Final Environmental Impact Report for San Diego 1991 Regional Air Quality Strategy

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CONTENTS

| 1.0 | INT | ODUCTION | -1 |
|-----|-----|-------------------------------------------------------------------------|----|
| | 1.1 | Purpose and Need 1- | ·2 |
| | 1.2 | Background and History 1. | -2 |
| | 1.3 | Legal Authority | 4 |
| | 1.4 | Lead and Responsible Agencies 1- | 4 |
| | | | |
| 2.0 | SUN | MARY | 1 |
| | 2.1 | Project Description 2- | 1 |
| | | 2.1.1 Background | 1 |
| | | 2.1.2 Project Characteristics | 2 |
| | 2.2 | Significant Environmental Impacts and Mitigation Measures | 6 |
| | 2.3 | Insignificant Environmental Impacts 2- | 6 |
| | 2.4 | Alternatives to the Project 2- | 6 |
| | | 2.4.1 No-Project Alternative 2- | 6 |
| | | 2.4.2 Less-Stringent Aiternative 2-1 | 2 |
| | 2.5 | Cumulative Impacts | 3 |
| | | 2.5.1 Air Quality | 3 |
| | | 2.5.2 Water Resources 2-14 | 4 |
| | | 2.5.3 Energy and Utilities 2-14 | 4 |
| | | 2.5.4 Hazardous Waste 2-1 | 5 |
| | 2.6 | Significant Irreversible Impacts 2-1 | 5 |
| | 2.7 | Relationship Between Local Short-Term Uses of Man's Environment and the | |
| | | Maintenance of Long-Term Productivity 2-1 | 5 |
| | 2.8 | Growth-Inducing Impacts 2-1 | 5 |
| | | | |
| 3.0 | PRO | IECT DESCRIPTION | 1 |
| | 3.1 | Project Proponent | 1 |
| | 3.2 | Project Location | 1 |
| | 3.3 | Project Background | 1 |
| | 3.4 | Project Objectives | 1 |
| | 3.5 | Project Characteristics | 5 |
| | 3.6 | Stationary Source Control Measures 3-11 | J |
| | | 3.6.1 Industriai ROG Emission Controls | l |
| | | 3.6.2 Industrial NO _x Control Measures | 2 |
| | | 3.6.3 Areawide ROG Control Measures 3-25 | 5 |
| | | | |

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|------|
|------|

CONTENTS (Cont'd)

| | | 3.6.4 Areawide NO _x Control Measures 3-27 |
|-----|----------|--------------------------------------------------------|
| | | 3.6.5 Energy Conservation Measures 3-28 |
| | 3.7 | Transportation Control Measures 3-29 |
| | 3.8 | Indirect Source Review |
| | 3.9 | Clean Fuels |
| | 3.10 | Project Alternatives |
| 4.0 | ENV | RONMENTAL SETTING |
| 7.0 | <u> </u> | Farth |
| | 7.1 | 4 1 1 . Geographical Setting |
| | | |
| | 4.0 | 4.1.2 Seisific Activity |
| | 4.2 | 4.0.1 Meteorology/Climete |
| | | 4.2.1 Meleorology/Climate |
| | | 4.2.2 Air Quality Standards |
| | | 4.2.3 Baseline Sources and Conditions |
| | | 4.2.3.1 Ozone |
| | | 4.2.3.2 Particulate Matter (PM ₁₀) |
| | | 4.2.3.3 Oxides of Nitrogen (NO _x) 4-12 |
| | | 4.2.3.4 Carbon Monoxide 4-12 |
| | | 4.2.3.5 Sulfur Dioxide 4-12 |
| | | 4.2.3.6 Hydrocarbons/Reactive Organic Gases (ROG) 4-12 |
| | | 4.2.4 Transport From The South Coast Air Basin 4-13 |
| | 4.3 | Water Resources 4-13 |
| | | 4.3.1 Groundwater/Surface Water 4-13 |
| | | 4.3.2 Imported Water 4-14 |
| | 4.4 | Biological Resources 4-15 |
| | 4.5 | Noise 4-16 |
| | 4.6 | Light and Glare |
| | 4.7 | Land Use |
| | 4.8 | Natural Resources |
| | 4.9 | Population and Housing 4-21 |
| | 4.10 | Employment |
| | 4.11 | Transportation/Circulation |
| | | 4.11.1 Roads |
| | | 4.11.2 Bicycle Facilities |
| | | · · · · · · · · · · · · · · · · · · · |



CONTENTS (Cont'd)

| 4.11.3 Transit Facilities 4.11.4 Aviation Facilities 4.12 Public Services 4.12.1 Law Enforcement 4.12.2 Fire Protection 4.12.3 Hazardous Materials Incident Response 4.12.4 Emergency Medical Services 4.12.5 Health Care 4.12.6 Schools 4.12.7 Libraries 4.12.8 Sewage Treatment Facilities 4.12.9 Solid Waste 4.13 Energy/Utilities 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.2 Mitigation Measures | · · · · · · · · · · · · · · · · · · · |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|
| 4.11.4 Aviation Facilities 4.12 Public Services . 4.12.1 Law Enforcement 4.12.2 Fire Protection 4.12.3 Hazardous Materials Incident Response . 4.12.4 Emergency Medical Services 4.12.5 Health Care . 4.12.6 Schools . 4.12.7 Libraries . 4.12.8 Sewage Treatment Facilities 4.12.9 Solid Waste . 4.13 Energy/Utilities . 4.13.1 Electrical Power . 4.13.2 Natural Gas . 4.14 Aesthetics . 4.15 Recreation . 4.16 Paleontological and Cultural Sites . 4.17 Risk of Upset . 4.18 Public Health . 4.19 Hazardous Waste . 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES . 5.1 Earth . 5.1.1 Impacts . 5.1.2 Mitigation Measures . | |
| 4.12 Public Services | |
| 4.12.1 Law Enforcement 4.12.2 Fire Protection 4.12.3 Hazardous Materials Incident Response 4.12.4 Emergency Medical Services 4.12.5 Health Care 4.12.6 Schools 4.12.7 Libraries 4.12.8 Sewage Treatment Facilities 4.12.9 Solid Waste 4.13 Energy/Utilities 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | · · · · · · · · · · · · 4-25 · · · · · · · · · · · 4-27 · · · · · · · · · · · 4-27 · · · · · · · · · · 4-27 |
| 4.12.2 Fire Protection 4.12.3 Hazardous Materials Incident Response 4.12.4 Emergency Medical Services 4.12.5 Health Care 4.12.6 Schools 4.12.7 Libraries 4.12.8 Sewage Treatment Facilities 4.12.9 Solid Waste 4.13 Energy/Utilities 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | · · · · · · · · · · · · 4-27 · · · · · · · · · · · · 4-27 · · · · · · · · · · · 4-27 |
| 4.12.3 Hazardous Materials Incident Response | · · · · · · · · · · · · 4-27 · · · · · · · · · · · · · 4-27 |
| 4.12.4 Emergency Medical Services | 4-27 |
| 4.12.5 Health Care | |
| 4.12.6 Schools | 4-28 |
| 4.12.7 Libraries | |
| 4.12.8 Sewage Treatment Facilities 4.12.9 Solid Waste 4.13 Energy/Utilities 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.1 Earth 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4-29 |
| 4.12.9 Solid Waste 4.13 Energy/Utilities 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.1 Earth 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4-29 |
| 4.13 Energy/Utilities | 4-29 |
| 4.13.1 Electrical Power 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.1 Earth 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4-31 |
| 4.13.2 Natural Gas 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4-31 |
| 4.13.3 Telephone Service 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4-33 |
| 4.14 Aesthetics 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4.33 |
| 4.15 Recreation 4.16 Paleontological and Cultural Sites 4.17 Risk of Upset 4.18 Public Health 4.19 Hazardous Waste 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | 4.34 |
| 4.16 Paleontological and Cultural Sites | 4-34 |
| 4.17 Risk of Upset | 4-35 |
| 4.18 Public Health | 4-36 |
| 4.19 Hazardous Waste | 4.37 |
| 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | A-37 |
| 5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES 5.1 Earth 5.1.1 Impacts 5.1.2 Mitigation Measures | |
| 5.1 Earth | 5 1 |
| 5.1.1 Impacts | 5 1 E 1 |
| 5.1.2 Mitigation Measures | |
| | 5 1 E 1 |
| 5.2 Air Quality | |
| 5.2.1 Impacts | · · · · · · · · · · · · · · · · · · · |
| 5.2.1.1 Localized Ozone Effects | ••••••••••••••••••••••••••••••••••••••• |
| 5.2.1.2 Ammonia Slip | ···· ··· ··· ··· ··· · ··· · · · · · · |
| 5.2.1.3 Accidental Release of Ammonia | |
| 5.2.1.4 Accidental Release of Vanor Recovery Media | •••••5-3 |
| 5.2.1.5 Substitution to Low-ROG Substances | F A |
| 5.2.2 Mitigation Measures | 5-3 |
| | · · · · · · · · · 5-3 |

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CONTENTS (Cont'd)

| | | 5.2.2.1 | Localized Ozone Effects |
|-----|---------|-----------------------|--------------------------------------------------|
| | | 5.2.2.2 | Ammonia Slip |
| | | 5223 | Accidental Belease of Ammonia |
| | | 5224 | Accidental Belease of Vapor Bocovory Modio |
| | | 5225 | Substitution to Low POG Substances |
| 53 | Water | Basource | |
| 0.0 | 521 | Impacte | · · · · · · · · · · · · · · · · · · · |
| | 5.5.1 | 5311 | Accidental Poloses of Ammonia |
| | | 5210 | Accidental Release of Vener Deserver Multis |
| | | 5312 | Substitution to Low DOO Out standard |
| | 533 | J.J. 1.J Mitigatia | P Moseures |
| | 5.5.2 | F 2 2 1 | Accidentel Delegas of America |
| | | 5.3.2.1 | Accidental Release of Ammonia |
| | | 5.3.2.2 | Accidential Release of Vapor Recovery Media |
| 5 4 | Piologi | 5.3.2.3 | Substitution to Low-HOG Substances |
| 5.4 | Diologi | cal Resou | rces |
| | 5.4.1 | Impacts | 5-7 |
| | | 5.4.1.1 | Effect of Construction on Biological Habitat 5-7 |
| | | 5.4.1.2 | Accidental Release of a Catalyst Used in SCR 5-8 |
| | | 5.4.1.3 | Ammonia Slip |
| | | 5.4.1.4 | Accidental Release of Ammonia 5-8 |
| | | 5.4.1.5 | Accidental Release of Vapor Recovery Media 5-8 |
| | | 5.4.1.6 | Substitution to Low-ROG Substances |
| | 5.4.2 | Mitigatio | n Measures |
| | | 5.4.2.1 | Effect of Construction on Biological Habitat 5-9 |
| | | 5.4.2.2 | Accidental Release of a Catalyst Used in SCR 5-9 |
| | | 5.4.2.3 | Ammonia Slip 5-9 |
| | | 5.4.2.4 | Accidental Release of Ammonia 5-10 |
| | | 5.4.2.5 | Accidental Release of Vapor Recovery Media 5-10 |
| | | 5.4.2.6 | Substitution to Low-ROG Substances 5-10 |
| 5.5 | Noise . | • • • • • • • • | |
| | 5.5.1 | Impacts | |
| | | 5.5.1.1 | Reduced Congestion Could Cause Increased Vehicle |
| | | | Speeds 5-10 |
| | | 5.5.1.2 | Emission Control Equipment 5-10 |
| | 5.5.2 | Mitigation | n Measures |
| | | | |



CONTENTS

(Cont'd)

| | | 5.5.2.1 | Reduced Congestion Could Cause Increased Vehicle | |
|------|----------------|---------------------|---------------------------------------------------------|--------------|
| | | | Speeds | 5-11 |
| | | 5.5.2.2 | Emission Control Equipment | 5-11 |
| 5.6 | Light ar | nd Glare . | | 5-11 |
| | 5. 6 .1 | Impacts | | 5-11 |
| | 5.6.2 | Mitigation | Measures | 5-11 |
| 5.7 | Land U | se | | 5-11 |
| | 5.7.1 | Impacts | | 5-11 |
| | 5.7.2 | Mitigation | Measures | 5-12 |
| 5.8 | Natural | Resources | 8 | 5-12 |
| | 5.8.1 | impacts | | 5-12 |
| | 5.8.2 | Mitigation | Measures | 5-12 |
| 5.9 | Populat | ion/Housi | ng | 5-12 |
| | 5.9.1 | impacts . | | 5-12 |
| | 5.9.2 | Mitigation | Measures | 5-13 |
| 5.10 | Employ | ment | | 5-13 |
| | 5.10.1 | impacts . | | 5-13 |
| | 5.10.2 | Mitigation | Measures | 5-13 |
| 5.11 | Transpo | ortation/Ci | | 5-13 |
| | 5.11.1 | impacts . | | 5-13 |
| | 5.11.2 | Mitigation | Measures | 5-13 |
| 5.12 | Public S | Services | | 5-14 |
| | 5.12.1 | impacts . | • • • • • • • • • • • • • • • • • • • • | 5-14 |
| | | 5.12.1.1 | Effects on Wastewater Treatment Facilities | 5-14 |
| | | 5.12.1.2 | Accidental Release of Ammonia | 5-14 |
| | 5.12.2 | Mitigation | Measures | 5-15 |
| | | 5.12.2.1 | Effects on Wastewater Treatment Facilities | 5-15 |
| | | 5.12.2.2 | Accidental Release of Ammonia | 5-15 |
| 5.13 | Energy/ | Utilities | | 5 -15 |
| | 5.13.1 | impacts . | | 5-15 |
| | | 5.13.1.1 | Energy Requirements of Emission Controls | 5-15 |
| | | 5.13.1.2 | Energy Requirements of SCR | 5-16 |
| | | 5.1 3 .1.3 i | nduced Residential Switching from Gas to Electric Water | |
| | | I | | 5-16 |
| | 5.13.2 | Mitigation | Measures | 5-17 |
| | | | | |

