

SUMMARIES OF THE UNIQUENESS OF GRCDASWANA

This summary section presents information that transcends the chronological compilation of the history of GRCDASWANA in the three books (sections) that follow this summary. The design of the history chronicles year-by-year what occurred in the four major activities of the Association – Management, Technical Programs, the Annual Seminar and Equipment Show (WASTECON) and the Chapters. These summaries provide information that cross over the 4 activities throughout the history of the Association. Presented In this section are lists of the international presidents, a chronology of the growth of Chapters, a listing of the dates/locations of the annual international seminar and equipment show (WASTECON) and a special section devoted to tracing the Landfill Gas Management Technical Division..

GRCDASWANA International Presidents

Year	Name	Year	Name
1962	Grant Flint*	1987	Ken Smith
1963	Frank Machado*	1988	Pam Day ⁽⁹⁾
1964	John Gaul*	1989	Bob Bruhn
1965	Earl Records*	1990	Denny Kerton
1966	Clarence Dean & Ed Stepanek ^{*(1)}	1991	Walter Brodowski
1967	Les Haug ⁽²⁾	1992	N. C. Vasuki ⁽¹⁰⁾
1968	Bob Lawrence	1993	N. C. Vasuki
1969	Art Bonnell	1994	Curt Kemppainen ⁽¹⁰⁾
1970	Jacob Mynederse	1995	John Abernethy
1971	Jim Cornelius	1996	Herb Flodorf
1972	Clarence Price	1997	Durwood Curling ⁽¹¹⁾
1973	Jerry Fairbanks ⁽³⁾	1998	Steve Maguin
1974	Willie Case	1999	Mark Hammond
1975	Harry Frisby & Tom King ⁽⁴⁾	2000	Steve Viny ⁽¹²⁾
1976	Bob Lawrence ⁽⁵⁾	2001	Jack Friedline
1977	Bob Lawrence	2002	Mark Bryant
1978	Bill Larson ⁽⁶⁾	2003	Nancy Nevil
1979	Bob Epler & Bill Larson ⁽⁶⁾	2004	Allen Lynch
1980	Tim Hunt ⁽⁷⁾	2005	Rick Mauck
1981	Tim Hunt	2006	Andy Quigley
1982	Tim Hunt	2007	Tom Parker
1983	Gary Vroman	2008	Laure Batchelder Adams
1984	Peter Wong ⁽⁸⁾	2009	Carl Newby
1985	Jim Considine	2010	John Hadfield
1986	Phil Richmond	2011	Sara Bixby

*Although SWANA was organized as GRCDASWANA in 1961, it did not incorporate as international organization until 1966. The Presidents highlighted with an asterisk were Presidents of the Southern California (The Founding Chapter) and provided much of the leadership in the early years to create GRCDASWANA as an association of municipal solid

waste management professionals. Without question, Grant Flint was the founding father and driving force for the establishment of GRCDA.

All of the Presidents of GRCDA/SWANA provided dedicated leadership to the organization. No doubt each one of them put their print on the organization. The noted past International Presidents had a more than impact on what SWANA is today.

- 1) Two are listed as serving as president this year. **Ed Stepanek**, was originally elected as president of the founding chapter, but had to resign due to job demands. **Clarence Dean** succeeded as president.
- 2) **Les Haug** was the first "International President".
- 3) **Jerry Fairbanks** was the first non-Californian International President and the driving force behind the formation of the Washington Chapter.
- 4) Two are listed as serving as president this year. **Harry Frisby** was originally elected as International President, but had to resign due to personal reasons. **Tom King** succeeded him as president.
- 5) **Bob Lawrence's** contributions to GRCDA are legendary. He served two terms as International President. He was the driving force behind the formation of the Northern California Chapter. His most important contribution, however, is what now WASTECON is. Serving as the International Seminar Chairman his vision of a conference and exposition just for solid waste people carried the meeting from ballrooms in small hotels to major exhibit halls in major cities.
- 6) **Bill Larson** was the driving force behind the establishment of the GRCDA/SWANA Awards Program. **Bob Epler** can be credited with gaining GRCDA/SWANA the non-profit IRS(c)(3) designation (a research and educational organization) status. Serving as the Past International President **Bill Larson** assumed the presidency again when Bob Epler had to resign as he had left the public sector.
- 7) **Tim Hunt** was the first International President from east of the Mississippi River. He served three consecutive terms to provide stability during the first major growth surge of GRCDA. During his tenure at his urging GRCDA established a project form of cost accounting. Tim went on to serve as the Chair of the International Seminar and Equipment Show Committee for a number of years, years that saw major growth in the meeting. Tim was also the driving force behind the formation of the Florida Chapter.
- 8) **Peter Wong** was the first Canadian to serve as International President.
- 9) **Pay Day** was the first woman to serve as International President. Many organizations similar to GRCDA/SWANA have yet to elect a woman to the position of president.
- 10) **NC Vasuki** served two terms as International President and initiated the effort to establish a long-range program plan and an executive cadre' of staff for SWANA. NC was also a driving force in the formation of the Mid-Atlantic Chapter. **Curt Kemppainen** succeeded NC Vasuki and brought the long-range plan and executive staff plan to closure and implementation. Curt was also the driving force behind the formation of the Michigan Chapter.
- 11) **Durwood Curling** served as the International President when SWANA transitioned from Lanny Hickman to John Skinner as CEO/Executive Director of

SWANA. Durwood was also the driving force behind the formation of the Virginia Chapter.

12) **Steve Viny** was the first International President from the private sector. He was a perfect choice for this pioneer role.

