

Energy Technologies Area

A Self-Assessment of Subcontractor Job Hazard Analysis Implementation

October 8, 2020

Approved by:



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10/21/20

Date



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10 / 08 / 2020

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Introduction

The purpose of this assessment is to ensure ETA is adequately implementing and supporting the SJHA system by ensuring subcontractor work is performed safely and effectively within its divisions.

This self-assessment will evaluate all ETA-related SJHA's currently in the SJHA system to ensure non-construction subcontractor oversight is being conducted by ETA staff and they are ensuring subcontractor work is occurring in a safe and effective manner. The scope of this self-assessment is limited to non-construction subcontractor work only. Construction related work is overseen in a separate "Site Specific Safety Plan (SSSP)" and construction Job Hazard Analysis. This type of work is normally outside the scope of ETA personnel oversight and is generally implemented through Facilities. The only exception is the separate program implemented by the FLEXLAB facility.

Subcontractors are vendors and service providers who perform hands-on work at LBNL. Subcontractors who perform "hands-on" work in ETA work areas must have an approved Subcontractor Job Hazard Analysis (SJHA) on file. The SJHA is a work authorization document that identifies the scope of work, hazards, and controls that a subcontractor must follow in order to perform their work safely. An SJHA form is initiated by the ETA requestor at the SJHA website by going to: <https://sjha.lbl.gov>

Examples of subcontractor "hands-on" work that would require an SJHA includes:

- Use of hand or power tools
- Installation, repair or servicing of equipment
- Material handling
- Handling of chemicals, compressed gases, radioactive materials, or biohazardous materials.

Activities such as office and administrative work, computer programming, or attendance at a meeting do not constitute "hands-on" work and does not trigger the SJHA requirement.

There is a potential risk to LBNL personnel, subcontractors, and operations if subcontractor work is not clearly defined or performed in a safe manner. This could result in electric shocks, fires, falls, laser exposures, and chemical spills. The purpose of the SJHA process is to ensure subcontractor work is properly defined, authorized, and controlled in order to prevent these types of events.

The following steps are used to initiate an sJHA:

1. Access the SJHA website at: <https://sjha.lbl.gov>
2. Select "Create New SJHA" from the left-side menu.
3. Complete the information under tab #1 "Identification" and click the "save" button.
4. An SJHA identification number and web link will be created near the top of tab 1.

5. Copy the web link address and email to the subcontractor so that they can access the SJHA questionnaire (tab #2). A recommended email template is provided on the left-side menu of the SJHA web page.
6. Once the subcontractor has completed tab #2 “questionnaire”, they will click on the “notify requestor” button.
7. All listed subcontractor personnel will need to complete General Employee Radiological Training (GERT). A link for this training is provided in the SJHA so that subcontractors have access to this training:
https://training.lbl.gov/ehs/training/webcourses/EHS0470/story_html5.html
8. Prior to performing the work, print out a copy of the SJHA document by clicking on the “create pdf without dates” button on the bottom of each tab. The ETA requestor and all listed subcontractor personnel must sign the printed SJHA form after discussing the listed SJHA scope of work, hazards and required controls.
9. Once all signatures have been obtained, scan the completed SJHA and upload under tab #4 in the “signed SJHA work authorizations” section. The draft SJHA will then change to “final” status and is valid for 1 year.
10. Any related work authorization documents such as lock-out/tag out permits, penetration permits, laser authorizations, etc. should also be uploaded into the SJHA under tab #4.
11. Work observations should be performed and recorded by the Requester in order to verify that the work is being performed per the authorization. Work that includes high level hazards must be observed daily. Any observations of the work performed are documented in tab #5 “Observations.”

This self-assessment will evaluate all ETA-related SJHA’s currently in the SJHA system to ensure non-construction subcontractor oversight is being conducted by ETA staff and they are ensuring subcontractor work is occurring in a safe and effective manner. The scope of this self-assessment is limited to non-construction subcontractor work only. Construction related work is overseen in a separate “Site Specific Safety Plan (SSSP)” and construction Job Hazard Analysis. This type of work is normally outside the scope of ETA personnel oversight and is generally implemented through Facilities. The only exception is the separate program implemented by the FLEXLAB facility.

Requirements

Requirements for subcontractors and use of the SJHA system are described in the following documents:

- PUB-3000, Chapter 6, “Work Planning and Control”:
<https://www.lbl.gov/ehs/pub3000/CH06.html>
- PUB-3000, Chapter 8, “Electrical Safety”:
<https://www2.lbl.gov/ehs/pub3000/CH08/CH8.html>
- PUB-3000, Chapter 31, “Subcontractor Job Hazard Analysis”:
<https://www2.lbl.gov/ehs/pub3000/CH31.html>

Other important documents related to subcontractor safety requirements are:

- “ES&H Orientation for Non-Construction Subcontractors, Vendors, and Affiliates” handout
- “Roles for Requestors” document available on the SJHA website.
- “Roles for Subcontractors” document available on the SJHA website.
- Subcontractor Job Hazard Analysis website and database: <https://sjha.lbl.gov>
- ETA Integrated Safety Management (ISM) Plan- Section 10, “Identification and Assessment of Hazards”: <https://eta-safety.lbl.gov/content/integrated-safety-management-ism>

Methodology

The following methodology was used to conduct the ETA’s assessment of its implantation of the subcontractor sJHA process:

1. A complete list of all ETA related SJHA’s currently in the SJHA database will be generated. Each active/expired SJHA will be reviewed for completeness. Any issues identified will be noted. The review will include the following:
 - a. Submittals by ETA Division
 - b. “High risk” vs. “low risk” category
 - c. Purchase requisition information- Tab #1
 - d. Subcontractor contact information- Tab #1
 - e. Scope of work information- Tab #1
 - f. Work location information- Tab #1
 - g. List of subcontractor personnel and status of EHS0470 GERT training- Tab #2
 - h. Completeness of hazard questionnaire- Tab #2
 - i. Supporting documents (attachments)- Tab #4
 - j. Observations made- Tab #5
2. Current ETA personnel who have submitted SJHA’s will be surveyed to determine how well they understand the SJHA process and identify any issues they are having with implementing the SJHA process. Survey questions include:
 - a. What is the approximate time period you usually take to draft an SJHA prior to when the work is scheduled to begin?
 - b. Do you email the unique hyperlink supplied in Tab 1 of the draft SJHA document to the subcontractor for their assistance in completion of the form?
 - c. Do you reference the purchase requisition number on Tab 1 of the SJHA form?
 - d. Does the subcontractor complete Tab 2 “Questionnaire” or do you complete this for them?
 - e. Is it clear to you what constitutes a “high” and “low” work hazard level when completing the SJHA form?
 - f. Do you find that the Tab 2 hazard questionnaire useful in identifying potential hazards and planning the subcontractor’s work?
 - g. Do you perform a pre-job meeting with the subcontractor once they have arrived on-site and are ready for work?

- h. Do you know how to finalize the SJHA and make it change from “draft” to “active” status?
 - i. Are you aware that you must perform safety observations of your subcontractor while performing their work?
 - j. Have you experienced any instance where the subcontractor was performing their work in an unsafe manner?
 - k. Are you aware there are now COVID-19 controls for subcontractors incorporated into the SJHA process? Are COVID observations being performed during the work?
 - l. Do you understand that when you initiate an SJHA as the requestor, you are responsible for ensuring the subcontractor’s safety?
 - m. Give any feedback on items regarding the SJHA process that can be improved.
3. The following personnel participated in this self-assessment:
- a. Ron Scholtz- ETA Division Safety Coordinator
 - b. Current ETA personnel who have previously submitted SJHA’s
 - c. Assistance from Rob Connelly- EHS Division regarding questions pertaining to the SJHA process and set-up of the questionnaire
 - d. Assistance from Greta Toncheva EHS Division regarding questions pertaining to laser hazard SJHA’s.
4. The scope of this project applied to the following ETA Divisions:
- a. ETA Area
 - b. Building Technologies and Urban Systems (BTUS)
 - c. Cyclotron Road (CY)
 - d. Energy Analysis and Environmental Impact (EAEI)
 - e. Energy Storage and Distributed Resources (ESDR)
5. The following were not included in the scope of this self-assessment:
- a. Construction-related work that requires a Site-Specific Safety Plan (SSSP) and construction-JHA.
 - b. Work that is not considered “hands-on” such as office work, computer programing, or meeting attendance.
 - c. ETA personnel who are no longer working at LBNL.
 - d. This self-assessment is not intended to be an evaluation of the functionality of the current SJHA system.

Summary of Findings, Observations and Noteworthy Practices

The following is a summary of findings, observations, and noteworthy practices identified by the self-assessment team. Significant items identified in the findings section are each entered into the Corrective Action Tracking System “CATS” to ensure these are addressed and completion documented.

Findings:

1. A Corrective Action Tracking System (**CATS#0**) task was issued to ensure that ETA specific SJHA training is developed and implemented for all ETA personnel who use the SJHA system.