All the state of t

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Burning and the second second

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1.1

111 18

CONTENTS (Cont'd)

| | | 5.13.2.1 | Energy Requirements of Emission Controls | 5-17 |
|------|---------|------------|----------------------------------------------------------|------|
| | | 5.13.2.2 | Energy Requirements of SCR | 5-17 |
| | | 5.13.2.3 | Induced Residential Switching from Gas to Electric Water | |
| | | | Heating | 5-17 |
| 5.14 | Aesthet | ics | | 5-18 |
| | 5.14.1 | Impacts: | Emission Control Equipment | 5-18 |
| | 5.14.2 | Mitigation | Measures: Emission Control Equipment | 5-18 |
| 5.15 | Recreat | tion | ••••••••••••••••••••••••••••••••••••••• | 5-18 |
| | 5.15.1 | Impacts: | Accidental Release of Ammonia | 5-18 |
| | 5.15.2 | Mitigation | Measures: Accidental Release of Ammonia | 5-19 |
| 5.16 | Cultura | Resource | 98 | 5-19 |
| | 5.16.1 | Impacts | ••••••••••••••••••••••••••••••••••••••• | 5-19 |
| | 5.16.2 | Mitigation | Measures | 5-19 |
| 5.17 | Risk of | Upset | • • • • • • • • • • • • • • • • • • • • | 5-19 |
| | 5.17.1 | Impacts: | Accidental Release of Ammonia | 5-19 |
| | 5.17.2 | Mitigation | Measures: Accidental Release of Ammonia | 5-21 |
| 5.18 | Human | Health . | •••••••••••••••••• | 5-21 |
| | 5.18.1 | Impacts | ••••••••••••••••••••••••••••••••••••••• | 5-21 |
| | • | 5.18.1.1 | Accidental Release of a Catalyst Used in SCR | 5-21 |
| | | 5.18.1.2 | Ammonia Slip | 5-22 |
| | | 5.18.1.3 | Accidental Release of Ammonia | 5-23 |
| | | 5.18.1.4 | Accidental Release of Vapor Recovery Media | 5-25 |
| | | 5.18.1.5 | Substitution to Low-ROG Substances | 5-25 |
| | | 5.18.1.6 | Reformulation of Barbecue Charcoal Lighter Fluid | 5-25 |
| | 5.18.2 | Mitigation | Measures | 5-26 |
| | | 5.18.2.1 | Accidental Release of a Catalyst Used in SCR | 5-26 |
| | | 5.18.2.2 | Ammonia Slip | 5-26 |
| | | 5.18.2.3 | Accidental Release of Ammonia | 5-26 |
| | | 5.18.2.4 | Accidental Release of Vapor Recovery Media | 5-26 |
| | | 5.18.2.5 | Substitution to Low-ROG Substances | 5-26 |
| | | 5.18.2.6 | Reformulation of Barbecue Charcoal Lighter Fluid | 5-26 |
| 5.19 | Hazardo | ous Waste |) | 5-27 |
| | 5.19.1 | Impacts | ••••••••••••••••••••••••••••••••••••••• | 5-27 |
| | | 5.19.1.1 | Catalyst Used in SCR | 5-27 |
| | | | | |



CONTENTS

(Cont'd)

| | | | 5.19.1.2 | Additional Hazardous Wastes Generated From Emission |
|------|-----|---------------|-----------------|-----------------------------------------------------|
| | | | | Controis |
| | | 5.19.2 | Mitigatior | n Measures |
| | | | 5.19.2.1 | Catalyst Used in SCR 5-27 |
| | | | 5.19.2.2 | Additional Hazardous Wastes Generated From Emission |
| | | | | Controls |
| 6.0 | ALT | ERNATI | VES TO T | HE PROJECT |
| | 6.1 | No-Pro | ject Alterna | ative |
| | | 6.1.1 | Air Qualit | y |
| | | 6.1.2 | Water Re | sources |
| | | 6.1.3 | Biologica | l Resources |
| | | 6.1.4 | Risk of U | pset |
| | | 6.1.5 | Human H | lealth |
| | | 6.1 .6 | Hazardou | s Waste |
| | 6.2 | Less St | ringent Ait | ernative |
| | | 6.2.1 | Alr Quality | y/Public Health 6-4 |
| | | 6.2.2 | Water Rea | sources |
| 7.0 | CUI | IULATIV | E IMPACI | rs |
| | 7.1 | Air Qua | lity | 7.1 |
| | 7.2 | Water . | • • • • • • • • | 7.2 |
| | 7.3 | Energy | and Utilitie | PS |
| | 7.4 | Hazardo | ous Waste | 7-3 |
| | | | | |
| 8.0 | SIG | NIFICAN | T IRREVE | RSIBLE IMPACTS |
| 9.0 | REL | ATIONSI | HIP BETW | |
| | MEN | IT AND 1 | | |
| | | | | |
| 10.0 | GR | OWTH-II | NDUCING | IMPACTS 10-1 |
| 11.0 | RE | FERENC | ES | |
| | | | | |
| 12.0 | | DENDUN | - | |
| | | DENDUR | | |

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LIST OF TABLES

| 2.1-1 | Control Measures Proposed for Adoption and Implementation | 2-3 |
|---------------------|------------------------------------------------------------------------|------|
| 2.2-1 | Summary of Adverse Impacts and Mitigation Measures | 2-7 |
| 3.5-1 | 1991 RAQS Stationary Source Control Measures to Reduce Reactive | |
| | Organic Gas Emissions, Industrial Controls | 3-7 |
| 3.5-2 | 1991 RAQS Stationary Source Control Measures to Reduce Oxides of | • |
| | Nitrogen Emissions, Industrial Controls | 3-8 |
| 3.5-3 | 1991 RAQS Stationary Source Control Measures to Reduce Reactive | |
| | Organic Gas Emissions, Areawide Controls | 3-9 |
| 3.5-4 | 1991 RAQS Stationary Source Control Measures to Reduce Oxides of | |
| | Nitrogen Emissions, Areawide Controls | 3-10 |
| 3.5-5 | 1992 RAQS Stationary Source Control Measures to Reduce Oxides of | |
| | Nitrogen Emissions, Energy Conservation Controls | 3-10 |
| 3.5-6 | 1991 RAQS Transportation Control Measures to Reduce Emissions of | |
| | Carbon Monoxide, Oxides of Nitrogen, and Reactive Organic Compounds . | 3-12 |
| 3.5-7 | Control Measures and Their Responses | 3-13 |
| 4.2-1 | California and Federal Ambient Air Quality Standards | 4-6 |
| 4.2-2 | Ozone, Number of Days Exceeding Federal and State Standards, | |
| | San Diego County, 1985-1989 | 4-8 |
| 4.2-3 | Particulate Matter (PM10), San Diego County, 1985-1989 | 4-9 |
| 4.2-4 | Nitrogen Dioxide, Number of Days and Hours Exceeding State Standard, | |
| | San Diego County, 1985-1989 | 4-10 |
| 4.2-5 | Carbon Monoxide, Number of Days Exceeding Federal and State | |
| | Standards, San Diego County, 1985-1989 | 4-11 |
| 4.4-1 | Habitat Acreage in San Diego County | 4-16 |
| 4.7-1 | Percentage of Acreage by Land Use Category (for parcels of 1/2 acre or | |
| _ | more), San Diego County | 4-18 |
| 4.8-1 | Conservation Element - Minerals | 4-20 |
| 4 . 9-1 | Household Growth, San Diego County, 1980-2000 | 4-22 |
| 4.11-1 | San Diego County Transit Service, 89-90 Fiscal Year | 4-26 |
| 4.13-1 | SDG&E Fossil Steam Units, Net kW Capability | 4-32 |
| 4.16-1 | Archaeological Periods | 4-36 |
| 4.1 9- 1 | Existing and Future Class I Landfill Capacity in California | 4-38 |

viii

LIST OF FIGURES

| 3.2-1 | San Diego Air Basin | 3-2 |
|-------|--------------------------|-----|
| 3.4-1 | Strategy Emission Trends | 3-6 |
| 4.1-1 | San Diego County | 4-2 |

LIST OF APPENDICES

| Α | NOTICE OF PREPARATION AND INITIAL STUDY |
|---|---------------------------------------------------------------|
| В | RESPONSES TO NOTICE OF PREPARATION AND INITIAL STUDY |
| С | EIR MAILING LIST |
| D | TRANSCRIPT OF PUBLIC MEETING AND RESPONSES TO PUBLIC COMMENTS |
| Ε | COMMENTS AND RESPONSES TO COMMENTS TO DRAFT EIR |

Addendum

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1.0 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the proposed San Diego 1991 Regional Air Quality Strategy (RAQS). As such, this is a program EIR prepared to assess the impacts that result from implementing the strategies contained in the RAQS. The RAQS was developed by the San Diego County Air Pollution Control District (APCD or District). The RAQS is fully documented in the District's report *San Diego 1991 Regional Air Quality Strategy*, dated July 1991.

Section 1 presents the background for this EIR. Section 2 is a summary of the conclusions documented in the remainder of the report. Section 3 contains a detailed project description, and Section 4 presents the environmental setting for this EIR. Environmental impacts and mitigation measures are contained in Section 5, while environmental consequences of the alternatives to the project are presented in Section 6. Sections 7 discusses cumulative impacts. Significant irreversible impacts are discussed in Section 8. Section 9 discusses the relationship between short-term uses and long-term productivity. Finally, Section 10 discusses growth-inducing impacts.

This document is the Final Environmental Impact Report (FEIR) for the San Diego 1991 RAQS. On May 23, 1991, a Notice of Preparation (NOP) and Initial Study (IS) were distributed to appropriate agencies and interested parties. Comments on the scope of the analysis in the EIR were accepted until the close of the comment period (June 23, 1991). The NOP and comments to the NOP and IS are contained in Appendix A, and responses to both are contained in Appendix B. Appendix C contains the EIR mailing list. On August 1, 1991, a Draft EIR was issued with an ensuing 45-day comment period which closed on September 16, 1991. Public input was also solicited at a public meeting, held on September 12, 1991. Appendix D contains a transcript of this meeting and responses to public comments at their meeting. Since then, the transportation measures in the Draft EIR were revised by the San Diego Association of Governments (SANDAG), into a Transportation Control Measures (TCM) Plan, which was approved by the District on March 27, 1992. The Addendum to this FEIR discusses the incorporation of the TCM Plan.

This FEIR contains text from the Draft EIR modified as appropriate in response to comments received and revisions to the Transportation Control Measures. Changes in the text are indicated by a line in the right margin. Appendix E contains all written comments received and responses to the comments. The comments are arranged in the chronological order in which they were received by the District.

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1.1 Purpose and Need

The proposed RAQS is a regional plan with the objective of improving air quality in the county by reducing ozone and carbon monoxide (CO) concentrations. Ozone is the product of a complex chain of chemical reactions which occur in the atmosphere in the presence of sunlight. The primary compounds in these chemical reactions are reactive organic gases (ROG) and oxides of nitrogen (NO_x). Thus, ROG and NO_x emissions are said to be precursors to the formation of ozone.

As part of the planning process required by the California Clean Air Act (CCAA), the Air Resources Board (ARB) formally designated San Diego County as a nonattainment area for the state standards for ozone and particulate matter less than 10 microns in diameter (PM_{10}) in June 1989. The western portion of San Diego County (west of the Laguna mountains) is also a nonattainment area for CO and nitrogen dioxide (NO_2).

The goal of the 1991 RAQS is to develop a definitive plan for attaining and maintaining the state ozone standard in San Diego County at the earliest practicable date by concurrently reducing ROG, NO_x, and CO emissions from a broad range of sources. The California Clean Air Act (CCAA) requires all nonattainment areas to prepare attainment plans for the state standard by July 1, 1991. The 1991 RAQS is prepared to satisfy this CCAA requirement. According to the CCAA, there are three categories of air quality nonattainment areas: moderate, serious, and severe. An area is designated "severe" if the ARB finds and determines that it cannot attain and maintain the applicable state air quality standard(s) until after December 31, 1997. Although San Diego County has not yet been formally designated as a "severe" nonattainment area, it is anticipated that the County will be designated as such after the RAQS is submitted to the ARB. The CCAA provides several mandates for severe nonattainment areas which the 1991 RAQS anticipates. Among these is the requirement to reduce annual emissions by 5 percent per year, or by the maximum extent feasible, for all pollutants for which state standards are not met.

1.2 Background and History

The federal Clean Air Act (CAA) Amendments of 1977 required all states to attain the National Ambient Air Quality Standards by December 31, 1987. These amendments required states to submit plans that "demonstrated" attainment of the applicable standards by the statutory deadline.

The California Clean Air Act of 1988 (CCAA) added Chapter 10, District Plans to Attain State Ambient Air quality standards, to Part 3 of Division 26 of the California Health and Safety

Code (HSC). This chapter of the HSC requires, among other things, that districts develop plans to achieve the state ambient air quality standards as expeditiously as practical. These plans must include regulations that require control technologies for reducing emissions from existing sources.

Ozone (smog) is a pollutant of great concern in San Diego County. In 1990, San Diego County exceeded the federal ozone standard on 39 days and the state standard on 139 days. This is an improvement from 10 years ago when the federal standard was exceeded on 87 days and the state standard on 167 days in 1980. Pollution transported from the Los Angeles basin is a contributor to these violations. The CCAA requires the South Coast Air Quality Management District to mitigate the impact of its emissions from the Los Angeles area to San Diego County.

