.bryan@intel.com</a></td>
<td>McMillan, Bob</td>
<td><a href="mailto:bob.mcmillan@intel.com">bob.mcmillan@intel.com</a></td>
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<td>Caverly, Mickey</td>
<td><a href="mailto:mickey.caverly@intel.com">mickey.caverly@intel.com</a></td>
<td>Miller, Pat</td>
<td><a href="mailto:Patrick.M.Miller@Intel.com">Patrick.M.Miller@Intel.com</a></td>
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<tr>
<td>Chetlain, Virginia</td>
<td><a href="mailto:virginia.chetlain@intel.com">virginia.chetlain@intel.com</a></td>
<td>Nice, Travis S</td>
<td><a href="mailto:travis.s.nice@intel.com">travis.s.nice@intel.com</a></td>
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<td>Clark, Aubrey</td>
<td><a href="mailto:aubrey.clark@intel.com">aubrey.clark@intel.com</a></td>
<td>Notman, Steve</td>
<td><a href="mailto:steve.notman@intel.com">steve.notman@intel.com</a></td>
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<td>Clark, Don</td>
<td><a href="mailto:don.clark@intel.com">don.clark@intel.com</a></td>
<td>O'Connor, Russ</td>
<td><a href="mailto:russ.oconnor@intel.com">russ.oconnor@intel.com</a></td>
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<tr>
<td>Coleman, Milton</td>
<td><a href="mailto:milton.coleman@intel.com">milton.coleman@intel.com</a></td>
<td>Oglesby, Mitch</td>
<td><a href="mailto:mitch.oglesby@intel.com">mitch.oglesby@intel.com</a></td>
</tr>
<tr>
<td>Collins, Dennis H</td>
<td><a href="mailto:dennis.h.collins@intel.com">dennis.h.collins@intel.com</a></td>
<td>Phillips, Brett E</td>
<td><a href="mailto:brett.e.phillips@intel.com">brett.e.phillips@intel.com</a></td>
</tr>
<tr>
<td>Danowski, Greg</td>
<td><a href="mailto:greg.danowski@intel.com">greg.danowski@intel.com</a></td>
<td>Preston, Jon</td>
<td><a href="mailto:jon.preston@intel.com">jon.preston@intel.com</a></td>
</tr>
<tr>
<td>David, Ken</td>
<td><a href="mailto:ken.david@intel.com">ken.david@intel.com</a></td>
<td>Ross, Tim</td>
<td><a href="mailto:tim.ross@intel.com">tim.ross@intel.com</a></td>
</tr>
<tr>
<td>Dodds, Randy</td>
<td><a href="mailto:randy.dodds@intel.com">randy.dodds@intel.com</a></td>
<td>Schock, Lonnie R</td>
<td><a href="mailto:lonnie.r.schock@intel.com">lonnie.r.schock@intel.com</a></td>
</tr>
<tr>
<td>Engle, Mike</td>
<td><a href="mailto:michael.d.engle@intel.com">michael.d.engle@intel.com</a></td>
<td>Schroll, Suzie</td>
<td><a href="mailto:suzanne.m.schroll@intel.com">suzanne.m.schroll@intel.com</a></td>
</tr>
<tr>
<td>Fischer, John</td>
<td><a href="mailto:john.fischer@intel.com">john.fischer@intel.com</a></td>
<td>Schull, Jill</td>
<td><a href="mailto:jill.schull@intel.com">jill.schull@intel.com</a></td>
</tr>
<tr>
<td>Flannigan, Kirk</td>
<td><a href="mailto:kirk.flannigan@intel.com">kirk.flannigan@intel.com</a></td>
<td>Stewardsdon, Carolyn</td>
<td><a href="mailto:carolyn.stewardsdon@intel.com">carolyn.stewardsdon@intel.com</a></td>
</tr>
<tr>
<td>Gariepy, Bonnie</td>
<td><a href="mailto:bonnie.gariepy@intel.com">bonnie.gariepy@intel.com</a></td>
<td>Sutter, Rick E</td>
<td><a href="mailto:rick.e.sutter@intel.com">rick.e.sutter@intel.com</a></td>
</tr>
<tr>
<td>Geiss, Darnel</td>
<td><a href="mailto:darnel.geiss@intel.com">darnel.geiss@intel.com</a></td>
<td>Swazo, Kathy</td>
<td><a href="mailto:kathryn.x.swazo@intel.com">kathryn.x.swazo@intel.com</a></td>
</tr>
<tr>
<td>Grant, Doug</td>
<td><a href="mailto:doug.grant@intel.com">doug.grant@intel.com</a></td>
<td>Taylor, Donald</td>
<td><a href="mailto:donald.taylor@intel.com">donald.taylor@intel.com</a></td>
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<tr>
<td>Grant, Steve</td>
<td><a href="mailto:steve.grant@intel.com">steve.grant@intel.com</a></td>
<td>Toppenberg, Tony</td>
<td><a href="mailto:anthony.n.toppenberg@intel.com">anthony.n.toppenberg@intel.com</a></td>
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<tr>
<td>Hardgrove, Rock</td>
<td><a href="mailto:rockx.w.hardgrove@intel.com">rockx.w.hardgrove@intel.com</a></td>
<td>Wallace, Mary A</td>
<td><a href="mailto:mary.a.wallace@intel.com">mary.a.wallace@intel.com</a></td>
</tr>
<tr>
<td>Hecht, Barbara A</td>
<td><a href="mailto:barbara.a.hecht@intel.com">barbara.a.hecht@intel.com</a></td>
<td>Zawalski, Rod M</td>
<td><a href="mailto:rod.m.zawalski@intel.com">rod.m.zawalski@intel.com</a></td>
</tr>
</tbody>
</table>

RA Contractor BKMs Rev. 2  11/29/01
Owner: OR/WA/UT Projects EHS
Addendum B

INCIDENT RESPONSE NOTIFICATION OUTLOOK "VOTING" INSTRUCTIONS

3. PROCEDURE

3.1. If you would like to individuals to respond as to their availability for the incident review, you may use the "Vote" option in Outlook when you send your message. Be sure to note in the message text that you are using this option.

3.1.1. Create a new message
3.1.2. View
3.1.3. Options
3.1.4. Voting/Tracking
3.1.5. Use voting buttons
3.1.6. You can type in Yes, I would like to attend; No, I will not be attending
3.1.7. Click o.k.
3.1.8. Send

3.2. You will not see the voting buttons in the text of your sent message. If you would like to see the buttons, be sure to cc yourself on the message.
THE CONTROL OF HAZARDOUS ENERGY (LO/TO)

1. OBJECTIVE
   1.1. Determine and document Lockout/Tagout requirements specific to all contractors and subcontractors on the Intel Ronler Acres Campus and to establish minimum standards and procedures for the operation or energization of the equipment process in order to protect personnel.

2. SCOPE
   2.1. This policy applies to energy sources such as, but not limited to, electrical, hydraulic, pneumatic, chemical, radiation, thermal, compressed air, energy stored in springs and potential energy from gravity.

3. PROCEDURES/EXPECTATIONS
   3.1. Application:
      3.1.1. LO/TO is required for servicing and maintenance of machines and equipment in which the unexpected energizing or start up of the machines or equipment, or release of stored energy could cause injury to employees.

      3.1.2. All contractors and subcontractors shall follow at a minimum the State of Oregon's Occupational Safety and Health Administration's (OSHA) The Control of Hazardous Energy LO/TO 1910.147.

   3.2. Procedure:
      3.2.1. Contractor shall define scope of work and all possible sources of stored energy.

      3.2.2. A lock and tag are required for each employee at all points of stored energy.

      3.2.3. In coordination with Intel representative, shut down the equipment or system using normal shutdown procedures.

      3.2.4. Isolate the equipment or system by operating the switch, valve, or other energy-isolating device. Block, bleed down, or otherwise control all stored energy.
3.2.5. In coordination with Intel representative, verify that isolation and
deenergization has been accomplished by attempting to operate the equipment of system and verifying with appropriate
diagnostic equipment. Electrical Energized Work (EEW) procedures shall be employed until work area has been tested and proven to be de-energized.

3.2.6. Prior to startup, check the equipment of system to ensure it is in safe operating condition with all guards, etc. In position.

3.2.7. Notify all affected employees and Intel representatives (if appropriate) that lockout/tagout is being removed.

3.2.8. In coordination with Intel Representative, restore power source and verify safe operating conditions.

3.3. Type of LO/TO system used: Locks in conjunction with identification tags


3.4.1. The ERT leader for the facility must be contacted.

3.4.2. An attempt must be made to reach the employee who attached the lock. If the employee can not be reached,

3.4.2.1. Verification must be made that the employee who applied the lock is not at the facility. This must include a walk through of the equipment effected by the lockout, and the employee must be notified of the lock removal prior to resuming work.

3.4.2.2. When all conditions have been met, the supervisor in consultation with the ERT leader may request that a member of the ERT remove the lockout/tagout device.

3.4.2.3. An ERT incident report must be issued after removal of a lockout/tagout device.
CO-OCCUPANCY MANAGEMENT

1. PURPOSE

1.1. A project co-occupancy management team shall put in place a process that will ensure the development and smooth transition of environmental and safe operating procedures/standards/practices from the General Contractor owned construction mode to a customer (RACS owned sustaining mode while in a co-occupied environment).

2. SCOPE

2.1. All Ronler Acres construction projects being performed in operating facilities.

3. PROGRAM ELEMENTS

3.1. Procedure

3.1.1. The charter for the co-occupancy management team (or designated EHS program focus teams) is to review the existing environmental health and safety programs with a vision of developing a seamless transition to sustaining mode. It should account for the programs currently in use on the construction site and document gaps or differences either in the program content or program execution. It should develop a road-map showing how and when these gaps or differences will be addressed during the project phases.

3.1.2. EHS program focus teams will review the existing programs, perform the gap analysis and propose a transition roadmap identifying timelines for development or alignment steps. Upon ratification by the co-occupancy management team, program focus teams will implement the agreed development/alignment steps.

3.1.3. The EHS program focus teams will communicate changes to the Intel requirements using the pre-agreed communication methodologies.
4. **ROLES AND RESPONSIBILITIES**

4.1. EHS program focus teams should be formed to perform the program development and/or alignment.

4.2. EHS Program Teams - Member’s Roles and Responsibilities

4.2.1. General Contractor EHS

   4.2.1.1. Content expert on existing site requirements
   4.2.1.2. Link between program team and CM/GC management

4.2.2. Projects EHS

   4.2.2.1. Content expert on BKMs for program transition, resolution mechanisms
   4.2.2.2. Link between sustaining team and project management;
   4.2.2.3. Co-Occupancy process facilitator;

4.2.3. Site EHS

   4.2.3.1. Content expert on site EHS programs including Virtual Factory requirements
   4.2.3.2. Link with site EHS management
   4.2.3.3. Link with site/corporate Training
   4.2.3.4. Liaison with external bodies / agencies

4.2.4. RACS

   4.2.4.1. Representative of first customers of programs
   4.2.4.2. Content expert on practical application of site EHS programs
   4.2.4.3. Link with RACS management

4.2.5. IQ Group

   4.2.5.1. Representative of 2nd customer of programs
   4.2.5.2. Content expert on practical implementation in IQ environment
   4.2.5.3. Link with IQ management

4.2.6. Manufacturing Group

   4.2.6.1. Representative of down-line customer
4.2.6.2. Content expert on practical implications of site EHS programs
4.2.6.3. Liaison with manufacturing management

5. TIMING

5.1. Since co-occupancy is not simply in existence for a phase of the project but for the entire length of the project, processes must be put in place early in the life of the project to manage the existence of two or more organizations within a single space potentially operating with different work standards. Where changes in operating standards/practices are determined to be necessary during the life of the project, the timing of such changes/transitions will be set by the Co-Occupancy Management Team to minimize workforce confusion and re-training.

5.2. Program readiness dates are typically driven by the nature of project activities such as commissioning, IQ mobilization, operational readiness, chemical introduction, etc. The Co-Occupancy Management Team in consultation with the EHS Program Focus team leaders should use the project schedule to identify the timing of program introduction or transition/alignment.
COOLING TOWER ENTRY

1. OBJECTIVE
   1.1. To document specific requirements, which will reduce hazards, associated with working in or around operating cooling towers.

2. PROCEDURES/EXPECTATIONS
   2.1. Definitions
      2.1.1. **Legionella Bacteria**
              The causal agent of Legionnaire's Disease is a water-based organism, which causes a respiratory infection when inhaled in an aerosol form. Many building water systems have been linked to outbreaks of Legionellosis, and the bacteria have been isolated from numerous sources. One of the most frequently cited causes of endemic outbreaks of Legionellosis is the operation of cooling towers.

      2.1.2. **Permit Required Confined Space (PRCS)**
              A confined space that has a serious recognized safety or health hazard present (e.g. hazardous atmosphere, unguarded equipment, chemical spills, etc.)

   2.2. General
      2.2.1. Entry into the cooling towers has been determined to be a confined space entry.

   2.3. Cooling Tower Work
      2.3.1. Entry into a Permit Required Confined Space requires the issuance of a permit.
2.3.2. Personal Protective Equipment:

2.3.2.1. Due to water treatment chemicals and possible microbial contamination the following PPE is required.

<table>
<thead>
<tr>
<th>Work Area</th>
<th>PPE Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>When working on top of or inside the cooling tower.</td>
<td>Full face HEPA respirators, hooded plastic or rubber rain suits, gloves</td>
</tr>
<tr>
<td>When working around the tower within the mist area for greater than 15 minutes per workday.</td>
<td>Disposable HEPA respirators* Full Face HEPA respirator, or hooded rain gear, vented goggles, gloves</td>
</tr>
</tbody>
</table>

Additional PPE may be required depending on the work being performed.
*The disposable HEPA respirator that is required for Intel is the 3M 8233 (N100).

2.3.3. Lockout and tagout requirements are mandated for any hazardous energies which pose a potential threat to entrants. (ex. Fan Blades)

2.3.4. The buddy system must be utilized anytime an employee is required to enter an operating cooling tower. The buddy is required to remain outside the tower and be able to assist or call for assistance in an emergency situation by radio or other equally effective means.
CRANES, RIGGING & HOISTS

1. OBJECTIVE
   1.1. To establish minimum safety standards to ensure all crane operations are performed in a safe manner.
   1.2. To ensure that all cranes used on an RA construction projects are in safe working condition.
   1.3. To prevent injuries and losses resulting from incidents caused by improper use of cranes.

2. PROCEDURE
   2.1. All crane work must be pre-planned to ensure the safety of the process. It is the responsibility of the contractor and/or crane equipment supplier to ensure any crane used on an RA construction projects are in safe working condition. Documentation must be supplied with the crane and reviewed by project management prior to any work by the crane on the job.
   2.2. When moving a crane, a spotter is required when the potential for overhead hazards or impact to the facility exists. The spotter must be positioned so they are able to visually confirm that an incident will not occur, and must be able to immediately communicate with the operator to notify of hazardous conditions. Communication may be by verbal or visual means.

   2.3. Documentation required:
      2.3.1. The crane has been inspected and maintained in accordance with the manufacturer’s specifications.
      2.3.2. The crane complies with all applicable regulatory or special requirements of the project. Cranes should be equipped with a two-blocking device, or a system shall be used which deactivates the hoisting action before damage occurs in the event of a two-blocking situation (two-block damage prevention feature).
      2.3.3. Operator’s manual must be available in the cab of the crane.
      2.3.4. The crane has a current, thorough annual inspection by a person qualified to inspect and certify cranes.
2.3.5. Inspection logs for daily, weekly, and monthly work are available in the crane cab for inspection.

2.3.6. The operator of the crane has a crane safety training card or documentation verifying the operator’s qualifications to operate this specific type of crane.

2.3.7. Written safe crane operating procedures are available in the cab of the crane. These are to be written by the contractor. The operator’s manual may not be used in lieu of separate safety procedures.

2.3.8. Special permission (in the form of a lift plan) is required for any lift that exceeds 90% of the rated capacity of the crane in the pick condition. (This is not applicable for mobile cranes equipped with operating computer systems or tower cranes with operating limit switches.)

2.3.9. At no time will a crane be operated with computer systems or limit switches in a non-functioning or override condition.

2.3.10. The weight of the load must be known (not estimated) or means taken to accurately weigh the load before any pick.

2.3.11. All outriggers must be fully extended and set on stable ground and/or adequate solid cribbing before any lift.

2.3.12. All rigging gear is inspected before each use. Damaged equipment must be immediately taken out of service. All rigging gear must be rated for a safe capacity for that lift.

2.3.13. Any multiple crane pick requires a written plan submitted to the project superintendent.

2.3.14. A written safety plan must be submitted to project management for the use of multiple tower cranes, including a tower crane and mobile cranes, prior to work on a project.

2.3.15. Cranes, rigging, and loads are not permitted within a 10 (10') feet of power lines rated 50kV or below. Any questions regarding cranes and rigging should be referred through project management.

2.3.16. Use of a dedicated bellman should be considered in project planning.

2.3.17. Due to the seriousness of crane safety procedures, any operator or supervisor who violates these procedures will be subject to immediate disciplinary action, up to and including removal from the project.

2.4. Multiple cranes on project--whenever two or more cranes are in use on a project, the following procedures must be followed:
2.4.1. Crane use meetings should be held daily before work starts.
   Attending:

   2.4.1.1. Operators.
   2.4.1.2. Bellboys and/or dedicated signal men.
   2.4.1.3. Foremen of crews using cranes.

2.4.2. A written pre-plan must be submitted as part of the project safety plan. See attached, Intel Ronler Acres Hoist Planning Worksheet.

2.4.3. Radio communications between operators.

2.4.4. Quadrants of operation clearly defined.

2.5. Tower cranes:

2.5.1. Tower crane selection and sizing must be pre-planned as a function of the project safety plan. Consideration must be given to local conditions and potential permits required. A specific tower crane erection, jumping, or dismantling safety meeting must be held at the job site prior to these work processes.

2.5.2. The following checklist should be used as a guide for issues that must be addressed at this meeting. Tower crane erection, jumping, dismantling checklist:

   2.5.2.1. All tower cranes must be erected, jumped, dismantled, and operated in accordance with the manufacturer’s specifications and procedures. (Operating manual must be provided on site.)

   2.5.2.2. The tower crane lessor must provide the erector and project management with a list of verified weights of all major component parts.

   2.5.2.3. The tower crane lessor must provide the erector and project management with written procedures for erecting, jumping (when appropriate), and dismantling each major component. This will include proper torquing specifications and procedures.

   2.5.2.4. The tower crane lessor must ensure that all components of the crane arrive at the job site in safe working condition.

   2.5.2.5. The tower crane lessor, erection contractor, mobile crane operator, and/or representative, and project
supervision must make a physical inspection of the erection site to ensure adequate setup area and proper radius and load chart capacities.

2.5.2.6. The erector must provide a load chart for the crane to be used in the erection process.

2.5.2.7. The erector must provide a fall protection work place for the erection, jumping, or dismantling process.

2.5.2.8. The tower crane erector’s representative must be on the job site to monitor the erection process.

2.5.2.9. Soils and footings for both the tower and mobile crane must be verified as adequate for the erection process.

2.5.2.10. The tower crane erector’s representative must inspect, test, and certify, in writing, that the tower crane is in safe working condition prior to any work being performed.

2.6. Lift Pre-Planning

2.6.1. A Ronler Acres Hoist Planning Worksheet shall be completed prior to any lift. This includes, but is not limited to, lifts with cranes, material lifts, chain falls, etc. A properly completed hoist plan can be used for multiple lifts. See attached Intel Ronler Acres Hoist Planning Worksheet.

2.6.2. All critical lifts must have a critical lift plan. A Hoist Planning Worksheet would not be required in this situation.

2.6.3. The Ronler Acres Hoist Planning Worksheet serves also as a pre-task plan. A separate Pre-Task Plan is not required with a completed Hoist Planning Worksheet.
A. SAFETY: Please describe control measures on back of form for any Safety item checked “Yes”
1. Will work involve live systems or energized equipment? Yes No
2. Is lockout/tagout of energized systems required? Yes No
3. Will work involve exposure to falls of 6 feet or greater? Yes No
4. Are ladders, Mobile Elevated Work Platform (MEWP), scaffolds or work platforms needed to perform task? Yes No
5. Will the task involve the use of chemicals or be adjacent to process equipment/piping containing chemicals?
   - Have Material Safety Data Sheets been provided to crew? Yes No
   - Are containers properly labeled (contents, hazards)? Yes No
   - Does the work generate waste of chemicals? Yes No
   - Will the work generate odors (odor notification posted and security notified [613-3333])? Yes No
   - Are chemicals stored properly (double containment)? Yes No
   - Does task require special PPE? Yes No
6. Does this task require the demolition of electrical/chemical systems or equipment? Yes No
7. Does this work involve removing floor tile and/or working under the raised floor? Yes No
8. Will weather conditions affect the safe completion of this task? Yes No
9. Will work involve using sharp tools or materials (Example: Saws, knives, sheet metal, unistrut, etc)? Yes No
10. Will work take place in an area where environmental cut hazards (sharp objects) exist? Yes No
11. Will work involve employee exposure to hazardous noise levels (>85 dBA, need to yell to overcome noise)? Yes No

B. POTENTIAL IMPACTS: Will the work involve or have the potential to impact*: Yes No
1. Fire Detection -Smoke Detectors IR/UV/HSDD/VESDA Safety Shower, Eye wash, Leak detection
2. Evacuation Speakers Fire Extinguisher
4. Hazardous Gas/BCD Systems, EWN / EEW
5. Confined Space PERMITS: Are any of the following permits required to perform task?
   - SIPP Hot Work (NEHW)
   - EWN / EEW
   - MEWP
   - Confined Space

D. PPE (Personal Protective Equipment): Is any of the following PPE required to perform task?
1. What type of gloves does your task require? * Specify type of chemical glove on the back; ** Document on the back why gloves are not required.
2. Should material handling equipment be used to move/lift materials (i.e. forklift, pallet jack, chain fall)? Yes No
3. Does this task require periodic stretching? Yes No
4. If manual material handling is required. Does material exceed 35 lbs. in weight? Yes No
5. Does this task involve the use of chemicals or be adjacent to process equipment/piping containing chemicals? Yes No
6. Will work involve special PPE?
   - Head Protection
   - Eye Protection
   - Foot/Toe Protection
   - Reflective Vest
   - Face Shield
   - Respirator
   - Other (note on back) Forceful Exertion
   - Shoulders
   - Neck
   - Back
   - Knees
   - Arms

F. EMERGENCY EQUIPMENT AND EXIT LOCATIONS: (know where you are)
1. Nearest Exit
2. Nearest phone
3. Fire Extinguisher
4. Eye Wash/ Shower

G. GENERAL NOTE: Signature of foreman indicates completion of following activities:
1. Work area has been walked by crew to identify safety and/or impact concerns.
2. Work is safe to work in (i.e. housekeeping, guarding, congestion, work surfaces, access).
3. Work has been coordinated with other crafts in the area.
4. All tools and equipment are safe and in good condition (includes assured grounding, slings, hand tools, etc.)
5. All necessary training for this task has been completed.
6. All new employees have been familiarized with work area.
7. Sufficient personnel have been assigned to complete this task safely.
8. Emergency exits and equipment have been identified (phones, fire extinguishers, eyewashes, etc.).
9. Contingency plans have been developed for unexpected events (medical emergency and/or equipment failure).

Foreman (please print)_____________________________ Foreman Signature___________________________________

INTEL RONLER ACRES HOIST PLANNING WORKSHEET
Contractor: Work Area: Effective Date:
Description of work:

1. Will work involve live systems or energized equipment?
2. Is lockout/tagout of energized systems required?
3. Will work involve exposure to falls of 6 feet or greater?
4. Are ladders, Mobile Elevated Work Platform (MEWP), scaffolds or work platforms needed to perform task?
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   - Have Material Safety Data Sheets been provided to crew?
   - Are containers properly labeled (contents, hazards)?
   - Does the work generate waste of chemicals?
   - Will the work generate odors (odor notification posted and security notified [613-3333])?
   - Are chemicals stored properly (double containment)?
   - Does task require special PPE?
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B. POTENTIAL IMPACTS: Will the work involve or have the potential to impact*:
1. Fire Detection -Smoke Detectors IR/UV/HSDD/VESDA
2. Evacuation Speakers
4. Hazardous Gas/BCD Systems, EWN / EEW
5. Confined Space

D. PPE (Personal Protective Equipment): Is any of the following PPE required to perform task?
1. What type of gloves does your task require? * Specify type of chemical glove on the back; ** Document on the back why gloves are not required.
2. Should material handling equipment be used to move/lift materials (i.e. forklift, pallet jack, chain fall)?
3. Does this task require periodic stretching?
4. If manual material handling is required. Does material exceed 35 lbs. in weight?
5. Does your task involve any musculoskeletal risk factors listed below?

F. EMERGENCY EQUIPMENT AND EXIT LOCATIONS: (know where you are)
1. Nearest Exit
2. Nearest phone
3. Fire Extinguisher
4. Eye Wash/ Shower

G. GENERAL NOTE: Signature of foreman indicates completion of following activities:
1. Work area has been walked by crew to identify safety and/or impact concerns.
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9. Contingency plans have been developed for unexpected events (medical emergency and/or equipment failure).