GRCDA/SWANA CHAPTERS **8/31/10**
CHRONOLOGY OF GROWTH

#	NAME	CULTURAL NAME	DATE	COMMENTS
1	GRCDA	GRCDA Founding Chapter	2/14/1962	When originally formed, there were no thoughts of Chapter
	Southern California	Southern California	11/9/1987	Name Change in 1987 to recognize the chapter as the
2	Northern/Central California	Sierra	6/10/1964	Dissolved in 1965.
	Northern California	Gold Rush	1965	Date not known, assumed in early 1965
3	Central California	Sierra	11/10/1966	Chartered at the 1996 annual meeting
4	Washington	Evergreen	11/8/1969	Chartered @ the 7th. Annual Show, initially included E
5	Oregon	Oregon Beaver	1975	Many names including Committee for a Greater Oregon
		Oregon Beaver		Group, Oregon Solid Waste Management Association
		Oregon Beaver		Oregon Chapter of GRCDA, Oregon Beaver Chapter/
6	Arizona			Date not known, assumed either 1974,5,6
7	British Columbia	Pacific		Date not known, assumed either 1974,5,6
8	Canadian Prairie	Northern Lights		Date not known, assumed 1976/1977
		Northern Lights		Includes the Provinces of Alberta, Manitoba, Saskatch
		Northern Lights		Northwest Territories
9	Ontario			Date not known, assumed 1976/1977
10	New Mexico	Road Runner		Date not known, assumed 1976/1977
11	Utah	Beehive		1966
See Note 1				
12	Florida	Sunshine	1978	Chartered @ the 16th. Annual Meeting in Calgary, Alb
13	Oklahoma	Indian Nations	1978	Chartered @ the 16th. Annual Meeting in Calgary, Alb
14	Illinois	Land of Lincoln	8/28/1980	Chartered at the 18th. Annual Meeting in Phoenix, AZ
15	Texas	Lone Star	8/28/1980	Chartered at the 18th. Annual Meeting in Phoenix, AZ
16	Iowa-Nebraska	Cornhusker	9/3/1981	Chartered at the 19th. Annual Meeting in Salt Lake Ci
	Nebraska	See Note 2		
17	Louisiana		8/19/1982	Chartered at the 20th Annual Meeting in Dallas, TX
18	Minnesota	Land of Lakes	1983	Assumed chartered at the 21st. Annual Meeting in W
19	New Jersey		1983	Assumed chartered at the 21st. Annual Meeting in W
20	Virginia	Old Dominion	1983	Assumed chartered at the 21st. Annual Meeting in W
21	Mid-Atlantic		8/23/84	Chartered at the 22nd. Annual Meeting in Orlando, FL
22	Alabama		8/29/1985	Chartered at the 23rd. Annual Meeting in Denver, CO
23	Georgia		8/29/1985	Chartered at the 23rd. Annual Meeting in Denver, CO

24	Alaska	Great Lands	8/14/1986	Chartered at the 24th. Annual Meeting in Reno, NV
25	Ohio	Ohio Buckeye	8/14/1986	Chartered at the 24th. Annual Meeting in Reno, NV
26	Michigan		8/13/1987	Chartered at the 25th. Annual Meeting in Saint Paul, M
27	North Carolina		8/13/1987	Chartered at the 25th. Annual Meeting in Saint Paul, M
28	Iowa	Iowa Society of Solid	1988	Provisional Chapter
		Waste Operators	1990	Entered as a Chapter in 1990
29	Pennsylvania	Keystone	1988	See Note 3
30	Massachusetts		8/23/1990	Entered at the 28th. Annual Meeting in Vancouver, BC
	See Note 4			
31	New York		8/23/1990	Entered at the 28th. Annual Meeting in Vancouver, BC
32	South Carolina	Palmetto	8/23/1990	Entered at the 28th. Annual Meeting in Vancouver, BC
33	Mississippi		8/15/1991	Entered at the 29th. Annual Meeting in Cincinnati, OH
34	Wisconsin	Badger	8/15/1991	Entered at the 29th. Annual Meeting in Cincinnati, OH
35	Tennessee	Volunteer	8/6/1992	Entered at the 30th. Annual Meeting in Tampa, FL
36	Atlantic Canada		8/5/1993	Entered at the 31st. Annual Meeting in San Jose, CA
37	Indiana	Indiana Hoosier	8/5/1993	Entered at the 31st. Annual Meeting in San Jose, CA
38	Kansas	Kansas Sunflower	8/2/1994	Entered at the 32nd. Annual Meeting in San Antonio, T
39	New Hampshire	Northern New England	10/24/1995	Entered at the 33rd. Annual Meeting in Baltimore, MD
	Vermont			
	Maine		8/2000	Joined the New Hampshire-Vermont Chapter
40	Missouri		10/24/1995	Entered at the 33rd. Annual Meeting in Baltimore, MD
41	West Virginia		10/24/1995	Entered at the 33rd. Annual Meeting in Baltimore, MD
42	Kentucky		9/24/1996	Entered at the 34th. Annual Meeting in Portland, OR
43	Nevada	Great Basin	9/24/1996	Entered at the 34th. Annual Meeting in Portland, OR
44	Arkansas		10/28/1997	Entered at the 35th. Annual Meeting in St. Louis, MO
45	Louisiana (See Note 5)		10/27/1988	Re-entered at the 36th. Annual Meeting in Charlotte, M
46	Puerto Rico (See Note 6)	Caribbean Puerto Rico	5/21/2009	Entered at the mid-year meeting of the IB

Note 1: Unfortunately, the files in the early years of GRCDA growth were either not Maintained, or were passed from hand to hand and eventually did not get passed. SWANA attempted to gather back histories, information, etc. by asking each Chapter to identify a historian to work with the history writing effort. That did not work real well, as some Chapters did not respond. In some cases Chapter historians had the same problem of finding records, or surviving early GRCDA pioneers to help in the writing of the history.