The CCAA requires that a revised plan to control smog, carbon monoxide, and nitrogen dioxide be submitted to the ARB this year to provide for attainment of the air quality standards as expeditiously as practicable. Actions to address state particulate standards are deferred until an ARB report on the feasibility of attaining these standards is submitted to the Legislature in 1991, and specific requirements are established by the state.

An area's air pollution is severe if the state board finds and determines that the district cannot attain and maintain the applicable state standard until after December 31, 1997. San Diego County has not yet been formally designated as a severe nonattainment area. Appropriate designation will not occur until after the initial plans are submitted to the ARB in 1991. However, attainment of the ozone standard in San Diego County by December 1997 is unlikely, and the ARB has required that the San Diego APCD prepare the 1991 RAQS to meet all the requirements for a severe area.

The CCAA issues several mandates for severe nonattainment areas. Among these are the following requirements:

- Attainment of the state air quality standards by the earliest practicable date.
- Annual emission reductions of 5 percent per year beginning in 1988 for all air pollutants for which state standards are not met.
- A permitting program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all new or modified permitted stationary sources.

- The application of best available retrofit control technology (BARCT) for existing emission sources.
- Provisions to develop area and indirect source control programs.
- Adoption and implementation of transportation control measures to substantially reduce trip growth and vehicle miles travelled growth, achieve a 1.5 average vehicle occupancy for weekday commute trips by 1999, and have no net increase in vehicle emissions after 1997.
- Measures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets.
- Submission of an attainment plan in 1991 and triennial updates thereafter.

According to CCAA, if the 1991 RAQS is unable to meet the above mentioned 5 percent requirement, then all feasible measures must be implemented. Preliminary analysis by the APCD indicates that the 5 percent annual reduction target will not be met in San Diego County, and all feasible measures will be required.

1.3 Legal Authority

As mentioned above, the CCAA requires all nonattainment areas in the state to develop new plans to meet federal and state air quality standards at the earliest practicable date. The ARB has designated the Air Pollution Control District as the responsible agency for San Diego County.

1.4 Lead and Responsible Agencies

The following are lead and responsible agencies for this project:

- The San Diego County Air Pollution Control District (APCD or District) is the applicant and proponent of this project. This agency has jurisdiction over stationary sources of air emissions in San Diego County. District rules and regulations govern the siting and modifications of sources of air pollution within the County.
- The California Air Resources Board (ARB) has jurisdiction in California for mobile sources of air emissions and oversight responsibility for local air pollution control districts in the state.



 The U. S. Environmental Protection Agency (EPA) has overall responsibility for ensuring the implementation and enforcement of the federal Clean Air Act. The state of California has been delegated responsibility for compliance with provisions in this act. However, Region IX of the EPA retains oversight of the California State Implementation Plan, under which the San Diego County RAQS falls.

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2.0 SUMMARY

2.1 **Project Description**

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The 1991 RAQS contains control strategies designed to improve air quality by concurrently reducing emissions of ROG, NO_x , and CO. As such, it is a complex document containing many sources of data, assumptions, and methodologies. Main elements of the 1991 RAQS are: Air Quality, Baseline Emissions Inventory, Stationary and Area Source Control Measures, Transportation Control Measures, and Emission Forecasts.

2.1.1 Background

In response to attainment requirements of the federal Clean Air Act Amendments of 1977, the California Clean Air Act of 1988 (CCAA) added Chapter 10 to Part 3 of Division 26 of the California Health and Safety Code. This chapter requires that air pollution control districts develop plans to achieve the state ambient air quality standards as expeditiously as practical. Because California standards are more stringent than federal standards, achieving state standards will automatically satisfy federal standards.

As part of the CCAA process, the Air Resources Board (ARB) formally designated San Diego County as a nonattainment area for the state standards for ozone and particulate matter less than 10 microns in diameter (PM_{10}) in June 1989. The western portion of San Diego County (west of the Laguna Mountain Range) is also a nonattainment area for carbon monoxide (CO) and nitrogen dioxide (NO₂).

Ozone (smog) is a pollutant of great concern in San Diego County. Ozone is the product of a complex chain of chemical reactions which occur in the atmosphere in the presence of sunlight. The primary compounds in these chemical reactions are reactive organic gases (ROG) and oxides of nitrogen (NO_x). Because of this, ROG and NO_x are said to be precursors to the formation of ozone, and the reduction of emissions from these precursors will reduce ozone concentrations.

The CCAA requires that a revised plan to control smog, carbon monoxide, and nitrogen dioxide be submitted to the ARB this year to provide for attainment of the air quality standards as expeditiously as practicable. Actions to address state particulate standards are deferred until an ARB report on the feasibility of attaining these standards is submitted and specific requirements are established by the state.

An area's air pollution is considered severe if the state board finds and determines that the district cannot attain and maintain the applicable state standards until after December 31, 1997. San Diego has not yet been formally designated as a severe nonattainment area. Appropriate designation will not occur until after the initial plans are submitted to the ARB in 1991. However, attainment of the ozone standard in San Diego County by this date is unlikely, and the ARB has required the San Diego APCD to prepare the 1991 RAQS to meet all the requirements for a severe area.

Among other things, the CCAA requires a severe nonattainment area to attain the state air quality standards by the earliest practicable date and to achieve annual emission reductions of 5 percent per year beginning in 1988 for all air pollutants for which state standards are not met. According to the CCAA, if the 1991 RAQS is unable to meet this 5 percent requirement, then all feasible measures must be implemented.

The emission reductions anticipated by implementation of the 1991 RAQS do not meet the 5 percent annual emission reduction required by the CCAA. From 1987 to the year 2000, implementation of the 1991 RAQS is projected to reduce ROG emissions by 3.3 percent per year, NO_x emissions by 2.0 percent per year, and CO emissions by 4.1 percent per year. Because this strategy does not attain the 5 percent per year reductions, all feasible measures to reduce emissions of pollutants are incorporated in the 1991 RAQS.

2.1.2 **Project Characteristics**

The control measures in the RAQS are the basis of the project description for the purpose of this EIR. Control measures in the RAQS appear in the form of emission limits, procedural rules, and other compliance measures. Most environmental impacts are associated with the assumed technologies or compliance methods that will be adopted by sources to comply with control measures specified in the RAQS.

Table 2.1-1 summarizes control measures that are proposed in the RAQS for adoption and implementation. The measures can be classified as to their intent. Some measures are intended to reduce NO_x and have either an "NI" (industrial) or an "NA" (areawide) number designation in Table 2.1-1. Other measures are intended to reduce emissions of ROG, and these measures have either an "RI" (industrial) or an "RA" (areawide) number designation in the table. Conservation measures intended to reduce both NO_x and ROG emissions are designated by an "EC," and mobile source control measures designed to reduce CO, NO_x, and ROG emissions are designated by an "TC" in Table 2.1-1.

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Control Measures Proposed for Adoption and Implementation

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| L | Number | Control Measure | Description |
|----------|--------|-----------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>u</u> | RI-1 | Bulk Gasoline Storage Tank Degassing | Restricts uncontrolled emissions during cleaning and decommissioning of underground gasoline storage tanks. |
| LI | RI-2 | Automobile Refinishing | Requires use of low-ROG coatings and solvents, high efficiency transfer equipment, and various improvements in operating procedures. |
| | RI-3 | Solvent Cleaning and Degreasing Operations | Revises Rules 67.6 and 11 to require controls for currently exempt equipment. |
| | RI-4 | Polyester Resin Operations - Fiberglass Manufacturing | Revises Rule 67.12 to require low-ROG solvents, high efficiency transfer equipment, and various improvements in operating procedures. |
| | RI-5 | Substitute Cleanup Solvents | Requires use of low-ROG solvents and improved handling procedures. |
| | RI-6 | Metal Parts and Products Coatings | Requires use of low-ROG solvents, high efficiency transfer equipment, and various improvements in operating procedures. |
| 2.2 | RI-7 | Marine Vessel Coating Operations | Requires use of low-ROG coatings and closed applicator cleaning systems. |
| | RI-8 | Underground Tank Decommissioning and Soil Decontamination | Requires 90% efficient emission controls during onsite treatment of soil. |
| | RI-9 | Paint and Ink Manufacturing | Requires use of low-ROG coatings, closed tool cleaning systems, improvements in operating procedures, and add-on control devices for large firms. |
| I | RI-10 | Can and Coil Coatings | Revises Rule 67.4 to require zero-ROG sealing materials or add-on control devices. |
| | RI-11 | Wood Products Coatings | Revises Rule 67.11 to eliminate low usage exemption and require low-ROG coatings or add-on control equipment. |
| | RI-12 | Adhesives | Requires use of low-ROG coatings, high efficiency transfer equipment, enclosed cleanup systems, improved record keeping, and add-on control devices. |
| ł | RI-13 | Commercial Bakeries | Requires 90% reduction of ROG emissions from large commercial bakeries. |
| 1 | RI-14 | Foam Blowing and Plastics Expanding | Requires low-ROG blowing agents or add-on emission control devices. |
| | RI-15 | Kelp Processing and Bio-Polymer Manufacturing | Revises Rule 67.10 to increase efficiency control from 90% to 95%. |
|] | RI-16 | Plastic Parts, Rubber, Composites, and Glass Operations | Requires low-ROG coatings and solvents; high transfer efficiency equipment, closed equipment cleaning systems, and improved operating procedures. |
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Control Measures Proposed for Adoption and Implementation

| Number | Control Measure | Description |
|--------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| RI-17 | Petroleum Dry Cleaning | Revises Rule 67.2 by lowering petroleum solvent usage exemption and increasing ROG emission controls for large firms. |
| RI-18 | Polyester and Epoxy Resin Operations - Further Fiberglass Manufacturing | Revises Rule 67.12 to eliminate low usage exemption. |
| RI-19 | Semiconductor Manufacturing and Electronic Packaging Operations | Requires add-on emission control devices, use of low-ROG cleaners, and improved solvent handling procedures and record keeping. |
| RI-21 | Ethylene Oxide Sterilizers | Requires add-on emission control devices, equipment modifications, and improved reporting and testing procedures. |
| RI-22 | Groundwater Decontamination | Requires add-on controls and improved reporting and monitoring. |
| NI-1 | Selective Catalytic Reduction for Large Utility Boilers | Requires selective catalytic reduction (SCR) for large utility boilers. |
| NI-2 | Further Controls on Turbines | Revises Rule 68 requiring higher efficiency water or steam injection and selective catalytic reduction for large turbines operated more than 6,000 hours per year. |
| NI-3 | Selective Catalytic Reduction for Lean Burn Engines | Requires SCR for lean burn engines operating on natural, digester or landfill gas. |
| NI4 | Small Internal Combustion Engines (200-500 hp) | Requires combustion modifications or flue gas treatment for 200-500 HP engines. |
| NI-5 | Small Internal Combustion Engines (50-200 hp) | Requires combustion modifications or flue gas treatment for 50-200 HP engines. |
| NI-6 | Controls for Industrial and Commercial Boilers | Requires a range of control devices for boilers of less than 100 million BTU/hr. |
| NI-7 | Selective Catalytic Reduction for Large Non-Utility Boilers | Requires selective catalytic reduction (SCR) for large non-utility boilers. |
| RA-1 | Consumer Products | Requires consumer products be reformulated with low-ROG formulations. |
| RA-2 | Small Utility and Lawn/Garden Equipment | Requires reduction in emission limits for 1994 and subsequent engines. |
| RA-3 | Commercial Charbroiling | Requires emissions be controlled, probably with electrostatic precipitators. |
| RA-4 | Architectural Coatings | Modifies Rule 67.0 to require lower solvent content for previously exempt categories and future reductions from currently controlled categories. |
| RA-5 | Barbecue Grill Charcoal Ignition | Prohibits sale and use of high-ROG emission lighter fluid. |
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Control Measures Proposed for Adoption and Implementation

| | Number | Control Measure | Description |
|------------|--------|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | RA-6 | Deodorants and Antipenspirants | Requires low-ROG aerosol reformulation or substitution to nonaerosol types. |
| | RA-7 | Marine Gasoline Refueling | Requires use of vacuum assist vapor recovery systems for gasoline dispensing. |
| | 1 | New Source Review | Requires no increase in emissions from new or modified sources. |
| 4 | NA-1 | Low-NO _x Residential Water Heaters | Requires low-NO _x natural gas water heaters. |
| | NA-2 | Low NO _x Central Furnace Heaters | Requires natural gas fired, low-NO _x central furnaces to be installed in new multi- and single-family homes and in existing homes when furnaces are to be replaced. |
| . | NA-3 | Low-NO _x Commercial Water Heaters | Requires low-NO _x natural gas watter heaters. |
| I | EC-1 | Residential Solar Hot Water Heaters - New Homes | Requires solar-assist equipment on natural gas and electric water heaters in new homes. |
| 2-5 | EC-2 | Swimming Pool Solar Water Heaters - New | Requires solar-assist equipment on new natural gas-fired heated swimming pools. |
| - - | EC3 | Hot Tub/Spa Solar Water Heaters - New | Requires solar-assist equipment on new hot tubs and spas. |
| I | EC.4 | Commercial Solar Hot Water Heaters - New Development | Requires solar-assist equipment on natural gas-fired and electric water heating in new commercial buildings. |
| | EC5 | Residential Solar Hot Water Heaters - Retrofit Existing Homes | Requires solar-assist equipment on natural gas and electric water heaters upon home resale. |
| | 9 C | Swimming Pool Solar Water Heaters - Retrofit | Requires solar-assist equipment on natural gas heated pools upon home resale. |
| | EC-7 | Hot Tub/Spa Solar Water Heaters - Retrofit | Requires solar-assist equipment on natural gas heated hot tubs and spas upon home resale. |
| | 1C-1 | Trip Reduction and Parking Management Program | Promotes trip reductions higher vehicle occupancy through various promame |
| <u>1</u> | TC-2 | Atternative Transportation Mode Capacity Expansion | Supports TC-1 by promoting alternative transportation means. |
| | 103 | Traffic Management Program | Provides for traffic flow improvements through computerization of traffic simults |
| I | 104 | Land Use | Reduces emissions by attening land usage through various programs. |
| | , | Indirect Source Control Program | Requires new indirect sources (e.g., shopping centers) to mitigate emissions. |
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ATTACHMENT B

1999-001-400

Page 20

2.2 Significant Environmental Impacts and Mitigation Measures

This is a program EIR that assesses the implementation of a regional plan. In a program EIR, specific site data and other quantitative information normally found in an EIR are not available. Because of this, analysis in a program EIR is necessarily more general and qualitative as is recognized in guidelines of the California Environmental Quality Act. The reduction of ROG, CO, and NO, emissions is the goal of the 1991 RAQS. Projections of future emission reductions stemming from the implementation of this RAQS are summarized in Figure 3.2-1 of Section 3. This EIR analyzes the potential adverse impacts to the environment that can be expected from the implementation of the RAQS. Table 2.2-1 summarizes these potential impacts and their corresponding mitigation measures. As can be seen in this table, many of the adverse impacts result from the adoption of selective Control Measures catalytic reduction (SCR) systems to reduce NO, emissions from boilers. In this SCR application, large quantities of ammonla must be transported to and stored on a project site. If a large, catastrophic release of ammonia occurs, significant impacts could occur to many environmental issue areas as outlined in Table 2.2-1. However, compliance with existing safety requirements in the handling and storage of ammonia and implementation of an emergency response plan makes the occurrence of harmful impacts from this event highly unlikely and, therefore, insignificant.