Foreman (please print)_____________________________ Foreman Signature___________________________________

INTEL RONLER ACRES HOIST PLANNING WORKSHEET
Contractor: Work Area: Effective Date:
Description of work:
## INTEL RONLER ACRES HOIST PLANNING WORKSHEET

### I. Draw a diagram of your lift

<table>
<thead>
<tr>
<th>Item to be Lifted:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>Size</td>
</tr>
</tbody>
</table>

### Lifting Equipment:

<p>| |</p>
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<tr>
<th></th>
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<tbody>
<tr>
<td>Type</td>
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<tr>
<td>Capacity</td>
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</table>

### Rigging Equipment:

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</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Capacity</td>
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### Anchor Point:

<p>| |</p>
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<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Capacity</td>
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</tbody>
</table>

### Include the following in your drawing:

- Indication of Damage/Wear
- Safeties and Guards in Place
- Operators Trained
- Operator's Manual Present
- Maintenance Updated

### Your Route: (Include the following)

- Pathway (or Flight Path)
- Obstructions
- Clearances
- EMO's, Live Lines
- Other Craft

### Methods of Communicating Hazards:

- Spotters during lift
- Overhead work signs
- Barricading tape and signs
- Other

### K. Controls

Are there any additional safety or impact controls? (Explain any items marked yes from section A or B)

### L. Signatures

- Foreman's Signature:
- Competent Rigger's Signature:
- Crews' Signature (circle the name of the person who has inspected the equipment):

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*Do Not Use Modified Lifting Equipment or Rigging Unless Approved in Writing by a Qualified Person*

*Rev 6 06/03/03*

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POST IN WORK AREA – Final Rev. 06/03/03
CRYOGEN DEWAR ELEVATOR TRANSPORTATION

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors and subcontractors for the transportation of cryogen dewars on elevators. This procedure is designed to eliminate potential for an employee exposure to an oxygen deficient atmosphere during the transportation of cryogen dewars within the enclosed space of an elevator.

2. SCOPE
   2.1. This BKM covers all elevator transportation of cryogen dewars on the Ronler Acres campus.

3. PROCEDURES/EXPECTATIONS
   3.1. The transportation of cryogen dewars within an elevator with personnel present in the elevator at the same time is prohibited.

   3.2. The transportation of cryogen dewars on elevators will require two personnel. One individual will place the cryogen dewar in the elevator and the second individual, stationed at the destination floor, will remove the dewar.

   3.3. Cryogen dewars will be secured to prevent movement during transportation.

   3.4. A warning sign will be posted in the elevator to notify personnel that the elevator is being utilized for the transportation of a cryogen dewar and entry is prohibited.
RONLER ACRES CONTRACTOR EHS PROGRAM

EHS PROGRAM IMPROVEMENT AND ESCALATION GUIDELINES

1. PURPOSE

1.1. EHS program improvement and escalation of issues may be required from time to time to resolve issues related to Environmental, Health, and/or Safety on Intel projects. The intent of this document is to provide and communicate a standard Guideline and escalation process for how Intel Management will address EHS performance issues.

2. SCOPE

2.1. This program applies to all Ronler Acres CP&E managed projects.

3. PROGRAM ELEMENTS

3.1. **Level I** – EHS Discipline Guideline for Contractor Company Chronic Non Serious and Moderately Serious EHS Performance Issues: This guideline is to be applied when the same safety issues have already been addressed several times with the contractor and there is no demonstrated sustained improvement and or for matters where the cumulative sum of issues involved indicate the Contractor is clearly not managing the safety aspects of the job to Intel’s expectations. (e.g. housekeeping, chemical management, training, barricades, pre task planning, permit violations, etc.)

3.1.1. **Step 1:** Clearly communicate the issue to the Contractor Management team onsite. Establish clear expectations by defining desired results. The desired results should be objective, measurable, and have due dates and owners assigned. Document the meeting and attendees by sending a written letter to the contractor detailing AR’s, owners, and commitments made. A copy of this letter must be maintained for future reference.

3.1.2. **Step 2:** Upon or prior to assigned completion date, meet with GC Management to review the status of the ARs. At this time, Intel Management must communicate to the GC whether or not INTEL is satisfied both the ARs have been completed and the desired results have been achieved. Document the meeting and the attendees with a follow up letter to the contractors management detailing progress or lack there of.
3.1.3. **Step 3:** If the issues have not been fully resolved seek understanding for why the ARs are not done and/or why the results have not been realized. Reassign appropriate ARs to resolve issues and set time to reconvene to review status.

3.1.4. **Step 4:** If after completing Step 3 the issues have not been resolved elevate the matter to the next level of Contractor Management. Repeat Steps 1 through 3 with next level of GC management.

3.1.5. **Step 5:** If matters are not resolved after completing Step 4 issue a letter of "Notice of Failure to Perform" to the Contractor's Director, Contractor's EHS Manager, on site Contractor Project Manager with a copy forwarded to the Intel PM, Intel Corporation Division Manager, Intel EHS Manager, Intel FMS Manager, and Intel EHS Attorney. File and save originals of all meeting minutes and correspondence related to the matter.

3.1.6. **Step 6:** With hold incentive dollars and or incremental project payments until the Contractor has successfully satisfied Intel management the issue has been resolved.

3.1.7. **Step 7:** Once a "Notice of Failure to Perform" letter has been formally issued and receipt has been documented the Intel PM shall place the General Contractor on a formal "CCAP", Contractor Corrective Action Plan.

3.2. **Level II** – EHS Discipline Guideline for Contractor Company Serious and Very Serious EHS Performance Issues and Chronic Impacts to Factor Operations: This guideline is to be applied when incident rates, incident frequency, and or severity of incidents are trending out of control; when serious EHS issues are not being resolved real time, when fatality prevention programs are not in place, (e.g. Fall Protection, EEW, Crane Safety, etc.); and or when Contractor's has demonstrated an inability to prevent interruptions and impacts to operations.

3.2.1. **Step 1:** When applicable stop work in the area and have the issue corrected immediately.
3.2.2. **Step 2:** Intel Management shall clearly communicate with details the extent of all issues/concerns to the General Contractor Management team on site. Clear and precise expectations and desired results must be communicated to their core management team both verbally and by a detailed follow up letter. The General Contractor must develop a recovery/action plan to immediately correct the issues and or trends.

3.2.3. **Step 3:** General Contractor and Intel Management must present their recovery plan, to all applicable personnel on site, within 72 hours of the initial Intel/Contractor performance meeting.

3.2.4. **Step 4:** Intel Management and Contractor shall continue to mutually monitor progress of recovery/action plan. The following options should be documented and understood by contractor management prior to the implementation of their recovery plan: If significant improvement is demonstrated within a two week period Intel Management shall issue a letter of "Notice of Satisfaction to Perform" shall be issued to the Contractor. This letter should reference the details of non-performance from the first letter, correctives actions taken, and the results of their recovery plan to date. If significant improvement is not demonstrated within a two-week period, Intel Management shall issue a letter of "Notice of Failure to Perform" to the Contractor's Director, Contractor's EHS Manager, on site Contractor Project Manager with copies forwarded to the Intel PM, Intel Division Manager, Intel EHS Manager, FMS Manager and Intel EHS Attorney. File and save originals of all meeting minutes and correspondence related to the matters. If matters become worse and or Intel management decide the Contractor is continuing to place people and or operations at unacceptable risk the project shall be shut down for a minimum of one work day at the Contractor's expense and Intel Management shall issue a letter of "Notice of Failure to Perform" to the Contractor's Director, Contractor's EHS Manager, on site Contractor Project Manager with copies forwarded to the Intel PM, Intel Division Manager, Intel EHS Manager, FMS Manager and Intel EHS Attorney. File and save originals of all meeting minutes and correspondence related to the matter.

3.2.5. **Step 5:** With hold incentive dollars and or incremental project payments until the Contractor has successfully satisfied Intel management the issue has been resolved.
3.2.6. **Step 6:** If and or when a Contractor has received three "Notice of Failure to Perform" letters in a rolling twelve-month period the Intel PM shall place the Contractor on a formal "CCAP", Contractor Corrective Action Plan.

3.3. **Level III – EHS Discipline Guideline for Contractor Company IDLH**

Performance Issues and Serious Impacts to Factory Operations: This guideline is to be applied when CIA incident rates, CIA incident frequency, and or severity CIAs are trending out of control; when serious life threatening EHS issues are not being resolved real time, when the lack of sound fatality prevention programs have resulted in a serious incident or injury, (e.g. Fall Protection, EEW, Crane Safety, etc.); when Contractor's activities have shut down factory operations with significant loss of product/output; and or when Contractor's activities have eroded the Intel's relationship with the local community due to negligence (e.g. building code violations, environmental design/abatement violations, unscheduled city/community utility shut downs, unscheduled city/community traffic disruptions).

3.3.1. **Step 1:** The project shall be shut down for a minimum of three workdays at the Contractor's expense.

3.3.2. **Step 2:** Intel Management shall place the Contractor on a formal "CCAP", Contractor Corrective Action Plan. Notice of the Contractor being placed on a "CCAP" shall be communicated to the Contractor's Director or equivalent immediately by the Intel PM. Intel Management Notifications process is to be used to notify the Intel Division Manager, Intel EHS Manager, Intel FMS Manager and Intel EHS Attorney. File and save originals of all meeting minutes and correspondence related to the matter.

3.3.3. **Step 3:** Contractor shall not be allowed to resume work until the Director or President of the Company personally presents their "Corrective Action Plan" to the Project's Intel Management team.

3.3.4. **Step 4:** Contractor and Intel Management shall schedule a mass safety meeting with all hands to communicate appropriate "CCAP" recovery/action plan details.

3.3.5. **Step 5:** With hold incentive dollars and incremental project payments until the Contractor has successfully satisfied Intel management the issue has been resolved.
3.4. **Level IV – EHS Discipline Guideline for Contractor Company** demonstrated inability to effectively manage the Environmental, Health and/or Safety aspects of their contract: This guideline is to be applied when after having been placed on a Contractor Corrective Action Plan, "CCAP", the Contractor Company has failed to successfully complete the CCAP; when GC has demonstrated repeated or chronic failure to manage the Environmental, Health, and or Safety of the project thus resulting in higher than acceptable level of: injuries, illnesses, incidents (e.g. CIAs, OSHA violations, EPA violations), business impacts (e.g. factory/operations shut downs resulting in significant loss of product/output), or a fatality; and or when Contractor’s activities have seriously eroded the Intel's relationship with the local community due to negligence (e.g. building code violations, environmental design/abatement violations, unscheduled city/community utility shut downs, unscheduled city/community traffic disruptions).

3.4.1. **General Note:** Due to the level of seriousness related to the project and its contract, all Level IV Disciplinary actions shall be conducted under the guidance of Intel Legal advice with the FMS manager and Intel Business Managers involved. All documentation shall be maintained with copies sent to the Intel Legal advisor for records retention.

3.4.2. **Step 1:** The project shall be shut down for a minimum of three workdays at the Contractor's expense with Contractor being placed on a three-day suspension.

3.4.3. **Step 2:** Project team shall consult with appropriate Intel Business Manager (PATO or Fab), Intel "Corporate Intel & EHS Legal, and Corporate FMS Manager to develop preferred course of action.

3.5. **Level IV – Option "A" Response:** Send a very firm message to the GC/CM/PM requiring them to demonstrate full ownership of all aspects of safety on the project and to implement comprehensive safety programs, complete with: ongoing training, documentation of all guidelines, on site field safety personnel, a training center staffed with safety trainers two days per week, taught in each of the languages present within the work force, record keeping on site confirming all required training has been met. Frequency of training to be commensurate with demands of the project, with a minimum expectation all personnel will receive all the required training within two weeks of arrival and until such time a buddy system put in place to mentor and protect new employees. Intel to recognize we need to immediately address the shortcomings of the GC/CM/PM by signing up to personally coach/manage the EH&S aspects of the project. Intel
EHS recovery team to be brought in to implement required safety systems to correct and mitigate reoccurring issues. This recommendation is not aimed at replacing any GC/CM/PM staff rather to furnish the additional support and expertise needed and to ensure the project can continue safely and to share the work load of getting proper EHS systems in place.

3.5.1. **Level IV – Option "B" Response**

3.5.1.1. Bring in a stronger more comprehensive Contractor to manage the project with GC/CM/PM in a subordinate role to the new Contractor. Keep project shut down until the new Contractor is engaged. **OR;**

3.5.1.2. Re-assign a more senior or experienced Intel PM to manage the project with full responsibility for all events related to the project, personally accountable for all negative EH&S incidents and issues on the project. Keep project shut down until the Intel Manager is engaged.

3.5.2. **Level IV – Option "C" Response**

3.5.2.1. Cancel contract with GC/CM/PM for breach of contract for failure to perform EH&S contract requirements before we experience any additional risks of serious incidents or fatalities resulting from their negligence of responsibilities. Re-issue the contract to a Contractor firm who can truly meet Intel's expectations with incurred expenses back charged against outgoing Contractor company. Staff a core Intel team to run all aspects of the project until all concerns are resolved and until new Contractor team is engaged. **OR;**

3.5.2.2. Cease doing business with the GC/CM/PM and remove them from all Intel bidders list.

4. **ROLES AND RESPONSIBILITIES**

4.1. Site Intel EHS Project Manager – Responsible for ensuring Contractor safety performance is tracked, trended and addressed.

4.2. Site Intel Project Manager – Responsible to address Contractor performance issues are addressed and corrected timely.
4.3. Site Intel FMS Contracts Manager – Responsible for ensuring Intel issues contracts only to Contractors who successfully meet Intel's safety requirements, to ensure performance issues are addressed, and to enforce contract terms and conditions.

5. TIMING

5.1. Review with Contractor management prior to initiating the contract.

5.2. As required if or when a contractor company needs counseling.

5.3. As required when a contractor needs to resolve safety performance problems.
ELECTRICAL DEMOLITION

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding demolition of energized or previously energized circuits.

2. PROCEDURES/EXPECTATIONS
   2.1. Pre-Demolition:
      2.1.1. Develop a Pre-task Plan with crew input.
      2.1.2. Determine if the electrical system can be de-energized. If work can be performed de-energized, utilize Lock-out/Tag-out to isolate circuits. Develop EWN Plan and get CM/GC and System Owner review and approval.
      2.1.3. If the electrical system cannot be de-energized develop an Electrical Energized Work Plan per CM/GC and Contractor identified Best Known Methods.
         2.1.3.1. NOTE: It is acknowledged that the installation or removal of electrical breakers and termination or de-termining of conductors at electrical panels may be performed without LO/TO if appropriate EEW procedures and Plans are in place.
      2.1.4. Verify initiation of Electrical Change Request (ECR).
      2.1.5. Develop & submit and verify acceptance of Electrical Work Notification (EWN) to SIPP Department.
      2.1.6. Coordinate with RACS/CS Electrical to de-energize circuit.
      2.1.7. Post Pre Task Plan with EWN and EEW at work location.
   2.2. Demolition:
      2.2.1. Provide and don required PPE as indicated in Task Plan and EEW.
      2.2.2. Barricade the work area: post appropriate signs and initiate all other safety requirements.
      2.2.3. Using a digital meter, verify that there is no voltage present in circuit. Tone conductors to verify correct circuits and correct labels.
      2.2.4. Begin disconnection of system at panel removing conductors from panel and installing K.O seal.
      2.2.5. If possible, pull cable outside of cable tray.
2.2.6. Prior to cutting cable utilize a ring along the cable to verify that cable to be cut is the one intended.
2.2.7. Remove all circuits, wiring, conduits, supports, etc.
2.2.8. Remove and replace all circuit labels with correct labeling.
2.2.9. Dispose of all wiring, conduits, and supports in the appropriate owner supplied recycle containers.
2.2.10. Clean up area.
2.2.11. Contact the CM/GC and RACS/CS representatives after all demo work is completed to close out the Electrical Change Request (ECR).
ELECTRICAL PANEL PENETRATIONS

1. OBJECTIVE
   1.1. To define Ronler Acres expectations of contractors regarding electrical panel penetrations.

2. PROCEDURES/EXPECTATIONS
   2.1. Determine if electrical system can be de-energized. If work can be performed de-energized, utilize lock-out/tag-out to isolate circuits.
   2.2. If electrical system cannot be de-energized follow Electrical Energized Work Plan per CM/GC and Contractor identified Best Known Methods.
   2.3. Provide and don required PPE as indicated in Task Plan and EEW
   2.4. Barricade the work area: post appropriate signs and initiate all other safety requirements.
   2.5. Use a knockout punch for all penetrations.
   2.6. If a knockout punch is not feasible, then a carbide shouldered hole cutter bit or other applicable method is permissible. Appropriate means should be used to prevent slug from falling into gear when using a device which produces such slug.
RONLER ACRES CONTRACTOR EHS PROGRAM

ENERGIZED ELECTRICAL WORK

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Energized Electrical Work (EEW).

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for having a written Energized Electrical Work Program that outlines company specific training, procedures, and equipment prior to performing EEW. This program shall be available at the job site for Intel review.
   
   2.2. The Contractor is responsible for providing all training and equipment required to perform EEW in a safe manner.
   
   2.3. Prior to performing EEW, the contractor shall document the safety precautions taken for the task and post this information at the immediate job site. This posting shall be in the form of an EEW Permit or Job Safety Plan signed by the electrician’s immediate supervisor.
   
   2.4. The area surrounding the EEW task shall be cordoned off with Barricades and/or signage sufficient to prevent the inadvertent contact of other employees.
   
   2.5. Specific notification requirements prior to any electrical work shall be confirmed with the Intel Project Manager.
   
   2.6. The Contractor shall follow Intel’s Corporate Safety EEW Guideline. To obtain a copy of the guideline contact your EHS representative.
   
   2.6.1. See Attached Electrical Work Type Matrix referenced from the Intel’s Corporate Safety EEW Guideline.
### ELECTRICAL WORK TYPE MATRIX

<table>
<thead>
<tr>
<th>Electrical Work Type</th>
<th>Energy Magnitude</th>
<th>Work Specifics</th>
<th>Testing/Metering Operations</th>
<th>Suggested Safety Equipment (^{(2)})</th>
<th>Buddy Required</th>
<th>EEW Permit Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type # 1(^{(3)})</td>
<td>Zero Volts</td>
<td>De-energized, locked and tagged out and verified to be at zero energy. Meter and check all potential sources of energy before beginning work.</td>
<td>Meter only to ensure no power.</td>
<td>Safety Glasses as defined by a job hazard analysis</td>
<td>No</td>
<td>No(^{(4)})</td>
</tr>
<tr>
<td>Type # 2</td>
<td>Energized with covers in place less than 600 Volts</td>
<td>Designed for Metering and Testing with permanent covers(5) in place that will prevent any potential direct/indirect contact with energized sources.</td>
<td>Metering and testing only by means of designed testing points with all covers in place.</td>
<td>Safety Glasses</td>
<td>No</td>
<td>No(^{(4)})</td>
</tr>
<tr>
<td>Type # 3</td>
<td>Less than 50 Volts and less than 240 Volt Amps</td>
<td>Work involving potential direct/indirect contact with energized exposed circuits less than 50 Volts and less than 240 Volt Amps.</td>
<td></td>
<td>Safety Glasses (non-conductive frames)</td>
<td>No</td>
<td>No(^{(4)})</td>
</tr>
<tr>
<td>Type # 4</td>
<td>50 to 600 Volts or 240 Volt Amps and above</td>
<td>Work involving potential direct/indirect contact with energized exposed circuits 50 to 600 Volts or 240 Volt Amps and above. Includes any test with potential RF exposure. (Covers/shielding removed)</td>
<td>Metering and testing of 50 to 600 Volts when NOT breaking the plane of the opened/removed cover and maintaining the minimum approach distance as defined in section 5.4.2.</td>
<td>Safety Glasses (non-conductive frames), properly rated and tested(PRT) rubber insulated gloves, sleeves, boots or mats, PRT insulated tools, body hook, Nomex or equivalent protective clothing and properly rated face shield or as defined by a job hazard analysis. Ensure the area is properly barricaded with non-conductive material.</td>
<td>Type 4 EEW Buddy</td>
<td>No(^{(4)}) EEW Badge required</td>
</tr>
<tr>
<td>Type # 5</td>
<td>Greater than 600 Volts</td>
<td>Work involving potential direct/indirect contact or direct exposure with energized circuits greater than 600 Volts with or without permanent covers in place when breaking the plane of the opened/removed cover or not maintaining the minimum approach distances as defined in section 5.4.2.</td>
<td>Limited to metering, testing and troubleshooting. Also includes IR Scanning where the plane is broken or not maintaining the minimum approach distance. ((4))</td>
<td>Safety Glasses (non-conductive frames), properly rated and tested(PRT) rubber insulated gloves, sleeves, boots or mats, PRT insulated tools, body hook, Nomex or equivalent protective clothing and properly rated face shield or as defined by a job hazard analysis. Ensure the area is properly barricaded with non-conductive material.</td>
<td>Type 5 EEW Buddy</td>
<td>Yes</td>
</tr>
</tbody>
</table>

\(\text{EEW Buddy Required}\)  
\(\text{EEW Permit Required, Buddy Required}\)  

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\(\text{footnotes:}\)  
\(^{(3)}\) ANY energized work done in a hazardous location requires an EEW permit. (Required for type 1 when verifying zero voltage)  
\(^{(4)}\) Individual tasks must be reviewed for PPE requirements.  
\(^{(5)}\) Work should be classified as energized until testing is complete and zero voltage is verified. Access to exposed voltage must be via a hinged cover or screw fastened cover with raised handles for safe removal-only if potential for direct/indirect contact.  
\(^{(1)}\) Equipment which is finger proof and has no potential for direct/indirect physical contact also meets this requirement.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev10/97

ERGONOMICS

1. OBJECTIVE
   1.1. To define expectations of contractors and sub-contractors regarding ergonomics at the Ronler Acres Campus.

2. EXPECTATIONS
   2.1. Each contractor company is responsible for training all employees in utilizing proper ergonomics on a construction site. Training shall develop skills in identifying ergonomics risk factors associated with construction work and explain the process contractors & sub-contractors should follow to minimize/eliminate ergonomics risk factors on the job. Training shall educate employees on proper lifting techniques, the selection of proper hand tools / equipment, and the contractor company’s stretching program (e.g. Stretch-N-Flex).

   2.2. Each contractor company is responsible for insuring employees adhere to the ergonomics principles outlined in the training materials.

   2.3. Each contractor company is responsible for insuring there is a process in place to identify, communicate, and resolve ergonomics issues.

   2.4. Each contractor company is responsible for implementing a stretching program (e.g. Stretch-N-Flex).

   2.5. Each contractor company is responsible to insure that ergonomics risk factors are identified and addressed as part of ‘pre-task planning’ process.
1. PURPOSE
   1.1. This document will outline the best known method (BKM) for establishing and maintaining an equipment sign-off program for process equipment in a technology development or manufacturing environment.

2. SCOPE
   2.1. The equipment sign off (ESO) process is a thorough safety evaluation designed to ensure the safe facilitation of process tools in Intel factories. Start-up of facilities systems are to be addressed through operational readiness methodologies, e.g., system commissioning and room acceptance.

   2.2. The ESO process is not designed to ensure safe tool design – this is managed through compliance with the established Semi guideline (S2-93) and is facilitated by the Intel Corporate Equipment EHS organization.

3. PROGRAM ELEMENTS
   3.1. The ESO process is broken into three major elements; Safety Level 1 (SL1), Safety Level 2 (SL2) and Safety Level 3 (SL3). No tools are allowed to begin production prior to completing SL3.

      3.1.1. **Safety Level 1 (SL1):** SL1 is the installation milestone to allow electrical energization and initial diagnostics. Core building/facility systems (building readiness) are to in place for SL1. Inert process gases as required for diagnostic testing are also allowed. No hazardous production materials are allowed to be used at SL1.

      3.1.2. **Safety Level 2 (SL2):** SL2 is the installation milestone to allow hazardous production materials (HPM) to be used in support of process qualification. All integral systems must be in place at SL2 to ensure safe operation of the tool during qualification.
3.1.3. **Safety Level 3 (SL3):** SL3 is the final installation safety milestone designed to ensure all systems to be in place to sustain a safe processing environment including operations specs, etc.

4. **ROLES AND RESPONSIBILITIES**

4.1. Equipment Owners – Equipment owners are responsible for the safe installation and operation of systems/equipment. Equipment owners ensure that the equipment is installed and operated per code and Intel requirements. The owner coordinates completion of checklists and all supporting documentation prior to sign-off. The owner ensures that punch-list items are communicated and resolved in a timely manner.

4.2. Projects EHS Representative – The project manager is responsible for implementation of the programmatic elements of this document in whole or part. EHS program expectations should be well communicated and understood early in the process. The Projects EHS representative is also responsible for ensuring adequate EHS resources (Intel and/or contract) have been assigned to the project.

4.3. Safety Engineers – Safety Engineers are responsible for providing support to equipment installation teams and equipment owners. Key activities will include ESO training for project team members, performing safety level 1, 2 and 3 sign-offs and providing technical EHS support to equipment installation teams.

5. **TIMING**

5.1. General expectations and requirements for ESO should be communicated to the project team (project management, equipment owners, etc.) at the beginning of each project. Key ESO milestones (SL1, 2, 3) should be integrated to the installation schedule for each tool.

5.2. Site specific EHS requirements need to be defined early in the process. In many cases site requirements such as labeling and POC naming will need to be defined during the base build phase. A method of communicating base build and design requirements to the ESO team will need to be implemented. An understanding of the site EHS organization level of involvement in resolving specific issues that arise during sign-off needs to be negotiated.
5.3. Expectations of other site organizations: The ESO process requires notifying other organizations (ERT, Gas Pad, BCDS) that tool have completed SI2. The method notification should be negotiated before start of sign-offs. There are also requirements for input from other organizations. The method of verifying RACS Facilities Verification, LSS testing, Ventilation test and balancing, IH assessments, gas and chemical delivery line testing, room/bay readiness, and chemical approval forms should be clearly understood before starting sign-offs.

5.4. When possible, the ESO team should be “front loaded” and brought on onboard early. This will facilitate coordination between ESO and Design and help set expectations with the functional area IQ teams.

6. TOOLS

6.1. Checklists

6.1.1. Generic Checklists: The generic SL1, SL2 and SL3 checklists are approved by the Equipment EHS Extended Staff (EEHS X-Staff). The checklists can be found on the web at http://www-fct.rr.intel.com/ehs/esogen.htm. This is a controlled document and cannot be changed without approval of the EEHS X-Staff.