Note 2: The compiler (Lanny Hickman) has assumed that the new NE-IA Chapter separated in either 1982 or early 1983 (this was planned when the NE-IA Chapter was chartered. We assigned the early date to NE, as IA did not come into the Association until 1988.

Note 3: We were unable to find 1988 Annual Business Meeting minutes. However the August 21, 1988 IB annual meeting minutes list PA as a chapter. On the other hand, a listing provided by SWANA offices indicates that PA was granted provisional chapter status on August 21, 1988. There is no indication that PA was chartered in 1989 or 1990. Consequently, unless further information occurs, the author has arbitrarily assigned 1988 as the anniversary date for the Pennsylvania Keystone Chapter.

Note 4: Around 1990 the charter was dropped as an instrument of joining SWANA. Incorporation and adoption of the Affiliation Agreement were the official steps of entry into SWANA.

Note 5: Louisiana originally was chartered as a GRCD Chapter on 8/19/1982 at the Dallas, TX annual business meeting. The chapter ran into difficulties and the chartered was lifted. Consequently, the action taken in St. Louis was a rechartering of the Louisiana Chapter.

Note 6: Originally, the membership approved the acceptance of an organization as a Chapter. However, in time, this authority was given to the IB by the membership. At the time, the formal process for chapter development included a Provisional Chapter step and then when all paperwork requirements are met Chapter status is awarded by the International Board of Directors.

**1963 – 1977 DATES AND VENUES FOR
 GRCD/ SWANA ANNUAL CONFERENCE AND SEMINAR
 GRCD/ SWANA ANNUAL SEMINAR AND EQUIPMENT SHOW
 SWANA/ GRCD ANNUAL INTERNATIONAL SEMINAR AND EQUIPMENT
 SHOW
 SWANA WASTECON**

Number	Date	Location/Venue
1	November 21-22, 1963	Culver City, CA Veterans Memorial Auditorium
2	November 12-13-14, 1964	Pasadena, CA Huntington-Sheraton Hotel
3	November 11-12-13, 1965	Oakland, CA Edgewater Inn
4	November 1966	Long Beach, CA Marina Inn
5	November 9-10-11, 1967	San Francisco, CA Del Webb's
6	November 7-8-9, 1968	Fresno, CA Hacienda Inn
7	November 6-7-8, 1969	San Diego, CA San Diego Hilton Inn
8	November 5-6-7, 1970	San Jose, CA Hyatt Hotel
9	November 18-19-20, 1971	Fresno, CA Ramada Inn
10	November 8-9-10, 1972	San Diego, CA Hilton Inn
11	November 7-8-9, 1973	Santa Cruz, CA Holiday Inn
12	1974*	Fresno, CA Fresno Convention Center
13	1975*	Inglewood PSA Hotel at the Forum
14	1976*	Seattle, WA Red Lion Hotel @ SeaTac Airport
15	1977*	Lake Tahoe, CA Sahara Tahoe

* Month and Date of these shows not found in reference material.

Thanks to Dick Townley, Roy Barbatti, and Bob Epler for assisting with information to build this table.

Major Source: Early GRCD history prepared to Red Davis and Tony Portolese.

**1978 – 1996 DATES AND VENUES FOR
 GRCD/ANNUAL CONFERENCE AND SEMINAR
 GRCD/ANNUAL SEMINAR AND EQUIPMENT SHOW
 ANNUAL GRCD/ANNUAL SEMINAR AND EQUIPMENT
 SHOW
 ANNUAL WASTECON**

Number	Date	Location/Venue
16	1978	Calgary, ALB
17	1979	San Diego, CA, Hilton Hotel
18	1980, August 25-27 First show in a convention center	Phoenix, AZ Phoenix Convention Center
19	1981, August 31, September 1-2	Salt Lake, UT, Salt Palace
20	1982, August 16-18	Dallas, TX Dallas Convention Center
21	1983	Winnipeg, ALB
22	1984, August 20-22	Orlando, FL Orange County Convention Center
23	1985, August 26-28	Denver, CO Denver Convention Center
24	1986, August 11-13	Reno, NV Reno Convention Center
25	1987, August 10-12	St. Paul, MN St. Paul Convention Center
26	1988	Baltimore, MD, Baltimore Convention Center
27	1989, August 14-16	Tulsa, OK Tulsa Convention Center
28	1990, August 21-22	Vancouver, BC Vancouver Convention Center
29	1991, August 12-14	Cincinnati, OH Cincinnati Convention Center
30	1992, August 3-5	Tampa, FL Tampa Convention Center
31	1993, August 2-4	San Jose, CA San Jose Convention Center
32	1994, August 1-3	San Antonio, TX San Antonio Convention Center
33	1995, August 24-26	Baltimore, MD Baltimore Convention Center
34	1996, September 24-26	Portland, OR Portland Convention Center

**1997 – 2014 DATES AND VENUES FOR
 GRCD/SWANA ANNUAL CONFERENCE AND SEMINAR
 GRCD/SWANA ANNUAL SEMINAR AND EQUIPMENT SHOW
 GRCD ANNUAL INTERNATIONAL SEMINAR AND EQUIPMENT SHOW
 GRCD WASTECON**