2.3 Insignificant Environmental Impacts

All other issue areas have been determined to have insignificant or no adverse impacts from the implementation of the 1991 RAQS

2.4 Alternatives to the Project

The California Environmental Quality Act requires an EIR to describe reasonable alternatives to the proposed project that could feasibly attain the project's basic objectives. The proposed 1991 RAQS is the San Diego County APCD's preferred alternative for achieving the objective of improved air quality within the county. Two additional alternatives are evaluated in the EIR: the no-project alternative and the less-stringent control alternative. A discussion of these alternatives is provided below.

2.4.1 No-Project Alternative

This alternative consists of not implementing the proposed RAQS. The existing rules and regulations in effect would continue in place and any future air quality regulation would be in accordance with the existing strategy. No additional air pollution control requirements would

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Summary of Adverse Impacts and Mitigation Measures

| Issue Area | Description of Impacts | Significance | Mitigating Circumstances or Mitigation Measures | Residual Impact |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| AIR QUALITY | Localized Ozone Effects: NO _x reduction measures, while resulting in benefits to the environment, can cause local increases in ozone due to the process of scavenging. | Not Significant | None recommended because the measure is estimated to be regionally beneficial. | Not Significant |
| | Ammonia Slip: In selective catalytic reduction (SCR) to reduce NO _x emissions from boilers and IC engines, there are low level emissions of unreacted ammonia. | Not Significant | Concentration levels of ammonia from this process will not be significant; require installation of appropriate monitors and controllers within the fluegas system; require regular SCR maintenance. | Not Significant |
| | Accidental Release of Ammonia: In SCR systems, there is a potential for release during operation or transportation, causing a risk to humans and other living organisms. | Unlikely, but Significant | Require proper emergency equipment and training; establish an emergency response plan. | Not Significant |
| | Accidental Release of Vapor Recovery Media: Improper disposal or handling of spent vapor recovery media, such as carbon canisters, can result in the release of toxics and hydrocarbons to the air. | Not Significant | Coordinate with responsible agencies to ensure compliance with regulations regarding handling/ transport of hazardous materials; encourage continuous carbon regeneration systems. | Not Significant |
| | Substitution to Low-ROG Substances: Reformulating coatings, cleaners and solvents to low-ROG content might result in compounds being used that are hazardous and toxic. Improper disposal or handling of these could result in hazardous emissions. | Not Significant | Coordinate with responsible agencies to promote public awareness programs. | Not Significant |
| WATER RESOURCES | Accidental Release of Ammonia: In SCR systems, accidental, catastrophic release of ammonia during operations or transportation presents a health risk to water based resources. | Not Significant | Require proper emergency equipment and training; establish an emergency response plan. | Not Significant |
| | Accidental Release of Vapor Recovery Media: Improper disposal or handling of spent vapor recovery media, such as carbon canisters, can result in the release of toxics and hydrocarbons to ground water. | Not Significant | Coordinate with responsible agencies to ensure compliance with regulations regarding handling/transport of hazardous materials; encourage continuous carbon regeneration systems. | Not Significant |

1999-001-400

Summary of Adverse Impacts and Mitigation Measures

| Issue Area | Description of Impacts | Significance | Mitigating Circumstances or Mitigation Measures | Residual Impact |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| WATER RESOURCES (Cont.) | Substitution to Low-ROG Substances: Accidential release of water based products (with low-ROG content) could contaminate water resources. | Not Significant | Coordinate with responsible agencies to promote public awareness programs; require pre-treatment of wastewater in wet scrubbing. | Not Significant |
| BIOLOGICAL RESOURCES | Effect of Construction on Biological Habitat: Transportation construction projects could eliminate or reduce biological habitat | Possibly Significant | Where possible, build away from biologically sensitive areas; coordinate with other agencies to institute measures to ensure protection of resources. | Not Significant |
| | Accidental Release of a Catalyst Used in SCR: The catalyst, vanadium pentoxide, is toxic, and an accidental release is possible during change-out of the catalyst. | Not Significant | No mitigation measures are identified for this impact. This is unlikely to occur and adequate safety regulations exist. | Not Significant |
| | Ammonia Slip: In selective catalytic reduction (SCR), there are low level emissions of unreacted ammonia. | Not Significant | Concentration levels of ammonia from this process will not be significant; require installation of appropriate monitors and controllers within the fluegas system; require regular SCR maintenance. | Not Significant |
| | Accidental Release of Ammonia: In SCR systems, accidental, catastrophic release of ammonia during operations or transportation presents a risk to biological resources. | Unlikely, but Significant | Require proper emergency equipment and training; establish an emergency response plan. | Not Significant |
| | Accidental Release of Vapor Recovery Media: Improper disposal or handling of spent vapor recovery media, such as carbon canisters, can result in the release of compounds harmful to biological resources. | Not Significant | Coordinate with responsible agencies to ensure compliance with regulations regarding handling/ transport of hazardous materials; encourage continuous carbon regeneration systems. | Not Significant |
| | Substitution to Low-ROG Substances: Acciden- tal release of water based products (with low-ROG content) could be harmful to biological resources. | Not Significant | Coordinate with responsible agencies to promote public awareness programs; require pretreatment of wastewater in wet scrubbing. | Not Significant |
| NOISE | Reduced Congestion Could Cause Increased Vehicle Speeds: Increased vehicle speeds can lead to small increases in noise, especially at peak hours. | Not Significant | Existing noise ordinances will mitigate this impact. No mitigation measures are identified. | Not Significant |

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Summary of Adverse Impacts and Mitigation Measures

| lesue Area | Description of Impacts | Significance | Mitigating Circumstances or Mitigation Messures | Residuel Impact |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| NOISE (Cont.) | Emission Control Equipment: Such equipment could increase noise levels to objectionable levels. | Not Significant | Existing noise ordinances will mitigate this impact. No mitigation measures are identified. | Not Significant |
| TRANSPORTATION AND CIRCULATION | Parking Controls: Controls could result in fewer parking spaces in lots that could result in increased on-street parking. | Not Significant | Local parking ordinances and procedures will alleviate impacts from this. | Not Significant |
| PUBLIC SERVICES | Effects on Waste Water Treatment Facilities: Improper handling or discharge of wastewater (e.g., technologies such as steam regeneration of carbon and wet scrubber devices) could contaminate severs and water supplies. | Possibly Significant | Compliance with sewer discharge regulations minimizes this impact. Require pre-treatment of wastewater when wet scrubbers are used; enforce compliance discharge requirements. | Not Significant |
| | Accidental Release of Ammonia: In SCR systems, the catastrophic release of ammonia during operations or transportation could increase demands for emergency services. | Not Significant | Adequate emergency facilities exists. The need to use these will be reduced by requiring proper on- site emergency equipment, training, and establishment of an emergency response plan. | Not Significant |
| ENERGY AND UTILITIES | Energy Requirements of Emission Controls: Emission control equipment increases demands for electricity. | Not Significant | Coordinate with utilities and governments to promote energy conservation. | Not Significant |
| | Energy Requirements of SCR: SCR requires energy to operate, resulting in increased demands for natural gas. | Not Significant | Demands are small relative to regional uses, and available supplies exist. | Not Significant |
| | Induced Residential Switching from Natural Gas to Electric Water Heating: Depending on annualized costs and other preference factors, homes may be switched to electric water heating to avoid investing in a solar assist system, causing a possibly large increase in electric capacity needs. | Significant | The APCD will modify proposed measures to require homes with electric water heaters to also install solar assist units. This will eliminate the incentive to switch to electric water heating. | Not Significant |
| AESTHETICS | Emission Control Equipment: Add-on emission control equipment might be architecturally unappealing. | Not Significant | Most equipment will be installed in industrial areas. Work with responsible agencies to require alternate placement and employ other strategies to minimize the impact. | Not Significant |

Page 229

Summary of Adverse Impacts and Mitigation Measures

| Issue Area | Description of Impacts | Significance | Mitigating Circumstances or Mitigation Measures | Residual Impact |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| RECREATION | Accidental Release of Ammonia: In SCR systems, the catastrophic release of ammonia during operations or transportation could cause short-term harm to resources in recreational areas. | Unlikely, but Significant | Require proper emergency equipment and training; establish an emergency response plan. | Not Significant |
| RISK OF UPSET | Accidental Release of Ammonia: In SCR systems, the catastrophic release of ammonia during operations or transportation could cause loss of life and property. | Unlikely, but Significant | Require proper emergency equipment and training; establish an emergency response plan. | Significant |
| HUMAN HEALTH | Accidental Release of a Catalyst Used in SCR: The catalyst, vanadium pentoxide, is toxic, and an accidental release is possible during change-out of the catalyst. | Not Significant | No mitigation measures are identified for this impact. This is unlikely to occur and adequate safety regulations exist. | Not Significant |
| | Ammonia Slip: In selective catalytic reduction (SCR), there are low level emissions of unreacted ammonia. | Not Significant | Concentration levels of ammonia from this process will not be significant; require installation of appropriate monitors and controllers within the fluegas system; require regular SCR maintenance. | Not Significant |
| | Accidental Release of Ammonia: In SCR systems, there is a potential for release during operation or transportation, causing a risk to humans. | Unlikely, but Significant | Require proper emergency equipment and training; establish an emergency response plan. | Not Significant |
| | Accidental Release of Vapor Recovery Media: Improper disposal or handling of spent vapor recovery media, such as carbon canisters, can result in the release of toxics harmful to humans. | Not Significant | Coordinate with responsible agencies to ensure compliance with regulations regarding handling/ transport of hazardous materials; encourage continuous carbon regeneration systems. | Not Significant |
| | Substitution to Low-ROG Substances: Reformulating coatings, cleaners and solvents to low-ROG content might result in exempt compounds being used that are hazardous and toxic. Improper disposal and handling of these could result in emissions harmful to humans. | Not Significant | Coordinate with responsible agencies to promote public awareness programs. | Not Significant |

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Summary of Adverse Impacts and Mitigation Measures

| issue Area | Description of impacts | Significance | Mitigating Circumstances or Mitigation Measures | Residual Impact |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| HUMAN HEALTH (Cont.) | Reformulation of Barbecue Charcoal Lighter Fluid: The practice of using gasoline to ignite barbecues might increase. | Not Significant | Promote public information and education programs to warn the public of dangers and inform the public of safe alternatives. | Not Significant |
| HAZARDOUS WASTE | Catalyst Used in SCR: The catalyst contains vanadium pentoxide, a toxic which must either be recycled or disposed of at a Class I landfill. | Possibly Significant | Require recycling or return to the original vendor for processing rather than disposal of the catalyst at a Class I landfill. | Not Significant |
| | Additional Hazardous/Toxic Materials from Emission Controls: Many measures result in increased quantities of hazardous materials (e.g., carbon canisters in vapor recovery systems) which will place demands on Class I landfills. | Possibly Significant | Where feasible, require recycling; encourage continuous carbon regeneration systems; promote thermal incinerators as a means of disposal of hazardous materials. | Not Significant |
| 2-11 | | | | |

be imposed, although existing state and local regulations, especially with respect to motor vehicle emissions, would continue to control emissions in the future. No new NO_x CO, and ROG controls would be imposed by regulation.

The impact of greatest significance with the implementation of the no-project alternative would be the air quality within the District. There would be higher emissions, overall, of both ROG, CO, and NO_x and subsequent slower progress toward reducing ozone levels. A secondary benefit of reduced NO_x emissions is the reduction of other air pollutants, such as particulate matter. Implementation of the no-project alternative would cause these emissions to be higher than with the proposed RAQS. Benefits from implementing the no-project alternative will result from avoiding the adverse impacts expected from implementing the proposed project. All of the adverse impacts from implementing the proposed project either can be mitigated to a level of nonsignificance or are unlikely. Furthermore, the no-project alternative does not satisfy the need of the project to comply with requirements of the California Clean Air Act, which requires the District to do everything feasible to attain the clean air standards.

