



2020 Annual Safety Report

Environment, Health,
& Safety Manual

The Steward Observatory Annual Safety Report 2020



12m Radio Telescope and Very Long Baseline Array (VLBA) antenna, Kitt Peak, Arizona
Image credit: Arash Roshanineshat
Steward Observatory, The University of Arizona December 19, 2019



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The year 2020 was unusual for safety at Steward Observatory due to a highly contagious Corona virus known as COVID-19. Early in March 2020, The University of Arizona issued a statement for faculty, staff and students to perform work and studies remotely.

“Staff who are at risk of becoming seriously ill from COVID-19 infection should consider moving to performing their job duties remotely, effective Monday, March 16. Please work directly with your supervisor to make such arrangements and consult with Human Resources as necessary.”

The Safety Committee joined with University officials, Steward Observatory Directors, Project Managers and Supervisors to prevent the spread of the COVID19 virus. Our primary focus in 2020 was to aid in developing safe working protocols, obtain services from Facilities Management for essential workers, and provide accurate information to our employees. The pandemic that so many had warned about for years had arrived.

- Most employees prepared to work at home for an undefined period of time. At first there were many questions regarding employee safety in labs and at the telescope sites. We quickly changed our Executive Safety Meetings to one hour bi-weekly Zoom meetings. We also collaborated with Risk Management Services, Occupational Health, Research Lab & Safety Services, Facility Management and other University officials to develop written plans and find critical safety products. Not all employees could work from home. Thus, it was critical for Steward Observatory to enable those deemed “essential workers” to continue working in labs and telescope sites in a safe manner.
- Each telescope site and lab operated on University and CDC Guidelines to keep employees separated from potential exposure. The 12-meter on Kitt Peak was prohibited from having more than one person on site from March until mid-July. Two persons were able to perform summer shutdown work. However, it wasn’t until December 2020 when they were allowed to perform observations, but without observers on site. The first on site observers occurred April, 2021.

The SMT telescope was shut down in March, but started observations in May 2020. The telescope shut down for repairs from mid-June to mid-September and then went back to observing with operators, but remote observers only.

The 90-inch telescope on Kitt Peak was closed from March until about October with one employee allowed on site to keep an eye on things and do maintenance work. In October 2020, some observing started with just one person at the telescope site. Currently, more staff are on site and guidelines are followed to minimize exposures.

- Mount Lemmon shut down from March 26 to March 31, 2020 with two employees working rotating shifts to provide maintenance and keep everything in working order. In mid-June, lightning struck in the Santa Catalina Mountains and started the Bighorn Fire. The fire raged across the Catalina’s towards Mt. Lemmon and was finally contained in mid-July. During this time, three to four employees worked rotating shifts of twelve or more



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hours to monitor telescopes on Bigelow, the summit, and to help fire fighters as needed. After the fire, the crew continued to be on site for cleanup, maintenance and summer shutdown operations. In August 2020, observations began at the 60-inch and the two telescopes on Bigelow. The rule was that no two persons were to work together in the same space and to maintain separate dorm rooms. Observers brought their own bedding so that no one had to clean up after them.

- Most employees at the Steward building on Cherry Ave stayed home from March 16 until June 2020 when some employees were allowed permission to work in labs, machine shop or offices. In addition, there were 20 or so contractors working each day during the summer, but less (perhaps 10 or so) from September on. During this time Facilities Maintenance (FM) custodians maintained and cleaned the facility using products specific to preventing spread of COVID-19. Special trained FM teams were brought in to disinfect areas if someone was identified as having COVID symptoms. Other FM shops installed flush free toilets, hands free paper towel dispensers, protective desk guards and bottles of sanitizer to disinfect high use equipment. Special placards were used for maintaining 6 ft. distance and reminders to cover your nose and mouth with face coverings. The majority of the work force worked from home. All employees wore the required face coverings “masks” and seeing another employee in the hallway was a random occurrence.
- The LBTO closed from March 18, 2020 to May 25, 2020 with no observing, but with two (2) employees from Safford to maintain the mountain equipment safe. From May 26 to July 20 the telescope was back in operation for observing but mostly remotely from Tucson. Summer shutdown was July 21 to August 21 with Safford staff only and limited Tucson staff sleeping at the observatory. Regular observing started August 21 with maximum of four staff overnight. Make sure to read the detailed LBTO report below.
- In April 2021, University officials approved a detailed safety plan to allow essential workers from Casting, Polishing and Integration to return to work in the Mirror Lab. The comprehensive COVID-19 “return to work procedure” and training material was developed by the Mirror Lab Manager. Training for all employees included a hazard awareness for COVID-19 and Mirror Lab Safety protocols for egress, clean-up, and separation. The Mirror Lab Manager worked to support University COVID test requirements and set up a testing site at the Mirror Lab for shift workers. Such testing was made feasible by the support of the UA Test, Trace, Treat Program.

During this time, Facilities Management provided essential disinfecting equipment, hand sanitizer, plastic barriers, hazard signage, hands free paper towel dispensers and special hazmat cleaning for areas if an employee reported COVID symptoms. The Mirror Lab was one of the few research groups on campus to return to a 24/7 work schedule in late April 2020. This enabled mirror production to safely continue. All other non- essential employees worked from home.



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- The point in providing the above information about working conditions during the pandemic is to show that employees were continuing to work without any reported injuries. In 2020, Steward Observatory had zero (0) OSHA recordable accidents with no lost time. This is the best record yet and a reduction from the OSHA 2019 of two (2) recordable injuries.