6.1.2. Tool Specific Checklists: Most CP&E projects will use tool specific checklists, however, the use of tool specific checklists will have to be negotiated with the site. Tool specific checklists are generated by the JIQTs and approved by the P8xx meeting. Copies of the tool specific checklists can be found on the web at http://www-fct.rr.intel.com/ehs/esotool1.htm.

6.1.3. P8xx Meeting: The P8xx Meeting has been formed to provide cross site consistency for design and ESO. At least one ESO representative from each site should phone into the P8xx meeting.

6.1.4. Scheduling: All sign-offs should be scheduled at least 48 hours in advance. Notification of cancellations should occur before noon of the previous day.
FALL PROTECTION

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Fall Protection.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for design and implementation of a project safety plan to ensure that fall protection is provided to all employees. Elements of the safety plan should include training, equipment, and methods to ensure fall protection techniques are provided throughout the project. Work with fall exposures that exceed six (6') feet requires a fall protection safety plan designed specifically for that project. The plan must be submitted to project management prior to any work.

   2.2. All employees on Intel premises must use 100% fall protection such as lifelines and railings when working within six (6') feet of open-sided roofs, ledges, catwalks or when parapets are less than 42 (42") inches high. Employees must be tied off 100% of the time when exposed to a fall, which may require a double lanyard system.

   2.3. Only approved full-body harnesses (no belts) shall be worn when exposed to a fall of six (6') feet or greater.

   2.4. Daisy-chaining of fall protection devices is strictly prohibited.

   2.5. The use of 100% fall protection systems and equipment is mandatory on our projects. Any employee found in violation of fall protection requirements is subject to removal from the project.

   2.6. It is important to know the difference between fall restraint and fall arrest. If there is a potential for a fall of greater than 2 feet, then a fall arrest system must be utilized. Fall arrest systems require the use of a full body harness.

   2.7. If and when a static line system is utilized, documentation will be required to demonstrate the effectiveness of that system.
SUBFAB FALL PROTECTION-ALTERNATIVES

3. OBJECTIVE

3.1. The objective is to provide information regarding alternative fall protection methods for the sub fab areas when conventional measures are not available. Also see the "Ronler Acres Contractor BKM - Fall Protection". The following recommendations are based upon actual test results conducted at the Ronler Acres Intel site in 1995. The test results do comply with the OSHA 2:1 safety factor for fall protection anchorage points if the specified equipment as described in this document is used. The hard copy test results and recommendations are available upon request.

4. PROCEDURE

4.1. Anchorage points in order of preference:

4.1.1. Beam straps attached to structural steel with at least a 5000lb-weight capacity (preferred).

4.1.2. Approved beamer devices designed for fall arrest and secured to structural steel with a weight load rating of at least 5000 lb.

4.1.3. In place fall protection tie off points which have been built into the structure for the purpose of fall protection.

4.2. Alternative attachment using the 1 5/8" embedded or non-embedded Unistrut:

4.2.1. The tie off shall use at least a 5/8" forged steel shouldered eyebolt.

4.2.2. Tie off to suspended trapeze unistrut where the span is 24" or less using at least 1/2" steel all thread.

4.2.3. Unistrut trapezes shall not be used for fall protection anchorage if any system or equipment is being supported.

4.3. Fall arrest equipment:

4.3.1. A full body harness, which meets ANSI standards, shall be used when fall arrest protection is needed.

4.3.2. A retractable web type shock-absorbing lanyard shall be used where possible. The fall distance of this type lanyard is under 2'.

RA Contractor BKM Rev 2 11/29/01
Owner: OR/WA/UT Projects EHS
4.3.3. Non-retractable lanyards should not be used unless the potential fall distance of the fully opened lanyard and shock absorber are calculated to be within the safe limits. The typical 6’ lanyard and shock absorber are too long when fully expanded to provide adequate fall protection in most sub fab areas (14’ ceiling).

4.4. Training

4.4.1. Employees using these or any fall protection equipment must be fully trained in the proper use and care of the equipment as described by the manufacture. Each subcontractor on site shall document the training. The training needs to include:

4.4.1.1. A complete review of the procedure.
4.4.1.2. The proper method for erecting, maintaining, assembling and inspecting the system.
4.4.1.3. Limitations on the use of the alternative fall protection anchorage points.
4.4.1.4. An understanding of the role of the employee in using this alternative system.

4.5. Pre Task Planning Expectations:

4.5.1. It is expected that all fall protection systems being used for a task must be detailed on the pre task plan. Details shall include, but not be limited to, fall protection equipment being used and anchorage point location.
1. Anchorage points in order of preference:

2. Alternative attachment using the 1 5/8" embedded or non-embedded unistrut.

3. Fall arrest equipment:
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 10/18/01

FORKLIFTS

1. OBJECTIVE
   1.1. To define the safe operation of forklifts on the Ronler Acres Campus

2. PROCEDURES/EXPECTATIONS
   2.1. Each forklift operator will undergo company specific training and a certification program. Operators will be required to refresh this training every two years and whenever they may be required to operate a machine of a different make and model. The operator shall read and understand the owner's manual prior to operating the forklift.

   2.2. The operator must perform an initial inspection prior to operating the forklift for the first time on each shift. See Forklift Daily Inspection Form for minimum requirements. The inspection form must be kept on the lift for a minimum of 24 hours before being removed and filed.

   2.3. The operator will be held responsible for the safe operation of his machine. Some basic safety expectations are:

      2.3.1. No riders.
      2.3.2. The operator will wear safety glasses, a hard hat, and the seatbelt while operating the forklift.
      2.3.3. Operator's compartment must be kept clean, safe and orderly.
      2.3.4. Tools and equipment shall be kept in a manner that prevents their accidental entanglement with the operator or forklift mechanics.
      2.3.5. A spotter is required in congested work areas (docks inside secured areas), or when the operator's direct line of sight is impeded, during any movement regardless of whether a load is being lifted or not.
      2.3.6. The spotter and any working personnel in the area must be in a reflective vest.
      2.3.7. Ensure that the load is stable or secured.
      2.3.8. All tires will remain on the ground at all times during the lift and while transporting the load.
2.3.9. Internal combustion engine machines will not be taken inside a building without proper permits.
2.3.10. The counterweight will not be used as a storage area.
2.3.11. Leave the forks down and flush with the ground when parked.
2.3.12. The operator will not use a cell phone while operating the forklift.
2.3.13. Pedestrians always have the right of way.
2.3.14. All posted speed limits shall be obeyed.

2.4. In and around an operating facility, an attentive spotter is required whenever a load is being lifted or moved. On a greenfield site, a spotter is not required unless the driver's view is impaired, or if the lift is being operated in an area of high pedestrian or vehicular traffic.

2.5. When working with a spotter, the operator must ensure that he and the spotter are using the same signals. All signaling arrangements should be address during the pre-task planning. The operator will receive signals from one person only.

2.6. In and around an operating facility, when the forklift is parked it must have the parking brake set as well as a chock block placed behind a "downhill" tire on the operators side of the vehicle. On a greenfield site, the parking brake must be set and the machine shall be turned off.

2.7. With battery-powered forklifts, the operator will wear safety glasses and gloves while attaching the charging system.

2.8. With propane-powered forklifts, the operator will wear safety glasses and gloves while changing the propane tank. The tank will be changed only after the engine quits, all the propane in the line has been used and the tank has been shut off.

2.9. When refueling a diesel-powered forklift, the operator will ensure that no diesel fuel is spilled. Whatever vehicle is providing the fuel will have a spill kit on board. Refer to the Hazardous Material Control Plan/ Waste Minimization and Pollution Prevention BKM for chemical transfers.

2.10. All forklifts will have a fully charged and working fire extinguisher on board, visible and readily available.
2.11. At no time will anyone be allowed under the raised forks. This applies to going under the boom on an extended-boom forklift. If for some reason someone has to reach under the forks, then the forks must first be blocked out or cribbed out to protect the employee in case of a mechanical failure.

2.12. Caution will be taken with loads when operating the forklift on uneven surfaces with extended or elevated booms.

2.13. Modifications and additions that affect capacity and safe operation (i.e. fork extensions) shall not be performed by the user without the manufacturer’s prior written approval. Capacity, operation and maintenance instruction plates, tags or decals shall be changed accordingly.
Forklift Daily Inspection Form

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<th>Operator's Name</th>
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Prior to operating this forklift, the daily checklist must be completed by a licensed and qualified operator. Check the items listed below and mark each box with the appropriate letter to identify satisfactory operation or condition of item. For all items marked with "R" for repair, report discrepancy to your general foreman.

S = Satisfactory (in safe working condition)  R = Repair/Replace (use "remarks" to describe discrepancy)

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RA Contractor BKMs Rev. 2  11/29/01
Owner:  OR/WA/UT Projects EHS
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 2/01

HAND PROTECTION

1. OBJECTIVE
   1.1. To ensure that hand protection is used in situations where there are known hazards present, identify specific areas that have caused injuries historically, and establish minimum guidelines for the use of hand protection.

2. PROCEDURES/EXPECTATIONS
   2.1. This policy applies to all contracted work on the Ronler Acres campus (Contractors, Suppliers, Vendors, etc.). We have identified specific situations that require the use of hand protection. This is not meant to be all-inclusive. Other situations not identified in this document should be reviewed during task planning. Appropriate gloves should be worn for hand protection in any situation where exposure to hazards exists. Hand protection for the areas identified is mandatory unless wearing the hand protection creates a higher potential for injury. When a higher potential is identified an alternate means to assure hand protection must be outlined in the Job Hazard Analysis, Task Plan, and established work procedure as applicable.

   2.2. Where exposure exists, hand protection shall be utilized in the following situations:

   2.2.1. When materials with sharp edges are being handled (metal, glass, etc.)
   2.2.2. Cutting operations using hand held non power operated cutters
   2.2.3. Handling of wood materials
   2.2.4. Concrete operations where hands are exposed
   2.2.5. During the use of utility and/or pocket type knives
   2.2.6. While pulling wire in or around electrical panels
   2.2.7. During use of impact type tools
   2.2.8. During welding operations
   2.2.9. During grinding operations or when helping during grinding operations
   2.2.10. Working on or near materials affected by extreme temperatures
2.2.11. Handling Hazardous Materials as indicated on the Material Safety Data Sheet (MSDS).

2.2.12. Personnel involved in the removal and handling of trash

2.2.13. Protective gloves should be worn for hand protection in the clean rooms when hands are exposed to the hazards described by this procedure. Intel Micro-contamination should be contacted to review glove selection for work in the clean room.

2.3. Different exposures require the use of different types of gloves. Each situation must be evaluated to ensure that the appropriate type of hand protection is used. The following list is not considered all inclusive and are to be used as examples:

<table>
<thead>
<tr>
<th>Hot Work</th>
<th>See EEW BKM</th>
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<tbody>
<tr>
<td>Welding Operations</td>
<td>Gauntlet Type Gloves</td>
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<tr>
<td>Grinding Operations</td>
<td>Tight Fitting Leather Gloves</td>
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<tr>
<td>Exposure to sharp edges and metal burrs</td>
<td>Kevlar or equivalent</td>
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<tr>
<td>Utility/Pocket Knives</td>
<td>Kevlar or equivalent</td>
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<tr>
<td>Concrete work</td>
<td>Rubber or leather gloves</td>
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<tr>
<td>Exposure to hazardous materials</td>
<td>Chemical resistant gloves per the MSDS requirements</td>
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</tbody>
</table>

2.4. Tight fitting leather gloves should also be utilized when hand protection is necessary around rotating equipment to prevent entanglement of loose articles/gloves/hands in this equipment.
HAZARD COMMUNICATION

1. OBJECTIVE
   1.1. To prevent occupational injuries or illnesses through the efficient, proactive communication of hazards potentially present in the workplace.

2. PROCEDURES/EXPECTATIONS
   2.1. All Intel contractors are responsible for ensuring that their employees and subcontractors (if applicable) receive Hazard Communication training prior to work at Intel projects. This training shall be designed to meet or exceed OSHA requirements (29 CFR 1910.1200 or 29 CFR 1926.59). As with all required training, proof of training shall be made available to Intel project management upon request.

   2.2. All contractors working on Intel projects shall have a written hazard communication program approved by Intel project management and in place as part of the project safety plan.

   2.3. All hazardous materials brought onto Intel projects shall be reviewed, approved and managed within the expectations as defined in the "CHEMICAL APPROVAL" section of this manual.

   2.4. Material Safety Data Sheets (MSDS) for all hazardous materials required to complete the work scope shall be present on site and made available to all employees (Intel and contractor). The location of the MSDS’s shall be communicated to all employees as part of project orientation.

   2.5. All hazardous materials in use on Intel projects shall be labeled. Each container label shall list the substance name, hazardous ingredients, hazard warnings and the manufacturer’s name and address.
1. **OBJECTIVE**

1.1. To define the Ronler Acres campus expectations of contractors regarding management of hazardous materials on-site.

2. **PROCEDURES/EXPECTATIONS**

2.1. Each Contractor company is responsible for ensuring that its employees understand and comply with all applicable Environmental Protection Agency (EPA), Department of Environmental Quality (DEQ) and, Department of Transportation (DOT) regulations while performing work on Intel premises.

2.2. Each Contractor company is responsible for ensuring that its employees are trained in chemical and waste management prior to performing work at an Intel facility. In addition, each Contractor company is responsible for ensuring that campus-specific training is provided to its employees that includes:

2.2.1. Proper collection, transportation and disposal procedures for the contractor’s chemical wastes at the Intel campus (see Waste Management BKM).

2.2.2. Emergency response procedures at the Intel campus.

2.3. When using chemicals, contractors must do everything reasonably possible to eliminate the potential for spills, drips, or leaks. These include, but are not limited to, the following:

2.3.1. All chemical dispensing must be performed over a drip tray and the drip tray must be kept clean and free of debris.

2.3.2. When a chemical is not in use, the container lid must be closed securely.
2.3.3. Chemicals must be stored within OSHA compliant containers in designated contractor shop areas.

2.3.4. All chemical containers must be in good condition and free from rust or corrosion.

2.4. Under no circumstances shall a substance be placed into a storm or roof drain.

2.5. No chemicals shall be handled in an area where a leak or spill could enter a storm drain without written permission from Intel unless the chemical is in a closed container.

2.6. When chemical handling is required in the vicinity of a storm drain, the contractor must install adequate safeguards to protect the storm drain in the event of a spill or leak. A member of the EHS Environmental Team must approve the safeguards.

2.7. Whenever possible, no chemical containers (empty or full) shall be left outside on Intel premises. All empty containers must be cleaned properly and disposed at the end of each working day. If it is necessary to store containers outside, they must be provided with adequate secondary containment and protected from storm-water.

2.8. Contractors must use designated staging areas. Intel chemical storage areas shall not be used as staging areas.

2.9. For waste disposal, refer to Ronler Acres Contractor EHS Program: Waste Management.

2.10. Follow CS Hazardous Material Control Plan.

2.11. Follow CS Air Pollution Control Plan.
HEARING CONSERVATION

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding hearing conservation.

2. PROCEDURES/EXPECTATIONS
   2.1. Contractor agrees to provide hearing protection to all Contractor’s employees as required by applicable EHS laws and, at a minimum, in compliance with 29CFR 1910.95 or 1926, as applicable. In accordance with these standards, Contractor is responsible for determining noise levels for noises generated during construction activities.

   2.2. Any area or operation that exposes employees to noise in excess of 90 dBA shall be posted as “Hearing Protection Required.”

      2.2.1. Hearing protection shall be utilized at cut-off saws, pneumatic jack hammers, gas powered portable cut-off saws.

   2.3. Any area or operation that exposes employees to noise between 85-90 dBA shall be posted as “Hearing Protection Required” with the following stipulations:

      2.3.1. If you are in the area more than 4 hours, you must wear hearing protection.

      2.3.2. If you are in the area less than 4 hours, hearing protection is voluntary.

   2.4. In areas posted as “Hearing Protection Required”, Contractor is responsible for providing hearing protection and for ensuring that hearing protection is worn at all times.

   2.5. Contractor shall ensure that any employee exposed to 85 dBA (eight hour TWA) shall be enrolled in a comprehensive Hearing Conservation Program.
RONLER ACRES CONTRACTOR EHS PROGRAM

HOUSEKEEPING

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding area housekeeping and clean up.

2. PROCEDURES/EXPECTATIONS
   2.1. All work areas must be maintained and cleaned on a daily basis. Some areas such as a cleanroom, subfab, office area or heavily congested areas require a “clean as you go” approach.

   2.2. Use a vacuum cleaner/system to immediately remove any debris or dust generated when operating cutting or grinding machines or when carrying out other dirt or particle generating activities.

   2.3. Work areas must not be left unmanned without a full, comprehensive clean up. No materials shall be left that could present a trip or other hazard. If materials need to be left, appropriate hazard identification systems shall be employed (barricades, etc.).

   2.4. All electrical cords and temporary power supply lines shall be kept off the floor whenever possible. Temp power lines shall be suspended by the use of non conducting materials only.

   2.5. Materials shall never be left loose in racks or in an unsecured state.

   2.6. Ensure adequate receptacles are available to store paper and other waste materials created by the projects.

   2.7. Any material used to protect flooring surfaces shall be secure in place (i.e. buy the use of tape). To prevent any tripping or slipping hazards.
RONLER ACRES CONTRACTOR EHS PROGRAM

CONTRACTOR HYDROSTATIC AND STATIC TESTING

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Contractor Hydrostatic and Static Testing.

2. SCOPE
   2.1. To outline liquid management procedures within projects.

3. PROCEDURES/EXPECTATIONS
   3.1. Is the system to be hydro or static head tested joined to a live system by a valve? If so, follow LO/TO plan. If NOT Hydrostatic or Static head testing, Read and follow sections 4 through 7.

   3.2. Can an air test be performed prior to a hydro to address obvious or large leak? (<6 inch diameter stainless steel, carbon steel or cast iron systems only). If so, follow approved pressure specification. Not Plastic

   3.2.1. Example: Southwest pressurizing PVC causing explosion of material.

   3.3. Hydro testing not allowed to be performed unattended. Long duration (more than one shift) tests shall be Attended (Definition: Process, Lead, Engineer and/or assigned personnel monitoring during test period) and coordinated appropriately between CP & E and RACS to eliminate incidents.

   3.4. Flanges, valves, unions, flow meters on piping systems must be covered in such a manner as to “collect and direct” any release of liquid. The collect and direct method of liquid management is necessary to manage liquids so they do not impact any sustaining, in qualification process, new equipment set in place, enunciators, lighting, smoke detectors within 12 feet of possible liquid source.

   3.5. Two main methods of liquid management are as follows:
3.5.1. Encapsulating the potential leak source (collects and directs).

3.5.2. Place poly-sheeting barrier between leak source and tool. The method is preferred. The B method can be used with the following precautions: Liquids are to be contained without spillage on floors. Use extreme care when placing barrier between tool sets as not to cover supply or exhaust vents, placing sheeting directly on EMO buttons or control panels. “Shrink wrapping” a tool set is not allowed.

3.6. Materials used for liquid management should be strong enough not to fail under the pressure test being performed.

3.6.1. EXAMPLE #1: 6 mil or thicker poly sheeting or continuous tube sheeting around flanges valves unions and threaded fittings. These should overlap as to “collect” liquid and not leak out the ends. Bottom of capsule should have poly tubing attached in such a manner as to “direct” liquid to an intended location (Bucket, garbage can or authorized safety shower).

3.6.2. EXAMPLE #2: Pre-made spill protection systems are available, effective and their use is recommended. Here are two recommendations: www.newpig.com: Part #TLS286 Pipe Leak Diverter; http://www.idealgraphics.com/ramco/RAMCO Vue-Drain-Gard Safety Shield.

3.7. After completion of work, ALL liquid management materials and liquid are to removed from work area (plastic sheeting, danger/caution tape and signage).

3.7.1. Exceptions to this checklist should be reviewed with the SIPP Mechanical Technicians prior to starting work.
INJURY FREE ENVIRONMENT PROGRAM

1. PURPOSE
   1.1. The Purpose of the Injury Free Environment program is to develop a project workforce (both management and craft personal) dedicated and personally committed to eliminating all occupational injuries and incidents. This document will define the minimum elements necessary to implement an effective injury free environment program.

2. SCOPE
   2.1. The EHS Injury Free Environment program implementation is required for all Intel construction projects. It is an integral element in the Projects EHS philosophy and program execution. The Injury Free Environment program may be implemented utilizing internal Intel resources or by an outside consultant such as JMJ Associates. It is the responsibility of the project management team to identify the strategy that best meets the needs of the defined project scope.

3. PROGRAM ELEMENTS
   3.1. Injury Free Workshops: Workshops will be delivered to contractor and Intel construction personnel to introduce the concept of Injury Free as part of Intel's Safety Model. The workshops are designed to identify and address key issues and challenges to achieving world class safety performance, instill a paradigm shift of key managers to the possibility of injury free performance and to develop individual and team commitment to achieve an injury free work-site. Class participants are encouraged to commit to and agree to be held accountable to the creation of an injury free environment.

   3.2. Intel Injury Free Environment Workshops are one day workshops designed to introduce the concepts of injury free performance, obtain a personal commitment towards the creation of an injury free environment and provide injury free program implementation skills. Attendees include all Intel project personnel, the CM/GC management, subcontractor management and Craft Forman.
3.3. Contractor (JMJ Associates) provided Injury Free Workshops consist of separate project management and Foremen workshops: The Management workshops are two day workshops which include Senior Managers from Intel, the CM/GC and the subcontractors with particular focus on management issues of creating an Injury Free environment. The Foremen workshops are for all project Foreman and General Foreman on the project with particular focus on front line issues of creating an Injury Free environment.

3.4. Perception Surveys: A sampling of the project team is conducted through confidential interviews with managers, supervisors and craftworkers to generate a report/assessment of factors that directly or indirectly affect activities in the field. The survey will include an evaluation of such items as perceived priorities of managers and supervisors, incident reporting, effectiveness of programs and policies, subcontractor engagement and leadership for safety on the project.

3.5. Safety Leadership Team (SLT): The SLT is formed with representatives of Intel, the CM/GC, and the subcontractors. Their role is to provide leadership and oversight, develop implementation strategies and remove any barriers to achieving an Injury Free environment. The SLT should develop a Charter/Mission statement and make them visible and accountable to the project.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 12/02/03

LADDERS

1. OBJECTIVE

1.1. To define the expectations of contractors in regards to ladder safety.

2. PROCEDURES/EXPECTATIONS

2.1. Employees working on ladders:

2.1.1. Anytime an employee is working and is exposed to a fall hazard in excess of six (6') vertical feet as measured from the sole of their shoe, personal fall protection shall be used.

2.1.2. Exception:

2.1.2.1. Maintains at least three points of contact with the ladder at all times; AND,

2.1.2.2. Maintains center of body between the ladder’s vertical supports while performing work on the ladder.

2.2. General Portable Ladder Requirements

2.2.1. A metal spreader/locking device of sufficient strength to securely hold the front and back sections in open positions shall be a working component of each stepladder.

2.2.2. Do not use the two top rungs of a ladder.

2.2.3. Ladders shall be inspected prior to each use.

2.2.4. Damaged ladders shall be tagged as “Dangerous, Do Not Use” or similar wordage and be withdrawn from service.

2.2.5. Ladders shall not be placed in front of doors opening toward the ladder unless door is blocked, open, locked and posted or guarded.

2.2.6. Ladders shall be equipped with non-slip bases.

2.2.7. Ascend/descend on side approved for such.

2.2.8. When ascending/descending, climber must face the ladder.

2.2.9. Only one person on ladder at a time.

2.2.10. Only fiberglass ladders are allowed. Wood or metal types are not acceptable.
2.2.11. Ladders shall be secured with a chain, cable or a rope to a structural member (e.g. column, rack designed for ladder storage, hung horizontally on a pipe rack, etc.)

2.2.12. The ladder must be stored in such a manner to prevent the ladders from falling over or shifting.

2.2.13. Do not attach/store ladders to utilities or utility racks

2.2.14. When stored on the ground, ladders must be on edge (never flat) and coned off to prevent a tripping hazard.

2.2.15. Extension ladders must be adequately secured at the top.

2.2.16. A minimum of a 36-inch overlap above landing is required for extension ladders (~ 3 rungs).

2.2.17. Manufacturer’s information must be on the side of the ladder.

2.2.18. Follow the 4:1 rule for extension ladders: The distance from the ladder’s base to the vertical side of support shall be one-fourth of its supported length.

2.2.19. Where hard hats are required a warning system (barricades, cones, or an attendant) shall be used when in high traffic areas, doorways, or blind corners. In areas where hard hats are NOT required a warning system shall be used at all times.

2.2.20. Carry tools or equipment in tool belts or bags, handed up or down to different levels or lifted by a mechanical hoist.

2.3. General Fixed Ladder Requirements

2.3.1. All rungs shall have a minimum diameter of 3/4 inch.

2.3.2. Distance between rungs shall not exceed 12 inches and shall be uniform throughout.

2.3.3. Minimum length of run shall be 16 inches.

2.3.4. The required clearance between ladder and the nearest permanent object on the climbing side of the ladder is 30 inches.

2.3.5. Seven inches of clearance is required between ladder rungs and nearest permanent object on the backside of the ladder.
LIQUID MANAGEMENT

1. OBJECTIVE
   1.1. To document the Ronler Acres Contractor requirements for liquid management (including, but not limited to, static and hydrostatic testing).