2.4.2 Less-Stringent Alternative

This alternative has three components. First, it proposes to drop energy conservation measures for existing homes because of their potential financial burden to homeowners. This will reduce future costs to the public to retrofit homes before resale, but will have no significant adverse environmental impacts as compared to the Project. Second, this alternative will adopt less stringent employee trip reduction measures, which will result in more vehicle trips and allow more congestion than the proposed RAQS, resulting in higher automobile emissions of ROG, CO, and NO_x.

Finally, the iess-stringent alternative is designed to eliminate or reduce risks associated with the use and transportation of anhydrous ammonia required in selective catalytic reduction (SCR) applications. This alternative eliminates SCR as the preferred alternative technology for controlling NO_x emissions from boilers used in the generation of electric power (NI-1). Urea injection with combustion modification (UI/CM) will be the alternative to SCR. As a result, the less-stringent alternative will result in higher levels of NO_x emissions than will the proposed project.

Another adverse Impact associated with the implementation of the less-stringent alternative would be the potential impacts to existing water supplies. The urea injection process requires large quantities of water. While this amount will be small compared to total usage in the area, it could be considered significant during drought conditions.

2.5 Cumulative Impacts

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The Caiifornia Environmental Quality Act requires an EIR to discuss cumulative impacts. Cumulative impacts can result from individually minor but collectively significant impacts from projects taking place over a period of time. This fact calls for an assessment of the 1991 RAQS In relation to other individual projects related to or affected by this project. Because this is a program EIR, the direct impacts discussed above in Sections 2.2 and 2.3 address the potential cumulative environmental effects of all measures proposed for implementation in the 1991 RAQS.

The Regional Air Quality Strategy is a regional plan. Because of its widespread effect, it impacts and is impacted by projects both within San Diego County and in adjacent air districts. Projects within the county which could provide cumulative impacts include commercial, residential, and agricultural development consistent with the San Diego County General Plan. Attainment plans prepared by adjacent air pollution control districts will also produce effects which would be cumulative to those discussed as direct impacts in this EIR.

Although the impacts of a single project or plan may not be significant when considered in isolation, the cumulative impacts of associated projects may be significant when these projects are considered collectively.

2.5.1 Air Quality

The South Coast Air Basin (SCAB) is located immediately north of San Diego County and has similar air quality problems and concerns. Depending on wind and other conditions, pollutants can move from SCAB into San Diego County. The RAQS is intended to improve air quality in the county. Specifically, the RAQS will significantly reduce emissions of NO_x , CO, and ROG, the two key precursors to ozone. Thus, air quality will be improved in adjacent air districts which might otherwise be adversely affected by these pollutants generated in San Diego County. Conversely, because these adjacent regions have similar plans for improving the air quality for their respective jurisdictions, a reduction in pollutants transported into San Diego County is expected.

Electrification is a favored approach to improving air quality in the South Coast Air Quality Management Plan (AQMP). The EIR for Santa Barbara County's RAQS (SBCAPCD, 1990) provides a detailed discussion of the adverse air quality impacts of generating electricity to provide for the added cumulative demand caused by the various attainment plans within the region. Impacts to air quality will depend on many variables, including how additional electricity is produced, where it is produced, and at what time it is produced. The conclusion



reached in the document is that there are too few data to provide any more than highly speculative results. Nevertheless, the potential exists for increased electric production in the southern California area which can lead to increases in NO_x and ROG emissions. In San Diego County, it is believed these increases will be offset by the reductions in emissions that stem from conservation measures that are either contained directly in the RAQS or are instituted as conservation based mitigation measures to offset increased electric use from the RAQS.

Greenhouse gases allow incoming solar radiation to pass through the earth's atmosphere but trap outgoing infrared radiation like the panels of a greenhouse. Some experts believe increasing levels of greenhouse gases threaten to warm the earth by as much as 4 to 9 degrees fahrenheit over the next 50 to 100 years (AOR, 1989). Many measures in the RAQS will result in reformulation of compounds to various low-ROG substances. One potential substitute is 1,1,1-trichloroethane, a greenhouse gas. While potential releases of these compounds are possible, their volumes are small compared to total global contributions of greenhouse gases and are not considered significant. Nevertheless, these small, local releases could contribute in a small way to the cumulative global greenhouse effect.

2.5.2 Water Resources

If urea injection is used in the less stringent alternatives to reduce emissions of NO_x , impacts to water resources could occur. Two major factors combine to make the impact cumulative. First, the southwestern United States is in the fifth year of a drought. Water resources are being drawn down and supplies are being rationed. Second, the population of San Diego County in particular, and Southern California in general, is expected to continue to increase. This increased development would be expected to produce a continued increase in water demand. Given the current climate of uncertainty about water supplies, it would be reasonable to expect a short-term significant impact on water supply; the impact would be expected to be insignificant when water supplies return to their expected pre-drought levels.

2.5.3 Energy and Utilities

There may be increased overall energy demands due to the implementation of the rules in the RAQS. These demands could be significant when considered in light of the projected employment and population growth of the region. Many control technologies either require energy for implementation or cause a reduction in efficiency of energy use. Opposing such a trend would be an improvement in energy efficiency in motors and implementation of conservation measures. Thus, the potential exists for a cumulative impact to energy from the

RAQS, but a prediction of its magnitude would be speculative. This is too speculative to be considered a significant adverse impact.

2.5.4 Hazardous Waste

Many measures in the 1991 RAQS will result in increased quantities of hazardous materials which could significantly impact Class I landfills in the region. With mitigation measures, these direct impacts are not considered significant. However, when considered with the projected regional growth in population and employment, the potential exists for significant cumulative impacts to hazardous waste disposal. Because the magnitude of these predicted cumulative impacts is speculative, this is not considered significant.

2.6 Significant Irreversible Impacts

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Potentially significant environmental impacts are reduced to a level that is less than significant from mitigation (see Table 2.2-1). The remaining potentially significant issue areas, are short-term in nature and not irreversible.

2.7 Relationship Between Local Short-Term Uses of Man's Environment and the Maintenance of Long-Term Productivity

The long-term effect of the RAQS is to improve air quality, resulting in improved public health and welfare. The overall long-term effect is beneficial to society by improving the long-term quality of the air. To achieve this effect, there will be short-term adverse impacts from implementation of the 1991 RAQS. Implementation of the 1991 RAQS is not expected to have adverse effects on long-term productivity in the area.

2.8 Growth-Inducing Impacts

The objective of the RAQS is an improvement in air quality. Insofar as better air could lead to increased growth, the plan could produce higher growth. However, such impacts are speculative and assumed small. Therefore, no significant growth-inducing impacts from implementation of the RAQS are anticipated.

3.0 PROJECT DESCRIPTION

3.1 Project Proponent

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San Diego County Air Pollution Control District (APCD) 9150 Chesapeake Drive San Diego, California 92123-1095

3.2 **Project Location**

The proposed San Diego 1991 Regional Air Quality Strategy (RAQS) contains a series of measures proposed for implementation that will improve air quality in San Diego County. A complete discussion of the RAQS can be found in the *1991 San Diego County Regional Air Quality Strategy*. If approved, the proposed RAQS will affect sources of air emissions located throughout San Diego County, California. A map of San Diego County is included as Figure 3.2-1.

3.3 **Project Background**

The federal Clean Air Act (CAA) Amendments of 1977 required all states to attain the National Ambient Air Quality Standards by December 31, 1987. These amendments required states to submit plans that "demonstrated" attainment of the applicable standards by the statutory deadline.

The California Clean Air Act of 1988 (CCAA) added Chapter 10, District Plans to Attain State Ambient Air Quality Standards, to Part 3 of Division 26 of the California Health and Safety Code (HSC). This chapter of the HSC requires, among other things, that districts develop plans to achieve the state ambient air quality standards as expeditiously as practical. These plans must include regulations that require control technologies for reducing emissions from existing sources.

As part of the CCAA planning process, the Air Resources Board (ARB) formally designated San Diego County as a nonattainment area for the state standards for ozone and particulate matter less than 10 microns in diameter (PM_{10}) in June 1989. The western portion of San Diego County (west of the Laguna Mountain Range) is also a nonattainment area for carbon monoxide (CO) and nitrogen dioxide (NO₂).

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Figure 3.2-1. San Diego Air Basin

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Ozone (smog) is a pollutant of great concern in San Diego County. Ozone is the product of a complex chain of chemical reactions which occur in the atmosphere in the presence of sunlight. The primary compounds in these chemical reactions are reactive organic gases (ROG) and oxides of nitrogen (NO_x). Thus, ROG and NO_x are said to be precursors to the formation of ozone, and the reduction of emissions from these precursors will reduce ozone concentrations.

In 1990, San Diego County exceeded the federal ozone standard on 39 days and the state standard on 139 days. This is an improvement from 10 years previously when the federal standard was exceeded on 87 days and the state standard on 167 days in 1980 (SDAPCD, 1990). Pollution transported from the Los Angeles basin is a contributor to these violations. The CCAA requires the South Coast Air Quality Management District to mitigate the impact of its emissions from Los Angeles County to San Diego County.

The CCAA requires that a revised plan to control smog, carbon monoxide, and nitrogen dioxide be submitted to the ARB this year to provide for attainment of the air quality standards as expeditiously as practicable. Actions to address state particulate standards are deferred until an ARB report on the feasibility of attaining these standards is submitted to the Legislature, and specific requirements are established by the state.

An area's air pollution is considered severe if the state board finds and determines that the district cannot attain and maintain the applicable state standard until after December 31, 1997. San Diego has not yet been formally designated as a severe nonattainment area. Appropriate designation will not occur until after the initial plans are submitted to the ARB in 1991. However, attainment of the ozone standard in San Diego County by December 1997 is unlikely, and the ARB has required that the San Diego APCD prepare the 1991 RAQS to meet all the requirements for a severe area.

The CCAA issues several mandates for severe nonattainment areas. Among these are the following requirements:

- Attainment of the state air quality standards by the earliest practicable date.
- Annual emission reductions of 5 percent per year beginning in 1988 for all air pollutants for which state standards are not met.
- A permitting program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all new or modified permitted stationary sources.

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- The application of best available retrofit control technology (BARCT) for existing emission sources.
- Provisions to develop area and indirect source control programs.
- Adoption and implementation of transportation control measures to substantially reduce trip growth and vehicle miles travelled growth, achieve a 1.5 average vehicle occupancy for weekday commute trips by 1999, and have no net increase in vehicle emissions after 1997.
- Adoption of measures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets.
- Submission of an attainment plan in 1991 and triennial updates thereafter.

According to CCAA, if the 1991 RAQS is unable to meet the above-mentioned 5 percent requirement, then all feasible measures must be implemented. Preliminary analysis by the APCD indicates that the 5 percent annual reduction target will not be met in San Diego County, and all feasible measures will be required.

3.4 **Project Objectives**

As stated above, San Diego County exceeds the state and federal standards for ozone and the state standard for PM_{10} . The western part of the county exceeds standards for CO and NO₂. The proposed San Diego 1991 RAQS was prepared pursuant to the California Clean Air Act (CCAA) and as such is a regional plan which contains a series of measures proposed for implementation that will improve air quality in San Diego County.

The goal of the 1991 RAQS is to develop a definitive plan for attaining and maintaining the state standard for ozone and CO in San Diego County at the earliest practicable date by concurrently reducing ROG, NO_x , and CO emissions from a broad range of sources. Since the CCAA requires all nonattainment areas to prepare attainment plans for the state standard by July 1, 1991, the 1991 RAQS is prepared to satisfy this CCAA requirement. Because the CCAA ozone standard is more stringent than the federal standards, compliance with the CCAA standard will result in compliance with the federal ozone standard.

The emission reductions anticipated by the 1991 RAQS do not meet the 5 percent annual emission reduction required by the CCAA. From 1987 to the year 2000, ROG emissions are projected to be reduced by this plan by 35 percent (3.3 percent per year); NO_x emissions are

1999-001-400



expected to decline by 23 percent (2.0 percent per year), and CO emissions are projected to decline by 42 percent (4.1 percent per year). Figure 3.4-1 summarizes ROG, NO_x and CO emission trends through the year 2010 for the proposed 1991 RAQS. Because this strategy does not attain the 5 percent per year reductions, all feasible measures to reduce emissions of pollutants are incorporated in the 1991 RAQS.

3.5 **Project Characteristics**

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The 1991 RAQS contains control measures designed to improve air quality by concurrently reducing emissions of pollutants. As such, it is a complex document containing many sources of data, assumptions, and methodologies. Most of the control measures require local implementation, although some are statewide measures adopted by ARB to meet CCAA mandates. This strategy is comprised of specific control measures that are organized into two basic categories: 1) stationary sources, which include both point and area source control measures, and 2) transportation control measures, designed to reduce emissions from transportation related sources.

Control measures in the RAQS appear in the form of emission limits, procedural rules, and other compliance measures. In some cases, these measures do not specify a specific control technology or "compliance method." However, in formulating the control measures and in analyzing the practicality of the measures and feasibility of emissions limits, the APCD considered relevant technologies and compliance methods.

Most environmental impacts are associated with the technologies or compliance methods that will be adopted by operators of emission sources in response to control measures specified in the 1991 RAQS. In order to better define the environmental impacts of measures that have yet to be adopted and implemented, discussions of these include the assumed control technologies or methods that will be adopted to comply with the measure.

The control measures are the basis of the project description for the purpose of this EIR. Accordingly, control measures proposed in the 1991 RAQS are discussed in some detail in the following sections. All measures proposed in the 1991 RAQS are discussed.

Before control measures are discussed in detail, tabular summaries of the proposed measures are presented. Stationary source control measures are presented in Tables 3.5-1 through 3.5-5. Control measures are listed in these tables along with estimates of total emissions of the target population associated with the control measure plus projected reductions in emissions following implementation of the control measure. Individual industrial control measures concern point sources of emissions. Examples include coatings (e.g.