2020 Themes and Goals

Each year the Executive Safety Committee reviews Steward Observatory's workplace safety and health program and then sets themes and goals based on noted program weaknesses or safety improvements that are needed. For 2020 our goals included: 1) make significant progress on updating fall protection equipment and procedures at telescope sites; 2) continue efforts on safe driving and; 3) promote full compliance with GHS policy and 4) complete the Steward Observatory deferred maintenance upgrade.

1. Promoting safe driving and obtaining full GHS policy compliance were put on hold during the pandemic.
2. Successfully designed a fall protection system for the 90-inch telescope roof/hatch. This system was fabricated and successfully installed at the site.
3. Completed the University of Arizona's Deferred Maintenance Project (DMP) to restore and upgrade the Steward Observatory building 65.

Safety Committee Meetings

In each of the past years we held at least two Safety Committee Meetings with all members of the Safety Committee. We had one meeting planned for April, 2020, but due to the COVID-19 virus we postponed that meeting indefinitely and did not schedule a second meeting. We did, however begin bi-weekly meetings of the Executive Safety Committee that met for at least one hour and continued through July, 2021. The primary focus was the safety and health of our employees during the COVID-19 pandemic. Other efforts focused on:

- Campaign to advertise annual safety accomplishments via laminated posters on strategically placed bulletin boards in Steward Building.
- Revised *Incident Report* procedures to ensure follow through and closure on action items.
- Updated Safety Manual hyperlinks, the manual format and page numbering system.



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- Developed a formal communication line with Kitt Peak management for notification of emergencies and procedures for UA employees.
- Developed a plan to add additional AED's to Steward Observatory main building.
- Rolled out and started using the new Safety Inspection Checklist for documenting site inspections. An inspection template was “borrowed” from LBTO and modified to facilitate site inspections by all groups.
- Investigated outside vendor (Vivid) training program as an option to update employee safety training. There is a general agreement that the Steward safety training website is obsolete in content. The review of purchased programs includes critical components such as method of training (on-line), record of training, training content, an ability to update current standards, and cost. It was determined that outside Vendor packages exceed current Observatory budgets. We are continuing to work with University departments (Risk Management Services, Research Laboratory Safety Services) to develop essential on-line training through the University Edge program for critical required trainings.

2020 Safety Improvements

This year there were many safety improvements made at the various facilities. Some improvements listed below were made on a routine basis due to site manager and employee involvement others as a result of the safety inspections. The following is a list of improvements by site.

Steward Building on Cherry

- ✓ Room 455 unblocked fire extinguisher
- ✓ Room 379 was very crowded and is now clean
- ✓ Crowded hallways cleaned up to allow for proper aisle clearance
- ✓ Floor tiles replaced where broken
- ✓ Hall near 353 had fire extinguisher on floor is now wall mounted
- ✓ At least eight emergency lights replaced
- ✓ Fourth floor hallway was very crowded, now clean
- ✓ Room 443 Electrical switch now not blocked and tripping hazards removed from floor
- ✓ Major cleaning and overhaul of HVAC system in entire building

Sunnyside Mirror Aluminizing Facility

- ✓ Platform designed to be built and installed in vacuum chamber, built but not installed
- ✓ Overhead crane has been replaced, but not yet installed due to virus



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Engineering & Technical Services Facility at Tech Park

- ✓ First Aid Kit installed and stocked near bathroom
- ✓ Telephones installed at either end of the building.
- ✓ New notebook with all SDS sheets compiled and stored next to the chemical storage cabinet.
- ✓ Safety glasses required placards now posted where needed.
- ✓ Laser Caution signs posted where required.
- ✓ Compressed gases caution signs placed on bottle cart and bottle storage area.
- ✓ Lockout/Tagout station now installed with individual employee tags clearly labeled.

Richard F. Caris Mirror Lab

- ✓ Facility first aid kits, fire extinguishers and AED's continue to be inspected monthly
- ✓ Safety shower and eyewash stations are inspected
- ✓ Nine emergency lights and exit lights replaced or repaired
- ✓ Casting dust collectors have a plan for weekly inspection and cleaning

Mount Lemmon and Bigelow

- ✓ Improved method for ladder storage

Kitt Peak 90-Inch

- ✓ Electronics shop leaks fixed
- ✓ Cranes inspected and approved
- ✓ Slip ring changes made and approved--major improvement
- ✓ Snow removal procedure now revised and approved--another major one done
- ✓ Super Lotis rodent problem fixed
- ✓ Oil leak on big joe fixed
- ✓ Obtained truck with air bags for travel to Tucson
- ✓ B and D grinder tool rest fixed
- ✓ Oxygen/acetylene welder brought up to specifications to new policy
- ✓ All new safety harnesses purchased and inspected and operators trained for use
- ✓ Revised and approved Snow Removal Procedure

12-Meter Telescope on Kitt Peak

- ✓ Three emergency lights have been replaced.
- ✓ Chains replaced around the loading dock.
- ✓ All new asphalt driveway and parking area.
- ✓ All First Aid kits updated with new items

SMT

- ✓ Arc flash rubber gloves sent for testing/service
- ✓ All chemicals now stored in flammable storage cabinets.
- ✓ All ladders stored upright
- ✓ First aid kits updated
- ✓ Flashback arrestors installed on both tank and torch sides of hose for welder.



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- ✓ Carbon monoxide detector installed in Utility room
- ✓ Replaced cracked guard on shop grinder.