Number	Date	Location/Venue
35	1997, August 25-27	St. Louis, MO St. Louis Convention Center
36	1998, October 26-28	Charlotte, NC Charlotte Convention Center
37	1999, October 19-21	Reno, NV Reno Convention Center
38	2000, October 24-26	Cincinnati, OH Cincinnati Convention Center
39	2001, October 16-18	Baltimore, MD Baltimore Convention Center
40	2002, October 29-31	Long Beach, CA Long Beach Convention Center
41	2003, October 14-16	St. Louis, MO St. Louis Convention Center
42	2004, September 21-23	Phoenix, AZ Phoenix Convention Center
43	2005, September 27-29	Austin, TX Austin Convention Center
44	2006, September 19-21	Charlotte, NC Charlotte Convention Center
45	2007,	Reno, VA Reno Convention Center
46	2008,	Tampa, FL Tampa Convention Center
47	2009, September 22-24	Long Beach, CA Long Beach Convention Center
48	2010, August 15-16	Boston, MA Boston Convention and Exhibition Center
49	2011, August 23 – 25	Nashville, TN Nashville Convention Center
50	2012, August 14 - 16	Washington, DC Walter E. Washington Convention Center
51	2013, September 17-19	Long Beach, CA Long Beach Convention Center
52	2014, August 26-28	Dallas, TX Dallas Convention Center



GRCDA/SWANA Landfill Gas Management Division – An Association within An Association¹

The old saying, “That No Good Deed Goes Unpunished” applied unbeknownst to the pioneers in the development of the sanitary landfill. Improved siting, planned placement and unloading and compaction practices that emerged as the sanitary landfill developed resulted in improved utilization of air space, safety and the emergence of engineering principles in the design of disposal facilities. The most common denominator, however, in the change from dumps to sanitary landfills was the application of daily cover.

Daily cover resulted in many good things including appearance, vector control, minimization of infiltration of run-on from rainfall, and fire control to mention the most notable positive attributes. However the good deeds were punished, in the early emergence of sanitary landfills with the generation of an unexpected by product of the degradation of the solid waste in sanitary landfills – landfill gas. The early literature (1950s/1960s) addressing the design and construction of what eventually became sanitary landfills rarely mentions the emergence of a gas from the landfills. When noted, it was more in the context of a peculiarity rather than either a technical problem or an opportunity.

This special section of the GRCDA/SWANA history focuses specifically on the formation of a group of men and women committed to the phenomenon of the generation of methane in sanitary landfills. This group as an almost independent association brought about the establishment of the GRCDA/SWANA Landfill Gas Management Division and their annual Landfill Gas Symposium. A unique organization within SWANA and the only one of its kind international symposium dedicated just to the management of landfill gas (LFG)

Discovery and Beginnings

Introduction of the sanitary landfill as a preferred method of the disposal of solid waste was probably most rapid in the State of California. Notably, large private owned disposal sites and the emergence of the Sanitation Districts of Los Angeles as a major player in the disposal of municipal solid waste led to the growth of deep canyon filled sanitary landfills. By the early 70s, odors, occasional surface fires and migration from covered landfills began to raise questions about what problems were represented by these somewhat unexpected side effects of the design of sanitary landfills.

¹ Many thanks to Fred C. Rice for his assistance in the preparation of this special section of the GRCDA/SWANA history. Having been there from almost the beginning and being more than just a specialist in landfill gas management, Fred was committed to documenting the evolution and advancement of the field of landfill management. He is the true historian of the field and was very instrumental in the establishment of the GRCDA/SWANA Landfill Gas Management Division.

Early studies focused on quantification and qualification of the nature of the gas and early on the presence of high percentages of methane signaled some potential problems. We have to appreciate that there was little or no history of techniques for sampling and analyzing landfill gas. However, the petroleum industry, especially the natural gas portion of the petroleum industry offered analytical methodologies that were adaptable to landfill gas analysis. Migration patterns were also studied and the causation of migration was explored. These early studies did much to lay the foundation for eventual development of some common terms and comparable sampling and analytical methodologies.

The passage of the Solid Waste Disposal Act in 1965 and the commitment of the new USPHS Solid Waste Program to eradicating open dumping and utilization of the sanitary landfill brought about research efforts that began to augment all of the efforts of the early pioneers in landfill gas management.

Some highlights of this period of time include:

- Efforts to predict LFG generation rates
- An explosion at a National Guard Armory in Winston-Salem, North Carolina heightened the interest in establishing LF control programs. The significance of migration of LFG to surrounding neighbors brought about concerns of liabilities for landfill owners.
- The Sanitation Districts of Los Angeles County made a major investment to address LFG migration at their Palos Verdes sanitary landfill. The eventually led to the first high BTU landfills gas recovery system. This system was still in operation in 2010 at the writing of this history.
- To make the point that LFG was an energy source, Joe Edberg captured LDF from a **landfill**, generated electricity generated by a LFG fired internal combustion engine driving a small kw electric generator to light a Christmas on top of the landfill.
- The first private enterprise, created just to penetrate the LFG to Energy market, NRG NuFuel Co., a high BTU based enterprise was established.
- A number of consulting engineering firms began to entered field.

The Feds Get Interested

Two federal agencies entered the picture – starting late 1960. The USPHS Bureau of Solid Waste Management was funding research related to the issues of gas generation rates, technology assessments and generally spreading the word about the potential of LFG problems at sanitary landfills and the potential benefit of LFG to Energy. The other federal agency that came into the picture in the very early 70s was the US Department of Energy, Municipal Waste Program. Focusing solely on the energy benefits of LFG and technology and systems research to enhance the recovery and utilization of LFG as an energy source.