1978 1980 1982 1984 1985 1988 1990 1992 1994 1995 1998 2000 2002 2004 2005 2010



Page 36


TABLE 3.5-1

1991 RAQS Stationary Source Control Measures to Reduce Reactive Organic Gas Emissions Industriai Controls

| Number | Control Measure | Adoption Date | Emission Reduction (tons/day) |
|---------------|-------------------------------------------------------------------|---------------|-------------------------------------|
| RI-1 | Bulk Gasoline Storage Tank Degassing | 1996 | 1.90 |
| RI-2 | Automobile Refinishing | 1993 | 1.31 |
| RI-3 | Solvent Cleaning and Degreasing Operations | 1994 | 1.06 |
| RI-4 | Polyester Resin Operations - Fiberglass Manufacturing | Adopted | 0.83 |
| Pi-5 | Substitute Cleanup Solvents | Unscheduled | 0.73 |
| - FI-6 | Metal Parts and Products Coatings | Adopted | 0.56 |
| RI-7 | Marine Vessel Coating Operations | Adopted | 0.50 |
| RI-8 | Underground Tank Decommissioning and Soil Decontamination | 1993 | 0.55 |
| Ri-9 | Paint and Ink Manufacturing | 1992 | 0.48 |
| R ⊩ 10 | Can and Coll Coatings | 1994 | 0.32 |
| RI-11 | Wood Products Coatings | Adopted, 1994 | 0.87 |
| RI-12 | Adhesives | 1993 | 0.22 |
| R ⊫13 | Commercial Bakeries | 1995 | 0.22 |
| RI-14 | Foam Blowing and Plastics Expanding | 1995 | 0.20 |
| RI-15 | Kelp Processing and Bio-Polymer Manufacturing | Adopted | 0.17 |
| Fi -16 | Plastic Parts, Rubber, Composites and Glass Operations | 1994 | 0.17 |
| RI-17 | Petroleum Dry Cleaning | 1996 | 0.04 |
| FII-18 | Polyester and Epoxy Resin Operations - Further Fiberglass Control | 1994 | 0.08 |
| RI-19 | Semiconductor Manufacturing and Electronic Packaging Operations | 1995 | 0.07 |
| RI-2 1 | Ethylene Oxide Sterilizers | Adopted | 0.018 |
| RI-22 | Groundwater Decontamination | 1997 | < 0.01 |

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TABLE 3.5-2

1991 RAQS Stationary Source Control Measures to Reduce Oxides of Nitrogen Emissions industrial Controls

| Number | Control Measure | Adoption Date | Emission Reduction (tons/day) |
|--------|-------------------------------------------------------------|---------------|-------------------------------------|
| NI-1 | Selective Catalytic Reduction for Large Utility Boilers | 1992 | 7.32 |
| NI-2 | Further Controls on Turbines | 1994 | 0.64 |
| NI-3 | Selective Catalytic Reduction for Lean Burn Engines | 1995 | 0.61 |
| NH4 | Small Internal Combustion Engines (200-500 hp) | 1995 | 1.59 |
| NI-5 | Small Internal Combustion Engines (50-200 hp) | 1996 | 0.78 |
| NH6 | Controls for Industrial and Commercial Boilers | 1993 | 0.16 |
| NI-7 | Selective Catalytic Reduction for Large Non-utility Boilers | 1993 | 0.05 |

1999-001-400

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TABLE 3.5-3

1991 RAQS Stationary Source Control Measures to Reduce Reactive Organic Gas Emissions Areawide Controls

| Number | Control Measure | Adoption Date | Emission Reduction (tons/day) |
|------------|-----------------------------------------|---------------|-------------------------------------|
| RA-1 | Consumer Products | Adopted | 6.30 |
| RA-2 | Small Utility and Lawn/Garden Equipment | Adopted | 2.67 |
| RA-3 | Commercial Charbroiling | 1996 | 0.52 |
| RA-4 | Architectural Coatings | Unscheduled | 0.37 |
| RA-5 | Barbecue Grill Charcoal Ignition | Adopted | 0.04 |
| RA-6 | Deodorants and Antiperspirants | Adopted | 0.34 |
| RA-7 | Marine Gasoline Refueling | 1997 | 0.02 |
| - | New Source Review | 1992 | • |
| Not availa | | 1392 | |

TABLE 3.5-4

1991 RAQS Stationary Source Control Measures to Reduce Oxides of Nitrogen Emissions Areawide Controls

| Number | Control Measure | Adoption Date | Emission Reduction (tons/day) |
|--------|-----------------------------------------------|---------------|-------------------------------------|
| NA-1 | Low-NO _x Residential Water Heaters | 1995 | 2.50 |
| NA-2 | Low NO _x Central Furnace Heaters | 1997 | 1.01 |
| NA-3 | Low-NO _x Commercial Water Heaters | 1995 | 0.12 |

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TABLE 3.5-5

1991 RAQS Stationary Source Control Measures to Reduce Oxides of Nitrogen Emissions Energy Conservation Controls

| Number | Control Measure | Adoption Date | Emission Reduction (tons/day) |
|--------|---------------------------------------------------------------|---------------|-------------------------------------|
| EC-1 | Residential Solar Hot Water Heaters - New Homes | 1995 | 0.38 to 0.54 |
| EC-2 | Swimming Pool Solar Water Heaters - New | Unscheduled | < 0.01 |
| EC-3 | Hot Tub/Spa Solar Water Heaters - New | Unscheduled | < 0.01 |
| EC-4 | Commercial Solar Hot Water Heaters - New Development | 1995 | 0.01 |
| EC-5 | Residential Solar Hot Water Heaters - Retrofit Existing Homes | 1995 | 1.68 to 2.43 |
| EC-6 | Swimming Pool Solar Water Heaters - Retrofit | Unscheduled | 0.01 to 0.03 |
| EC-7 | Hot Tub/Spa Solar Water Heaters - Retrofit | Unscheduled | 0.01 to 0.02 |

1999-001-400

Page 40



paints), cleaning solvents, coatings, kelp processing, and semiconductor manufacturing. Table 3.5-1 and 3.5-2 present the industrial control measures for ROG and NO_x emissions, respectively. Areawide sources are small sources scattered across the county whose cumulative effect on air quality can be significant. Examples include space heating and air conditioning, household products, and charcoal lighter fluid. Table 3.5-3 summarizes the areawide control measures for ROG emissions, and Table 3.5-4 presents the areawide control measures for NO_x emissions. Energy conservation control measures to reduce NO_x emissions are summarized in Table 3.5-5. Finally, transportation control measures (TCM) are being proposed, which, in coordination with California's new motor vehicle emission standards, will help achieve reductions in ROG, NO_x and CO. These measures are summarized in Table 3.5-6. For each control measure in the 1991 RAQS, Table 3.5-7 summarizes the assumed technologies and compliance methods that could result in possible environmental impacts.

3.6 Stationary Source Control Measures

Stationary source control measures are summarized in this section. In order to better define the environmental impacts of each measure, these summaries include the assumed control technologies or methods that will be adopted in compliance with each measure.

3.6.1 Industrial ROG Emission Controls

This section summarizes stationary source, industrial control measures designed to reduce ROG emissions (see Table 3.5-1). Before particular measures are discussed, a brief overview of ROG control technologies is presented. The most common add-on emission control techniques for reducing emissions of ROG are: thermal incineration, catalytic incineration, carbon adsorption, absorption, and condensation. The use of one or a combination of these control techniques may be a viable alternative, depending on the application. The most appropriate application for these control techniques is dependent on many process variables. The following is a brief description of each of the control techniques mentioned above:

Thermal Incineration (TI): This control technique is a combustion process that oxidizes the organic vapor emissions to carbon dioxide and water. TI units are sometimes referred to as direct flume or direct-flame afterburners. The contaminated vapors are typically collected in a vapor recovery system and delivered to a preheater where they are heated by indirect contact with hot incinerator exhaust gases. The vapors are then passed through the combustion zone where the combustion process is completed. TI typically attains control efficiencies as high as 95 percent with ROG inlet concentrations as low as 20 parts per million (ppm).

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TABLE 3.5-6

1992 RAQS Transportation Control Measures to Reduce Emissions of Carbon Monoxide, Oxides of Nitrogen, and Reactive Organic Compounds

| | | | Emis | sion Redu (tons/day | ctions /) |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|------|------------------------|--------------|
| Number | Control Measure | Adoption Date | ROG | NO _X | со |
| TC-1 | Transportation Demand Management Program Employment Based Trip Reduction Education Related Trip Reduction Heavy Duty Truck Trip Reduction | 1992 1993 1994 | 6.9 | 6.4 | 88.6 |
| TC-2 | Alternative Transportation Mode Capacity Expansion Expanded Transit Park and Ride Facilities High Occupancy Vehicle Facilities Bicycle and Pedestrian Facilities Vanpools | | | b | b |
| TC-3 | Traffic Management Program Transportation Control Improvements Ramp Metering Incident Management | • | 0.6 | 0.6 | 12.8 |
| TC-4 | Land Use Job-Housing Balance Mixed Use Development Transit Corridor Development | • | Þ | b | b |
| - | Indirect Source Review | 1992 | N/A | N/A | N/A |
| - | Clean Fuels | 1992 | N/A | N/A | N/A |
| (a) Adoption (b) These m | schedule to be developed after evaluation with transportation criteria. secures support the trip reduction program, rather than supplementing its r | eductions. | | | |

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TABLE 3.5-7

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Control Measures and Their Responses

| | | | | Likely | Techno | logy o | L Com | oliance | Method | | |
|--------|----------------------------------------------------------------------------|----|---|--------|----------|--------|--------|----------|------------|----|---|
| Number | Control Meneure | CM | F | СF | נר א | 8 | я 2 | EC | O W | ಕಿ | æ |
| Rŀ1 | Bulk Gasoline Storage Tank Degassing | | | | | | × | | | | |
| RI-2 | Automobile Refinishing | | | | | | | | × | | |
| RL3 | Solvent Cleaning and Degreesing Operations | | | | <u> </u> | | | | | | |
| RL4 | Polyester Resin Operations - Fiberglass Manufacturing | | | | | | | | × | | |
| RL5 | Substitute Cleanup Solvents | | | | | Ļ | | | × | | |
| RIG | Metal Parts and Products Coatings | | | | | | | ļ | × | | |
| RI-7 | Marine Vessel Coating Operations | | | | | | | <u> </u> | | | |
| RH8 | Gasoline Tank Decommissioning and Soil Decontamination | | | | × | | | | | | |
| RL9 | Paint and Ink Manufacturing | | | | × | | | | × | | |
| RL10 | Can and Coil Coatings | | | | × | | | | | | |
| RI-11 | Wood Products Costings | | | | × | × | | | | | |
| RL-12 | Adhesives | | | | × | × | | | × | | |
| RI-13 | Commercial Bakeries | - | | | × | | | | | | |
| RI-14 | Foam Blowing and Plastics Expanding | | | | × | × | | | | | |
| RI-15 | Kelp Processing and Bio-Polymer Manufacturing | | | | × | | | | × | | |
| RI-16 | Plastic Parts, Rubber, Composites, and Glass Operations | | | | × | × | | | × | | |
| RI-17 | Petroleum Dry Cleaning | | | | × | | | | | | |
| Ri-18 | Polyester and Epoxy Resin Operations - Further Fiberglass Manufacturing | | | | × | × | | | | | |
| RI-19 | Semiconductor Manufacturing and Electronic Packaging Operations | | | | × | × | | <u> </u> | × | | |
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TABLE 3.5-7 (Cont.)

Control Measures and Their Responses

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| Control Measure | CM | E | ۲ ۲ | Ш | R | R | R | EC | OM | ß | æ |
| hylene Oxide Sterlitzers | | | | | × | | | | × | | |
| roundwater Decontamination | ÷. | | | | × | | | | × | | |
| elective Catalytic Reduction for Large Utility Boilers | | × | | | | | | | | | |
| urther Controls on Turbines | × | × | × | | | | | | - | | |
| evised Exemption Threshold for Small Engines | | × | | | | | | | | | |
| mail Internal Combustion Engines (200-500 hp) | × | × | | | | | | | | | |
| mall Internal Combustion Engines (50-200 hp) | × | × | | | | | | | | | |
| ontrols for Industrial and Commercial Boilers | × | × | | | - | | | | | | |
| elective Catalytic Reduction for Large Non-Utility Boilers | | × | | | | | | | | | |
| onsumer Products | | | | | | × | | | | × | |
| mall Utility and Lawn/Garden Equipment | × | × | × | × | | | | | | | |
| ommercial Charbroiling | | | | | × | | | | | | |
| rchitectural Coatings | | | | | | × | | | | | |
| arbecue Grill Charcoal Ignition | | | | | | × | | | | | |
| ecdorants and Antiperspirants | | | | | | × | | | | | |
| larine Gasoline Refueling | | | | | × | | | | | - | |
| ew Source Review | | | | | | | | | | | × |
| ow-NO _x Residential Water Heaters | × | | | | | | | | | | |
| ow NO _x Central Furnace Heaters | × | | | | | | | | | | |
| ow-NO _x Commercial Water Heaters | × | × | | × | | | | | · | | |
| esidential Solar Hot Water Heaters - New Homes | | | | | | | | × | | | |
| | Nyterne Oxide Sheriktzen Ovinctwarter Decontamination dective Catalytic Reduction for Large Utility Boilers inther Controls on Turbines wrised Evernption Threshold for Small Engines and Internal Combustion Engines (50-500 hp) mal Internal Combustion Engines (50-500 hp) mal Internal Combustion Engines (50-200 hp) mal Internal Combustion Engines (50-200 hp) ontrols for Industrial and Commercial Boilers Meditive Catalytic Reduction for Large Non-Utility Boilers ontrols for Industrial and Commercial Boilers mal Utility and Lawn/Garden Equipment ontertial Coating ontertural Coating thecture Catalytic Reduction and Charcoal Ignition and Coating who, Residential Water Heaters w NO, Central Furnace Heaters w NO, Commercial Water Heaters we NO, Commercial Solar Hot Water Heaters - New Homes | Controls Startifizers Control hylene Oxicle Startifizers Mail Mail <td>Notice Stantizers Control menture hylene Oxide Stantizers Controlmention oundwater Decontamination K Mitter Controls on Turbines X 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TABLE 3.5-7 (Cont.)