MGIO

- ✓ Flashback arrestors were installed on all welding equipment
- ✓ Carb cleaner leaking in cabinet was fixed
- ✓ First aid kits all updated
- ✓ All flammable materials now stored in proper cabinets
- ✓ Flashback arrestors are now installed on welders in the utility building on summit.
- ✓ Summit welding cart now upgraded with new O₂/fuel separator

MMTO

- ✓ The medical trauma bag was reorganized and updated.
- ✓ Mobilize self-directing first aid rescue system was implemented for nighttime staff.
- ✓ Breaker panels were upgraded in 2019 reducing the hazards in East Observatory labs.
- ✓ Adhering to a two-person minimum for summit task days has been enforced through limited staff operations during COVID.
- ✓ Winter traction devices to prevent slips and falls during icy conditions (Kahtolla Microspikes) were distributed to mountain staff.
- ✓ Blackline lone worker device has been utilized for nighttime staff
- ✓ Adhering to a two-person minimum for summit task days has been enforced through limited staff operations during COVID



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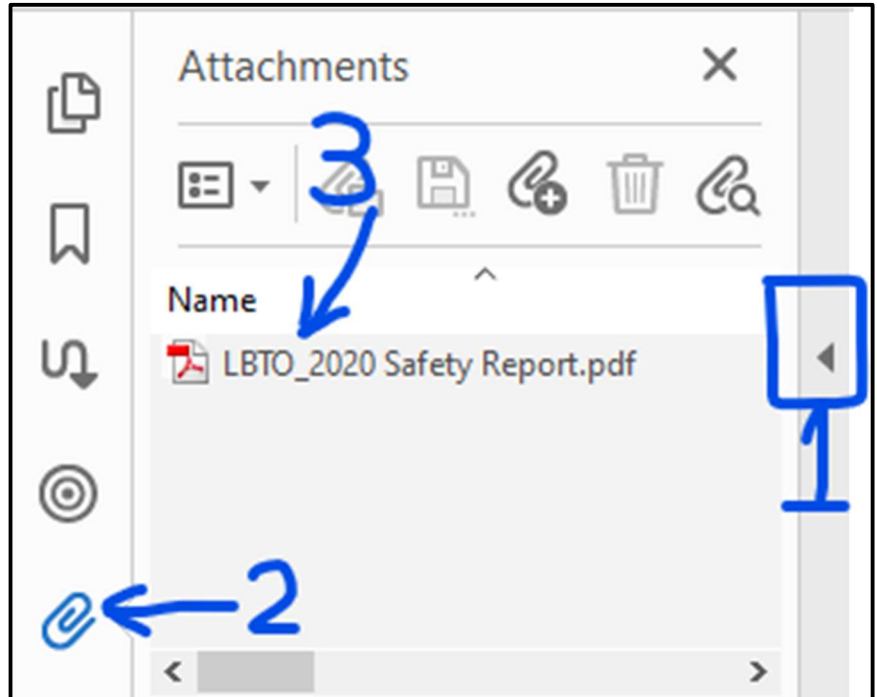
LBT (Report provided by David Carroll LBTO Safety Manager/Engineer)



Acrobat Document
LBTO Safety Report.pdf

To view the LBTO Safety Report,
please follow the instructions
below:

1. Expand the sidebar.
2. Click on the *paperclip* icon.
3. Double click on the file.





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2020 Safety Training

The pandemic stay at home order resulted in many employees updating training from both the Steward Observatory and the University of Arizona Edge Training site. Training subjects ranged from fall arrest, arc flash to information security awareness and preventing discrimination and harassment. Early re-entry employees completed training in hazard awareness for COVID-19, disinfection and cleaning processes, use of personal protective equipment and safe distance work in facilities.

2020 Safety Metrics

Steward Observatory uses the following metrics to evaluate the safety culture and effectiveness of the safety program. These include, the record of site inspections, documented safety fixes and the OSHA record of injury report. Note that site inspections for 2020 lagged due to Covid-19 and occurred in 2021 as documented in Appendix B.