2. SCOPE
   2.1. This BKM shall be used to mitigate the potential for liquid exposure to facility equipment, tools, etc.

3. PROCEDURES/EXPECTATIONS
   3.1. Contain the potential leak source and direct to an appropriate container. Ensure chemical compatibility if necessary. If you are unsure as to compatibility, consult with your EHS representative.
   3.2. If there is a possibility of liquid exposure to facility equipment, tools, etc. one of the following two methods should be followed:
      3.2.1. Encapsulating the potential leak source (collect and direct). (Preferred method)
      3.2.2. Place poly-sheeting barrier between leak source and tool. Liquids are to be contained, ensuring no potential for spillage on floors. When placing barrier between tool sets do not cover supply or exhaust vents. Extreme care should be taken to not activate EMO buttons or limit access to control panels. NOTE: “Shrink wrapping” a tool set is not allowed.
   3.3. Examples of proper ways to control liquid:
      3.3.1. EXAMPLE #1: 6 mil or thicker poly sheeting or continuous tube sheeting around flanges, valves, unions and threaded fittings. These should overlap as to “collect” liquid and not leak out the ends. Bottom of capsule should have poly tubing attached in such a manner as to “direct” liquid to an intended location (Bucket, garbage can or authorized safety shower).
      3.3.2. EXAMPLE #2: Pre-made spill protection systems are available and effective, and their use is recommended. Here are two recommendations: www.newpig.com: Part #TLS286 Pipe Leak Diverter; http://www.ramco-safetyshields.com/; RAMCO Vue-Drain-Gard Safety Shield.
3.4. Materials used for liquid management should be strong enough not to fail under the pressure test being performed.

3.5. Post signage on liquid management containment. See attached Notice: Containment In Progress signage.

3.6. If liquid contains, or potentially contains hazardous substances, erect barricade per the Barricading and Safety Signage BKM.

3.7. Review area daily to ensure:
   3.7.1. Proper containment is intact
   3.7.2. Signage is in place
   3.7.3. Liquid collection device is not full
   3.7.4. Containment is free of trash.

3.8. After completion of work, all liquid management materials are to be removed from work area (plastic sheeting, danger/caution tape, signage, barriers, containers), and liquid disposed of properly.

3.9. Exceptions to this BKM should be reviewed with the SIPP Department prior to starting work.

4. ATTACHMENT
   4.1. NOTICE: CONTAINMENT IN PROGRESS signage
NOTICE
CONTAI NMENT IN PROGRESS

START DATE:  END DATE:
(Start date of containment) (Estimated date when issue will be resolved.)

INTEL/CONTRACTOR/VENDOR: ________________________________
(Inel: Department / Contractor/Vendor: Company Name)

PRIMARY CONTACT: __________________ PHONE: __________________
PAGER: __________________

SECONDARY CONTACT: __________________ PHONE: __________________
PAGER: __________________

MATERIAL BEING CONTAINED: ________________________________

REASON FOR CONTAINMENT: ________________________________

Call Security (x3333 or 503-613-3333) for non-emergency issues with this containment.

IN AN EMERGENCY CALL x4444 or 503-613-4444 (cell).

Rev. 2 12/15/02
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 08/02

MOBILE ELEVATED WORK PLATFORMS (MEWP)

1. OBJECTIVE

1.1. To define the Ronler Acres expectations of contractors regarding mobile elevated work platforms.

2. PROCEDURES/EXPECTATIONS

2.1. Note – The following procedures are further defined in the Intel Mobile Equipment Work Platform (MEWP) policy. In addition to these minimum program requirements all of the requirements listed in the Intel MEWP policy are applicable and required on the Ronler Acres campus.

2.2. Workers shall be trained on the equipment they will be operating. Verification of training must be kept with the operator during lift work.

2.3. Lifts shall be inspected and determined to be in a safe condition prior to use. A Pre-use daily inspection checklist shall be posted on the lift.

2.4. Lifts in sustaining buildings (after Op-Ready) must give SIPP notification prior to operation. Contact the SIPP team to acquire the appropriate documentation and safety operational checklist.

2.5. All lifts must have dual activation controls.

2.6. Only the minimal materials, tools, and equipment are allowed to be hoisted in personnel lifts. Lifts shall not be used to raise/position materials.

2.7. A spotter is required for lift movement during:

2.7.1. Base Build – All congested areas (high traffic) and hazardous locations

2.7.2. Sustaining (after OP-Ready) – During ALL lift movement in any location

2.8. All gates/guardrails shall be closed/installed prior to raising the platform.

2.9. Articulating Boom Lifts (lifts which travel up/down and rotate 360 degrees) require personnel to tie-off inside the basket

2.10. Personnel shall not dismount from lifts in an elevated position (unless double-lanyard tie off is possible).
2.11. Appropriate clearances around energized electrical conductors must be maintained. Recognized electrical safe work practices shall be observed.

2.12. All parts of the worker's body shall remain inside the lift platform when it is being raised.
   2.12.1. Lifts shall be lowered prior to traveling long distances (over 10 feet). If lifts are moved in a raised position, the operator shall look in the direction of travel and avoid all overhead obstructions-Spotter required.

2.13. Floor load ratings shall be adhered to.

2.14. Refer to the following documents for MEWP Inspection Checklists:
   2.14.1. Ronler Acres MEWP Initial Inspection Checklist
   2.14.2. Ronler Acres MEWP Daily Inspection Checklist
Ronler Acres MEWP Initial Inspection Checklist

**Rev 08/02**

**TO BE COMPLETED WHEN A LIFT IS FIRST BROUGHT ON SITE AND BEFORE IT IS USED**

CONTACT NAME: ______________________ CONTACT NUMBER: ______________________

TYPE OF LIFT: ______________________ MODEL #: ______________________

| Inspect the battery and hydraulic equipment. | P | Lower operating controls successfully over ride the upper controls. | P |
| Control panel is clean & all buttons/switches are clearly visible (no paint over spray, etc | P | All Safety Indicator lights work. | P |
| Both upper and lower controls are adequately protected from inadvertent operation. | P | Motion alarms are functional. | P |
| Upper drive controls interlock mechanism is functional (i.e. foot pedal, spring lock, or two hand controls; ) | P | All guardrails are sound and in place, including basket chains, and gate door. | P |
| All switch & mechanical guards are in good condition and properly installed. | P | Work platform extension slides in and out freely with safety locking pins in place to lock setting on models with extension platforms. | P |
| Safety decals are in place and readable. | P | Work platform & extension slides are clean, dry, & clear of debris. | P |
| The manufacturer’s operations manual is stored on MEWP. | P | Inspect for defects such as cracked welds, fuel leaks, hydraulic leaks, damaged control cables or wire harness, etc. | P |
| Drive controls function properly & accurately labeled (up, down, right, left, forward, back). | P | Braking devices are operating properly. | P |
| Operating and emergency controls are in proper working condition, EMO button or Emergency Stop. | P | Tires and wheels are in good condition, with adequate air pressure if pneumatic. | P |
| Grounding Strap is in place & operational. | P | |

- When a lift is initially bought on site contact your GC for inspection. If it passes this inspection you can obtain a green tag with a Permit # on it. This must stay on the lift the entire time it is on the Ronler Acres Site.
- **Lifts must be re-inspected when transferred between GCs or Contractors.**

INSPECTOR NAME: ______________________ DATE: ______________________

INSPECTOR SIGNATURE: ______________________ COMPANY: ______________________
### Ronler Acres Daily MEWP Inspection Checklist

Rev 08/02

<table>
<thead>
<tr>
<th>Contractor:</th>
<th>Model Number:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requester:</td>
<td>Serial Number:</td>
</tr>
</tbody>
</table>

**Start Date:** __/__/__  **End Date:** __/__/__  **Building/Floor/Column:** __/__/__

<table>
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<tr>
<th>Date</th>
<th><strong>/</strong>/__</th>
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</table>

**Operator’s or Inspector’s Name** (person performing the inspection)

Is the operator trained to operate this MEWP and does the operator have a valid operator’s license/card?  

- [ ] Y / N
- [ ] Y / N
- [ ] Y / N
- [ ] Y / N
- [ ] Y / N
- [ ] Y / N
- [ ] Y / N

<table>
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<tr>
<th>Inspection Item &amp; Description:</th>
<th>Pass/Fail Status</th>
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<tbody>
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<td>P / F</td>
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<tr>
<td>2. Upper drive controls interlock mechanism are functional (i.e. foot pedal, spring lock, or two hand controls).</td>
<td>P / F</td>
</tr>
<tr>
<td>3. Emergency lowering function operates properly.</td>
<td>P / F</td>
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<tr>
<td>4. Lower operating controls successfully override the upper controls.</td>
<td>P / F</td>
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<td>5. Both upper and lower controls are adequately protected from inadvertent operation.</td>
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<td>7. All switch &amp; mechanical guards are in good condition and properly installed.</td>
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<td>17. Braking devices are operating properly.</td>
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**Workplace Assessment**

Survey work area for potential hazardous operating conditions prior to use of aerial lift usage.

Ensure all the hazards identified are addressed in task planning with sufficient strategies to mitigate the hazards and/or risks.

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---

**Owner:** OR/WA/UT Projects EHC

**Green Permit Number:** ________

**Ronler Acres Daily MEWP Inspection Checklist**

**Operator’s or Inspector’s Name** (person performing the inspection)

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RONLER ACRES CONTRACTOR EHS PROGRAM

NON-ELECTRICAL HOT WORK

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Non-Electrical Hot Work activities.

2. PROCEDURES/EXPECTATIONS
   2.1. A Non-Electrical Hot Work Permit is required anytime work involves the use of open flame, spark producing equipment and some heat producing activities. This includes welding, cutting, burning, grinding, soldering, brazing, heat/hot air gun, propane space heater, and pipe bending ("hotboxes") operations.

   2.2. Prior to commencing work, all work specific/area hazards shall be understood and communicated and all appropriate permits shall be obtained. Permits and security notification requirements obtained through:
      2.2.1. Sustaining-Site SIPP team.
      2.2.2. Greenfield-General Contractor.

   2.3. All appropriate permits shall be posted in the area of the work.

   2.4. All personnel in the surrounding work area shall be properly warned of the hazardous work area by the use of barricades or other communication means.

   2.5. Prior to work, within 35 feet of work area:
      2.5.1. Flammable liquids, dust lint and oily deposits are to be removed.
      2.5.2. Explosive atmosphere is eliminated or if not possible, monitored.
      2.5.3. Floors swept clean.
      2.5.4. Combustible floors wet down, combustibles in the area removed or covered with fire resistive protection.
      2.5.5. Floor and wall openings covered fire resistive tarpaulins suspended beneath work.

   2.6. A fire watch shall be employed while Non-Electrical Hot Work is ongoing and for 30 minutes after with fire extinguishing equipment immediately available at the work area.
2.6.1. The exception being with heat guns, space heaters and pipe benders--these units should go through the cool down phase, be turned off and then be unplugged; the fire watch can discontinue once the unit is room temperature. In this special case, the operator can be the same person as the fire watch.

2.7. All fire watch personnel shall be trained in the use of the fire protection equipment provided—each contractor is responsible for this training.

2.8. Additional fire watch responsibilities include verification that the area remains clear of all combustible materials during work, assisting in monitoring duties of adjacent areas which may be affected by the hot work operation and to assist with compliance of all hot work safety requirements listed on the issued permit.

2.9. Non-Electrical Hot Work shall not be conducted in any area classified as a Class I, Division I or II area according to the current Uniform Fire Code. Contact your local safety representative or project manager for questions.
ODOR NOTIFICATION

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors conducting odorous work. The applicability to greenfield operations may vary. Contact Intel EHS for clarification.

2. PROCEDURES/EXPECTATIONS
   2.1. Any work which may result in an odor uncommon to the area or the work being performed in that area must be announced in advance to personnel working in the area and to Intel security.

   2.1.1. Examples of odorous construction activities include (but are not limited to) the following:
   - fiber glassing,
   - silicon or other sealing (i.e. Sikaflex, Penetron),
   - PVC gluing,
   - heat shrinking,
   - painting,
   - using adhesives,
   - fire sprinkler work where the sprinkler system is breached releasing water,
   - IPA used for cleaning (concentrations greater than 10% IPA),
   - grinding that will produce odors,
   - any welding (other than orbital welding),
   - odorous work performed in office, restrooms or cafeteria areas,
   - CRC coatings and concrete sealing,
   - asphaltling,
   - roofing activities,
   - continuous operation of internal combustion engines (cranes, welders, generators) near buildings.

   2.2. The procedure for notification should proceed as follows:

   2.2.1. Odor Notification Signs will be posted in the immediate work area to alert personnel in the area of the properties of the odor, location of MSDS, primary and secondary contact numbers, task and duration (see attachment).
2.2.1.1. For odorous work in RP1, the contractor must make an additional phone call to the captain of the ship to open and close the odorous work (503) 604-0518.

2.2.2. The odor notification signs will be posted where it will be visible to all potentially affected employees. For example, if the work is occurring under the raised floor or in the pipe racks, then the signs should be posted in more accessible areas such as on RMF barricade above the floor where the work is occurring, or in aisle ways below the catwalks where the work is occurring.

2.2.3. Security will be notified by calling 3-3333 or (503) 613-3333. The notification will consist of company name, task, odor, location, contact name and number. Security will log the information at SCC. The caller should request the log number from security and add it to the blank space on the odor notification signs.

2.2.3.1. D1D is a flow through Fab; place notification signs on multiple floors of expected odor path.

2.2.4. All contact names and numbers given should be for the individual doing the work or his/her supervisor.

2.2.5. When the odorous work is complete, a close out call will be made to security to close the odor notification at 3-3333, and all signs taken down.

2.3. For odorous work that generates flammable vapors, that is conducted in a confined space or that occurs near incompatible chemicals, additional requirements are necessary. Hazard assessments, engineering controls and additional procedures must be followed in these cases in order to be in compliance with the confined space entry procedures, hotwork permits and/or chemical use approval procedures.
LOCATION: Floor:________ Column lines or Bay:________

START DATE:______________________ END DATE:______________

CONTRACTOR:______________________

PRIMARY CONTACT:______________ PHONE:______________
PAGER:______________

SECONDARY CONTACT:______________ PHONE:______________
PAGER:______________

CHEMICAL NAME:__________________

MSDS LOCATION:__________________

ODOR (Similarities):__________________

__________________

__________________

__________________

__________________

TASK:__________________

SECURITY NOTIFICATION: (3-3333) Time Called _______ Log #__________
RONLER ACRES CONTRACTOR EHS PROGRAM

OPERATIONAL READINESS MANAGEMENT

1. PURPOSE
   1.1. The purpose of this program is to define consistent EHS expectations in support of a typical project Operational Readiness Milestone.

2. SCOPE
   2.1. This Projects EHS program shall apply to all Intel projects that include an Operational Readiness Milestone on the Ronler Acres campus. Although EHS does not own the Operational Readiness Process (or milestone), EHS does provide the EHS building and system criteria that shall be used to define building readiness, and will need to work with the Site to ensure all appropriate EHS programs are in place and functioning at the appropriate milestone.

3. PROGRAM ELEMENTS
   3.1. Facilities Equipment Commissioning
   3.2. Room/Area Acceptance
   3.3. EHS Program Readiness

4. ROLES AND RESPONSIBILITIES
   4.1. Intel Project Team:
      4.1.1. Define the project milestones in consultation with the client (Intel) site organizations.
      4.1.2. Define the specific operational readiness requirements for each milestone.
      4.1.3. Communicate the Operational Readiness requirements to the scheduling team (if applicable), GC/CM, project management team, design firm and all appropriate workgroups.
4.1.4. Develop and communicate the defined commissioning, room acceptance and program readiness methodologies in consultation with project stakeholders.

4.2. **Construction Manager/General Contractor:**

4.2.1. Develop a project work schedule, which accounts for the timing of the operational readiness project milestones.

4.2.2. Participate in the definition & timing of operational readiness deliverables.

4.2.3. Provide information on the status of deliverables critical to attaining operational readiness.

4.3. **RACS (Ronler Acres Campus Services):**

4.3.1. Define the RACS requirements to achieve Operational Readiness in consultation with the project stakeholders.

4.3.2. Coordinate the development of RACS programs and services required for operational readiness.

4.3.3. Track and communicate the status of RACS operational readiness deliverables

4.3.4. Provide technical advice to the project stakeholders when negotiating alternative temporary RACS related features, programs and services.

4.4. **EHS (Environmental, Health, and Safety):**

4.4.1. Define the EHS requirements to achieve Operational Readiness in consultation with the project stakeholders.
4.4.2. Coordinate the development of EHS programs and services required for operational readiness.

4.4.3. Track and communicate the status of EHS operational readiness deliverables

4.4.4. Provide technical advice to the project stakeholders when negotiating alternative temporary EHS related features, programs and services.

5. TIMING
5.1. Op ready planning should begin upon formation of project schedule.

6. TOOLS
6.1. The F14 EHS Commissioning Process

6.2. The F14 EHS Room Acceptance Process

6.3. The F14 Operational Readiness EHS Checklist

6.4. The F14 EPRT Guidelines

6.5. Recommendations for Successful Operational Readiness Implementations

6.6. F14 AWN Sustaining Ready Lessons Learned

6.7. The F14 Operational Readiness Process

6.8. The F14 Commissioning EHS Master Checklist

6.9. The F14 Room Acceptance EHS Master Checklist
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev11/97

PERSONAL PROTECTIVE EQUIPMENT (PPE)

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding personal protective equipment

2. PROCEDURES/EXPECTATIONS
   2.1. General:
       2.1.1. Contractors and their employees must come to an Intel project with PPE as required to safely perform their work. At a minimum, all employees must be supplied with a hard-hat, approved safety glasses and sturdy, ankle high leather work shoes/boots.
       2.1.2. All contractors shall ensure that their employees have received training on the proper use, storage and care for all PPE as required for their work. As with all training, proof of training shall be maintained and made available to Intel upon request.

   2.2. Head / Scalp:
       2.2.1. Hard-hats are to be worn on all construction projects, sub fab areas and CUB areas unless otherwise communicated or posted. Hard-hats shall meet ANSI Z89.1 - 1986 and shall be Class A or B. No class C hard-hats are allowed on Intel projects.
       2.2.2. Metallic hard-hats are prohibited.
       2.2.3. Bump caps are prohibited as head protection.
       2.2.4. Before each use, hard-hats should be inspected for cracks, signs of impact or rough treatment and wear that might reduce the degree of safety originally provided. If signs of excess wear exist, it should be discarded.
       2.2.5. Hard-hat suspensions shall never be altered.
       2.2.6. Hard-hats are to be worn with the bill to the front or as provided by the manufacturer; hard-hats shall not be worn backwards or otherwise on the head.
       2.2.7. If face protection (face shields) are required to be worn in addition to head protection, face shields shall be provided that can be worn with the employee’s hard-hat.
2.3. **Eye & Face Protection:**

2.3.1. Prior to work in any area with potential exposure to hazardous materials/chemicals, the nearest eyewash shall be identified and communicated to all.

2.3.2. All contractors and their employees must wear ANSI Z87.1 approved eye protection on all construction projects, subfab areas and CUB areas unless otherwise communicated or, posted.

2.3.3. Special eye hazard work scopes or areas (such as welding, torch work, etc.) shall be identified in pre-task plans and appropriate eye protection provided.

2.3.4. Goggles shall be worn if the potential for fine particles or chemical hazards exists. Goggles shall also be worn for overhead protection from particles/dust.

2.3.5. Dark tinted eye protection is not allowed inside facilities/structures unless specifically required and approved by project management.

2.3.6. Visitors to the project that do not have approved eyewear shall be provided approved goggles or glasses.

2.3.7. ANSI approved eye wear shall be worn over prescription glasses for access to project work areas until permanent protective eyewear can be obtained, if applicable.

2.3.8. Face shields shall be worn when grinding and handling acids or molten materials.

2.4. **Body Protection:**

2.4.1. Where chemical hazards (corrosives, etc.) are present, appropriate protection shall be provided to all personnel. The protection provided shall be chosen to be resistant to the hazards and chemical properties as presented by the work. Reusable clothing must be decontaminated prior to storage.

2.4.2. For hazard specific protection, such as for protection for electrical hazards, refer to the appropriate procedure/guideline as provided in this manual.

2.4.3. When welding, the neck and face shall be suitably protected from arc burns.

2.4.4. For all construction projects, employees shall be required to wear long pants and shirts with sleeves. Project management shall approve all exceptions.

2.5. **Hand Protection:**
2.5.1. Refer to the HAND PROTECTION BKM of this program.

2.6. **Legs, Thighs, Knees, Shins, & Ankles:**
2.6.1. Overalls or pants must not have loose, torn or dragging fabric.
2.6.2. Pointed tools shall not be carried in pockets. A canvas or leather tool sheath hung from the belt is acceptable. **Remember: All Points Down.**

2.7. **Feet & Toes:**
2.7.1. Sturdy, leather work shoes/boots shall be worn by all personnel on Intel projects unless otherwise documented and/or posted.
2.7.2. For personnel required to repetitively handle loads in excess of 35 pounds, steel-toed safety boots/shoes are required.
2.7.3. Metatarsal and steel-toed guards shall be worn by all personnel conducting tamping and air hammering processes.
2.7.4. Note – The use of steel-toed (safety shoes/boots) and/or metatarsal guards is best understood and defined as part of a project plan or pre-task plan. The pre-task plan shall understand all risks associated with the work and address them accordingly.

2.8. **Hearing Protection:**
2.8.1. Refer to the HEARING CONSERVATION BKM of this program.

2.9. **Respirators:**
2.9.1. If a project plan, pre-task plan or exposure monitoring determines that the use of a respirator is required to adequately safeguard employees, all employees shall be trained, fitted and supplied the appropriate respirator for the job.
2.9.2. Respirators shall not be shared. Each employee requiring protection shall be issued equipment unless contractor has a formal cleaning/disinfecting program in place.
2.9.3. Anyone wearing a respirator shall be clean-shaven to ensure a secure face/respirator seal.
2.9.4. All personnel required to use a respirator while working on Intel projects shall be trained and training records should be available at the request of project management.
<table>
<thead>
<tr>
<th>INTEL FACILITY AREA</th>
<th>SAFETY VEST</th>
<th>STURDY LEATHER WORK BOOTS</th>
<th>SAFETY GLASSES</th>
<th>HARDHAT</th>
<th>LONG PANTS</th>
<th>SLEEVED SHIRTS</th>
<th>RESPIRATOR</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. GREENFIELD/ BASEBUILD CONSTRUCTION SITE</td>
<td>X*</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X (based on task)</td>
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<td>* Until cessation of frequent mobile equipment use</td>
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<tr>
<td>II. CO-OCCUPANCY PERIOD (base build construction)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>X (based on task)</td>
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<td>III. OPERATING FACILITIES</td>
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<tr>
<td>A. OPERATING FACILITY (Small scale construction limited to localized area within facility)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X (Based on task)</td>
</tr>
<tr>
<td>B. OPERATING FACILITY (Large scale construction occurring throughout majority of facility)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X (Based on task)</td>
</tr>
</tbody>
</table>
3. DEFINITIONS

3.1. **Greenfield Construction** – Construction which occurs from groundbreaking until co-occupancy begins.

3.2. **Base build Construction** – Construction which occurs from first project construction activities to “op-ready”.

3.3. **Co-occupancy** – The period of time during which both construction personnel and Intel personnel perform regular work in the same geographical area.

3.4. **Op-ready** – The point at which production chemicals are introduced into a newly constructed system or facility.

3.5. **Intel Construction-related personnel** – Those Intel personnel whose primary responsibilities include observation, oversight, direction or inspection of construction activities. These are usually from organizations such as Projects EHS, etc.

3.6. **Intel Non-construction-related personnel** – Those Intel personnel whose primary responsibilities do not include those of Intel Construction-related personnel, but who may have occasion to enter a construction area during or after a co-occupancy period. These are usually from organizations such as RACS, PTD, Fab 20 manufacturing, etc.

4. NOTES

4.1. **All** personnel must wear task-specific PPE required by other guidelines, such as the CS EHS Manual or Ronler Acres EHS Guidelines.

4.2. **All** personnel must meet posted, area-specific PPE guidelines.
POWDER ACTUATED TOOLS

1. OBJECTIVE
   1.1. To define the Ronler acres expectations of contractors regarding the use of powder actuated tools.

2. PROCEDURES/EXPECTATIONS
   2.1. All powder-actuated tools must be approved by Intel prior to use on Intel property.
       2.1.1. Sustaining contractors must complete a powder actuated tool request form from the SIPP team.
       2.1.2. Base build contractors must contact the general contractor EHS department for approval.
   2.2. All employees must be certified to use the tool prior to operation. Verification of training must be available.
   2.3. The tool must be inspected each day before loading to insure that all safety devices are in good working condition.
   2.4. A muzzle guard or shield shall be in place prior to firing operation.
   2.5. Firing of the tool shall be by at least two separate and distinct actions (dual activation).
   2.6. Tools will not be loaded until just prior to the intended firing time. Loaded tools will not be left unattended.
   2.7. Tools will not be used in explosive or flammable atmospheres.
   2.8. Tools shall not be greater than .27 caliber.
2.9. When firing into a concrete surface, the depth must be a minimum of 3 times greater than the length of the fastener.

2.10. Fired cartridges shall be disposed of properly and not allowed to accumulate on the floor or in the work area.

2.11. Precautions shall be taken to ensure that the affected area is sufficiently barricaded off with danger tape and employees are aware of the activity. A clear parameter should be designated based on manufacturer’s recommendations.

2.12. Sufficient notification shall be given to building occupants to inform them of any potential noise or pedestrian traffic diversions caused by the work.

2.13. Sufficient personal protective equipment shall be worn including required eye protection, face shields, hearing protection and hand protection. Check the manufacturer’s recommendations for guidance. At a minimum face shield, eye protection and hearing protection should be utilized.
RONLER ACRES CONTRACTOR EHS PROGRAM

POWERED WORK VEHICLES (PWV)

1. OBJECTIVE
   1.1. To define the requirements for utilizing golf carts or equivalent vehicles used for transportation on the Ronler Acres campus.

