

Application of San Diego Gas & Electric Company
(U 902 M) for Authorization to Recover Costs Related to
the 2007 Southern California Fires Recorded in the
Catastrophic Event Memorandum Account (CEMA)

Application 09-03-_____
(Filed March 6, 2009)

Exhibit No.: _____

PREPARED DIRECT TESTIMONY
OF ALAN DULGEROFF
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

MARCH 6, 2009

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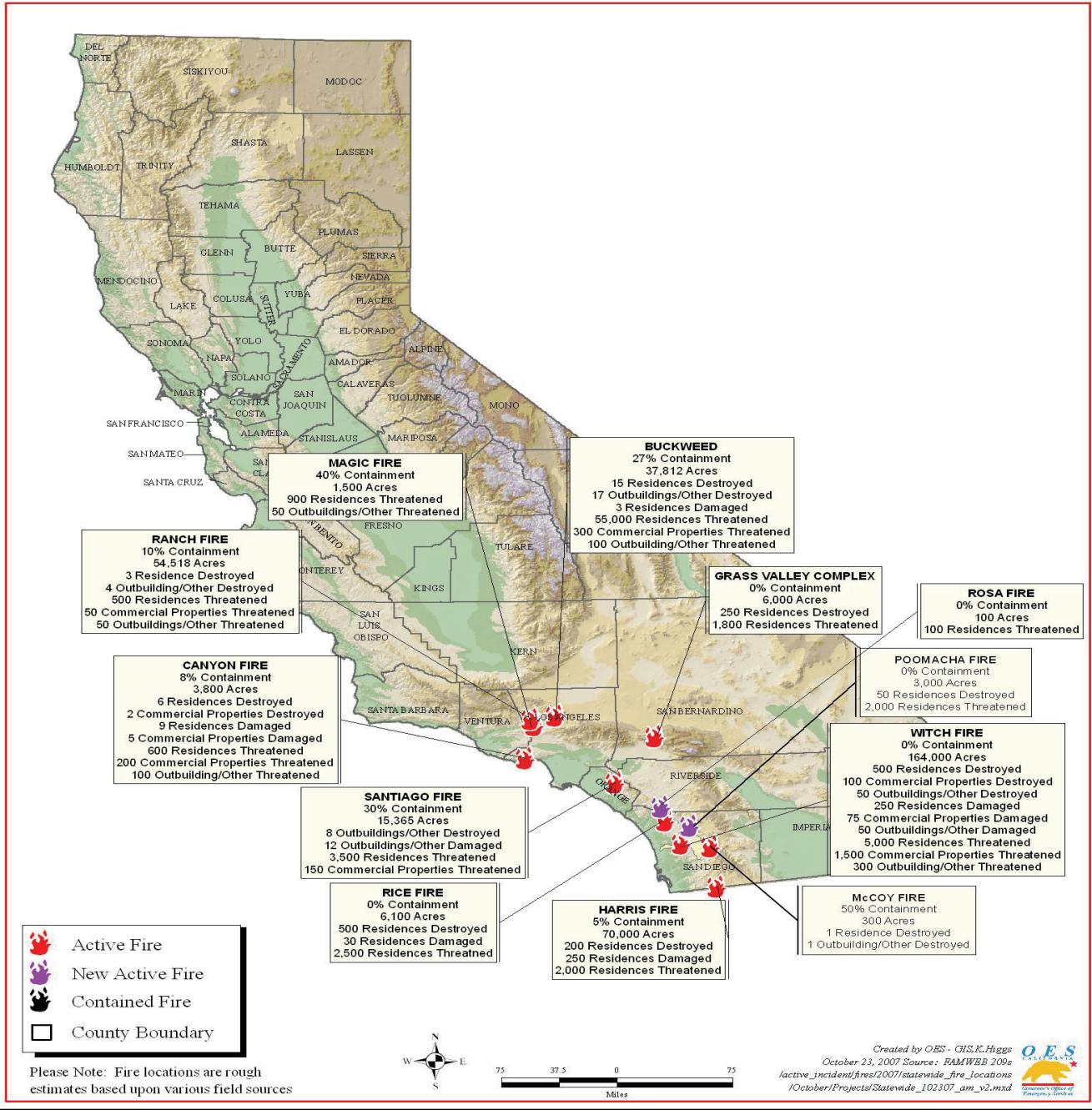
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1 respective satellites, Ramona and Mt. Empire. In total, 117 distribution circuits were
2 affected by either transmission or distribution system disturbances. Over 1,600 distribution
3 poles were assessed to be burned to the point where replacement was required during the
4 initial restoration effort. As of December 31, 2008, the total pole count for replacement
5 associated with the 2007 Fires reached over 1,900 distribution poles. Roughly 80,000
6 electric customers lost service for a prolonged period of time at some point during the fires.

7 The 2007 Fires were formally declared emergencies by the City of San Diego,
8 County of San Diego, State of California, and U.S. Federal Government between the period
9 of October 21, 2007 and October 24, 2007. The Company suffered a significant amount of
10 damage to its facilities and orchestrated a committed response to restore service for its
11 customers.

CALIFORNIA WILDFIRES

as of 10/23/07 1200 Hours



1
2
3

Figure 1 – Map of California Wildfires at 12:00 p.m. on October 23

1 **III. RESTORATION EFFORTS**

2 **A. INITIAL RESPONSE**

3 Based on SDG&E's experience with the 2003 Fires, SDG&E quickly moved to
4 mobilize personnel. Several of the primary organizations supporting utility efforts to
5 address the 2007 Fires are described in Exhibit A. Initially, emergency responders were
6 dispatched, and on-duty personnel from Electric Distribution Operations (EDO) and the
7 Emergency Operations Center (EOC) began monitoring the fires and SDG&E system
8 conditions. Anticipating the rapidly moving fires would cause severe damage and service
9 interruptions, requests were made at 4:22 a.m. on October 22, 2007 for districts to retain
10 their crews. The EOC was fully activated on Monday, October 22, 2007 at 5:00 a.m. The
11 total number of customers without power had risen to approximately 19,000 at that time.
12 By 5:36 a.m., a control center notification canceled all routine work. At 6:45 a.m., the
13 EOC, EDO, six C&O Centers, Grid Control, and Kearny Maintenance and Operations
14 conducted a conference call to brief staff on system status and to begin outlining a detailed
15 plan for potential resource requirements.