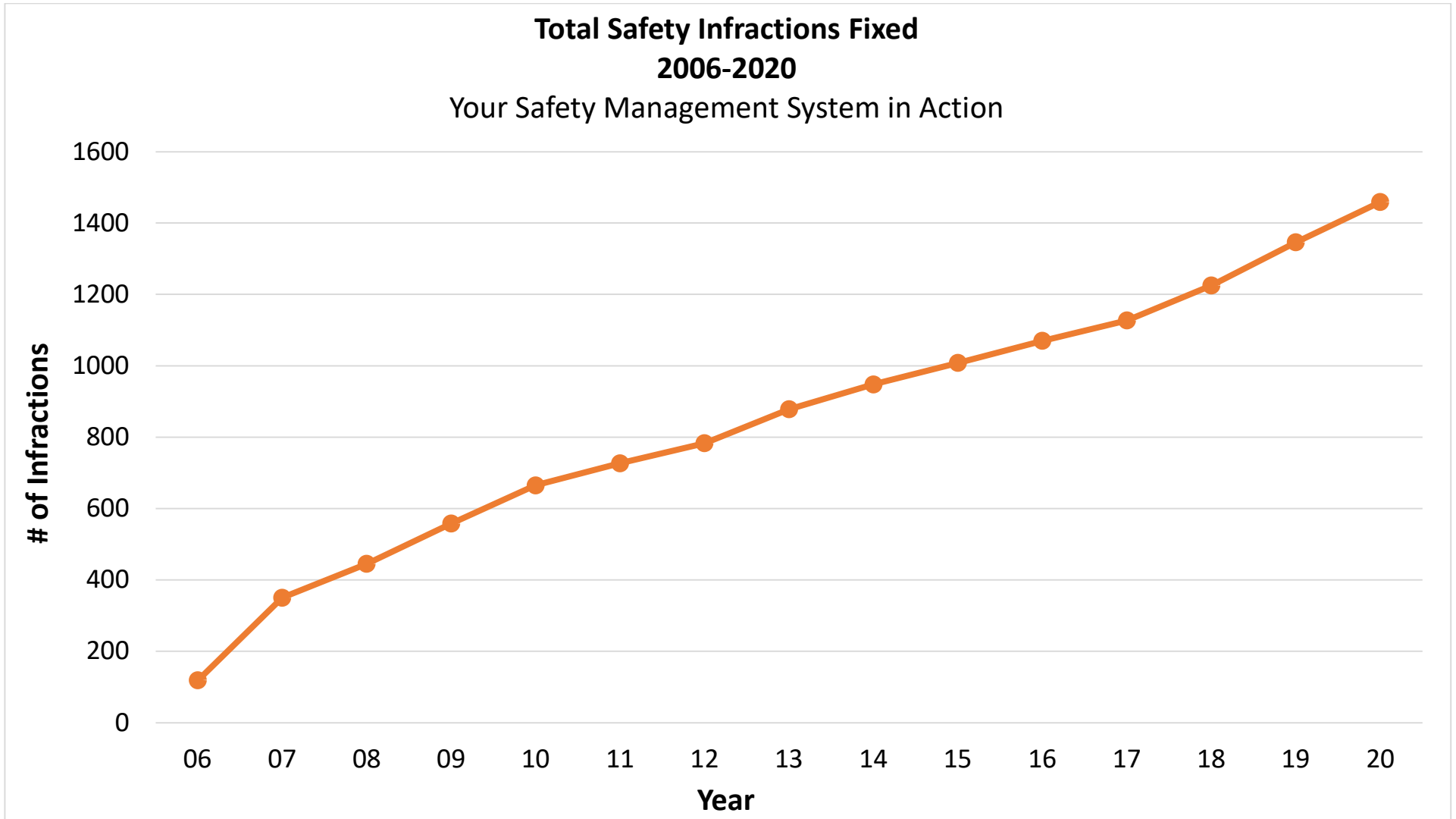
Appendix A - Risk Management OSHA Record of Injury

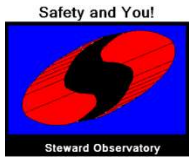
Appendix B – Historical accounting of accomplishments to date detailing number of infractions and fixes resulting from inspections.



