# PACIFIC GAS AND ELIECTRIC COMPANY GAS DISTRIBUTION PIPELINE SAFETY REPORT JANUARY 1 - JUNE 30, 2011 <br> IN COMPLIANCE WITH <br> CALIFORNIA PUBLIC UTILITIES COMMISSION DECISION 11.05-018 

SEPTEMBER 30, 2011

# PACIFIC GAS AND ELECTRIC COMPANY GAS DISTRIBUTION PIPELINE SAFETY REPORT JANUARY 1-JUNE 30, 2011 <br> IN COMPLIANCE WITH <br> CALIFORNIA PUBLIC UTILITIES COMMISSION DECISION 11-05-018 

TABLE OF CONTENTS
Introduction and Background ..... 1
Summary ..... 2
Use of June 2011 Budget Data ..... 2
Applicability of Certain Reporting Requirements ..... 3
Reporting on Capital Projects ..... 3
Decision-Making Process ..... 5

1. Distribution Planning ..... 5
Budgeting, Spending and Project Reprioritization ..... 8
2. Settlement Agreement Allocations ..... 8
3. Budget by Major Work Category ..... 10
4. Capital Spending by Major Work Category ..... 11
5. O\&M Spending by Major Work Category ..... 12
6. Comparison of Settlement Agreement Allocations to Actual Spending ..... 13
7. Capital Project Status ..... 15
8. Completed Capital Project Cost ..... 22
9. Comparability of Actual Costs and Settement Agreement Allocations ..... 24
10. 2011 GRC Forecasted Capital Project Status ..... 26
11. 2011 Planned Capital Projects ..... 30
12. Variance Explanations Between Settement Agreement Allocations and Actual Spending ..... 31
Project Descriptions and Status ..... 34
13a. Capital Project Status ..... 34
13b. Pipeline Records ..... 35
PACIFIC GAS AND ELECTRIC COMPANY
GAS DISTRIBUTION PIPELINE SAFETY REPORTJANUARY 1-JUNE 30, 2011IN COMPLIANCE WITHCALIFORNIA PUBLIC UTHIITIES COMMISSIONDECISION 11-05-018
TABLE OF CONTENTS
(CONTINUED)
14a. Regulatory Requirement Driven Capital Projects ..... 38
14b. Risk Management "Top 100" Projects ..... 39
13. Most Recent Risk Management "Top 100" ..... 40
14. Distribution Pipeline Inspection Plan ..... 41
15. Project Descriptions ..... 43
Appendix A - Gas Distribution Five Year Capital Forecast, by Project, as Provided in the 2011 GRC ..... A. 1
Appendix B - GRC Methodology and Imputed Regulatory Values ..... B-1

# PACIFIC GAS AND ELECTRIC COMPANY GAS DISTRIBUTION PIPELINE SAFETY REPORT JANUARY 1 - JUNE 30, 2011 <br> IN COMPLIANCE WITH <br> CALIFORNIA PUBLIC UTILITIES COMMISSION DECISION 11-05-018 

## Introduction and Background

This report is being submitted in compliance with California Public Utilities Commission (CPUC or Commission) Decision 11-05-018 concerning Pacific Gas and Electric Company's (PG\&E or the Company) 2011 General Rate Case (GRC). Ordering Paragraph (OP) 44 of that decision requires that:

Pacific Gas and Electric Company shall submit gas distribution pipeline safety reports to the Directors of the Commission's Consumer Protection and Safety Division and Energy Division. The requirements of the reports are detailed in Attachment 5 to this decision.

Attachment 5, page 1, of Decision 11-05-018 further specifies:
Reports shall cover activity over the first six months of the calendar year and the second six months of the calendar year and contirue until further notice of the Commission. Reports shall be submitted no later than three months after the end of each six-month period.

As directed, this first semi-annual report covers gas distribution pipeline safety information for January 1 through June 30, 2011. In a separate report being submitted concurrently in compliance with Decision 11-04-031, which concerned PG\&E's Gas Transmission and Storage Services application, the Company reports on related gas transmission pipeline and storage safety information.

This report is organized consistent with the issues set forth in Attachment 5 to Decision 11-05-018:
ffi Decision-Making Process (Item 1);
ffi Budgeting, Spending and Project Reprioritization (Items 2-12); and
ffi Project Descriptions and Status (Items 13-17).
This report includes distribution-level Major Work Categories (MWC) that relate to gas distribution safety, integrity and reliability. Other MWCs, such as New Business (MWC EV) and Work Requested by Others (MWC EW), are not included in this report,
but are addressed in the August 3, 2011 budget report submitted in compliance with OP 42 of Decision 11-05-018.

## Summary

For 2011, PG\&E has budgeted more overall on gas distribution safety, integrity and reliability than the Settlement Agreement[1] allocations for both capital and expense programs. For capital, PG\&E expects to spend $\$ 191.1$ million in 2011, which is $\$ 33.6$ million more than provided for in the Settement Agreement. For operations and maintenance (O\&M or expense) activities, PG\&E expects to spend $\$ 140.2$ million in 2011, which is $\$ 2.1$ million more than provided for in the Settlement Agreement. Currently, PG\&E is on track to spend the entire amount budgeted for gas distribution safety, integrity and reliability. Although PG\&E expects to spend more than the amount allocated in the Settement Agreement on gas distribution safety, reliability and integrity, the Company is spending less on some Cas Distribution programs to fund higher priority Gas Distribution work.

In this first six-month report period, PG\&E has completed approximately 4 million inspections through O\&M activities in areas such as leak survey, cathodic protection, isolated services program, district regulator station maintenance, valve maintenance, atmospheric corrosion and standby/field meets. (See Item 16, Distribution Pipeline Inspection Plan.) These activities include 298,000 services surveyed for leaks, 245,000 mark and locate tags completed, and 6,300 service leaks repaired. (See Item 7, Capital Project Status.)

This report also includes information on 124 capital projects, of which 38 projects are complete. (See Tables and $7-2$ and 17-1.) These projects have current-year expenditures greater than $\$ 10,000$ and are forecasted to exceed $\$ 250,000$. These projects include the replacement of approximately 11 miles of main and the replacement of 3,700 services. (See ltems 10 and 17.)

## Use of June 2011 Budget Data

Consistent with PG\&E's August 3, 2011 budget report referenced above, the budgets for 2011 contained in this report reflect those developed in June 2011. This is because the final decision for the 2011 GRC was issued in May 2011, and hence PG\&E
[1] References throughout this report to the Settlement Agreement are meant to refer to the multi-party settement of Phase 1 of PG\&E's 2011 GRC, adopted in Decision 11-05-018.
first prepared a 2011 budget that incorporated the final decision later that month. The June 2011 capital budget data also includes PG\&E's estimate of increased spending as a result of the Tax Relief, Unemployment Insurance Reauthorization, and Job Creation Act of 2010, which includes provisions on bonus depreciation.

## Applicability of Certain Reporting Requirements

As explained in PG\&E's March 14, 2011 comments on the Proposed Decision and Alternate Proposed Decision leading up to D.11-05-018,[2] certain requirements identified for inclusion in this report are not applicable to distribution-level gas operations. Where no analogous information is available, PG\&E has so indicated in this report. In other instances, PG\&E has provided analogous information in order to meet the Commission's intent.

For example, Items 14 and 15 request information on Gas Distribution capital projects or pipelines that are on PG\&E's "Risk Management Top 100" list or are in high consequence areas. Gas Distribution pipelines have never been part of the Top 100 list, which has historically been applied only to gas transmission pipeline segments. Similarly, "high consequence areas" is a term of art that does not apply to Gas Distribution pipelines. For the current report, PG\&E has indicated that these two items are inapplicable. However, as part of PG\&E's new Distribution Integrity Management Program (DIMP), PG\&E is performing a risk ranking of the Gas Distribution system and the Company will report on the results when they are available.

Also, Items 17e, 17f, 17g, and 171 regarding "pipeline numbers," "mileposts," "geographical coordinates and location," and "class location" are factors that relate to gas transmission pipelines and are not generally available for Gas Distribution pipelines. Nonetheless, PG\&E has provided as much information as is available to be responsive.

## Reporting on Capital Projects

The reporting on capital projects in this report follows the instructions set forth in Attachment 5 of Decision 05-11-018. The Decision explains:

For capital projects proposed or forecasted in the test year 2011 general rate case
(GRC), PG\&E shall report on capital projects at the level set forth in the workpapers for PG\&E's GRC Gas Capital testimony. For more generally referenced capital projects, PG\&E shall provide information for every project with total forecasted spending in excess of $\$ 250,000$ and with actual expenditures in the year of over
[2] March 14, 2011 Opening Comments of Pacific Gas and Electric Company on the Proposed Decision of ALJ Fukutome and the Alternate Proposed Decision of Commissioner Peevey (Not Including Non-Tariffed Products and Services Issue).
$\$ 10,000$, within each gas capital MWC. These thresholds are consistent with PG\&E's annual Gas Pipeline Replacement Program reports. (D.11-05-018, Attachment 5, p. 4.)

Accordingly, where the Commission has requested information on projects proposed or forecasted in the GRC, PG\&E provides project-specific data at the level of detail set forth in Table $19-3$ of the workpapers for PG\&E's Gas Capital testimony (Exhibit PG\&E-3, Chapter 19). Table 19-3 is attached as Appendix A to this report.

And, where the Commission has generally requested information about capital projects, PG\&E provides project-specific data using the monetary thresholds described above.

In other areas, the Commission has requested data concerning projects specified in the Settlement Agreement. Because the Settlement Agreement did not include allocations for specific gas capital projects, PG\&E provides information in this report at the MWC level.

## Decision-Making Process

## 1. Distribution Planning

## Request

A thorough description and explanation of the strategic planning and decisionmaking approach used to determine and rank which capital projects, operation and maintenance (O\&M) activities, and inspections are undertaken for gas distribution pipeline, safety, integrity and reliability are to be undertaken.

## Response

PG\&E established plans and budgets for 2011 Gas Distribution capital and expense expenditures as part of the Company-wide operating plan development process. This planning and decision-making process is outlined below.

In 2010, the managers with day-to-day responsibility for Gas Distribution capital and expense expenditures (program managers) gathered information from gas engineering, integrity management, maintenance and operations directors, managers, field superintendents, Gas Distribution engineers, and project managers to develop a preliminary work plan and proposed budget for 2011. The work planned for the Gas Distribution system each year is based on a number of factors. Compliance with regulation is a key factor driving many inspection, maintenance and replacement programs. In addition, the maintenance, repair and replacement activities required to maintain system integrity and safety are determined for the planning period. Work is also planned to provide capacity to meet customer needs and to achieve operational efficiency and reliability. In developing the preliminary work plan, the program managers start with the plan from the prior year and the forecast from the last rate case as the initial point of reference. This annual planning process was used to establish a preliminary budget and work plan for 2011, which was subsequently updated to reflect the final GRC decision.

Once this preliminary work plan was developed, the Gas Distribution program managers categorized the proposed work, capital projects and expense programs (O\&M activities), according to the following prionities:
ffi Mandatory: Work that is required to maintain system safety, mandated by rule or regulation (e.g., CPUC or Federal Energy Regulatory Commission), or is essential to maintaining the Company's business operations.
ffi Prionity 1: Work that is deemed critical to the Company's operational goals and that could not be deferred without impact to system operations or reliability.
ffi Priority 2: Work that would have a moderate impact on the Company's operational goals but for which deferral may be considered.
ffi Priority 3: Work that is necessary to successfully realize the Company's longterm objectives but for which deferral may be considered.

These categories were used to determine relative priorities for work in the upcoming year in order to develop the proposed 2011 budget and operating plan. Except for work within the mandatory category, the program managers further prioritized specific work within the same risk category (Priority 1, Priority 2, Priority 3) according to factors such as the impact of the work on system safety, system reliability and integrity, capacity needs, customer needs, and other operational requirements. Capital and expense work were prioritized separately. Gas distribution work was not combined with gas transmission or electric transmission for purposes of this prioritization process. Gas distribution was prioritized with electric distribution in 2010 for the 2011 budget year.

The work included in the mandatory category, the prioritization of Gas Distribution work in priority Categories 1,2 and 3, as well as the proposed Gas Distribution plan and budget, were reviewed by senior management in the Company's Gas and Electric Transmission and Distribution (T\&D) lines of business. The result of this process formed the basis for the Gas Distribution proposed budget request and plan.

After review by the Finance Department, the proposed Gas Distribution budget and plan were submitted for further review and approval to PG\&E's Operating Plan Committee (OPC), the team of senior officers responsible for PG\&E's Company-wide planning and budgeting. For the 2011 budget request, the Gas Distribution business was included within the presentations prepared for the overall T\&D lines of business for OPC approval. Upon completion of their review of all the budget requests for all PG\&E lines of business, in conjunction with the Company's senior leadership, the OPC communicated the approved annual budgets for 2011 at the line of business level (i.e., at the Gas Distribution
level, not specifically allocated by MWC or program). These approved budgets were also presented to the Company's Board of Directors for its concurrence.

After the approved budgets are presented, the line of business reviews the budget relative to the initial request. If the approved budget is different from the request, the line of business either defers lower prionity work or funds additional work activities using the prioritization previously developed to support the budget request, taking into consideration any emergent issues. For instance, if the approved budget is lower than the original request, the line of business removes activities from that year's work plan, starting with funding levels for the lowest priority areas (i.e., starting with Priority 3, if any). In general, work which is deferred in one year is considered in future years. Because work within Priorities 1,2 and 3 are prioritized within that category, the work plan supporting the initial request can be modified to accommodate the approved budget.

## Mid.- Year Updates

Throughout the year, Gas Distribution occasionally adjusts the work plan. As such, during the course of the January through June 2011 reporting period, the detailed Gas Distribution budget and work plan were adjusted to address changes in work scope, adjustments in work execution plans or to address operational and other emergent issues. This re-planning effort (referred to as the Cycle 1 Budget) included an update to reflect the GRC decision in May 2011 and included minor changes to improve the accuracy of the 2011 work plan.

## Budgeting, Spending and Project Reprioritization

## 2. Settlement Agreement Allocations

## Request

Amount of funds allocated in the Settlement Agreement to each Major Work Category (MWC) related to gas distribution pipeline safety, integrity and reliability for capital expenditures and for $O \& M$ expenses. To the extent they are specified in the Settlement Agreement, amounts of funds expected to be incurred for each capital project used as the basis for the settled capital expenditures. If capital projects are not specified in the Settlement Agreement, show the capital projects proposed by PG\&E in its Application (A.) 09-12-020.

## Response

Table $2-1$ reflects the funds allocated by MWC for O\&M, as specified in the Settement Agreement. Table $2-2$ reflects the funds allocated by MWC for capital. These capital amounts are calculated as shown in Appendix B. The MWCs shown on both tables are those that relate to gas distribution pipeline safety, integrity and reliability.

TABLE 2-1
PACIFIC GAS AND ELECTRIC COMPANY SUMMARY OF 2011 O\&M ALLOCATIONS
FOR GAS DISTRIBUTION PIPELINE SAFETY, INTEGRITY AND RELIABILITY BASED ON THE GRC SETTLEMENT AGREEMENT (D.11-05-018, APPENDIX A, PAGE 1-A3) (IN THOUSANDS OF 2011 DOLLARS)

| MWC | MWC Description | Settlement Agreement Allocation |
| :---: | :---: | :---: |
| DE | Leak Survey | 15,482 |
| DF' | Mark and Locate | 29,902 |
| DG | Cathodic Protection | 10,757 |
| EX | Meter Protection | 1,200 |
| $F \mathrm{~F}$ | Operate Gas Distribution System | 3,945 |
| FH | Gas Distribution Preventative Maintenance | 16,924 |
| Fl | Cas Distribution Corrective Maintenance | 35,656 |
| GF | Operations Distribution - Gas Mapping | 1,600 |
| GO | Gas Engineering | 3,060 |
| Js | Distribution Integrity Management Program | 19,500 |
|  | Total | 138,026 |

MWC KF "GT\&D Impl Regulatory Change" is not included in the Settlement Agreement allocations in Table 2-1 because it was not included in the GRC;
however, this MWC does have a budget allocation for 2011 as indicated in Table 3-1

TABLE 2-2
PACIFIC GAS AND ELECTRIC COMPANY
SUMMARY OF CAPITAL ALLOCATIONS FOR GAS DISTRIBUTION PIPELINE SAFETY, INTEGRITY AND RELIABILITY BASED ON THE GRC SETTLEMENT AGREEMENT
(IN THOUSANDS OF 2011 DOLLARS)

| MWC | MWC Description | Settlement Agreement Allocation |
| :---: | :---: | :---: |
| 14 | Cas Pipeline Replacement Program | 123,266 |
| 27 | Gas Meter Protection - Capital | 593 |
| 47 | Gas Distribution New Capacity | 12,760 |
| 50 | Gas Distribution Reliability | 20,660 |
| 52 | Cas Distribution Emergency Response | 264 |
|  | Total | 157,543 |

MWCs 2 J and 2 K are not included in the GRC Settlement Agreement allocation amounts in Table 2-2 because they were not included in the GRC; however, these new MWCs have either a budget allocation for 2011 or actual spending as indicated in Tables 3-2 and 6-2.

## 3. Budget by Major Work Category

## Request

Amount budgeted for each MWC at the beginning of each calendar year.

## Response

Tables $3-1$ and $3-2$ reflect the funds budgeted by MWC for O\&M and capital, respectively.

TABLE $3-1$
PACIFIC GAS AND ELECTRIC COMPANY SUMMARY OF BUDGETED O\&M EXPENSE BY MWC (IN THOUSANDS OF 2011 DOLLARS)

| WWVC | MWC Description | Eudiget |
| :---: | :---: | :---: |
| DE | Leak Survey | 18,609 |
| DF | Mark \& Locate - G\& | 26,978 |
| DG | Cathodic Protection | 8,748 |
| EX | Meter Protection-Inspect\&Corr | 199 |
| $F \mathrm{~F}$ | Opr Distribution Sys - Gas | 3,038 |
| FH | Preventive Maintenance Gas | 19,173 |
| Fl | Perf Maint to Corr Fail - Gas | 39,550 |
| GF | Opr Distribution Sys - Gas Map | 934 |
| GG | Opr Distribution Sys -- Gas Eng | 3,070 |
| JS | G Dist Integrity Mgt Pgm (DIMP) | 19,500 |
| KF | GT8D Impl Regulatory Change | 367 |
| Cas Distribution Expense |  | 140,166 |

TABLE 3-2
PACIFIC GAS AND ELECTRIC COMPANY SUMIMARY OF BUDGETED CAPITAL BY MWC (IN THOUSANDS OF 2011 DOLLARS)

| IIWV | MWC Description | Budget |
| :---: | :---: | :---: |
| 14 | Gas Pipeline Replacement Pgm | 123,707 |
| 27 | Gas Meter Protection-Capital | 332 |
| 47 | G Dist New Capacity - Gas | 12,000 |
| 50 | G Dist Reliability | 39,390 |
| 52 | G Dist Emergency Response | 702 |
| 2 | GT\&D Impl Regulatory Change | 0 |
| 2 K | G Cust HPR | 15,000 |
| Cas Distribution Capital |  | 191,131 |

## 4. Capital Spending by Major Work Category

## Request

Amount spent during the reporting period, year-to-date IYTD], and annual totals by MWC and for each capital project within each MWC.

## Response

Table 4-1 provides a summary, by capital MWC, of the spending from January 1 through Jume 30, 2011, on gas distribution pipeline safety, reliability and integrity.

TABLE 4-1
PACIFIC GAS AND ELECTRIC COMPANY SUMMARY OF CAPITAL SPENDING BY MWC (IN THOUSANDS OF 2011 DOLLARS)

| MwC | MwC Description | Actuals <br> $1 / 1-6 / 30$ |
| :---: | :---: | ---: |
|  |  |  |
| 14 | Gas Pipeline Replacement Pgm | 60,962 |
| 27 | Gas Meter Protection-Capital | 0 |
| 47 | C Dist New Capacity- Cas | 4,953 |
| 50 | G Dist Reliability | 24,253 |
| 52 | GDist Emergency Response | 366 |
| $2 J$ | GT\&D Impl Regulatory Change | 66 |
| 2K | GCust HPR | 761 |
| Gas Distribution Capital | 91,361 |  |

Table 4-2 provides additional project-by-project spending detail. The column titled "Project No." corresponds to the type of work by division. Within each "Project No." are many orders for specific projects. Orders for these specific projects that meet the criteria for this report are noted with an eight digit number and an order description. Orders noted as "OTHER" reflect a grouping of smaller projects that are forecasted to be less than $\$ 250,000$. This level of detail shows all projects or grouping of projects within each MWC.
"TABLE 4.2
PACFIC ELECTRIC AND GAS COMPANY PROJECTS WITH 2011 EXPENDTURE 3 . 10,000 and FOREOAST $\$ \$ 250,000$