2. PROCEDURES/EXPECTATIONS

   2.1. PWVs will be operated with courtesy and care for the safety and convenience of pedestrians. Pedestrians shall be afforded the right of way at all times. All operators should possess a valid state drivers license and shall be issued a brief tutorial on inspection procedures and safe operations by their company.

   2.2. All carts shall be equipped with reflectors, headlights and an orange safety flag (off road vehicle marker). The flag will be mounted on a 6-foot rod, at a minimum.

   2.3. In vehicles without turn signals, hand signals shall be used to relay turns.

   2.4. All vehicles will utilize one of the following when backing up: a back-up alarm, a horn or a spotter. Operators will obey all speed limit requirements.

   2.5. Company name and unique I.D. (number or name on cart) shall be displayed on all carts.

   2.6. The wheels shall be chocked when parked within the secured perimeter and when on inclines outside the secured perimeter.

   2.7. PWVs shall be used on campus roads or pathways and are not to be used on public roadways or side walks.
2.8. Vehicles shall be restricted to parking only in the areas designated by the Ronler Acres campus logistics team. The keys to the PWVs shall be left in the ignition while unattended inside the secured perimeter.

2.9. PWVs shall be operated in accordance with the manufacturer’s recommendation, which includes vehicle occupancy, that is, each person shall have a seat. PWVs shall not be modified in any manner that affects the recommended mode of operation, speed, or safety of the vehicle.

2.10. All PWVs shall be regularly inspected for maintenance and kept in good working order according to manufacturers recommendation.

2.11. Smoking is not allowed in any PWV not equipped with an ashtray.

2.12. Intel charging stations are not available for Contractor use.
PRE-SAFETY LEVEL 1 ELECTRICAL DISTRIBUTION PANEL CONNECTION PROCEDURE

1. OBJECTIVE
   1.1. To establish a control procedure for the line side termination of electrical cables from manufacturing equipment (process tools and support equipment) to electrical distribution panel breakers.

2. SCOPE
   2.1. This procedure applies to the installation of all process tools and support equipment for which electrical power is supplied via electrical distribution panel breakers. This procedure does not apply to plug-in tools.

   2.2. This procedure was developed specifically for Ronler Acres campus.

3. BACKGROUND
   3.1. Safety Level 1 (SL1) has traditionally been the point at which electrical conductors were connected to tools and those tools became capable of being energized. At that point, then lockout/tagout procedures were required for employees potentially exposed to hazardous electrical energy.

   3.2. During tool installation in 1998-1999 in D1B, however, the City of Hillsboro Electrical Inspector requested that tools be energized prior to SL1 for testing so that proper operation of their life safety systems could be verified.

   3.3. This energization prior to SL1 led to the development of this protocol for notifying affected employees that energization of the tool is possible, and that Control of Hazardous Energies (CoHE) procedures must be utilized by employees working on the tool who could be exposed to the hazardous energies.

4. PROCEDURES/EXPECTATIONS
   4.1. Construction.

        4.1.1. During construction of the electrical distribution system, conductors shall not be terminated to any breaker which is capable of energizing a tool or its supporting equipment until explicit written direction has
been provided to the electrical contractor by the project manager or
designee.

4.2.  Notification of impending completion of electrical system.

4.2.1.  Prior to directing an electrical contractor or others to terminate
conductors on a breaker, the project manager or designee shall
post a sign on the tool, which includes the following:

4.2.1.1.  A lightening bolt symbol which is recognized as an
indication of live electrical circuit,
4.2.1.2.  Bold, black letters printed on a yellow background;
4.2.1.3.  The words “CAUTION: THIS EQUIPMENT IS
CAPABLE OF BEING ENERGIZED.
LOCKOUT/TAGOUT PROCEDURES REQUIRED.”
4.2.1.4.  The date on which the conductors are scheduled to
be terminated; and
4.2.1.5.  The name and phone number of the project manager
or designee

4.3.  Lockout/Tagout

4.3.1.  Beginning on the date indicated on the notification sign all workers
who may be exposed to hazardous electrical energy while working on
the equipment shall follow all lockout/tagout procedures described in
the Oregon Site Control of Hazardous Energies Procedure.

4.4.  Safety Level 1 (SL1) responsibilities.

4.4.1.  RACS – Prior to SL1, a RACS electrical representative shall verify the
completion of the electrical system for the process tool and all support
equipment to the top of the disconnect.  Upon verification, the RACS
electrical representative shall operate the breaker and allow power to
the main tool/equipment disconnect.  The representative shall then
place their signature on SL1 section of the “Caution – Do Not Use”
sticker affixed to the tool.  This signature is equivalent to signing the
SL1 checklist.

4.4.2.  EHS – Prior to initiating SL1 checklist activities, the EHS
representative shall observe and verify the presence of the RACS
electrical representative’s signature on the SL1 section of the “Caution
– Do Not Use” sticker affixed to the tool.  If the signature is not
present, the EHS representative shall not precede with the SL1
activities.

RA Contractor BKMs Rev. 2  11/29/01
Owner:  OR/WA/UT Projects EHS
CAUTION!
THIS EQUIPMENT IS CAPABLE OF BEING ENERGIZED

LOCKOUT/TAGOUT REQUIRED

DATE: _____________________________
CONTACT: _________________________
PHONE #: _________________________

This sign may be removed when SL2 is complete.

Revision 11, 10/16/02  Intel Ronler Acres Pre-Safety Level 1
Electrical Distribution Panel Connection Procedure  Owner: Brett Phillips
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev11/97

PUBLIC / COMMUNITY RELATIONS

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Public / Community Relations.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for notifying Oregon Public Affairs of any situation about which the news media might learn.

   2.2. Notification should take place immediately after calls to those people who have active roles in protecting life and property.

   2.3. Notify Oregon Public Affairs in any of the following situations:

      2.3.1. Any incident on Intel property to which public agency emergency action is summoned (e.g. Police or Fire).

      2.3.2. Medical attention is required for more than one employee arising from a common incident; one employee suffers a grave or serious injury; there is a fatality.

      2.3.3. There is an off-site incident involving Intel property or Intel employees on company time. This includes incidents involving hazardous materials while en-route to or from Intel.

      2.3.4. News media calls or arrives on site. DO NOT respond to press questions without specific guidance from Oregon Public Affairs.

   2.4. Refer to the attached memo EMERGENCY NOTIFICATION TO OREGON PUBLIC AFFAIRS for information on how to contact Public Affairs Staff in priority order.
Memo

Date: 31 October 1997

To: Oregon Site Managers, Site Security, EHS

From: Bill MacKenzie, JF3-107, x4-1330
       Becky Carter, JF3-107, x4-7963

Subject: EMERGENCY NOTIFICATION TO OREGON PUBLIC AFFAIRS, Rev. 9.1

In concept, Oregon Public Affairs should be alerted to any incident about which the news media might likely learn. Bill MacKenzie, Public Information Manager, who is the person be contacted first, has a new pager number effective October 31, 1997. Notification should take place immediately after calls to those people who have active roles in protecting life and property (e.g., get the safety and facilities engineers in first). Here is a simple definition that should cover most incidents:

Public Affairs should be notified (immediately after primary response contact) of any incident on Intel property to which public agency emergency action is summoned (e.g. 911 for police or fire). In addition, call Public Affairs whenever medical attention is required for more than one employee arising from a common incident. Individual illness need not be reported, but a group of employees with similar symptoms, on the job, is. Public Affairs should be notified of off-site incidents that involve Intel property or Intel employees on company time. This includes incidents involving hazardous materials while enroute to or from Intel. Always call Public Affairs if news media calls or arrives on site. DO NOT respond to press questions without specific guidance from Oregon Public Affairs.

Public Affairs Staff (in priority order):
Use Digital Pager first: Key in your phone number, press # and hang up. Keep line open and your call will be returned shortly.


Back-up Contacts: (in priority order)

5. Craig Modahl  Office: 642-6428 Oregon Site Materials and Services Manager
              Corporate Communications Manager
FAB: RAISED FLOOR

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations for working safely under and around raised floor surfaces in the Fabs.

2. SCOPE
   2.1. This BKM applies to all contractors and suppliers/vendors who lift or remove raised floor tiles, including view tiles, or who enter the space beneath the raised floor in Ronler Acres Fabs.

   2.2. Note: SORT, Computer Rooms and the Labs are not included in this procedure due to the different raised floor surface in these locations, and must comply with the Non-Fab Raised Floor BKM.

3. PROCEDURES/EXPECTATIONS
   3.1. General:
      3.1.1. The areas beneath the raised floors have been determined to be Confined Spaces.
      3.1.2. Under normal operating conditions, the areas are considered Non Permit Required Confined Spaces (NPRCS).
      3.1.3. Conditions that may not be normally present that can (or have a potential to) cause a serious safety and health hazard may change the classification of the raised floor area to a Permit Required Confined Space (PRCS).
      3.1.4. All tiles that are replaceable must be replaced at the end of the workday.
      3.1.5. NOTE: Entry into a Non Permit Required Confined Space does not require the issuance of a permit.

   3.2. Requirements for Raised Floor Work:
      3.2.1. Contractor is responsible for having the necessary equipment on hand PRIOR to removing a raised floor tile. This may include, but is not limited to:
         3.2.1.1. Barricades.
         3.2.1.2. STOP sign.
3.2.1.3. Raised Floor Pre Entry Checklist.

3.2.1.4. Appropriate tile pullers.

3.2.1.5. Applicable PPE:

3.2.1.5.1. Hardhat or bump cap must be worn to protect against injuries under the RMF. At no time will a bump cap be used in place of a hard hat when required in the general fab area.

3.2.1.5.2. Knee/Elbow pads may be used to prevent injuries under the RMF.

3.2.2. Barricading raised floor openings:

3.2.2.1. Stanchions and chains/warning tape OR safety cones are NOT allowed as an approved method of barricading openings in the raised floor surface.

3.2.2.2. Single openings are defined as a tile opening(s) with a continuous circumference. See Appendix A. SINGLE openings must be protected by either:

3.2.2.2.1. Approved barricade system as follows:

3.2.2.2.1.1. Aluminum Single Tile Barricade System.

3.2.2.2.1.2. Strut Railing that is bolted to the raised floor surface.

3.2.2.2.1.3. PVC Railing AND an attendant.

3.2.2.2.2. Approved hole cover. (A hole cover must be made of any material that meets standard strength and construction requirements, and projects not more than 1 inch above floor level with all edges chamfered to 30 degrees or less as measured from the plane of the floor). The hole cover must be secured on all four sides so that the cover cannot come loose when walked on (e.g. cleanroom tape or equivalent). The hole cover must be labeled “HOLE.”

3.2.2.3. Multiple openings (or “Swiss Cheese” openings) are defined as openings that are not connected. See Appendix A. MULTIPLE openings cannot be protected by a single barricade. Each single opening
must have its own means of preventing anyone from falling into it.

3.2.2.3.1. Strut railing barricades shall be removed upon completion of floor modifications (All floor tile installed and secured) or when adequate hole covers are used.

3.2.3. In Type 2 copper contaminated areas; approved barricade systems require “Copper only” labels and/or orange-tape.

3.2.4. Floor tile removal:

3.2.4.1. The STOP sign must be filled out, and attached to the barricade and visible from all access areas.

3.2.4.2. A two-person lift and approved tile pullers are required when removing a floor tile.

3.2.4.3. Tiles must be stored in a location and manner where they will not cause a slip or trip hazard to others in the area.

3.2.4.4. When entry beneath the raised floor tiles is required, the Raised Floor Pre Entry Checklist must be filled out and a buddy must be present.

3.2.4.4.1. If the space beneath the raised floor contains, or has the potential to contain any recognized serious safety hazard (or if any of the questions on the Pre Entry Checklist have been answered YES), the raised floor may be considered a Permit Required Confined Space and consultation with EHS is required prior to entry.

3.3. Attendant and Buddy Requirements:

3.3.1. **Attendant** – The attendant must constantly monitor the space and shall perform NO duties that may interfere with their sole responsibility, which is to monitor and protect the entrance and to protect personnel from inadvertently entering the hole/opening.

3.3.1.1. An attendant is required when using a PVC railing to protect a hole/opening, or when you have an incomplete barricading system (i.e. tool move in onto a pedestal).
3.3.2. **Buddy** – The buddy is responsible for the entrant who is below, or in, the raised floor opening. Their responsibilities include, but are not limited to:

3.3.2.1. Assist in removal/replacement of raised floor tiles and to assist with setting up and securing the barricade.

3.3.2.2. Always maintain visual and/or verbal contact with the entrant at all times, and notify ERT in the event of an emergency.

3.3.2.3. Notify worker under the floor if there are any changing conditions in the work environment above the raised floor.

3.3.2.4. Notify others in the area to make sure they do not disturb or endanger the workers under the raised floor.

3.4. **Note** – **Never** enter under the raised floor to try and rescue the workers. **Contact** ERT in the event of an emergency – x44444.

4. **REFERENCES**

   4.1. Barricading BKM
   4.2. Confined Space BKM
APPENDIX A
FLOOR TILE OPENING EXAMPLES

Single Openings (Examples)

a) 

Or

Continuous Circumference

b) 

Or

Continuous Circumference

c) 

Or

Continuous Circumference

Multiple Openings (Examples)

a) 

Or

b) 


RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 3/04

NON - FAB: RAISED FLOOR

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations for working safely under and around raised floor surfaces in non – Fab areas.

2. SCOPE
   2.1. This BKM applies to all contractors, and suppliers/vendors who lift or remove raised floor tiles, including view tiles, or who enter the space beneath the raised floor in: Fab20 Sort, D1C Sort, Computer Rooms and the Labs.
   2.2. Note – Fab20, RB1 (including C4), RP1 or D1C are not included in this procedure due to the different raised floor surface in these locations, and must comply with the FAB Raised Floor BKM.

3. PROCEDURES/EXPECTATIONS
   3.1. General:
      3.1.1. Raised Floor Safety training is required for removal of floor tiles.
      3.1.2. Prior to removal of any floor tile the Operations Manager (OM) and personnel working in the area must be notified.
      3.1.3. The areas beneath the raised floors have been determined to be Confined Spaces.
      3.1.4. Under normal operating conditions, the areas are considered Non Permit Required Confined Spaces (NPRCS).
      3.1.5. Conditions that may not be normally present that can (or have a potential to) cause a serious safety and health hazard may change the classification of the raised floor area to a Permit Required Confined Space (PRCS).
      3.1.6. All tiles that are replaceable must be replaced at the end of the workday.
      3.1.7. NOTE – Entry into a Non Permit Required Confined Space does not require the issuance of a permit.

3.2. Requirements for Raised Floor Work:
   3.2.1. Contractor is responsible for having the necessary equipment on hand PRIOR to removing a raised floor tile. This may include but is not limited to:
3.2.1.1. Barricades. (Non-Fab only.)
3.2.1.2. Chains/Stanchions. (Non-Fab only.)
3.2.1.3. Danger Tape. (Non-Fab only.)
3.2.1.4. STOP sign.
3.2.1.5. Raised Floor Pre Entry Checklist.
3.2.1.6. Appropriate tile pullers.
3.2.1.7. Applicable PPE:
   3.2.1.7.1. Hardhat or bump cap must be worn to protect against injuries under the RMF. At no time will a bump cap be used in place of a hard hat when required for a specific task.
   3.2.1.7.2. Knee/Elbow pads may be used to prevent injuries under the RMF.
3.2.2. Barricading raised floor openings:
3.2.2.1. FLOOR TILE openings must be protected by either:
   3.2.2.1.1. Strut Railing that is bolted to the raised floor surface.
   3.2.2.1.2. Two-tile rigid barricade with locking wheels.
   3.2.2.1.3. Danger Tape with stanchions at leading edge of opening, AND danger tape 6 feet from the leading edge of opening AND an attendant. (Danger tape should be placed 36-48” vertical from the raised floor).
   3.2.2.1.4. PVC Railing AND an attendant.
3.2.2.1.5. Approved hole cover. (A hole cover must be made of any material that meets standard strength and construction requirements, and projects not more than 1 inch above floor level with all edges chamfered to 30 degrees or less as measured from the plane of the floor).
3.2.3. Floor Tile Removal:
3.2.3.1. The STOP sign must be filled out, and attached to the barricade and visible from all access areas.
3.2.3.2. Approved tile pullers and a two-person lift (when required) should be used when removing a floor tile.
3.2.3.3. Tiles must be stored in a location and manner where they will not cause a slip or trip hazard to others in the area.

3.2.3.4. When entry beneath the raised floor tiles is required, the Raised Floor Pre Entry Checklist must be filled out and a buddy must be present.
   3.2.3.4.1. If the space beneath the raised floor contains, or has the potential to contain any recognized serious safety hazard (or if any of the questions on the Pre Entry Checklist have been answered YES), the raised floor may be considered a Permit Required Confined Space and consultation with EHS is required prior to entry.

3.3. Attendant & Buddy Requirements:

3.3.1. **Attendant** – The attendant must constantly monitor the space and shall perform NO duties that may interfere with their sole responsibility, which is to monitor and protect the entrance and to protect personnel from inadvertently entering the hole/opening.
   3.3.1.1. An attendant is required when using a PVC railing, or chains/stanchions and danger/caution tape to protect a hole/opening, or when you have an incomplete barricading system (i.e. tool move in onto a pedestal).

3.3.2. **Buddy** – The buddy is responsible for the entrant who is below, or in, the raised floor opening. Their responsibilities include, but are not limited to:
   3.3.2.1. Assist in removal/replacement of raised floor tiles and to assist with setting up and securing the barricade.
   3.3.2.2. Always maintain visual and/or verbal contact with the entrant at all times, and notify ERT in the event of an emergency.
   3.3.2.3. Notify worker under the floor if there are any changing conditions in the work environment above the raised floor.
   3.3.2.4. Notify others in the area to make sure they do not disturb or endanger the workers under the raised floor.

3.4. **Note** – Never enter under the raised floor to try and rescue the workers. Contact ERT in the event of an emergency.
4. REFERENCES
   4.1. Barricading BKM
   4.2. Confined Space BKM
DO NOT ENTER THIS AREA UNLESS AUTHORIZED BY:

NAME: __________________________  PHONE/PAGER: __________________________

START DATE/TIME: __________________________  END DATE/TIME: __________________________

HAZARD (S): ________________________________________________________________

If entry is required beneath the raised floor, the checklist on the back of this sign must be completed!

Rev. 2  11/29/01
OWNER: OR/WA/UT Projects EHS
RAISED FLOOR PRE-ENTRY CHECKLIST

This checklist must be completed in order to enter beneath the raised floor surface. NOTE: Entry under the raised floor with head and shoulders above the raised floor surface does not require completion of the Raised Floor Pre-Entry Checklist.

Ensure the following are present before conducting any work under the raised floor:

- Buddy
- Barricades
- Tile Pullers
- STOP Sign/Checklist
- Hardhat/Bump cap

<table>
<thead>
<tr>
<th>Checklist Item</th>
<th>Yes/No</th>
<th>Date/Time</th>
<th>Entrant’s Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Are the raised floor entrant or others performing work in the area that may create a safety or health hazard (using inerts/chemicals, HPM line breaking, demolition, welding, electrical work, etc.)?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Is there an HPM/unknown spill or clean up underway in your work area?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Will heavy equipment or tools be moved over/through your work area or access/egress routes during raised floor work?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Is equipment operating in the work area that may create a safety or health hazard (e.g., process tool demo/decon, exhaust from motors, noise hindering communication, etc.)?</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- If you answered "Yes" to any of these questions STOP WORK AND CONTACT YOUR supervisor and your EHS representative for direction. The space may be considered a permit required confined space in which specific training and requirements (permits, monitoring, etc.) are necessary before any work can continue. Additionally, other permits/controls may be required.

- If you answered "NO" to all these questions:
  1. Ensure a buddy is present
  2. Post this checklist at the entry point
  3. Complete work

For Non-Emergency Assistance Contact: 1. Your Supervisor 2. Your EHS Representative

For Emergency Procedures: 1. Notify Security using the emergency line 4-4444 2. Security will notify ERT.

Do Not Attempt An Entry Rescue!
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev10/97

RESPIRATORY PROTECTION

1. OBJECTIVE

1.1. To define the Ronler Acres expectations of contractors regarding Respiratory Protection.

2. PROCEDURES/EXPECTATIONS

2.1. Each Contractor company is responsible for design and implementation of a Respiratory Protection program when its employees will be using respirators. Elements of the program should include; risk/hazard analysis, selection of appropriate respirators, medical evaluation of respirator wearers, training, and fit testing. Training records shall be made available at the request of project management.

2.2. The Contractor is responsible for determining when and where respiratory protection is required to address hazards that are generated as a result of Contractor activity on either new construction or sustaining contractor projects.

2.3. If Respiratory Protection is required as a result of hazards presented by Intel Operations the Contractor will work with Intel EHS to select the appropriate respiratory protective equipment.

2.4. All respiratory protection equipment used on Intel sites shall be NIOSH approved.

2.5. Respirators shall not be shared. Each employee requiring protection shall be issued equipment unless the Contractor has a formal cleaning/disinfecting program in place. Anyone wearing a respirator shall be clean-shaven to ensure a secure face/respirator seal.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 3 12/99

REVOCATION AND REINSTATEMENT OF CONTRACTOR ACCESS PRIVILEGES

1. PURPOSE
   1.1. This document outlines procedures required subsequent to the revocation of any CP&E contractor’s campus access privileges due to violation of Intel or General Contractor (GC) EHS policy. Further, it outlines procedures required prior to reinstatement of campus access privileges, which have been revoked due to EHS violations.

2. SCOPE
   2.1. This guideline applies to all CP&E construction contractors on the Intel Ronler Acres Campus.

3. REFERENCE DOCUMENTS/TRAINING
   3.1. General Contractor Progressive Discipline Policy and/or Zero Tolerance Policies
   3.2. Intel CS EHS Construction Manual
   3.3. Ronler Acres Contractor Orientation

4. PROCEDURE/EXPECTATIONS
   4.1. Revocation of Site Access Privileges:
       4.1.1. Notification – An Intel employee who revokes a contractor’s access privileges or requests such revocation shall immediately notify the following stakeholders:
           4.1.1.1. Contractor’s on-site project management;
           4.1.1.2. General Contractor’s on-site project management (if GC is utilized on project)
           4.1.1.3. Intel Project Manager or Work Group Lead
           4.1.1.4. Intel Projects EHS representative
       4.1.2. Review of Revocation or Retention – Proposed revocation of site access privileges for violation of safety procedures shall be reviewed by the Intel Projects EHS Representative the Intel Project Manager, and the GC Project Manager. The EHS representative and project managers may find:
4.1.2.1. The revocation has merit and should be upheld;
4.1.2.2. Mitigating circumstances dictate that the revocation should be denied.

4.1.3. The Intel Project Manager and the Intel Project EHS Representative will be responsible for making the final determination.

4.1.4. Improvement Plan – The EHS representative and project managers may also elect to require an improvement plan or probationary period for the trade contractor whether the revocation is upheld or denied.

4.1.5. Notification of Revocation by GC – If the GC revokes site privileges due to safety violations, Intel notification is necessary to the Intel Project Manager and the Intel Project EHS Representative.

4.1.6. The GC Progressive Discipline Policies will be upheld, but Intel reserves the right to review any actions by the GC that Intel deems excessive.

4.1.7. Notification of Security, Customer and Campus Manager – If the Intel Project Manager and Projects EHS representative uphold the revocation, then the EHS representative shall notify Intel Security, the customer and the campus manager in writing of the revocation.

4.1.8. Notification of Revocation Requestor – The Projects EHS representative shall notify the revocation requestor in writing of the disposition of his request.

4.2. Security Process for Revocation of Site Access Privileges:

4.2.1. If a contractor badge has been revoked for violation of safety protocol, the badge shall be collected from the contractor and turned in to the nearest security lobby. The contractor should have been escorted from the site by this time.

4.2.2. Security shall complete a “Badge Termination/Exchange Action Form” annotating the reason the badge was returned. Security personnel shall forward the form to the nearest Badge and ID office for further disposition.

4.2.3. The contractor whose badge has been revoked shall be identified in the system as “termed”. The Intel EHS representative shall request the Badge and ID office to flag his record to read “Not allowed on any Intel Campus”.

4.2.4. The record shall be retained automatically unless otherwise directed from high-level management. A flagged contractor
shall not be allowed back onto an Intel campus unless a Reinstatement Plan meeting the criteria described in Section VI following is completed.

4.2.5. If the decision is made not to allow an individual back onto the campus, the request shall be transmitted to Corporate Security via e-mail message. Corporate Security shall send a Denial letter to all Badge and ID offices and placed in the corporate files. Note: The security computer system has backup in the case of any interruption of service.

4.3. **Reinstatement of Campus Work Privileges:**

4.3.1. *Minimum Time of Revocation* – Under no circumstances shall any Contractor whose access privileges have been revoked be permitted to return to work on any campus within six months of revocation. GC minimum time of revocation may be more stringent.

4.3.2. *Reinstatement Plan* – Subsequent to minimum time of revocation and prior to reinstatement of revoked campus access privileges for any contractor, a Reinstatement Plan shall be developed.

4.3.2.1. *Plan Development* – The prospective employer shall develop the Reinstatement Plan. The Plan shall include input from the following, at a minimum:

- 4.3.2.1.1. Site project manager of respective trade contractor;
- 4.3.2.1.2. Site Superintendent or General Foreman of trade contractor;
- 4.3.2.1.3. Trade Contractor EHS Representative;
- 4.3.2.1.4. Intel Projects EHS representative;
- 4.3.2.1.5. Intel Work Group Lead for respective trade discipline;
- 4.3.2.1.6. General Contractor Project Manager (if GC is utilized); and
- 4.3.2.1.7. Campus Manager

4.3.2.2. *Plan elements* – The Plan shall include the following:

4.3.2.2.1. *Actions* – Plan shall include a list of actions that the contractor and the individual shall take to ensure that violations do not reoccur. The actions should include, but not be limited to: Injury Free Environment
Strategies, Policy Enforcement, Training, etc.