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Control Measures and Their Responses

| | | • • | | | Lke | ly Tec | hnolog | y or C | omplia | nce M | ethod | | |
|-----|---------------|---------------------------------------------------------------|---------|-----------|---------|----------|----------|----------|---------|-------|-------|---|---|
| | Number | Control Measure | CM | F | 5 | E | N | RR | GR | EC | WO | ð | Æ |
| | EC-2 | Swimming Pool Solar Water Heaters - New | | | | | | · | | × | | | |
| | EC3 | Hot Tub/Spa Solar Water Heaters - New | | | | | | | | × | | | |
| | ₽ C | Commercial Solar Hot Water Heaters - New Development | | | | | | | | × | | | |
| | EC-5 | Residential Solar Hot Water Heaters - Retrofit Existing Homes | | | | | | | | × | | | |
| | EC.6 | Swimming Pool Solar Water Heaters - Retrofit | | | | | | | | × | | | |
| | EC-7 | Hot Tub/Spa Solar Water Heaters - Retrofit | | | | | | | | × | | | |
| | TC-1 | Trip Reduction and Parking Management Program | | | | | | | | | | × | × |
| | - TC-2 | Alternative Transportation Mode Capacity Expansion | | | | | | | | | × | × | × |
| 3-1 | TC3 | Traffic Management Program | | | | | | | | | × | | × |
| 5 | TC-4 | Land Use | | | | | | | | | | | |
| | | Indirect Source Control Program | | | | | | | | | | | × |
| | * Abbreviatik | ons are defined as follows: | | | | | | | | | | | |
| | 5 | Combustion Modifications (e.g., low NO, burners, staged air | | tion) | | | | | | | | | |
| | | Flue Gas Treatment (e.g., selective catalytic reduction) | | • | | | | | | | | | |
| | 5 | Clean Fuels (methanol, compressed natural gas, liquified pro | cane ga | 8) | | | | | | | | | |
| | E | Electrification |) | | | | | | | | | | |
| | R | Vapor Recovery and control systems (carbon absorption, the | mal/cat | alytic ir | cinera | tors, re | frigerat | tion uni | ts) | | | | |
| | RA | Reduce ROG content in coatings, cleaners and solvents or an | vich to | noenbe | uns) sr | actants | () solut | ions wi | thout R | 00 | | | |
| | G | t Gas Recovery systems | | • | , | | • | | | | | | |
| | EC | Equipment Change or retrofit for conservation | | | | | | | | | | | |
| | ž | Modification of Operations | | | | | | | | | | | |
| | 8 | Change Practices of individuals | | | | | | | | | | | |
| | æ | Procedural Rule changes | | | | | | | | | | | |

1989-001-400

- Catalytic Incineration (CI): This technology is similar to TI in that heat is used to convert the organic contaminants to carbon dioxide and water. However, a CI unit uses a catalyst to lower the oxidation activation energy. This allows combustion to occur at temperatures around 600°F. The lower operating temperatures result in decreased fuel consumption when compared to thermal incineration. CI units are typically 90 percent effective on contaminated streams with ROG concentrations greater than 100 ppm.
- Carbon Adsorption (CA): Adsorption is a process by which organic compounds are retained on the surface of granular solids. The solid adsorbent particles are highly porous and have very large surface volume ratios. Gas molecules penetrate the pores of the adsorbent and contact the large surface area available for adsorption. Activated carbon is the most common adsorbent for removal of ROG. Control efficiencies of over 90 percent can be obtained with inlet ROG concentrations greater than 1,000 ppm.
- Absorption (wet scrubbing): Absorption is the mass transfer of selected components from a gas stream into a nonvolatile liquid. The choice of absorbent depends on the solubility of the gaseous organic compounds and the cost of the absorbent. Packed towers, spray chambers, and venturi scrubbers can be used for the absorption equipment. Absorption efficiencies are dependent on the solubility of the ROG vapors. Control efficiencies of 90 percent for inlet concentrations as low as 300 ppm are attainable.
- Condensation: Condensation is a separation technique (usually using refrigeration) in which a contaminated gas stream is brought to saturation and contaminants are condensed to liquid. In many cases the recovered contaminants are recycled and reused. Removal efficiencies as high as 95 percent for ROG inlet concentrations as low as 5,000 ppm can be obtained with this control technique.

RI-1, Buik Gasoline Storage Tank Degassing. Restrict uncontrolled degassing and emission control during cleaning and decommissioning of above ground gasoline storage tanks.

<u>Assumed Technologies and Methods:</u> This measure requires control of at least 90 percent of ROG emissions. Vapor recovery systems which vent to a carbon adsorption unit or thermal incinerator are likely methods of control. A description of carbon adsorption units and thermal incinerators is contained at the beginning of Section 3.6.1.

1999-001-400

Page 46

RI-2, Automobile Refinishing. Require the use of low ROG coatings and solvents, high transfer efficiency application equipment, improved procedures for storage and handling of cleanup solvents, use of enclosed systems for equipment cleaning, improved maintenance and operating procedures, and proper record keeping.

<u>Assumed Technologies and Methods:</u> Surface coatings (e.g., paints, plastic coatings) result in ROG emissions. These emissions stem from the organic solvent portion of the coating and occur during application and drying of the coating. Low-ROG primers, paints, solvents and cleanup materials are required. More stringent low-ROG targets are set for the future. These are technologically forcing, since low-ROG coatings that meet these requirements do not exist at this time. Low-ROG and water-based coatings and solvents are available to meet current standards. This measure also requires coating application processes or equipment with high transfer efficiency (at least 65 percent) which also will reduce ROG emissions. Electrostatic and high-volume low-pressure equipment exist to meet this requirement.

RI-3, Solvent Cleaning and Degreasing Operations. Revise Rules 67.6 and 11 to require emission controls and permits for currently exempt degreasers, remote reservoir cleaners, and strip tanks; to increase freeboard ratio and require freeboard chillers for vapor degreasers; and to require additional controls, lip exhausts, and carbon adsorbers for vapor degreasers emitting 10 tons/year or more.

<u>Assumed Technologies and Methods:</u> In cold cleaning operations, low-ROG and water based cleaners exist to meet the standard. In vapor cleaning operations, the solvent is heated to its boiling point, creating larger ROG emissions than in cold cleaning. For these operations, a higher freeboard ratio will be required which will reduce emissions caused by diffusion or room drafts. For large emitters, the measure requires solvent vapors to be captured by a lip exhaust and vented to a carbon adsorption unit. Instead of carbon adsorption, thermal or catalytic incinerators might be used as the control method.

Ri-4, Polyester Resin Operations - Fiberglass Manufacturing. Revise Rule 67.12, Polyester Resin Operations, which requires material and process changes to reduce styrene emissions, use of low ROG solvents or reclamation systems for cleaning solvents, higher efficiency application equipment, special procedures for storage of cleanup solvents and solvent-laden materials, and record keeping for polyester resin operations.

<u>Assumed Technologies and Methods:</u> Suppressed and low monomer resins exist that will reduce styrene emissions, and are currently used in certain fiberglass fabrication

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operations. This measure also requires improved transfer efficiency equipment such as airless and air-assisted airless spray guns.

RI-5, Substitute Cleanup Solvents. Require the use of lower ROG content cleaning solvents and improved solvent handling procedures for cleaning of equipment and materiais used in surface coating operations.

<u>Assumed Technologies and Methods:</u> Solvents are used to clean and maintain coating application equipment, paint spray booths, and other equipment used in the coating process. Among other things, this measure requires use of low-ROG or water based cleanup solvents.

RI-6, Metal Parts and Products Coating. Enforce control of emissions from surface coating of metal parts and products by use of low ROG solvents, high efficiency application equipment, special procedures for storage and use of cleanup solvents; require improved record keeping and tightening of exemption requirements.

<u>Assumed Technologies and Methods:</u> This measure will require the use of low-ROG or water based coatings and solvents and the adoption of improved transfer efficiency equipment.

RI-7, Marine Vessel Coating Operations. Require lower solvent content coatings and cleanup materials and closed applicator cleaning systems for coating operations associated with construction and repair of marine vessels.

<u>Assumed Technologies and Methods:</u> This measure will be met by adoption of reformulated coatings and cleanup materials using water-based or low-ROG solvents.

RI-8, Gasoline Tank Decommissioning and Soli Decontamination. This control measure reduces ROG emissions which occur as a result of excavation and/or treatment of soil contaminated by leaking underground storage tanks and pipelines. It also delineates special procedures for underground storage tank (UST) removal and handling of excavated soil and installation of emission controls in soil decontamination projects.

<u>Assumed Technologies and Methods:</u> Onsite treatment or remediation of contaminated soil will be required to have emission controls with more than 90 percent efficiency. Carbon adsorption units, thermal incinerators or catalytic incinerators will meet this requirement. In addition, this measure requires 90 percent control of ROG emissions during tank removal and decommissioning. This will require use of a refrigerated



condenser, carbon adsorption unit or thermal/catalytic incinerator as an emission control mechanism.

RI-9, Paint and Ink Manufacturing. Require use of add-on control equipment for large companies, use of low ROG cleaning materials or solvent reclamation, and use enclosed systems for cleaning tools and equipment; require proper record keeping.

<u>Assumed Technologies and Methods:</u> This measure requires the adoption of low-ROG or water-based coatings and solvents, and, for large operations, the installation of add-on vapor recovery systems such as carbon adsorbers, thermal incinerators or refrigerated condensers.

RI-10, Can and Coil Coating. Revise Rule 67.4 to require use of zero VOC (ROG) compounds for can end sealing and coating operations, and use of zero ROG coatings or add-on control devices for coil coating operations.

<u>Assumed Technologies and Methods:</u> Can end sealing compounds which contain zero ROG are a proven technology. Zero ROG content primers for coil coatings are in the development stage. As an alternative, firms can use add-on vapor recovery systems that vent emissions to control equipment such as carbon adsorbers, thermal/catalytic incinerators, or refrigerated condensers.

RI-11, Wood Products Coatings. Revise Rule 67.11 to require use of low ROG coatings or add-on control equipment and elimination of low usage exemption.

<u>Assumed Technologies and Methods:</u> This measure will require the adoption of low-ROG or water based coatings and cleaning equipment. More stringent low-ROG targets are set for the future. As an alternative to low-ROG coatings, firms can use add-on vapor recovery systems that vent to emission control equipment such as carbon adsorbers, thermal/catalytic incinerators, or refrigerated condensers.

RI-12, Adhesives. Require the use of iower ROG content adhesive formulations or add-on control equipment; use of adhesive application equipment with higher transfer efficiency; use of low ROG content solvents and enclosed systems for equipment and surface cleanup operations; and improved record keeping of ROG containing materials.

<u>Assumed Technologies and Methods:</u> This measure requires adoption of low-ROG or water based solvents and the adoption of high transfer efficiency application methods. As an alternative to low-ROG coatings, firms can use add-on vapor recovery systems that vent to control equipment that is at least 90 percent efficient, such as carbon adsorbers, thermal/catalytic incinerators, or refrigerated condensers.

RI-13, Commercial Bakerles. Require 90 percent reduction of ROG emissions from commercial bakerles producing more than 1,000,000 pounds of bread per year.

<u>Assumed Technologies and Methods:</u> Exhaust streams can be controlled by various add-on control equipment. The most likely method is catalytic or thermal incineration.

RI-14, Foam Blowing and Plastics Expanding. Require the use of alternate blowing agents or the addition of control equipment such as a carbon adsorption unit or an incinerator.

<u>Assumed Technologies and Methods:</u> This measure requires the adoption of low-ROG and low-chlorofluorocarbon (CFC) blowing agents. As an alternative, firms can use addon vapor recovery systems that vent to emission control equipment that is at least 95 percent efficient, such as carbon adsorbers, thermal incinerators, or refrigerated condensers.

RI-15, Keip Processing and Bio-Polymer Manufacturing. Revise Rule 67.10, Keip Processing and Bio-polymer Manufacturing Operations, to increase required efficiency of control from 90 to 95 percent.

<u>Assumed Technologies and Methods:</u> Absorption equipment already installed under Rule 67.10 (to meet a 90 percent control level) has demonstrated a capability to meet a 95 percent control level. Increased water throughput and associated water treatment are major operational changes.

RI-16, Plastic Parts, Rubber, Composites, and Glass Coating Operations. Require use of low ROG coating and cleanup solvents for plastic, rubber, and composite coatings; process changes or add-on control for glass coating, high transfer efficiency application equipment, enclosed systems for equipment cleaning; improved maintenance and operating procedures; and proper record keeping.

<u>Assumed Technologies and Methods:</u> This measure requires adoption of low-ROG or water based coatings, solvents and cleanup materials and the adoption of high transfer efficiency application methods. As an alternative to low-ROG coatings, firms can use add-on vapor recovery systems, such as carbon adsorbers, thermal incinerators, or refrigerated condensers.