Results of the SJHA document review:

1. See Attachment 1 “List of Draft SJHA’s” and Attachment 2 “List of Active and Expired SJHA’s” for a complete listing of all ETA-related SJHA’s found in the database.
2. There is a total of 114 ETA-related SJHA’s in the database as of June, 2020. These go back as far as 2013.
3. SJHA’s by division include:
 - a. ETA Area- 2
 - b. BTUS- 12
 - c. Cyclotron Road- 11
 - d. EAEI-23
 - e. ESDR- 66
4. SJHA’s by status include:
 - a. Currently Active- 15
 - b. Expired (Not renewed after 1 year)- 68
 - c. Draft (Never activated)- 31
5. SJHA’s activated by year:
 - a. 2020 (June): 8
 - b. 2019- 14
 - c. 2018- 8
 - d. 2017-23
 - e. 2016- 15
 - f. 2015- 12
 - g. 2014- 1
 - h. 2013- 2
6. A total of 31 “draft” SJHA’s remain in the system. Most have been in the system for more than 3 years. The SJHA system does not have a feature that allows unwanted drafts to be deleted. Therefore, it is unclear if these drafts were simply canceled work or the actual work was performed with the SJHA not being activated by the requestor. Many of the requestors are unavailable to determine which scenario occurred.
7. A total of 83 active and expired SJHA’s were individually reviewed for completeness. See attachment 2 for a spreadsheet showing the results for each individual SJHA evaluated. The results are:
 - a. Hazard Level Indicated
 - i. Low Hazard- 79
 - ii. High Hazard- 4
 - b. Requisition Number Indicated
 - i. Yes- 8

- ii. No- 75
- c. Subcontractor Contact Information
 - i. Yes- 78
 - ii. No- 5
- d. Scope of Work
 - i. Yes- 83
 - ii. No- 0
- e. Work Location Given
 - i. Yes- 78
 - ii. No- 5
- f. Subcontractor Worker List with EHS0470 GERT Training
 - i. GERT Completed- 73
 - ii. No GERT Completed- 10
- g. Hazard Questionnaire Completed
 - i. Yes- 80
 - ii. No- 3
- h. Supporting Documents Attached
 - i. Yes- 21
 - ii. No- 62
- i. Work Observations Documented
 - i. Yes- 9
 - ii. No- 74

Results of the SJHA survey:

1. The SJHA survey was sent out electronically using the Google Forms template.
2. The SJHA survey was issued to 30 personnel who had previously submitted at least 1 SJHA. I received responses from 13 with at least two no longer working at LBNL and another two declining to participate.
3. See attachment 3 for the survey question results. A summary is as follows:
 - a. Approximate time period to draft a SJHA prior to work is scheduled to begin?
 - i. One Day- 7.7%
 - ii. One Week- 30.8%
 - iii. One Month-30.8%
 - iv. Other- 30.8%
 - b. Do you email the unique hyperlink of the SJHA to your subcontractor for their feedback/assistance in completion of the form?
 - i. Yes- 84%
 - ii. No- 7.7%
 - iii. N/A- 7.7%
 - c. Do you reference your purchase requisition number?
 - i. Yes- 46.2%
 - ii. No- 23.1%

- iii. Sometimes- 23.1%
- iv. N/A- 7.7%
- d. Does your subcontractor complete the hazard questionnaire or do you complete for them?
 - i. Requestor completes- 23.1%
 - ii. The subcontractor completes- 38.5%
 - iii. We both complete- 30.8%
 - iv. N/A- 7.6%
- e. It is clear to you what constitutes a “high” and “low” work hazard level?
 - i. Yes- 69.2%
 - ii. No- 7.7%
 - iii. Somewhat-23.1%
- f. Do you find the hazard questionnaire useful in identifying potential hazards and planning the subcontractor’s work?
 - i. Yes- 53.8%
 - ii. No-0%
 - iii. Sometimes-46.2%
- g. Do you perform a pre-job meeting with the subcontractor once they are on-site?
 - i. Yes- 76.9%
 - ii. No-0%
 - iii. Sometimes-0%
 - iv. Other: 15.4%
 - v. N/A- 7.7%
- h. Do you know how to finalize a SJHA and make it change from “draft” to “active” status?
 - i. Yes- 69.2%
 - ii. No-7.7%
 - iii. I’m aware but not always- 7.7%
 - iv. Other- 15.4%
- i. Are you aware you should perform safety observations of your subcontractor while performing their work?
 - i. Yes- 76.9%
 - ii. No- 23.1%
- j. Have you ever experienced any instances where subcontractors were performing work in an unsafe manner?
 - i. Yes- 0%
 - ii. No- 100%
- k. Are you aware there are now COVID-19 controls for subcontractors?
 - i. Yes- 84.6%
 - ii. No- 15.4%
- l. Do you understand that when you initiate a SJHA as requestor, you are responsible for ensuring the subcontractor’s safety while performing work?
 - i. Yes- 92.3%
 - ii. No- 7.7%

4. Feedback given by those surveyed includes:

- a. “The form is sometimes cumbersome. I think it should be simplified to better serve the purpose of ensuring safety”
- b. “Some tips on securing site access, especially post-COVID, would be helpful”
- c. “The process is awkward particularly if you are requesting service from a company and not an individual and they are not exactly sure which technician will be doing the job more than a day out”
- d. It would be good if there are standard SJHA’s for certain types of jobs (i.e. pipette calibration, oven repair, refrigerant repair)”

Noteworthy Practices:

1. There were several SJHA’s that were very detailed and complete. In particular, those submitted by FLEXLAB personnel stand out.

Conclusions

The following conclusions summarize the results of the ETA’s assessment of its implementation of the SJHA process:

1. There is a potential issue where “draft” SJHA’s are never made “active” by the requestor but yet the work is actually performed.
2. Almost all SJHA’s were listed as “low hazard” work. However, there were 9 SJHA’s reviewed that involved work with lasers. The majority of these were listed as “low” hazard. They should have been listed as “high” hazard along with required daily work observations documented.
 - a. Laser installations and other high hazard laser tasks require a “Temporary Work Authorization” (TWA) which is signed and documented. None of the laser SJHA’s included a TWA as a document attachment. I could only locate one TWA for a recent laser installation.
3. There were 10 SJHA identified where the subcontractors completed work and never first completed the required EHS0470 GERT training. Work should not be allowed until this mandatory training is first completed.
4. There currently is no easy way to identify any planned subcontractor work and ensure that there is a SJHA generated for it. We are currently in contact with Procurement to see if there is a regular report that can be generated for requisitions submitted that can be compared with SJHA submittals.

Recommendations and Suggested Future Improvements

The following recommendations and improvements should be made by ETA in order to enhance the implementation of the SJHA process by ETA personnel:

1. Better training of ETA personnel submitting SJHA’s is definitely needed. It does not look like EHS has any immediate plans to offer this type of training, however, ETA can develop and deploy training to those who need to access and use the system.
 - a. Develop SJHA training materials
 - b. Make available as a course in Berkeley Lab Training (ETA0020). This will allow tracking of those who have completed the training.

- c. Deploy where possible through WPC hazards/controls as a “division elective” training course.
 - d. All ETA personnel who plan on initiating SJHA’s will be required to complete this course at least once.
 2. The SJHA system is open to all LBNL personnel. There is currently no way to limit who can access or use the system. This includes staff who are new to the lab or are not familiar with the SJHA system. However, the Division Safety Coordinator is notified whenever a SJHA is started. The DSC can assign SJHA training when:
 - a. A SJHA is submitted for the first time
 - b. Lab Area Safety Leads
 - c. ETA administrative staff that generate SJHA’s
 - d. Others as needed
 3. Better tracking and oversight by ETA of draft SJHA’s is needed. At a minimum, the status of draft SJHA’s should be reviewed and updated as needed by the Division Safety Coordinator to ensure better quality control.
 - a. This can be documented through the monthly metrics sent to ETA top management each month listing all SJHA’s submitted for that month along with status (already started).
 - b. CATS should be issued by ETA to the requestor in the event a SJHA is not activated while subcontractor work is actually performed or other process issues such as incomplete hazard questionnaires or missing EHS0470 GERT training.
 - c. Going forward, the DSC should request deletion of draft SJHA’s that involve canceled work. This has to be manually requested as there is no “delete” or “archive” option on the SJHA form.
 4. Develop a monthly report through Procurement that allows tracking of ETA purchase requisitions that may involve subcontractor work. This will help ensure that a SJHA is generated for any hands-on work.
 5. ETA needs better communications with SJHA submitters of the need to attach important documents and add work observations for not only general safety practices, but especially COVID-19 observations. This can be included in the proposed training, but can also be documented in a regular ETA “Safety Alert” as a reminder.

ATTACHMENT 1 List of Draft SJHA's

SJHA ID	Division	Hazard Level	Requisition No.	Subcontractor	Subcontractor Details	Scope of Work	Requester	Building	Added Date	Status
4027	BU	Low	1000309251	Arrow Glass	Denise Grimshaw 640 San Pablo Ave Albany, CA 94706 510-525-2118 fax 510-525-4265 arrowglasscco@yahoo.com	For LBNL Flexlab Test Bed 1 rooms 103 & 104, remove 20 window panes from testbed 1 and install 20 1/4" clear single pane glass panels.	Curry, Stacy L	090X	6/25/20	Draft
3954	BU	Low		Arrow Glass	Denise Grimshaw 640 San Pablo Ave Albany, CA 94706 510-525-2118 fax 510-525-4265 arrowglasscco@yahoo.com	Install low-E IGUs and Solar Control Film on windows. The glass will be changed out but there will not be installation of frames, cutting, etc. on-site.	Curry, Stacy L	090X	3/12/20	Draft
3949	BU	Low		ClimatePro	Bob Dobbins CFO email: bob@climatepro.com Dan Nazarovt Estimator dan@climatepro.com Scheduling: admin@climatepro.com	Install film on glass windows for 2 FLEXLAB testbeds.	Curry, Stacy L	090X	3/10/20	Draft
3943	ED	Low		Brucker XRD		Annual Maintenance XRD	Lau, Grace Y	062	3/2/20	Draft
3939	ED	Low	1000297245	Prottemp Mechanical, Inc.	Prottemp Office Manager: Darlene Johnson - 408-244-9821, darlenejohnson@prottemp.net Espc Customer Support: Karl Hoenshell - 616-896-6170, support@espec.com	Technician will troubleshoot and/or repair two environmental chambers located in 70-291 and 70-116, respectively. Technician will also install a dry air purge line on the chamber located in 70-116, which will be connected reversibly to the existing compressed air line in this room using plastic tubing.	Hubble Dion	070	2/26/20	Draft
3934	ED	Low		RBD Instruments, Inc.	2437 NE Twin Knolls Dr. Suite 2 Bend, OR 97701 UNITED STATES Phone: 541-330-0723	Maintenance of the X-ray Photoelectron Spectroscopy system, specifically: Replacing ion gauge and its controller, tuning the voltages on the lens column, inspecting the lens to assess possible issues (alignment, contamination etc.). This requires venting the system and performed the baking procedure. Venting/Baking are already covered under an active wpc.	Arca, Elisabeth a	070	2/21/20	Draft
3788	BU	Low	1000258144	EKO USA	William Beutell, Application Engineer EKO USA 1111 N. Market St Suite 300 San Jose, CA 95113 P: +1 (408) 977 - 7751 F: +1 (408) 977 - 7741 C: +1 (828) 387 - 6932	Assist with installation of EKO Sun Tracker Systems.	Curry, Stacy L	090X	9/19/19	Draft