4.3.2.2.2. Success Indicators – The Plan shall include behaviors/milestones by which the success of the reinstatement shall be judged.

4.3.2.2.3. Public Relations Considerations – The Plan shall address potential loss of goodwill or other negative impact to morale, which may occur as a result of either the revoked contractor returning to work or the revoked contractor not being allowed to return to work.

4.3.2.3. Plan approval – The Reinstatement Plan Development Team shall present the Reinstatement Plan for approval to the Projects EHS Manager and the CP&E Program Manager. Failure to approve the Plan by either the Projects EHS Manager or the CP&E Program Manager shall constitute continuation of revocation of access privileges.

4.3.2.4. Notification of Security – If the Reinstatement Plan is approved, the Intel Projects EHS representative shall notify Intel Security of the restoration of access privileges and shall request that the Contractor record be flagged “Privileges Restored on [date]”.

RONLER ACRES CONTRACTOR EHS PROGRAM

SAFETY INCIDENT INVESTIGATION / REPORTING

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding safety incident reporting

2. PROCEDURES/EXPECTATIONS
   2.1. Intel contractors and their subcontractors are required to immediately (within one hour) report to Intel (Intel Sponsor or Project Management) any accidents and incidents (including, but not limited to, illness, injury, fires, property damage or hazardous material spills) that occur on Intel projects. Each Contractor/Subcontractor company is responsible for having a written procedure that will communicate any incident as described above to Intel Ronler Acres Management including, but not limited to, PTD, RACS, CP&E, Projects EHS, ERT, Security. Specific notification/investigation requirements shall be discussed prior to the commencement of work and can be obtained from the EHS representative during the project review process.

   2.2. All incidents and occupational injuries must be formally documented by the employer and investigated thoroughly to identify root cause and contributing factors. Further, the results of the investigation, with a corrective action plan shall be provided to Intel within five (5) working days. At Intel's discretion, any and all incidents, injuries or near misses may be investigated jointly by all involved parties. As such, when incidents occur, the incident scene must be preserved and all parties involved retained to ensure a thorough investigation.

   2.3. At a minimum, all contractors must report their First Aid, Recordable, Lost Day Cases (including restricted day cases) and project hours to Intel on a monthly or weekly basis (depending on contract), even if they did not incur any injuries or incidents. All employees must be included—labor and office/general/support. Request the appropriate reporting form from Intel project management prior to commencing work.

   2.4. Incidents meeting Construction Incident Alert criteria (CIA) for base build contractors, Safety Bulletin Incident criteria (SBI) for sustaining contractors or environmental incidents meeting the definition of an
Environmental Management Incident (EMI) will require additional cross-site reporting. Intel EHS and Project Management will coordinate the CIA/SBI/EMI reporting effort. Contractor shall provide the Intel EHS representative with all needed incident information.

2.5. Contractor agrees to maintain injury, illness and accident/incident information on the Intel site where the work is being performed. This information shall be provided in part or in full at any time at the request of Intel’s project management. At the completion of all projects, all injury/illness summary or tracking data shall be transferred/copied/provided to Intel to ensure inclusion in Intel data management systems.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev11/97

SAFETY SELF ASSESSMENT (SSA)

1. OBJECTIVE

1.1. The Safety Self Assessment program is a safety management tool designed to focus on documenting continuous improvement plans and progress towards the goal of world class safety. The process typical includes Total Safety Management (TSM) training, current situation analysis, formal corrective action plans to address deficiencies, and review with an executive team. All RA construction projects managed by CP&E will conduct annual SSAs to evaluate their program effectiveness. The project's GC/CM and Subcontractors will participate in the SSA review process.

2. SCOPE

2.1. This program applies to all CP&E managed projects worldwide, with major projects being reviewed every 12 to 18 months. Projects may conduct an internal SSA at the commencement of the project in an effort to proactively create an action plan focused on immediate injury free performance.

3. PROGRAM ELEMENTS

3.1. Total Safety Management (TSM) Training – Training designed to communicate the Intel Safety Model and the Injury Free methodologies that are at the core of Projects EHS philosophies.

3.2. Safety Self Assessment Workshop – Facilitated workshop to understand and document the project's current state of EHS performance. This workshop should also produce a site specific action plan based on a formally conducted current situation and gap analysis.

3.3. Safety Self Assessment Action Plan – Completed, ratified project action plan based on the project's current situation and gap analysis (as compared to a defined "ideal state"). This action plan is kept current by the Project Manager and can be used as a leading indicator for injury/incident prevention.

3.4. Executive Site Visit – Upon completion of the action plan, Intel business unit executives accompanied by a Corporate Safety
representative, will visit the project site to review the SSA workshop results and conduct an external assessment. Feedback is received from the business unit leaders and incorporated into the action plan as appropriate.

4. ROLES AND RESPONSIBILITIES

4.1. The Project Manager owns the SSA process, with support typically provided by the project management team including the Projects EHS Representative. The Project Management Team (or the Safety Leadership Team (SLT)) will lead the SSA process from TSM to SSA Workshop to Site Visit. The Project Manager shall own management and execution to the SSA action plan. The Projects EHS Representative and team will provide BKM processes and materials for TSM and workshop as well as co-teach TSM with Project Management Team.

5. TIMING

5.1. TSM Training – Preferred to be two to three months prior to executive site visit and one to two weeks prior to Safety Self Assessment Workshop. May be retrained periodically to integrate new contractors upon deployment at projects.

5.2. SSA Workshop – Two to three months prior to executive site visit is recommended to ensure action plan has been initiated.

5.3. SSA Action Plan – Rev. 0 completed as part of the SSA Workshop. Final (Rev. 1) completed and distributed by project team within one (1) month of workshop completion or prior to executive site visit.

5.4. Executive Site Visit – Determined by CP&E Senior Management, Corporate Safety and Projects EHS Manager. Generally conducted every 12 to 18 months.
SCAFFOLDS

1. OBJECTIVE
   1.1. To define the expectations for contractors building and using scaffolds on the Ronler Acres Campus. This BKM addresses the more important issues regarding scaffolds. It is the expectation that all scaffolds built and/or used on the Ronler Acres campus will meet or exceed the OSHA Standard 29 CFR 1926.450 Subpart L.

2. DEFINITIONS
   2.1. **Scaffolds** – Any temporary elevated platform (supported or suspended) and its supporting structure (including points of anchorage) that support workers and materials. This would include a single plank put in place as a work platform.
   2.2. **Single Plank Wood Scaffold** – A work surface elevated above lower levels constructed using an individual wood plank.
   2.3. **Competent Person** – One who through experience or training can identify hazardous working conditions and who has authorization to take prompt corrective measures to eliminate them.
   2.4. **Qualified Person** – One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter.
   2.5. **Users** – A person who works from or accesses a scaffold who is trained to recognized hazards associated with that scaffold and to control or minimize the hazards.

3. PROCEDURES/EXPECTATIONS
   3.1. Fall Protection For Erecting or Dismantling:
      3.1.1. Workers who erect or dismantle scaffolds must, if feasible, use fall protection. A competent person, designated by the employer, must determine if fall protection is feasible at each stage of erecting and dismantling process. This determination will be addressed and outlined while filling out the Pre-Task Plan. Refer to the Fall Protection BKM for help in understanding Ronler acres specific tie off points.
   3.2. Hand rails, Mid rails, and Toe boards:
      3.2.1. Whenever possible, handrails, mid rails, and toe boards shall be installed.
3.2.2. If handrails cannot be installed then an appropriate scaffold tag will be installed to identify the missing components.

3.2.3. If toe boards cannot be installed, a barricade system shall be put in place to protect any one from entering under a working scaffold without toe boards.

3.3. Material and Time Frame Requirements:

3.3.1. See Attached Ronler Acres Scaffolding Requirements for Occupied Buildings.

3.4. Scaffold User training must cover the following:

3.4.1. Electrical hazards, such as overhead power transmission lines.

3.4.2. Fall hazards and methods to control the hazards.

3.4.3. Falling object hazards and methods to protect persons from falling objects.

3.4.4. How to use the scaffold’s walkways, platform components, and access areas.

3.4.5. The scaffolds load capacity and the types of loads appropriate for the scaffold.

3.4.6. All users of scaffold shall read and understand this BKM.

3.5. Tagging of Scaffolds:

3.5.1. A competent person will tag all scaffolds. A competent person must inspect scaffolds and components before each work shift, after any incident that could weaken it, and after each installation. See attached Scaffold inspection form.

3.5.2. Single plank wood scaffolds shall be tagged with the yellow Single Plank Wood Scaffold Safety Form. This form addresses items related to single plank wood scaffolds and includes the inspection sheet. See attached Single Plank Wood inspection form.

3.5.3. All scaffolds will be tagged with a Red, Yellow, or Green tag (see attached sample Tags).

3.5.3.1. RED means the scaffold is unsafe or is under construction, and is not to be used.

3.5.3.2. YELLOW means the scaffold does not meet all requirements, and special equipment or rules are required in order to use the scaffold. These requirements must be posted (i.e. 100% fall protection).

3.5.3.3. GREEN means that the scaffold meets all OSHA standards and can be used without any additional
rules or equipment. This scaffold meets all load and level requirements, and is tagged with a competent person name and contact number.

**NOTE:** If there is no tag, no one is allowed on scaffold.

3.6. Scaffold Inspection

3.6.1. Ronler Acres Scaffold Daily Inspection Sheet will be filled out and posted by the competent person. See attached daily inspection sheet. Due to the frequent relocation of single plank scaffolds, an inspection is required daily and each time it is relocated. See attached Single Plank Wood Scaffold Safety Form.

3.7. Scaffold Capacity:

3.7.1. Scaffolds must be able to support their own weight and at least four times the maximum intended load applied to them. Unless otherwise noted in subdivision 3/L, scaffold components have to meet the 4 to 1 safety factors. All modifications to a scaffold will to be approved by the competent person.

3.8. Base Plates, Jacks and Foundation:

3.8.1. Where required, base plates or screw jacks must be used. Foundation must also meet the 4 to 1 safety factors.

3.9. Planking:

3.9.1. All planking used at Ronler Acres shall meet or exceed the OSHA Guideline. All wood type planks shall be made of a scaffold grade lumber.

3.9.2. Single plank wood scaffolds that are used in the clean room or clean environment (Protocol Level 3-5) shall be sealed (example: transparent clean room tape) to prevent microcontamination issues and to enable the competent person to visually inspect the condition of the wood.

3.9.3. Single wood planks put in place are considered scaffolding and must have the company name, the appropriate scaffold form, and need to be removed when the job is complete.

3.9.4. Single wood plank scaffolds shall be secured using brackets, zip ties, or other approved fastening device to eliminate cantilever effects or side shifts.

3.10. Scaffold Access:

3.10.1. There will be a safe means of access for each employee erecting, dismantling or working on the scaffold.

3.11. Control Access:
3.11.1. The area under a scaffold during construction shall be secured by RED danger tape while scaffold is under construction. Refer to Barricading and Safety Signage BKM.

3.11.2. It may also be necessary to control the area under the scaffold after the scaffold is complete.

3.12. Intel Systems:

3.12.1. Prior to a scaffold being built, Intel systems that may be affected shall be identified while filling out Pre-Task Plan. If any Intel system, as outlined in the Pre-Task Plan, may be impacted or blocked, the Intel system owner shall be notified by the CC and the CC’s signature will be required on the Pre-task Plan.

3.12.2. Scaffolding affecting stairs, corridors and main egress aisles shall be presented to the City of Hillsboro for review and approval. Daily egress impacts will be managed by the contractor through use of the daily inspection sheet.

4. REFERENCES

- OSHA Standard 29 CFR 1926 Subpart L
- Ronler Acres Contractor Best Known Methods (BKM)
**Intel Scaffold Daily Inspection Sheet**

| Name of scaffold erector: |  
| Name of competent person: |  
| Name of scaffold inspector: |  

**Identify the scaffold tagging system.**

- Red / Yellow / Green (circle one)
- Other (Identify)

**Are there any special conditions noted on the inspection tags?**

- Yes*  
  *If “Yes” they must be identified on the task plan.
- No

**Check appropriate Scaffold System in use.**

- Frame Scaffold
- Rolling Scaffold
- System Scaffold
- Baker Scaffold
- Tube & Coupler
- Other

**What is the duty rating of the scaffold you are working on?**

- Light Duty = 25 lbs per sq ft = Maximum Wooden Plank Span = 10 FT.
- Medium Duty = 50 lbs per sq ft = Maximum Wooden Plank Span = 8 FT.
- Heavy Duty = 75 lbs per sq ft = Maximum Wooden Plank Span = 6 FT.

**Are guardrail systems, toe board, and mid-rail in place and complete?**

- Yes
- No*

*If either of these are “NO,” fall protection methods must be identified on task plan.

**Is there protection for falling objects?**

- □ Toe Boards
- □ Fans / Screens
- □ Other

**Is there protection for pedestrian walk through?**

- Yes
- No

**Is there an identified means of access?**

- Yes
- No*

*If “NO,” this must be identified on task plan.

**Material handling tasks while working on scaffold must be identified on task plan.**

**Are there unique hazards in the work area?**

- □ Electrical
- □ Mechanical
- □ Chemical
- □ Thermal
- □ Pneumatic
- □ Hydraulic

**A SCAFFOLD SHALL NOT BE MODIFIED OR CHANGED UNLESS UNDER THE SUPERVISION OF A COMPETENT PERSON!**
**Single Plank Wood Scaffold Safety Form**

THIS SCAFFOLD DOES NOT MEET ALL SCAFFOLD REQUIREMENTS AND REQUIRES THE USE OF 100% FALL PROTECTION BY ALL USERS

MAXIMUM OCCUPANCY: __________ LBS

MAXIMUM LOAD: __________ LBS

JOB NAME/TOOL #: ____________________________

PERSON INSTALLING PLANK: ____________________________

PERSON INSPECTING PLANK: ____________________________

START DATE: __________ END DATE: __________

COMPANY: ____________________________  PH NUMBER: ____________________________

CONTACT: ____________________________  PH NUMBER: ____________________________

SPECIAL CONDITIONS

DO NOT MODIFY THIS STRUCTURE

100% FALL PROTECTION REQUIRED

**Daily Inspection Sheet**

**MAXIMUM LOAD CAPACITY**

(Check applicable box)

☐ 1 ft – 6 ft Length = 350 lbs  ☐ 8 ft – 10 ft Length = 350 lbs

☐ 6 ft – 8 ft Length = 300 lbs  ☐ Other: ____________________________ lbs

SCAFFOLD CAPACITY: Scaffold system must be able to support its own weight and at least four times the maximum intended load to meet the 4 to 1 safety factor.

PRIOR TO USE, THIS SINGLE PLANK SCAFFOLD SHALL BE INSPECTED BY A COMPETENT PERSON DAILY AND/OR AFTER EACH INSTALLATION TO INCLUDE THE FOLLOWING ITEMS:

- **Condition of wood**—look for splits, surface cracks, notches, burns, visible damage to wood, accumulated layers of paint, plaster, or tape that obscures the condition of the wood.
- **Properly secured**—single wood plank scaffolds shall be secured using brackets, zip ties, or other approved fastening device to eliminate cantilever or side shift effects.
- **Free of**—debris, tools, or materials.
- **Falling object protection**—identify alternate method to prevent falling objects or barricade area below to protect other workers.
- **Fall Protection**—appropriate fall protection system is in place to maintain 100% tie off by user.
- **Access**—is identified and enables workers to safely access and egress the work platform.

*NOTE: IF ANY OF THE ABOVE LISTED ITEMS ARE FOUND TO BE DEFICIENT, THE PLANK MUST BE RED TAGGED AND NOT USED UNTIL UNTIL PLANK MEETS ALL APPLICABLE OSHA AND SITE SCAFFOLD REQUIREMENTS.*

<table>
<thead>
<tr>
<th>DATE</th>
<th>NAME</th>
<th>INITIAL</th>
<th>DATE</th>
<th>NAME</th>
<th>INITIAL</th>
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<tbody>
<tr>
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</tbody>
</table>

RA Contractor BKM's Rev. 2 11/29/01
Owner: OR/WA/UT Projects EHS
**DO NOT ALTER**

Ronler Acres Site

This scaffold has been erected to meet site requirements and is safe for its intended use.

<table>
<thead>
<tr>
<th>MAXIMUM</th>
<th>PEOPLE ONLY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>MAXIMUM LOAD</th>
<th>LBS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

SCAFFOLD IS MADE FROM FIRE RETARDANT MATERIAL  YES □  NO □

<table>
<thead>
<tr>
<th>START DATE:</th>
<th>END DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

COMPETENT PERSON:

CONTACT NUMBER:

COMPANY:

(green)
THIS SCAFFOLD DOES NOT MEET ALL FEDERAL / STATE OSHA STANDARDS SEE BELOW FOR DEFICIENCIES

MAXIMUM ___________ PEOPLE ONLY

MAXIMUM LOAD ___________ LBS

SCAFFOLD IS MADE FROM FIRE RETARDANT MATERIAL  YES ☐ NO ☐

START DATE: ___________ END DATE: ___________

COMPETENT PERSON:

CONTACT NUMBER:

COMPANY:

(yellow)

<table>
<thead>
<tr>
<th>DEFICIENCIES</th>
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<tbody>
<tr>
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</tr>
<tr>
<td></td>
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</tbody>
</table>
Blank Page
**DO NOT USE THIS SCAFFOLD**

**Ronler Acres Site**

**KEEP OFF**

This scaffold is being erected or dismantled. Only authorized employees using required PPE may access this scaffold.

<table>
<thead>
<tr>
<th>SCAFFOLD IS MADE FROM FIRE RETARDANT MATERIAL</th>
<th>YES ☐</th>
<th>NO ☐</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>START DATE:</th>
<th>END DATE:</th>
</tr>
</thead>
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<table>
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<tr>
<th>COMPETENT PERSON:</th>
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</table>

<table>
<thead>
<tr>
<th>COMPANY:</th>
</tr>
</thead>
</table>

**(red)**

**DEFICIENCIES**

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Ronler Acres Site

100% FALL PROTECTION REQUIRED FOR THIS WORKING PLATFORM

ACTIVITY:

________________________________________

________________________________________

START DATE: _____________ END DATE: ______________

CONTACT: __________________   PAGER:______________

MAXIMUM _____ PEOPLE ONLY
100% FALL PROTECTION REQUIRED

SEE REVERSE SIDE FOR MORE INFORMATION
## RONLER ACRES SCAFFOLDING REQUIREMENTS FOR OCCUPIED BUILDINGS

<table>
<thead>
<tr>
<th>MATERIAL</th>
<th>WIDTH</th>
<th>LENGTH</th>
<th>MAXIMUM DURATION (calendar days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wood</td>
<td>4’</td>
<td>Unlimited</td>
<td>7 days</td>
</tr>
<tr>
<td>Wood</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>24 hours w/o sprinkler drops (Note 1) 10 weeks with sprinkler drops</td>
</tr>
<tr>
<td>Fire Retardant (FR) Wood or FR Fiberglass</td>
<td>4’</td>
<td>Unlimited</td>
<td>6 months</td>
</tr>
<tr>
<td>Fire Retardant (FR) Wood or FR Fiberglass</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>24 hours w/o sprinkler drops (Note 1) 6 months with sprinkler drops</td>
</tr>
<tr>
<td>Metal</td>
<td>4’</td>
<td>Unlimited</td>
<td>6 months</td>
</tr>
<tr>
<td>Metal</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>24 hours w/o sprinkler drops (Note 1) 6 months with sprinkler drops</td>
</tr>
<tr>
<td>70% Open Metal Grating</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>6 months</td>
</tr>
<tr>
<td>70% Open Fire Retardant Treated Fiberglass</td>
<td>Unlimited</td>
<td>Unlimited</td>
<td>6 months</td>
</tr>
</tbody>
</table>
OBJECTIVE

1.1. The purpose of the Solid Waste Management Plan is to manage solid waste associated with onsite construction and build-out activities. These requirements have been established to comply with: applicable federal, state and local laws, regulations, standards and requirements; Intel’s minimum performance standards (MPS); and project and Ronler Acres site specific standards and requirements.

1.2. While demonstrating compliance with government and Intel standard, this plan is also designed to: Save money, protect the environment by limiting the potential for pollution, and Conserve material resources.

SCOPE

2.1. The Solid Waste Management Plan applies to all Ronler Acres contractors and their subcontractors involved in the generation, transportation, handling, storage and disposal of solid waste material on the Intel site.

2.2. All contractors/subcontractors are responsible for minimizing solid waste generated during those construction / build-out related activities that are contractually their responsibility.

2.3. The General Contractor is responsible for the overall implementation of the Solid Waste Management Plan.

PROCEDURES/EXPECTATIONS

3.1. Definitions

3.1.1. **Solid Waste** - Any waste that is generated from the site development activities, construction of buildings and other structures, or build-out of existing areas/buildings. These materials can consist of:

3.1.1.1. Wood

3.1.1.2. Cardboard

3.1.1.3. Glass

3.1.1.4. Paper

3.1.1.5. Plaster (board)
3.1.1.6. Asphaltic substances
3.1.1.7. Brick
3.1.1.8. Stone
3.1.1.9. Concrete
3.1.1.10. Aluminum
3.1.1.11. Plastic
3.1.1.12. Ferrous metals

3.1.2. Examples of solid waste materials include, but are not limited to:

3.1.2.1. Rubble (soil, rock, concrete, asphalt, brick)
3.1.2.2. Asphaltic material (shingles, tar paper)
3.1.2.3. Ferrous metals (steel rebar, pipe, flashing, structural members, ductwork, drums, cans)
3.1.2.4. Non-ferrous metals (aluminum, copper, brass, conduit, pipes, wiring, electrical and plumbing hardware)
3.1.2.5. Untreated wood (trees, framing, scrap lumber, pallets, construction lumber)
3.1.2.6. Treated wood (plywood, wood preservative pressure-treated wood, laminates)
3.1.2.7. Plaster (drywall, sheetrock)
3.1.2.8. Glass (windows, doors)
3.1.2.9. Plastic (pipes, tubing, fittings, molding, tiles, vinyl siding, doors, windows, sheeting, pallets, containers, packaging)
3.1.2.10. Paper and cardboard (containers, packaging materials, specifications, drawings, reading material)

3.2. General
3.2.1. For each project, a goal for reuse of construction solid waste will be established. Based on experience with other projects, a goal of between 20 and 30 percent should be achievable. Available markets for recycled materials will drive recycling. Also, the prices paid will be affected by the amount of contamination in these materials. Procurement and work management practices can influence the success of achieving maximum recycling and reuse of materials. Where landfill disposal costs are high, more effort in processing and separating waste materials can result in
significant cost savings. All of these factors will be considered when implementing the Solid Waste Management Plan.

3.3. Communication and Planning

3.3.1. Figure 1, Solid Waste Management Plan Process Flow, provides an overview of the process steps where solid waste management requirements have been established as part of the Solid Waste Management Plan. Communication and planning objectives for each of these steps is discussed within this section of the plan. Attachments 1 through 4 are provided as in-field checklists to ensure compliance with this plan.

3.3.2. Reduce the Amount of Waste Generated

3.3.2.1. Appendix A – Waste Reduction Strategies

3.3.2.2. All CP&E contractors and their Subcontractors are responsible for reducing the amount of solid waste generated on the site.

3.3.2.3. The first step of the Solid Waste Management plan is Waste reduction. The General Contractor and all subcontractors are expected to plan and implement their work activities in a manner that minimizes construction solid waste. Source reduction begins largely in the planning and design stages of a project. The following activities encourage source reduction of solid waste:

3.3.2.3.1. Alter purchasing practices to reduce waste: Wherever possible, buy supplies in bulk and closely monitor unused supplies.

3.3.2.3.2. In landscaping design, avoid unnecessary clearing of trees. Chip roots and branches onsite.

3.3.2.3.3. Specify in purchase orders that suppliers deliver goods with a minimum of packaging, or require suppliers to remove and handle packaging after delivery (unless packaging reuse value is high).

3.3.2.3.4. Minimize excessive materials used, and optimize use of purchased materials.

3.3.2.3.5. Use framing components manufactured offsite.

3.3.2.3.6. Reuse excess lumber in the construction process.
3.3.2.3.7. Ensure that materials are measured to avoid excessive end cuts.
3.3.2.3.8. Secure onsite roll-off boxes to discourage unauthorized dumping.

3.3.3. **Estimate Quantities of Solid Waste to be Generated**

3.3.3.1. Appendix B - Solid Waste Estimates
3.3.3.2. The General Contractor is responsible for performing a weekly estimate of the volume of solid waste generated (in cubic feet). This typically includes wood, concrete products, aluminum, ferrous metal, other non-ferrous metal, sheetrock, land clearing waste, plastics, paper, and cardboard.

3.3.4. **Estimate Amount of Solid Waste to be Recovered**

3.3.4.1. The General Contractor is responsible for estimating the amount of material to be recovered. This is accomplished by:
3.3.4.1.1. Determining the potential amount for re-use at construction site
3.3.4.1.2. Determining the volume available for market
3.3.4.1.3. Determining the volume available for disposal

3.3.5. **Determine Existing Solid Waste Practices**

3.3.5.1. The General Contractor will review any existing practices for reusing, recycling and discarding solid waste. For sustaining operations they will determine existing practices, such as recycling programs and goals, separation methods, reuse objectives, contracts with end-use markets, etc. For green field sites, a review of local/regional practices for construction solid waste will be conducted.