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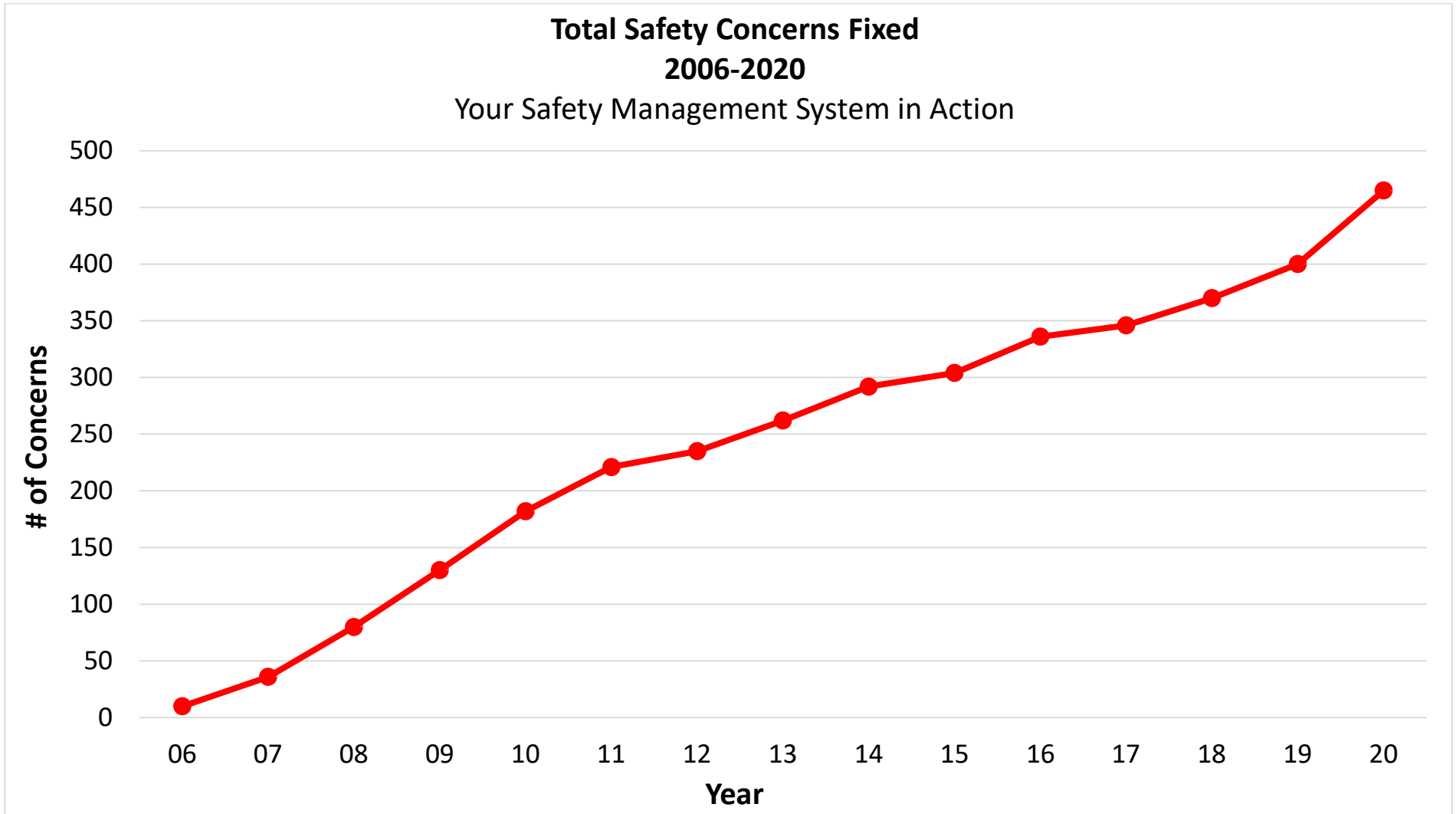
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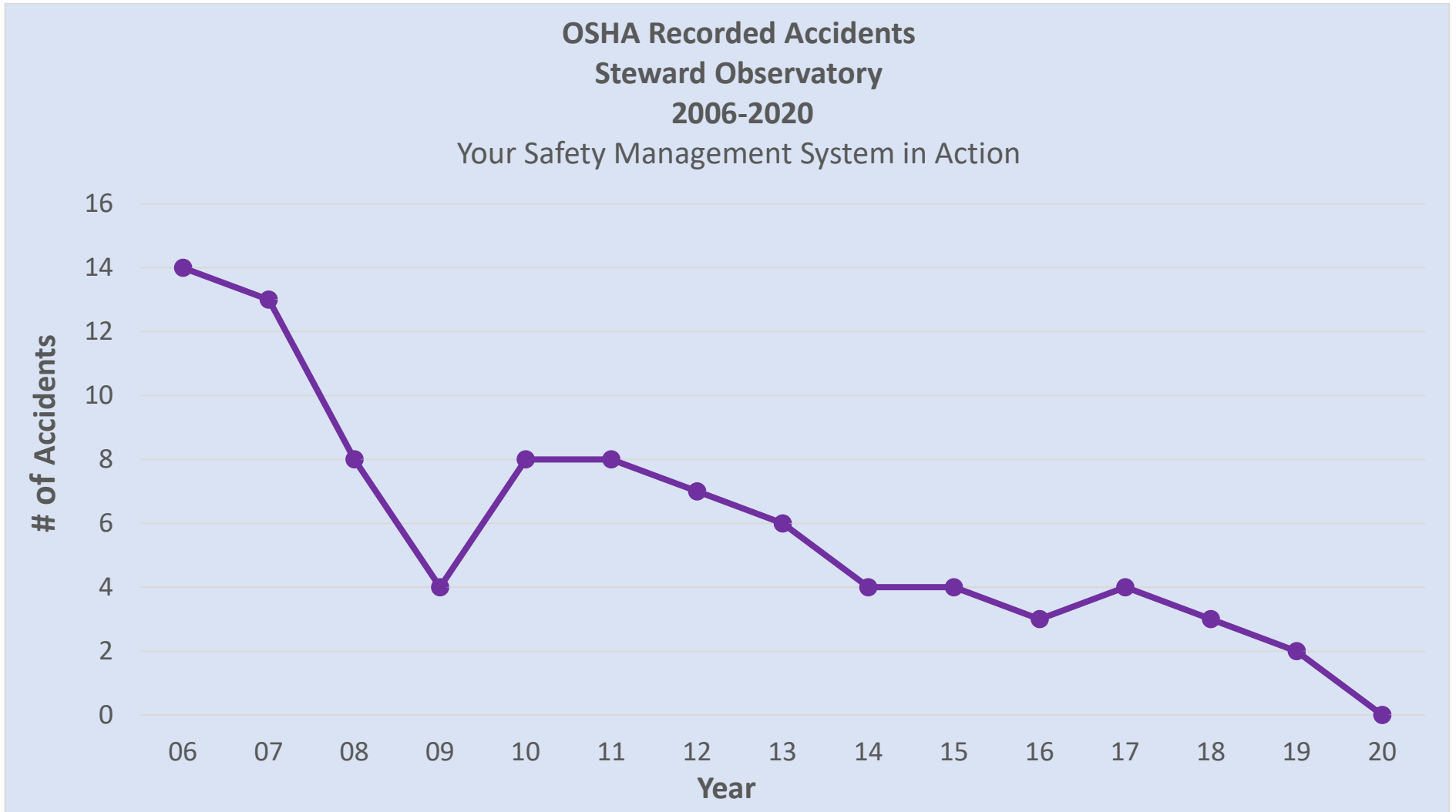
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APPENDIX A

OSHA Record of Injuries & Lost Time 2006 to 2020

I = Injury Report
 O = OSHA Recordable Accidents and injuries
 IL = Illnesses
 L = Lost time Accidents
 T = Total lost work days

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007	2006
O	00	02	03	04	03	04	04	06	07	08	08	04	08	13	14
I	00	02	03	00	03	05	06	05	14	13	12	11	23	25	06
IL	00	00	00	01	00	00	02	01	00	01	03	01	01	02	04
L	00	00	00	01	00	00	00	00	01	01	01	00	00	01	03
T	00	00	00	18	00	00	00	00	10	33	06	00	00	07	164

(Statistics according to official UArizona Risk Management data)



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OSHA's Form 300A (Rev. 01/200) Summary of Work-Related Injuries and Illnesses

Year 2020

U.S. Department of Labor
Occupational Safety and Health Administration
Form approved OMS no. 1293-0170

All establishments covered by Part 1904 must complete this Summary page, even if no injuries or illnesses occurred during the year. Remember to review the Log to verify that the entries are complete.