16 By 7:30 a.m., SDG&E had 55 outages with 24,000 customers out of power.
17 SDG&E raised its alert status to Event Level V, and the EDO Emergency Desk was
18 activated. Estimates of customers out of service were growing rapidly and predicted to get
19 much worse. Information updates continued from systems such as the Automated
20 Distribution Operations System and Energy Management System, reflecting new
21 distribution system service interruptions and transmission line outages. Field personnel
22 were reporting extensive damage to both distribution and transmission facilities. It quickly
23 became apparent that the extent of the damage caused by the multiple fires was greater than
24 could be managed with available Company resources and additional assistance would be
25 required. Therefore, mutual aid, contractor and helicopter services were placed on standby
26 to aid in responding to the developing emergency.

27 **B. FIELD RESPONSE**

28 SDG&E called on all qualified field resources to respond to the fires. The first
29 priority was to make the system safe for the public and agency emergency personnel.

1 From the outset, crews began working around the clock to clear hazards, assess damage,
2 and make repairs. Damage assessment was a high priority for the Company, but it could
3 not begin until the areas were deemed safe for entry by the California Department of
4 Forestry and Fire Protection (CAL FIRE).

5 As home inspections were performed by fire, police, and local agencies, and utility
6 personnel were allowed in a burned area, the next priority was to make the area safe by
7 removing both electrical and structural hazards. Since the fires affected some densely
8 populated residential areas, a “Street Safe” procedure was utilized for the first time, in
9 coordination with fire and police departments, to ensure public safety from damaged
10 electric facilities. Service crews and larger primary and secondary crews removed services
11 from burned homes, cleared wires and poles that had fallen, tested structural integrity and
12 reinforced compromised poles, and also completed an assessment of the area to determine
13 what repairs were needed to restore service. After crews were allowed access by CAL
14 FIRE, it took approximately two full days to examine every street in each of the fire
15 damaged communities, remove the hazards, and assess for damage to begin system repair
16 and restoration. As part of the Street Safe effort, SDG&E worked closely with impacted
17 communities and fire and police departments to determine when it was safe for residents to
18 return to their homes.

19 As these areas were made safe and assessed, restoration was prioritized and
20 estimated. While numerous facilities were repaired simultaneously across the service
21 territory, the general priority was as follows: Transmission lines, followed by substations,
22 then distribution lines. The prioritization was designed to restore service to as many
23 customers as possible, and as quickly as possible. Work ceased on all routine construction
24 and maintenance activities, including new business. Local contractors already working for
25 SDG&E were also taken off routine projects and assigned to fire damage restoration.

26 SDG&E invoked mutual assistance agreements with other utilities which responded
27 in the days and weeks following the onset of the fires. SDG&E also requested each
28 electrical contractor that was already in the region doing business with the Company to
29 assemble additional resources. Within the first week, additional linemen from other
30 utilities and out-of-state contractors arrived. This continued until the mutual assistance
31 effort was deemed complete and power for all but a few customers had been restored. For

1 | SDG&E crews, the effort continued until all customers were back in service, damage was
2 | repaired, and the scheduling of new business work was restored to near normal.

3 | During the early stages of assessment and restoration, it became apparent to
4 | SDG&E that the 2007 Fires not only had a great impact on densely populated communities,
5 | but also on areas with extremely rugged terrain. The rugged terrain posed numerous
6 | challenges for assessing damage and restoring service. For example, SDG&E personnel
7 | were unable to use vehicles to assess and repair all the damage. Consequently, many pole
8 | holes had to be dug manually, and certain poles had to be delivered by helicopter to
9 | numerous locations. Helicopters were needed to replace over 240 burned poles.

10 | Within urban areas, much of the electric distribution facilities affected by the fire
11 | were mainly underground subsurface and pad-mounted equipment. Unlike an overhead
12 | system where the damage is visible, fire damage to the electric distribution underground
13 | system is not as easily detectable. As a result, SDG&E expended a great deal of effort
14 | testing and locating damaged facilities. Damage to the underground system included
15 | melted cable near the entry of a service to a burned building, heat damaged transformers,
16 | and melted conduit. An additional challenge was that in some neighborhoods the location
17 | of burned homes was intermittent. Given these conditions, SDG&E had to quickly
18 | reconfigure the system to make safe and cut loose connections to damaged homes so that
19 | the circuits could be re-energized to serve the habitable homes.

20 | In some areas such as Fallbrook and Palomar Mountain, damage to the electric
21 | distribution feeder infrastructure was very extensive, cutting off electric supply to outlying
22 | portions of communities that were outside of a burn area. Early on, SDG&E recognized
23 | their needs and connected large generators to the undamaged and isolated sections of
24 | circuits feeding these areas, thus providing power to these communities during the weeks
25 | that crews needed to repair the electric systems. These generators were installed by
26 | electric distribution crews and maintained 24 hours-a-day by substation electricians.
27 | SDG&E was able to restore power to hundreds of customers days and weeks ahead of
28 | rebuilding facilities.

1 **C. CREW RESPONSE**

2 **I. SDG&E Crew and Staff**

3 The union workforce that maintains, operates, and constructs SDG&E’s electric
4 system is comprised of approximately 520 active employees. These employees include
5 transmission, distribution, and substation electrical workers ranging from working foremen
6 to apprentices and assistants. Distribution electrical workers operate from six geographical
7 districts and two satellites in SDG&E’s service territory as detailed in Exhibit A. The
8 substation and transmission electrical workers operate out of the Kearny Maintenance and
9 Operations center (Kearny). SDG&E typically averages 30 staffed electric distribution
10 crews spread across its service territory working on the electric system.