Sin thousands
Cas Distributon - Capital

"ABLE 4-"
OACIFC ELECTRIC AND GAS COMPANY

|  |  |  | Sillu |  | Y! <br> (Lilum | (\#) silum WiviMent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | 5506443 | Pipeline Replacement-San Francisco | 30008281 | RUE G GPRP 1GTH ST SAN FRANOISCO | 89.400 | 9 5.44 |
| 14 | 5506443 | Pipeline Replacement-san Francisco | 30808590 | GFRP MISSIONDISTIICT A, GANFRAN | 91249 | 54, 65 |
| 14 | 5606443 | Pipeine Replacement-San Francisco | 30815779 | OC1 G GPRP HOLLYPARK 1 (100 APPLETONAVE | 3350 | 3489 |
| 14 | 5506443 | Pipeline Replacement-San Francisco | 30820278 | GGPRPEALBOAPARK4, SF | 3508 | \%087 |
| 14 | 5506443 | Pipeline Replacement-San Francisco | 30821410 | GGPRPJOOST, SF | 838 | 8 878 |
| 14 | 5506443 | Pipeine Feplacement-San Framisco | 30821001 | R1EG GPRP BERNA HELOUTS. SF | \$20.6 | 859 |
| 14 | 5506443 | Pipeine Replacementsan Francisco | 30823194 | M GPRP CRESCENT 3, GANFRANCISCO | 55 | 5:041 |
| 14 | 5506443 | Pipeline Replacement-San Francison | 30829620 | MCPRP-CONCO 1-SF | $8 \leqslant 5$ | 3348 |
| 14 | 5506443 | Pipeine Replacement-San Francisco | 30829626 | OCIEGGPRF OCEANANDPLYMCUTH, SF | 3499 | 850 |
| 14 | 5506443 | Pipelne Replacement-San Francison | OTHER |  | . 8121 |  |
| 14 | 5506443 | Pipeline Replacoment-san Francisco | TOTAL |  | 330.567 |  |
| 14 | 5507198 | Es Copper Sevice Replacement | TOTAL |  | 882 |  |
| 14 | 5507398 | PN Copper Sevice Replacement | TOTAL |  | 3527 |  |
| 14 | 5507600 | SJAb7 Services Replicement | TOTAL |  | +4 |  |
| 14 | 5507601 | MMAG7 Services Replacement | TOTAL |  | - 8 |  |
| 14 | 5507659 | DIA67 Services Replacement | TOTML |  | 496 |  |
| 14 | 5507660 | ccad 67 Services Replacement | TOTAL |  | \% 0 |  |
| 14 | 5507601 | FR A67 Sewices Replacement | TOTAL |  | 828 |  |
| 14 | 55076\% | YO A87 Services Replacement | TOTAL |  | 4 |  |
| 14 | 55076e8 | NE A6? Services Replacement | TOTAL |  | 561 |  |
| 14 | 5507605 | 1467 Services Replacement . 60 | Tormi |  | 856 |  |
| 14 | 5507781 | SFAG7 Services Replacement | TOTAL |  | - 8 |  |
| 14 | 5509319 | ES A67 Sevices Replacement | TOTAL |  | 8137 |  |
| 14 | 5508320 | PNa67 Servicss Feplacement | TOTAL |  | 976 |  |
| 14 | 5509321 | DAA67 Services Replacement | TOTAL |  | 8112 |  |
| 14 | 5508322 | Co Copper Services Replacement | TOTAL |  | 4 |  |
| 14 | 5508323 | ¢J Copper Serfice Replacernent | TOTAL |  | 43 |  |
| 14 | 550832 | SF Copper Sevice Replacement | TOTAL |  | 5608 |  |
| 14 | 5508326 | Yo Copper Sevice Replacement | TOTAL |  | 3135 |  |
| 14 | 55083 3n | INS Copper Service Replacement | TOTAL |  | \%7,435 |  |
| 14 | 5508369 | SA Ab7 Services Feplacement | TOMAL |  | \$121 |  |
| 14 | 550e37 | \|FR Copper Service Replacement | TOTAL |  | 32.591 |  |
| 14 | 5508372 | Di Copper Service Replacement | TOTAL |  | 312308 |  |
| 14 | 15509247 | Est mim EstDesignDisk . Scv RHWC 14 | TOTAL |  | 3449 |  |
| 14 | 5509273 | Wmaphit - Other Mapplng - ScV MMWC I4 | TOTAL |  | 3102 |  |
| 14 | 5734818 | ScV - HMWC IM plaming | TOTAL |  | + 8001 |  |
| 14 | 550705 | Econ Slim SA Copper Swrepl | TOTAL |  | 81 |  |
| 14 | 5610177 | Econ Stim Pipeline Replacement SanJose | TOTAL |  | 88 |  |
| 14 | 5510178 | Econ Stim Pipeline Replacement San Franc | 30820364 | RACOPRM ATHENS, S: | 221 | 54. |
| 14 | 5510178 | Econ Stim Ppelne Replacement Sen Franc | OTHER |  | 50 |  |
| 14 | 5510178 | Exon Stim Pipeline Replucement San wrame | TOTML |  | 321 |  |
| 14 | 5510179 | Econ Stim PN Copper maccessible Tees | TOTAL |  | 333 |  |
| 14 | 5510180 | Econ Sum su Copperinaccessible Ifees | TOTAL |  | 40 |  |
| 14 101AL |  |  |  |  | 960,962 |  |
| 27 | 5500885 | MeverProtectoapliteast Eay | TOTAL |  | 80 |  |
| 27 TOTAE |  |  |  |  | 50 |  |
| 47 | 5500748 | Incr. Capacity ©-DI | 30789549 | OC1 BYPON MAIN EXTENGION-BXLER RD EYR | 3754 | 5806 |
| 47 | 5500748 | Iner. Capacity C-D! | 30820811 | MAINREWFORC STONE VLY YRD, ALAMO | 8482 | 8604 |
| 47 | 5600748 | Iner Capacity G-DI | OTHER |  | 310 |  |
| 47 | 5500748 | incr. capacity G-DI | TOTAL |  | 81,220 |  |
| 47 | 5500749 | Mner Gapacity ces | TOTAL |  | 80 |  |
| 47 | 5500750 | Incr Capacity CHR | 30757869 | R2 INST 17000 FT OF Q" FL MAINFRESND | 98 | 8485 |
| 47 | 5500750 | mer Capacty GFFR | 30784111 | OC2CAPACTY INCREASEHAFLANINNCHCLOVS | 525 | 957 |
| 47 | 5500750 | Incr Capacify C-FR | OTHER |  | 50 |  |
| 47 | 5500750 | iner Capacity c.fer | TOTAL |  | +110 |  |
| 47 | 5500752 | Inor. Capacity G-MI | 30747707 | OCIDUBUMBUD DUBLIIMSTAL 4100 FT | 884 | 9 |
| 47 | 5500752 | Incr. Capacity G-MI | OTHER |  | 985 |  |
| 47 | 5500752 | Incr Capacity 6 -lil | TOTAL |  | 8228 |  |
| 47 | 550075 | mer. Capacily © - NE | TOTAL |  | - 83 |  |
| 47 | 5500754 | 47E-Cons/Acq New Fac-u-Mmins EO | TOTAL |  | 8178 |  |
| 47 | 5500756 | Incr. Capaciy G-NV | 30742423 | CCIHET HOOFT GINPL BRUCERD, CHICD | \$36c | 8572 |
| 47 | 5500755 | Iner. capacity C-NV | OTHER |  | 55 |  |
| 47 | 5500755 | Incy, Capacity G-NV | TOTAL |  | 3391 |  |
| 47 | 5500756 | Incr Capactiy G.PN | 30783043 | GCI CORDILERASREDWOCDCIT | 5397 | 8450 |
| 47 | 5500750 | Incr Capacty G.pN | ornek |  | 349 |  |
| 47 | 5500756 |  | TOTAL |  | 9446 |  |
| 47 | 5500757 | Incr Capacily CSA | TOTAL |  | \$231 |  |
| 47 | 5500759 | Incr. Capacify CB S | 30675123 | OC2G 1270 FTAPLGREATAMERICAPKMMSC | 994 | \$28 |
| 47 | 5500759 | Incr. Capacily G - S | OTHER |  | 5 7 |  |
| 47 | 5500759 | Inter Capacity 6.5 .5 | TVTAL |  | 8101 |  |
| 47 | 5500760 | Incr. Capacily C .51 | 30798844 | INST. 1050 OF ${ }^{\circ}$ PL.ELMST, LYE | 9291 | 8288 |

"ABLE 4-"
PACFIC ELECTKIC AND GAS COHPANY

"ABLE $4-2$
PACIFIC ELECTRIC AND OAS COMPANY

| wiw | W新: Mit |  | अMII | ThertMhtyMM | 4, <br> 4.4 | Muldtwisu EMM <br>  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 5500657 | lmpr Reiloep cmy | OTHER |  | 8190 |  |
| 50 | 5500657 | Impr Relbup Gum | TOTML |  | 8230 |  |
| 50 | 55500653 | Impr Reidep c. Sa | 30846074 | GPHAZEIAVEGETW GREENBACK P FORTUNA | 8313 | 3486 |
| 50 | 5500658 | Impr Relldep G. SA | OTHER |  | 5473 |  |
| 50 | 5500858 | Impr Rellom G.SA | TOTAL |  | 9786 |  |
| 50 | 5500659 | Impr Rellope csp | 30750573 | OC1 GREPLMANCASTAS \& CRESTA VISTA. | 3488 | 363 |
| 50 | 5500659 | Impr realdep CSF | 30761629 | CCI SREPL G*STLHP TUNUEL AVE SFBRISBANE | 8124 | 878 |
| 50 | 5500659 | Impr Relldep CSF | 30833648 | DOLORESMFRE. SF | 354 | 872 |
| 50 | 5500659 | Impr Relidep S.SF | OTHER |  | 3204 |  |
| 50 | 5500659 | Impr Relldep GSF | TOTAL |  | 3670 |  |
| 50 | 55ivuect | Impr Relmep SSu | TOTAL |  | 3410 |  |
| 50 | 5500661 | linpr Relluen Sisl | TOTAL |  | 5149 |  |
| 50 | 5500662 | Impr Rellop CST | 30755040 | GRANTLNE\&L2 | 314 | 3780 |
| 50 | 5500662 | Impr Rellomes.ST | 30756709 | 9TH\& LINCOLT, GTOCKTON | 8455 | 5507 |
| 60 | 5500662 | Impr ReIDep C.ST | OTHER |  | sacd |  |
| 50 | 5510832 | Impr Relloep G.5T | TOTAL |  | 4757 |  |
| 50 | 5500663 | Impr Relvep c.yo | 30742231 | MERCED PHASE 3 RELABIITY | 9249 | 933 |
| 50 | 5500663 | Impr Rellep G-yo | OTHER |  | 338 |  |
| 50 | 5500663 | Impr Relidep C.Yo | TOTML |  | 9287 |  |
| 50 | 550264 | System-wide unscheduled main replacament | TOTAL |  | 887 |  |
| 50 | 5506942 | Irry Rel/Dep, ass Services . $=$ E | TOTAL |  | \$1066 |  |
| 50 | 55966843 | Imp Rel/Dep, Cas Services | TOTAL |  | 3433 |  |
| 50 | 5506944 | Imp RevDep, Sas Sves mbe | TOTAL |  | 3187 |  |
| 50 | 5506945 | mmp Relldep, ©as svcs | TOTAL |  | 8110 |  |
| 50 | 550694\% | mp Rel/Dep, Gas Sves - Dl | TOTAL |  | 8421 |  |
| 50 | 5506947 | lmp Rel/Dep, cas sves -.FR | TOTML |  | 8152 |  |
| 50 | 5506848 | Imp Rel/Dep, Gas Sves - ME | TOTAL |  | \%122 |  |
| 50 | 5506949 | Imp Rel/Dep, 6ms Svce N NE | TOTAL |  | 8462 |  |
| 50 | 5546550 | Imp Rel/ Dep, cas Svcs - so | TOTAL |  | 8457 |  |
| 50 | 5506951 | Imp Rel/Dep, cates Sves - MV | TOTAL |  | 3110 |  |
| 50 | 5506852 | lrmp Refldep, Gas Sves ${ }^{\text {PN }}$ | Total |  | \$460 |  |
| 50 | 5506953 | Imp Rel/Dep, Gas Sves-SA | TOTAL |  | 3640 |  |
| 50 | 550695 | Imp Relldep, Sms Sves mf | TOTML |  | 3436 |  |
| 50 | 550085 | Imp Rel/Dep, Gas Sves - 5] | TOTAL |  | 8348 |  |
| 50 | 5506956 | Itrp Rel/Dep, Sas Sves - Su | TOTAL |  | 3734 |  |
| 50 | 5506957 | Ernp Rel/ Dep, Gas Svcs - ST | TOTAL |  | 5207 |  |
| 50 | 5506958 | Imp Rel/Dep, Gas Svis - Yo | TOTAL |  | 8144 |  |
| 50 | 5506959 | Impr Relbisys Depnd. G-CP Sys.00 | TOTAL |  | 561 |  |
| 50 | 550109\%0 | Impr Relb/Sys Depnd-C-CP Sys. DA | TOTAL |  | 538 |  |
| 50 | 5506961 | Itror RelbiSys Depnd (S.CP Sys mol | TOTAL |  | 388 |  |
| 50 | 5506842 | Lmpr Relwisys Depnd-G-CP Sys mee | TOTAL |  | 392 |  |
| 50 | 5506963 | Impr Relbsys Depnd-G.CP Sys -FR | 30766290 | OC2 2010 IUST ANODES (95)FRESNODIVISU | 8363 | 943 |
| 50 | 5606963 | Impr Felbisys Dephd-GCP Sys -FF | OTHER |  | 939 |  |
| 50 | 5506983 | Impr Relbisys Depnd-G.CPSy - MR | TOTAL |  | 8378 |  |
| 50 | 5506968 | Impr Relbisys Dephd-6.icp Sys - KE | Total |  | 316 |  |
| 50 | 5506006 | lmpr Relb/Sys Depnd.r-mP Sys - Ne | TOTAL |  | 863 |  |
| 50 | 5506967 | Irnpl Relbisys Dephduc.cP Sys.SO | TOTAL |  | 8134 |  |
| 50 | 5506888 | lmpr RelbiGys Depnd.G-CP Sys - NV | TOTAL |  | 885 |  |
| 50 | 5506889 | Impr Rolb/Sys Depnd -S*CP Sys - PN | TOTAL |  | 813 |  |
| 50 | 5506970 | Empr Relbleys Depnd-G.CP SYS - SA | TOTAL |  | 1135 |  |
| 50 | 55069711 | Impr Rellicye Depnd-G-CP Sys.SF | TOTAL |  | 820 |  |
| 50 | 5506872 | Imyr Relbisys Depndigep sys . 51 | TOTAL |  | 85 |  |
| 50 | 5500973 | Impr RelbiSys Depnd -(.cer Sys . SJ | Total |  | 885 |  |
| 50 | 55060741 | Impr Relilsys Dephodisal Sys mT | TOTAL |  | 357 |  |
| 50 | 5506975 | lmpr Relbisys Depnd.C-mP Sys w Yo | TOTAL |  |  |  |
| 50 | 5500978 | Impr RelbiSys Depnd- | TOTAL |  | 318 |  |
| 50 | 5506978 | Impr Relbigys Deprd-(S-Oti Equip - Di | TOTAL |  | 8181 |  |
| 50 | 5506979 | Impr ReblSys Deprodic-Oti Equip - EE | TOTAL |  | \$110 |  |
| 50 | 5506980 | Impr Rebisys Depnd.C.Oth Equip - FR | TOTAL |  | 82 |  |
| 50 | 5508981 | Impr Relbisys Depnd-s-Oth Equip - KE | TOTAL |  | \% 2 |  |
| 50 | 5506982 | Impr Relbisys Depndrcmoth Equip - III | TOTAL |  | - 5 |  |
| 50 | 5506983 | Empr Relb/Sys Deprd-G.Oth Equip - Ne | TOTAL |  | 476 |  |
| 50 | 55040841 | Lmpr RelbiSys Depnd.r-Oth Equip - So | TOTAL |  | 811 |  |
| 50 | 5506985 | lmpr Reli/Sys Depnd-G.Otm Equip - M | TOTAL |  | 3 |  |
| 50 | 5506986 | Impr Rebbsys Dapmo-G Oth Equip - PN | 30768821 | CC1 INGTL 401 PL AND ABANOON DR GTI2 | 5278 | 8200 |
| 50 | 5506986 | Impr Reblsys Dephd. Goth Equip - Pn | OTHER |  | 4.7 |  |
| 50 | 5506986 | Impr Relbsys Depnd-G.-Othequip - PN | TOTAL |  | 5295 |  |
| 50 | 5506987 | Impr Relb/ys Dephd-s.Oth Equip - SA | TOTAL |  | \$19 |  |
| 50 | 5906983 |  | TOTAL |  | 4152 |  |
| 50 | 5506989 | Impir RelbiSys Depnd-(\%-Oth Equip - Si | TOTAL |  | - 1 |  |
| 50 | 550699011 | Impr Relbisys Depnd.cwoth Equip.. 53 | TOTAL |  | 8236 |  |

"ABLE 4-2
PACFIC ELECTRIC AND GAS COMPANY

"ABLE $4-2$
ACKFK ELECTKIC AND OAS COMPANY


|  | WWhataWN |  | Whut |  | TM <br> «4 ${ }^{2}$ | 3u") Siner Mi $4 \pi / 4$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 5509085 | HE - mpr Kelloep Gas Sves | TOTAL |  | 582 |  |
| 50 | 5509100 | HE - mipr Relbisys Depnd. Regs | 30767694 | R RCREEUILD REGULATOR STA RT3/EUREKA | 854 | 988 |
| 50 | 5609100 | HE - impr Rebisys Depnd.G.Regs | OTHER |  | 8256 |  |
| 50 | 55091008 | HE - Impr Reillisys Depnd-GRRegs | TOTAL |  | 8312 |  |
| 50 | 5509101 | HE mapr ReblSys Depndic-ip Sys | TOTAL |  | $\sqrt{27}$ |  |
| 50 | 5509102 | HE - Impr Relblsys Depnd- | TOTAL |  | 321 |  |
| 50 | 5509252 |  | TOTAL |  | \$80 |  |
| 50 | 55699277 | Mapping other Mapping - ScV MWC 50 | TOTAL |  | 812 |  |
| 50 | 5710899 | Irmp Kel/Dep, Gas Sves mba | TOTAL |  | $81 / 4$ |  |
| 50 | 5710002 | Imp Rel/Dep, Gas Sves .fr | TOTAL |  | \$65 |  |
| 50 | 5710805 | Imp Rel/Dep, Guis Svcs - NE | TOTAL |  | 2 |  |
| 50 | 5710910 | lrmp Rel/Dep, Sils Sves - SF | TOTAL |  | 813 |  |
| 50 | 5710011 | Imp Rel/Dep, Las Svcs - SJ | TOTAL |  | 85 |  |
| 50 | 5712641 | Impr RelblSys Depnd\%\%ep Sys - P/1 | TOTML |  | 31 |  |
| 50 | 5737258 | MWC 50 ScV Allocation | TOTAL |  | - +387 |  |
| 50 | 5510176 | Econ Slim lmu Rel Dop 6 Remote CP SA | TOTAL |  | 89 |  |
| 50 | 5510239 | Econ Stim lmpr relluep S.SA | TOTAL |  | 87 |  |
| 50 | 5510240 | Econ Stim Impr Relloer G.yo | 30894788 | R2 MODESTORELIABILITYPHASE - MODESTO | 54 | 54 |
| 50 | 5510240 | Econ Stim impr Rellep S.VO | OTHER |  | 99 |  |
| 50 | 5510240 | Econ Stim Impr Relldap G-Yo | TOTAL |  | 813 |  |
| 50 TOTAL |  |  |  |  | 524,253 |  |
| 52 | 550088 | Repl Plart correcco | Total |  | 530 |  |
| 52 | 5500665 | Repl Plant cotr coba | TOTAL |  | 324 |  |
| 52 | 5500686 | Repl Plant Corr ©-DI | TOTAL |  | \%6 |  |
| 52 | 5500867 | Replplant Cors | TOTAL |  | 8 |  |
| 52 | 5500670 | Repl Pant Cort ©FR | TOTML |  | 80 |  |
| 52 | 55u0er ${ }^{2}$ | Replpant cort cke | TOTAL |  | 80 |  |
| 52 | 5500674 | Repl Mant Cor ${ }^{\text {ablM }}$ | TOTML |  | *2 |  |
| 52 | 5500675 | Wepl Pantcor eNE | TOTAL |  | +80 |  |
| 52 | 5500727 | Repl liant Corr . 50 | TOTAL |  | 50 |  |
| 52 | 5500730 | \|Repl Plant corr cNu | TOTAL |  | 45 |  |
| 52 | 5 55002: | ReplPlant corr CPM | TOTAL |  | \$33 |  |
| 52 | 5500740 | ReplPlant Cort SmA | TOTAL |  | 94 |  |
| 52 | 5560741 | Repl Plant cors 6-5F | TOTAL |  | \%0 |  |
| 52 | 5500742 | Repl Plmat Cort 6 S | Total |  | 852 |  |
| 52 | 5500743 | Repl Plant Corre-sl | TOTAL |  | 32 |  |
| 52 | 5500744 | Repl Plant corr csill | TOTAL |  | $\because 1$ |  |
| 52 | 550074.5 | Repl Plant Corr Sivo | TOTAL |  | 83 |  |
| 52 | 5509104 | HE - Repl Phant Cort | TOTAL |  | 81 |  |
| 52 | 5509324 | Emerg Resp-6xDigulis m He | TOTAL |  | 862 |  |
| 52 | 5509328 | Emery Resp-G-Dig-Ins m NE | TOTAL |  | 319 |  |
| 52 | 55093301 | Emerg Resp- $5 \times$ Dig 4 Ins - PN | TOTAL |  | 330 |  |
| 52 | 5509331 | Emerg Respw(0.Diguth - Sk | TOTAL |  | \$12 |  |
| 52 | 5549334 | Emerg Resp-G.Dig-ins - \$J | TOTAL |  | 811 |  |
| 52 TOTAL |  |  |  |  | \$366 |  |
| 23 | 5742838 | PRESIDIO LNG INECTION PROJECT, SF | TOTAL |  | 837 |  |
| 23 | 5742638 | SEICms Distribution Restoralion | TOTAL |  | 829 |  |
| 2. TOTAL |  |  |  |  | \$66 |  |
| 2 K | 551022 | Econ Stim HPR Convert MannGc. | TOTAL |  | 312 |  |
| 2 K | 55102311 | Econ Stim HPR Convert Mair.Ne | TOTAL |  | 3 |  |
| $2 k$ | 5510231 | Econ Stim HPR Conver Main MV | TOTAL |  | 38 |  |
| 2 k | 5510232 | Econ Stim HPR Convert Main PV | TOTAL |  | \$96 |  |
| 2 K | 5510273 | Econ Stim HPR Convert Main SA | TOTAL |  | 82 |  |
| 2 K | 5510235 | Econ Stim HPR Convarelmains | TOTAL |  | 1150 |  |
| 2 K | 5510238 | Econ Sim HPR Convert Mainst | 30840277 | R2 CONVERT JAHANT RO DFM TO DISTRIBUTION | 914 |  |
| 2K | 5610238 | Econ Sum Her Convert Main-ST | OTHER |  | 87 |  |
| 2 K | 5510230 | Econ Stim HPR Convert Mainst | TOTAL |  | 519 |  |
| 2 K | 5510259 | Econ Stim HPR Convers Main.YO | TOTAL |  | 84 |  |
| 2 K | 5510200 | Econ SlimHPR Convert istr Reg-c | TOTAL |  | 82 |  |
| 2 K | 5510270 | Econ Stim MPR Convert Distr Reg. PM | 30676300 | R1 GHOREVAYORBELMONT | 848 | 399 |
| 2 K | 5510270 | Econ Stim HPR Convert Distr Reg. Pn | 30676310 | OC1 TOMER ROADHPETODFS | \$49 | \%669 |
| 2 K | 5610270 | Econ Sim HPR Conver Distr Reg.pn | OTHER |  | 93 |  |
| 2 K | 5510270 | Econ StimhPR ConvertDEt RegrpN | TOTAL |  | 139 |  |
| 2 K | 5510271 | Econ Sum HPR ConvertDistr ReqwsA | TOTAL |  | 89 |  |
| 2 K | 5510273 | Econ SimHPR Converidistr Reg Su | TOTAL |  | \% 0 |  |
| 2 k | 5510275 | Econ Stim HPR Convert Distr Regis | TOTAL |  | 89 |  |
| 2 K | 5510277 | Econ Stim HPR Conver Distr Reg.Yo | TOTAL |  | * |  |
| $2 k$ | 5510280 | Econ Stim HPR Replacement. | TOTAL |  | $\$ 133$ |  |
| $2 k$ | 5590243 | Econ Sim HPR Feplacementrk | Total |  | 411 |  |
| $2 k$ | 5510285 | Econ Stim MPR ReplacementKE | TOTAL |  | 81 |  |
| 2 K | 5510297 | Econ SumHPR ReplacementuE | TOTAL |  | 8125 |  |

"ABLE M- 2
DACIFK ELEOWTO ANO OAS CONPANY


## 5. O\&M Spending by Major Work Category

## Request

Amount spent during the reporting period, year-to-date, and annual totals on O\&M for safety, integrity and reliability.

## Response

Table $5-1$ provides a summary, by expense MWC, of the spending from January 1 through June 30, 2011, on gas distribution pipeline safety, reliability and integrity.