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3783	BU	Low	1000256948	Carousel USA	John Thomson john@carousel-usa.com Ryan Rickabaugh ryan@carousel-usa.com	Inspecting below the rotating test bed to diagnose turntable issues.	Curry, Stacy L	090X	9/17/19	Draft
3432	ED	Low		TA Instruments	Carousel USA 15206 Ceres Avenue Fontana, CA 92335 (626) 334-7190	Installation of Dynamic Mechanical Analyzer	Lau, Grace Y		8/1/18	Draft
3274	ED	Low		GBC Scientific	They are the makers of our ICPMS	ICPMS general service and maintenance	Gonzalez, Jha mis Jose	070	1/5/18	Draft
3256	CY	Low		UC Berkeley Biosciences Divisional Services	Natasha Gilliody, ngilliody@berkeley.edu is the account manager at UCB. Jeff Davenport, jdavenport@berkeley.edu would work on the freezer.	Diagnosing unstable temperature on a -80°C freezer in 977-2877/286 (Potter street facility). Note that PO no is for an UT.	Mansfield, Rich ard	977	11/30/17	Draft
3184	CY	Low		Shane Ketcham	Phone: 845-866-7188 Email: sketcham@sono-tek.com	The purpose of the visit is to have the vendor troubleshoot issues with our spray deposition robot that is located in building 62, room 316. At most, we can expect component part replacement after the cause has been identified. At least, he will adjust the programming to resolve the problem. He will not be touching anything energized.	Diaz, Daniel	062	9/5/17	Draft
3084	EA	Low	1000127951	Gerstel	410-387-9744 Direct ? 410-247-5885 Main ? 443-709-0304 Direct Fax caelzondo@gerstelus.com ? www.gerstelus.com 701 Digital Drive, Suite J ? Luthicum, MD 21090	Will be installing an auto sampler (Gerstel TDSA) on an Agilent Gas Chromatograph in B70-R221	Maddalena, Ra ndy	070	5/30/17	Draft
3063	ED	Low		Vacuum Technology Inc.	Alex Haines 978-335-0141 alex.haines@vti-glovebox.com	Manufacturer installation of a new VTI inert glove box in lab area 70-226. Work includes glove box unpacking, set-up, connection of pump and vent lines, and system start-up.	Liu, Gao	070	4/25/17	Draft
2934	EA	Low		Agilent Technologies	Agilent Technologies Michael Derksen, michael_derksen@agilent.com, 408-314-5776 Samir Samaan, samir_samaan@agilent.com	Install sulfur chemiluminescence detector on existing GC.	Maddalena, Ra ndy	070	11/15/16	Draft
2932	ED	Low		GBC Scientific	They are the makers of one of our ICP-MS	ICP-MS general service and maintenance	Gonzalez, Jha mis Jose	070	11/14/16	Draft
2926	ED	Low		Mark Snowberger	email: msnowberger@sono-tek.com office phone: (845)795-2020 Ext. 162 mobile phone: (607)793-6764	The contractor is coming to install a spray deposition system (ExaxiCoat from Sono-Tek). The work will involve attaching an exhaust hose and an air line to the instrument (these lines will be present and ready to install when he arrives). After the air and exhaust connections are made, the instrument will be plugged in and initial depositions of catalyst ink (ethanol, carbon particles, gold particles, polymer electrolyte) made onto perfluorosulfonic acid membranes (Nafion brand).	Lau, Grace Y	070	11/7/16	Draft

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2921	AD	High	The window washer	The Window Washer Rachael Holquin 4000 Pinalico Drive# 114-137 Pleasanton, Ca 94588 877-371-5660 sales@The Window Washer .com	Window washing exterior only at B90 using a rented scissor lift.	Sytnarski, Susa n.A	090	1/12/16	Draft
2844	EA	Low	Christine Porter	Christine Porter christine.porter@intertek.com intertek	Perform field inspection of Applied power supply units for test chamber, located in Building 60. Work involves field inspection of equipment to ensure it meets electrical safety standards.	Rosenquist, Gregory J	060	8/5/16	Draft
2818	EA	Low	Zhang Yue	Aprovecho E-mail: zhangyue0321@163.com	The contractor will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves group in ET/A/E/A/EI how to operate the contractor's biomass cookstove. In order to teach LBNL employees how to operate the contractor's cookstove, the contractor will need to operate their stove by burning biomass (e.g. wood, pellets, or charcoal) in the cookstove. The contractor's only activity will be operating their biomass cookstove under the hood in the cookstoves lab (75C) by burning wood. LBNL Cookstove Group members will be present at all times during demonstration and testing of the biomass cookstove.	Rapp, Vi H	075C	7/18/16	Draft
2817	EA	Low	Jesse Andres	Aprovecho E-mail: andresj@oregonstate.edu	The contractor will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves group in ET/A/E/A/EI how to operate the contractor's biomass cookstove. In order to teach LBNL employees how to operate the contractor's cookstove, the contractor will need to operate their stove by burning biomass (e.g. wood, pellets, or charcoal) in the cookstove. The contractor's only activity will be operating their biomass cookstove under the hood in the cookstoves lab (75C) by burning wood. LBNL Cookstove Group members will be present at all times during demonstration and testing of the biomass cookstove.	Rapp, Vi H	075C	7/18/16	Draft
2774	ED	Low	OPAL-RT	Ravi Venugopal ravi.venugopal@opal-rt.com install equipment and provide training on its use.	Procuring a hardware-in-the-loop system from OPAL-RT. They will be providing and installing it. Subsequently they will provide onsite training for how to use it.	Stewart, Emma	090X	5/25/16	Draft
2771	EA	Low	Richard Burda	Hooks Association richard1@hookassoc.com	Psychrometric AC Test Chamber calibration	Qu, Yi	060	5/25/16	Draft
2710	ED	Low	A.T. Laser Services, LLC	Laser service and repair contractor	Laser service	Gonzalez, Jhans Jose	070	4/15/16	Draft
2709	ED	Low	SMS Ltd	Surface Measurement Systems LTD. NA - Andrea Gimbar, Senior Office Administrator, agimbar@surfacemeasurementsystems.com, 610-798-8299 phone, 610-798-0334 fax	Calibration of DVS Sorption Instrument, which includes the following: check hang down wires, inspect liquid reservoir, gas fittings, o-ring seals, clipard valves, test dew point analyzer, check microbalance for noise and calibrate it, check mass flow controllers for leaks and check partial pressure of valves with salts; test preheater for accuracy.	Lau, Grace Y	070	4/13/16	Draft

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2686	ED	Low	Instron corporation	Shyam mistry Field Systems Engineer Cell:925-698-0031 Instron corporation Tel: 781.575.5232 E-mail shyam_mistry@instron.com Service: 800.473.7838 E-mail: Service_Requests@instron.com	Instron for setup, calibration and training the mechanical instrument in Rm 70-143.	Lau,Grace Y	060	3/22/16	Draft
2683	EA	High	Q-corporation	Q Corporation 4880 Adohr Lane Camarillo CA 93012 Phone: 805.797.4920 E-Mail: jlopp@qcorp.com	QC Corp will install the DAQ system for the two AC test chambers in Building 60 following the drawings and documentation that LBNL provides. The tasks include: 1. Install the power supply system for the DAQ. 2. Work with LBNL employees and install low voltage (<50V) wiring system of the DAQ. 3. Assist LBNL employees to install mechanical parts of the DAQ system. 4. Provide consultation for the installation and troubleshooting. 5. Some of the tasks, when involve high voltage (>50V) electricity will require QEW2 certification. The person who will perform the task should have the QEW2 certification up to date.	Qu, Yi	060	3/21/16	Draft
2678	EA	High	Underwriters Laboratories Inc.	UL Customer Service Phone: 1-877-854-3577 email: FieldEvaluations@us.ul.com website: www.ul.com Alternate Contact: Gregory Hansen, Phone: +18476641302; E-mail: Gregory.X.Hansen@ul.com	Perform field inspection of data acquisition system for psychrometric test chamber, located in Building 60. Work involves field inspection of equipment to ensure it meets electrical safety standards.	Qu, Yi		3/15/16	Draft
2417	ED	Low	Agilent technologies	andy.tai@agilent.com	Installation of a new Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES)	Gonzalez, Jha nis Jose	070	6/9/15	Draft
2232	ED	Low	MBraun	John Caddle (Service Manager) 14 Marin Way, Stratham, NH 03885. Email: johncaddle@mbraunusa.com. Phone: 1-603-773-9333 ext. 253; fax: 1-603-773-0008	Installation of glove box using simple hand tools. Connecting hoses and vendor-supplied pump, piping, connecting argon cylinders, plugging in and powering on system, and checking system for leaks. No energized work to be done. Worker must be escorted while in the lab.	Bhatt, Mahesh	033	10/30/14	Draft
1875	EA	Low	Mark Hooks	Mark Hooks Associates Mark.h@hookssassoc.com	Installing DAQ System	Rosenquist, Gregory J	031	1/6/13	Draft