The USDOE solid waste program was committed to building a scientific and engineering base for landfill gas management. Led by Don Walters the program provided funds to the bring the pioneers in LFG management together to exchange information and talk

about the various systems and technologies being created from either the technologies of the oil/gas industry or from whole cloth..

The pioneers, at least some of them, were reluctant to disclose the “secret technologies and number” to those that they say as competitors. Needless to say, this was a major hurdle that had to be dealt with by DOE since federal monies could not be used to give one enterprise an advantage over another.

To help overcome this problem, DOE awarded a contract to the Johns Hopkins Applied Research Laboratories to plan and organize conferences and to referee the fair and open interchange of information. These conferences were the genesis of the SWANA International Landfill Gas Symposia.

The first DOE sponsored and funded (travel was paid for by DOE and attendance was by invitation only) was held on March 9-10, 1978 at the Johns Hopkins Applied Research Lab in Laurel, MD. The following discussion presents the dates and locations of the symposium through 2010. When possible highlights of the progress of the landfill gas management industry are highlighted. ***Thanks to Fred Rice, a SWANA member, involved in LFG management from the very first and a major player in the establishment of the Landfill Gas Management Division within SWANA.***

The Evolution of the Symposium and Landfill Gas Management in the US

1978 - By 1978 interest in LFG management had reached a point where support from the USDOE Waste to energy program had resulted in the program funding a gathering of the leaders in the LFG management growing industry.

Johns Hopkins Applied Research Laboratories were provided funding to bring these leaders together in a “show and tell” on control technologies, analytical procedures, markets, etc. This first meeting held in 1978 in Laurel, MD was attended, by invitation only, by 25 considered to be the most involved in LFG management. This meeting was the origin of the current SWANA Landfill Gas Symposium, now in its 33rd year.

In 1978 a number of consulting firms had entered into the development of LFG projects, notably Lockman Associates, SCS Engineers, and EMCON Associates. Projects included Azusa, Wilmington, and Mountain View. Pioneering projects created by the

1979 - The popularity and value of the 1978 meeting in Laurel prompted continued funding from DOE for the 1979 2nd LFG symposium, held at the Colorado College for Women in Denver, CO. 1979 saw interests in the east with LFG management when Brooklyn Union Gas starting tests on LFG recovery. Getty Synthetic Fuels appeared with the renaming of RSF.

1980 - The third symposium was held at the Asilomar Conference Center in Monterey, CA. By then professional growth and interest had reached national level and attendees represented many states and provinces. Still funded by DOE GRCDA, represented by Lanny Hickman, entered into the picture representing the landfill/landfill gas interests of

the Association. The LFG group and GRCD A held discussions about joint efforts of the two groups.

1981 - The 4th Annual LFG Symposium was held in the Tidewater Inn in Easton, MD May 20-22, 1981. Interests in the LFG group had reached a point, where at the urging of the Johns Hopkins DOE funded program manager, Russ Eberhart serious discussions were underway to organize a LFG management association. Given the federal tax credits which were established in 1980 and the promulgation of RCRA landfills guidelines, federal interests had grown from just research to financial and regulatory concerns. A stronger presence in Washington was needed, hence why not an association? Fred Rice (Getty Synthetic Fuels) and John Pacey (EMCON Associates) urged the LFG group to consider approaching GRCD A on a possible partnership. They in turn called Lanny Hickman who jumped in the car with Kay Hickman and drove to Easton for a late night meeting with the LFG Group.

Lanny made the following proposal:

1. GRCD A would establish a Landfill Gas Management Committee to provide services to the LFG group and to represent LFG interests in Washington, DC.
2. All of the services that they thought an independent LFG association was needed for would be provided by GRCD A.
3. No special fees or costs would be assessed the LFG group other than the standard GRCD A membership rates.
4. GRCD A would work with the current Johns Hopkins Laboratories and other DOE contractors to assist them in the planning of the annual conference.

After a deal of discussion and support of the likes of Fred Rice, John Paley and a representative from the CA State Department of Health, the LFG group organized the initial GRCD A LFG Management Committee.

Following the formation of the GRCD A LFG Management Committee efforts began by the Committee to get organized, establish a database of LFG interests and to have a more formal process for the formation of the annual symposium. A number of subcommittees were formed and efforts on the development of a number of manuals of best practice were begun. GRCD A began formal discussions with DOE regarding their plans for the future support of the symposium and the interrelationship between their programs and GRCD A interests. Similar discussions were also held with the EPA's solid waste office.

1982 - The 5th Annual LFG Symposium was held March 15-17, 1982 at the Asilomar Conference Center in Monterey, CA. GRCD A co-sponsored the conference; Kay Hickman was introduced as the conference and meetings coordinator for GRCD A. At the LFG Management Committee annual business meeting Lanny Hickman informed the committee that DOE had initially planned to fund the symposium for just a few years as a stimulus for establishing a focus on LFG Management (DOE in 1982 was still covering some travel costs, management costs and promotional costs.) and that 1982 would be the last year of DOE financial support. Lanny laid out a number of options for the committee to consider and then proposed that they approve the following:

1. The Committee needs to recognize that for the symposium to succeed that it should be self-supporting and not dependent on funding like DOE in the future.
2. The Committee had to take full responsibility for the technical quality of the programs offered at the symposium.
3. That the symposium continues to be developed and offered as a specialty technical conference and not a trade show.
4. That if at all possible symposium sites should be near LFG projects.
5. GRCDA would take all financial risks and that any funds after expenses would go into the GRCDA general account. GRCDA pledged to ensure funding for the LFG Management Committee and would provide staff support for Committee activities.
6. Working with the Committee, promotion and management of the symposium would be under the auspices of GRCDA.