TABLE 5-1
PACIFIC GAS AND ELECTRIC COMPANY
SUMMARY OF EXPENSE SPENDING ON O\&M FOR SAFETY, INTEGRITY AND RELIABILITY (IN THOUSANDS OF 2011 DOLLARS)

| MWVC | MWC Description | Actuals $1 / 1=6 / 30$ |
| :---: | :---: | :---: |
| DE | Leak Survey | 9,669 |
| DF | Mark \& Locate - G\&E | 12,823 |
| DG | Cathodic Protection | 5,101 |
| EX | Meter Protection-Inspect\&Corr | 28 |
| FG | Opr Distribution Sys -- Gas | 1,756 |
| FH | Preventive Maintenance Gas | 14,026 |
| Fl | Perf Maint to Corr Fall - Gas | 18,738 |
| GF' | Opr Distribution Sys -- Gas Map | 474 |
| GG | Opr Distribution Sys -- Gas Eng | 890 |
| JS | G Dist Integrity Mgt Pgm (DIMP) | 5,957 |
| KF' | GT\& ${ }^{\text {Impl Regulatory Change }}$ | 319 |
| Cas Distribution Expense. |  | 69,782 |

## 6. Comparison of Settlement Agreement Allocations to Actual Spending

## Request

Companison of amounts spent on capital projects and O\&M to Settlement Agreement allocation, showing remaining balance or amount spent in excess of allocation.

## Response

Table 6-1 repeats the information found in Table 2-1 (Settlement Agreement Allocation), Table 3-1 (Budget), and Table 6-1 (Actuals) and shows the difference between year-to-date spending and the Settlement Agreement allocations for O\&M MWCs. Table 6-2 repeats the information found in Table 2-2 (Settlement Agreement Allocation), Table 3-2 (Budget), and Table 4-1 (Actuals) and shows the difference between year-to-date spending and the Settement Agreement allocations for capital MWCs.

TABLE 6m
PACIFIC GAS AND ELECTRIC COMPANY
COMPARISON OF O\&M SPENDING TO SETTLEMENT AGREEMENT ALLOCATION (IN THOUSANDS OF 2011 DOLLARS)

| WWVC | Mwr Description | Budget | Settrement <br> Agreement <br> Allocation | Actuals $111.6 / 30$ | Difference Between Allocation and Actuals |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DE | Leak Survey | 18,609 | 15,482 | 9,669 | 5,813 |
| DF | Mark \& Locate-G\&E | 26,978 | 29,902 | 12,823 | 17,079 |
| DG | Cathodic Protection | 8,748 | 10,757 | 5,101 | 5,656 |
| EX | Meter Protection-Inspect\&Corr | 199 | 1,200 | 28 | 1,172 |
| FC | Opr Distribution Sys - Gas | 3,038 | 3,945 | 1,756 | 2,189 |
| FH | Preventive Maintenance Gas | 19,173 | 16,924 | 14,020 | 2,898 |
| Fl | Perf Maint to Corr Fail - Gas | 39,550 | 35,656 | 18,738 | 16,917 |
| GF | Opr Distribution Sys - Gas Map | 934 | 1,600 | 474 | 1,126 |
| 60 | Opr Distribution Sys - Gas Eng | 3,070 | 3,060 | 890 | 2,170 |
| JS | G Dist Integrity Mgt Pgm (DIMP) | 19,500 | 19,500 | 5,957 | 13,543 |
| KF | GT\&D impl Regulatory Change | 367 | 0 | 319 | -319 |
| Gas Distribution Expense |  | 140,166 | 138,026 | 69,782 | 68,243 |

TABLE 6-2
PACIFIC GAS AND ELECTRIC COMPANY
COMPARISON OF CAPITAL SPENDING TO SETTLEMENT AGREEMENT ALLOCATION (IN THOUSANDS OF 2011 DOLLARS)

| VIVE | Wivc Descripticn | Budigel | Settement <br> Agreement <br> Allocation | Actuals $111.6 / 30$ | Difterence <br> Between <br> Allocation and Actuals |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | Gas Pipeline Replacement Pgm | 123,707 | 123,266 | 60,962 | 62,304 |
| 27 | Gas Meter Protection-Capital | 332 | 593 | 0 | 593 |
| 47 | G Dist New Capacity - Gas | 12,000 | 12,760 | 4,953 | 7.807 |
| 50 | C Dist Reliability | 39,390 | 20,660 | 24,253 | -3,593 |
| 52 | C Dist Emergenoy Response | 702 | 264 | 366 | - -102 |
| $2 J$ | GT8D Impl Regulatory Change | 0 | 0 | 66 | -66 |
| 2 K | G Custhpr | 15,000 | 0 | 761 | -761 |
| Cas Disiribution Capital |  | 191.1311 | \} 3 . 1 5 7 , 5 4 3 | 91,361 | 68,162 |

## 7. Capital Project Status

## Request

Identify and describe capital projects and O\&M work that has been started and completed during reporting period including completion date and report on the status of work-in-progress.

## Response

Table $7-1$ includes all O\&M MWCs, showing, where applicable, work that is measured in units. Where possible, the table includes detail on the units of work and expected spending included in PG\&E's budget, the actual data for this reporting period on units of work completed and spending, as well as a comparison (in percentage form) of the completed units compared to the budgeted units. All work in this table reflects the plan for calendar year 2011.

Table $7 .-2$ identifies the status of capital projects. The construction of a number of projects reflected in Table 7.2 were completed before the reporting period, however, since the project recorded more than $\$ 10,000$ in expenditures (i.e., trailing costs and adjustments) during this reporting period, these projects were also included in the table. The projects in Table $7-2$ show, as applicable, (i) a planned construction start date, (ii) an actual construction start date for those projects that have started construction, (iii) a forecasted finish construction date and (iv) an actual finished construction date for those projects that are complete.

Capital projects may be in one of five stages of progress: Complete, Documentation, Construction, Pre-Construction and Design. Figure $7 . .1$ explains the definition of each status, as well as the number of projects in each status that are addressed in this report.

FIGURE 7-1
PACIFIC GAS AND ELECTRIC COMPANY
PROJECT STAGE DEFINITION

| Status | Description | Number of <br> Projects |
| :--- | :--- | :---: |
| Complete | Projects that do not expect to have any more construction labor <br> charges and have documentation completed. | 38 |
| Documentation | Projects that do not anticipate anymore construction charges but <br> still require documentation, such as as-builts and job closure <br> documents. | 17 |
| Construction | Projects that are currently being constructed. | 48 |
| Pre-Construction | Projects that are being evaluated for financial authorization or <br> pending third-party permits. | 19 |
| Design | Projects that are currently being engineered or estimated. | 2 |
|  | Total | 124 |

TABLE $7-1$
PACIFIC GAS AND ELECTRIC COMPANY GAS DISTRIBUTION O\&M PROGRESS BY CATEGORY (IN THOUSANDS OF 2011 DOLLARS)

|  |  | 2011 Budger |  |  | 2011 Actual "Ihrough Jurne |  |  | 2011 Y1D <br> Progress |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Work Category | Unit of Measure | Units | Budget |  | Units |  | cual | \% Complete Units |
| Routine Leak Survey | Services surveyed | 735,000 | 离 | 10,618 | 298,395 | \$ | 5,230 | 40.6\% |
| Special Leak Suvey | Miles Surveyed | 1,008 | \$ | 7,991 | 660 | 9 | 4,439 | 65.5\% |
| MWVC DE Total |  |  | \$ | 18,609 |  | \$ | 9,609 |  |
|  |  |  |  |  |  |  |  |  |
| General |  |  | \$ | 800 |  | \$ | 423 |  |
| Mank Locate | USATags | 503,423 | \% | 26,178 | 245,321 | \$ | 12,399 | $48.7 \%$ |
| MWVC Dill Total |  |  | 4 | 26,978 |  | \$ | 12,823 |  |
|  |  |  |  |  |  |  |  |  |
| Cathodic mrotection (ce) Monloring | Pipe-lo-Soll <br> Measurements Taken | 55,437 | \$ | 3,372 | 29,687 | \$ | 1.863 | 53.6\% |
| Ce Resurveying | CPAreas Resurveyed | 391 | \% | 828 | 170 | \$ | 594 | 43.5\% |
| cf Trowbleshooting | CPAreas Diagnosed | 2,068 | \$ | 3,049 | 1703 | \$ | 2,168 | 82.4\% |
| Celsolated Sevices | Isolated Services Evaluated | 13,469 | \$ | 898 | 344 | \$ | 19 | 2.6\% |
| CP Field Support |  |  | 4 | 600 |  | " | 457 |  |
| MINC DC Total |  |  | 4 | 8,748 |  | \$ | 5,101 |  |
|  |  |  |  |  |  |  |  |  |
| Merer Protection Posts | Meter Sites | 981 | \$ | 199 | 31 | \$ | 28 | 31.6\% |
| MWWC EX Total |  |  | * | 198 |  | \$ | 28 |  |
|  |  |  |  |  |  |  |  |  |
| General |  |  | \$ | 345 |  | \$ | 135 |  |
| Gas System Monitoring (Pressure Charts) | Number of Operations | 24,722 | \$ | 2.142 | 14,258 | * | 1,307 | 57.7\% |
| Gas System Operalions Winter Ops) | Number of Operations | 1,798 | \$ | 551 | 1,020 | \$ | 314 | 56.7\% |
| MWN: |  |  | \% | 3,038 |  | 4 | 1,756 |  |

TABLE $7-1$
PACIFIC GAS AND ELECTRIC COMPANY GAS DISTRIBUTION O\&M PROGRESS BY CATEGORY (IN THOUSANDS OF 2011 DOLLARS)
(CONTINUED)


Notes:

1. In the 2011 GRC Exhibit 3 , Chapters 17 and 18, MWC DE routine survey forecasted units as miles surveyed. The CRC forecast units have been converted to number of services. Since the current tracking distribution survey is captured by number of services, subsequent reports will use services for routine survey units.
2. MWC FH originally included Atmospheric Corrosion correction on meters. An improved process was implemented and this work is now being accounted for under MWC JS DIMP. This change in MWC designation will be reflected in the next reporting period.
3. MWC GC consists of costs associated with the Cas Distribution Planning Engineers. An accounting error occurred within this reporting period that will be reversed in the second half of the year.

TABLE "'"-2
PACIFIC GAS AND ELECTRIC COMPANY STATUS OF CAPITAL PROJECTS

| Line No: | Proter Status | Order Number | Project Name | $\qquad$ | Actual Construction Stan Date | Acual Constumtion Fmish Date | Forecasted Constretion Finish Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Complete | 3009626 | CCIEGGPRP OCEAN ANDPL.VMOUTH, SF | 3 ¢011 | 21611 | 50/t |  |
| 2 | Complete | 30815779 | OCIS GPRY HMLVPAMK 1 (100 APYIGTONAVE | 126111 | 121010 | 71411 |  |
| 3 | Complete | $3000780 \%$ | OC1GGFRP SUNSE 2, SF | 13111 | 1029110 | 30011 |  |
| 4 | Complete | 20805165 | GP 214 EOLVEAVEFRESNO | 107510 | 92400 | f026m01 |  |
| 5 | Complete | 30804481 | OC GPRP 25TMST SPOTMAIN SANFRAN | 112911 | 1120110 | 510111 |  |
| 6 | Complete | 3079386 | CC2PEPL MAN HEIGHT \& BEFKEIEYSTBAK | 102010 | 927 MO | 32411 |  |
| 7 | Complete | 30769549 | OXEYMONMAINEXTENSION GIXLERROEYP | 10410 | व1110 | 51211 |  |
| 8 | Complete | 30786843 | OC1R4-D6-IMSTALL.DR ST, VEMMONT \& "E'S | 9210 | 7690 | $3 / 1 / 11$ |  |
| 9 | Complete | 30784111 | OC2 CAPACITYINCFEASEHAPI.ANRNCHCLOVIS | 7 T \% | 72610 | 3/7/1 |  |
| 10 | Complete | 30783043 | OC1 CORUILERASREDWOODCITY | 721110 | $7 / 1210$ | 24711 |  |
| 11 | Complete | 30766290 | C22030MST ANOUES (IS) FRESNODIVSN | 6710 | 51210 | 42711 |  |
| 12 | Complete | 30762994 | OCA CDCAPACTY CENTRAL.AVE MCKIMIEYVIL. | 32210 | 3/210 | 1028010 |  |
| 13 | Complete | 30761621 | OCIGREPL GSTHP TUNNE AVESFBRSQANE | S3/10 | 41610 | $4 / 22111$ |  |
| 14 | Complete | 30760327 | OC FEP. 700 OF 2\%WTH 2ME ESPL PAC | 91919 | 9710 | 117710 |  |
| 15 | Complete | 30758576 | CCIGPEPIR-ITEEVY \& LACUNA HONOA SF | 32940 | 22510 | 62414 |  |
| 16 | Complete | 30759573 | OCI CTEPL MAN CASTAS\& CRESTA VITA, | 32010 | 22010 | $7 / 21 / 11$ |  |
| 17 | Complete | 30768823 | OCI MSTLL HOO PL AMU AEANDONDR STN 2 | $41 / 10$ | 5 510 | 6बी1 |  |
| 18 | Complete | 30767802 | OCt CDRSTATONGAPION CTPTESEURS | 324410 | 24100 | ITOH1 |  |
| 19 | Complete | 30754774 | OCIGOPRPHOLLYPARKISF | 6210 | 2 110 | $131 / 11$ |  |
| 20 | Complete | 30754768 | OCTGGPRP STAPESSANPRANCISCO | 71970 | 122701 | 1/4/4 |  |
| 21 | Complete | 30753697 | OC1GSYR BAYVEN 2 SANPRANCSCO | 7110 | 42, 100 | 1/12/11 |  |
| 22 | Complete | 30751625 | MCA SP PM PEI HMY CFOSSIVG. MACAVINES | 9 ma | 1600 | 12410 |  |
| 23 | Complete | 30749119 | GPCAPACITYSHP PARALIEL MAN MODESTO | 28610 | 12/1009 | $11 / 110$ |  |
| 24 | Complete | 30767707 | OCIDUBUNEIVDOUELININSALI 4DOFTO | 3640 | 12010 | 34811 |  |
| 25 | Complete | 30742428 | OCAMST 17004 B M M | 111009 | 1111300 | $617 / 11$ |  |
| 26 | Complese | 30741572 | OC2 OPR THIDSTREI DAKDALEPHASE 2 | $111 / 10$ | 11409 | 122010 |  |
| 27 | Complete | 30740781 | CCA VACAVIY \& SHETTERCOVE.INSTLR | 11419 | 121109 | 513111 |  |
| 28 | Complete | 30737291 | CCA CPFPISTRETPYTALUNA | 41910 | 1014109 | 21111 |  |
| 20 | Complete | 30737244 | OC OMR SAMTAMAROAPTA SANRAFAEI | $981 / 0$ | 10 mmog | 102901 |  |
| 30 | Complete | 30714055 | CCAROSEVLLEX EUTIERNUT (A-62) REG RYL | 72309 | 52909 | 327/11 |  |
| 31 | Complete | 3069291 | OC GFEEULDGORMALI SR STN.PTISEUR | 33009 | 22309 | 43971 |  |
| 32 | Complete | 30675123 | OC2 1,270FT API.CREATAMERCAPIVYYSC | 41110 | 1223108 | 4 L 11 |  |
| 33 | Complete | 30674922 | OCIGGPMP GEARY 4 SANERANCISCO | S7010 | 12809 | $3 \mathrm{mm1}$ |  |
| 34 | Complete | 30674809 | OCt GRPR SAIVTFRANCIS 4, SF | 71110 | 12008 | 310111 |  |
| 35 | Complete | 30699246 | OCIGPRPBALEDATERRACE, SAN FRANCISCO | 52840 | 21900 | 113010 |  |
| 38 | Complete | 30616134 | OC C EERKUEY CPPP PH 1. ASHEY UPRATE | 2040 | 1022008 | 270171 |  |
| 37 | Complete | 30616330 | OCA CP PRPELRASETHGU MASON VACAVILLIE | 3209 | 1022100 | 120 m 1 |  |
| 38 | Compere | 30616128 | OCA CPRPDOESIMS GKEVUA. VACAVIIE | 3200 | 102108 | 11990 |  |
| 39 | Doctmentation | 30835636 | CH SUCPRPGIPSTST WEST, SONOMA. | 24611 | 21811 | 6/7h1 |  |
| 40 | Docamentation | 3007661 | CTGPRPGAPTOL 3 SANFRANCECO | 102570 | 10ヶ4/10 |  | 3013 |
| 47 | Documentation | 30077291 | HUNTUMTON \& | 114190 | 1211110 |  | 0 m 11 |
| 42 | Doommentation | 30006816 | OCIP4EGGPRPSAN BRUNO, SF | पाप00 | 101610 |  |  |
| 43 | Doumentation | 30798684 | NST, 1050 Of GiP EMMST, LIVm | 112111 | 1011510 | 6 6311 |  |
| 44 | Documenction | 30797796 | + WCUST, 1EE TOSACRMMENTO, LODI+ | 10140 | 92, 10 | 5211 |  |
| 45 | Documentation | 30762887 | R2L REPI VALVESSTHP. 24, MRESNO \& NAVY + | 101810 | $3 / 010$ | 84 |  |
| 46 | Documentation | 30758394 | A-10JUNPYRO\&ARASTRADERCBLIOCKVALVE | 7210 | G14\%0 | 3711 |  |
| 47 | Documentition | 30767803 | Q2 MGT 17DOOFTOF 8 P MANTFESNO | 428110 | 32510 | $3 \mathrm{TH1}$ |  |
| 48 | Deamentation | 30757351 | OC3 CREUULDDRSTA CRESCENT DR CONC | 34640 | 24110 | 12710 |  |
| 49 | Documentation | 30766701 | QTHENNOON STOCKTON | 625110 | 2440 | 4/711 |  |
| 50 | Documentation | 30750040 | CPANTUNE \& 1 - $2+$ | 340190 | 12510 | 10470 |  |
| 51 | Documentation | 3076474 | OC4 R-OOSORIANDTERTARY RBL. WOCOMAR | 41340 | 21010 |  | 72011 |
| 52 | Deamentaton | 30753678 | GPARKAVEVUE GPFPMSANJOSE | 64719 | $1 / 1510$ | $3 / 1 / 11$ |  |

TABLE 7-2
PACIFIC GAS AND ELECTRIC COMPANY STATUS OF CAPITAL PROUECTS (CONTINUED)

| Lne No: | Project Status | Order <br> Number | Project Name | Planned Consmuction Start Date | Actual Construction Start Date | Actual Construction Finish Date | Forecasted Construction Finish Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 53 | Documentation | 30750011 | WEST MRESNO OPRP 2010 | 111210 | 2220 | 12141 |  |
| 54 | Documentation | 30680560 | GS12TH\&S STHET, SANTOSEGPRS | 219909 | 1223308 | 3810 |  |
| 55 | Documentation | 30608852 | GPPPLOCUSTEWASHINGTON LODIPHAS | 217769 | 116508 | 62911 |  |
| 56 | Construction | 30846074 | GP HAZEL. AVEBETW. CREENBACK \& FORTUNA | 412211 | 4291 |  | 71931 |
| 57 | Constuction | 30840277 | R2CONVET JAHANT RDDFM TODISTREUTION | 5241 | 34611 |  | 6782012 |
| 58 | Construction | 30835701 | GPRP GROVE HILL AVE SAN ANSELMO | 11511 | 3411 |  | 012811 |
| 59 | Construction | 30829620 | M GPR - Congot-sf | 12411 | 41311 |  | 123011 |
| 60 | Construction | 30827211 | GP RM EUHMAM\& TWMN OAKS MAPA | 111811 | 1814 |  | 122914 |
| 61 | Construction | 30823194 | MGPAp CREsCENT3, sanfrancisco | 12.17110 | 27711 |  | 10121111 |
| 62 | Constuction | 30821604 | RIEGGPRPEENALHEGHTS SF | 1/18/11 | 3/31/! |  | 111212 |
| 63 | Construction | 30824.410 | comp doost sf | 212211 | 4 man |  | 312712 |
| 84 | Consmution | 30820811 | CO1 MAINRENFORC STONE VLIY PD ALAM | 22441 | 4281! |  | 72341 |
| 65 | Construction | 30820364 | RMOGPRPATHENS, SF | 122610 | 11511 |  | 113011 |
| 66 | Constucrion | 30620278 | cgprp Eal boapark 4.5 FF | 12610 | 31411 |  | 62612 |
| 67 | Construction | 30814275 | RZ. GP WINDSOR, ALAMEDA GPFP | $1 / 311$ | 112240 |  | 1110011 |
| 68 | Consfuction | 30813057 | CRMPEFL MAM ORANGEAVE WOVATO | 12210 | 127710 |  | 663014 |
| 69 | Construction | 30813051 | GPREPI. MAINBRIDEENY BRDWUKE SAUSALT | 121319 | 123010 |  | 833111 |
| 70 | Construction | 30612259 | REEUILD MARSHALL DAVEDR STATION | 12890 | 1611 |  | 89991 |
| 71 | Constuction | 30810294 | BERKEIEY GPRF PMASE 2 PRIMCETEEG | 101810 | $11 / 110$ |  |  |
| 72 | Construction | 30510188 | REEID DR MRC-12, TST \& EST, WHEAL | 33.41 | 1021170 |  | 91171 |
| 73 | Construction | 30808712 | HUNTINGTON \& TUARE 2011 GPRP FRESNO | 12710 | 11 1610 |  | 911811 |
| 74 | Comstruction | 30806500 | CPRPMSSIONDSTRCT4, SANFRAN | 111811 | 2111 |  | 113011 |
| 75 | Constuection | 30808261 | RAE GGPRP STHEST. SANFRANCISCO | $11 / 110$ | 1217110 |  | 122211 |
| 76 | Construction | 30808360 | CGPRPBAYUIEW3. SANTRANCISCO | 108910 | 1410010 |  | 122211 |
| 77 | Construction | 30608157 | GGPRP SOUT VALENGAS, SAN RANUS | $1 / 311$ | 1120150 |  | 122941 |
| 78 | Consiruction | 30808140 | Ggrre rersia sanfrancsco | 109810 | 112010 |  | 113014 |
| 79 | Consinction | 30808096 | CGPRPSUNSET 3, SF | 108910 | 1025110 |  | 12/3011 |
| 80 | Constuction | 30807877 | G GPRP GCEANVEW SANFRANCSCO | 107710 | $11 / 23110$ |  | $12 / 2211$ |
| 81 | Construction | 30307430 | HUNTINGTON\& BTHGPRP 2011 FRESNO | 124310 | $413 \pm 1$ |  | 11/25/2011 |
| 82 | Construction | 30800817 | RAEGPRPMISSIONDITRICT SANTEANC | 92970 | 102519 |  | 3122011 |
| 83 | Construction | 303066314 | ESPRPOXLORD SF | 10110 | 101910 |  | 122222011 |
| 84 | Consinution | 30806806 | M027972GPRP OUTERMESION2 | 92410 | 1019010 |  | 93012011 |
| 85 | Consmuction | 30804511 | QEPLIP GPFP 147H \& H MARYSVILIE | 1241 | 113010 |  | 12302011 |
| 86 | Construetion | 30601105 | GMAPOLDAVEGPRPSJ | 108\%10 | 92110 |  | 12302011 |
| 87 | Consturtion | 30787133 | GCAP PEG 118 REEULD YOUNTVILIE | 92210 | 01910 |  | 32220012 |
| 88 | Construction | 30796765 | HDOVER GPRP (201 CPITICALPROJECT) | 917710 | 101210 |  | 11292011 |
| 89 | Construction | 30795703 | REDB.UFF GPrp Cedar \& Jackson | $13 / 1$ | 21001 |  | 10142018 |
| 90 | Construction | 30789089 | INST DUAL DR, STATION OSGCOD RD. Fevem | 831110 | 8220 |  | 4272011 |
| 91 | Consinution | 30785447 | CRUPGRADE PSSEBROADWAY\&MACAETHUR,SON | $9+1010$ | 820040 |  | 912011 |
| 82 | Consfruction | 30783042 | BOWDR, \& CRESTVEWDR. | 716810 | 827170) |  | 81312011 |
| 93 | Consmuction | 30774980 | DS PEBUID DF- 58 WONDEELIND, MTNGAT | 531170 | 12810 |  | 6172011 |
| 94 | Construction | 30762547 | GCREPLACEREOSTARAZIDEFOTSTIGEYS | 4510 | 101509 |  | 12202011 |
| 95 | Construction | 30755086 | ORE 013 TITEORODAM OROVILE | 31810 | 2870 |  | 93802011 |
| 96 | Constuction | 30755005 | ORE OUE MYERS \& DORA RELLD, OROVILIE | $517 / 10$ | 20110 |  | 7202011 |
| 97 | Construction | 30749118 | GPCAPACTY:GUP PARALLEL MAIN OAKDALE | 54110 | 121609 |  | 10412011 |
| 98 | Consfuction | 30746089 | PH:BERRYESSARD SANJOSE GPAP-2010 | 42710 | 12100 |  | $3 / 21201$ |
| 99 | Construction | 30742291 | MERCEDPHASE 3 RELIAEUTY | 412010 | 11909 |  | 0102001 |
| 100 | Construstion | 30741015 | ASGCHISTIAN EFAISTON EELMONT | 31610 | 11/809 |  | 1231201 |
| 101 | Construction | 30736194 | OCI GPRP PEEWOOD CTY | 111110 | 12070 |  | 5162011 |
| 102 | Consmustion | 30712856 | GP TIHST\& HENELEY RICHMONO | 52109 | 112409 |  | 12312010 |
| 103 | Construction | 30876310 | OCITOWER ROADHPR TODRS | $313 / 09$ | 128008 |  | 71514 |
| 104 | Preamemuction | 30833648 | DOLORESMFPE SE | 5911 |  |  | 10121201 |
| 105 | Preeronstiuction | 30826697 | R4 GD REEULD DRH733 KEVWCOO | 37711 |  |  | 111020011 |
| 108 | Preronsmuction | 30826686 | GD GPRP WEST AND VARIOUS, PEIALUMA | 3/1/11 |  |  | 12292017 |
| 107 | Premonstuction | 30826505 | R GREEUID RHEEMDR STATION MISAGA | $1177 / 11$ |  |  | 3112012 |
| 108 | Precorstiucton | 30814783 | R2 MODESTORELAELITY MHASE I MODESTO | 2191411 |  |  | 319612012 |
| 109 | Prearaniuction | 30813.671 | REEUILI VICTORY DR STATION | 1/1911 |  |  | 11302011 |
| 110 | Preconstruction | 30810393 | Rt RPL DUTCH\& BRANDLIMAIN: PENNGROV | 3/2811 |  |  | $11 / 232011$ |
| 111 | Preconstuction | 30809970 | RT 12REIU U25REGSTA UKAAH | 2411 |  |  | 2292012 |
| 112 | Preeconstuction | 30790929 | R2MCALIEVFROM WUSONTOHOLMAN | 84710 |  |  | 10772011 |
| 113 | Preeronstuction | 3078793 | F4 NEWGEGSTATON-POWEE INN \& CICAM | 91310 |  |  | 111892011 |
| 114 | Precongtuction | 30789975 | PELDIR D-36. WESER B FARPNGTON FR | 12/3110 |  |  | 7272011 |
| 115 | Preconstiuction | 30707699 | FTROREBUID DEEGUATORSTAR13/EUREKA | 93010 |  |  | 103112012 |
| 116 | Pre-constuction | 30761015 | FPRMREYICRKCROSSING. LUCASVIYRP | 572510 |  |  | 9232011 |
| 117 | Preconstuction | 30755018 | ORS 33, ERIDLEYPD, CRIDLEY | 72310 |  |  | 5252012 |
| 118 | Precorspectiom | 30753589 | Regoremulid rev blufidg i03 | 51010 |  |  | 33010012 |
| 119 | Preamstuction | 3067955 | crimpacificave. santarosa. | 2309 |  |  | 3308012 |
| 120 | Preconstruction | 30679552 | GRIMSHORTST, VALIEJO | 11909 |  |  | 10282001 |
| 121 | Preconsturdion | 30870477 | R2INSTALL ORS JUNIPEROSERRASTANFORD. | 3/2309 |  |  | 12302011 |
| 122 | Presonstuction | 30676390 | RISHOREWAY DR BEIMONT | 511509 |  |  | 9302011 |
| 123 | Desicn | 30799615 | RRE REEUULD DR MRC-10.OIVEHRST | $11 / 2990$ |  |  | 9282012 |
| 124 | Design | 30741812 | RTC4SSANFORR-WEIESLEYFITER RTA | 3159 |  |  | 10912011 |

