



Association of Reciprocal Safety Councils, Inc.

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ARSC

The mission of the Association of Reciprocal Safety Councils, Inc. (ARSC) is to provide to ARSC members world-class safety education, risk management services and resources that are consistent, cost-effective, reciprocal and that conform to regulatory standards and industry-accepted practices that will result in a safer world.

ARSC RECIPROCAL TRAINING PROGRAMS

Basic Orientation Plus®
Basic Orientation Plus - Refresher®
Benzene
Bloodborne Pathogens
Confined Space
Electrical Safety for Non-Qualified
Elevated Work
Fire Watch Attendant
Hazard Communication Standard
Hearing Conservation
Hydrogen Sulfide
Line of Fire Lockout/Tagout
Process Safety Management
ProtectWatch
Respiratory Protection
Silica

The Association of Reciprocal Safety Councils, Inc. (ARSC) and the Value of Reciprocity

THE HISTORY OF ARSC AND ITS MISSION

Mission Statement

In June 1995 the National Petroleum Refiners Association (NPRA), now known as the American Fuel and Petrochemical Manufacturers (AFPM) ad-hoc committee on Contractor Safety Training, and the Texas Chemical Council (TCC) Occupational Safety and Health (OSH) committee delegated the task of developing reciprocity agreements with all Contractor Safety Councils to the Administrators of each of the Safety Council's involved.

The Safety Council representatives began meeting and working diligently towards reciprocity. The immediate focus was on the Gulf Coast area, as that is the largest Petrochemical Industry concentration in the country. Many felt that if an agreement could be reached in the Gulf Coast area that other parts of the country would agree in time.

The dedicated efforts of these Safety Council representatives were realized by the development of a training program that would not only meet the objectives of the NPRA but also provide the contractor with "training" as well as "orientation." An association was formed to manage the process and the Basic Orientation Plus® (BOP) and the Basic Orientation Plus - Refresher® (BOPR) was put in service.

ARSC was chartered as a not-for-profit corporation on October 7, 1997 (Charter #1462953) and is funded by the participating Safety Council Organizations each calendar year. Each ARSC member is required to be a non-profit organization.

To fulfill the objectives of the ARSC, members have adopted a mission statement that currently reads as follows:

ARSC's mission is to provide to ARSC members world-class safety education, risk management services and resources that are consistent, cost-effective, reciprocal and that conform to regulatory standards and industry-accepted practices that will result in a safer world.

(Adopted by the ARSC Board of Directors on 02/21/17)

THE ARSC CURRICULUM SERVES AS THE STANDARD FOR RECIPROCAL SUCCESS

Why ARSC?

ARSC members work together to develop and revise current training programs that meet a significant portion of the Occupational Safety and Health Association (OSHA) requirements, as defined within the standards. This allows councils that perform site orientations to work with industrial facility representatives in reducing the amount of redundant information in their site orientations, thereby increasing the effectiveness of the training while reducing the cost of development. This is the historical basis upon which, BOP/BOPR were initially created. The objective of ARSC is to continue this approach and produce new and effective additional reciprocal training programs that provide consistent and cost-effective reciprocal safety education that conforms to regulatory standards and industry-accepted practices.

The BOP program meets a significant portion of the OSHA-mandated contractor requirements. This increases safety training efficiency for the contract employee due to a reduction in redundant information being presented.

ARSC programs are not meant to relieve contract companies of all training responsibilities. There are elements of the standards that require the contractor to provide employer specific information regarding policy and procedures as well as some hands-on training on specific equipment. ARSC developed a specific training matrix for each BOP module that lists the specific regulatory requirement covered in the training then lists what the contractor must do for full regulatory compliance. The BOP/BOPR training matrix can be found on the ARSC website.

ARSC programs focus on the needs of industry. A key to the success of ARSC and the reciprocal model is the involvement and support of the Owners in the areas serviced by the ARSC members. The contractors, facilities and workers benefit from cost and time savings by the reduction of repetitive training while assuring the quality of the training from ARSC member to ARSC member. There is also a savings to the ARSC members by reducing the amount of money each individual ARSC member must spend to develop their own programs.

Credibility is a core value of ARSC that is provided to members and owner facilities. Comprehensive audits of each ARSC member, regarding quality and consistency of training, as well as assurance that the individual trained is the individual who is issued a card stating the training has occurred, is the chief tool used to attain and maintain credibility. ARSC contracts with a third-party auditing firm to conduct audits of each ARSC member.