Using the Log, count the individual entries you made for each category. Then write the totals below, making sure you've added the entries from every page of the log. If you had no cases write "0."

Employees, former employees, and their representatives have the right to review the OSHA Form 300 in its entirety. They also have limited access to the OSHA Form 301 or its equivalent. See 29 CFR 1904.35 in OSHA's Recordkeeping rule, for further details on the access provisions for these items.

Number of Cases

Total number of deaths	Total number of cases with days away from work	Total number of cases with job transfer or restriction	Total number of other recordable cases
0	0	0	0
(G)	(H)	(I)	(J)

Number of Days

Total number of days away from work	Total number of days of job transfer or restriction
0	0
(K)	(L)

Injury and Illness Types

Total number of... (M)	
(1) Injury	0
(2) Skin Disorder	0
(3) Respiratory Condition	0
(4) Poisoning	0
(5) Hearing Loss	0
(6) All Other Illnesses	0

Post this Summary page from February 1 to April 30 of the year following the year covered by the form.

Public reporting burden for this collection of information is estimated to average 16 minutes per response, including time to review the instruction, search and gather the data needed, and complete and review the collection of information. Persons are not required to respond to the collection of information unless it displays a currently valid OMB control number. If you have any comments about this estimate or any aspect of this data collection, contact: CE, Department of Labor, OSHA Office of Statistics, Room N-5644, 200 Constitution Ave, NW, Washington, DC 20212. Do not send the completed forms to this

Establishment information

Your establishment name Steward Observatory - All
 Street 835 N. Cherry Ave.
 City Tucson State Arizona Zip 85721
 Industry description (e.g., Manufacture of motor truck trailers)
Colleges and University
 Standard Industrial Classification (SIC), if known (e.g., SIC 3710)
 OR North American Industrial Classification (NAICS), if known (e.g., 538212)

Employment information

Annual average number of employees _____
 Total hours worked by all employees last year _____

Sign here

Knowingly falsifying this document may result in a fine.

I certify that I have examined this document and that to the best of my knowledge the entries are true, accurate, and complete.

[Signature]
 Company Executive
520-621-1790
 Phone

CRO
 Title
1/26/21
 Date



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APPENDIX B

Steward Observatory Site Inspections

Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C Tele	10/22/19	8	+	4	02/07/21	8	+	19	07/05/21	11		5		0		0
KP & Sunny	09/23/19	9	+	6	10/25/20	6	+	8	05/05/21	6		9		0		0
MGIO	10/28/19	2	+	6	10/03/20	1	+	2	04/17/21	3		2		0		0
VATT	10/28/19	0	+	2	01/21/21	1	+	3	06/04/21	3		2		0		0
LBT	10/28/19	1	+	8	11/17/20	0	+	3	07/12/21	0		3		0		0
MMTO		0	+	0	03/30/20	0	+	5	-----	0		0		0		0
SO & Annex	11/26/19	0	+	1	02/08/21	0	+	1	-----	0		0		0		0
Imaging Tech	12/17/19	0	+	0	11/10/20	0	+	0	05/13/21	0		0		0		0
ETS Facility	12/18/19	0	+	0	09/9/20	0	+	6	03/18/21	0		0		0		0
Optics Shop	12/17/19	2	+	3	-----	0	+	0	-----	0		0		0		0
12-Meter	09/23/19	3	+	2	11/24/20	2	+	6	06/14/21	5		2		0		0
SMT	10/28/19	2	+	6	11/17/20	0		3	04/29/ 21	1		1		0		0
SO Mirror Lab	12/16/19	0	+	2	10/27/20	0	+	6	06/03/21	0		1		0		0
Totals		27	+	40		18		71		29		25		0		0
Total items fixed		1296				1345				1405				0		
Total infractions				1363				1434				1459				0



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C Tele	10/03/17	7	+	4	04/16/18	4	+	2	09/18/18	4		1	05/15/19	2		8
KP & Sunny	10/10/17	3	+	3	03/19/18	4	+	4	09/25/18	6		1	08/14/19	3		9
MGIO	09/26/17	1	+	0	05/07/18	1	+	0	09/12/18	1		3	06/25/19	0		1
VATT	09/26/17	0	+	0	05/07/18	0	+	0	09/12/18	0		0	06/25/19	0		5
LBT	09/26/17	0	+	2	05/07/18	0	+	1	09/12/18	0		1	06/26/19	0		2
MMTO	11/13/17	0	+	3		0	+	0	10/10/18	1		5		0		0
SO & Annex	10/24/17	11	+	38	04/02/18	14	+	4	10/29/18	6		25	06/01/19	9		6
Imaging Tech	11/20/17	0	+	0	06/06/18	0	+	0	11/26/18	0		2	07/02/19	0		0
ETS Facility		0	+	0	Closed	0	+	0		0		0	08/07/19	0		2
Optics Shop	11/14/17	0	+	4	05/22/18	2	+	2	11/19/18	1		2	05/07/19	2		0
12-Meter	10/10/17	3	+	5	03/19/18	2	+	1	10/10/18	1		0	04/22/19	1		3
SMT	09/26/17	0	+	0	05/07/18	0	+	1	09/12/18	0		0	06/26/19	0		2
SO Mirror Lab	12/11/17	0	+	5	06/11/18	0	+	4	12/09/18	0		8	07/30/19	1		2