3.3.6. **Locate Markets for Recovered Materials**

3.3.6.1. Appendix C – Solid Waste Management
3.3.6.2. Return on investment (ROI)
3.3.6.3. The General Contractor will locate markets for wood, asphalt, concrete products, aluminum, ferrous metal, other non-ferrous metal, sheetrock, land clearing waste, plastics, paper, and cardboard. Determine current unit prices and product specifications required for scrap and resale.

3.3.7. **Determine Disposal Rates and Amounts Reused Onsite**

3.3.7.1. The General Contractor will be responsible for contacting local landfill disposal sites for current rates, and determining those raw materials likely to be reused on the site.

3.3.8. **Estimate Costs to Recycle and Revenues**

3.3.8.1. The General Contractor will be responsible for estimating labor, material, equipment, hauling, and disposal costs and revenues from reuse and sold recycled materials.

3.3.9. **Issue Purchase Orders and Contracts**

3.3.9.1. Appendix D – Solid Waste Disposition

3.3.9.2. The General Contractor will issue purchase orders and contracts for construction solid waste processing, storage (roll-off boxes, bins), transportation, end-use markets, and final disposal.

3.3.10. **Determine Onsite Locations for Containers and Bills**

3.3.10.1. The General Contractor will determine onsite locations for solid waste bins, boxes, and staging areas.

3.3.11. **Communicate Locations and Recycling Process**

3.3.11.1. To ensure all contractors and subcontractors are aware of both requirements and resources available for implementing the Solid Waste Management Plan, the General Manager will perform the following:

3.3.11.1.1. Provide signs on bins or containers describing specific materials to be recovered.
3.3.11.1.2. Communicate location of materials, methods of solid waste separation and processes, locate storage areas, including and bins and boxes.

3.3.11.1.3. Define the responsibilities of contractors and subcontractors in regards to reusing, recycling and disposing of waste materials.

3.3.12. **Implement Solid Waste Recycling Program**

3.3.12.1. Implementation of the Solid Waste Management Plan is the responsibility of the General Contractor. This may involve activities that are actually performed by other contractors or subcontractors.

3.4. **Training**

3.4.1. The General Contractor is responsible for communicating the objectives and expectations of the Solid Waste Management Plan to construction managers and applicable personnel who will be required to implement this plan.

3.5. **Auditing**

3.5.1. As an indicator of both performance and conformance with the Solid Waste Management Plan, the General Contractor will prepare a program report on a monthly basis. This report will provide the following types of information:

3.5.1.1. Total volume of waste generated

3.5.1.2. Volume of waste recovered for reuse

3.5.1.3. Volume of waste recycled and capital cost recovered by recycling

3.5.1.4. Volume of waste disposed of as shipped solid waste and cost associated with shipping the waste.

3.5.2. This report will be submitted to Projects EHS Representative for review on a monthly basis.
**SOLID WASTE MANAGEMENT PLAN**

**FIGURE 1**

**SOLID WASTE MANAGEMENT PLAN**

*Process Flow*

1. **Reduce the Amount of Solid Waste Through Planning and Controls**
2. **Estimate Quantities of Waste to be Generated**
3. **Estimate the amount of material to be recovered**
4. **Determine Existing Practices**
5. **Locate Markets for Recovered Material**
6. **Determine Disposal Rates and Amount Reused Onsite**
7. **Estimate Cost to Recycle and Revenues From Recycling**
8. **Determine Onsite Location for Containers and Bins**
9. **Communicate Locations and Recycling Process**
10. **Manage Solid Waste Recycling Program (Reuse/Recycle/Discard)**

**Decision Points**

- **Yes, per the Hazardous Waste Management Plan**
- **No, per the Hazardous Waste Management Plan**
- **Does Waste Contain Hazardous Material?**
  - Yes
  - No

**End Points**

- **Process In Accordance With the Hazardous Waste Management Plan**
- **Issue Purchase Order and Contracts**
APPENDIX A
SOLID WASTE REDUCTION STRATEGIES
(PERFORMED BY GENERAL CONTRACTOR, ALL CONTRACTORS AND SUBCONTRACTORS)

Where applicable the following activities will be implemented to encourage source reduction:

___ 1. Alter purchasing practices to reduce waste: Wherever possible, buy supplies in bulk and closely monitor unused supplies.

___ 2. In landscaping design, avoid unnecessary clearing of trees. Chip roots and branches onsite.

___ 3. Specify in purchase orders that suppliers deliver goods with a minimum of packaging, or require suppliers to remove and handle packaging after delivery (unless packaging reuse value is high).

___ 4. Minimize excessive materials used, and optimize use of purchased materials.

___ 5. Use framing components manufactured offsite.

___ 6. Reuse excess lumber in the construction process.

___ 7. Ensure that materials are measured to avoid excessive end cuts.

___ 8. Secure onsite roll-off boxes to discourage unauthorized dumping.

___ 9. Asphalt and concrete wastes (including concrete block) can be ground and crushed onsite. Some reuse options require no processing of crushed material. For example, it can be used for nonstructural fill of berms and lowlands. Asphalt can be crushed and reused for asphalt pavement.

___ 10. Waste products can be source separated to produce more marketable loads. Individual bins or boxes should be designated for various types of products.

___ 11. Local refuse (drop box) haulers can be good resources for information about how best to recycle different types of wastes.

___ 12. Source separation plans can be coordinated with CPM schedules to achieve optimal diversion of wastes. Research on available end-use markets before the project begins can result in good savings.

___ 13. Local waste exchange can be contracted to determine what products are in demand for exchange.

___ 14. Instructing all on site personnel regarding appropriate procedures will lead to higher levels of materials recovery. For example, the use of designated containers for holding recovered materials will reduce contamination.

Table 1 provides examples of end-use markets for recycled construction solid waste. Depending on demand, the end-use markets are places that will pay for products or take them for free.
### Table 1
End-Use Markets for Recycled Construction Wastes

<table>
<thead>
<tr>
<th>Waste Type</th>
<th>End Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dirt</td>
<td>Soil, soil conditioner, landscaping</td>
</tr>
<tr>
<td>Bricks and tile</td>
<td>Masonry, landscaping, ornamental stone, decorative facades</td>
</tr>
<tr>
<td>Concrete, cinder blocks, rocks</td>
<td>Fill, roadbed aggregate, haul roads, masonry use onsite, landscaping</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Road/bridge resurfacing, landfill haul roads, asphalt aggregate</td>
</tr>
<tr>
<td>Tar-based materials, roofing</td>
<td>Mixed with used asphalt for resurfacing, raw material -- reuse onsite</td>
</tr>
<tr>
<td>Ferrous pipes, roofing, flashing</td>
<td>Reused, raw material -- sold as scrap</td>
</tr>
<tr>
<td>Aluminum</td>
<td>Remelt, raw material -- sold as scrap</td>
</tr>
<tr>
<td>Copper</td>
<td>Reused, raw material -- sold as scrap</td>
</tr>
<tr>
<td>Steel, brass</td>
<td>Reused, raw material -- sold as scrap</td>
</tr>
<tr>
<td>Stumps, treetops, mixed wood and limbs</td>
<td>Chipped for fuel, landscaping, compost bulking, animal bedding, manufactured building products, haul roads, landscaping, re-use on construction site</td>
</tr>
<tr>
<td>Wall studs - other construction-grade lumber</td>
<td>Temporary or permanent framing and general construction</td>
</tr>
<tr>
<td>Framing, scraps</td>
<td>Chipped for fuel, landscaping, compost bulking, animal bedding, manufactured building products, landfill haul roads</td>
</tr>
<tr>
<td>Plywood, pressure-treated</td>
<td>May or may not be chipped for fuel, landscaping, compost bulking, animal bedding, manufactured building products, concrete forms, floor protection</td>
</tr>
<tr>
<td>Creosote-treated, laminates</td>
<td>End use depends on local regulations concerning chemicals in material. If use is approved, uses are similar to those for other wood materials (listed above)</td>
</tr>
<tr>
<td>Used cardboard</td>
<td>Fuel pellets</td>
</tr>
<tr>
<td>Plaster, sheetrock</td>
<td>In place of sand in concrete/aggregate fill - agriculture, gypsum as raw material</td>
</tr>
<tr>
<td>Glass</td>
<td>In place of sand in concrete/aggregate</td>
</tr>
<tr>
<td>White goods/appliances</td>
<td>Scrap recyclers for crushing</td>
</tr>
<tr>
<td>Lead paint, asbestos, fiberglass, fuel tanks</td>
<td>None known</td>
</tr>
</tbody>
</table>
APPENDIX B
SOLID WASTE ESTIMATIONS
(PERFORMED BY GENERAL CONTRACTOR OR DESIGNEE)

1. Estimate the weekly volume generated of construction solid waste (in cubic feet) of wood, concrete products, aluminum, ferrous metal, other non-ferrous metal, sheetrock, land clearing waste, plastics, paper, and cardboard.

Two tables are provided as guidance on estimating waste volume that is generated. Table 2 provides guidance on the typical building material content for construction within the United States. Table 3 provides guidance on estimating the density of construction waste materials.

<table>
<thead>
<tr>
<th>Material</th>
<th>Percentage (%)</th>
<th>Volume - Cubic Yard</th>
<th>Density - Pounds per Cubic Yard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel and Iron</td>
<td>2.7</td>
<td>0.1</td>
<td>1090</td>
</tr>
<tr>
<td>Copper, Brass</td>
<td>&gt;0</td>
<td>Neg</td>
<td>906</td>
</tr>
<tr>
<td>Lead</td>
<td>&gt;0</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Aluminum</td>
<td>0.1</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>Concrete</td>
<td>53.7</td>
<td>0.9</td>
<td>1190 - 1855</td>
</tr>
<tr>
<td>Brick &amp; Clay</td>
<td>--</td>
<td>--</td>
<td>1210 - 3024</td>
</tr>
<tr>
<td>Block</td>
<td>21.0</td>
<td>0.3</td>
<td>1210 - 3024</td>
</tr>
<tr>
<td>Wood</td>
<td>22.0</td>
<td>1.1</td>
<td>400</td>
</tr>
<tr>
<td>Glass</td>
<td>0.2</td>
<td>Neg</td>
<td>--</td>
</tr>
<tr>
<td>Plastic</td>
<td>0.1</td>
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<td>--</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>2.4</td>
<td>830</td>
</tr>
</tbody>
</table>

Based on one ton of waste
### Table 3: Density of Typical Construction Waste Materials (% by Weight)

<table>
<thead>
<tr>
<th>Material</th>
<th>Density (Pounds per Cubic Foot)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steel (Cold drawn)</td>
<td>489</td>
</tr>
<tr>
<td>Glass (Common)</td>
<td>162</td>
</tr>
<tr>
<td>Timber</td>
<td>38-42</td>
</tr>
<tr>
<td>Rubble, Masonry</td>
<td>137-156</td>
</tr>
<tr>
<td>Dry Rubble, Masonry</td>
<td>110-130</td>
</tr>
<tr>
<td>Brick Masonry</td>
<td>103-128</td>
</tr>
<tr>
<td>Earth (Excavated)</td>
<td>63-126</td>
</tr>
<tr>
<td>Asphalt</td>
<td>81</td>
</tr>
</tbody>
</table>

2. Estimate the amount of material to be recovered:
   - A. Determine potential amount for re-use at construction site
   - B. Determine volume available for market
   - C. Determine volume available for disposal

3. For sustaining operations, determine existing practices, such as recycling programs and goals, separation methods, reuse objectives, contracts with end-use markets, etc.

   For green field sites, determine local/regional practices for construction solid waste.
APPENDIX C
DETERMINING SOLID WASTE MANAGEMENT
RETURN ON INVESTMENT

(PERFORMED BY GENERAL CONTRACTOR OR DESIGNEE)

___ 1. Locate markets for wood, asphalt, concrete products, aluminum, ferrous metal, other non-ferrous metal, sheetrock, land clearing waste, plastics, paper, and cardboard. Determine current unit prices and product specifications required for scrap and resale. Contact waste exchanges in the local area to determine needs for these materials.

___ 2. Contact local landfill disposal sites for current rates. Determine raw materials likely to be re-used on the construction site.

___ 3. Estimate labor, material, equipment, hauling, and disposal costs and revenues from reuse and sold recycled materials by waste material type. The following equation can be used to determine which waste products can be recovered economically.

\[
\text{Labor} + \text{Material} + \text{Equipment} + \text{Hauling} - \text{Disposal Cost} \leq \text{Market Price}
\]

For re-use of raw materials, cost would be determined as replacement cost.

___ 4. Determine if waste material will contain any Hazardous Materials per the Hazardous Material Control Plan. If no hazardous materials are contained within the solid waste material, go to step 6.

If hazardous materials are within the solid waste, determine if these materials meet the definition of hazardous waste per the Hazardous Waste Management Plan. If the solid waste does not contain hazardous waste, go to step 6.

___ 5. If the solid waste material contains hazardous waste, process the hazardous waste in accordance with the Hazardous Waste Management Plan.

___ 6. Issue purchase orders and contracts for construction solid waste processing, storage (roll-off boxes, bins), transportation, end-use markets, and final disposal.
APPENDIX D
SOLID WASTE DISPOSITION
(Page 1 of 2)

(PERFORMED BY GENERAL CONTRACTOR OR DESIGNEE)

___ 1. Determine onsite locations for solid waste bins, boxes, and staging areas.

___ 2. Provide signs on bins or containers describing specific materials to be recovered.

___ 3. To ensure all contractors and subcontractors are aware of both requirements and resources available for implementing the Solid Waste Management Plan, the General Manager will perform the following:

   • Communicate location of materials, methods of solid waste separation and processes, locate storage areas, including and bins and boxes.
   • Define the responsibilities of contractors and subcontractors in regards to reusing, recycling and disposing of waste materials.

(_PERFORMED BY GENERAL CONTRACTOR OR SUBCONTRACTORS AS DETERMINED BY GC)

___ 4. Implement waste disposition by ensuring waste material is segregated for reuse, recycling or disposal.

   Figure 2 provides an illustration of waste streams for the disposition of solid waste.
RONLER ACRES CONTRACTOR EHS PROGRAM

SPILL PREVENTION AND CONTROL PLAN

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Spill Prevention and Control.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for the design and implementation of a Spill Prevention and Control Plan to prevent or minimize the spill or release of any chemical.

   2.2. The plan must meet all applicable federal, state and local regulations and standards. It will be documented and available for Intel review.

   2.3. The Contractor is responsible for providing all training and equipment required in the Spill Prevention and Control Plan in accordance with OSHA 1910.120.

   2.4. The Contractor is responsible for identifying the potential for any chemical spill or release prior to all chemical handling, transfer and storage operations, or other procedures performed in the presence of these operations. Once identified, specific controls will be implemented to prevent any potential chemical spill or release, and to contain any spill or release.

   2.5. Refer to Construction Incident Response for notification requirements.

   2.6. The Spill Prevention and Control Plan will contain the following information and requirements at a minimum:

      2.6.1. Roles and Responsibilities of those who perform chemical handling, storage and transfer operations, spill prevention and response, and emergency notification and communication.
2.6.2. Spill Prevention and Control training provided to those who handle, store, or transfer chemicals; respond to chemical spills; or make emergency notification or communication.

2.6.3. Spill Control equipment appropriate for potential spills and in sufficient quantity to handle a worst-case spill.

2.6.4. Maintenance and replacement of Spill Control equipment to ensure adequate supplies at all times.

2.6.5. Spill control equipment will be staged and attended by trained personnel during all bulk chemical transfers.

2.6.6. Storm drain catch basins and other storm water drainage routes will be isolated prior to any nearby chemical handling, storage or transfers. This can be accomplished through the use of spill stopper mats, berms, booms, or other similar means.

2.6.7. Chemical containers will be stored in suitable cabinet or covered areas such that any failure of a chemical container will be contained and not released to the environment.

2.6.8. Chemical containers and piping will be protected from all cutting, welding or other operations that could cause a failure of these systems.

2.6.9. Equipment will be maintained according to manufacturers recommended maintenance schedule.

2.6.10. Equipment will be regularly inspected to identify and correct any signs of drips or leaks or potential failure points that could lead to a chemical release. Particular attention will be paid to fuel and hydraulic systems to ensure tanks, lines and fittings are secure and not deteriorating.
1. OBJECTIVE
   1.1. To identify subcontractor pre-qualification requirements

2. PROCEDURES/EXPECTATIONS
   2.1. Pre-Qualification: Intel’s Safety Policy requires that, where possible, "only contractors with above average safety records" will be utilized. In support of this, the Contractor is required to have a process to pre-qualify subcontractors (and multi-tier subcontractors) to evaluate their historical safety performance. Minimal elements to be included are: written safety policies and programs, historical regulatory reporting records, previous claims experience (Experience Modification Rates, if applicable), and written program review.

   2.2. Subcontractors with low ratings (or below average) must be approved by Intel PMs prior to placement on the Bid List.

   2.3. A low or below average rating (does not meet minimum requirements) is defined as:
      
      2.3.1. A recordable incident rate of less than 7.0 in any of the last three years.

   2.4. An Experience Modification Rate (EMR), if applicable greater than 1.0 in any of the last three years.

   2.5. A lack of a written EHS program - a core written program covering basic EHS elements required for the project scope of work shall be in place

   2.6. If any of the aforementioned criteria is not met, a formal corrective action plan must be established and approved by the Intel PM prior to commencement of work.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev11/97

SUBSTANCE ABUSE MANAGEMENT

1. OBJECTIVE

1.1. Intel is committed to fulfilling its legal and ethical responsibility to maintain a safe and efficient working environment on Intel premises. Persons who work while under the influence of illegal drugs or alcohol present a safety hazard to themselves and their co-workers. Furthermore, the presence of illegal drugs or alcohol in the workplace reduces Intel's ability to achieve high-quality cost-effective services and deliverables from its contractors and suppliers. Such limitations tend to negatively impact Intel's ability to provide the highest quality product and services to its customers.

2. SCOPE

2.1. This program applies to all contractors/subcontractors working on the Ronler Acres campus.

3. PROCEDURES/EXPECTATIONS

3.1. Personnel will be denied access to Intel property in the event they:

3.1.1. Report to work on Intel premises while under the influence of alcohol or illegal drugs. Use, possession, purchase, sale, manufacture, distribution, dispensation or solicitation of illegal drugs while on Intel premises or during a time period billed to Intel for an Intel-sponsored training session or other Intel function.

3.1.2. Have in their possession or distribution of an open container of alcohol on Intel premises or while providing services to Intel off-site.

3.1.3. Being under the influence of a legal drug or abusing one while in the workplace whenever that influence endangers persons or property or substantially impairs the performance of the contractor/supplier's employee/representative or interferes with the efficient operation of Intel's business.
3.2. *Drug Testing* – When Intel has a reasonable suspicion that a contractor or supplier employee/representative is under the influence of alcohol or drugs in violation of this guideline, Intel may require the contractor or supplier employer to perform drug and/or alcohol testing of the individual or remove the individual from Intel premises. Intel also may require removal from Intel premises of any contractor, supplier or employee/representative who refuses to cooperate during a reasonable investigation into violation of this guideline.

3.3. *Drug and Alcohol Program* – Contractor's drug and alcohol program shall be at least as stringent as Intel's. This means that at a minimum (i) all Contractor's employees assigned to Intel premises shall pass a screen test (urine analysis) for drugs within seven (7) days before assignment at Intel and (ii) Contractor shall perform immediate drug and alcohol testing of any employee so assigned if Contractor has a reasonable suspicion of drug or alcohol impairment, and (iii) Contractor shall conduct random drug and alcohol tests on 5% of the employee population on a monthly basis. "Reasonable suspicion" is present when an observation of a change in an employee's behavior or conduct indicates noticeable performance impairment to the observer.
RONLER ACRES CONTRACTOR EHS PROGRAM

BKM Rev 3 10/02

SUB FAB CATWALK ACCESS PROCEDURES

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of trade contractors accessing sub fab catwalks.

2. SCOPE
   2.1. This BKM covers all sub fab catwalks located on the Ronler Acres campus. It does not include catwalks located in the interstitial or other process areas such as the CUB.

3. PROCEDURES/EXPECTATIONS
   3.1. All Buildings
      3.1.1. Identify items at base, top, and around catwalk ladder that might cause slips, trips, and falls. Keep access areas clear of material and debris.
      3.1.2. Scope out pathway on catwalk before entering.
         3.1.2.1. Identify low hanging objects.
         3.1.2.2. Identify potential sharp objects.
         3.1.2.3. Identify potential impacts (i.e. valves and brittle pipe).

   3.2. FAB 20/D1C/D1D
      3.2.1. Catwalk ladders in FAB 20, D1C and D1D are secured by cable restraints.
      3.2.2. Do not remove these restraint systems without approval.
      3.2.3. If removal is necessary (e.g. tool moves or long-term work) contact LSS at x3-3333 for approval.
      3.2.4. Prior to ladder removal:
         3.2.4.1. Verify catwalk is clear of personnel.
         3.2.4.2. Remove ladders from both sides of catwalk.

RA Contractor BKM's Rev. 2  11/29/01
Owner: OR/WA/UT Projects EHS
3.2.5. Reinstall ladders and cable restraints when task is complete.

3.2.6. Ladders must be replaced at the end of the shift.

3.2.7. If the cable system is in need of repair, contact the Action Line at x3-7400.

3.3. **RB1**

3.3.1. Access the catwalk to determine if there are personnel on the catwalk.
   
   3.3.1.1. Notify the personnel as to which ladder is being removed.

3.3.2. Post tape and signs at both gates alerting personnel that the ladder has been removed (Use signs described in the Barricading BKM).
   
   3.3.2.1. A CAUTION sign and CAUTION tape should be placed at the access gate (facing outward, toward the ladder) with the ladder in place.

   3.3.2.2. A DANGER sign and DANGER tape should be placed inside the gate (facing into the catwalk) where the ladder has been removed.

3.3.3. Use a tie wrap to secure the gate that does not have a ladder.

3.3.4. Replace the ladder and remove all signs and ties at the end of the task or shift.
TEMPORARY STRUCTURES (E.G. ENCLOSURES)

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations for the use of temporary structures (e.g. Enclosures).

2. PROCEDURES/EXPECTATIONS
   2.1. Definition:
      2.1.1. Temporary structures are defined as field constructed enclosures designed to provide weather protection or restrict access to enclosed areas. They typically have an expected "life" of less than 10 months. Examples of temporary enclosures include:

      2.1.1.1. Temporary Electrical Enclosures
      2.1.1.2. Temporary Weather Resistant Work Enclosures
      2.1.1.3. Temporary Storage Areas

   2.2. Construction:
      2.2.1. Temporary enclosure shall be designed and constructed using sound construction techniques and quality building materials.
      2.2.2. All temporary enclosures shall be structurally stable and be able to withstand adverse weather conditions if they are constructed outdoors.
      2.2.3. Enclosures containing energized electrical equipment shall be constructed in accordance with the applicable local and national electrical codes. All electrical enclosures shall be "weather tight" or shall only contain electrical equipment rated for outdoor use.
      2.2.4. No hazardous materials shall be stored unattended in temporary enclosures

   2.3. Inspection:
2.3.1. All temporary enclosures shall be inspected by a Safety Professional upon completion of construction and prior to use. Upon completion of the inspection, the Safety Professional will attach a "Green Tag" inspection to the temporary enclosure. The inspection tag shall list the inspectors name and date.
TOOLS/EQUIPMENT

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding the use or restriction of specific tools.

2. PROCEDURES/EXPECTATIONS
   2.1. Electrical Tools:
      2.1.1. Insulated Tools - Prior to working in energized panels, all tools shall be required to be of non-conductive construction.
      2.1.2. Fish tape shall be of non-conductive type only unless specifically approved for use in the specific areas/instances by Intel EHS and SIPP.
      2.1.3. Resistance style meters (i.e. Wiggins, Square D, ITE, etc.) are not allowed to be used in energized panels. Use a digital or equivalent means for testing voltage.
      2.1.4. Use only step bits in energized switchgear or panels.

   2.2. Mechanical Pipe Cutters:
      2.2.1. The use of snap cutters on process lines or on lines installed adjacent to process lines (pipe racks, chases, trenches) is prohibited unless specifically approved by a SIPP permit. In addition the use of snap cutters within live pipe racks shall comply with all equipment demolition procedures including the ringing of the specific line/pipe to be cut. There are no restrictions on the use of snap cutters outside of buildings in piping fabrication, decontamination or storage areas.

   2.3. Multiple Outlet Devices/Extension Cords:
      2.3.1. Definitions:
         2.3.1.1. Daisy Chaining – The practice of connecting multiple extension cords to multiple outlet devices.
         2.3.1.2. Multiple Outlet Device – A device that allows connection of more than one electrical device to an outlet or extension cord. These are more commonly called "splitters", "power strips", "pigtails", "3-way", etc.
2.3.2. All multiple outlet devices and extension cords must be properly grounded when connected to a power source. Multiple outlet devices must be rated for at least 20 amps.

2.3.3. Extension cords shall be rated for the maximum anticipated electrical load.

2.3.4. Multiple outlet devices must only be used at the terminus of the cord. The use of multiple outlet devices for the purpose of daisy chaining extension cords is not allowed.

2.4. Sawzall (reciprocating saw):

2.4.1. Procedure:

2.4.1.1. Remove all material that does not have to be cut in place. (RMF)

2.4.1.2. All systems at risk require protection and approval from owner/s.

2.4.1.3. Sawzall must be tool of last resort.

2.4.2. Checklist:

2.4.2.1. In order to use a Sawzall a “YES” must be answered to the four questions below. Answering “NO” to any question requires approval from the SIPP department.

2.4.2.1.1. Have you attached a drawing and dimensions of area/material to be cut?

2.4.2.1.2. Have you fully identified the system to be cut?

2.4.2.1.3. Have you assessed risk at maximum stroke of blade?

2.4.2.1.4. Is there full view of the area to be cut?
1. **OBJECTIVE**
   1.1. This document will outline the best know methods (BKM) for establishing and maintaining tool install/clean room safety programs during the installation of process equipment in a technology or manufacturing environment.