ATTACHMENT 2 List of “Active” and “Expired” SJHA’s with Completeness Review

SJHA ID	Division	Hazard Level	Requisition No.	Subcontractor	Subcontractor Details	Scope of Work	Date	Requester	Building	Worker List	Tab 2 Questions	Supporting Doc	Obsv.	Comments
4089	ED	Low		JEOL		Maintenance and fixing of the Scanning Electron Microscope in Bldg 62-238.	8/10/20	Lau Grace Y	062	OK	OK	YES	NONE	No subcontractor details
3997	BU	Low		Arrow Glass	Denise Grimshaw 640 San Pablo Ave Albany, CA, 94706 510-525-2118 fax 510-525-4265 arrowglassco@yahoo.com	For LBNL FlexLab Test Bed 1 rooms 103 & 104, remove two existing doors and install two new doors with Single Full Lite Glass Panel (36 Wide x 94 High 18 gauge steel door, primed only, insulated tempered clear glass). Also, remove 20 window panes from testbed 1 and install 20 1/4" clear single pane glass panes.	7/17/20	Curry, Stacy L	090X	OK	OK	NONE	YES	
4044	ED	Low		Mbraun Technical Josh Picard	email: j.picard@mbraunusa.com phone: 408-569-4841	Josh will be onsite to check the status of glovebox and commission the use of the box at room 263, building 70. We have all pipeline connected and gas tank in place, he should just come over to have a inspection on those and commission the use of the box. He might also give us a short training. Overall, it should be very limited use of tools from his end.	7/9/20	Zhao, Yangzhi	070	OK	OK	NONE	NONE	
4001	CY	Low		Corovan Commercial Moving Services	CoroVan Commercial Moving Services, Laura Engen, lengen@corovan.com, (510) 828-9141	Moving two experimental setups and related equipment to off-site location at d2Solar in San Jose for off-site research. All work must be performed in a safe manner. The Requester will assess each moving job for safety before the work is performed. Vendor may perform some installation of partitions or furniture.	6/12/20	Nizamian, Dustin Paul	063A	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3898	ED	Low		HPM Systems	Don Stevenson, 70 Saratoga Ave., Suite 200, Santa Clara, CA 95051 don@hpmystems.com 408-615-6900	Calibration and testing of hydrogen sensors in 70-257.	1/31/20	Scholtz, Rona Id G	070	OK	OK	NONE	NONE	
3904	ED	Low		Integrated Instrument Services (I2S), 5601 Fortune Circle Drive South, Suite A, Indianapolis, IN, 46241. Contact: Amanda Young I2S Customer Service Email: a.young@i2sinc.com Tel: 800-468-3437	Integrated Instrument Services (I2S), phone 800-468-3437, 5601 Fortune Circle Drive South, Suite A, Indianapolis, IN, 46241.	Standard Pipette Calibration and Routine Analytical Balance Calibration	1/30/20	Bergstrom, Helen Kathryn	062	OK	OK	NONE	NONE	
3908	ED	Low		Clean Harbors Environmental Services, Inc. Dave Sato (sato.dave@cleanharbors.com)	Subcontractor will provide supplies and labor to provide on-site waste segregation and packaging of hazardous wastes in B62 and B70 for ETA. Same-day transportation and disposal (including preparation of manifests, LDRs, etc. when requested), in accordance with EPA Land Disposal Restriction Standards (40 CFR Part 268) and per the Clean Harbors UCCOP subcontract.	1/30/20	Etherington, Kelley	062	OK	OK	OK	NONE	NONE	
3895	ED	Low	0000995376	Thermo Scientific	Ron Massone 800-642-6638 ext 3415384 617-283-5684 (mobile) 608-273-5045 (fax)	Annual preventive maintenance (PM) for EDS detector of JEOL SEM; measurement of signal strength, alignment of detector position, change component of detector when needed; fix problems found during PM. Repair of detector, analyzer, detector motor control, and computer. All equipment is electrically powered with a plug and cord.	1/9/20	Lau, Grace Y	062	OK	NONE- Questions not answered	NONE	NONE	Questionnaire not completed
3871	ED	High		Michael Fink	Cohherent Michael.fink@coherent.com	Installation of a new laser . Discovery TPC from Coherent Inc. The laser will be installed in Bldg 90-018F.	12/17/19	Kaur, Sumanj eet	090	OK	OK	YES	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3850	ED	High	1000283962	Associated Environmental Systems	Peter Rea 8 Post Office Square, MA, 01720 Tel: 978-772-0022 Fax: 978-772-0088 Email: Peter.Rea@associatedenvironmentalsystem.com	Diagnostic and repair of environmental chamber at battery testing lab. Work may involve use of tool to assembly and disassembly parts and components from chamber, and test their functionality.	11/2/19	McShane, Eric	062	OK	OK- Hot Work	YES	NONE	Hot Work Permit completed
3842	ED	Low		Bruker AXS Inc	Gerardo Woody Field Specialist - Microanalysis Bruker AXS Inc. 5465 East Cheryl Parkway Madison, WI 53711 US Phone: +1 800-234- XRAY(9729) Fax: +1 608-276-9162 Support.BNA.America s@bruker.com www.Bruker.com	2018 PM Maintenance, In Room 143, with XRF machine	11/7/19	Lau, Grace Y	070	OK	NONE- Questions not answered	YES	NONE	Questionnaire not completed
3803	ED	Low		Remishaw	Remishaw will send their engineer Eric Waterstreet, email is Eric.Waterstreet@Remishaw.com.	Installation of a Remishaw Ramon system in Building 70, Room 174. The instrument is on site in building 70, but needs to be installed on an optical bench, connected to power, and tested. Oct 29th and 30th are scheduled for this, and on Oct 31st subcontractor is scheduled to train LBNL staff to use the instrument.	10/31/19	Schnabel, Manuel	070	No GERT completed by subcontractor	OK- Laser	YES	NONE	GERT not completed by subcontractor. Laser
3785	ED	Low		neasppec GmbH	Person: Robert Christian Stabla Email: Robert.Stabla@neasppec.com Phone: +49 89 420 797 203 - 70	The Neasppec rep (Robert Stabla) will be installing a newly upgraded scattering scanning near-field optical microscope within Robert Kosteck's lab in building 70, room 174. In addition, Robert Stabla will also be providing onsite training on how to use the system. All hardware for the system is already onsite. Note that the installation is tentatively scheduled to start on either October 2 or 3 and end October 9 or 10.	10/1/19	Larson, Jonathan Michael	070	OK	OK- Laser	YES	NONE	Laser