Totals		25	+	64		27	+	19		20		48		18		40
Total items fixed		1127				1189				1215				1265		
Total infractions				1216				1235				1283				1323



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C Tele	09/30/15	1	+	6	04/05/16	3	+	10	09/06/16	7	+	10	03/29/17	9	+	3
KP & Sunny	11/10/15	1	+	0	03/29/16	0	+	1	10/11/16	0	+	0	03/23/17	0	+	5
MGIO	09/16/15	0	+	0	05/10/16	0	+	0	09/21/16	0	+	0	05/11/17	0	+	2
VATT	09/16/15	0	+	1	05/10/16	0	+	0	09/21/16	0	+	0	05/11/17	0	+	1
LBT	09/16/15	0	+	1	05/10/16	0	+	5	09/21/16	0	+	3	05/11/17	0	+	2
MMTO	10/20/15	0	+	6	05/03/16	0	+		10/31/16	1	+	5		0	+	
SO & Annex	11/09/15	7	+	9	05/02/16	5	+	3	11/14/16	7	+	6	04/11/17	10	+	8
Imaging Tech	11/23/15	0	+	0	04/11/16	0	+	1	11/29/16	0	+	0	04/19/17	0	+	3
Solar Tracker	12/09/15	0	+	1	05/03/16	0	+	2	12/19/16	0	+	2	05/30/17	0	+	0
Optics Shop	10/19/15	1	+	2	04/13/16	1	+	3	11/21/16	2	+	1	05/01/17	3	+	3
12-Meter	11/10/15	5	+	5	03/29/16	2	+	0	10/11/16	2	+	0	03/23/17	2	+	4
SMT	09/16/15	0	+	0	05/10/16	0	+	0	09/21/16	0	+	0	05/11/17	0	+	0
SO Mirror Lab	12/14/15	0	+	7	05/09/16	0	+	3	12/05/16	0	+	0	05/08/17	0	+	5

Totals		15	+	38		11		28		19		27		24		36
Total items fixed		1008				1050				1070				1092		
Total infractions				1061				1089				1116				1152



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C Tele	11/05/13	3	+	3	04/08/14	4	+	2	10/01/14	2	+	2	04/14/15	1	+	3
KP & Sunny	11/12/13	1	+	3	04/01/14	2	+	2	11/12/14	2	+	1	04/08/15	0	+	2
MGIO	09/25/13	0	+	4	05/13/14	0	+	1	09/18/14	0	+	0	05/19/15	0	+	0
VATT	09/25/13	0	+	0	05/13/14	0	+	1	09/18/14	0	+	1	05/19/15	0	+	0
LBT	09/25/13	0	+	0	05/13/14	0	+	0	09/18/14	0	+	0	05/19/15	0	+	2
MMTO	10/24/13	0	+	32	06/11/14	0	+			0	+			0	+	
SO & Annex		0	+		05/21/14	14	+	6	11/24/14	6	+	15	05/18/15	3	+	12
Imaging Tech		0	+		05/20/14	0	+	0	12/02/14	0	+	3	05/11/15	0	+	2
Solar Tracker		0	+		05/19/14	0	+	0	11/20/14	0	+	4	05/20/15	1	+	0
Optics Shop	11/26/13	0	+	12	06/03/14	2	+	6	11/19/14	2	+	0	05/12/15	1	+	0
12-Meter	11/22/13	0	+	0	04/01/14	0	+	0	11/12/14	0	+	7	04/08/15	4	+	3
SMT	09/25/13	2	+	3	05/13/14	3	+	0	09/18/14	0	+	1	05/19/15	1	+	1
SO Mirror Lab		0	+		05/22/14	0	+	1		0	+		02/09/15	0	+	4
Totals		6	+	57		25	+	19		12	+	34		11	+	29
Total items fixed		878				916				948				983		
Total infractions				941				960				994				1023



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C Tele	11/17/11	0	+	2	05/16/12	0	+	7	11/19/12	5		2	05/28/13	3		2
KP & Sunny	11/22/11	0	+	2	05/29/12	0	+	0	11/15/12	0		0	05/21/13	0		6
MGIO	09/19/11	0	+	1	05/09/12	0	+	1	11/08/12	0		0	05/02/13	0		0
VATT	09/19/11	0	+	0	05/09/12	0	+	0	11/08/12	0		0	05/02/13	0		0
LBT	09/19/11	0	+	4	05/09/12	1	+	0	11/08/12	0		1	05/02/13	0		3
SO & Annex	02/27/12	8	+	18	09/17/12	8	+	6	04/09/13	9		11	11/20/13	12		14
Imaging Tech	05/01/12	0	+	1	01/14/13	0	+	0	06/10/13	0		2	11/04/13	0		0
Solar Tracker	03/20/12	0	+	1	08/14/12	1	+	1	03/26/13	0		2	11/25/13	0		0
Optics Shop			+				+		12/18/12	0		18	05/23/13	2		4
12-Meter	11/22/11	0	+	0	05/29/12	0	+	1	11/15/12	0		0	05/21/13	0		0
SMT	09/19/11	1	+	0	05/09/12	0		0	11/15/12	0		0	05/02/13	0		3
SO Mirror Lab	02/29/12	0	+	11	10/04/12	0	+	5	04/09/13	0		11	11/27/13	0		8
Totals		9	+	40		10		21		14		47		17		40
Total items fixed		727				766				783				827		
Total infractions				776				797				844				884