11 At about 5:00 a.m. October 22, 2007, Company on-call emergency response
12 personnel began reporting for duty, including additional system operators and field
13 personnel. Employees living in the very broad fire-threatened areas were asked to focus on
14 the safety of their families and evacuation from their homes. Once the safety of their
15 families was assured, they reported to work and assisted in the Company’s restoration
16 efforts. The Gas Emergency Center (GEC) was activated at Miramar to help respond to
17 potential gas related service interruptions, and the first conference call was conducted
18 between the EOC, six distribution operating districts, Grid Control, Kearny, and the Safety
19 Department. The conference call focused on reviewing current system status and outlining
20 a detailed plan for future resource requirements. It also addressed potentially shifting part
21 of the workforce from unaffected districts to fire-damaged areas to aid in damage
22 assessment and restoration efforts.

23 Electric Distribution Operations was continuously monitoring the multiple fires and
24 system status, routinely communicating with the EOC and other departments, and planning
25 for assessments and crew redeployments. In anticipation of the significant damage in the
26 northern and eastern regions of San Diego County, supervision, crews, and various
27 resources from the Metro, Beach Cities, North Coast, and Orange County Districts were
28 redeployed to the Northeast district to assist with assessment and restoration efforts. As
29 needed, these districts assumed responsibility for large sections of Northeast territory and
30 utilized nearly all their personnel, including dispatchers, planners, engineers, and

1 supervision to manage the entire assessment and repair. North Coast and Orange County
2 districts suffered damage and outages in their own territory, but after the first week were
3 able to release more of their crews to assist the Northeast district and support overall work
4 priorities.

5 In addition to SDG&E's electric distribution crews, there were many other people
6 involved in coordinating and supporting the assessment and restoration efforts. Kearny
7 personnel completed switching operations in the substations for crew safety and operated
8 equipment supporting construction. Planners and designers from Project Management
9 assessed damage and wrote work orders for rebuilding the electrical system. Several
10 district storeroom workers served as tool and equipment "runners" for SDG&E, contract,
11 and mutual aid crews. Supervisors and Contract Administrators supported Company crews
12 and served as liaisons for mutual aid and contract crews. Gas and street repair crews also
13 served as equipment operators and built access roads for electric crews. Managers and
14 engineers supported the effort by organizing the work, coordinating support for field
15 personnel, and providing timely updates to Electric Distribution and Grid Operations, and
16 ultimately to SDG&E's customers.

17 **2. Mutual Assistance Crews**

18 SDG&E is one of ten utilities that is a signatory to the California Utilities
19 Emergency Association (CUEA) Mutual Assistance Agreement. Others include Pacific
20 Gas and Electric (PG&E), Southern California Edison (SCE), Bear Valley Electric Service,
21 Modesto Irrigation District, Sierra Pacific Power Company, The City of Anaheim, The City
22 of Riverside, The City of Roseville, and The Sacramento Municipal Utility District. The
23 mutual assistance agreement provides for reciprocal emergency restoration services during
24 any declared emergency or disaster affecting member utilities. The agreement also has
25 been used when requesting services from non-member electric and/or gas utilities. As part
26 of regular emergency preparations and planning, SDG&E has performed exercises that
27 simulate the varying phases of in-coming mutual assistance.

28 On October 22, activation of the EOC triggered the formation of the Company's
29 Mutual Assistance Management team. Communications immediately began with CUEA
30 and other utilities about crew availability, response timing, and related logistics and

1 contracts. Companies contacted included: PG&E, Salt River Project (SRP), Sierra Pacific
2 Power, Imperial Irrigation District, Southern California Gas Company, and SCE. Utilities
3 offering resources were evaluated by ability to mobilize, crew size and capability, and total
4 response time. Utilities were selected and the necessary agreements were signed and
5 finalized on October 23. Mobilization commenced immediately.

6 SDG&E's mutual assistance program requires every responding crew and its
7 leadership to attend a "pre-work" orientation. The two-hour orientation covers a
8 comprehensive safety lecture, environmental restrictions, examples of construction and
9 work methods/clearances, emergency procedures, assessment information by geography,
10 and general logistical information. SDG&E's operations personnel were assigned as
11 mutual assistance coordinators and qualified SDG&E electrical technicians were assigned
12 as mutual assistance crew liaisons. To ensure safety and operating efficiency, an SDG&E
13 liaison was assigned to every mutual assistance crew.

14 Once mobilized, the combined mutual assistance workforce totaled 203 mutual
15 assistance utility workers, 29 electric transmission and distribution overhead electric crews,
16 nine heavy equipment operators, four gas crews, and seven fleet utility specialists.

17 Over the course of the event, the duration of mutual assistance varied by utility.
18 While working in the service territory every company provided safe, productive, and
19 cooperative restoration services. SDG&E staggered demobilization in accordance with
20 restoration priority and demand. On Monday, November 5, SCE was released, followed by
21 Sierra Pacific on Tuesday, SRP on Wednesday, and PG&E on Thursday.

22 3. Contract Crews

23 As with the fires that occurred in October 2003, in addition to Company and mutual
24 assistance crews, SDG&E utilized multiple specialty contractors to assist with the
25 restoration of utility service during and immediately after the fires. Contractors were used
26 to clear downed power lines and remove debris, dig pole holes, reconstruct the electric
27 transmission and distribution systems, and clean up destroyed facilities.