The Committee agreed with the above proposal and adopted the principles proposed. Discussions then focused on the 1983 symposium and it was decided that to improve the financial chances that the 6th annual symposium should be held in CA, probably in the LA basin. Industry Hills was proposed as the preferred sites and GRCDA staff was assigned the task of securing a venue for the symposium.

1983 - An ideal site for the 6th annual symposium was the Sheraton Hotel in Industry Hills, CA. The hotel set of a closed landfill with an 18-hole golf course built on the landfill. Under the complete management of the LFG Management Committee and GRCDA staff the symposium was held March 14-18, 1983. Almost 200 attended the symposium and the future for the symposium was assured. The LFG Management Committee issued its first Practices and Procedures Manual.

Some 1983 highlights of the evolution of the LFG management field included the first on-site LFG powered electric generating plant in Brattleboro, VT, Fresh Kills, NY, a LFG representative was invited to sit on the GRCDA International Board of Directors². The Scholl Canyon Model for LFG production came on the scene.

1984 – The 7th Annual LFG Symposium was held in the Sheraton Regal Hotel in Piscataway, NJ, on April 14-18, 1983. For some of the veterans of the symposium Piscataway was a memorable site. The hotel site was somewhat out in the boonies and not too close to the nightlife that some of the veterans had come to expect. It also, was not too handy to easy access from around the US. It did, however, provide ready access to a number of LFG projects in the NY City and eastern NJ areas. Attendance was high, however, due to the close proximity of the eastern seaboard and the attraction of seeing the progress that LFG management was making in the east.

1985 – The 8th Annual LFG Symposium was held in the Gunter Hotel in San Antonio, TX on April 9-11, 1985. Many will remember the presentation for an EPA air pollution representative indicating the plans to regulate emissions from landfills. She became known as the Dragon Lady for her high and mighty approach to lecturing to experts in the field.

² GRCDA/SWANA has had a long history of assuring that the technical side of the organization has adequate and fair representation in the governance of the association. This is not common practice in the association business.

Other notable things in 1985 included planned LFG emission regulations by the Los Angeles Air Quality Management District. Energy tax credits were extended by the US Congress.

By now with the demands for rooms and meeting space planning for future LFG symposiums was moved out 3-5 years in advance.

1986 - The 9th Annual LFG Symposium was held in the Newport Beach Marriott in New Port Beach, April Gunter Hotel in San Antonio, TX on April 17-21. After being in the middle and eastern part of the US the return to CA was attended by the largest crowd ever to attend the symposium. One of the best reasons for coming back to CA was the many LFG projects that could be visited.

1987 - The 10th Annual LFG Symposium was held in the West Palm Beaches Hyatt Hotel, in West Palm Beach, FL on February 9-13, 1987. This was the furthest south and east that the symposium caravanned since its inception. Attendees were treated with a tour of the many high class facilities of the Solid Waste Authority of Palm Beach County.

1988 - The 11th Annual LFG Symposium was held in the Hyatt Regency West in Houston, TX March 21-24, 1988. The symposium was dominated with discussions about the planned USEPA regulations of LFG emissions. A special Regulatory Sub-Committee was established to track, interact with EPA, and provide input and comments as the EPA regulation development process proceeded. Eventually, the subcommittee was expanded to bring in National League of Cities and National Association of Counties and was labeled the Solid Waste Action Committee (SWAC). The presence of these two organizations brought the political clout of local governments into the picture. Partnering with NLC and NACO gave SWANA improved access on the Hill as members of the Congress were always open to the needs of local government elected officials.

1989 - The 12th Annual LFG Symposium was held in Doubletree Inn, Monterey, CA on March 20-23, 1989³. Tax credits for LFG projects were extended by the US Congress for one year. Working to keep these tax credits became an ongoing effort by SWANA and it Landfill Gas Management Division. Special funding was established to help finance the effort. The change of the name of the association in 1989 was welcomed by the LFG Management Division.

1990 – The 13th Annual LFG Symposium was held in Marriott's Lincolnshire Hotel in Lincolnshire, IL, on March 27-29, 1990. A number of meetings to provide input and comments of drafts of the LFG New Source Performance Standards (NSPS) were held with EPA in the Research Triangle in North Carolina and Washington, DC over 1989 and 1990. In 1990 SWANA formally submitted six sets of comments on EPA's New Source Performance Standards.

³ Monterey became a favorite for the LFG Symposium and over the history of the symposium Monterey hosted the symposium 3 more times

The Story and Evolution of the Development of the USEPA Landfill Gas NSPS

1990-1995 – During this period of time SWANA and its partners in SWAC held interminable meetings and provided endless comments on various stages of development of the LFG NSPS. During this long period of time key points continued to be made:

- the agency was using a flawed landfill screening criteria and data to base their proposed regulations,
- their proposed Method 2E was too complex and rigid,
- they had failed to use good engineering practice,
- they had used invalid data for the basis of their L_0 and k factors,
- in the opinion of SWANA's/SWAC's world recognized LFG management experts the proposed rule was technically flawed,
- their economic analysis to determine economic impact of the proposed rule was unrealistic and low,
- their “cookie cutter” approach for selecting landfills for regulation was invalid and
- they were including way too many landfills to achieve reasonable reduction of emissions from landfills.