## 8. Completed Capital Project Cost

## Request

Total costs of each completed capital project

## Response

The 38 capital projects that were completed from January 1 to June 30, 2011, are listed in Table 8-1. As explained previously, a completed project will have construction complete, documentation complete, and no longer expects labor charges.

TABLE 8-1
PACIFIC GAS AND ELECTRIC COMPANY COSTS FOR COMPLETED PROJECTS
(IN THOUSANDS OF 2011 DOLLARS)

| Order Number | Project Description | Cost <br> (11/2011 to $6 / 3020111$ |  | cost Since Inception E"emaing 63012011 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 30616128 | OC4 GPRP DOBDINSO KENDAL VACAVILLE | \$ | 20.55 | S | 491.42 |
| 30616130 | OC4 GPPRPELIZABETHO MASON, VACAV/FLE | 5 | 63.47 | \$ | 718.35 |
| 30616134 | OCI GEEFKFLEY GPAP -PH 1:ASHBYUPRATE | 5 | 167.89 | \$ | 1,703.30 |
| 30649246 | CCI OPRP EAIBOA TERRACE, SANTFANCSCO | 5 | 19.94 | \$ | 2.087 .84 |
| 30674899 | OCI GOPRP SANT FRANCS 4. SF | \% | 68.32 | \$ | 1,608.69 |
| 30674022 | OC1 GGRP GEARY 4 SANFFANCLSOO | 5 | 82.97 | 8 | 4,09949 |
| 30675723 | OC2G 1,270FHIPL:GREATAMERICAKMY.SC | \$ | 94.06 | 5 | 281.25 |
| 30692911 | OCT GREBURDCORNMAL DRSTN, PITISEUR | $\$$ | 28.19 | \$ | 484.75 |
| 30714055 | OC4 ROSEVLE 2 BUTIURNUT (AG2) REG PPL | 5 | 20.48 | 5 | 381.78 |
| 30737244 | OC4 GPRP SANTAMARGARITA, SAN RAFAEL | 8 | 37.02 | S | 391.62 |
| 30737291 | OCA GPRPISTREETPETALUMA | § | 85.41 | \$ | 1.073 .09 |
| 30740781 | OCA VACAVLY\& SHELTERCOVE INSTLF | \$ | 173.72 | \$ | 409.98 |
| 30741372 | OC2OPRPTHRDSTRETOAKDALEPHASE2 | 8 | 35.31 | S | 753.95 |
| 30742428 | CCA INST $1700 T$ G-N PL, ERUCE RL, CHICO | S | 386.24 | 8 | 572.20 |
| 30747707 | OCT DUELN ELVODUBLN NSTALL 4100 FTO | 8 | 140.69 | S | 1,186,00 |
| 30749199 | GPCAPACTYGH? PARAILEL MAN MOOESTO | \% | 30.98 | \$ | 770.65 |
| 30751625 | OCA GP RMRER HMY CROSSIMG MAGAZNE ST | \% | 50.39 | \$ | 626.01 |
| 3075067 | OCI G OPRP BAMIEN 2 SAN FRANOSCO | \$ | 263.86 | S | 2,950.88 |

TABLE 8-1
PACIFIC GAS AND ELECTRIC COMPANY COSTS FOR COMPLETED PROJECTS (IN THOUSANDS OF 2011 DOLLARS)
(CONTINUED)

| mrder Number | Project Desmmpmion | $\begin{gathered} 6 o s i \\ (1 / 1201110 \\ 6 / 30 / 2019) \end{gathered}$ |  | $\begin{gathered} \text { Mostsince } \\ \text { Inceplion } \\ \text { Ending } \\ 6 / 30 / 2011 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 30754768 | ORA 9 OFRP STAPLES EAN FRANCIBCO | S | 238.81 |  | 1,439.37 |
| 30754774 | OKG O GFRF HOLLY PARK 1 GF | 5 | 334.06 | \$ | 3,242.10 |
| 30757362 | OC1 O DF STATION CARION OTPITTSEURG | 8 | 11.31 | 8 | 261.97 |
| 30758827 | OCI INSTL 4OO PLAND ABANDON DR STN? | \% | 277.82 | \$ | 290.23 |
| 30759573 | OCI CREFL MAIN CASITAS \& CRESTA VISTA. | 8 | 489.08 | \$ | 631.37 |
| 30759676 | OMC REPL R 11 DEWEY \& LASUNA HONDA. SF | 8 | 495.03 | \$ | 820.47 |
| 30760327 | OCT REPL 700 OF 2'W1TH 2'PLESPL.PAC | \$ | 35.66 | \$ | 244.24 |
| 30761621 | OCI GREPL G"STLHP TUNNEL AVE SF/ERISEANE | \% | 122.38 | 5 | 792.74 |
| 30762994 | OCA CD CAPACITY CENTRAL AVE MCKINIEYVIL | \$ | 18.11 | \$ | 321.13 |
| 30766290 | C2 2010 INST ANOLES ( 5 ) FRESNO DIVISM | S | 36271 | 9 | 43406 |
| 30783043 | OCI CORDILLERAS REDW OLD CITY | 5 | 396.59 | ${ }_{\text {\% }}$ | 457.76 |
| 30784111 | OC2 CAPACITY INCREASE HARLAN RNCH CLQVIS | 5 | 24.70 | \$ | 571.19 |
| 30786843 |  | 8 | 142.00 | 9 | 1.016 .08 |
| 30789649 | OCA BYRON MAIN EXTENSION - EIXLERRD EYR | 9 | 754.16 | 9 | 806.11 |
| 30793853 | OCZ REPL MAINHEICHT Q EERKELEY ST, BAK. | 8 | 23.68 | 5 | 3317 |
| 30804481 | OCI GPRP $25 T H$ ST SPGTMAIN. SANFRAN | \$ | 408.36 | 9 | 408.77 |
| 30805155 | SP 214 EOLIVEAVEFRESNO | 8 | 183.36 | 9 | 343.61 |
| 30807801 | OC1 SPRP SUNSET 2.SF | \$ | $2,839.06$ | \$ | $\underline{2,847.79}$ |
| 30815779 | OCT O GPRP HOLLYPARK 1 (TOOAPPLETON AVE | \$ | 357.74 | 9 | 488.81 |
| 30829626 | ORAE CPRP OCEAN AND PLYMOUUTH.SF | \$ | 499.34 | S | 500.78 |

9. Comparability of Actual Costs and Settlement Agreement Allocations

## Request

Reported actual costs should be directly comparable to amounts approved in the Settlement Agreement. Identify whether any reported amounts include administrative and general [A\&G] expenses, indirect and/or overhead costs and, if so, show these amounts.

## Response

All actual costs set forth in this report are directly comparable to amounts set forth in the Settlement Agreement. Tables 9-1 and 9-2 show the payroll taxes and benefits for expense MWCs and Capitalized $A \& G$ for capital MWCs, respectively.

TABLE 9-1
PACIFIC GAS AND ELECTRIC COMPANY
A\&G AND TAXES IN EXPENSE
RECORDED PAYROLL TAXES AND BENEFITS BY MWC
(IN THOUSANDS OF 2011 DOLLARS)

| MVVC | MWC Description | M8: <br> Expense | Payroll <br> Taxes | Benefits | Total For MWC |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DE | Leak Survey | 8,227 | 429 | 1,013 | 9,669 |
| DF | Mark \& Locate - G\&E | 10,655 | 652 | 1,515 | 12,823 |
| DG | Cathodic Protection | 4,214 | 255 | 632 | 5,101 |
| Ex | Meerer Protection-Inspect\&Corr | 24 | 1 | 3 | 28 |
| FG | Opr Distribution Sys - Gas | 1,440 | 90 | 226 | 1,756 |
| FH | Preventive Maintenance Gas | 11,981 | 608 | 1,437 | 14,026 |
| F | Perf Maint to Corr Fail - Gas | 15,978 | 821 | 1,920 | 18,738 |
| GF | Gas Dist Mapping | 371 | 28 | 75 | 474 |
| CG | Opr Distribution Sys - Gas Eng | 693 | 45 | 152 | 890 |
| Js | Gas Dist Integrity Management | 5,438 | 140 | 379 | 5,957 |

TABLE 9-2
PACIFIC GAS AND ELECTRIC COMPANY

## A\&G TAXES IN CAPITAL

RECORDED CAPITALIZED A\&G BY MWC
(IN THOUSANDS OF 2011 DOLLARS)

| MWC | MWC Description | Capitalized <br> A\&G | Total For <br> MWC |
| :---: | :--- | ---: | ---: |
| 14 | GDist Pipeline Repi Program | 4,482 | 60,962 |
| 27 | Gas Meter Protection - Capital | - | - |
| 47 | CDist Capacity | 416 | 4,953 |
| 50 | GDist Reliability General | 2,328 | 24,253 |
| 52 | GDist Leak ReplEmergency | 30 | 366 |

## 10. 2011 GRC Forecasted Capital Project Status

## Request

Identify whether capital projects forecasted in A.09-12-020 have been started, completed, remain to be undertaken (include anticipated start and completion date) or have been reprioritized. If reprioritized, provide the reasons for the reprioritization and the justification for the new project(s). Describe the new capital project(s) including estimated start and completion date. Discuss whether funding will be requested in a future rate case application for forecasted capital projects that were reprioritized and identify the se projects.

## Response

Table 10-1 provides the status of the safety, integrity and reliability-related capital projects forecasted in Application 09-12-020. The table shows (i) units of work (where applicable) and costs forecasted in the GRC, (ii) actual units of work undertaken (where applicable) and costs incurred for this reporting period, and (iii) a mid-year update on units of work forecast to be completed and costs to be spent by the end of the year.

TABLE 10-1
PACIFIC GAS AND ELECTRIC COMPANY
SUMMARY GAS DISTRIBUTION CAPITAL PROGRAMS GRC FORECAST, ACTUALS AND YEAR END COMPARISON (IN THOUSANDS OF 2011 DOLLARS)


[^0]In Application 09-12-020, PG\&E forecast the number of units it expected to complete within broad project categories, such as Gas Pipeline Replacement Program (GPRP) and Gas Distribution New Capacity. In total, PG\&E expects to spend over $\$ 23$ million more than the capital forecasted in GRC Application 09-12-020 for gas distribution pipeline safety, integrity and reliability-' related capital programs. Specifically, PG\&E expects to spend more on capacity, reliability main and service replacements and regulator stations than forecasted in Application 09-12-020. However, PG\&E expects to spend less than originally forecast on GPRP, Cathodic Protection (CP), Electronic Pressure Monitoring, CP Remote Monitoring and Meter Protection.

MWC 14 - Gas Pipeline Replacement Program. In PG\&E's testimony in Application 09-12-020, PG\&E stated: "The financial forecast for MWC 14 for the years 2011-2013 was developed assuming the continuation of the GPRP and CSRP [Copper Service Replacement Program]. As DIMP is developed, funding for the traditional GPRP and CSRP programs will be reallocated to support new DIMP-driven expenditures." (Exhibit PG\&E-3, Chapter 19, p. 19-4.) PG\&E plans to spend $\$ 16.7$ million less than the Application 09-12-020 forecast. The decreased GPRP spending in 2011 compared to the original GRC forecast is being offset by increased spending on CSRP, reliability main replacements with equivalent priorities to GPRP, and reliability regulator stations. PG\&E plans to spend $\$ 20.7$ million more than forecasted in Application 09-12-020 for CSRP, reliability main replacements, and regulator stations. Though PG\&E does not expect to spend the GPRP full amount forecast in Application 09-12-020, PG\&E does expect to spend more on GPRP than allocated in the Settlement Agreement. PG\&E expects to request additional funding in a future rate case for GPRP, but this funding would supplement, rather than replace, the funding received through the Settlement Agreement.

MWC 50 - Cathodic Protection. This work category involves replacing or installing new anodes. This work is expected to be completed as required.

MWC 50 - Electronic Pressure Monitoring Program. Spending in the Electronic Pressure Monitoring Program has been delayed to assess optimal technologies for this program. Existing pressure recorders are being replaced as required with the currently approved electronic technology, but the systematic
program to replace these units has been delayed pending the assessment of technologies. PG\&E may seek additional funding for this program in a future rate.

MWC 50 - CP Remote Project. The CP Remote Project is being piloted this year for system-wide deployment in subsequent years. Depending on the results of the pilot, PG\&E may seek additional funding for this program in a future rate case.

MWC 27 - Meter Protection. The reduced spending on meter protection is being offset by higher spending on higher prionity safety-related work. PG\&E may still complete the planned meter protection work within the 2011-2013 rate case cycle and thus, at this time, PG\&E does not know whether it will seek additional funding in a future rate case.

## 11. 2011 Planned Capital Projects

## Request

At the beginning of each calendar year, describe the capital projects planned to be undertaken for the year.

## Response

The projects planned to be undertaken for 2011 are set forth in Table 17-1. Table 17-1, Column 17A (Project Name) lists all the capital projects planned to be undertaken in 2011.

## 12. Variance Explanations Between Settlement Agreement Allocations and Actual Spending

## Request

To the extent PG\&E does not fully spend the amounts for capital projects or O\&M related to pipeline safety, integrity management, and reliability specified in the Settlement Agreement, explain the reasons for doing so.

## Response

PG\&E has included in Tables $12-1$ and $12-2$ information responsive to this request for those projects where PG\&E is able to determine, as of June 30, 2011 that it will likely not spend the annual allocated amount by the end of the year. In total, PG\&E expects to spend in excess of the Settlement Agreement amounts for both expense and capital related to gas distribution pipeline safety, integrity and reliability.

TABLE 12-1
PACIFIC GAS AND ELECTRIC COMPANY SUMMARY OF DISTRIBUTION EXPENSE SETTLEMENT AGREEMENT AMOUNT VS. SPENDING COMPARISON (IN THOUSANDS OF 2011 DOLLARS)

| MVIC | MVIC Description | Budget | GRC 12011 <br> Settlement <br> Agreement <br> Allocation) | Actual (as of 6(30/11) | Difference ISetrement Agreement Allocation Actual) | Explanation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DE | Leak Survey | \$18,609 | \$15,482 | \$9,669 | \$5,813 | Spending planned to exceed Settiement Agreement. |
| DF | Merk and Locate | 26,978 | 29,902 | 12,823 | 17,079 | Decrease primarly due to a reduction in the forecasted volume of Underground Service Alert requests due to the slow down of third-party construction. Forecast volume changes year over year primarily based on the economy. |
| DO | Cathodic Protection | 8,748 | 10,757 | 5,101 | 5,656 | Forecast has been revised and spending is planned to exceed Settlement Agreement. |
| EX | Meter Protection | 199 | 1,200 | 28 | 1,172 | Decrease primarily due to decision not to pursue non-critical meter protection work in 2011 to support higher priority work. PG\&E anticipates completing the program before or by the original proposed target time in 2016. |
| $F \mathrm{~F}$ | Operate Gas Distribution System | 3,038 | 3,945 | 1,756 | 2,189 | Decrease due to a reduction in general support costs for Gas Distribution operations. |
| FH | Gas Distribution Preventative Maintenance | 19,173 | 16,924 | 14,026 | 2,898 | MWC FH originally included Atmospheric Corrosion correction on Meters. An improved process is being implemented and this work is now being accounted for under MMC JS (DIMP). This will be reflected in the next reporting period. Based on May forecast, spending will be slightly less due to decrease in non-recurring expense projects for other higher priority work. |
| $F$ | Gas Distribution Corrective Maintenance | 39,550 | 35,656 | 18,738 | 16,917 | Spending planned to exceed Settement Agreement. |
| GF | Operations Distribution Gas Mapping | 934 | 1,600 | 474 | 1,126 | Decrease primarily due to lower gas mapping labor costs than originally forecasted and a reduction in non-critical mapping improvement projects to support higher priority work. |
| 60 | Gas Engineering | 3,070 | 3,060 | 890 | 2.170 | Spending planned to exceed Settlement Agreement. |
| JS | Distribution Integrity Management Program | 19.500 | 19.500 | 5,957 | 13,543 | Spending planned to exceed Settement Agreement. |
| KF | Implement Regulatory Change | 367 | 0 | 319 | -319 | Work not planned in the GRC. |
|  | Total | \$140,166 | \$138,026 | \$69,782 | \$68,243 | Total spending planned to exceed Settement Agreement. |

TABLE 12-2
PACIFIC GAS AND ELECTRIC COMPANY
SUMMARY OF DISTRIBUTION GAPITAL SETTLEMENT AGREEMENT VS. SPENDING COMPARISON
IN THOUSANDS OF 2011 DOLLARS)

| MWC | MWC Description | Budget | GRC 12011 <br> Settlement Agreement Allocation) | Actual fas of s/30/11 | Difference <br> (Settlement Agreement Allocation Actual) | Explanation |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 14 | Gas Pipeline Replacement Program | \$123,707 | \$123,266 | \$60,962 | \$62,304 | Spending planned to exceed Settlement Agreement. |
| 27 | Gas Meter Protection | 332 | 593 | 0 | 593 | Work is a result of expense MWC EX - Meter Protection. Please refer to MWC EX. |
| 47 | Gas Distribution New Capacity | 12,000 | 12,760 | 4,953 | 7,807 | Spending planned to exceed Seltlement Agreement. |
| 50 | Gas Distribution Reliability | 39,390 | 20,660 | 24,253 | $-3,593$ | Spending has already exceeded Sellement Agreement. |
| 52 | Gas Distribution Emergency Response | 702 | 264 | 366 | -102 | Spending has already exceeded Settlement Agreement. |
| $2 J$ | GT\&D Impl Regulatory Change | 0 | 0 | 66 | -66 | MWC not included in Seltlement Agreement. |
| 2 K | G Cust HPR | 15,000 | 0 | 761 | -761 | MWC not included in Settement Agreement. |
|  | Total | \$191,131 | $\$ 157,543$ | \$91,361 | \$66,182 | Total spending planned to exceed Settlement Agreement. |

## Project Descriptions and Status

## 13a. Capital Project Status

## Request

Discuss status and progress of capital projects previously started and not completed.

## Response

This information is set forth in Table $7 .-2$, and is reflected as well in Table 17-1, Column 13 (Project Status).

131b. Pipeline Records

## Request

Identify and explain any discrepancies found with pipeline records. Report if no records exist.

## Response

Discrepancies found with pipeline records are reported when active facilities are not mapped, the facilities are on the map but not in the field, or when other inaccuracies are found in PG\&E's maps. Gas Mapping encompasses tracking the size, material type, location, configuration, and other essential information needed to identify over 42,000 miles of underground gas main and nearly 3.3 million gas services in support of the Company's 4.3 million residential, commercial and industrial gas customers (accounts). Table 13B-1 includes mapping corrections reported from January 1 to June 30,2011 , which includes mapping corrections found during capital and O\&M work.