28 SDG&E leadership anticipated the need for a large number of contract crews to
29 restore service in a timely manner, and to help facilitate providing appropriate rest for the
30 safety of all crews. Construction Services first called on local contractors to fully mobilize,

1 and then acquired the services of additional contracted electric line crews from Northern
2 California, Colorado, Arizona, Nevada, Oregon, Washington, and Montana. The local
3 contractors called upon for the fire restoration work were generally the same contractors
4 SDG&E uses on a routine basis. They were already familiar with SDG&E's operating
5 protocols, construction standards, and safety requirements. At peak periods, contractors
6 provided 78 electric crews and 129 digging crews, along with heavy equipment to pull
7 electric line trucks into difficult locations.

8 SDG&E's Construction Services department, working in coordination with efforts
9 directed from the Company's C&O Centers, dispatched contract crews to fire damaged
10 locations, generally concentrating on specific geographical areas or electric distribution
11 circuits. Contract Administrators were assigned to each location to provide field
12 coordination, tracking, and oversight. Additional qualified resources from other parts of
13 the Company served as Contract Administrators, due to the large number of crews utilized
14 during this crisis. Construction Services supervisors and administrative employees
15 provided 24 hours per day back office support, as the field personnel worked to repair the
16 damaged electric infrastructure. The contract crews were another essential part of the
17 team, and made strong contributions to the restoration efforts.

18 **D. LOGISTICAL SUPPORT FOR RESTORATION ACTIVITIES**

19 Company, mutual assistance, and contract crews provided the experience, skill,
20 direct labor, and equipment necessary to replace the damaged poles, wire, and other
21 infrastructure. For these crews to be as effective as possible, it was necessary that a host of
22 other support organizations work behind the scenes to ensure that the crews had everything
23 they needed to complete work safely, efficiently, and according to plan. Logistical support
24 was one of the most important undertakings during this extended emergency restoration
25 effort. Basic necessities such as food, lodging, and sanitation facilities had to be provided,
26 especially since many of those assisting in the restoration effort were from outside of the
27 local area. Transportation, communication devices, safety equipment, and a continuous
28 supply of materials were essential to completing repairs.

29 During major emergencies, SDG&E's Strategic Lead position within the Business
30 Support team at the EOC has functional oversight of various support areas including fleet

1 mobilization, facility management, human resources, safety, environmental, material
2 supply and delivery, information technology, security, food service, hotels, and staging
3 areas. SDG&E's logistics team coordinated these essential behind-the-scenes functions for
4 crews constantly on the move, and met material requirements sometimes identified only
5 hours before they were needed for repairs in the field.

6 **E. MATERIALS AND DELIVERY**

7 SDG&E Logistics personnel, reporting to the EOC, quickly implemented the first
8 phase of emergency material-related supply efforts. Logistics personnel attempted to
9 forecast needs for materials and services based on gathered information from field
10 assessments. To meet the initial requests for material, local storeroom personnel were
11 called out and assigned to shifts to provide 24-hour-a-day support. All 10 SDG&E
12 storerooms were staffed and operational continuously throughout the first three weeks.

13 SDG&E also formed an Inventory Management team to ensure the materials would
14 arrive in a timely fashion. The team estimated sizes and quantities of poles, cross-arms,
15 transformers, and hardware. Inventory levels were checked and purchases expedited,
16 ensuring the flow of material for a restoration effort that was continuously changing as the
17 event unfolded. In total, over 1,800 purchase order lines were placed with 18 suppliers.
18 Large quantities of wood poles were purchased during the event, which came from plants
19 in Canada, Washington, and Oregon, as well as California storage sites in Fresno and the
20 Imperial Valley. As the poles arrived on approximately 150 trucks from these locations,
21 they had to be unloaded, sorted, and reloaded for the delivery of appropriate sizes and
22 lengths to as many as 15 different locations. Employees dedicated to this effort placed the
23 purchase orders, directed each delivery, processed goods receipts, accepted requests from
24 the field, specified reloading for delivery to the field, and coordinated the routing and
25 unloading of the poles.

26 For the storerooms to process and issue large quantities of material, SDG&E
27 established a team dedicated to expediting material requests. This team gathered
28 information on material needs from a variety of sources including damage assessment
29 reports, repair orders, and communications from crew leaders and liaisons in the field.
30 Material requests were organized and consolidated by type, timing, and location, and

1 quickly compared to what stock was available or scheduled to arrive from other sources.
2 Employees were recruited and Company trucks assembled into a team of special “runners”
3 capable of immediately dispatching to retrieve materials, assembling them into an order,
4 and then delivering the materials directly to the field for installation by the crews.
5 Establishing this process minimized delays by relieving crews from having to return to
6 staging areas or C&O Centers for additional parts, thus helping reduce overall restoration
7 time.

8 **F. ENVIRONMENTAL MITIGATION**

9 In response to the 2007 fires and the urgent need to rebuild the utility infrastructure,
10 SDG&E’s Environmental Services department implemented a multi-faceted approach to
11 identifying and managing the many environmental issues associated with the restoration
12 activities. Environmental Services immediately began contacting environmental regulatory
13 agencies to request permission and/or acquire permits to allow field crews to perform
14 emergency work activities necessary to rebuild the damaged or destroyed utility
15 infrastructure. The agencies contacted include: U.S. Army Corps of Engineers
16 (USACOE), San Diego Regional Water Quality Control Board (RWQCB), State Water
17 Resources Control Board (SWRCB), California Department of Fish and Game (CDFG),
18 U.S. Fish & Wildlife Service (USFWS), U.S. EPA Region 9 (USEPA), California
19 Department of Toxics Substance Control (DTSC), and San Diego Air Pollution Control
20 District (SDAPCD).

21 Numerous federal, state and local environmental permits had to be obtained and/or
22 utilized in connection with SDG&E’s restoration activities. These environmental permits
23 required SDG&E to prepare and submit a number of studies on the environmental impacts
24 incurred during SDG&E’s restoration activities. In order to obtain information for the
25 studies, SDG&E assigned a number of biologists to work with field crews to assess
26 worksite conditions. The biologists collected information for both upland habitat and
27 water crossings, assessed all grading locations, pole replacement sites, work set up areas,
28 and made recommendations for installation of erosion control measures.