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3769	EA	Low		Carlos Elizondo	410-387-9744 Direct, 410-247-5885 Main, 443-709-0304 Direct Fax caellizondo@gerstel.com www.gerstelus.com 701 Digital Drive, Suite J Linthicum, MD 21090	Carlos will be troubleshooting and repairing the injection inlet (Gerstel TDSA) on an Agilent Gas Chromatograph in B70-R221.	9/20/19	Russell, Martin L	070	OK	OK	NONE	NONE	
3765	ED	Low		Millipore Sigma		Installation of New Millipore Water Filter	8/30/19	Kushner, Douglas	070	No GERT completed by subcontractor	OK	NONE	NONE	GERT not completed by subcontractor. Laser
3730	ED	High		Associated Environmental Systems	Peter Rea 31 Willow Rd, Ayer, MA 01432 Tel: 978-772-0022 Fax: 978-772-0088 Email: Peter.Rea@associateenvironmentalsystem.com	Diagnostic and repair of environmental chamber at battery testing lab. Work may involve use of tool to assembly and disassembly parts and components from chamber, and test their functionality.	8/8/19	McShane, Eric	062	OK	OK - Hot Work	YES	NONE	
3729	ED	Low	1000239457	PerkinElmer	contact: Sidney Bennett email: Sidney.Bennett@perkinelmer.com cell: 1-832-643-1226	Repair and servicing of a differential scanning calorimeter (DSC) in Building 70, Room 218.	7/29/19	Lu, Gao	070	No GERT completed by subcontractor	NONE- Questions not answered	YES	YES	Questionnaire not completed. GERT not completed by subcontractor
3703	EA	Low		AGILEN T CrossLab Service	Martin Jacques, Agilent Service Technician martin.jacques@agilent.com	Installation, repair, preventative maintenance, calibrations for all Agilent equipment	6/28/19	Russell, Martin L	070	OK	OK	NONE	NONE	
3421	CY	Low	NA	Lap Shun Nelson Chan	Lap Shun Nelson Chan nelsonschan@gmail.com	Setting up an akta FPLC. This will involve installation of new mechanical parts, and functional testing.	6/10/19	Mansfield, Richard	977	OK	OK	NONE	NONE	
3617	ED	Low	1000239457	PerkinElmer	contact: Sidney Bennett email: Sidney.Bennett@perkinelmer.com cell: 1-832-643-1226	Repair and servicing of a differential scanning calorimeter (DSC) in Building 70, Room 218.	5/2/19	Lu, Gao	070	OK	OK	NONE	YES	
3614	EA	Low		Ionicon	Eugene Hartungen Ionicon Analytik Gesellschaft m.b.H. Eduard-Boden-Gasse 3, 6020 Innsbruck, Austria (Europe), office@ionicon.com, Pn. +43512214800, Fax: +43512214800-099	Repair and service Proton Transfer Reaction Mass Spectrometer (PTR-MS).	4/2/19	Maddalena, Randy	070	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3566	ED	Low		HOIRIBA INSTRUMENTS INCORPORATED	20 Knightsbridge Rd Piscataway, NJ 08854 E-mail: sanga.kim@horiba.com	Service on site on Raman Instrument. Laser alignment of 633nm and 514nm.	2/13/19	Hasa,Ivana	070	OK	OK	NONE	NONE	
3518	ED	Low		Michael Gollnar	MGollnar@tainsysteme.com	Installing rheometer accessories, additional training	12/4/18	Berlinger,Sarah	070	OK	OK	NONE	NONE	
3174	ED	Low		HPM Systems	Don Stevenson, 70 Saratoga Ave., Suite 200, Santa Clara, CA 95051 don@hpmystems.com	Calibration and testing of hydrogen sensors in 70-257.	11/16/18	Scholtz,Ronald G	070	OK	OK	YES	NONE	
3497	ED	Low		Edmund Buhler GmbH	408-615-6900 Thomas Bogenschütz -Engineer / Customer service. Edmund Buhler GmbH, Schindackerstrasse 8, DE 72411 Bodelshausen (www.edmund-buehler.de) Phone Office: +49 (0) 7471 / 9864 - 64 Mobile Phone: +49 170 206 7714 E-mail: thomas.bogenschuetz@edmund-buehler.de	A specialized engineer will give technical training and installation support for the Splat Quencher equipment in 70-108. The visit is organized as part of a purchase order issues for Edmund Buhler GmbH (German Company).	11/5/18	Hasa,Ivana	070	OK	OK	YES	NONE	
3431	CY	Low		NOR-CAL Moving Services	Howard Hammons, hhammons@nor-calmoving.com	Moving to off-site location	8/3/18	Lys,Eion	977	OK	OK	NONE	NONE	
3403	AD	Low	1000199587	Diablo Analytical	Terry L. Ramnus tiranus@diabloanalytical.com Diablo Analytical, Inc. 5141 Lone Tree Way Antioch, CA 94531 Tel: 925-755-1005 ext 115	Doing a re-calibration and troubleshooting issues for a real time gas analyzer - mass spectroscopy	7/30/18	Fornaciari,Juile	070	OK	OK	NONE	NONE	
3380	ED	Low		Cannon Instrument Company	Collin Fischer, CFischer@cannoninstrument.com, 949-606-3385 David B. Trowbridge, DTrowbridge@cannoninstrument.com, 814-933-0473	Installation of a new viscometer and testing viscometer operation using standard solutions	6/7/18	Diederichsen,Kyle	062	OK	OK	NONE	NONE	
3366	ED	High		HORIBA INSTRUMENTS INCORPORATED	3880 Park Ave Edison NJ 08820-3012 sanga.kim@horiba.com	Service on site on Raman Instrument. Laser alignment of 633nm and 514nm.	5/30/18	Hasa,Ivana	070	OK	OK - Laser	YES	NONE	Laser

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

				ED															
3354	ED	Low		Bruker AXS Inc	Gerardo Woody Field Specialist - Microanalysis Bruker AXS Inc. 5465 East Cheryl Parkway Madison, WI 53711 US Phone: +1 800-234-XRAY(9729) Fax: +1 608-276-9162 Support.BNA.Americas@bruker.com www.Bruker.com	2018 PM Maintenance. In Room 143, with XRF machine	4/25/18	Berlinger, Sarah	070	No GERT completed by subcontractor	OK	NONE	NONE						
3327	ED	Low		Hyet (affiliates)	Hyet Albert Bos albert.bos@hyet.nl	The subcontractor who is an affiliate at the lab will install tubing and a test stand in support of establishing a WPC. They will not perform any wall or floor penetrations.	3/17/18	Danilovic, Nemanja	070	OK	OK	NONE	NONE						
3257	ED	Low		Coordinated Projects Installations Inc.	Rich Vitali 324A Yolanda Ave - Santa Rosa, CA 95404 T: (707) 578-8255 ext. 12 - C: (707) 975-3913 - F: (707) 578-8219 rich@coordinatedprojects.com www.coordinatedprojects.com	The subcontractor will assemble casework and cabinets. They will not perform any wall or floor penetrations.	12/3/17	Danilovic, Nemanja	070	OK	OK	YES	NONE						
3252	BU	Low		STASIS	Rob Morton 720.435.4550 rmorton@stasis-pcm.com	Install PCM material in ceiling of FLEXLAB rotating test bed.	11/28/17	Harding, Ari	090X	OK	OK	YES	NONE						
3244	CY	Low		Certified GeneTools	Certified GeneTool, Inc. 7074 Commerce Cir A, Pleasanton, CA 94588 Name: May Xu E-mail: may@cgentool.com Phone: 415-519-2989	Vendor coming to inspect a piece of equipment, only work on a computer anticipated to troubleshoot. Service with no requisition (outside funds). Possible use of hand tools. Any acetone/rittle generated will be collected in SAA and handed by us as usual (not the vendor)	11/9/17	Mansfield, Richard		OK	OK	NONE	NONE						

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3240	ED	Low	Coordinated Projects Installations Inc.	Rich Vitell 324A Yolanda Ave - Santa Rosa, CA 95404 T: (707) 578-8255 ext. 12 - C: (707) 975-3913 - F: (707) 578-8219 rich@coordinatedproject.com www.coordinatedproject.com	The subcontractor will assemble casework and perform any wall or floor penetrations.	11/7/17	Danilovic, Nemanja	070	OK	OK	NONE	NONE	
3218	ED	Low	Vacuum Technology Inc.	Sam Cai sam.cai@vht-glovebox.com c: 510 333 6562 t: 978 879 4302 f: 978 879 4387	Manufacturer installation of a new VTI inert glove box in lab area 70-226. Work includes glove box unpacking, set-up, connection of pump and vent lines, and system start-up.	10/4/17	Zheng, Tianyu	070	OK	OK	NONE	NONE	
3215	ED	Low	Diversified Laboratory Repair	Susanne Quan phone - 707-746-7600, squan@dirrepair.com	Repairing a freeze drier unit that was damaged in shipment. Will involve disassembling unit and moving a fan back into place before reassembling.	10/3/17	Diederichsen, Kyle		OK	OK	NONE	NONE	
3196	ED	Low	Coordinated Projects Installations Inc.	Rich Vitell 324A Yolanda Ave - Santa Rosa, CA 95404 T: (707) 578-8255 ext. 12 - C: (707) 975-3913 - F: (707) 578-8219 rich@coordinatedproject.com www.coordinatedproject.com	The subcontractor will unpackaged and assemble casework and cabinets. They will not perform any wall or floor penetrations and will coordinate with facilities on next steps.	9/27/17	Danilovic, Nemanja	070	OK	OK	NONE	NONE	
3176	EA	Low	Honeywell		Assist in electrical inspection of de-energized (unplugged) air cleaning technology that is located in 70-289 that was fabricated by Honeywell and will be tested for performance by LBNL after electrical inspection has been completed and technology passes lab standards.	9/6/17	Maddalena, Randy		OK	OK	NONE	NONE	
2226	ED	Low	Douglas W. Kresse	Douglas W. Kresse Coherent Inc. Field Operations Scientific Group- North America Tel: 408 764-4183 e-Mail: Douglas.Kresse@coherent.com Product support: 800/367-7890	re-alignment laser at 70-157.	8/16/17	Mao, Xiangfei	070	OK	OK - Laser	NONE	NONE	Laser

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3141	ED	Low		Surface Measurement	George Branch ? Field Service Engineer Office: +1 610-798-8299 Mobile: +1 415-420-1941 Email: gbranch@surfacemeasurementsystems.com Web: www.surfacemeasurementsystems.com	Repair DVS	7/26/17	Lau,Grace Y	070	No GERT completed by subcontractor	OK	NONE	NONE	GERT not completed by subcontractor. Laser
3142	ED	Low		TUV Rheinland of North America	Stephen Pochton cell: 7608057391 spochton@us.tuv.com	Field evaluation Service: electrical safety check with voltmeter, current clamp, measuring temperature with IR gun.	7/25/17	Lau,Grace Y	070	No GERT completed by subcontractor	OK	NONE	NONE	GERT not completed by subcontractor. Possible electrical work not indicated in questionnaire.
3133	ED	Low		Bruker AXS Inc.	Ken Romalino Ken.Romalino@bruker.com Bruker AXS Inc. 5465 East Cheryl Parkway Madison, WI 53711 US Phone: +1 800-234-XRAY(9729) Fax: +1 608-276-3015	X-Ray Fluorescence Installation in 70-143	7/24/17	Lau,Grace Y	070	OK	OK	NONE	NONE	
2864	CY	Low		Beckman Coulter	Bruce Fleming email: bffleming@beckman.com tel: 415-860-1991	Repair of Biomek NXP Span-8 with Gripper. System ID # 500548 (located in building 977 room 272). Work may require use of hand tools as needed to replace failed parts on the instrument.	7/17/17	Mansfield, Richard	977	OK	OK	NONE	NONE	
3126	ED	Low		Kip Sieroan	KSieroan@tainsystems.com	Rheometer accessory installation	7/17/17	Berlinger, Sarah	070	OK	OK	NONE	YES	
3125	ED	Low		Michael Gollnar	MGollnar@tainsystems.com	Installing rheometer accessories	7/17/17	Berlinger, Sarah	070	OK	OK	NONE	YES	
3087	ED	Low		Michael Gollnar	MGollnar@tainsystems.com	Rheometer installation and training	6/7/17	Berlinger, Sarah	070	OK	OK	NONE	YES	
3090	ED	Low		Agilent Technologies	Sean Hayes Email: sean_hayes@agilent.com	Training on UV/Vis equipment purchased from Agilent Technologies.	6/5/17	Kushner, Douglas Ian	070	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