TABLE 13B-1
PACIFIC GAS AND ELECTRIC COMPANY GAS MAPPING CORRECTIONS REPORT

| Dunses |  by wampand | Werat meporkay | U, worma <br>  |  | Move |  | Remater Sob | cottrtents Chese orolerevarcy | 1i | Dake horracks |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| DA | 41272011 | Construejon | MOFFETI \& GAYSHORE | 7 | 3349E6. | 1 |  | UPDATEC DIAGRAM | M ${ }^{\text {P }}$ | $5113 / 2011$ |
| DA | 4272011 | contruction | CRAMT \& FREMONT | 7 | $13410-44$ | 1 |  | UPDATED DIAGRAM | M | 543/2011 |
| प] | 2102011 | Estimating | 1250 Springorook | $\square$ | 45FT5 | 1 |  | Mapping Ciscrepancy | M | 2112011 |
| $k E$ | 4/3/2011 | Comstrumton | Service mot foumd in field. |  | 4573.57 | 1 |  | Wapping had yet to receve a completed Job package by the constuction department | 3 | $413 / 2011$ |
| KE | 4/32011 | Constructon | Sewrice mot found in field. |  | 6573.37 | 1 |  | Mapping had yet to recevea completed sob package by the construction department | $J$ | A143209 |
| $k E$ | 4132011 | Comstumion | Service not found in field. |  | 15973] | 1 |  | Mapping had yet to recelve a completed Job package by the construction depamment | $J$ | 4132011 |
| KE | $5 / 52011$ | Constuction | scrvice posted of of plet boumbary |  | 502695 | 1 |  | Pat boundary issue. No chande made |  | 5192011 |
| KE | $56 / 2011$ | Comstruction | Service info swapred |  | 15024.95 | 2 |  | Mapred sinde service as a bratry | M | 592091 |
| KE | 5/312011 | Comstrictiot | Seryce info swepped | 4 | 15025-D2 | 2 |  | Mapped sinde service as a branct | M | 51812011 |
| $k E$ | $5 / 62015$ | Constuckn | Eranch scrvice found in lied that was not mapped |  | 15026-95 | 3 |  | THapping had yet to recelve a completed Job package by the constriction departmemt | 3 | 5162015 |
| $k E$ | 6/7/2015 | Comstruetion | Service round in field that was not on plat |  | 5027-86 | $\uparrow$ |  | Mapping had yet to receve a completed Job package by the construction department | $J$ | 6/82011 |
| $K E$ | Gitorath | Comstruetion | Eranch sefvice found in fied that was not mapped |  | 5025 D4 | 1 |  | Wapping had yet to receve a completed Job package by the constuction deparment | $J$ |  |
| KE | 6202011 | Contmuction | Eranch service fuind in fied that was not mapped |  | 5025- ${ }^{5}$ | 1 |  | Mapping had yet to recelve a completed Job package by the construction teparment | $J$ | 7/11/2011 |
| M1 | 1226011 | Mappirg | Incorrect materialon Coshent | C | 16 E16 | 10 | CM444480.70 | Mapping Discrepaticy | M | 1282011 |
| M | 1312011 | Constuetion | Dublim Buvillage Fkwy vave posted in wronct focation | 4 | 23802 | 1 | 30220193 | As-bulit gave wrong measurement for valve | A | 232015 |
| M1 | ?1602011 | Maprina | Buckhom Craek, Deep Craek | IL | 129507 | 3 | 30517068 | 3 services posied 3 mrong location | [1/] | 217172011 |

TABLE 13B－1
PACIFIC GAS AND ELECTRIC COMPANY GAS MAPPING CORRECTIONS REPORT （CONTINUED）

| civemen | Wata fercd bymappitg | Wepk Reported | $4 \leq c+46 \mathrm{~b}$ <br>  |  | M1： | $\|$$\substack{\text { mat } \\ \text { Locations or } \\ \text { Sas }}$ | Fatatesi dob＊ | Mumbenta <br>  | Iv | Date corrected |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| M | 21172011 | Construction | Farkshore，diferent ETS location | L | 20004 | 2 |  | TETG removed 1 new | 4 | 21172011 |
| M | 2172011 | Consrimetion | Saluood，moterent wrs bocation | － | 20a05 | 2 |  |  | v） | 2178001 |
| M | 317／2011 | Mappins | Andrade Ra wrong Cla | T | 25507 | i | CM440653．88 | Wob ！n map niffrod Hom ackai Wot ． 4 | M | 3172011 |
| M | 378\％011 | Conesrumam | Cabrilo Dr dupluate servies |  | 20\％08 | 1 |  | Serves was postedin 2 lorators | M | अ18．2011 |
| M | 3／18／2011 | Comstruction | Thartion ave．servios on tup mot im 宸期 |  | 20806 | 1 |  | paperwork mot recened by lappory monfyng of assmoce camorf | 0 | 3192001 |
| M | 42580011 | Consirustion |  |  | 28F0\％ | 3 | CM474005788 | Mavering Disorvancy | 1／1 | 4262601 |
| M1 | 41184011 | coneribetion | bramintava | $\pm$ | 13B14 | 2 |  | luapping Disureand | M | s1192011 |
| M | $5 / 27 / 2011$ | Mapping | Wrong stem names | T | 11015．16 | 3 |  | Wotrcation of atrest mame changes Were not rwesived by Mapmen to make the appropiate updates． | （3） | $6 / 272011$ |
| Pn | 1／21／2019 | Mappimy | 123：SPRINE ST | T | 3279．F3．3 | 1 |  | This was in the quene to be updated | B | $1 / 212011$ |
| PN | 1／20／2011 | Conatruckion |  | T | 2280．52 | 8 |  | Thus was in the cueve bo be updated | E | 1252011 |
| PN | 1／28201！ | Construction | 2509 El Camino，Recwood Chy | ！ |  | 3 |  | Swhened andress ！omations | a | 21／20n |
| pn | 2／162011 | Construction | Bro Mraba，hat Moon Bay |  | 3\％75－85 | 1 |  | hapme had yetroreceve a oompeted dot packace by them nonctuction department | d | 3／2011 |
| FN | 2402011 | Conaruction | 10\％LEEE，HaLF MDON BAY |  | 3275 | $\dagger$ |  | Mappen und yeyto receven a completa dob package by the construchon department | $j$ | 312011 |
| PN | 41482014 | Ther Tubion Peramme： |  |  | 3270．j2 | $!$ |  | Added missuq intomanon tom ers Sevice Fecord | A | 41920019 |
| FH | 4192014 | Cher mivemon Persamme | ｜दिए |  | 3279．52 | i |  | This was in the quese to be updated | B | 410201 |
| PH | 4／42011 | Other Divison Personmei | 221 CENTRAl AVE Hot Moon Bay |  | 2275－17 | 1 |  | Mappma had yet to recery oomatetad job parkage by the corstrantion cepartmem | d | $410 \% 2019$ |
| PH | $31 / 2011$ | Othem Division Persannel | 401 LEE AVE Findim MOON BAY |  | 829565 | 1 |  | Taprang und yet to reaname completer job package by the constrocton departmend | d | 41102001 |
| Fh | 7152011 | Other bivisun Fersomam | 524，528， 440 ：54A BERKELEY <br>  |  | 32860．11 | 4 |  |  | 晾 | 4212019 |
| FH | $4 / 28.2011$ | Esematra | WRONC LOC AADDRESSES |  | 3279．15 | 2 |  | Mappits ineremance | M | 4r8／2011 |
| Pl | 4／282011 | Mapping | HPDATED BLOCK \＆ST Marme |  | 758 | 15 |  | This was in the queue to be updated | E | 4／202001！ |
| PH | 5／202011 | Construction | 1700 12m，Redweod Cry |  | 3278.66 | 1 |  | No prevous Ces Service ferord． sembe was never mapped | U） | 9202011 |
| PH | 5272011 | Mapping | लहएECTON DATES WAS MOVED |  |  | 4 |  | Mapping Disorepancy | 4 | $527 / 2011$ |
| Sf | 211／201！ | Conmarucrion | dula | T | ［b25］ | 1 |  | To Exess Fow yave | 4 | 22／2011 |
| SF | THE／201！ | Pamerta | Hudsonmaxem |  | 4 | T |  | Thising limmame Vave |  | T192011 |
| SF | 2242011 | Pranimg | Mions Forer mide | E | 3FIT | 1 |  | Thaim was delelec |  | 2442011 |
| SF | 2212011 | Complance | Paul ${ }^{\text {c crave } 8!}$ | T | $4 \mathrm{FO4}$ | 1 |  | Thappirg Userevancy |  | 22412011 |
| SF | 3／1／2011 | Estimatry | 17\％4 Joost ave |  | \％Fers | 1 |  | Happing Diserepancy | ［1／1 | 317／2011 |
| SF | उ，22201］ | Pambing | Lzatrimgevens |  | 3－${ }^{2}$ | 1 |  | The servce vas posted wise |  | 3，प2\％11 |
| ¢5 | צ2\％201 | Praming | Teon brok ar Marke |  | 3－464 | 1 |  | Mappring Discrepency | M | अरुप201i |
| $5^{5}$ | 3L25201t | Parnimg | Mattet \＆Dutuse | PI | 3－t／b |  |  | Wraprig is sererancy | M | 323．2011 |
| sF | 3rorzt1 | Pameng | Posk and DVesaram |  | 1 TH | 1 |  | vave number was missing |  | $3 \mathrm{B6201}$ |
| SF | उ30\％ 211 | Temitrg | Derror anc Frood |  | ？ 5 | 1 |  | IMapmer Disceparicy | M | 3 उप2011 |
| $5{ }^{5}$ | 33，${ }^{\text {a }}$ | Pamming | Tf6at Evangave |  | 4－D 8 | 1 |  | Whe servee was neverlweled |  | 3302011 |
| SF | 330\％OIt | Patring | 11300 Evance |  | 4008 | 1 |  | Too many vmecessaty lies |  | 3302011 |
| SFP | $3 / 302011$ | Pammas | Poswomm \＆Diamond |  | 9F｜ry | 1 |  | Wepping raorta oo not indocate Why a low pressure valve is recoraed in the HF wave book． |  | $3 \times 02011$ |
| SF | 3／312011 | 1］amma | 23ras vermort |  | 4 CO | 1 |  | Dappin Discregaricy | 11 | 412011 |
| SFP | 4／62011 | Panking | $116 t h$ \＆Bryant Sta | T | 4．802B | 1 |  | remover valve mumber． unmanamed vate showld be un－ nambered | 产 | 402011 |
| st | That | Dernemg | Chktar 6 seby |  | 4t5ak | 1 |  | Wapesu Discrepanty | 117 | बh20 |
| GF | 482011 | Pranming | Stayan \＆Page | $T$ | $3-A 13 C$ | 1 |  | Removed valve mumber umannaned vave should be bu－ numbered | Mi | 4882011 |
| 5 St | पह2011 | Tarmug | Stcoterst | 1 | V＋IES | T |  | Serve was ievet uphated ilt ${ }^{\text {a }}$ |  | पुप्या |
| 9 F | 44122014 | Pranamy | Ammany \＆ |  | 4 FOHf | 1 |  | Wan war replaned in That bat never mpated． | M | 4112001 |
| St | एय2011 | PEvity | Varmus coname |  | Varow | 15 |  | TVrong vave symbe | 1 | पदxएT |
| BF | उुपा | Pamomy | bor holy fuk cime |  | 4－20 | ， |  | Servee was restea morreaty． | 1 M | 53／20T1 |
| St | 33／201 | Hammas | गra mat tia sale |  | 4tEOA | 1 |  | Rremovet ut ecals symbus． | 17 | 3T／2011 |
| st | 540w | P\％mamy | Yaimum Lromatons |  | Yarious | 12 |  | Wratr vave sprabol | M | अ16／2011 |
| SF | 86\％201 | Pamma | Vativis－acailis |  | Yandus | 4 |  | Wring valee symbal | M | 6，62011 |
| 9 | 1／122011 | Consmuction | 115 E，Empre 5t orass valley |  | $210 \% .63$ | 1 |  | Servoe foundin fied | j | 1132011 |
| S | 2102011 | Comstruction |  |  | 2as－cs | i |  | samice molonger exims | if | 422014 |
| St | 3GLV11 | Construetion | 1020．4TYST MAFYSVILE | $\underline{4}$ | 215456 | 2 | 30832871 | Curaued yaim dmentors | U） | 3152011 |
| 51 | 41442011 | Comgruation | LESS RAIROAD AYE |  | 2214－43 | 1 |  | Wharg Locator git map |  | 41512011 |
| SJ | ［1／12201］ | Construction | bicusemtember ir |  | 3410．f8 | 1 |  | labled m． 2 to plat |  | 1／13／2011 |
| SJ | 3／22पण1 |  | T10t6 S． 2 dr St San ，ose |  | 3413．E6 |  |  | barcmim |  | 3 224011 |
| BJ | 302011 |  | TT0日MEkay sanjose |  | 3352．64 |  |  | ExCEM |  | उ\％2011 |
| Sj | 392011 |  | N Fiagram Tasman operating |  | 3351.65 |  |  | Shova vaver－8／4 \＆V／3 |  | 392011 |
| SJ | उप1／201！ |  | Tuypad Laramene |  | 3，14＋72 |  |  | Wrow vave：T4．F2C $\mathrm{g}^{2}$ |  | 3112011 |
| 5 S | 6233201 |  | TSTCCKTV EASEURY |  | उत13．c | 1 |  | WUELPED ovekle |  |  |
| Su | 62．72011 | Pammen | PARKAML MERTDIA | T | 3413－E1 | $\stackrel{2}{2}$ |  | WROUL VALVE IS | ｜M｜ | 6／272011 |
| 5 | 6． 6272011 | Congtrumen | MOUTEREY \＆ND TULY |  | गपदes | T |  | Vave is in the nosed doerlon |  | $6 / 27 / 2011$ |

Legend to Table 13B-1:

Wiscrepancy Code (D-Code):


Wrong sizelype of equipment ( t , line equipment, valve, etc.)
Wrong sizelype of conductorfcable, main, or service (ie. ripes \& wires)
Facilites shown in wrong location (e.g. wrong distance or dimension from P/L)
Wrong sizehype of support structure or enclosure (pole, guy, box, condut, etc.)
Wrong text information on map not associated with any symbol (e.g. address, notes, etc.)
hand base discrepancy (e.g. streets or property lines dont match)
Root Cause Code (C-Code):

|  | As-built not accurate <br> Completed job not receved by Mapping <br> Maps pending update <br> Mapping discrepency <br> Undocumented fild change (no job or documentation for installation) |
| :---: | :---: |
|  |  |
| 8 |  |
| 4 |  |
|  |  |

## 14a. Regulatory Requirement Driven Capital Projects Request

Explain if a capital project is undentaken in response to a federal andior Commission regulatory requirement or advisory and/or National Transportation Safety Board (NTSB) recommendation.

Response
Table 17-1. Column 14, identifies projects initiated in response to federal and/or Commission regulatory requirements or advisory and/or NTSB recommendations, including projects that were initiated as a result of a CPUC audit.

## 1410. Risk Management "Top 100" Projects

## Request

Identify if project was/is on Risk Management Top 100 list or was/is in a "highconsequence area"

## Response

Items 14 b and 15 request information on Gas Distribution projects or pipelines that are on PG\&E's "Risk Management Top 100 " list, or are in high consequence areas. Gas distribution pipelines have never been part of the Top 100 list, which has historically been applied only to gas transmission pipeline segments. Similarly, "high consequence areas" is a term of art that does not apply to Gas Distribution pipelines. These two items are thus inapplicable. However, as part of PG\&E's new DIMP, a risk ranking of Gas Distribution pipeline is being performed and the Company will report on the results in upcoming semiannual reports, when available.

## 15. Most Recent Risk Management "Top 100 "

## Request

Include most recent Risk Management Top 100 report if it includes gas
distribution pipelines; identify changes from the prior report and explain why the changes were made.

## Response

As explained in response to ltem 14b, the Top 100 list applied only to gas transmission pipeline segments and was never applied to Gas Distribution. However, PG\&E is performing distribution risk ranking as part of the new DIMP. Subsequent reports will identify any changes to that ranking and explain the basis for such changes.

## 16. Distribution Pipeline Inspection Plan

## Request

Include most recent distribution pipeline inspection plan showing inspection methods to be used for specific pipeline segments and progress to plan. Note and explain any changes to the prior plan. Report on inspection results, identify and describe any discrepancies found with pipeline records. Report if no records exist.

## Response

PG\&E's Gas Distribution pipeline inspection plan is shown in Table 16-1. The table shows the MWC that the inspection activity is under as well as the inspection method along with a brief description. Progress toward the inspection plan is shown under the "Units Planned" and "Units Completed" columns. A summary of the results of each inspection method is also included. For a list of records discrepancies, please see Table 13B-1.

TABLE 16-1
PACIFIC GAS AND ELECTRIC COMPANY
DISTRIBUTION PIPELINE INSPECTION PLAN AND PROGRESS-TO-PLAN

| MWC | Inspection Method | Description | Units Planned (1/12011) 12/31/2011) | $\begin{gathered} \text { Units Completed } \\ (1 / 1 / 2011= \\ 6 / 30 / 2011) \\ \hline \end{gathered}$ | Results |
| :---: | :---: | :---: | :---: | :---: | :---: |
| DE | Leak Survey | Gas Distribution leak survey is conducted either annually, every 3 years, or every 5 years depending on the lype of facility. Leak survey involves taking instrument reads over the pipeline in order to determine the presence of any gas leaks. All leaks that are Ifound are either fixed immediately if deemed hazardous (Grade 1) or graded and scheduled for repair or recheck (Orade 2, 24, or 3), | 735,000 | 298,395 | As a result of the leak survey inspections during the frret reporting period of 2011, 8268 total leaks were found: <br> 723 of Grade 1 leaks <br> 2363 of Grade 2 leaks <br> 969 of Grade 2 tleaks <br> 4213 of Grade 3 leaks |
| DC | Cathodic Protection (CP) Monitoring | CP Montoring includes laking pipe-to-soll reads (which provides information about the cathodic protection levels on the pipeline) and rectifier reads. On Gas Distribution, pipe-to-soll reads are laken evey oher month and rectiliers are required to be read, at a Iminimum, annually. | 55,437 | 29,687 | As a result of the cathodic protection montoring during the first reporting period of 2011,1717 corrective trouble shooting nolifications were issued. |
| DG | Isolated Service Program | All distribution services that have been identified as being cathodically isolated from the distribution main are visited once every 10 years. A pipe-lo-soil read is taken to make sure the sevice is under adequate cathodic protection. | 13,469 | 344 | As a resull of the isolated service inspections during the first reporting period of 2011. B correctve trouble shooting notfications were issued (inspector installed anode on the gas service risert |
| FH | District Regulator Maintenance | Gas Distribulion district regulator stations receve two different lypes of inspection maintenance. An "A" inspection consists of a diagnostic test of the regulator function, visual inspection of the fregulator environment and operation of all valves, and is conducted amually. A "B" inspection consists of everything that is irequired in the "A" inspection and It also includes an intemal imspection of the regulator equipment and replacement of all Irubber goods. The " B " inspection is performed, at a minimum, conce every 8 years. | 3,167 | 3,006 | As a resull of the districi regulator maintenance inspections during the first reporting period of 2011, 671 corrective notifcations were issued. |
| FH | Valve Maintenance | Gas Distribution valve maintenance involves operating and Imspecting the valves on an anmual basis. | 6,805 | 3,767 | As a resull of the valve maintenance inspections during the first reporting period of 2011,149 corrective Inatifications were issued. |
| FH/JS | Atmospheric Corrosion (AC) Inspections | Ac Inspections involve a visual hspection of all above Igroundexposed pipeline facilties that could be subject to atmospheric corrosion. This inspection is performed every 3 ivears. | 3,352,781 | 3,442,129 | As a resull of the AC inspections during the first reponting period of 2011, 28,426 locations were identified for follow-up. |
| DF | Standby/Fild Meets | Whenever excavalion work is being performed on Gas Distribution critical facilties, a field meet with the contractor and a standby employee, present on site while the pipeline is exposed, are both rrequired. These inspections are penormed "as-needed" based on ine location of excavation. | 503,423 | 245,321 | Out of the Mark \& Locate tags receved in the reponting perlod, 518 required a field meet andlor standby. |

Note: MWC FH originally included Atmospheric Corrosion correction on Meters. An improved process was implemented and this work is now being accounted for under MWC JS (DIMP). This change will be reflected in the next reporting period.

## 17. Project Descriptions

## Request

Project descriptions shall include the following:
a) Project name
b) Work description: Provide details of work to be undertaken
c) Purpose: Explain why the work is necessary.
d) Timeframe: Start to completion, including significant milestones.
e) Pipeline number
f) Mileposts
g) Geographical coordinates and location (city, place name, county)
h) Pipeline map

1) Class Iocation
j) Identify if pipeline is in a high consequence area
k) Vintage of each pipeline segment and year installed
2) Manufacturer of the pipe
m) Whether the pipe is seamless or non-seamless
n) Maximum allowable operating pressure of the pipeline
o) Operating pressure
p) Pipeline dimensions (diameter, thickness, length) of each segment

व) Areas and communities the pipeline is providing service to
r) Explain how work on pipeline will affect senvice
s) Explain how work on pipeline might affect (such as operating pressure) the operation of other distribution pipelines and facilities connected to the project
t) For exposed pipelines: Examine for external defects and report results
u) For removed pipelines: Examine for external and internal defects and report results

## Response

Tables $17-1$ through 17.-4 provide the information requested and are described below:
ffi Table 17.1 lists all projects with applicable project details.
ffi Table 17-2 describes the history of plastic pipe and plastic pipe dimensions.
ffi "Table $17-3$ describes the steel pipe dimensions.
fffi
Table 17-4 shows the results of all gas inspection reports for the period January 1 to June 30,2011 . Table $17-4$ is a summary of the results from inspections performed when a pipeline is exposed. This can also include the internal inspection when applicable.
a) Table $17 .-1$, Column 17a - The project name is the order description.
b) Table 17..1, Column 17b - Work description is the Maintenance Activity Type (MAT) code which describes the category of work for this project. This includes the range of years the pipe deactivated was installed by material. Also included is the length in footage and diameter of the pipe deactivated by material.
c) Table 17.1 , Column 17c-Purpose of the work is the program that the work is being funded under.
d) See Table 7..2 - Timeframe includes the planned and actual start and finish dates for construction.
e) Not Applicable - Pipeline number is used specifically for transmission.
f) Not Applicable - Mileposts are used specifically for transmission, however, location information is provided in Columns 17 g and 17 h .
g) Table 17-1, Column 179-GIS coordinates are not available for Gas Distribution, however the division and city for the project is provided.
h) Table $17-1$, Column 17 h - Pipeline Map is the Map and Plat or Facility.
i) Not Applicable - Class location does not apply to distribution facilities.
j) Not Applicable - "High Consequence Area" is a term of art that does not apply to distribution facilities.
k) Table $17-1$, Column 17 k - Vintage of pipe is the range of years the pipe installed was manufactured by material. This information is only available for projects that are completed. The year installed is the year the project was completed, by material.