29 As restoration work began, SDG&E activated the Environmental Command Center
30 (ECC) to respond to environmental questions arising in the field. The ECC also initiated

1 environmental support activities for more than 26 field sites. These sites included
2 command centers, staging areas, helicopter sites, and other miscellaneous sites. The ECC
3 responded to hundreds of requests for assistance from the field regarding, among other
4 things, hazardous materials and waste management, air quality permitting issues, rules to
5 minimize impacts to natural resources, explanation of regulations designed to protect
6 cultural resources, and coordination of spill clean-ups. The ECC was also in
7 communication with local, state, and federal agencies to gain unique permits that allowed
8 repair crews to continue with restoration work.

9 Additionally, Environmental Services personnel were given Business Support
10 Liaison (BSL) duties and assigned to temporary staging areas that supported restoration
11 activities near the major burn sites around San Diego County. Environmental Services
12 staff provided ‘one-stop-shop’ support for the staging areas by handling environmental
13 issues at those sites. The issues included requests for material and equipment needed to
14 manage burned poles and transformers, checks on proper storage and staging of these
15 wastes, scheduling drop-offs and pick-ups of containment equipment, and communicating
16 staging area activities to support environmental review requirements.

17 Hazardous waste generated by the fire damage and restoration work also required
18 coordination from the Environmental Services Hazmat group. Hazmat staff handled the
19 dispensing of collection waste bins and palettes for burned poles, cross arms, transformers,
20 and other hazardous waste. Hazmat also assigned experienced crew members to report
21 daily at regions with multiple staging areas to support and provide guidance to personnel in
22 remote field locations. Hazmat coordinated with emergency response contractors to
23 perform spill clean-up for burned electrical equipment along with other incidental vehicle
24 fuel and hydraulic releases. In total, Hazmat fielded over 336 requests, moved 198 pole
25 bins, and assisted on 89 transformer replacements.

26 After the fires were extinguished, and concurrent with the final days of electric
27 service restoration, a group of biologists was deployed to survey all areas impacted by the
28 restoration work and evaluate the potential for erosion at those locations. Biologists were
29 assigned to ride-along with SDG&E construction personnel and provided maps of
30 distribution and transmission lines impacted by the fires. Once an entire line was assessed,
31 recommendations were submitted to Environmental Services. Environmental and

1 construction project management staff collaborated in determining the scope of work
2 required. Erosion control contractors were then brought in to work under the guidance of
3 SDG&E personnel. Environmental staff later performed quality control checks on the
4 completed installations throughout the rainy season to determine if installations were
5 adequate or if additional work was required.

6 7 **G. STAGING AREAS**

8 To provide forward support closer to the actual field locations where the bulk of the
9 repair and restoration work was occurring, SDG&E established “command centers” and
10 “staging areas” in strategic locations. The command centers provided central meeting
11 locations for crews, office trailers for field management planning, vehicle fueling tankers,
12 temporary storage for poles and materials, helicopter landing zones, and relatively
13 convenient locations to distribute food and provide restroom facilities. With locations
14 close to where repair and restoration work was being performed, these command centers
15 and staging areas minimized crew driving time. Staging areas typically had portable
16 lighting for night work and security was maintained 24 hours-a-day.

17 As more material and crew staging areas were opened, efforts to provide food,
18 temporary offices, temporary assembly areas, bathrooms, washbasins, waste containers,
19 and lights created the need for a centralized approach. Two teams were formed to oversee
20 the details of these efforts. One team was assembled at SDG&E’s Northeast C&O Center
21 and another at the EOC. The Northeast team focused on understanding the ongoing and
22 constantly changing operational needs of crews in the field. The EOC team focused on
23 contracting with vendors to supply these operational needs, and managing the logistics and
24 delivery of the supplies. A daily conference call with all support staff, such as Facilities,
25 Logistics, Fleet, Security, and Information Technology, facilitated communication of the
26 needs in the field, establishment or movement of command centers and staging areas, and
27 scheduling of food and supplies. The EOC worked with the Company’s procurement
28 group to initiate the supplier-related contracts.

29 The number of staging areas increased in quantity and size as more contract and
30 mutual assistance crews began arriving, requiring food and shelter. Arrangements were

1 made for hotels, field offices, restrooms, crew shelters, and mess tents. Over the course of
2 the restoration effort, more than 26 different field sites were utilized. 10 sites became
3 command centers and 16 sites were used as staging areas. Additionally, on numerous
4 occasions, meal deliveries were made at a number of remote locations for crews who could
5 not make it back to the command centers. Staging locations and provisions varied and
6 depended on the crew needs and work being performed in a particular area. Some staging
7 areas were only in-service a few days, while others remained for several weeks.

8 As briefly noted above, a new program titled “one-stop-shop” was initiated and the
9 Company deployed BSLs to provide on-site support services for field operations at various
10 districts, command centers, and staging areas. The BSL’s role was to act as a point of
11 contact for each staging area and coordinate needs with the EOC. Fifty-six employees
12 from business support organizations including Fleet, Facilities, Environmental, Supply
13 Management, and Project Management were assigned to command and staging sites, C&O
14 Districts, and Kearny. BSLs coordinated with the EOC on deliveries, ongoing
15 maintenance and management, and installation and removal of mobile office trailers, tents,
16 tables and chairs, food, portable lighting, back-up power generators, portable toilets, ice
17 and storage chests, trash cans and bins, vehicles and equipment, and field materials.

18 At the peak, over 2,000 utility personnel were supporting restoration efforts. Daily
19 meal counts ranged from 2,000 at the start of the response to 7,000 at the height of the
20 recovery efforts at command centers and other critical locations. This tapered off to less
21 than 1,000 meals per day toward the end of the restoration. In many cases, box lunches
22 were prepared and delivered directly to the crews in the field to minimize downtime from
23 restoration activities. Snacks and drinks were also provided.

