Survey Conducted: August 22, 2012

Survey Performed By:
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On August 22, 2012, Buddy Alkire, Regional OSH Manager, with the General Services Administration performed a noise survey at the David Skaggs Research Center (CO0055ZZ) in Boulder, Colorado. The noise survey was accomplished at the request of Dr. James W. Elkins, Chief, Supervisory Physicist, Halocarbons & Other Atmospheric Trace Species (HATS). Ms. Elizabeth Felder, GSA Representative, accompanied during the survey.

The survey primarily measured the noise level in various areas of the building and is not a indication of a personal Time Weighted Average (TWA) as expressed in the Occupational Safety and Health Administration’s noise standard 29 CFR 1910.95.

The equipment used during this survey was a Quest Sound Level Meter, Model #2100, serial #DAL020008 that was factory calibrated on February 29, 2012. The meter was site calibrated using a Quest QC-10 Calibrator, Model QC-10/QC-20, serial #QIL020096 calibrated on February 29, 2012. The sound level meter was successfully site calibrated before and after the survey.

The results of the survey are as follows:

<table>
<thead>
<tr>
<th>LOCATION/ACTIVITY</th>
<th>SOUND LEVEL (dBA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hallway at Conference Room 512</td>
<td>45.8</td>
</tr>
<tr>
<td>Stairwell</td>
<td>63</td>
</tr>
<tr>
<td>RD 103 Lab (Penthouse) with talking</td>
<td>54</td>
</tr>
<tr>
<td>RD 103 Lab with Grinder on</td>
<td>88</td>
</tr>
<tr>
<td>Dobson Roof</td>
<td>69.1</td>
</tr>
<tr>
<td>Dobson South Dome with dome rotation</td>
<td>76</td>
</tr>
<tr>
<td>Dobson South Dome with AC on</td>
<td>59.5</td>
</tr>
<tr>
<td>Radiation Deck by UV Radiation Monitor</td>
<td>60</td>
</tr>
<tr>
<td>Radiation Deck with stepper motor running</td>
<td>60</td>
</tr>
<tr>
<td>GD Lab 305 with flask vacuum running</td>
<td>51</td>
</tr>
<tr>
<td>GD Lab while talking</td>
<td>64</td>
</tr>
<tr>
<td>GD 405 Hallway</td>
<td>52</td>
</tr>
<tr>
<td>Freight Elevator while talking</td>
<td>61</td>
</tr>
<tr>
<td>GD 124 Station Sampling System</td>
<td>66</td>
</tr>
<tr>
<td>1D Lab 704</td>
<td>58.1</td>
</tr>
<tr>
<td>1D 709 with vacuum pump running</td>
<td>69</td>
</tr>
<tr>
<td>1D 709 while talking</td>
<td>72</td>
</tr>
<tr>
<td>2D 602 Flask Analysis Lab</td>
<td>66.5</td>
</tr>
<tr>
<td>GB 204 GMD Shop CNC machine running</td>
<td>61</td>
</tr>
<tr>
<td>GMD Shop – DeWalt Saw running (no cutting)</td>
<td>93</td>
</tr>
<tr>
<td>GMD Shop – Metal Chop Saw running (no cutting)</td>
<td>93</td>
</tr>
<tr>
<td>GMD Shop – CNC Machine changing tool</td>
<td>80</td>
</tr>
<tr>
<td>GMD Shop – Metal Lathe (running, no work)</td>
<td>77</td>
</tr>
<tr>
<td>GA 105 Fan Room AHU-1 running</td>
<td>72</td>
</tr>
<tr>
<td>GA 107 Mechanical Gear Room (switch gear)</td>
<td>68.5</td>
</tr>
</tbody>
</table>
GA 107 Plumbing Room AC-1 compressor running 82.3
GA 107 Plumbing Room AC-1 compressor fan only 70
GA 107 Switch Gear Room 68.5
GA 108 Chiller Room – compressor on 78.1
GA 108 Chiller Room between chiller 1 and 2 85.9
GA 108 Chiller Room between chiller 2 and 3 85.9
GA 108 Chiller Room Pump 7 running 73
GA 108 Chiller Room Pump 9 running 73
GA 109 Pump Room Georator electric motor on 77.5
GA 405 Computer Room just inside entrance 85.4
GA 405 Computer Room under ceiling fans 92
GA 405 Computer Room end of room by #8 on wall 88.5
GA 405 Computer Room middle of room by AT on wall 86.1
GA 405 Computer Room plastic enclosed area by CR-AC-16 91.7
1A 211 72.9
1A 212 62.9
2A 203 60.8
3A 202 vacuum pump with muffler 65
3A 202 vacuum pump with no muffler 70
1A 213 64
1A 203 Pump Room vacuum pump 76
1A 203 Pump Room vacuum pump 78
1A 203 Pump Room vacuum pump 72
1A 214 Laser on 68
RA 101 Mechanical Space on top A-B
   Boilers not on, vent fan running 67.9
RA 101 Mechanical Space
   AHU – fan 1, lab exhaust running 69.1
RA 101 Mechanical Space
   Pump 19, DPS-6 running 67.7
RA 103 Mechanical Space Pump Room 73.7
2B-201B Computer Room at entrance 74.9
2B-201B Computer Room by pillar AP 76.1
2B-201B Computer Room by rack 421 in plastic enclosure 80.7
2B-201B Computer room by TUB2C 75.2
2B-302 Computer Room at entrance 68
2B-302 Computer Room by wall marking AQ 71.1
2B-302 Computer Room at rack 340A 73.8
2B-518 Computer Room at entrance 75.1
2B-518 Computer Room at wall marking 12 76.8
2B-518 Computer Room at rack 5203 78.3
2B-518 Computer Room CRAC by marking AO-04 80.1
2B-518 Computer Room at rack 5403 78.1
Mechanical Room GC-419 AHU-4 running 79.4
GD 302 Plumbing Room with A-C-2 and AC-2 running 83
GD 302 Plumbing Room with only A-C-2 running 77
GD 302 Plumbing Room with P-20 running 78
GD 302 Plumbing Room with P-20 and Temperature Control Compressor running 83.1
GD 301 Mechanical Room at AHU-5/SF-5A 75.7
GD 301 Mechanical Room at SF-5B 77.3
GD 301 Mechanical Room between AHU-5 and SF-5B 84.3
GC 405 Machine Shop – no activity during survey
1B 603 Computer Room with a rack moving computer tapes 66 to 72.5
1B 601 Computer Room 70.9
1B 609 Computer Room at CRAC-6 77.5
1B 609 Computer Room at rack 913 76.2
1B 609 Computer Room at rack 2 76.7
1B 609 Computer Room at rack 9 83

It was noted during the survey that areas that have the potential to produce high noise levels had hearing protection (personal protective equipment) stationed in the room. These areas included computer rooms, machine shops, and some labs.

It is recommended that all areas with a noise level at or above the OSHA action level of 85 dBA have a sign outside the room indicating hearing protection, PPE (personal protective equipment), must be used in the room. Computer rooms have signs and noise protection equipment on the inside of the room and one machine shop also had signs and PPE.

To determine a true employee noise exposure selected employees should be sampled using a noise dosimeter. These results can be measured against the OSHA Occupational Noise Standard (29 CFR 1910.95) Permissible Noise Exposures table (Table G-16) to determine if employee(s) should be placed in a hearing conservation program.

If you have questions concerning this report or the data presented contact Buddy Alkire, General Services Administration’s Regional OSH Manager at 303-236-2987 or harold.alkire@gsa.gov.