1) Table 17-1, Column 171 - Manufacturer is noted for pipe installed on the completed project. The information in Table $17-1$ is based on construction as-builts. Tables $17-2$ and $17-3$ list the approved manufacturers for plastic and steel pipe.
m) Table 17-1, Column 17m - For steel pipe, Table 17-1 sets forth whether the pipe is seamless or non-seamless on the completed project.
n) Table $17-1$, Column 17 n - T"able $17-1$ sets forth the Maximum Allowable Operating Pressure (MAOP) of the pipeline for the final system at the completion of the project. For regulator stations, the MAOP is for the system at the outlet of the station.
o) Table $17 \ldots 1$, Column 170-Table 17.1 sets forth the operating pressure of the pipeline for the final system at the completion of the project. For regulator stations, the operating will be for the system at the outlet of the station.
p) Table 17-1, Column 17p-Pipeline dimensions sets forth the diameter and length in footage by material for pipe installed. Tables $17-2$ and $17-3$ set forth the standard thickness for plastic and steel pipe.
q) Table $17-1$, Column 17 g - Areas and communities the pipeline serves.
r) Table 17.1 , Column $17 r$ - Sets forth the number of gas services anticipated to have a service interruption due to the project.
s) Table 17-1, Column 17s - The effect on the operation of other distribution pipelines and facilities connected to the project are described as the pressure changes due to the project. This notes the changes in the MAOP or Net Open Percentage of the system or the increase in capacity for the low pressure point the gas system.
t) Table 17.4 - For exposed pipelines, external defect report results are included.
2) Table 17.4-For removed pipelines, external and internal defects and report results are included.


|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ur．N． | mothow |  | Nass | flurime | bisvon |  |  |  | Lester avam | （tan） |  | invirinit |  |  | Sionk | whor | （－xas） | $1 \sin \sin$ |  |  | (oxicom | etreorones |
| ！ | Coripiote | No | зтere |  | ＋tim | 120 | Werizem | Foomenge masan | surianabee | amamame | \％amantiz | \％ | 3 | bruentr | mi | $m$ | 33 | pys |  |  |  |  |
| 2 | Compto | No | \％an37e |  |  | cement heme | wererchats | Pposion fasperem | Snlumane | en fomenc | mamamitar | 218 | ${ }^{231}$ | axamic | \％ | $\cdots$ | s | ${ }^{9} 9$ |  |  | ， |  |
| 3 | campera | ＊ | maxyem | cro creme suser： |  |  |  | mua | sarfansere | Santanasex | valuaratar cht |  |  |  | $\cdots$ | $\infty$ | $s$ | pso |  shbor of at Fhar ： <br>  |  | 33 sama |  |
| 4 | Compie | No | 3 3nst |  | exisesman |  | Werm ame | Eisumitisemat | swo | eane | mumetar ${ }^{\text {a }}$ | \％ | ${ }^{317}$ | \％is | \％ | $\cdots$ | ne | $\cdots$ | \％ | $\cdots$ | wested | vesorcaititume |
| 5 | Combees | $\cdots$ | उenter |  |  | catbemmm | 30：scratm | Popmemame | saramect | 5mamm | suymparts | 219 | 2 m | amestas | \％ | 5 | $s$ | Pse | M5： | Natataserem 0 2 | asmus | \％ext |
|  | ample | W | 31383 |  |  | Ree 13 ？ | Exerese | Probiberspus | 8an | Eemata |  | 2118 | ， | Gsacas | \％ |  |  |  | इनF Fma |  | Crated | Heam |
| ？ | Cmpete | $\infty$ | इunca |  |  | 为 | ＊ | cosads | Tatio | these | mat matatrs | 2 min | 2 mm | Petamas | $\cdots$ | $\infty$ | \％ | ${ }^{\text {P98 }}$ | 1 mede pale | Petalanajumita | wemed | marymut |
| ${ }^{3}$ | Camers | \％ | अ1／es |  | meapare ketae 5ram | \％ |  |  | Eman | －1ate | （aytur | ${ }^{4}$ | 2 m | － | $\infty$ | ＂ | 5 | P3， |  |  |  | －8xarameme |
| \％ | Campeas | No | svem |  |  | \％ | \％ | casay | （xmm | Hasno | hat maraid de Mall 301 RNT |  | ${ }^{2017}$ |  | semper | $\cdots$ | s | ${ }^{\text {asg }}$ |  |  | ans ser | \％ |
| ${ }^{40}$ | Compiter | m | зппез示 |  |  | Reat yen | wort Matic | saty | \％num | \％ |  | 2 zin | 2017 | orsevis | $\cdots$ | 3 | 3 | ${ }^{983}$ | rem | 18 | womeat | Nobamun mege |
| 4 | Comeres | 18 | 11850 | － |  | 83 | werfas | Examememe | Hame | ， | ，wous | ${ }^{8}$ | 2 m | ${ }^{3}$ | $\cdots$ | sem | ${ }_{\text {sxes }}$ | $\cdots$ |  |  | visce | Smatsemat |
| 12 | Complet | No | 3 waxe |  |  | \％ | \％ | cosat | Herimet | Easas | Mil mative | 230310 | 230 | aracmer | \％o | m | ＊ | ${ }^{\text {P5 }} 8$ | 230 uef Pbet |  | weyd | （1）matur mex |
| ${ }^{13}$ | Comprietr | ＊ | \％＊｜er |  | \％emenmememer | 2ex＊＊ |  | Tweim omem | Sminamace | manimma | \％ancomatiosis | $2{ }^{3} \times 13$ | $3{ }^{3}$ | ancewe | no | $\cdots$ | $\cdots$ | ${ }^{296}$ | （3） | Teemastasmer in | \％asses | Nosastratstione． |
| 4 | Compe fie | $\cdots$ | 2193 | Cos Ant |  | comer |  | susimit mex | Pemara | 5 |  | 2 z | 2910 | uspm | $\stackrel{18}{ }$ | ${ }^{34}$ | 3 | ${ }^{395}$ | $3{ }^{3}$ siz Pust |  | 11.8 mexs | Wentrat tave |
| is | Complete | No | masm | cisherma |  | Sen | Sext mix | Fuembit mem | sumfanmee | ant fanmeo |  | \％ | $\geq 31$ | \％ | nio | ，Mram | \％ | ${ }^{\text {Pras }}$ |  | 3 | Sampes |  |
| 18 | Compricie | $\cdots$ | $3{ }^{2}+3$ |  |  |  | Warcalion | Wement mexim | Sanramese | Sentamex | Tatiomaxt biz | $2 \times 10$ | 2 mm | craxpe | $\cdots$ | 105 | $\square$ | anc |  | Suditiskitimat | 193mases | Vosestratat sime |
| $\frac{17}{18}$ |  | $\frac{10}{10}$ | 3， |  | 践 |  | Watsee | Eatars mat | Preme | ces | （ | $\frac{88}{88}$ | $\frac{3171}{\text { min }}$ | $\frac{81}{88}$ | $\frac{85}{89}$ | \％ | $\frac{18}{8}$ | ${ }_{\text {ps }}$ |  |  | $\frac{185058}{}$ | （osatarstave |
| 19 | Comptis | No | ${ }^{5014} 4784$ |  | monamemed | caymurs |  | \％impen froms | Smitamen | amfarmo | （xu）manaty |  |  |  | Notab | ${ }^{105}$ | ${ }_{8}^{88}$ | ¢ |  |  | zsamam |  |
| ${ }^{20}$ | Compicte | No | 3ilare |  |  | Camiplix | \％ractemem | Pestmenes fover | Snfismesm | istrameme | \％u． | $2 \times 3$ | 2700 | ${ }^{\text {axametase }}$ | \％ | $\infty$ | 5 | P956 |  |  | mom | 隹 |
| ${ }^{21}$ | Compriele | no |  |  |  |  | Whereft calion | Fipmonamaly | 3nfiamex | Santumes |  | ${ }^{203} 310$ | 3 yio | oruena | m | 8 | 品 |  |  | Tustrastememe | 1283 max e | vossirasatione． |
| ${ }^{22}$ | Compiete | \％ | 3039403 |  | nen | Seel lavas | （1） |  | wrstan | \％ate |  |  | 3710 |  | Sarrbes | $\%$ | 4 | ${ }^{\text {P9\％}}$ |  |  <br>  | ${ }^{2}$ amomeas | Tompreatatimax |
| ${ }^{23}$ | Conpiele | no | mamb |  |  | ＊ | m | Comat | osants | ato |  | ${ }^{110}$ | 270 | Duxples | \％ | $\infty$ | 5 | ${ }^{96}$ | pezat made |  | mosted |  |
| ${ }^{24}$ | comples | N | 20： 27878 |  | mompers nammay menremen | ＊ | \％ | cemer | memem | －mean |  | 2ms 10 | 370 | crowe | ${ }^{\circ}$ | ${ }_{55}$ | 5 | P96 | sisaser mase |  | When |  |
| ${ }^{36}$ | Campois | No | ，yinter | cant man mmonemese cato |  | $\cdots$ | 3 | esaty | West viler | cma | mumbrate | ${ }^{20818}$ | ${ }^{2 m}$ | omater | $\cdots$ | $\because$ | ： | ${ }^{\text {P9g }}$ |  | Amblatamemex 12 | Womex |  |
| 28 | Comppora | ко | ）\＄pene |  |  | Stex 913， 198 | matry sum | Spoms bex mexs： | resme | osems |  | 3 N | ${ }^{2350}$ | vemer | $m$ | $\sim$ | \％ | ${ }^{\text {P8\％}} 6$ | nssay meas | ateranamemaz | ssisemem | 为 |
| 27 | Complie | мo | зundurs |  |  | $\infty$ | \％ | Cupat | samaman | veabran | －5u．工sement | \％ | ${ }^{2017}$ | \％ | $\cdots$ | 5 | ${ }^{8}$ | Psg6 | ＂as | ma | nowat | 何 |
| ${ }^{28}$ | Comperic | ＊ | 3 \％ |  |  | 7exazastam | 2\％sidy | Tasimpar ficosin | Stacria | Framim | Natizeraviem | 20， | 2310 | Crumater | \％ | \％ | 4 | ${ }^{755}$ | 朗 | Testis： | masmees |  |
| ${ }^{3}$ | Campets | $\cdots$ | Jusrat |  | 6xpoweremameramm |  |  |  | wemat | smease | \％u．max | $2 \times 1$ | 2 nm | araxame | $\cdots$ | 8 | 4 | ${ }^{956}$ |  | Starataseme 12 | 13smexas | Nosatsemamp |
| 30 | Compte | $\cdots$ |  |  |  | ＊ | ＊ | Essation ampaid | 3xsamatic | 3xamat | \％emere | 的 | 2371 | m | ${ }^{3}$ | 10 | 5 | ${ }^{2936}$ | ＋3 |  | Wentar | Nosperiatstions |
| $\underline{31}$ | Campers | $\cdots$ |  |  |  |  |  | Cume |  | \％ |  | ， | 2min | $\cdots$ | $\cdots$ |  | 15 | FSG |  |  | wemer | \％expleanitas． |
| 32 | Complita | no | 30\％303 |  |  | $\cdots$ | \％ | Casats | Satiose | ：man | Wux xewar | ${ }_{2010}$ | 270 | Pstambe | \％ | $\infty$ | 3 | ${ }^{835}$ | 12erce mast |  | neted |  |
| ${ }^{3}$ | Compe fic | No | wiraz |  |  | comen |  | Popin Remer maxs | Simiamma | inn finmex | Weux matal |  | $\frac{2020}{20120}$ |  | combs | $\infty$ | \％ | ${ }^{88} 8$ |  |  | masm |  |
| 34 | Completa | No | mpase |  |  |  |  |  | mintamina | imfranme | Manatalarel | 2110 | 2310 | aremper | 晈 | $\infty$ | ＊ | ${ }^{\text {P3 }}$ |  |  | 123 sam |  |
| 35 | Campers | No | ampers | cit map mabon lemers swrawesco |  |  |  |  | Nan | antamem |  | 230 0 | ${ }^{2010}$ | raxt | $\cdots$ | $\cdots$ | ＊ | ${ }^{\text {ag }} 6$ | swear for | 2 | 10．Sensex |  |



| 4 | \％ | ［x． | TM， | F． | 33 | ［37 | 458 | T， | We | ［1／2． | Whe． | I．${ }^{\text {a }}$ | \％x． |  |  | 5．${ }^{\text {maj }}$ | \％3 |  | Treme |  | \％ | ［7． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Whers | krmat |  | arom | smise． | mathores |  | posisithing | anio | Lacmer ioxm | 1setrem | Kivive |  | － |  |  |  | श＝：2 |  |  | 9uturet | 3atim |  |
| ${ }^{38}$ | Comprise | no | 3 mm |  |  |  |  | womens fovem | $\operatorname{cown}_{\text {Ex }}$ | Oster | Maresparde | ${ }^{238310}$ | 230 | axamer | $\stackrel{\text { nis }}{ }$ | $\infty$ | 33 | ${ }^{153}$ |  | Custrasatreetive | misences |  |
| 37 | Campere | － | 3 sabsm |  |  | Semins | mewder stam | Semameamemat | sazame | vasis | 19， | x：n | 230 | axavir | m | 5 | ＊ |  | nexatiak |  | wsmmas | Sosparamitasaz |
| 2 | $\frac{\text { chatat }}{}$ | N0 | 36． |  |  | Thems |  |  | amame |  | \％ 4 | 2 mga |  | Wexsle | 8 |  |  |  |  |  | \＃35vec | \％entrantaze |
| ${ }^{9}$ | Documamaty | ＊о | waxem |  |  |  |  | mpmensar mex | pentamane | Sarammo | air mixaral |  |  |  |  | \％ | \％ | ${ }^{196}$ | wasers mate |  |  |  |
| ${ }^{4}$ | Dosurnatetion | No | 3ap ${ }^{3}$ |  |  |  | fatar cat wn |  | Trem | Eenom |  |  |  |  |  | $\infty$ | \％ | P9\％ |  |  | ${ }^{\text {asmmema }}$ |  |
| ${ }^{12}$ | Dosurnatesm | vo | manssio |  | Cax Peomenemaremal fewam |  |  | －maxas | Sonramesce | Santanamat | Mol Oon |  |  |  |  | ${ }^{10}$ | \％ |  |  |  | asserves |  |
| ${ }^{4} 8$ | Osammentatan | ＊ | 3m | wet wes oreme wish we |  | ais | ro | ceasats | Sers | rancte |  |  |  |  |  | $\cdots$ | 17 | e95 | wex fremand | Fuemastermax 12 | wosket |  |
| 4 | Doanematiom | ＊ | आ 1 ¢7\％ |  |  | 的 | ， | casas | sncter | matam | Mailixprusp |  |  |  |  | ${ }^{105}$ | 9 | nwo | 1suter meate | Fitatistimetis | wistad |  |
| ${ }^{45}$ | Docaramention | No |  |  |  | ${ }^{*}$ | ${ }^{10}$ | Fidaisis oman | ），whers | shatm |  |  |  |  |  | $\infty$ | \％ | P95 | ， | ＂ | Wwet |  |
| ${ }_{8} 8$ | Dosumamatio | ${ }^{1 / 85}$ | $3 \times 15$ | 210．Wefmo |  | ， | ， | Ematy mame | Oomase | chams |  |  |  |  |  | $\infty$ |  | ${ }^{\text {p }}$ 96 |  | 8 | wemb | cospramerase |
| ${ }^{4}$ | Documeritum | No |  |  |  | ＊ | 4 | cosasi | crim | feam |  |  |  |  |  | $\infty$ | 3 | ${ }^{\text {P3 }}$ \％ | nzectimman |  | ms |  |
| ${ }^{45}$ | Doummetum | No |  | Oci gremil or biacmercem dor conc |  | $\stackrel{1}{4}$ | \％ | Fidemem inex | Paib | smans |  |  |  |  |  | 0 | \％ | ${ }^{\text {P9 }}$ ¢ | ＊ | ＊ | noter |  |
| 49 | Dosummation | $\cdots$ | Tulk |  |  | Semasay | Wey | Examememe | seman | ＊eam |  |  |  |  |  | $\infty$ | \％ | ${ }_{956}$ |  | Sextastersar 12 | 19 Sexas | \％aramamp |
| so | Docurmanation | мо | \＄1\％suc | czamuercla |  | Sxen | （ex emprome | rusemy mexam | speur | нam | Wil hinaity |  |  |  |  | $\cdots$ | ${ }^{\circ}$ | ${ }^{\text {usg }}$ |  | weramersern | 4tsmma |  |
| 51 | Documantion | $\cdots$ | winame |  |  | \％ | \％ | Eaxamememex | Man una | cexe |  |  |  |  |  | ＊ | $\pm$ | vsg | \％ | $1 \times$ | －omer | commatame |
| 52 | Dosammentaiom | $\cdots$ | 3 |  |  | 2atmisa | Hi．fort | Pminamamam | \％max | teme | －4ilmaxatim |  |  |  |  | 105 | ${ }^{3}$ | N＊ |  | Pemastamee 12． | 38 smas | Wentrastamp |
| ${ }_{53}$ | Documerituon | no | 5 mmpmox |  |  |  |  | Peomimeat mover | Sentios | cirava | Mal |  |  |  |  | $\%_{0}$ | 8 |  |  |  | 10ssarcen |  |
| 54 | Dosurmantan | ко | ：Musk |  |  |  |  | min | \％ 4 | Wwatem |  |  |  |  |  | $\cdots$ | \％ | ${ }^{\text {rs }} 6$ |  | ， | weammer |  |
| ${ }^{55}$ | Cnsution | $\cdots$ |  |  |  |  |  | Prsalf gray | crame | Trame | Calserat ${ }^{\text {a }}$ |  |  |  |  | 5） | $\square$ | ${ }^{1856}$ | \＃1afemit | Weratatili | same | cram crase |
| 58 | Constucton | ＊o | 3ne2r |  |  | Sis | － | Furciomencon ifr | 5exitm | vele |  |  |  |  |  | 8 | \％ | ${ }^{985}$ |  |  | 1338 mm |  |
| 57 | Constutan | No | 3 mazan |  |  |  | 3rur |  | Nesteos | manam |  |  |  |  |  | \％ | 5 | ${ }^{295}$ |  | 2uspastratiz | 27.5 | Nawhtarat maxe |
| ${ }_{58}$ | ${ }^{\text {construtan }}$ | No | 3 mas | Yompe cmaso 1．© |  | cexme |  |  | pmiammea |  | Whampeutela |  |  |  |  | ${ }^{105}$ | 11 | nwo |  | Sedraseximatiza | ampxam | \％er |
| 59 | cemaruat | $\cdots$ | 3 za 2 za |  | －amemareamer | Sata | 120． | Exater meat | Hexem | ＋ | May zriparfl |  |  |  |  | $\cdots$ | $s$ | ${ }^{2} 56$ |  | Rest masmay | sezexem | vexprase taza |
| so | constryton | мо | зез采 |  |  |  |  | mpamamesmen | miramae | 5enmex | suhavemat mat |  |  |  |  | \％ | ＊ | ${ }^{45} 6$ | War ar peste | asxinameme | ta 5mas | \％ex |
| ${ }^{6} 1$ | Construton | No | 3089 |  |  |  |  |  | paramame | 2anfineme |  |  |  |  |  | $\cdots$ | \％ | ${ }^{985}$ |  |  | 158 |  |
| ${ }^{62}$ | constyton | No | 2masa 40 |  |  |  |  |  | Pinrammen | \％aramex | \％al menarex |  |  |  |  | ${ }_{10} 5$ | ${ }^{\text {沼 }}$ |  |  |  | zpemese |  |
| \％ | Constration | ＊ |  |  |  | ${ }^{*}$ | ${ }^{3}$ | cosan | 1asbe | Suma |  |  |  |  |  | $\infty$ | \％ | ${ }^{4} 58$ | ［39］demax | Petastamex 13.3 | wortal | 边 |
| ＊ | untucton | кo | mas |  | sam |  |  | Pestimay frays | Smiammen | Pantiammex | Mu． |  |  |  |  | ${ }^{105}$ | 19 | नw | sixy mater | mat 122 | ws | abmagea masome |