24 Meal portions were increased to help the workforce maintain energy levels. The
25 increase was renegotiated at 1.5 times the initial meal cost. At the conclusion of the
26 restoration effort, over 124,700 meals were served.

27 The Logistics team was also responsible for procuring suitable housing for the
28 Mutual Assistance crews. The massive evacuation that occurred in San Diego County,
29 visiting emergency response personnel, and disaster relief teams left few hotel or lodging
30 choices. SDG&E found that the best solution was to secure available lodging closer to
31 metropolitan areas, then transport crews into the staging areas where their heavy equipment

1 was located. This plan proved to be very efficient by keeping crews together, organized,
2 and reporting on-time. This approach also helped keep large vehicles off public streets,
3 enhancing safety and minimizing disruptions to communities.

4 Facilities and Logistics were also instrumental in procuring other resources, such as
5 30 portable emergency generators, 80 light towers, 14 office trailers, 171 portable toilets
6 and 50 hand-wash stations, 16 tents, 419 tables, 1,000 chairs, 27 space heaters, 50 trash
7 bins, nine water tankers, and repeated refueling services for telecomm generators at remote
8 sites without utility power.

9 **H. CUSTOMER SERVICE SUMMARY FOR THE FIRE RECOVERY EFFORT**

10 **1. Customer Notification**

11 At the same time that SDG&E was managing the ongoing effort in the field, it was
12 also making a strong effort to communicate the situation to customers. SDG&E made it a
13 high priority to work with news media and local government officials to provide updates
14 on the latest developments. The Company also worked hard to communicate directly with
15 customers that lost service or were in some other way affected by the condition of
16 SDG&E's system.

17 For example, SDG&E's customer service staff initially called all customers who
18 had outages that were expected to last 48 hours or more by telephone to apprise them of the
19 situation, and then updated them regularly as additional information became available on
20 the status of their restoration. Thousands of phone calls were made, including calls to
21 customers on restored circuits to identify any residual problems. In addition, after fire
22 agencies declared a burned area safe to enter, SDG&E assembled a team to go door-to-door
23 distributing information, and leaving door hangers at the homes of customers who could
24 not be reached. Included on the hangers were basic contact information, estimated
25 restoration times, and safety information concerning downed power lines and back-up
26 generation. Over 10,000 door hangers were distributed during the emergency: 6,000 for
27 fire-safety and 4,000 for long-term outages.

28 **2. Customer Resource Centers**

29 SDG&E employees were deployed to Public Evacuation Centers across the fire-
30 affected areas to assist wherever possible. The teams answered questions about safety,

1 billing, restoration of service, the process of having gas and electric service reestablished
2 for homes that needed to be rebuilt, and other related topics. Materials were provided in
3 English and Spanish, and bilingual speakers were made available to assist wherever
4 possible. SDG&E employees from Customer Service, Project Management, and the
5 executive team also attended town hall community meetings and answered questions.
6 SDG&E staff also handled customer inquiries at crew staging areas and distributed the
7 same materials as available at the resource centers.

8 **3. Website Updates**

9 During the 2007 Fires, SDG&E made a strong effort behind the scenes to
10 coordinate the collection and dissemination of the continuously changing outage
11 information to ensure customers had the most current information. Customer service
12 representatives, the SDG&E website, and the customer contact efforts used current
13 information concerning outage restoration. Some system data required preparation.
14 Manually identified circuit isolation points were translated into specific customer outage
15 status for public access on its website. It was updated daily to include estimated
16 restoration times by area and circuit, and other helpful information.

17 **I. SAFETY**

18 Within the San Diego region, large scale public evacuations occurred in the
19 projected path of fire areas. In addition to the fire danger, damaged structures, debris,
20 smoke, and fatigue were also major concerns. With the challenges of the large displaced
21 population eager to return to their properties, SDG&E employees, contractors, and mutual
22 assistance crews kept employee and public safety as the highest priority during restoration
23 activities.

24 SDG&E's Safety staff organized and conducted key safety orientation meetings for
25 mutual assistance crews and contractors before any of the crews deployed to the field. The
26 11 members of the field safety team provided construction crews with daily safety tailgates
27 at staging areas, command centers, and/or work sites to inform them of changing fire
28 hazards and the means to deal with them. Additionally, SDG&E placed two Industrial
29 Hygienists in the field along with three Occupational Health Nurses to provide on-site
30 safety and health services at the restoration command centers. The 16 safety professionals

1 deployed throughout the region kept safety awareness at high levels during restoration
2 activities. Essential safety equipment such as dust and smoke respirators, goggles, and first
3 aid supplies were provided. Water and beverages were supplied to guard against
4 dehydration and fatigue.

5
6 **IV. SUMMARY**

7 By November 2, service to 97% of the approximate 80,000 customers affected had
8 been restored. On November 12, all service was restored and the majority of this enormous
9 recovery effort was complete. The graph in Exhibit B illustrates the daily outage
10 restoration progress. During the restoration process a total of 1,605 distribution and 211
11 transmission poles were replaced. As of December 31, 2008, the total pole count for
12 replacement associated with the fires had reached over 1,900 distribution poles and more
13 than 270 transmission poles. SDG&E also replaced approximately 341 spans of
14 distribution wire, 338 transformers, and numerous associated pieces of equipment.

15 ///

16 ///

1 **V. QUALIFICATIONS**

2 My name is Alan M. Dulgeroff. My business address is 735 33rd Street, San
3 Diego, California, 92102. I am employed by San Diego Gas & Electric as Manager –
4 Metro Construction and Operations. I have been employed by SDG&E since 1993. In
5 over 15 years of utility industry experience, I have held leadership and technical positions
6 in eight areas of electric and gas transmission and distribution engineering, construction,
7 operations, and maintenance.