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C_Tele	11/09/09	1	+	0	04/29/10	0	+	2	12/08/10	1	0		04/28/11	1		1
KP & Sunny	11/18/09	0	+	1	04/14/10	0	+	4	11/30/10	0	2		03/08/11	0		0
MGIO	11/10/09	0	+	0	05/12/10	0	+	1	09/21/10	0	0		05/26/11	0		0
VATT	11/10/09	0	+	0	05/12/10	0	+	0	09/21/10	0	1		05/26/11	0		0
LBT	11/10/09	0	+	0	05/12/10	0	+	0	09/21/10	0	3		05/26/11	1		2
SO & Annex	02/04/10	7	+	12	06/22/10	5	+	6	01/06/11	6	14		07/19/11	5		18
Imaging Tech	03/02/10	0	+	0	07/21/10	0	+	2	01/06/11	0	0		07/12/11	0		0
LBTI & Solar Tra	02/08/10	1		1	06/23/10	0	+	5	12/14/10	0	2		07/12/11	0		2
Tumamoc Hill	mothballed		+		mothballed		+		mothballed				mothballed			
12-Meter	11/18/09	0	+	1	04/14/10	1	+	3	11/30/10	1	2		03/08/11	0		1
SMT	11/10/09	2	+	1	05/12/10	0	+	4	09/21/10	2	0		05/26/11	2		2
SO Mirror Lab	03/05/10	1	+	28	07/15/10	3	+	4	11/22/10	0	7		08/02/11	0		4
Totals		12	+	44		9		31		10		31		9		30
Total items fixed		588				635				665				697		
Total infractions				644				675				706				736



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Site	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
MT Lem & C-Tele	03/31/08	4	+	13	09/04/08	8	+	5	01/21/09	3		3	07/07/09	1		3
KP & Sunny	05/08/08	0	+	4	08/07/08	1	+	1	12/16/08	2		0	06/04/09	2		7
MGIO	06/16/08	0	+	0	10/01/08	0	+	0	03/11/09	0		0	07/13/09	0		0
VATT	06/16/08	0	+	0	10/01/08	0	+	0	03/11/09	0		0	07/13/09	0		0
LBT	06/16/08	0	+	4	10/01/08	0	+	1	03/11/09	0		1	07/13/09	0		0
SO Office & Labs	06/19/08	17	+	11	11/05/08	10	+	10	04/02/09	8		30	07/28/09	10		6
Imaging Tech		0	+	0	11/06/08	0	+	2	05/18/09	0		1	08/25/09	0		0
LBTI Lab & So Te	06/17/08	0	+	2	11/20/08	0	+	11	04/9&5/6	1		4	08/19/09	0		2
Tumamoc Hill	mothballed		+		mothballed		+		mothballed				07/07/09	0		0
12-Meter	05/08/08	2	+	2	08/07/08	0	+	0	12/16/08	0		3	06/04/09	0		3
SMT	06/16/08	1	+	4	10/01/08	1	+	2	03/11/09	1		2	07/13/09	3		2
SO Mirror Lab	06/17/08	8	+	7	11/20/08	3	+	2	04/15/09	0		29	07/28/09	6		2
Totals		32	+	47		23		34		15		73		22		25
Total items fixed		389				445				487				553		
Total infractions				468				502				575				600



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Site	Inspected	Found	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New	Inspected	Rem.	+	New
Mt Lemmon	03/30/06	24	08/09/06	6	+	2	03/15/07	3	+	4	07/05/07	3		8	12/05/07	2		9
KP & Sunny	04/25/06	24	08/17/06	7	+	0	01/25/07	2	+	0	07/06/07	1		7	11/28/07	0		0
MGIO	05/03/06	2	08/22/06	0	+	0	04/04/07	0	+	0	08/29/07	0		0	01/16/08	0		1
VATT	05/03/06	28	08/14/06	24	+	1	04/04/07	13	+	7	08/29/07	14		2	01/16/08	2		1
LBT	05/04/06	9	08/22/06	0	+	3	04/04/07	0	+	0	08/29/07	0		8	01/16/08	2		1
SO & Tele	05/25/06	72	11/28/06	38	+	10	05/03/07	27	+	21	09/05/07	22		5	02/04/08	13		15
Imaging Tech	05/31/06	9	11/29/06	0	+	1	04/16/07	0	+	0	09/11/07	0		3	02/04/08	1		0
SMP	06/02/06	5	11/29/06	4	+	6	05/24/07	3	+	2	09/20/07	1		2	02/06/08	0		3
Tumamoc Hill	-	-	08/23/06	3		-	02/20/07	0	+	0	mothballed							
12-Meter	04/25/06	9	08/07/06	0	+	6	01/25/07	4	+	5	08/07/07	5		2	11/28/07	1		2
SMT	05/03/06	15	08/22/06	9	+	12	04/04/07	3	+	4	08/29/07	4		3	01/16/08	2		1
SO Mirror Lab	05/23/06	23	12/07/06	10	+	10	05/24/07	6	+	17	09/20/07	14		12	02/06/08	10		5
Totals		220		101	+	51		61		60		64		52		33		38
Total items fixed				119				210				267				350		
Total infractions		220				271				331				383				421



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