| 4． | （1） | ए3 | － | ［4． |  | 3 F |  | － | צ8． | ［r\％ | （3） |  | ［． $\mathrm{F}_{3}$ | 5，mim | 20． | 193is． | T． |  | 4ir）．ug． | （4xaz3． | ［ 5 m | \％e |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Thay | Ancreme |  | Tres | －merse | mathome |  | 03585046 Gymikebs | 2m．0． | Lacmer ioxm | 1setitiom | $x+\sqrt{4}$ |  |  | aris |  | wion | 19protig | Kintik | Pata simer | 2imumet | 4itis． | coina milumat |
| ${ }^{65}$ | Constucton | No | sumare |  |  |  |  | Promenememosm | Sont rask | Onfammeo | Numanatis |  |  |  |  | 10\％94 | \％ | ${ }^{\text {P4／}}$ |  |  | 1188 max |  |
| ${ }_{6}^{6}$ | Constution | $\cdots$ | 3amater |  |  | Seel 1 See 140 | －वF． | Tosinames frosm | Eme． | Otaxa | （maxamatib |  |  |  |  | 15 | ${ }^{14}$ | 835 | Herctize Prese | Deseris． | abarces | vesomatait manas |
|  | Consprat | $\frac{N 0}{N 0}$ |  |  | 隹 |  | Wr seo |  | ${ }^{\text {cosmex }}$ | anker | mall wa |  |  |  |  | ${ }_{50}^{50}$ | $\frac{38}{82}$ |  | 1，80 $\alpha 7 \mathrm{~S}$ | Mastankerimins | 2ew |  |
| 8 | Consulion | Y5 |  |  |  |  |  | Aasin |  |  | ， |  |  |  |  | a |  | ${ }_{7}{ }^{36}$ |  |  |  | abera mex |
| 70 | Canstucton | ＊＊ | ³1］$^{\text {a }}$ |  |  |  |  | Posingres frossm | Ese $\mathrm{Cow}^{\text {a }}$ | ${ }^{\text {athrowes }}$ | Nay mentos |  |  |  |  | $\infty$ | $\cdots$ | ${ }^{\text {P5 }}$ |  | 182 |  | Cetrant hrow hage $105!$ तst toll户 instatingw <br>  |
| 7 | Censtratan | 4 | มaxins |  |  | 38 | － | cepan | som | amato | mul．mazatis |  |  |  |  | s | ss | ${ }^{986}$ | ${ }^{\text {ma }}$ | $\cdots$ | Vester |  |
| 72 | consuation | ко | maxaw | TMg |  | ates se |  |  | \％mom | \％ex | Yail man maflu |  |  |  |  | \％ | \％ | ${ }^{\text {rsG }}$ |  | wersamersarna | starcen | 边 |
| ${ }^{73}$ | Constryton | $\cdots$ | 3 maxsmo |  | \％oqum |  |  | ＊ | sanfansse | Som fuaxeo | Mat．onctast con |  |  |  |  | $\infty$ | so | ${ }^{\text {Psg }}$ |  |  | masoren | cimet |
| 74 | $c^{\text {constucton }}$ | no |  |  | \％$\%$ | ceatina |  | Fustinser for | antramsam | Sumbumo | Maxamay |  |  |  |  | \％ | \％ | $\mathrm{P}_{\text {PYg }}^{\text {fuc }}$ |  |  | 13830 ccs | Cowed 282 Ming 145 in wh reviangual chompt |
| 75 | Constutan | ко | maxwe | Compenvens san fancsice | sam |  |  | Pqumpees mpars | miramme | 3namam | \％atiome |  |  |  |  | $s$ | ＂ | ${ }^{486}$ |  | aukrasherman 1／2 | wasmex |  |
| ${ }^{76}$ | Canstucton | No | Jwamar |  | ， | Sel haves， |  | Tosinamempers | man | Smfanme |  |  |  |  |  | $\infty$ | \％ | ${ }^{935}$ |  |  | 12.58 |  |
| ${ }^{77}$ | ${ }^{\text {constudion }}$ | no | zimesat |  |  |  |  | ms | Somiansame | ambumec |  |  |  |  |  | 08 | \％ |  |  |  | 20 ${ }^{3}$ |  |
| ${ }^{78}$ | Consuyton | No | smame | Grape sinser $\mathrm{sf}^{\text {sf }}$ |  | cemematis | Smisesten | Fowtuen mown | samamesem | San fisamex | yilomemata |  |  |  |  | $\infty$ | s | ${ }^{\text {PS }} 6$ |  |  | wsamees |  |
| ${ }^{79}$ | Constucton | No | sumpr | saproccamen minmasco |  |  |  | Pooimperacosin | man unke | nfammo |  |  |  |  |  | $\cdots$ | ＊ | ${ }^{\text {P9\％}}$ |  | Puemastamere ti． | 11304rese |  |
| 80 | Consuraton | ＊＊ | juap |  |  | Seation |  | popimene fems | theas | tuane |  |  |  |  |  | ＊ | s | P96 | 隹 |  | ＂S savere | cinet |
| ${ }^{81}$ | Constutan | ＊ | $3{ }^{3}$ |  |  | ${ }^{\text {cosem }}$ |  |  | Sanfamme | \％onammax | \％an maticu |  |  |  |  | $\leqslant$ | $s$ | ${ }^{\text {ps }} 6$ |  |  |  |  |
| ${ }^{82}$ | Constucton | ${ }^{*}$ | 3 zamsat | sproorforas sf |  | （eaty |  | Popinger fimsu | wnow | man funsmo | Whamatren |  |  |  |  | $\begin{gathered} 50 \\ 11 \\ 105 \end{gathered}$ | $\begin{aligned} & 50 \\ & 10 \\ & 10 \\ & \vdots 0 \end{aligned}$ |  |  | Werbstarmative | \％amm |  |
| ${ }^{83}$ | Consivatan | ＊ | jumse | werwzempoute wnstow？ |  | may |  | Pquin Rus fray | san fumbe | \％aramex |  |  |  |  |  | \％ | s | ${ }^{\text {P8 }} 6$ | Hyurame |  | ：\％5 $5 \times \times$ |  |
| ${ }^{84}$ | Castruction | No |  | （EPRLP Prepe |  |  |  | cesm | sers | nomsie |  |  |  |  |  | 5 | \％ | P95 |  | Duestrastermax in： | brue |  |
| \％ | Constutan | ＊ | 5 | Ommaber mex |  | Pertasatat | 4atitstas | Ampanacmazan | 3misem | crabz |  |  |  |  |  | $\infty$ | \％ | ${ }^{295}$ |  | Peetastamax 1.3 | \％saves | Tosmbiont |
| ${ }^{86}$ | Constuctor | No | 3019939 | scip gio tramame valmate |  | ${ }^{*}$ | ${ }^{\text {ra }}$ | Ceasaty | Nest ori $^{\text {a }}$ | Nem | Ma，\％sacart |  |  |  |  | $\cdots$ | \％ | p35 | \％ | $\cdots$ | $4{ }^{\text {Mrstad }}$ | 边 |
| 81 | Consmaten | \％ | 317638 |  |  | Stan 196 | ｜case |  |  | 2me |  |  |  |  |  | n | 3 | ${ }^{736}$ |  | Cagrbammatil | arseas | Towhereatem |
| ${ }^{88}$ | Constutan | $4 \times$ | 319375 |  |  | Star azazex |  | Popinesem Fomy | West vilat | Restar | Welizapain is |  |  |  |  | 40 | ＊ | ${ }_{\text {psg }}$ |  | Wutras sermat 172 | ${ }^{35} 5 \times$ |  |
| 89 | Constution | $\cdots$ | \％ex | NTT CURL DR MTMOMONOSOOOD ED PREN | New Cupasty Fopsetor statur | ${ }^{*}$ | $1$ | cowety | Amse |  |  |  |  |  |  | $\cdots$ |  |  |  | $x^{\infty}$ | $\cos ^{2} \sec$ |  |
| 80 81 81 | Canturion | No | 31／3car |  bow DR \＆Crestuewis |  | ${ }^{8}$ | \％ |  | ${ }^{\text {anden }}$ | Brekras |  |  |  |  |  | ${ }^{8}$ | $\frac{39}{30}$ | $\begin{array}{l\|} \hline \text { PSG } \\ \hline \text { PSG } \\ \hline \end{array}$ | $\frac{1 \pi}{n i n}$ | $\left.\right\|_{\infty}$ |  |  |
| 92 | Constudon | yee | अ17400 |  |  | mis | rim | Futamberomp | Wartivat | Restas |  |  |  |  |  | $\infty$ | 0 | ${ }^{385}$ | mo | ${ }_{0}$ | Werem | losustratationa |
| C | Consulion | Yes | 30， 3 887 |  |  | 8 | \％ | ERamamem | S\％em | FWeme | Walimarat is |  |  |  |  |  | ${ }^{35}$ | Fsg | 128 |  | Wexect |  |
| \％ | Consuaton | $\cdots$ | зukees | ¢fas |  | ${ }^{2}$ | \％ | Rexmemer | Nematar | 5me | crobativis |  |  |  |  | $s$ | \％ | 9gg | m | $\cdots$ | Nomer | Noumbeatmex |
| 55 | Canstudion | $\infty$ | 3 l |  |  | ＊ | ${ }^{1 *}$ | Esidet Somer | Wratrater | ${ }^{\text {come }}$ |  |  |  |  |  | \％ | 5 | P95 | ${ }^{\text {mas }}$ | ＋ | Noytar |  |
| 5 | Comaratan | $\cdots$ | Solsme | Sphaneme cre swios |  | Moumb |  |  | Pmax | Senor |  |  |  |  |  | $\cdots$ | － | nwm |  | Cas lasamamiz | abesem | vemersas mame |



|  |  |  |  |  | 5 | ${ }^{2}$ | 59 |  | S8 | 128 | m | ${ }^{15}$ | Wx | \％in | 318 | Wer | \％ |  |  |  | \％ | \％5． |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Wher： | arkrame |  | 4imen | －rime． | mathert |  |  | 2ni．t | 3isot | 1setation |  |  | － |  | sers | wion | \％＝x\％ |  | Heat mixates | Wartumit | 2matis | cromen mimome |
| 97 | Constution | No | зerene |  |  | \％ | io | Cwouts | mosmat | roske | Nat mixate |  |  |  |  | \％ | 30 | ${ }^{93}$ | ＋39\％ |  | \％ |  |
| 98 | Consmution | ${ }^{0}$ | Mimsee | Phat |  | mmamman mat |  |  | mana | cmexer | ，uil mex mix |  |  |  |  | 80 | \％ | ${ }_{\text {PSG }}$ | neeare pata |  | 2 mwnm | venmatsmes |
| 9 | Canstuxton | $\cdots$ | 31083 |  |  | Smem | erar seme |  | nomente | voses | Mu \％xs fur rim |  |  |  |  | 10 | 5 | ${ }^{\text {P3／6 }}$ | matap pata |  | 2smom | vosuprematimas． |
| 102 | Conswivtran | Yes | M，mex |  |  | \％ | \％ | Findent | ponex | sminse |  |  |  |  |  | $\cdots$ | 3 | ${ }_{\text {psg }}$ | m | $\cdots$ | magke |  |
| ${ }^{109}$ | comsuuton | so | gresse |  |  | Sen max max | Hex mrama | －qumperempay | \％mmo | mames |  |  |  |  |  | $\stackrel{3}{ }$ | 3 | ＂56 | coracmax | Putrasherraminz | \％5smem | Vospreas mame |
| 702 | wucto | ल | उतluex |  |  | ${ }^{6}$ |  | Erideramme | Ex हn | （1ume | wame |  |  |  |  | 0 | ${ }^{17}$ | ${ }^{\text {P3 }} 6$ |  |  | wernd | Sometem |
| 103 | Coneruxtion | No | 5vesuo |  |  | \％ | \％ | Fexamy max | pomua | smaras | sal zzanatca |  |  |  |  | $\cdots$ | $n$ | ${ }^{\text {p39 }}$ | 1 m |  | Nommer |  |
| ${ }^{164}$ | Precenstudion | мо | ， | colvesurne． 3 f |  |  | Hero yem | Tulaimb smeud | Sentamince | manfomma | MLl．majarat bix |  |  |  |  | $m$ | $\%$ | ${ }^{\text {P33 }}$ |  | ${ }^{*}$ | 158 barnes | Nosameatat minas |
| 103 | Precons | No | \％exame |  |  | \＄9xaticer | \％r |  | Smeme | Sosams | Sul |  |  |  |  | ${ }_{5}$ | 4 | ${ }_{\text {P5G6 }}^{\text {P9，}}$ | H19ere Pasa | Eatiasematiz | Hemer |  |
| 407 | Preetsonstution | No | samas |  |  | no | \％ | Eusain imoux | Fato | comat | \％－averemmaw |  |  |  |  | $\infty$ | \％ | P4\％ | \％ | $\cdots$ | mested | Nomastreat dopoe |
| ${ }^{1098}$ | Preconnkution | No |  |  |  | amine | sex | Tuspuit imum | \％emento | vesto | Wum xstatas |  |  |  |  | $\infty$ | 8 | ${ }^{\text {p\％}}$ \％ |  | Puemastimemer 1.2 | P3smbas |  |
| 109 | Procemanaution | No | maxish |  | Nascoman fromervimen | m | m | Catase | Onos | aman |  |  |  |  |  | 8 | 8 | ${ }^{\text {PSg }}$ | \％ | m | messet |  |
| $1{ }^{10}$ | Premematution | $\cdots$ | 3 samasa |  | Nuswer mememicemen |  |  | sumaty mimeir | somm | smatain | 5al zematis |  |  |  |  | 5 | ＂ | ${ }_{\text {esgig }}$ |  |  | 4 ssemes | cosombatctave |
| 111 | Pracmanua | No | Naswo | F |  | ${ }^{83}$ |  | Fewamy | Ро⿱二⿺卜丿， |  | Fat wr mate |  |  |  |  | 5 | 5 | ${ }^{\text {P36 }}$ | 203 | 123 | एकea |  |
| ${ }_{1 i 2}$ | Preamuxturion | ко | wimase |  |  | Suer maxaz | \％ut | maty | sentan | stoman | momatan |  |  |  |  | $\infty$ | ${ }^{55}$ | ${ }^{\text {P9 }} 6$ |  |  | $11589 \times 108$ |  |
| $\frac{118}{414}$ | Premersutio | N0 | Sule |  |  | ${ }^{8}$ | \％ | Eratib baver | Fatama | Skerem |  |  |  |  |  | 3 | $\frac{17}{3}$ | ${ }_{\text {Pr36 }}^{58}$ | 速 | － | Eextal | Noserverat |
| ${ }_{1}^{19}$ | Prememsuat | ${ }_{\text {ves }}$ | ${ }^{\text {and }}$ |  |  |  |  |  | ${ }^{\text {demememe }}$ |  | （mat sex |  |  |  |  | 0 | $\frac{38}{3}$ | ${ }_{\text {Pss }}{ }_{\text {Ps }}$ |  |  | Nover |  |
| ${ }^{118}$ | Pracoms wation | $\cdots$ | 30：mems |  |  | spem | wore stee | Suamy | chm ${ }^{\text {a }}$ | samate | \％all |  |  |  |  | 5 | 3 |  | 380e sem |  | 1，5exal | cosmeativer |
| 117 | Pro．censtution | ＊ | 3nister |  |  | m | \％ | Funder | Westuben | cme | Koins mas mbil |  |  |  |  | 5 | ${ }_{5} 5$ | pgi | $\cdots$ | m | Nomal | Nompleat max |
| $4{ }^{46}$ |  | ${ }^{\text {N6 }}$ | \％ |  | 成 |  | $)^{\frac{1}{2}}$ |  | Some |  | 践 |  |  |  |  | \％ | $\frac{8}{5}$ | ${ }_{\text {Pa }}{ }_{\text {Pa }}$ |  |  | ${ }^{\text {a }}$ | mex |
| ${ }^{120}$ | Preansutam | No | surax | ©an enors |  | उme $183 \times 4$ | Prick Cam | Evabim ami | Norien | － |  |  |  |  |  | ${ }^{2}$ | 2 | ${ }^{836}$ | 27，वz Pata | Efflowatimiliz | serm | ， |
| 121 | Procesonsution | No | $4 \pi$ |  |  | \％in | \％ia | coundy | Pomue | ancmase | masmantos |  |  |  |  | \＃ | ＂ | pys | no | ＊ | mostad |  |
| $\frac{128}{183}$ |  | No | Sumbe |  |  | ${ }^{83}$ | \％ | Eeprawe catpor | $\frac{1}{\text { Prema }}$ |  | （2alsmbeyr |  |  |  |  | $\frac{8}{4}$ | $\frac{8}{81}$ | ${ }_{\substack{\text { P96 } \\ \hline 56}}^{\text {P6 }}$ | \％ | ， |  |  |
| ${ }^{124}$ | Casag | $4 \times 8$ | 31／4x |  |  | ＊ | Pia | Fatamem mame | Pomme | tensaxam |  |  |  |  |  | $\cdots$ | 8 | 230 | x | ＊ | Nester | amamait mame |

TABLE 17-2
PACIFIC GAS AND ELECTRIC COMPANY
PLASTIC PIPE HISTORY

| Manufacturers and Brands |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| Manufacturer/Brand | From | To | PE Grade | Notes |
| Dupont Aldyl A | 1965 | 1990 | PE2306/2406 |  |
| Nipak | 1972 | 1985 | PE2306/2406 | Went out of business in 1985 |
| Phillips Driscopipe | 1972 | 2000 | $\begin{aligned} & \text { PE2306/2406 } \\ & \text { PE } 3408 \text { (1/4" only) } \end{aligned}$ | Merged with Plexco in 2000 to form Performance Pipe |
| Plexco | 1986 | 2000 | PE2306/2406 | Merged with Driscopipe in 2000 to form Performance Pipe |
| CSR/PolyPipe | 1991 | present | PE2406/2708 | Purchased by CSR in 1995, kept PolyPipe name |
| Uponor | 1992 | 2004 | PE2406 | Purchased by US Poly |
| Performance Pipe Driscoplex | 2000 | present | $\begin{aligned} & \text { PE2406/2708 } \\ & \text { PE4710 (1/4" only) } \end{aligned}$ |  |
| US Poly UAC 2000 | 2004 | present | PE2406/2708 | Now owned by JM Eagle |
| KWH Wehogas | 2006 | present | PE2406/2708 |  |
| Note: dates based on best available information and may be approximate. |  |  |  |  |

PLASTIC PIPE DIMENSIONS

| Dimensions and Tolerances |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Nominal Size <br> (inches) | SDR | Outside <br> Diameter <br> (inches) | Outside <br> Diameter <br> Tolerance <br> (inches) | Minimum <br> Wall <br> Thickness <br> (inches) | Wall <br> Thickness <br> Tolerance <br> (inches) |  |
| $1 / 4$ CTS | 6 | 0.375 | $\pm 0.004$ | 0.062 | +0.006 |  |
| $1 / 2$ CTS | 7 | 0.625 | $\pm 0.004$ | 0.090 | +0.009 |  |
| 1 CTS | 11.5 | 1.125 | $\pm 0.005$ | 0.099 | +0.012 |  |
| 1 1/4 IPS | 10 | 1.660 | $\pm 0.005$ | 0.166 | +0.020 |  |
| 2 IPS | 11 | 2.375 | $\pm 0.006$ | 0.216 | +0.026 |  |
| 3 IPS | 11.5 | 3.500 | $\pm 0.008$ | 0.304 | +0.036 |  |
| 4 IPS | 13.5 | 4.500 | $\pm 0.009$ | 0.333 | +0.040 |  |
| 4 IPS | 11.5 | 4.500 | $\pm 0.009$ | 0.391 | +0.047 |  |
| 6 IPS | 13.5 | 6.625 | $\pm 0.011$ | 0.491 | +0.059 |  |
| 6 IPS | 11.5 | 6.625 | $\pm 0.011$ | 0.576 | +0.069 |  |
| 8 IPS | 13.5 | 8.625 | $\pm 0.013$ | 0.639 | +0.077 |  |

${ }^{1} 4^{4 *}$ IPS and 6" IPS purchased by PG\&E was SDR 11.5 until 1996 , at which point a switch was made to SDR 13.5 (per Gas Bulletin 90.) Given a three-year storage life, SDR 11.5 pipe could have been used through 1999.

CODE NUMBERS FOR STEEL PIPE:

Asset Type: Gas Transmission and Distribution
Issued by:

## C. M. Vollbrecht $4=$ Original Signed By

Function: Design
Date: 04-21108

Rev. \#06: This document replaces Revision \#05. For a description of the changes, see Page 2.
This document also appears in the following manual:

## ффCas Applicant Desion Manual

## Purpose and Scope

This numbered document provides code numbers for steel pipe.

## Acronyms

ARC: abrasive resistant coating
DSAW: double-submerged arc welded
ERW: electric resistance welded
FBE: fusion bonded epoxy
SMLS: seamless

Table 1 PG\&E Standard Pipe Sizes

| Nominal Pipe Diameter (Inches) | Pipe Outside Diameter (Inches) | Wall <br> Thickness (Inches) | Grade | Seam Type | Code for Bare | $\begin{gathered} \text { Code } \\ \text { for } \\ \text { Wrapped } \end{gathered}$ | Code for FBE | $\begin{gathered} \text { Code } \\ \text { for } \\ \text { FBE+ARC } \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3/4 | 1.050 | 0.113 | B | SMLS | 011574 | 010067 | -' | - |
|  |  | 0.154 | B | SMLS | 011951 | 011036 | - | " |
| 1 | 1.315 | 0.133 | B | SMLS | 011575 | - | - | - |
|  |  | 0.179 | B | SMLS | 011935 | - | - | - |
| 1-1/4 | 1.660 | 0.140 | B | SMLS | 011576 | 010163 | - | - |
| 2 | 2.375 | 0.154 | B | SMLS | 011578 | 010147 | - | - |
| 3 | 3.500 | 0.216 | B | SMLS | 011692 | 010178 | - | - |
| 4 | 4.500 | 0.188 | $\times 42$ | ERW | 010941 | -- | 010914 | -' |
|  |  | 0.237 | B | SMLS | 011693 | - | 010364 | 010716 |
| 6 | 6.625 | 0.188 | $\times 52$ | ERW | 011004 | - | 010944 | - |
|  |  | 0.280 | B | SMLS | 011688 | - | 010014 | 010844 |
| 8 | 8.625 | 0.188 | $\times 52$ | ERW | 010717 | " | 010718 | 010795 |
|  |  | 0.250 | $\times 42$ | ERW | 010237 | - | 010838 | 010848 |
|  |  | 0.322 | B | SMLS | 011689 | - | 010029 | 010849 |
| 10 | 10.750 | 0.250 | $\times 52$ | ERW | 010797 | " | 010798 | 010803 |
|  |  | 0.365 | B | SMLS | 011804 | - | 010034 | 010851 |
| 12 | 12.750 | 0.281 | $\times 52$ | ERW | 010806 | - | 010935 | 010939 |
|  |  | 0.375 | B | SMLS | 011948 | - | 010037 | 010853 |

Table 1 PG\&E Standard Pipe Sizes, continued

| Nominal Pipe Diameter (Inches) | Pipe Outside Diameter (Inches) | Wall <br> Thickness (Inches) | Crade | Seam Type | Code for Bare | Code for Wrapped | Code for FBE | $\begin{gathered} \text { Code } \\ \text { for } \\ F B E+A R C \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 16 | 16.000 | 0.312 | $\times 52$ | ERW | 011051 | "' | 010038 | 010854 |
|  |  | 0.375 | B | SMLS | 011819 | -" | 010039 | 010855 |
| 20 | 20.000 | 0.375 | $\times 60$ | ERW | 010898 | "' | " | "' |
| 24 | 24.000 | 0.375 | $\times 60$ | DSAW | 010901 | "' | 010790 | 010903 |
|  |  | 0.500 | $\times 60$ | DSAW | 010052 | -" | 010057 | 010863 |
| 26 | 26.000 | 0.375 | $\times 60$ | DSAW | 010864 | "' | 010866 | 010867 |
|  |  | 0.500 | $\times 60$ | DSAN | 010904 | "' | 010905 | 010908 |
| 30 | 30.000 | $0.375{ }^{1}$ | $\times 60$ | DSAW | 010722 | "' | 010767 | 010868 |
|  |  | 0.500 | $\times 60$ | DSAW | 010500 | "' | 010869 | 010871 |
| 34 | 34.000 | 0.505 | $\times 60$ | DSAN | 010889 | "' | 010780 | 010876 |
| 36 | 36.000 | 0.500 | $\times 65$ | DSAW | 010909 | " | 010910 | 010913 |

1 Pipe with this wall thickness requires $42^{\prime \prime}$ minimum cover, when installing, to ensure adequate protection from traffic loads.