ARSC activities are managed by an Administrator who serves as coordinator for much of the committee activities. The Administrator is available to help anyone who is interested in the ARSC activities or has a question or concern they would like addressed.

ARSC continues to grow. And with twenty-six members operating in the United States and the U.S. Virgin Islands the BOP/BOPR programs are now offered by our members in Alabama, Alaska, Colorado, Illinois, Indiana, Kansas, Kentucky, Louisiana, Mississippi, New Jersey, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Utah, West Virginia, Wyoming, and St. Croix. The locations of the ARSC members can be found on the ARSC website located at www.arsc.net. Suitcase Training can be conducted by ARSC members at any remote location, even where no ARSC member location exists.

ARSC members and the owners they serve have expressed the need for continued efforts aimed at more reciprocal programs. ARSC has developed many additional reciprocal programs to meet the owner and contractor needs that have unique course codes and are subjected to ARSC guidelines for delivery and audits.

THE VALUE OF RECIPROCITY

Reciprocal Value Varies between ARSC Members

The diversity of the ARSC membership allows ARSC services to be offered in areas where large, medium, and small petrochemical markets exist. It should be noted that the larger the concentration of petrochemical facilities, the greater the reciprocal value.

Twenty-one ARSC members (80% of ARSC members) reported reciprocal transferred training units for 2021 as shown in the following table. These twenty-one ARSC members accounted for 96% of the ARSC training volume (300,797 training units of ARSC total volume of 313,321 units for 2020) representing the majority of ARSC volume.

MEMBER LOCATION	2019	2020	2021
Mobile, AL	1,080	1,437	NR
Midland, TX	452	501	482
Shreveport, LA	309	149	255
Port Lavaca, TX	1,904	1,241	1199
Borger, TX	1,395	2,388	631
Longview, TX	962	1,142	1557
Swedesboro, NJ	115	72	36
Freeport, TX	10,077	7,032	6884
Texas City, TX	9,223	6,789	6670
Decatur, AL	2,081	1,385	1846
Lake Charles, LA	14,302	8,188	27337
Corpus Christi, TX	20,266	4,963	6253
New Orleans, LA	4,992	5,261	6029
Beaumont, TX	21,543	9,021	17771
Baton Rouge, LA	34,702	15,343	49164
Houston, TX	28,651	19,442	18912
Oklahoma City, OK	1,903	1,237	2708
Wilmington, NC	50	20	20
Cheyenne, WY	2,311	757	2066
Louisville, KY	*NR	50	10
Anchorage, AL	*NR	*NR	141
Charleston, WY	*NR	*NR	*NR
Denver, CO	*NR	*NR	*NR
Evansville, IN	*NR	*NR	*NR
Nashville, ID	*NR	*NR	*NR
Salt Lake City, UT	*NR	*NR	*NR

*Not Reported (NR)

TOTAL TRANSFERS REPORTED **2021**: **149,973 (74% increase from 2020)**
TOTAL TRANSFERS REPORTED **2020**: **86,418 (45% decrease due from 2019 to covid)**
TOTAL TRANSFERS REPORTED **2019**: **156,318 (3% increase from 2018)**

The value of reciprocity for each ARSC member can be expressed in total number of reciprocal units received as shown in the above table or expressed in terms of how much reciprocity value exists in relation to the total number of ARSC units trained by each ARSC member. This later method is a more accurate representation of received value of reciprocity by an ARSC member who does not have to provide ARSC training for the BOP/BOPR and the contract worker can proceed directly to site-specific orientation thus saving the contractor and owner time and money.

CALCULATING THE RECIPROCAL RETURN ON INVESTMENT

Assumptions must be made to address labor cost and man-hours saved

To effectively calculate an accurate return on investment (ROI) that the ARSC reciprocal process provides to stakeholders, which include the ARSC members, petrochemical owners and contractors, a few assumptions must

be made. Not all ARSC members collect, and track data related to reciprocal training units. The following members did not report data: Mobile, AL, Denver, CO, Evansville, IN, Charleston, WV, and Salt Lake City, UT. This assumes that the percentage of reciprocal training has remained constant for the time periods provided. Reciprocity existed between Safety Councils prior to the creation of ARSC but training volume totals were not available.