3081	ED	Low	Kip Sheroran	Cell: 626-374-4057 ksheroran@kainstrume nts.com Service Hotline (302)427-4050	Kip is a TA instrument technician coming to LBNL for helping install a rheometer we bought from TA instrument. The installation work will be performed in 70-143. The materials for this installation will mainly include screwdriver, pliers, and tubing connections tools.	5/24/17	Ma.Fuduo	070	OK	OK	NONE	NONE
3062	ED	Low	Bio-Logic USA	Arnold Forman Email: arnold.forman@bio-logic.us Phone: 805-637-1439	Equipment repair in 070-0257 using supplier provided materials. The job involves replacing a broken communications board and power supply	5/21/17	Kushner, Douglas Ian		OK	OK	NONE	NONE
3037	CY	Low	Certified GeneTool	Certified GeneTool, Inc. 7074 Commerce Cir A, Pleasanton, CA 94588 Name: May Xu E-mail: may@genetool.com Phone: 415-519-2989	Vendor coming to install and demo a new piece of equipment (HPLC). Using handtools, handling acetone/trile.	4/4/17	Mansfield, Richard	977	OK	OK	NONE	NONE
3005	CY	Low	Eric Simpson	esimpson@sonotek.com, 845-857-5147	The purpose of the visit is to have the vendor troubleshoot issues with our spray deposition robot that is located in building 62, room 316. At most, we can expect component part replacement after the cause has been identified. At least, he will adjust the programming to resolve the problem. Replacing a component should require no more than a lock-tag on the end of the machine's plug. He will not be touching anything energized.	2/22/17	Diaz, Daniel	062	OK	OK	NONE	NONE
2989	ED	Low	Perkin Elmer	Arlene Parces: arlene.parces@perkinelmer.com, 510-610-8434 Kofi Williams: Kofi.Williams@PERKINELMER.COM	To work on the TGA	1/30/17	Kusoglu, Ahmet	070	OK	OK	NONE	NONE
2931	ED	Low	Vacuum Atmosphere Company	Todd Eberspacher (650) 723-2505 eberspacher@stantford.edu	Repairing glove box system in 70-108 lab	1/11/17	Lee Rung-Chuan	070	OK	OK	NONE	NONE

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2955	EA	Low		AGILEN T														
2906	BU	Low		Bay Area Balancing	Alberto Sanchez 551 Stockton Ave, San Jose, CA 95126 (408) 330-0900 alvarezanthonny408@yahoo.com	Installation, repair, preventative maintenance, calibrations for all Agilent equipment	12/19/16	Madalena R andy	070	OK	OK	NONE	NONE					
					We have contacted the Bay Area Balancing and Cleanrooms, Inc. to perform HVAC duct sealing on two chambers in FLEXLAB, using the aerosol sealing process developed in the 1990s at LBNL. They will use foam plugs to temporarily seal the ducts and HVAC components and then connect their equipment that will inject sticky aerosol particles into the duct system. They will use hand tools, like drills and streaks. They will need to use ladders. During the time the particles are being injected they will use a dust mask, not a respirator, to protect themselves from accidental exposure to the aerosol. During normal operations there is no exposure to the aerosol. This process was used a few years ago to seal ducts in either building 70 or 50. This was a much larger project with some very difficult to access areas, and required a lot of preparation. In FLEXLAB it will be very easy to access the duct system.													

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2855	CY	Low	Mark Snowberger	email: msnowberger@sonotek.com office phone: (845)795-2020 Ext 162 mobile phone: (607)793-6764	The contractor is coming to install a spray deposition system (ExacoCoat from Sonotek). The work will involve attaching an exhaust hose and an air line to the instrument (these lines will be present and ready to install when he arrives). After the air and exhaust connections are made, the instrument will be plugged in and initial depositions of catalyst ink (ethanol, carbon particles, gold particles, polymer electrolyte) made onto perfluorosulfonic acid membranes (Nafion brand).	9/23/16	Kuhl, Kendra	062	OK	NONE	NONE		
2831	BU	Low	Betterson urce	Robert (Bob) Callaway Inside & Outside Sales 408-655-5626 Cell 650-345-3631 Showroom Direct 650-345-9605 Main Number 408-317-3200 eFax bob@abettersonsource.com	Approximately two workers from Betterson will deliver office furniture (office desks and dividers) to FLEXLAB 90X. Workers will assemble the office furniture likely using hand tools but possibly with power tools (electric power screw drivers). No electrical work and no ladder use. Job should take approximately two hours.	8/22/16	Brown, Joshua a	090X	OK	YES	NONE	Pre-task hazard analysis attached	
2834	EA	Low	Ed Nygren	Field Service Engineer with Scion Instruments, EDN@scioninstruments.com 1-916-846-4216 (cell) and 1-512-215-8335 (office)	The scope of work includes repair and servicing of gas chromatographs and mass spectrometers located in Building 70 rooms 217, 221 and 223. Materials such as compressed gases, solvents and pump oil may be used. Proper PPE such as nitrile gloves and safety glass will be worn in accordance with the safety requirements in place in these rooms.	8/2/16	Russell, Mar on L	070	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2829	CY	Low		Beckman Couller	Engineer: Bruce Fleming, 415-860- 1991, bafleming@beckman. com Alternate engineer: Michael Chin, 510- 364-1957, mmchin@beckman.co m Beckman Couller, Inc 5350 Lakeview Pkwy S. Dr. Indianapolis, IN 46268	Preventative Maintenance on Biomek NXP Span-8 with Gripper, System ID # 500548 to include de- installation of instrument (located in building 67 room 5210A) and re- installation in building 977 room 272. Work may require use of hand tools as needed to disassemble and reassemble the instrument. Disassembled instrument will be packaged in bubble wrap and placed into boxes for transport.	7/25/16	Mansfield, RI char	Multiple Buildings	OK	OK	NONE	NONE	
2813	EA	Low		Garrett Allawatt	University of Washington E-mail: gallawatt86@gmail.com	The contractor will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves group in ETA/EAEI how to operate the contractor's biomass cookstove. In order to teach LBNL employees how to operate the contractor's cookstove, the contractor will need to operate their stove by burning biomass (e.g. wood, pellets, or charcoal) in the cookstove. The contractor's only activity will be operating their biomass cookstove under the hood in the cookstoves lab (75C) by burning wood. LBNL Cookstove Group members will be present at all times during demonstration and testing of the biomass cookstove.	7/18/16	Rapp, VI H	075C	OK	OK	NONE	NONE	