8 My present responsibilities include construction, operations, maintenance, and
9 emergency response for the electric distribution system in the Metro district of SDG&E’s
10 service territory. During the fires that occurred in October/November 2007, I was
11 responsible for construction and operations personnel who assessed and restored damage to
12 the electric distribution system.

13 I earned a Bachelor of Science in Electrical Engineering from San Diego State
14 University. I am licensed in California as a Professional Engineer.

15 I am sponsoring the Electric and Gas Distribution Operations and Restoration
16 section of SDG&E’s CEMA Application for the 2007 Fires.

17 I have not previously testified before the California Public Utilities Commission.

EXHIBIT LIST

EXHIBIT A – Description of SDG&E Distribution Operations

EXHIBIT B - Graphic - Outage Restoration Information

EXHIBIT A

Exhibit A

SDG&E Distribution Operations

SDG&E operates and maintains an electric distribution system that serves approximately 3.2 million consumers across more than 4,000 square miles from the California-Mexico border to southern Orange County. As of the 2007 Fires, SDG&E's electric distribution system was split between overhead lines (6,703 miles, or 40.5%), including more than 217,000 poles, and underground cable (9,853 miles, or 59.5%), which serve a mixture of urban and rural communities, consisting of 26 cities, two counties, and 15 major military facilities in geographic locations ranging from bay and coastal to inland valleys, mountain and desert developments.

The combination of SDG&E's significant underground system, overhead system in outlying areas, and diverse geographic service territory has a direct influence on how SDG&E has organized its operations to meet the needs of its customers under various circumstances. The construction, maintenance, and administration of SDG&E's gas and electric distribution systems is organized for efficiency during normal operations, but must also be prepared to effectively meet the challenges of emergencies. This exhibit provides background information on SDG&E's utility operations, focusing primarily on how it is organized with respect to emergency response.

1. Construction and Operations Districts

SDG&E maintains six geographically determined Construction & Operations Districts (a.k.a. districts or "C&O Centers") and two satellite operations. The districts are identified by name as:

- Construction Metro (or Metro)
- Beach Cities
- North Coast
- Orange County
- Northeast
- Ramona (satellite to Northeast)

Eastern

Mountain Empire (satellite to Eastern)

Each district is staffed with a management team, administrative support staff, engineering and planning personnel, fleet and logistics support, and a variety of highly trained and qualified field technicians represented by Local 465 of the International Brotherhood of Electrical Workers (IBEW). Construction and Operations personnel are primarily responsible for maintaining, operating, and upgrading the existing gas and electric distribution systems. This includes routine maintenance and new construction, as well as responding seven days-a-week, 24 hours-a-day, to routine gas and electric outages and emergencies affecting SDG&E's customers. When large emergencies occur, the districts collaborate to redeploy resources from an unaffected region to locations in need of additional support or specialty equipment.

2. Kearny Maintenance and Operations

Kearny Maintenance and Operations ("Kearny") is a substation and transmission department centrally located in Kearny Mesa. This group is responsible for all substation and transmission construction and maintenance activities. Kearny is staffed very similar to the districts, including a qualified workforce represented by Local 465 of the IBEW.

3. Construction Services and Fire Coordination

To augment the district field forces, SDG&E has a Construction Services Department that manages a diverse contract workforce. Specialty contractors are used primarily for gas and electric transmission and distribution system capacity and reliability projects, new customer projects, franchise related relocations, conversions from overhead electric to underground, vegetation management, intrusive pole inspections, and unique projects requiring specialized skills or equipment limited within the utility. The flexibility of a contract workforce provides a cost effective means for managing through periods of peaks and valleys associated with various business cycles. During extraordinary emergencies, contract crews are also a valuable resource that may be used to complement SDG&E's crews as necessary.

The fire coordination function is also managed by the Construction Services department. SDG&E's Fire Coordinators provide electrical awareness training and act as

the liaisons between SDG&E and the various local, state, and federal fire department agencies during 2007 fire events.

4. Electric Distribution Operations

The Electric Distribution Operations department works around-the-clock and is responsible for the safe and reliable operation of the electric distribution system. Electric Distribution Operations' primary activities include monitoring the status of the electric distribution system, coordinating planned outages, responding to unplanned outages, and overseeing all switching and authorization of work necessary for operations.

All planned outages are programmed and authorized by Electric Distribution Operations. This organization is also the first to learn about forced interruptions and other emergencies and is responsible for coordinating appropriate personnel. Electric Distribution Operations monitors National Weather Service forecasts, storms, and all other conditions that may impact SDG&E's electric distribution system and takes proactive steps to notify district and other personnel of potential problems using a five event level alert system. During the 2007 Fires, SDG&E reached Event Level V, the highest alert level, which signifies that emergency conditions are anticipated to exist for an extended duration, customer outages are extensive, service restoration times are expected to be more than two days, and/or mutual assistance crews have been requested.

5. SDG&E Emergency Operations Center

During major crises such as those characterized in an Event Level V alert, SDG&E activates its Emergency Operations Center (EOC) at its Century Park facility, which serves as a high-level central coordination and communications center. It is organized so that important decisions can be made and executed quickly with input from all the major functional groups within the Company. The EOC provides timely information to government agencies, law enforcement, fire departments, and briefings to the public via press conferences and media briefings. It is staffed around the clock as necessary with a lead executive, strategic leaders from seven primary functional groups, and a support group of subject matter experts. The seven primary groups include Electric Operations, Gas Operations, Business Support, Employee Support, Customer Service, External Affairs, and Communications. The EOC assumes responsibility for monitoring the "big picture" and making broad decisions related to the Company's response efforts. The EOC handles

general communications with employees, government agencies and the media, provides logistics in support of Company operations, and coordinates Mutual Assistance resources.