The second assumption utilized in the calculation of the reciprocal ROI is that a man-hours savings for reciprocal training will be 3 hours. The ARSC BOP course is taught in a time frame ranging from 4.5 to 5 hours and the ARSC BOPR is provided in a Computer-Based Training (CBT) format that generally takes 1.5 to 2 hours to complete. The breakdown of units taught between BOP and BOPR for 2021 is approximately 29.8% BOP to 70.2% BOPR. Based upon this ratio, the average man-hours saved per reciprocal unit are 3 hours.

The third assumption made is on the average cost of labor across the ARSC member’s regions. This could vary widely determined by numerous factors including union-nonunion, craft skill, per diem, experience, labor rate, payroll add-on such as overhead and taxes, and other factors that are passed on to the petrochemical owner. Research provided through the Texas Workforce Commission listed various labor rates throughout the Houston area for contractors working in the petrochemical industry. The factors listed above influence these labor rates. Based upon the data reviewed a labor rate of \$40/hour was selected to calculate the ROI. Some regions may want to utilize a rate that is lower or higher based upon the factors listed, but the cost should include payroll burden (taxes, insurance, et al.) as that is a true cost borne by contractors and petrochemical owners.

The last assumption is to utilize the data of the twenty-one ARSC members reporting reciprocal training units in 2020 as consistent for the ARSC members. As stated earlier, the training volume reported by these twenty-one ARSC members represents 96% of the ARSC training volume for 2021. When evaluating the number of reciprocal training units reported by the twenty-one ARSC members as a percentage of the total reciprocal units delivered by these ARSC members, a reciprocal percentage was derived. This percentage for 2021 was 49.9% (149,973 reciprocal units for 300,797 ARSC training units delivered). The table below applies the 49.9% reciprocity percentage for ARSC training units delivered in the current year (2021) and an average of 35% for the years from 1999-2020 for all ARSC members.

Table of ARSC Training Units by Year and Number of Projected Reciprocal Units

YEAR	TRAINING UNITS	RECIPROCAL UNITS
2021	313,321	156,223
2020	30,2431	89,520
2019	388,804	161,742
2018	378,633	159,025
2017	351,576	143,091
2016	374,570	144,585
2015	376,231	132,810
2014	367,250	115,317
2013	333,756	117,415
2012	327,756	115,305
2011	302,617	103,616
2010	279,626	106,460
2009	278,307	97,908
2008	291,706	102,622
2007	272,578	95,893
2006	256,157	90,116

2005	211,522	74,413
2004	190,290	66,944
2003	184,275	64,828
2002	168,464	59,266
2001	171,423	60,307
2000	164,024	57,704
1999	143,599	50,518

TOTAL UNITS REPORTED: 6,216,286 2,365,628

RECIPROCITY ROI INCLUDES MAN-HOURS SAVED AND TRAINING DOLLARS NOT SPENT

ARSC provided the petrochemical industry almost \$25MM in cost savings in 2021 and over \$400MM in cost savings since 1999

When evaluating the total dollars saved to the petrochemical industry due to reciprocity among the ARSC members, three factors must be considered. The first factor is calculating the total number of workers who were able to proceed directly to the owner site-specific training because they received ARSC training at an ARSC member facility. The second factor involves the man-hours saved in labor cost which would have been expended if the worker were required to complete the ARSC training. The third factor is the savings for the contractor in not having to pay the ARSC training fees to the ARSC member. Due to anti-trust laws, ARSC does not permit ARSC members to discuss training fees at any ARSC meeting. ARSC training fees are usually published on the ARSC member website and are divided into member and non-member fees. The fees vary from ARSC member locations and are based on training volume, owner support, membership dues and other ARSC member revenue streams. For calculation of the ROI involving training fees across the ARSC network of members for BOP/BOPR a value of \$40/unit is used and is a necessary part of the ROI calculation.

All three of these factors are expenses to the petrochemical owner, contractor or worker that provide the ROI dollars back to the ARSC stakeholders.