2814	EA	Low		Jessica Tryner Colorado State University E-mail: jessica.tryner@colostate.edu	The contractor will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves group in ETA/EAEI how to operate the contractor's biomass cookstove. In order to teach LBNL employees how to operate the contractor's cookstove, the contractor will need to operate their stove by burning biomass (e.g. wood, pellets, or charcoal) in the cookstove. The contractor's only activity will be operating their biomass cookstove under the hood in the cookstoves lab (75C) by burning wood. LBNL Cookstove Group members will be present at all times during demonstration and testing of the biomass cookstove.	7/18/16	Rapp,VIH	075C	OK	OK	NONE	NONE	
2816	EA	Low		Samuel Bertson Aprovecho E-mail: sbertson@aprovecho.org	The contractor will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves group in ETA/EAEI how to operate the contractor's biomass cookstove. In order to teach LBNL employees how to operate the contractor's cookstove, the contractor will need to operate their stove by burning biomass (e.g. wood, pellets, or charcoal) in the cookstove. The contractor's only activity will be operating their biomass cookstove under the hood in the cookstoves lab (75C) by burning wood. LBNL Cookstove Group members will be present at all times during demonstration and testing of the biomass cookstove.	7/18/16	Rapp,VIH	075C	OK	OK	NONE	NONE	
2747	ED	Low	1000081925	HPM Systems Gary Sanchez, 70 Saratoga Ave., Suite 200, Santa Clara, CA 95051 gary@hpmssystems.com 408-615-6900	Calibration and testing of hydrogen sensors in 70-257.	5/20/16	Scholtz,Rona Id G	070	OK	OK	YES	YES	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2706	EA	Low		Kirk Harris	Approved email: kgharris@sonic.net	Kirk will be visiting the cookstoves lab in 75C to teach LBNL employees in the Cookstoves Group in ETA/EAEL how to operate his TLUD biomass cookstove. In order to teach us how to operate his TLUD biomass cookstove, he will need to operate it himself by burning wood, already located in 75C and used for LBNL research activities, in the cookstove. His only activity in 75C will be operating his biomass cookstove, under the hood, by burning wood.	5/16/16	Rapp, V. H	075C	OK	OK	NONE	YES	
2715	ED	Low		Coherent Inc.	Douglas W. Kresse Coherent Inc. Field Operations Scientific Group-North America Tel: 408 764.4183 e-Mail: Douglas.Kresse@coherent.com Product support: 800/367-7890	Diagnose low pulse energy issue with laser at 70-157.	4/20/16	Zorba, Vassili	070	OK	OK - Laser	NONE	NONE	Laser
2665	BU	Low		Creative Window Interiors, Inc.	Creative Window Interiors, Inc. 1867 Little Orchard Street, San Jose, CA 95125-1034 Commercial Blinds, Drapery, Motorized and Manual Shades Please check out our updated website below! More pictures! www.creativewindowinteriors.com Phone 408.293.3330 fax 408.293.4410 Cell 408.799.1049 California Contractors License C-61 877833	Install motorized window shades at FLEXLAB 90X-102	3/23/16	Brown, Joshua	090X	OK	OK	YES	NONE	
2607	ED	Low		Shimadzu Scientific Instruments	Shimadzu Scientific Instruments 7060 Koll Center Pkwy # 328, Pleasanton, CA 94566 Phone: (925) 417-2090	Installation of FT-IR	1/5/16	Terborg, Lydia	070	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2384	ED	Low		Used Glovebox Company	Usedglovebox.com, 2560 W. Brooks Ave, #100, North Las Vegas, NV 89032. Contact: Mr. Jim Hanson, 702-343-0297, jhanson@usedglovebox.com	Jim Hanson and his co-worker will assemble the glove box from the components shipped to LBNL. They may use small power tools for bolting the components together. The glove box components will be moved into 70-291 by LBNL transportation and riggers.	9/9/15	J Cairns Eton	070	OK	OK	NONE	NONE	
2489	EA	Low		Mark Hooks Associates Mark.h@hookassoc.com	Mark Hooks Associates Mark.h@hookassoc.com	After the LBNL plumbers and electricians provide piping and electrical power, Jim Hanson will return to LBNL to provide startup and check-out of the glove box.	8/31/15	Rosenquist, Gregory J	060	No GERT completed by subcontractor	OK	NONE	NONE	
2476	BU	Low		Walters and Wolf Sheila Kocejl Project Manager M: 510-719-3680 41450 Boscell Road Fremont, CA 94538 skocej@waltersandw off.com	Sheila Kocejl Project Manager M: 510-719-3680 41450 Boscell Road Fremont, CA 94538 skocej@waltersandw off.com	Installation of a test glazing system on the FLEXLAB rotating test bed, rooms 90X-0101 and 90X-0102.	8/17/15	Harding, Ari	090X	OK	OK	NONE	NONE	
2477	ED	Low		K-Space Associates, Inc. GDeMaggio@k-space.com	GDeMaggio@k-space.com	Installing and Calibrating KSpace MOS system. Materials: etalons, mirrors, photodiode detector	8/11/15	Dudenas, Peter Joseph	070	OK	OK - Laser	YES	NONE	Laser
2456	EA	Low		Amplitude Systems Service Department Amplitude Systems 11 allée de Carteranne Cité de la photonique, Batiment MEROPA 33600 PESSAC FRANCE T : +1 (408) 588 4214 M : +1 (650) 450-2225 E-mail : mricaud@amplitude-laser.com Website : www.amplitude-systemes.com	Service Department Amplitude Systems 11 allée de Carteranne Cité de la photonique, Batiment MEROPA 33600 PESSAC FRANCE T : +1 (408) 588 4214 M : +1 (650) 450-2225 E-mail : mricaud@amplitude-laser.com Website : www.amplitude-systemes.com	Alignment adjustment of Amplitude laser, install chiller	7/30/15	Mao, Xiangfei	070	OK	OK - Laser	NONE	NONE	Laser
2429	EA	Low		Warren Stern Mike Stern 5400 FERN VALLEY MCKINNEY TX 75070 479-831-2066	Calorimeter balanced chamber commissioning. Data acquisition system for the psychrometric chamber and calorimeter balanced chamber commissioning.	6/28/15	Rosenquist, Gregory J	060	No GERT completed by subcontractor	OK	OK	NONE	NONE	

Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2404	BU	Low	1000032370	Schweiger Plumbing	SCHWEIGER PLUMBING INC 11722 W LARCH RD TRACY, CA 95304-1522 (209) 833-3941	Plumbing to replace flow meters at FLEXLAB building 90X, on test beds 1 and R. Insulation of new work at 90X on test beds 1, R, and 3.	6/10/15	Harding, Ari	090X	OK	OK	YES	NONE	
2377	ED	Low		Mettler Toledo	1990 Polaris Parkway Columbus, OH 43240-4035 Tel: (800) METTLER (800) 638-8537 www.mt.com	maintenance and repair of Karl-Fischer instrument	5/14/15	Terborg, Lydia	070	No GERT completed by subcontractor	OK	YES	NONE	
2072	ED	Low		SMS Ltd		Calibration of DVS Sorption instrument	4/10/15	Kusoglu, Ahmet	070	OK	OK	NONE	NONE	
2334	ED	Low		Zygo Corporation and Subsidiaries	3065 Olcott Street Santa Clara, CA 95054 Office: 408-434-1000 x4291 Mobile: 408-761-0074 FAX: 408-434-0759 E-mail: cfranke@zygo.com	ON SITE REPAIR AND CALIBRATION FOR THE INTERFEROMETER MICROSCOPE NEW VIEW FROM ZYGO	3/4/15	Gonzalez, Johns Jose	070	OK	OK	NONE	NONE	
2299	ED	Low		Balance Point Home Performance	Dan Perunko, dan@balancepointhp.com Gavin Healy, gavin@balancepointhp.com 530-477-0695 21695 Oak Meadows Rd, Grass Valley, CA 95945	Removing heating, ventilation, and cooling (HVAC) equipment and patching and painting holes in test house (4209 Cold Creek Way, Sacramento, CA 95838) leased for an indoor air quality research project funded by the California Air Resources Board.	1/20/15	Black, Douglas R	0000	No GERT completed by subcontractor	OK	NONE	NONE	Work performed at off-site location
2284	EA	Low		Chahal, Gurdaveeri, Moon, Eric	Chahal, Gurdaveer Gurdaveer.Chahal@coherent.com Moon, Eric Coherent Laser Eric.Moon@coherent.com	adjust laser	1/7/15	Mao, Xianglei	070	OK	OK - Laser	YES	YES	Laser

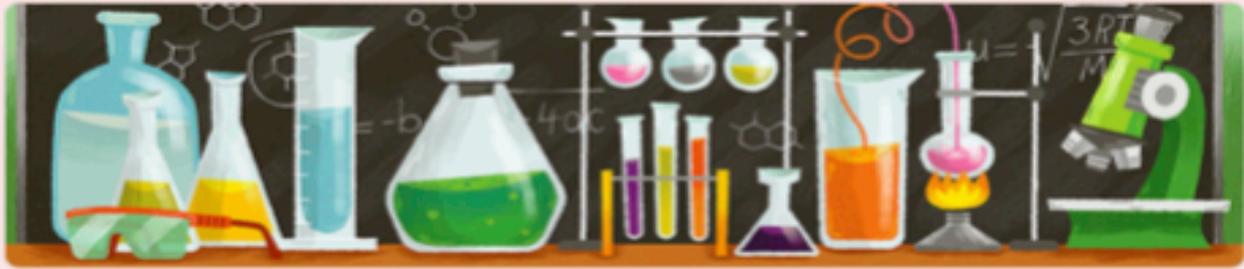
Energy Technologies Area

Subcontractor s/JHA Self-Assessment

2114	ED	Low		HORIBA Instruments Inc	HORIBA Instruments Inc A HORIBA Scientific Company 3880 Park Avenue Edison, New Jersey USA 08820 Phone: 732 494 8660 Fax: 732 549 5125 email: info.sci@horiba.com www.HORIBA.com/Scientific	Service a Raman microscope and a Raman spectrometer. It might involve alignment of class 3A, 3B and class 4 lasers. No electrical work or use of any power tools will be required to the job. Most manipulations will be in a closed, interlocked environment. If lasers need alignment, which requires open beam, subcontractor will clear the room of other users, put on the appropriate laser safety goggles, and put a sign on the door indicating the laser hazard and instructing people not to enter.	8/21/14	Terborg, Lydi a	070	OK	OK - Laser	YES	NONE	Laser
1877	ED	Low		Amplitude de systemes	Service Department Amplitude Systemes 11 allée de Canteranne Cité de la photonique, Batiment MEROPA 33600 PESSAC FRANCE phone : +33 (0)5 56 46 48 24 cell phone : +33 (0)6 34 05 55 59 email : rgelle@amplitude- systemes.com	Alignment adjustment of Amplitude laser	11/13/13	Zorba, Vassilia	070	OK	OK - Laser	NONE	NONE	Laser
1880	ED	Low	101391	Bruker Nano Inc.	Bruker Nano Inc., 112 Robin Hill Road, Santa Barbara, CA 93117 Phone: 1-800-873- 9750, Fax: 520-294- 1799 Email: BrukerNSDServiceOrders@bruker-nano.com	Repair of AFM (Atomic Force Microscope). The work is going to be performed in Room 70- 157. No hazardous material will be used.	11/13/13	Zorba, Vassilia	070	OK	OK	NONE	NONE	