Toward the end of 1995 it was obvious that the regulated community (SWANA and SWAC stake holders) and the EPA air pollution group charged with writing the rule were at an impasse. It was obvious that the EPA group was going to move forward with a flawed rule that would probably not achieve the intent of the rule and would throw a regulatory net over way too many landfills. The position of SWANA created a firestorm of pressure on EPA to reconsider the scope of the rule and to get EPA upper air pollution involved in the conflict between SWANA/SWAC and the EPA rule development group⁴. This pressure led to an agreement for the agency upper air pollution echelon decision makers and the regulated shareholders. Such a meeting was set.

The night before the meeting the SWANA/SWAC group met at the SWANA offices in Silver Spring to plot a strategy for the next day's meeting. The group consisted of representatives from the National League of Cities, National Association of Counties and SWANA representatives – Greg Vogt of SCS Engineers, Fred Rice, and Lanny Hickman of SWANA. Time in the office and over dinner at Mama Regina's (Lonny's favorite Italian restaurant in Silver Spring) the group decided to put a proposal on the table at the meeting the next day. In the opinion of the group the offer was a “fish or cut bait” position. The group proposed that the cutoff size of landfills to be regulated should be two and one-half million tons of planned/actual tonnage of capacity. The result **of**

⁴ The regulation development process in EPA was extremely complex and hampered by way too many layers of organization between the rule writers and the EPA executives who would eventually agree to issue a proposed and final rule. Incredible as it may seem, the level of EPA that would agree to issue the rule were not involved in the years of wrangling between the landfill/LFG industry and the rule writers.

the proposal would capture 90% of the gas emissions and only have to regulate 10% of the landfills. The stakeholders also suggested a modification of the L_0 and k factors.

At the meeting the next day EPA began the meeting, after introductions were made with an attempt to review the entire history and process for the development of the rule. The principal for the regulated SWANA stakeholders (Lanny Hickman) interrupted the EPA presentation and suggested that the history of the rule development was not necessary. Instead, he suggested that the stakeholders had a proposal they would like to put on the table for discussion and consideration. The key guy for the EPA group from their headquarters and for whom the rule writers reported agreed. The proposal was presented, a few questions were interchanged and then their key guy said (and this is exactly what he said; it has remained in my memory bank and will do so forever {Lanny Hickman}), "Well that seems reasonable to me, is there any reason we cannot accept their proposal?" Obviously, his staff agreed to his request. It should go without saying, but I am going to say it anyway, we were totally dumfounded and many of us wondered why we had not asked for such a meeting earlier.

From that point on the process for coming to closure and issuing the rule was discussed. Over the next several months, representatives of SWANA, led by Greg Vogt and SWANA staff, worked with EPA to complete the rule. Other non-SWANA stakeholders, notably the large private solid waste management companies and multi-large landfills, were not as pleased with the end product as the SWANA stakeholders, and they also had some input, but the guts of the rule was a product of EPA and the SWANA Landfill Gas Management Division. The resolution of the differences between EPA and the SWANA Landfill Gas Management Division clearly established the division as a key player in future landfill gas management efforts in EPA.

1991 – The 14th Annual LFG Symposium was held in Marriott's Mission Valley Inn in San Diego, CA on 26-28, 1991. As always when the symposium was held in California attendance was high. The technical program was highlighted with a variety of technical and management policy issues related to the EPA developing LFG NSPS. In addition, efforts led by Bernie Zehran (Zehran Energy) to gain Congress's continuation of the tax credit for landfill gas to energy project.

1992 - The 15th Annual LFG Symposium was held in the Sheraton National Hotel, in Arlington, VA on March 24-26, 1992. Arlington, VA is just across the Potomac River from Washington, DC. This was the first time the symposium was held in the US capital environs. Meeting in these environs afforded an opportunity for the symposium to include a number of representatives of EPA on the program. In addition, SWANA and its LFG members were able to schedule a number of capitol hill rounds of visits with staffs and members of House and Senate committees who impacted the LFG management industry (tax credits, alternated energy, and regulation to mention the most important).

Over the time period of 1992 & 1993 SWANA issued:

- SWANA LFG Field Practices Manual
- First SWANA LFG Training Course

- SWANA TQM Video on the Conversion of LFG to CNG

1993 - The 16th Annual LFG Symposium was held in the Galt House Hotel in Louisville, KY on March 23-25, 1993. LFG aficionados will ask why Louisville, KY since there was no notable LFG projects nearby. The symposium, by 1993 was so well established that both the LFG Management Division and SWANA felt that on occasion prominent LFG projects were not necessary. Another reason was SWANA's approach with venues. The meeting industry is a tight network and how customers deal with venues and staffs of venues become well known. SWANA and its attendees reputations were noted by being a tough, fair and honest negotiator that lived up to its promises, treated the staff with respect and when necessary and appropriate generous tippers. The Association had committee a number of years before to bring the annual convention to Louisville. However, for a number of reasons moved their convention to another city. In making the move, SWANA promised a valuable meeting to Louisville. What could be better than the LFG symposium?

1994 - The 17th Annual LFG Symposium was held in the Hyatt Regency Hotel in Long Beach, CA on March 22-24, 1994. As usual, a California venue drew large attendance. Monitoring, meetings, testimony at hearings continued on both of the key technical-policy fronts of the LFG Management Division – tax credits and LFG NSPS. In 1994 SWANA issued Specifications for the Construction of LFG Recovery Systems.