2. **SCOPE**
   2.1. All CP&E projects that involve tool install activities. As the project transitions from base build to tool install, the emphasize needs to turn to tool install and clean room safety.

3. **PROCEDURES/EXPECTATIONS**

   3.1. The tool install safety program is divided into a number of elements:

   3.2. *Subcontract Contracting* – Ensure the unique nature of working in a clean room and around charged systems are clearly communicated during the contracting phase of tool install. Specific procedures, training and equipment will different from standard construction safety. Review subcontractor EHS programs to verify they have worked in this environment and have addressed it in their EHS programs and work practices.

   3.3. *Training* – Initial construction safety orientation training should be replaced with training that will emphasize the unique hazards associated with operating clean rooms and associated utility and process support systems. This can be accomplished by modifying the exiting construction safety orientation to address these unique hazards and expected co-occupancy issues. Depending on the timing of the change the OP ready message can also be added to the package at the same time.

   3.4. *Procedures* – Equipment related procedures need to be in place to ensure process support system are leak/pressure tested before systems can be turned over for use. A signage system to identify when systems are charged needs to be put in place at
the same time. Specific lock and tag protocols for electrically energized or charged systems with chemicals needs to be put in place.

3.5. **Work Coordination** – As systems are charged and future points of connection need to be made, some type of work coordination meeting needs to be in place. This may be satisfied through the SIPP process.

3.5.1. **Specific Safety Procedures** – Specific safety procedures need to be put in place as the tool install process takes place. This can include some of the following items:

3.5.1.1. Ladder use (fall protection) in clean rooms
3.5.1.2. Working under the raised floor
3.5.1.3. Use of scissors lifts
3.5.1.4. Energized electrical work
3.5.1.5. Confined spaces
3.5.1.6. PPE
3.5.1.7. Working in and around charged utility systems
3.5.1.8. Material handling
3.5.1.9. Lock out/ tag out
3.5.1.10. Barricades, use of tape, cones, handrails and toe boards
3.5.1.11. Hazardous materials

4. **ROLES/RESPONSIBILITIES**

4.1. **Projects EHS Representative** – Participate in the development of the contracting strategy for the tool install general contractor. Ensure the general uses the BKM contacting selection criteria when developing their bidding lists. Monitor the pre-bid meetings to ensure the subcontractors clearly understand the unique environment they will be asked to work in. Ensure contractor senior managers participate on site and chair the various safety committees (MAC, SLT).

4.2. **General Contractor** – The general contractor shall be prepared to demonstrate their EHS program capability by way of past projects. This would be specific to tool install and clean room safety. The overall
program shall include the injury free workplace philosophy along with EHS programs that are outlined above. Specific information needs to be provided in the area of training, work place monitoring, equipment and indicators. Hold safety meetings as needed.

4.3. **Sub-contractors** – When bidding the work they will address EHS specially in both programs and dollars to ensure they can adequately support the necessary training, personnel protective equipment and specialty equipment/materials they will need to make their work as safe as possible. They will provide the general contractor an overview of their training programs and procedures. They will include a copy of their training records for specialized training that will not be provided on the project. The subcontractor will monitor the work area on a continues basis and work to eliminate and obvious hazards. Each task will be support through planning and coordination with other sub-contractors. Hold safety meetings as needed.

4.4. **Site EHS** – Participate in the various training and coordination meetings. This may include the MAC, SLT, incident reviews as needed.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 04/03

TOOL MOVE

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations on how to perform safe and impact free tool moves.

2. PROCEDURES/EXPECTATIONS
   2.1. General:
      2.1.1. Minimum PPE:
         2.1.1.1. In the uncrating/crating area:
            2.1.1.1.1. Steel toed or equivalent over the ankle leatherwork boots, gloves, safety glasses, hardhat and reflective vest when forklift is working in area.
            2.1.1.2. Inside the cleanroom and exterior hallways:
               2.1.1.2.1. Steel toed or equivalent over the ankle leatherwork boots, gloves and safety glasses.
            2.1.1.3. Demolitions/Relocations (Demos/Relos):
               2.1.1.3.1. See CUDL (Chemicals Used Decontamination Label) form.
      2.1.2. Barricading:
         2.1.2.1. In the uncrating/crating area:
            2.1.2.1.1. Red danger tape with signage will be used to secure the area. Signage must be fully completed and posted.
            2.1.2.1.2. At no time will emergency exits be blocked without proper signage or person redirecting to nearest emergency exit. Regulations require that all personnel must be able to access an emergency exit by going through no more than one other room and within one hundred feet, per Hillsboro Fire Department (not applicable to office environments).
2.1.2.1.3. Contact Security at 3-3333 to advise ERT of any egress congestion.

2.1.2.2. *Inside the cleanroom and exterior hallways:*

2.1.2.2.1. Appropriate signage will be used depending upon existing hazards. All signage will have contact names and numbers along with dates, times of move and redirection to nearest emergency exits.

2.1.2.3. Please refer to the Barricading and Safety Signage BKM for further clarification and signage templates.

2.1.3. **Uncrating:**

2.1.3.1. Area must be secured with red danger tape and signage.

2.1.3.2. Follow all Personal Protective Equipment (PPE) Guidelines. Refer to PPE BKM and Hand protection BKM.

2.1.3.3. All uncrated materials that have nails, staples, and/or bolts must be stacked with the sharp objects facing down.

2.1.3.4. Address any deviations from 2.1.3.3 in Pre-Task Plan.

2.1.3.5. Use forklift to handle stacked material. If a forklift is operating in the area all personnel (i.e. tool owners, vendors and tool move crew) in that area must wear a reflective vest, this also includes inside dock areas.

2.1.4. **Tool move paths (load capacities):**

2.1.4.1. A competent person or persons as defined by OSHA must inspect all tool move paths prior to any tool move. Inspect for clearances with other tools, walls and overhead vehicles (OHVs).

2.1.4.2. The raised metal floor (RMF) must also be inspected prior to the move. Look for cracked tiles, make sure that RMF pedestals are properly in place and insure that the RMF tiles are secured around the tool pedestal. Determine the load capacity for the RMF and plan accordingly.

2.1.5. **Dock safety:**
2.1.5.1. While working on the docks the dock barricades must be in place unless a truck is backed up to the dock or something is being loaded or unloaded.

2.1.5.2. All truck trailers shall have wheels chocked prior to loading or unloading.

2.1.5.3. Docks must be barricaded off with red danger tape and signage (signage must have contact information on them) prior to tool move.

2.1.5.4. All personnel including vendors, tool owners and construction coordinators must sign the pre-task plan if they are going to be in the tool move area.

2.1.5.5. No one will be allowed under or to place any part of his or her body under a raised load unless the load is properly cribbed or blocked out.

2.1.5.6. If a forklift is operating on the dock all personnel inside the red tape must wear reflective vest.

2.1.5.7. If the forklift has an internal combustion engine. Contact SIPP office about obtaining an "Internal Combustion Engine" (ICE) permit. Site security must be notified at 613-3333 that this type of forklift is on the dock for odor notification.

2.1.5.8. For forklift operations refer to Forklift BKM.

2.1.5.9. Emergency egress must be maintained. If egress is temporarily blocked, personnel need to be redirected with proper signage to the nearest emergency exit.

2.1.5.10. Elevator doors and dock roll up doors will not be open at the same time. This will cause a loss of air pressure in the cleanroom. Dock roll up doors should not be open for more than five minutes at one time.

2.1.6. **Housekeeping:**

2.1.6.1. Clean as you go. Keep working area free of clutter. Keep tripping/slipping hazards off of work area floor.

2.1.6.2. Refer to Housekeeping BKM for further clarification.

2.1.7. **Ladder safety:**

2.1.7.1. Follow the belt buckle rule.

2.1.7.2. Always face the ladder.

2.1.7.3. The top two steps are not to be used to stand on.
2.1.7.4. The top step is not a storage shelf.

2.1.7.5. If twisting, lifting and prying is required to work, a spotter holding the ladder is recommended.

2.1.7.6. If you exceed six feet in height you must maintain three points of contact with the ladder, (two feet and one hand, one foot and two hands), or use a personal fall protection system.

2.1.7.7. Refer to Ladders, Scaffolds and Aerial Lifts BKM for further clarification.

2.1.8. Tool move/rigging equipment:

2.1.8.1. All equipment must be inspected prior to each use.

2.1.8.2. A competent and trained person must oversee the use of tool move equipment.

2.1.8.3. Never exceed lifting capacities of tool move equipment.

2.1.8.4. No one will be allowed under or to place any part of his or her body under a raised load unless the load is properly cribbed or blocked out.

2.1.9. Site Incident Prevention Plan (SIPP):

2.1.9.1. All tool moves in the operational cleanroom area must have a SIPP permit or a Routine Work Plan.

2.1.9.2. Contact SIPP office located in RS2 for more information.

2.1.10. Design task specific Pre-Task Plan:

2.1.10.1. To be done at a later date.

2.1.11. Protocol/Micro-contamination (Micro):

2.1.11.1. See attached Protocol Tool Move Checklist.

2.1.12. Work Coordination Schedule (WCS):

2.1.12.1. All tool moves must be scheduled and placed on the WCS, which is facilitated by SIPP.

2.1.13. Training video:
2.1.13.1. It is recommended that persons involved in tool moves watch “Keys to a successful tool move” video. Contact Protocol Training Department for copy of video.

2.2. New Tools:

2.2.1. Checklist Reference:


2.2.2. Tool owner dock inspection:

2.2.2.1. Tool owner or tool owner representative must be present before unloading tool from truck.

2.2.2.2. Tool owner or tool owner representative must document any damaged crates as soon as damage is identified. Damaged crates shall not be moved until Tool owner notification and documentation has been completed.

2.2.3. CUDL form or equivalent documentation:

2.2.3.1. Ask vendor representative if tool has ever had any chemicals introduced to it.

2.2.3.2. If chemicals have been introduced then verify that tool has been decontaminated and that documentation is available.

2.2.3.3. If chemicals have been introduced then verify what the possible exposures are to crewmembers, use appropriate safety measures.

2.2.3.4. If chemicals have been introduced then verify that all ports, lines and exhaust vents are plugged or sealed.

2.3. DEMO TOOLS

2.3.1. CUDL form:

2.3.1.1. Verify that CUDL is in place and signed off by tool owner, decontamination owner and EHS.

2.3.1.2. CUDL form must be attached to the outside of tool, each layer of plastic wrap and on the outside of crate.
2.3.2. Capped and/or Plugged Lines:

2.3.2.1. Although the CUDL form may be signed off verify that all visible lines, ports and exhaust vents that have had potential for coming into contact with chemical are capped or sealed.

2.3.3. Unknown liquids:

2.3.3.1. In the event that unknown chemicals are discovered ERT should be immediately notified via 4-4444 or 613-4444. If contact is made with unknown chemicals one should immediately go to the nearest safety shower or eye wash as appropriate. The buddy should call the emergency number.

2.3.4. WCS:

2.3.4.1. Demo Tool Move must be scheduled and placed on WCS.

2.3.5. Appropriate PPE:

2.3.5.1. Verify what chemicals were in tool and what PPE would be needed according to exposure. This information can be found through Tool Owner, Construction Coordinator or on the CUDL form.

3. REFERENCES

3.1. Barricading and Safety Signage BKM
3.2. Forklift BKM
3.3. Housekeeping BKM
3.4. Ladders, Scaffolds and Aerial Lifts BKM
3.5. Personal Protective Equipment (PPE) BKM
3.6. Hand Protection BKM
Tool Move-In Checklist
Rev. 8 4/21/03

This checklist should follow the tool move-in and each item should be verified by the foreman as they occur.

For a complete description of how these tasks are to be performed, please read the Priority Trade Contractor (PTC) Reference Manual or Protocol Manual.

1. Before Entering the Fab
   - If the Tool Owner determines that the process tool is a high risk Copper (Cu) tool, then Cu hand tools shall be used; final wrap shall stay in place until tool is set in place; and rigging equipment shall be considered Cu contaminated and must be verified as decontaminated by protocol auditor.
   - Review the Wipe Down, Temporary Wall Usage, and Tool Move In procedures in the PTC or Protocol Manual before beginning any work.
   - Before the day of work, contact Sustaining or Construction Cleaners and Micro contamination for construction projects, to arrange for cleaning of area after completion of work.
     - Name of person contacted: ____________________________
   - On the day of work, contact AC or Ops Manager before beginning work. Confirm that it is okay to proceed with work.
     - Name of person contacted: ____________________________
   - Outer packaging (Styrofoam, expansion foam, wood, cardboard) removed prior to bringing any required materials into the pass through. Do not tear or remove any plastic wrapping.
   - Minimize the time that the fab doors are open.

2. Pass Through or Tool Move-In Bubble
   2.1. Wipedown Crews:
     - Wear Poly smock, hair net, beard cover (if applicable), shoe covers, and gloves.
     - Personnel wearing smocks and personnel in cleanroom garments cannot be in the pass thru at the same time.
     - Final wipedown of move in tool while inside of pass through or tool move in bubble. House vacuum and cleanroom wipes to be used. DO NOT remove the bottom layer of wrapping.
     - Final wipedown of any rigging tools needed for moving the tool in while inside of pass through or tool move in bubble.
     - Final wipedown of any tools needed to move the tool onto the pedestal while inside of pass through or tool move in bubble.
   2.2. Move In Crews:
     - Move in crews wear Gore-Tex garments. EXCEPTION: For high risk Cu tool move, personnel shall wear Cu only suits for moving the tool in, unless it is required to move through a bay, in which case, personnel wearing Gore-Tex shall handle it. Also for high risk Cu tool, final wrap shall stay in place until tool is set in place.
     - Inspect the floor of the tool move in path to ensure that no raised floor repairs are needed.
     - For air bearing moves, put down anti-static sheeting, vinyl flooring, stainless steel, or aluminum plates over the raised metal floor. Rule of thumb is no more than 1/3 of the
bay covered at one time. Exceptions for more than 1/3 of a bay must have prior Micro approval.

- No exposed wafers within 6 feet of tool move in path or final tool destination.
  **Name of area representative notified:** ________________________

- Person stationed ahead of tool move in to warn cleanroom personnel about the approaching equipment.

- Notify area that exposed WIP limitations have ended and that they can proceed with their area wipedown.
  **Name of area representative notified:** ________________________

- Area personnel are to wipe down any tool fronts, wafer boxes, WIP racks, and workstations in the area of work.

3. Moving the Tool into the Bay/Chase

- Temporary walls constructed as needed. Fill out temporary wall checklist.

- If a wall needs to be removed to move the tool into place, put a visquene wall up BEFORE taking down permanent wall. The visquene should be rolled up just before the tool passes through and taped back into place as soon as it clears. The amount of time that the wall is left open must be held to absolute minimum.

- Rebuild the permanent wall BEFORE removing the temporary wall.

- No pedestal - Once the tool is in place, a visquene / temp wall bubble should be built around the move in tool. This will protect the operating tools from the installation/hookup work being done to the move in tool.

- Pedestal - A larger visquene / temp wall bubble must be constructed which will be used to position the tool on the pedestal. Once the tool is in place, the size of the visquene / temp wall bubble should be down sized to suit the remaining installation/hookup work.

- For multiple tools being installed in parallel in the same area, a large bubble may be built to encompass all tools. Check with Microcontamination.

- Wipedown walls, tools, and floors (in that order) within the temporary enclosure.

- Remove temporary walls if they will not be needed to tool hook up. Fill out temporary wall checklist.

- Sustaining or Construction cleaners must super clean area of work. If a temporary wall is removed, this cleaning can be combined with the required cleaning for that work (per the temporary wall checklist).

- Notify area that work is completed and that they can proceed with their area wipedown.
  **Name of area representative notified:** ________________________

- Area personnel are to wipe down any tool fronts, wafer boxes, WIP racks, and workstations in the area of work.

- If tool is a Cu tool, once tool is installed, prior to SL1, it shall be labeled, both bay and chase side as Cu.

- Return this form to SiPP office with final paperwork.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev 11/97

TRENCHING AND EXCAVATION

1. OBJECTIVE

1.1. To define the Ronler Acres expectations of contractors regarding trenching and excavation.

2. PROCEDURES/EXPECTATIONS

2.1. Competent Person:

2.1.1. Competent Person means one who is capable of identifying existing hazards in the surroundings or working conditions that are unsanitary, hazardous, or dangerous to employees and who has authorization to take prompt corrective measures to eliminate them.

2.1.2. In order to be a "Competent Person" for the purpose of this requirement one must have documented specific training in and be knowledgeable about soils analysis, the use of protective systems, and the requirements of 29 CFR Part 1926.650-.652, Subpart P. Technical questions during the SIPP approval process will be asked to validate competency in excavation safety.

2.2. Requirements:

2.2.1. Prior to excavation all appropriate site permits must be obtained and task specific instructions followed.

2.2.2. During excavation work a competent person shall be on the job site at all times when personnel are working within or around the excavation of three (3') feet or greater, in order to monitor soil conditions and protection systems employed.

2.2.3. The estimated location of utility installations, such as sewer, telephone, fuel, electric, water lines, or any other underground installation that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation AND every 10 feet down during the work.
2.2.4. Adequate precautions shall be taken to protect employees working in excavations, against the hazards posed by water accumulation.

2.2.5. Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least two (2’) feet from the edge of excavations.

2.2.6. A stairway, ladder, or ramp shall be used as a means of access or egress in trench excavations that are four (4’) feet or more in depth. The ladder(s), stairways(s), or ramp shall be spaced so that no employee in the trench excavation is more than 25 (25’) feet from a means of egress. When ladder(s) are employed, the top of the ladder shall extend a minimum of three (3’) feet above the ground and be properly secured.

2.2.7. When excavations are exposed to vehicular traffic, each employee shall wear a warning vest made with reflective material or high visibility material.

2.2.8. Employees shall not be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling material.

2.2.9. In excavations where oxygen deficiency or gaseous conditions exist, or could reasonably be expected to exist, a confined space permit must be obtained.

2.2.10. Where oxygen deficiency (atmosphere containing less than 19.5% oxygen) exists, the area must be continuously ventilated until the oxygen levels are above 19.5%.

2.2.11. Where a gaseous condition exists, the area shall be ventilated until the flammable gas concentration is below 10% of the lower flammable limits.

2.2.12. Whenever oxygen deficiency or gaseous conditions exist or could reasonably exist, the area shall be monitored continuously to assure that employees are protected.

2.2.13. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

2.2.14. Sidewalks, pavement, and appurtenant structure shall not be undermined unless a support system such as shoring is
provided to protect employees from the possible collapse of such structures.

2.3. Personnel Protective Systems:

2.3.1. Employees in excavations shall be protected from cave-ins by an adequate protective system, which shall be inspected by a competent person.

2.3.2. The use of protective systems are required for all excavations, in excess of five (5') feet, except when excavation is within stable rock.

2.3.3. Trench excavations less than five (5') feet in depth may not require the use of protective systems, unless there is evidence of a potential cave-in. The competent person shall determine the need for use of protective systems when such conditions exist.

2.3.4. When sloping, benching, or protective systems are required refer to requirements in CFR 1926.652 (OSHA Construction Standards).

2.3.5. Whenever support systems, shield systems, or other protective systems are being used, a copy of the manufacturer's specifications, recommendations, and limitations sheet shall be in written form and maintained at the job site (attached to SIPP Permit).

2.4. Responsibilities of Competent Person:

2.4.1. Perform daily inspection of protection equipment, trench conditions, and adjacent areas.

2.4.2. Inspections shall be made prior to the start of work and as needed throughout the shift.

2.4.3. Inspections shall be made after every rainstorm or other hazard-increasing occurrence.

2.4.4. Remove employees from hazardous conditions and make all changes necessary to ensure their safety.

2.4.5. Categorize soil conditions and conduct visual and manual tests.

2.4.6. Determine the appropriate protection system to be used.

2.4.7. Obtain appropriate permits when needed (i.e., SIPP, Confined Space Permit).
2.4.8. Maintain on-site records of inspections and protective systems used.
### INTEL EXCAVATION CHECKLIST

<table>
<thead>
<tr>
<th>Description</th>
<th>Y</th>
<th>N</th>
<th>N/A</th>
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</thead>
<tbody>
<tr>
<td>1. SIPP Permit filled out completely.</td>
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<tr>
<td>2. Excavation Permit (detail scope of work) All utilities must have As-Built information attached.</td>
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<td>3. Overall jobsite is free of debris and good housekeeping being maintained.</td>
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<td>4. Employees exposed to vehicular traffic are wearing proper warning apparel.</td>
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<tr>
<td>5. Employees are wearing proper personal protective equipment including, but not limited to hard-hats, safety glasses, and steel toed boots.</td>
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<td>6. Work area is properly protected with barriers and/or barricades.</td>
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<td>7. All underground utilities are to be considered live and in service.</td>
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<td>8. All excavations around utilities are to be surveyed and staked every 10 feet identifying location and depths.</td>
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<td>9. Locate and identify shut-off valves, electrical feeder panels, and manholes prior to beginning.</td>
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<tr>
<td>10. All utilities are to be potholed and exposed for positive identification prior to beginning excavation.</td>
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<td>11. All utilities will be hand dug within 2' in all directions.</td>
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<td>12. Any utility that does not show up on current As-Builts will be As-Built prior to backfilling.</td>
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<td>13. Utilities are supported, shored, protected, or removed in open excavations.</td>
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<tr>
<td>14. Surface encumbrances that create a hazard are supported or removed. (These include sidewalk, curb, gutter, landscaping, etc.)</td>
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<tr>
<td>15. Adjacent structures have been adequately supported.</td>
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<td>16. Excavated material is placed at least two feet from edge of excavation.</td>
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<tr>
<td>17. Excavations greater than 4' in depth have proper means of access and egress, within 25' of lateral travel.</td>
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<td>18. Ladders used in access and egress are secured and extend 3' above the excavation.</td>
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<tr>
<td>DESCRIPTION</td>
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<td>-----------------------------------------------------------------------------</td>
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<tr>
<td>19. Excavation inspected for possibility of water accumulation.</td>
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<tr>
<td>20. Excavation continually monitored and properly protected if water accumulates.</td>
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<td>21. Employees are prohibited from working under any overhead suspended load.</td>
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<tr>
<td>22. Employees are protected from loose soil or rock falling from excavation face.</td>
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<tr>
<td>23. Proper walkways/bridges are provided where employees are required to cross excavations.</td>
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<td>24. Remote excavations are left properly protected with barriers and/or barricades.</td>
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<td>25. If hazardous atmosphere could reasonably be expected Confined Space Permit obtained.</td>
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<tr>
<td>26. If support systems are used, i.e. shields, shoring or other protective systems, a copy of the manufacturers tabulated data is attached to SIPP Permit.</td>
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APPENDIX B: OREGON EXCAVATION AND TRENCHING BKM

INTEL SOIL ANALYSIS CHECKLIST

Controller Name: ______________________  Competent Person: ______________________

Job Site Location: ______________________  Date: ______________________  Time: ______________________

Competent person has conducted acceptable visual and manual tests and has classified the soil accordingly.

SOIL TYPES: (Check One)

_______ Stable Rock

_______ Type A (Unconfined compressive strength of 1.5 TSF or greater)

_______ Type B (Unconfined compressive strength greater than .5 TSF and less than 1.5 TSF)

_______ Type C (Unconfined compressive strength of .5 TSF or less)

Visual Test Performed: ________ Yes  ________ No

Manual Test Performed: ________ Yes  ________ No

Description of pertinent soil analysis information:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

SELECTION OF PROTECTIVE SYSTEM

Protective System Selected:

_______ Sloping  ________ Aluminum Hydraulic Shoring

_______ Trench Shield  ________ Designed by RPE

_______ Excavation less than 5’ deep and no potential for cave-in.

_______ All necessary tabulated data on site and available for proper installation/use of selected protection system.
RONLER ACRES CONTRACTOR EHS PROGRAM
BKM Rev11/97

WASTE WATER AND STORM WATER MANAGEMENT

1. OBJECTIVE
   1.1. To define the Ronler Acres expectations of contractors regarding Waste Water and Storm Water Management.

2. PROCEDURES/EXPECTATIONS
   2.1. Each Contractor company is responsible for the design and implementation of a Waste Water and Storm Water Management Plan to ensure proper management of construction related wastewater and storm water.

   2.2. The plan will describe Roles and Responsibilities of all individuals responsible for wastewater and storm water management, and controls and practices used.

   2.3. The plan must meet or exceed all applicable federal, state and local regulations and standards.

   2.4. The plan will be documented and available for Intel review.

   2.5. The Contractor is responsible for providing all training and equipment required for the Waste Water Management Plan.

   2.6. Any project that will disturb 5 or more acres of land, even if over a several year period, requires an Erosion and Sediment Control Plan Worksheet and General Storm Water Construction Permit.

   2.7. Precipitation and wastewater generated by the following activities will be managed according to the applicable Erosion and Sediment Control Plan Worksheet. Contractor is required to have a copy of this Worksheet on site for review, if performing any of these activities.

      2.7.1. Clearing
      2.7.2. Excavation
2.7.3. Grading

2.7.4. Construction

2.8. Precipitation and wastewater generated by the following activities will be managed according to the CS Construction Manual, Waste Water Management Program. Contractor is required to have a copy of this Program on site for review, if performing any of these activities.

2.8.1. Dust Control
2.8.2. Truck wheel wash
2.8.3. Washout of concrete trucks, buildings or other structures
2.8.4. Equipment cleaning
2.8.5. Wash up of painting equipment
2.8.6. Pipe and process support equipment pressure testing
2.8.7. Leak testing, flushing and passivation
2.8.8. Dewatering subsurface soils

2.9. All municipal sewage will be connected to an approved sanitary sewer system. Contact Intel Site Architect for additional information.