6. SDG&E's Gas Emergency Center

Similarly, a Gas Emergency Center (GEC) located at SDG&E's Miramar facility serves as the local operational control center for emergencies on the gas distribution system resulting from severe storms, fires and earthquakes. The Miramar facility is also home to SDG&E's Gas Technical Services group that performs engineering, design, maintenance, and operational analysis of the gas system. The GEC is staffed with representatives from key gas operations positions including engineering, pipeline operations, mapping, customer service and construction crew supervision. The GEC provides direction to field forces on a regional basis and coordinates the gas activities, with the overall emergency response being managed through Electric Distribution Operations and the EOC.

7. Safety, Environmental, Engineering, and Project Management

In addition to serving as SDG&E's utility headquarters, Century Park also accommodates several important groups that are mobilized to support activities during times of emergencies. The Project Management group normally manages projects associated with designing and constructing new facilities. The Engineering staff is responsible for specifying equipment and standards, and evaluating the performance of the electric distribution system. Many employees are trained to be front-line assessors responsible for evaluating damage in the field and relaying that information back to the emergency response centers. Other departments at Century Park provide field support in their areas of expertise, such as Safety and Environmental.

8. Customer Call Center

SDG&E maintains a call center at its Century Park location, with the primary responsibility of processing customer phone calls regarding routine service matters such as establishing service, account status, bill payment questions, service call requests, as well as appliance efficiency and other energy related information requests.

During outages and emergencies, call volume can be heavy as the call center responds to customer inquiries regarding the status of the system, service restoration time, and a variety of other customer questions. The call center, along with the aid of Interactive Voice Response (IVR) systems, SDG&E's web site, and regular updates to the media,

serves an important role in keeping customers informed during emergencies. SDG&E recognizes that outage and restoration information is important to customers, and makes communication a high priority.

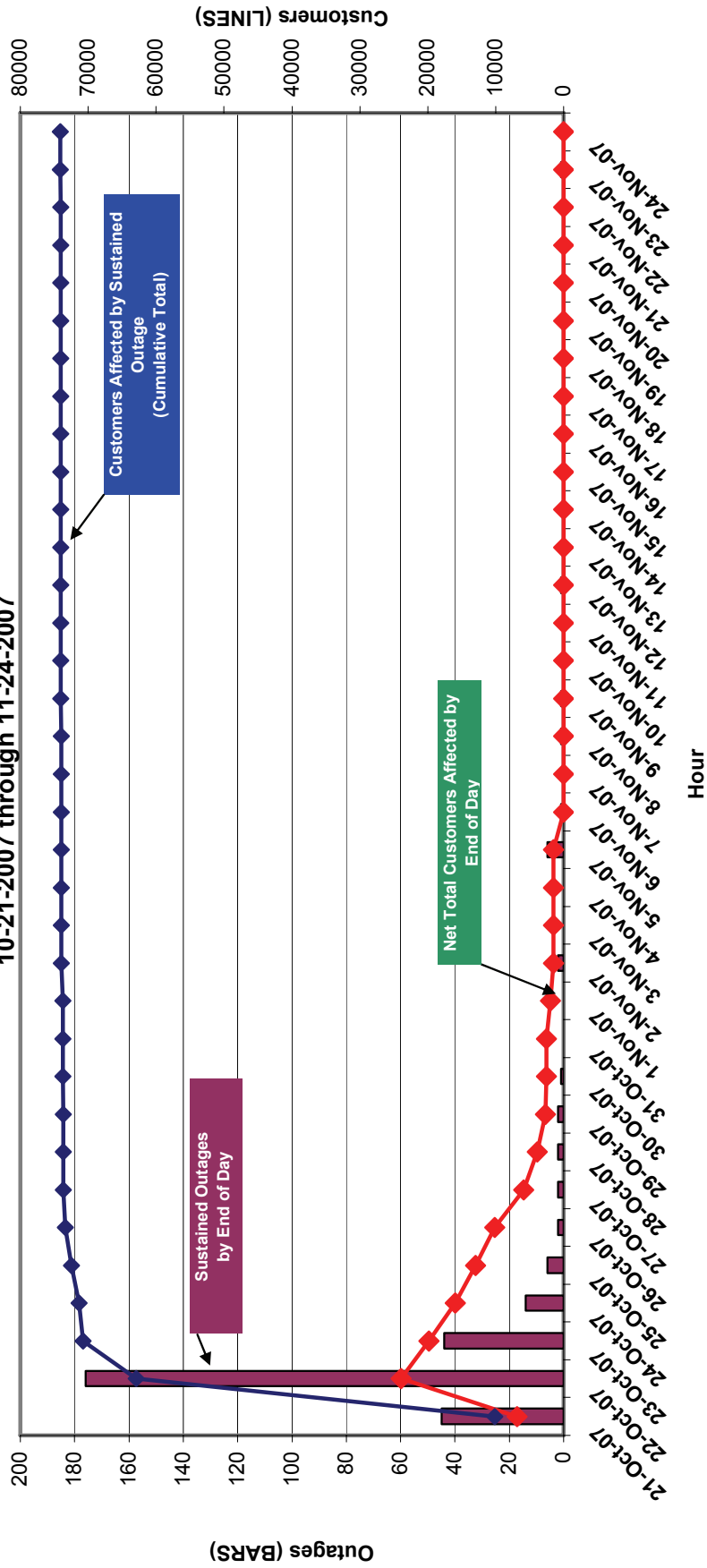
9. Emergency Readiness

To ensure that vital departments maintain their emergency response focus, the Emergency Operations Center and the Gas Emergency Center are activated at least one time each year with a full-scale emergency response or a drill simulating a significant impact on SDG&E's system and its customers. Personnel throughout the Company lend their expertise as needed for any real or simulated events.

EXHIBIT B

Exhibit B

**2007 Fires - Restoration Efforts
10-21-2007 through 11-24-2007**



Graphic- Outage/Customer Restoration Information 10/21/07 through 11/24/08