National Certification Standard
Job Descriptions

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October 3, 2012
Approach

- Researched/reviewed existing job descriptions
- Draft job description document written collaboratively by technical team members
- Reviewed and formatted by HR consultant
- Network used to solicit (via email and telephone) 3-4 reviewers for each job description.
  - A small stipend was offered for reviewer’s time.
  - Two-week turnaround was requested
  - Regular follow-up with reviewers to stay on schedule
- Team review of all comments (conference calls)
- Monthly reports to Project Management Team (conference calls)
- Draft and Final Reports sent to Project Management Team
US Bureau of Labor Standards
Format for Job Descriptions

- Description
- Significant Points
- Nature of the Work
- Education
- Job Training
- Certifications and Licenses
- Mechanical Skills
- Mathematics
- Public Safety and Security
- Administration and Management
- Work Environment
- Industry Resources
- Related Occupations

October 3, 2012
JOB DESCRIPTION FOR GEOTHERMAL HEAT PUMP SYSTEM INSTALLER (GHP SI)

Description
The Geothermal Heat Pump System Installer (GHP SI) is responsible for the installation and service of the Geothermal Heat Pump (GHP) Heating, Ventilation, and Air Conditioning (HVAC) system. A GHP SI is required to have an excellent understanding of the geothermal system as a whole including the ground heat exchanger, hydronics, air distribution, mechanical equipment, and their respective and integrated control systems. A GHP SI is also generally well-versed in the more traditional mechanical system installations.

Significant Points
>> Employers prefer to hire those who have completed technical school training or a formal apprenticeship.
>> Incumbents attending specialized programs sponsored by manufacturing organizations of GHP products are desirable.
>> Incumbents may be required to hold a state Refrigeration and/or HVAC Contractor’s license.
>> Advancement opportunities include, but are not limited to: Field Foreman, Project Superintendent, or other management positions.
>> Employers prefer to hire those with computer skills.
>> Must have the ability to effectively and professionally communicate with all involved stakeholders.

Nature of the Work
The total scope of a GHP SI may include all or some of the following tasks and/or skills:

- Read and follow blueprints or other specifications or scopes of work to install GHP heating and cooling systems.
- Provide (as applicable) Manual D and/or Manual J calculations for residential building load calculations.
- Collaborate with GHP Engineer or GHP Designer on the installation of the ground heat exchanger system as required.
- Coordinate the work of the contractors providing the ground heat exchanger or open-

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<table>
<thead>
<tr>
<th>Geothermal Heat Pump System Designer</th>
<th>Geothermal Heat Pump System Water Well Pump Installer</th>
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<tbody>
<tr>
<td>Geothermal Heat Pump System Engineer</td>
<td>Geothermal Heat Pump System Installer</td>
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<tr>
<td>Ground Loop Heat Exchanger Grouter</td>
<td>Geothermal Heat Pump System Inspector/Regulator</td>
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<tr>
<td>Ground Loop Heat Exchanger Looper</td>
<td>Geothermal Heat Pump System Commissioning Agent</td>
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<tr>
<td>Vertical Loop Driller</td>
<td>Geothermal Heat Pump System Project Manager</td>
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<tr>
<td>Horizontal Directional Driller</td>
<td>Geothermal Heat Pump System Trainer</td>
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<tr>
<td>Geothermal Heat Pump System Water Well Driller</td>
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Most Debated Jobs

• Combining GHP Engineer and GHP Designer not recommended

• Geothermal Formation Thermal Properties Tester modified to include a testing component and an analysis component

• Geothermal Heat Pump System Commissioning Agent is not responsible for ensuring ‘good design’ – issue with team but the nature of the industry

October 3, 2012
Team Recommendations

• Currently there are several certifications available to those in the GHP industry. It is recommended that the current curriculum be compared to each job description for enhancement as a ‘next step’ of this work product.
• It is also recommended that training for both future and existing certifications be provided independent of the testing process. The individuals performing the training must be independent from those who are writing the examinations.
• All interested stakeholders need to be a part of the National Certification Standard development, review and implementation. As with any developing standard, it is anticipated that its institutionalization will take time and that it will go through significant review and regular update. The government agency or professional or trade organization which undertakes this responsibility needs to realize and prepared to own a living document.