1995 - The 18th Annual LFG Symposium was held in the Clarion Hotel in New Orleans, LA on March 27-30, 1995. The development of the LFG NSPS was drawing the end of the process. Issues remained between EPA and SWANA and it was apparent that technical differences might ever be resolved. SWANA and the LFG Management Division to escalate their efforts beyond just being a bunch of “techies”. The poster meeting between SWANA stakeholders and EPA upper air regulation management was held and agreement was reached for a resolution of the technical and policy issues.

Over the past several years SWANA had increased international presence, primarily working with the International Solid Waste Association (ISWA). Through the encouragement of SWANA, ISWA expanded their Landfill Working Group to include LFG specialists. SWANA named Greg Vogt of SCS Engineers as their LFG representatives. Fred Rice issued the first of his “Gas Roots” a history of LFG Management in the US.

1996 - The 19th Annual LFG Symposium was held in the Sheraton Imperial Hotel in Research Triangle, NC on March, 19-21. Since its inception when the LFG group and Lanny Hickman struck a deal to house the LFG group in GRCD/ SWANA and launched the symposium as a property of SWANA the symposium had always been a technical program, no trade show. However, pressure from within the LFG Management Division's membership to add a limited sized technical trade show was argued for and against by the membership and SWANA management. An agreement on the limits and nature of a trade with a clear commitment to not interfere with the technical was struck and 1996 represented the first trade show (which became an accepted and extended part of the symposium).

The partnership between the LFG Management Division and Lanny and Kay Hickman ended in 1996 with their retirement.

The big LFG news in 1996 was the issuance of the LFG NSPS for Landfill Gas Management Systems.

1997 - The 20th Annual LFG Symposium was held in the Doubletree Hotel in Monterey, CA on March 25-27, 1997.

By 1997 SWANA's LFGMD (Landfill Gas Management Division) and EPA's Landfill Methane Outreach Program (LMOP) had matured into a cooperative effort.

The symposium was maturing and sought noted speakers to kick-off the meetings. In 1997 Professor Bob Ham from the University of Wisconsin was the opening speaker. Bob had admirable credentials of working in the field since his PhD candidate days.

The SWANA LFGMD completed and issued their Operations and Maintenance Manual for LFG Waste-to-Energy Systems.

Partnering with LMOP, the Divisional also released a video about LFG, its energy value and controlling methane in LFG.

This ends the first 20 years of history of the SWANA Landfill Gas Management Division. During those 20 years the pioneering efforts of a number of very smart people in essence created a new effective part of solid waste management. Its' symposium grew into an internationally technical specialty conference and the meeting to attend if one wanted to keep up with the evolution of the landfill gas management industry. It continues to grow and expand as a pre-eminent technical program focused on an important part of solid waste management...

A table of the Landfill Gas Management Division Symposium Dates and Locations follows on the next page.

LANDFILL GAS SYMPOSIUM DATES AND LOCATIONS

SYMPOSIUM		
NUMBER	DATES	LOCATION
1	March 9-10, 1978	Johns Hopkins Applied Research Lab Laurel, MD
2	March 21-23, 1979	Colorado College for Women Denver, CO
3	March 24-26, 1980	Asilomar Conference Center Monterey, CA
4	May 20-22, 1981	Tidewater Inn Easton, MD
5	March 15-17, 1982	Asilomar Conference Center Monterey, CA
6	March 14-18, 1983	Sheraton Hotel Industry Hills, CA
7	April 11-13, 1984	Sheraton Regal Piscataway, NJ

8	April 9-11, 1985	Gunter Hotel
		San Antonio, TX
9	April 17-21, 1986	Newport Beach Marriott
		Newport Beach, CA
10	February 9-13, 1987	West Palm Beaches Hotel
		West Palm Beach, FL
11	March 21-24, 1988	Hyatt Regency West
		Houston, TX
12	March 20-23, 1989	Doubletree Inn
		Monterey, CA
13	March 27-29, 1990	Marriott's Lincolnshire
		Lincolnshire, IL
14	March 26-28, 1991	Marriott Mission Valley
		San Diego, CA
15	March 24-26, 1992	Sheraton National
		Arlington, VA
16	March 23-25, 1993	Galt House Hotel
		Louisville, KY

17	March 22-24, 1993	Hyatt Regency Long Beach, CA
18	March 27-30, 1995	Clarion Hotel New Orleans, LA
19	March 19-21, 1996	Sheraton Imperial Research Triangle Park, NC
20	March 25-26, 1997	Doubletree Hotel Monterey, CA
21	March 23-26, 1998	Hyatt Regency Austin Austin, TX
22	March 22-25, 1999	Grosvenor Resort Lake Buena Vista, FL
23	March 27-30, 2000	San Diego Marriott La Jolla San Diego, CA
24	March 19-22, 2001	Marriott Quorum Hotel Dallas, TX
25	March 25-28, 2002	Doubletree Hotel Monterey, CA

26	March 24-27, 2003	Hyatt Regency
27	March 22-25, 2004	Adams Mark Riverwalk
		San Antonio, TX
28	March 7-10, 2005	Coronado Bay Resort
		San Diego, CA
29	March 27-30, 2006	Hilton St. Petersburg
		St Petersburg, FL
30	March 4-8, 2007	Hyatt Regency Monterey
		Monterey, CA
31	March 10-13, 2008	Westin Galleria
		Houston, TX
32	March 9-12, 2009	Westin Peachtree Plaza
		Atlanta, GA
33	March 8-14, 2010	Town and Country Resort
		San Diego, CA