In completing the ROI to the ARSC stakeholders for 2021, the following calculations provide the basis for the ROI:

Estimated Number of Reciprocal Training Units in 2021:	156,223
Estimated Number of man-hours saved by reciprocity:	156,223 x 3hrs/unit = 468,669
Estimated Cost Savings for man-hours saved by reciprocity:	468,669 x \$40/unit = \$18,746,760
Estimated Cost Savings for not having to pay for ARSC training:	156,223 x \$40/unit = \$6,248,920
ANNUAL RECIPROCITY SAVINGS TO STAKEHOLDERS IN 2021 FROM MAN-HOURS AND TRAINING COST:	\$24,995,680

In completing the ROI to the ARSC stakeholders from 1999-2021, the following calculations provide the basis for the ROI:

Estimated Number of Reciprocal Training Units 1999-2021:	2,365,628
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Estimated Number of man-hours saved by reciprocity:	2,365,628 x 3hrs/unit = \$7,096,884
Estimated Cost Savings for man-hours saved by reciprocity:	\$7,096,884 x \$40/unit = \$283,875,360
Estimated Cost Savings for not having to pay for ARSC training:	2,365,628 x \$40/unit = \$94,625,120
TOTAL RECIPROCITY SAVINGS TO STAKEHOLDERS FROM 1999-2020 DUE TO ARSC RECIPROCITY:	\$378,500,480

If reciprocal data were provided for 1997 and 1998, the total reciprocity value would exceed \$400MM.

It should also be noted that contract workers in some locations are permitted to go directly to the petrochemical owner's site and are not required to check in at the ARSC member location. These reciprocal units are not tracked by any the ARSC members. If a conservative estimate of 10% is utilized for workers not having to report to an ARSC member location for reciprocal transfer purposes, the reciprocal value for these workers increases the ROI by an additional \$20,000,000 generating a cumulative ROI to approximately \$420MM from ARSC beginnings in 1997.

EXPANDING RECIPROCITY IN THE FUTURE TO PROVIDE GREATER ROI

ARSC Expands library of Reciprocal Programs

ARSC and its members have expanded and revised the curriculum for additional reciprocal training courses and expect to continue the development of additional programs. We now offer many reciprocal courses.

All ARSC courses are subjected to the ARSC audit process for program integrity, instructor competency, testing protocols and the management-of-change process. ARSC currently does not require the ARSC member to track the reciprocal units associated with these additional courses. In addition to the BOP and BOPR courses, ARSC has created fourteen additional reciprocal courses. These courses are listed on page 2 of this White Paper. In 2021, ARSC members delivered the following training units of these courses shown in the table below with nineteen ARSC members reporting this data:

Additional ARSC Training Units Delivered For Reciprocal Courses In 2021

COURSE NAME	UNITS DELIVERED
Benzene	3696
Blood-Born Pathogens	2185
Confined Space Entry	58,647
Electrical Safety for Non-Qualified	170
Elevated Work	1331
Fire Watch Attendant	12,777
Hazard Communication Standard (HAZCOM)	829
Hearing Conservation	489
Hydrogen Sulfide	3395
Lockout Tagout(LOTO)-Line of Fire	2057
Process Safety Management	255
Protect Watch	215

Respiratory Protection	2175
Silica	3
TOTAL UNITS DELIVERED	88,224

THE FUTURE OF RECIPROCITY

ARSC and ARSC Members are well-positioned to assist Stakeholders with Future Reciprocal Solutions

The key to reciprocal success in the future is to utilize the experience and resources of the ARSC members. As non-profit organizations, ARSC members are created for the benefit of the industry they serve. ARSC and ARSC members are the subject matter experts when it comes to reciprocity. Many ARSC members offer additional services. Standardization of contractor pre-qualification forms (PQF), process safety management auditing, drug & alcohol testing, security background screening, craft skill assessments and workforce development initiatives are all areas where reciprocity may be leveraged and provide a substantial ROI to the ARSC member, petrochemical owner, contractor, and worker in the future. The success of the ARSC reciprocal model is branching out from the petrochemical industry into the commercial construction marketplace, utilities, pulp and paper, and the maritime industry. The success of future reciprocal solutions is only limited by our willingness to cooperate with each other. The old economic adage “time is money” still holds true today and the continued success of ARSC and ARSC members is a foundational stone in saving time, money, and lives. ARSC and ARSC members have a most noble mission, plus experience as reciprocity subject matter experts, as well as a wonderful heritage to continue to expand the good news of reciprocity and the ROI it brings to those we serve and those who will be served in the future.