## Revision Notes

Revision 06 has the following changes:

1. Updated the data in Table 1.
2. This document is part of Change 60.
pacifo gas and electric company



pacific gas and electric company
nspecIION RESULTS：danuary 01.2011 －－une so． 2

| 3issers | setrict | \＄nersesturst | mevies | neres |  | 4. | 4isert | STHER <br> perssure | Misk. | parmetel | listis | Mrsers： | Wereser | centrict wer | lentive |  | W：RTM cremerne | sexiry arlines： <br> IT： |  | lureme | fonsill | preser | hinting | $\left\lvert\, \begin{aligned} & \text { micese } \end{aligned}\right.$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Trems | Trism | \＃17mm |  | 3 3\％11 |  |  | 3 |  |  |  |  |  | T113 |  | ลญ¢ |  |  | ＂ |  | Bus | 8 | n | 8 | \％ |
| FFesmis | Ferem | Eloaviny | F\％erm | 333！！ |  |  | $4!$ |  |  |  | 138 |  | ［13］ |  |  |  |  |  |  |  | n | \％ | 3 | $\square$ |
| Feses | मुem | Weatis | Saliz | $3 \times 11$ |  |  | 8 |  |  |  | 4.3 | इएक्ता | 233 | Daxas viraj | Examin |  | Nuse | \％ | \％ |  | ＂ | 8 | \％ | $\square$ |
| सदemb | म\％\％ | Werm |  | उता1 |  |  | 8 |  |  |  | \％$\%$ | अधख | 2．17 |  |  |  |  |  |  |  |  |  |  |  |
| सem | kern | Terres | Baxasited | 34711 | Fim | Was | 3 | HPFeemply | 1552 |  | 173 | Steel | ${ }^{375}$ | हxabever | Бउм |  | सume |  |  |  |  |  |  |  |
| Fresmo | Tresmo | Enme | Frems | 3， 31 |  |  | 15 | Hp，expmit | 3！ |  | 6 \％ | Bxer | 3.18 | Hetambenspar | Par |  | Thne | $y^{2}$ | $y$ |  |  |  |  |  |
| सห\％ | Kars | Nastar | Ten | उ\％4！ |  |  | 15 |  |  |  | ${ }^{3} 9$ | \＄2el | 237 | Smanter | Far | Aaxple | Resse | \％ | 4 | Eund |  |  |  |  |
| Fismo | fesse | ELSE | Fesme | 3．7！ |  |  | 8 | HP $(\mathrm{CbHas}$ |  |  |  |  |  |  | Sum |  | Nuse | 8 |  | कus | n | n | n | n |
| \％ | Kem | FMEF | Rusgrest | 3771 |  |  | 3 |  |  |  | 3 |  | 23 |  |  |  |  |  |  |  | \％ | \％ | 3 | $\square$ |
| Whitivaley | Reatiry | Earty | fremimy | 3 mm | ［186］ |  | 1 |  | ${ }^{1363}$ | 4 |  | उitel | 375 |  | कus |  | Fune |  |  |  |  |  |  |  |
| Fresm | Feese | Eluwe | Hesm | 384！ |  |  | 4 | Hitcempst |  |  |  |  | P17 |  | Enem |  | Usl｜ | ＂ | 8 |  |  |  |  |  |
| FFesm | Fesso | Clues | Hesm | 354！ |  |  | 4 |  |  |  |  | PEsabey yeremay | 73 |  | दua |  |  | 3 | 3 | （xak |  |  |  |  |
|  | Fsemo |  | Hesm | 3811 |  |  | 18 | Het（crapsig |  |  | 76 | Stey |  | SIIfemap | Fark |  | nume | \％ |  |  |  |  |  |  |
| ¢קem | ［सडw | Calmbe | Hems | उसा1 |  |  | 18 | HP（－50per |  |  |  |  | $\cdots$ |  | bum |  |  | \＃ |  | bug | $\square$ | 3 | n | $\square$ |
| Heam | मु： | EEHME | ¢аяm | 38，71］ |  |  | 17 |  |  |  | 73 | 51851 | 313 |  | Pair |  | สำ | 3 |  |  |  |  |  |  |
| स2\％ | सen | F｜ask | Exarster | उस्या | \％ 819 | ］ 1 | 718 | Hef（exmery | श习1 | 8 | 73 |  | 2］${ }^{3}$ |  |  |  |  |  |  |  | ＂ |  | n | $\square$ |
| Whatcues！ | Ewers | 0 | Eras： | उशा！ | 385 | H2\％ | 417 | He［－3pasis） |  |  | 788 | अ1\％1 | 23 |  |  |  |  |  |  |  |  |  |  |  |
| Freski | Feres | ELame | Fesmo | 3941 |  |  | 4 | HP\％Camber |  |  | 73 | Skel | 3.78 | Sibiv wab | Fat |  | Nasse |  |  |  |  |  |  |  |
| हैex | Hesm | s | A ${ }^{\text {chen }}$ | 3， 317 |  |  | 15 |  |  |  | $4{ }^{43}$ |  | 2．3： |  |  |  |  |  |  |  | n | n | B | n |
| हRemit | Freme | Hexmmy | दеп！ | उस्या |  |  | 7 |  |  |  | $\because$ | अEx | 3 | मп： | अरा |  | सヱe | \％ | y |  |  |  |  |  |
| Whatyelicy | Prasulit | Elis | Cammy | З39］ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Fresem | Fesm | ELues | Fresm | 3ाप\％！ |  |  | s |  |  |  | 530 | ster | 3.919 | Shite wer | Far | Asseprate | Nate | 3 | 8 |  |  |  |  |  |
| Frespo | Fresem | Elase | Freses | 3／64］ |  |  | 4 | HP |  |  | 539 | Stea | 3.39 | Stury wray | Fat |  | Nune | ， | 8 |  |  |  |  |  |
| सहा | Kirli | Onve | TEx | आ1871 |  | 17 | 36 | WhFe－xpay | 2311 |  | 3 | Sex | 23 |  | Fair |  | Neme | \％ | y |  |  |  |  |  |
| Kem | kem | Es | Exerety | 3119 | B22 | Cat | $4{ }^{4}$ | HPE－stay |  | 8 | 178 |  | 353 |  |  |  |  |  |  |  | 11 | $B$ | B | $B$ |
| Fresmo | Preme | Fulem | fresmo | अ119！ |  |  |  | HPT（－atpsy |  |  | 3 3 | Preaterwh Molow | \＃155 |  |  |  |  |  |  |  | $\square$ | $\square$ | ＂ | $\square$ |
| उamamasy | Salymase | Ells | Smbramex | 3 $31 / 4$ | 2 | ＋ P | 36 | HFF－3tsm］ | 20m！ | $y$ | 230 | Seal | 235 | Cumbeway | Exalent |  | Hase |  |  |  |  |  |  |  |
| Rominex | \＃판 | carlin | Miveley | 3124 | उस4 | 836 | 4 | HFI（Gesprig） | 785？ | 4 | 438 | seel | 23 | Heterleanemal | Examm |  | Nene | Y | y | guat |  |  |  |  |
| Rem： | Kem | \＃1］ | Exerser | उप47！ | 5623 | Fat | $3!$ | HP | $23!$ | \％ | $2: 38$ | siel | \％ 3 | Daimeny | Far |  | Nese | Y | 3 | （2x） | 1 |  |  |  |
| Narth Coas | （1）${ }_{\text {ath }}$ | West | Reamed | 34441 | 2en7 | 197 |  |  | 1975 | ． | 141 |  | Am |  |  |  |  |  |  |  |  | n | n |  |
| Fibsio | Fresso | Enumberio | Fressis | उ／40！ |  |  | 18 |  |  |  | 3.80 | Sixal | 3.30 | Snutiewap | Far | Arcepaba | Nembe | B |  |  |  |  |  |  |
| Evesso | Exesso |  | Fiesem | 314／4］ |  |  | 2 | HFP：－ |  |  |  |  | ！ |  | Gusa |  | Nemse | 3 | 3 |  |  |  |  |  |
| F\％eso | ¢รsec | Efanime | Fissk | 314／4］ |  |  | ${ }_{3} 3^{6}$ |  |  |  | $3 \%$ |  | \％ |  |  |  |  |  |  |  | 1 | $\square$ | 8 | 8 |
| ［1\％3m | ［1\％am | 『＂\％ | Heme | उ124］ |  |  | ${ }_{3} 3$ |  |  |  | 3 Bm | PEzamy | ${ }^{135}$ |  |  |  |  |  |  |  | $\square$ | $\square$ | $\square$ | $\square$ |
| Frext | Tresm | Esme | Freas | 3144！ |  |  | 4 |  |  |  | $3{ }^{3}$ |  | 33 | Smast | Exatem |  | Nome |  |  | Eus |  |  |  |  |
| Fesmo | Fese | stim | Preme | अपया！ |  |  | \％ |  |  |  | 3 mm |  | $\frac{123}{637}$ |  |  |  |  |  |  |  | n | ＂ | ＂ | ＂ |
| Kem |  | Hime | Eassmen | 3／44！ |  |  | ？ |  | ${ }^{1933}$ |  | ${ }^{6.3}$ | Stem | 6.59 | Emimeat | Exatem | Aeseprame | Nesse |  |  | करat |  |  |  |  |
| Fresho | Fresme | EManerlo | Freses | 3／4571 |  |  | 18 | HP（ceares |  |  | 780 |  | 3.15 | Shaple wrap | Frat |  | Nene |  |  |  |  |  |  |  |
| Resem | Trest | Evimite | Freme | 3457！ |  |  | 21 |  |  |  |  |  | IIII |  | 503 | सद्mber |  | 8 | 8 |  |  |  |  |  |
| Bantrances | Salfrimeso | Rese |  | 3¢6TI |  |  |  |  |  |  | 231 | Seel |  |  |  |  |  |  |  |  |  |  |  |  |
| Fesmo | Fresm | Faltan | Fresm | 3169］ |  |  | 8 | He［Estrsy |  |  | 4.08 | Pe 2 abrame Molay | ${ }^{185}$ |  |  |  |  |  |  |  | n | n | ＂ | $\square$ |
| Frese | ¢rsme | Hexmenk | Frane | 3／1541！ |  |  | 18 | HFPrembly |  | $y$ | 738 | इxem | 339 | Stratyas | Fsat | Aexarate | Nuse |  |  |  |  |  |  |  |
| Freme | Heam |  |  | अ1674 |  |  | ${ }^{17}$ | HF：－ 8 ［ides |  | $\geqslant$ |  | steel | 3 m | Clus | gum |  |  | 3 |  | cum |  | 8 | 8 | $\square$ |
| Erasm | ［1：3m | Elane | Feame | उ157 |  |  | 5 | HP（cratay |  | $y$ |  | steel | 2 m | Ofler | Gual |  |  | \％ |  |  | $B$ | 8 | 8 | $\square$ |
| Frests | Presm | EChise | Frese | 3：5m | उडe5 |  | T | HP（estins ） |  |  | 487 | Esel | 4 m |  |  |  |  |  |  |  |  |  |  |  |
| Rem | Kers |  | Tan | उ197！ | －320 | － | \％ | HFPestrsin |  | ＂ | 6 \％ | Pe 2496 Cramy | 4.50 |  |  |  |  |  |  |  | ＂ | y | ＂ | 8 |
| Nowh valley | Reprang | cram | Smatak | 31511 | mon | 803 | 0 | HP（\％atipa a $^{\text {a }}$ | 1963 | y | 1.90 | steal | 0.38 | Taps | Goed |  | Nene |  |  |  |  |  |  |  |
| Nuthey | \％｜\％ili | स $6 \times \mathrm{k} \mathrm{k} / \mathrm{m}$ | TBucin | 31674 | 238\％ | 3 | 3 |  | $739 \%$ | $\square$ | 1763 |  | $\square 3$ |  |  |  |  |  |  |  | $\square$ | ＂ | 0 | $\square$ |
| Nuth Casas | Ukiab | ElemLum | Rencrad | 34774 | 8497 | 107 | 5 | HPf ceeramic | 4975 |  | 3.00 |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  | $n$ |  | Prempromy |  |  |  |  |  |  |  |  |  | \％ | \＃ |  |
| Numbeas | Uxats | Whas | valey | anm | 2007 | 48 | 18 | HFPCEtama | 30\％ | 8 | 3.08 | Pezabromy | 195 |  |  |  |  |  |  |  | ： | $\square$ | 8 |  |
| ［Esmo | Fresme |  | ¢\％am | ［｜ITI！ |  |  | 7 |  |  | $y$ |  | उंem | 317 | Eller | Gua |  |  | n |  | छरख | 8 | $\square$ | B | $\square$ |
| Presm | Presme | Emaem | Freme | ［317\％］ |  |  | 1 | HF［（xatise |  |  | 537 | Stel | 23 | Smase | Gomer |  | Name |  |  |  |  |  |  |  |
| 불ํ | Fesm |  |  | 317\％！ |  |  | \％ 8 | HFteresm |  |  | 639 |  | 2.31 |  |  |  |  |  |  |  | ＂ | n | 3 | \％ |
| Nurlicas | Eluk： | Pemermatis | Euxki | उप\％！ | －345 | \％ | 12 | HPTCOmsis | 4368 | Y | $4{ }^{43}$ | अहel | 43 | Smamis | Eratery |  | Neme | 8 | y |  |  |  |  |  |
| Natcmes | Eus\％ | Pemsymata | Eraks | उ／7\％11 | ［4］ | 185 | 13 |  | 1046 | y |  | Stel | $\mathrm{CH}^{3}$ | sumas | Exatelit |  | mose | 8 | \％ |  |  |  |  |  |
| Herthener | Eluers | Pemsymata | Eurake | ［17］！ | 449 | 185 | 12 | ［4］（c－bitatis） | 1546 | $\nu$ | 483 | Seea | 4317 | Smast： | Exalent |  | None | n | y |  |  |  |  |  |
| Fresm | Fexey | Eastion | Preme | 3／39！ | 3885 |  | ？ | Hp，－npasis） | （1036 | \％ | 630 | Seel | 197 | horaprithaplay | B004 |  | Nome | y | $y$ | Gund |  |  |  |  |
| $\frac{\text { Nuth Coast }}{\text { Nught mat }}$ | Euran | Fansyuatia | $\frac{\text { Eurera }}{\text { Latkerir }}$ | 3／18：11 | $\frac{818}{\frac{8185}{2}}$ | $\mathrm{CPS}^{106}$ | $\frac{12}{27}$ | HP | 4945 | $y$ | ${ }^{4.301}$ |  | $\frac{4.010}{100}$ |  |  |  |  |  |  |  |  |  |  |  |
| Maters | Fresm | Esimpsen | Fresko | 3x： |  |  | 20 | AFPre＝ |  |  | 3.10 |  | 0.25 |  |  |  |  |  |  |  | ＂ | n | n | n |
| kem | kem | Fisain | Eakersimy | 3／21／7 | －3129 | （301 | 3 |  | T356 | n | 3 min |  | \％isi |  |  |  |  |  |  |  | ＂ | n | n |  |
| ¢em\％ | Peses | L | Prese | उला！ |  |  | 53 |  |  |  | 33 | sieal | 133 | Dameway | －am |  | Raspe |  |  |  |  |  |  |  |
| Fesso | Fresme | L | Freste | ［3219］ |  |  | 83 | Hp（empra） |  |  | 3 m | Steer | 400 | Bandewap | Gned |  | Name |  |  |  |  |  |  |  |
| Fegro | Fesme |  | Fresmo |  |  |  |  |  |  |  |  | Steel | 3.07 |  | Gova |  | Nabse | $\square$ |  | Gound |  |  |  | $\square$ |


|  | Wis |  |  | $=$ |  | $=5=$ |  | $\sqrt{=1}$ | $=$ |  | $-$ |  | $=$ |  |  |  |  |  |  | $=5$ | ／$=$ | ＝ | ＝ |  |  |  |  |  |  |  |  |  |  |  | － |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \frac{1}{4} \\ & \frac{1}{4} \\ & 0_{1} \end{aligned}$ |  |  | $=$ | $=$ | $=-$ |  | $=2$ | $=$ | $=$ | $=0$ |  | $=$ |  | $1=1$ | $=$ | $=$ |  |  | $=$ | $=$ | $=$ | $=$ |  |  | $=$ |  |  |  |  |  |  |  |  | $=$ | $=$ |  |
|  | $\frac{3}{4}$ |  |  | $=$ | $=$ | $=-$ |  | $=-$ | $\cdots$ | $=$ | $=-2$ |  | $=$ |  | $=$ | $=$ | $=$ |  | $==$ | $==$ | $=$ | $=$ | $=$ |  |  | $=$ |  |  |  |  |  |  |  |  | $=$ |  | $=1$ |
|  | \％\％ |  |  | ＝ | － | ：$c=$ |  | $=-$ | ＝ | $=$ | c |  | $=$ |  | $=$ | $=1$ | $=$ |  | c－ | －$=$ | $=$ | $=$ | $=$ |  |  | － |  | －$=$ |  |  |  |  |  |  | $=$ |  |  |
|  | $\begin{aligned} & 4 . \\ & 28 \\ & 2 \end{aligned}$ | 19 |  | 8 | \％ | 5 | 碞 | 8 |  |  |  |  |  | \％ |  |  |  |  |  |  | 8 |  |  |  | 突 | 5 |  |  | 8 |  |  | 曷 |  | 5 |  |  | 5 |
|  | $48$ | 17 | $\cdots$ |  | $\cdots$ | 3. |  |  |  |  |  |  |  |  |  |  | $=$ |  |  |  |  |  |  |  |  | $=$ |  |  |  |  |  | $\cdots$ |  | － |  |  | － |
|  | $\frac{48}{8} \frac{1}{8}$ | 40 | $\cdots=$ |  | $\cdots$ | $\cdots$ | $=$ | $=$ |  | $=$ |  |  | $=-$ |  | $=$ |  | $=$ | $=$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\cdots$ |
|  | ${ }_{3}^{4}$ | $\operatorname{la}_{2}^{2} 2^{2}$ | $5$ |  | \％${ }_{5}^{2}$ | ${ }^{2}$ | E |  | $\mid$ | 1 |  | \％ | \％ |  |  |  |  | \％ | 2 |  |  |  |  | $20$ |  | 5 |  |  | $y_{0}^{2}$ | $5$ |  |  |  | 2 |  |  | 5 |
|  |  | 5 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | \％ |
|  | $\frac{4}{6}$ | $\operatorname{cic}_{5}^{2}$ | $58$ | 4 | 4 | ${ }_{5}^{2}$ | \％ |  | E | \％ |  | \％ |  |  | ${ }^{6}$ |  |  | 4 | $8$ |  |  |  |  | 6 |  | ${ }^{\circ}$ |  |  |  | 戠䢒 |  |  | 匿 | L |  |  | 5 |
| $\begin{array}{r} 5 \\ 8 \\ 8 \\ 2 \\ 2 \\ 3 \end{array}$ |  |  |  |  |  | \％ |  |  |  | $3$ |  | \％ |  |  |  |  |  |  |  |  | $\stackrel{y}{6}$ | 훈 |  |  |  | \％ |  |  |  |  |  |  |  |  |  |  |  |
|  | 5 | ¢ $\square_{5}$ | 8 c | E 5 | 56 |  |  |  | － |  | 5 | E |  |  |  | － |  | $45$ | \％ | 5 | － |  | 5 |  |  |  | $\cdots$ |  |  | 5 | S | E |  |  | 5 |  |  |
|  | $\frac{4}{4}$ |  |  |  |  |  |  | $5$ |  |  | $\frac{5}{5}$ |  |  |  |  |  |  |  |  |  | $8$ |  |  |  |  |  |  |  |  |  |  |  |  | － |  |  | （1） |
| $\begin{gathered} \frac{1}{2} \frac{9}{8} \\ \frac{3}{9} 9 \\ \frac{1}{9} \end{gathered}$ |  | \％ 58 | ¢ $\%$ ¢ | 65 | － 5 | 588 | 5 | 8 | Es | $85$ | 5 | 8 |  |  | ¢8 | 85 | 58 | 88 | \％ | － | －5 | ¢ | 5 | － | ＝ | 5 | ${ }_{4}{ }_{5}$ | － | 5 | ¢ 5 |  | 8 | 5 |  | 8. | 55 | 85 |
| $\frac{5}{4}$ |  | 0 | 0 |  |  | $\cdots$ | \％ | $\cdots$ |  |  |  |  |  |  |  | $=$ | $=0$ | 1 |  |  |  | $=$ |  |  |  |  |  | $=$ |  |  |  | $\cdots$ |  |  |  | $\cdots$ |  |
|  | $\frac{4}{4}$ | \％ | 4 |  |  | \％ |  |  |  |  | 4 |  |  |  |  |  | ${ }^{2}=$ | － |  |  |  | $\underline{\square}$ |  |  |  |  |  | 0 |  |  |  | 5 |  |  |  | 8 |  |
|  | $\frac{54}{4}$ |  |  |  | $\frac{3}{6} \frac{3}{2}$ |  |  | $\frac{2}{2}$ |  |  | $\frac{5}{82}$ |  |  |  |  |  |  |  |  |  | $5$ |  | $5$ | $5$ |  |  | $\frac{5}{96}$ |  |  | $\frac{6}{6}$ |  |  |  |  | $\frac{6}{6}$ |  |  |
|  | $\stackrel{8}{4}$ | $12=$ |  | 6 | $5=$ |  | － | co |  |  | －$=$ | \％ | $\pm$ | － | $\pm$ | 5 | \％ | 5 | － |  | － |  |  | － |  | －$\%$ |  | $1-$ | ， | $\cdots$ |  |  |  | 5 | $\cdots$ | － | $\pm$ |
|  | $\frac{4}{4}$ |  | 5 |  |  | 8 |  |  |  |  |  |  |  | 5 |  | 8 | E |  |  |  |  |  |  |  |  |  |  | 8 |  |  |  | 4 |  |  |  | $\pm$ |  |
|  | \％ |  | 5 |  |  | 5 |  |  |  |  | $11$ |  |  |  |  | 5 | － |  |  |  |  |  |  |  |  |  |  | 5 |  |  |  | 8 |  |  |  | 5 |  |
|  | $\frac{4}{4}$ | $\sqrt{5}=$ |  |  |  |  | $5$ |  |  |  |  |  |  |  | $55$ |  |  |  |  | 5 | $5$ | 5 | 5 | 5 |  |  | 6 | $5$ | $E=$ | ＝ |  | 5 | 5 | 5 |  |  | 5 |
|  | $\frac{18}{9}$ |  |  |  |  |  |  |  | 遃 |  |  |  |  |  |  |  |  |  | $\mathfrak{c}$ |  | ${ }^{2} E_{E}^{2}$ |  |  | $8^{2}$ |  |  |  |  |  | $5$ | 竞 | ${ }_{6}$ | $\sqrt{6}$ |  |  |  | 4 |
|  | $\begin{aligned} & 4 \\ & 4 \\ & 4 \\ & 4 \\ & \vdots \\ & \vdots \\ & 8 \\ & 8 \end{aligned}$ |  |  |  |  |  |  |  |  | $5$ |  |  |  | $8^{2}$ |  | ） |  |  | 5 | $\pm$ | \％ | － $5=$ | \％ | \％ |  |  | $)^{5}$ | ， |  |  |  | ${ }^{5}$ |  | － |  |  |  |
|  | $\stackrel{4}{4}$ | $1{ }^{2}$ | $\cos ^{2}$ |  |  |  |  |  |  | ${ }^{2}$ | $5^{5}$ |  |  | 5 |  |  | $\frac{1}{5} \frac{0}{5}$ |  | 3 |  |  | 喛気 |  | ${ }^{6}$ | ${ }^{2}$ |  |  |  |  |  |  |  |  |  |  |  | $0^{2}$ |
|  | $\stackrel{8}{8}$ |  |  |  |  |  |  |  |  |  |  | $5^{2}$ |  |  |  |  | 5 |  |  |  | $5$ | $5^{2}$ | $\left\|\begin{array}{\|c\|} 0 \\ 0 \end{array}\right\|$ | $y^{2}$ |  |  |  |  |  |  |  |  | $g_{0}$ | $58$ |  |  | 5 |


pachic gas and electric Company
GAS INSPECTION RESULTS: January 01 2011-


# PACIFIC GAS AND EIECTRIC COMPANY APPENDIXA 

GAS DISTRIBUTION FIVE-YEAR CAPITAL FORECAST, BY PROJECT, AS PROVIDED IN THE 2011 GRC

APPENDIXA
PACIFICGASANDELECTRICCOMPANY
GASDISTRIBUTOH
GYEAR CAPTAL FOREGAST, BYPROUECT. AS PROVIDED IN THE 2011 GRC
TABLE 19.3 (2011 GRC, EXHBIT (PO\&E.3), WORKPAPERS SUPPORTNO CHAPTER 19) NOLINAL DOLLARS

$\frac{2}{2}$ (1) PGEE SAP wsis ware not sapatad by hese caleghes for MWC 47 unil 2000


## PACIFIC GAS AND ELECTRIC COMPANY

## APPENDIX B

GRC METHODOLOGY AND IMPUTED REGULATORY VALUES

## APPENDIXB

## PACIFIC GAS AND ELECTRIC COMPANY

 GRG METHODOLOGY AND IMPUTED REGULATORY VALUES
## Capital Expenditures


Any reductions that were not specifcally identifed were applied proportionately to PG\&E's request across all MWCs not otherwise called-out in the Settement Agreement
 funding to maintain the 2011 spending profie, the 2011 capital expenditure values were further adjusted to yield an evenly dis tributed spending profile over the 2011 - 2013 period.

Note: capltal imputed values have been adjusted to include capitalized pension $A 8 Q$ costs at the adopted 2011 level.

2011 GRC CAPITAL EYPENDITURES IMPUTED REGULATORY VALUE -GAS DISTRIBUTION PIPELINE SAFETY
THOUSANDS OF 2011 SAP DOLLARS



[^0]:    2011 GRC Forecast based on 2011 GRC Testimony Exhibit 3 Chapter 19.
    ${ }^{2} 2011$ Full Year Forecast based on mid-year forecast
    ${ }^{3} 2011$ Actual Units are based on projeds with completed documentation
    ${ }^{4}$ MWC 50 Miscellaneous includes various actual costs such as Electronic Pressure Monitoring and CP Remote Monitor
    ${ }^{5}$ See narrative discussion on this item.