ATTACHMENT 3

SJHA Survey Responses

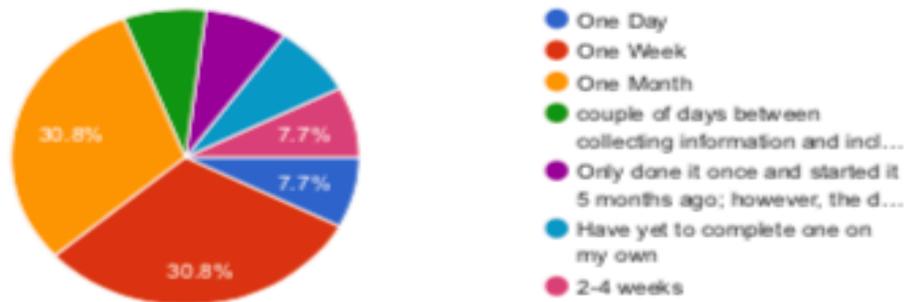


ETA Subcontractor Self Assessment Survey

13 responses

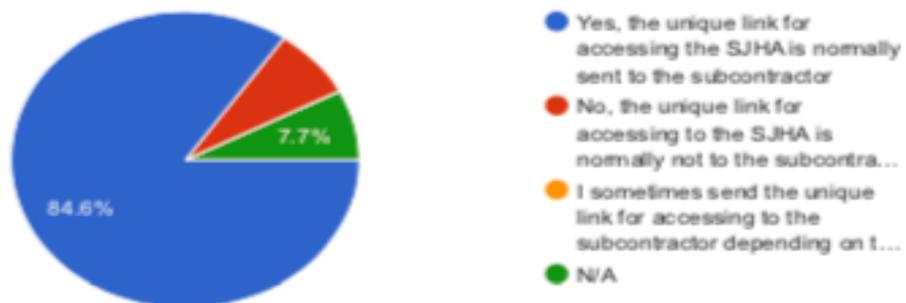
What is the approximate time period that you usually take to draft an SJHA prior to when the subcontractor work is scheduled to begin?

13 responses



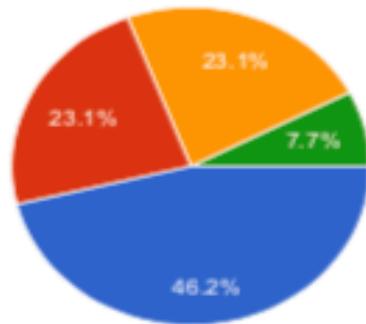
Do you email the unique hyperlink supplied in Tab 1 of the draft SJHA document to your subcontractor for their feedback or assistance in completion of the form?

13 responses



Do you reference your purchase requisition number on Tab 1 of the SJHA form?

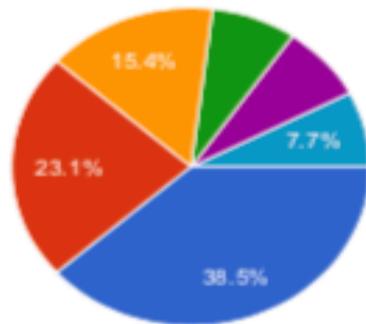
13 responses



- Yes, I reference the purchase requisition number in the SJHA
- No, I don't reference the purchase requisition number in the SJHA
- I sometimes reference the purchase requisition number
- N/A

Does your subcontractor usually complete Tab 2 "Questionnaire" or do you complete this for them?

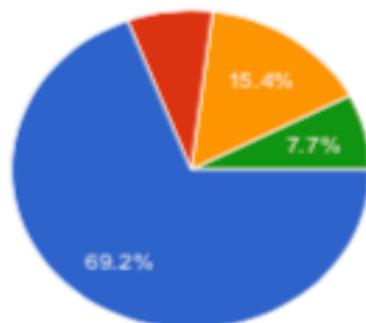
13 responses



- The subcontractor completes Tab 2 Questionnaire
- I complete the Tab 2 Questionnaire myself
- Both. It depends on who the subcontractor is
- I started the Questionnaire for them, then asked them to fill...
- N/A
- Both; I usually start it and hav...

Is it clear to you what constitutes a "high" and "low" work hazard level when completing the SJHA form?

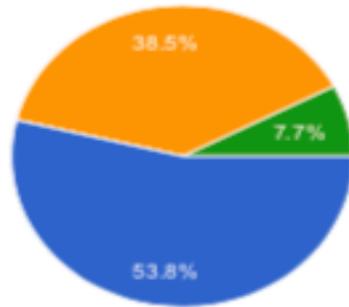
13 responses



- Yes, I understand the difference between "high" and "low" hazard work.
- No, I don't understand the difference between "high" and "low" hazard work.
- I understand somewhat, but I'm not always sure.
- Not sure - so far I've only been involved in low hazard work.

Do you find that the Tab 2 hazard questionnaire useful in identifying potential hazards and planning the subcontractor's work?

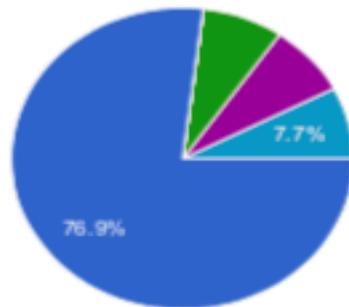
13 responses



- Yes, it is useful
- No, it is not useful (explain why in "other")
- It is sometimes useful
- It is useful, but I would make it more clear that maintenance on cord-and-plug equipment does not constitute High Hazard work. Right now it's a tiny footnote, and was a source of...

Do you perform a pre-job meeting with the subcontractor once they have arrived on-site and are ready to work? Pre-job meetings include a review of the SJHA, discuss potential hazards/controls, ensure work scope is defined, and answer any questions.

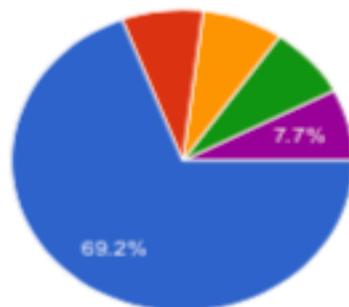
13 responses



- Yes, I normally perform pre-job meetings
- No, I normally do not perform pre-job meetings
- Maybe, depending on the scope of the work being performed
- Due to covid I needed to cancel the visit thus I can't answer th...
- Have not yet had the chance t...
- N/A

Do you know how to finalize an SJHA and make it change from "draft" to "active" status?

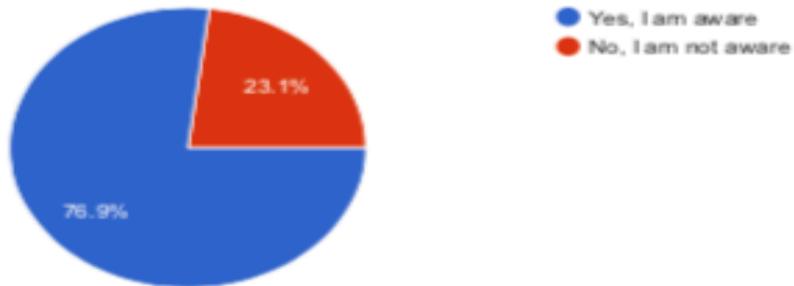
13 responses



- Yes, I am aware of the process described in Tab 4 of the SJH...
- No, I'm not aware of the process described in Tab 4 of...
- I'm aware but don't always remember to change the SJH...
- Due to Covid we did not go this far in the form
- Not sure - I think this happens with the upload.

Are you aware that you must perform safety observations of your subcontractor while performing their work and documenting this using Tab 5 or the checklist provided on the SJHA home page?

13 responses



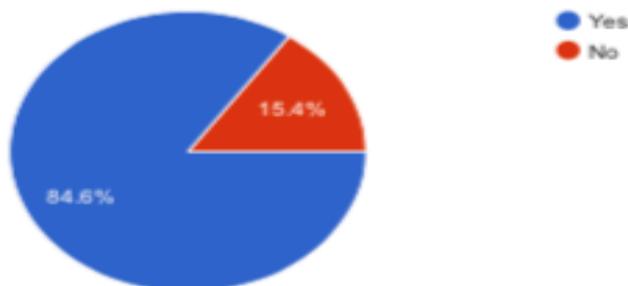
Have you ever experienced any instances where the subcontractor was performing their work in an unsafe manner?

13 responses

- No
- no
- not applicable
- Haven't had a subcontractor on-site yet
- No.
- no - subcontractors have always been safe
- None

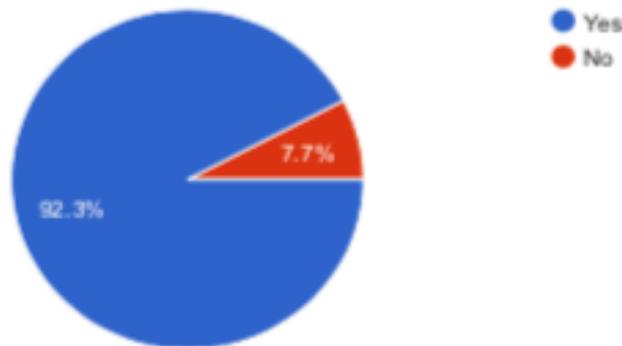
Are you aware that there are now COVID-19 controls for subcontractors incorporated into the SJHA process?

13 responses



Do you understand that when you initiate an SJHA as the requester, you are responsible for ensuring the subcontractor's safety while performing work at the lab?

13 responses



Please give any feedback on things about the subcontractor SJHA process that can be improved. Are there any features that you like? How can ETA better support you with subcontractor safety?

3 responses

The form is sometimes cumbersome. I think it should be simplified to better serve the purpose of ensuring safety.

Some tips on securing site access, especially post-COVID, would be helpful.

the process is awkward particularly if you are requesting service from a company not an individual and they are not sure exactly which technician will be doing the job more than a day out.

It would be good if there are standard SJHAs for certain type of jobs (ie pipette calibration, oven repair, refrigerant repair)