RI-17, Petroleum Dry Cleaning. Revise Rule 67.2, Dry Cleaning Equipment Using Petroleum-Based Solvent, by lowering the petroleum solvent usage exemption limit and increasing the ROG emission control level for large petroleum-based solvent dry cleaning facilities.

<u>Assumed Technologies and Methods:</u> Compliance with this control measure will require adoption of solvent recovery dryers, carbon adsorbers, and refrigeration units. All of these are currently being used in one form or another in California.

RI-18, Polyester and Epoxy Resin Operations - Further Fibergiass Control. Revise Rule 67.12, Polyester Resin Operations, to eliminate the low usage exemption; to extend the application of cleanup solvent control requirements to also cover epoxy resin operations; and to require add-on controls for large polyester resin operations.

<u>Assumed Technologies and Methods:</u> This measure requires adoption of polyester resins material with low-ROG content. Low-ROG cleaning materials must be used or 80 percent of the high-ROG solvent must be recycled. Spraying equipment with high transfer efficiency is also required. For large operations, the measure requires the installation of add-on vapor recovery systems such as carbon adsorbers, thermal incinerators, or refrigerated condensers.

Ri-19, Semiconductor Manufacturing and Electronic Packaging Operations. Require use of add-on control devices for slip casting; use of lower ROG content or lower vapor pressure materials for tool and equipment cleaning; improved housekeeping practices for handling of organic solvents; proper record keeping.

<u>Assumed Technologies and Methods:</u> The measure requires the adoption of low-ROG cleaning materials which are widely available and used in the coating industry. For ceramic chip manufacturing, the measure requires the installation of add-on vapor recovery systems that vent to emission control equipment such as thermal/catalytic inclnerators or carbon adsorbers.

RI-21, Ethylene Oxide Sterilizers. Require the use of emission control equipment, basic equipment modifications, record keeping requirements, source testing, reporting provisions and/or alternative sterilization techniques to reduce air emissions of ethylene oxide (ETO) in San Diego County.

<u>Assumed Technologies and Methods:</u> This measure requires certain modifications to equipment to reduce emissions of ethylene oxide (EtO). For all but the smallest firms,

1999-001-400

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the measure requires add-on control equipment to reduce emissions by 95 percent to 99.9 percent (depending on usage levels). Two emission control technologies that are feasible are acid-catalyzed scrubbers (producing ethylene glycol as a by product) or catalytic incineration.

RI-22, Groundwater Decontamination. Require use of water phase carbon adsorption or add-on control equipment of air stripping operations in groundwater decontamination projects; Initiate special reporting, monitoring and record keeping requirements.

<u>Assumed Technologies and Methods:</u> The dominant process for removal of ROG from contaminated groundwater is air stripping which accelerates volatilization of ROG using countercurrent streams of air. All ROG emitted from air stripping operations must be reduced by at least 90 percent using add-on vapor recovery units such as carbon adsorption or thermal incinerators.

3.6.2 Industrial NO_x Control Measures

This section summarizes the stationary source industrial control measures designed to reduce NO_x emissions (see Table 3.5-2). Before particular measures are discussed, a brief overview of NO_x control techniques is provided.

 NO_x formation can be attributed to two factors: fuel bound nitrogen and thermal NO_x formation. NO_x formation from fuel bound nitrogen results from the oxidation of the nitrogen in fuels. Thermal NO_x formation results from the high temperature fixation of combustion air nitrogen and oxygen. In any combustion process, NO_x and CO emissions are inversely related. Attempts to decrease NO_x emissions by modifications to the combustion process may result in increases in CO emissions. Strategies to control NO_x emissions can be divided into three categories: combustion modifications, flue gas treatment, and alternative fuels. Any combination of these may be used to reduce NO_x emissions.

Combustion modifications are pre-formative controls and are used to reduce NO_x formation (fuel bound) by controlling the combustion variables. Technologies include low NO_x burners, low excess air techniques, staged air combustion, staged fuel combustion, and flue gas recirculation.

Flue gas treatment systems are post-formative measures which reduce both fuel and thermal NO_x after it has been formed, usually by chemical methods. In general, exhaust gases are exposed to reducing agents which decompose the NO_x to elemental nitrogen and water.

Three available flue gas treatments are selective catalytic reduction (SCR), selective noncatalytic reduction (SNCR), urea injection, and non-selective catalytic reduction (NSCR).

The most likely choice of an alternative fuel is methanol. Alternative fuels, such as natural gas or methanol, have no fuel bound nitrogen, so no NO_x is formed. Since the combustion temperature of methanol is lower than natural gas or fuel oil, the concentration of thermally formed NO_x is also lower than when using these other fuels.

NI-1, Selective Catalytic Reduction for Large Utility Bollers. Obtain NO_x reductions from existing electrical generating utility boilers by requiring selective catalytic reduction (SCR).

<u>Assumed Technologies and Methods:</u> SCR systems reduce NO_x in the gases exhausted by boilers by combining ammonia and oxygen with NO_x in the presence of a catalyst to produce molecular nitrogen and water vapor, the by-products of this reaction. For optimum results, this reaction must occur in the narrow temperature range between 303°C and 400°C. Generally, in order to use SCR, a facility will require some structural modifications, some equipment modifications, installation of a piping injection system with automatic control, monitoring equipment for recording emission levels in the stack gas, and the installation of one or more ammonia storage tanks. When operating properly, SCR can achieve a NO_x reduction of 90 percent or greater. Increased ammonia emissions are associated with this control technology.

NI-2, Further Controls on Turbines. Revises Rule 68 requiring higher efficiency water or steam injection, and selective catalytic reduction (SCR) for large turbines operated more than 6,000 hours per year.

<u>Assumed Technologies and Methods:</u> Water or steam injection consists of the introduction of water into the turbine combustion chamber, cooling the combustion flame, which causes a reduction in NO_x emissions. SCR was discussed in NI-1, directly above. This measure is not expected to apply to standby or peaking units. Each of the 16 standby utility turbines in San Diego County did not operate over 1,000 hours in 1987.

NI-3, Revised Exemption Threshold for Small Engines (Selective Catalytic Reduction For Lean Burn Engines). Use selective catalytic reduction (SCR) as add-on control technology for NO_x emissions from lean burn reciprocating engines operating on natural gas, digester gas, or landfill gas.

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<u>Assumed Technologies and Methods:</u> Approximately 92 percent of the 25 lean burn engines in the area will be affected by this measure. Please see NI-1, above, for a discussion of SCR.

NI-4, Small Internal Combustion Engines (200-500 hp). Requires combustion modifications or flue gas treatment from existing, nonpermitted Internal combustion engines which have maximum power output ratings of 200 to 500 brake horsepower. Lower the Permit to Operate exemption limit in Rule 11 in order to bring these engines into the permit system.

<u>Assumed Technologies and Methods:</u> For natural gas-fired engines, nonselective catalytic reduction (NSCR) is required. This flue gas treatment is also best available control technology (BACT) for rich-burn engines. NSCR utilizes a catalyst bed and simultaneously reduces hydrocarbons CO and NO_x emissions. Essentially, this is the same device as the catalytic converter used for automobile engines.

For diesel-fired engines, the BACT methods required by this measure are selective catalytic reduction (SCR) or ignition retard, both of which are combustion modifications. As yet, SCR has not been demonstrated for diesel engines on a commercial basis. In ignition retard, the fuel is injected into the cylinder shortly before the piston reaches top dead center. Ignition retard reduces NO_x emissions by lowering the peak cylinder temperatures and pressures.

NI-5, Small Internal Combustion Engines (50-200 hp). Require combustion modifications or flue gas treatment from existing, nonpermitted internal combustion engines which have maximum power output ratings of 50 to 200 brake horsepower. Lower the Permit to Operate exemption limit in Rule 11 in order to bring these engines into the permit system.

<u>Assumed Technologies and Methods:</u> Please see the discussion in NI-4, directly above, concerning internal combustion engines from 200 to 500 hp.

NI-6, Controls for Industrial and Commercial Bollers. Require low excess air (LEA), low NO_x burners (LNB), flue gas recirculation (FGR), selective catalytic reduction (SCR), or selective noncatalytic reduction (SNCR) to obtain NO_x reductions from permitted commercial and industrial bollers which have heat input ratings of less than 100 million BTU/hr.

<u>Assumed Technologies and Methods</u>: This measure requires various combustion modifications (e.g., low excess air, low NO_x burners, staged air/fuel combustion and flue gas recirculation) and flue gas treatments (e.g., selective catalytic reduction and selective noncatalytic reduction) which have been discussed above.

NI-7, Selective Catalytic Reduction for Large Non-utility Boilers. Obtain NO_x reductions from existing large steam production, non-utility boilers by requiring selective catalytic reduction (SCR).

<u>Assumed Technologies and Methods:</u> Please see NI-1, above, for a discussion concerning SCR for utility bollers.

3.6.3 Areawide ROG Control Measures

Stationary source, areawide control measures designed to reduce ROG emissions (see Table 3.5-3) are summarized below:

RA-1, Consumer Products. Require reformulated products to be used in households or institutional and commercial establishments with less photochemically reactive formulations. (The ARB has adopted regulations to reduce ROG emissions from sixteen consumer products ranging from air fresheners to shaving creams to automotive windshield washer fluids).

<u>Assumed Technologies and Methods:</u> Some substitute manufacturing processes have been found (e.g., pump sprays replacing aerosol sprays), many of which will require future technological development and consumer acceptance.

RA-2, Small Utility and Lawn/Garden Equipment. Reduce exhaust emission standards for 1994 and subsequent model lawn and garden and utility engines. Replace engines intended for use in pre-1994 equipment with engines complying with the emission standards for 1994 beginning in 1999.

<u>Assumed Technologies and Methods:</u> For two-stroke engines, better maintenance and installation or more efficient carburetors may be necessary. For four-stroke engines, it will be necessary to install non-selective catalytic converters similar to the catalytic converters in automobiles.

RA-3, Commercial Charbrolling. Control emissions from commercial charbroiling operations. (Source category is composed of restaurants and eating establishments.)

<u>Assumed Technologies and Methods</u>: This measure will require installation of electrostatic precipitators (ESP) on grill exhaust stacks to control PM₁₀ emissions. The incoming exhaust stream in an ESP system travels through an electrical field which separates particles. Collected fine particles are then washed down to collection hoppers

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in a detergent and water mixture. In addition, this measure requires installation of a ROG control device (e.g., carbon adsorption units, thermal/catalytic incinerators, or absorption units).

RA-4, Architectural Coatings. Modify Rule 67.0, Architectural Coatings Rule, to require lower solvent content for previously exempt categories and require future reductions from currently controlled categories.

<u>Assumed Technologies and Methods:</u> Architectural and other surface coatings (e.g., paints, plastic coatings) result in ROG emissions. These emissions stem from the organic solvent portion of the coating. These coatings emit ROG as they are applied and while they dry. Low-ROG or water-based coatings currently are available that meet the limits set in the proposed control measure for the near term. Over time, more stringent limits on ROG emissions from coatings is required, and technological advancement will be required in order to meet these limits.

RA-5, Barbecue Grill Charcoal Ignition. Prohibit the sale of any material and/or method used to ignite barbecue charcoal unless the ROG emissions resulting from the ignition are less than or equal to 0.02 pound of ROG per start.

<u>Assumed Technologies and Methods:</u> Adoption of this control measure will likely result in greater use by the public of barbecues that use alternative fuels for ignition and/or operation (e.g., electricity, natural gas and propane).

RA-6, Deodorants and Antiperspirants. Require reformulation or substitution of underarm deodorants and antiperspirant products to reduce the quantity of organic solvent or aerosol propellant. (The ARB proposes to adopt State of California regulations limiting the ROG content of these products.)

<u>Assumed Technologies and Methods:</u> Non-ROG based technologies exist as substitutes for aerosol propellants (e.g., pump sprays). If these are not accepted by consumers, the market share in California will increase for low-emitting "roll-ons" and sticks.

RA-7, Marine Gasoline Refueling. Require use of a vacuum assist vapor recovery system to capture and process vapors displaced from vessel fuel tanks during gasoline dispensing.

<u>Assumed Technologies and Methods:</u> This control measure requires the application of existing technology. Vacuum-assisted vapor recovery systems that are currently in use at automobile gasoline stations are expected to work on most pleasure craft.

New Source Review (NSR). The purpose of this control measure is to reduce ROG and NO_x emissions in the county by lowering the District's current NSR threshold to a level as yet to be determined. The California Clean Air Act requires that severe nonattainment areas have a permit program to achieve no net increase in emissions from all permitted new or modified stationary sources. If the act is amended to exempt sources less than five tons per year from "no net increase" requirements and San Diego is eligible for this exemption, then NSR will be implemented with this exemption.

<u>Assumed Technologies and Methods:</u> This is a procedural measure, and subsequent emission offsets stemming from this rule will be site and project specific.

3.6.4 Areawide NO_x Control Measures

Stationary source, areawide control measures designed to reduce NO_x emissions (see Table 3.5-4) are summarized below:

NA-1, Low-NO_x Residential Water Heaters. Require that natural gas-fired water heating systems installed in all new residential multi- and single-family homes and replaced in existing homes meet a NO_x emission limit of 40 nanograms per joule.

Assumed Technologies and Methods: Low-NO_x water heaters meeting the above standard are currently available at modest price differentials from standard units.

NA-2, Low NO_x Central Furnace Heaters. Requires natural gas-fired low-NO_x central furnace heaters to be installed in all new residential multi- and single-family homes. Replacement units in existing units must meet a low-NO_x emission limit.

<u>Assumed Technologies and Methods:</u> Low-NO_x central furnaces meeting the above requirements are available at modest price differentials from standard units.

NA-3, Low NO_x Commercial Water Heaters. Require that natural gas-fired water heating systems installed in all new buildings and replaced in existing buildings meet a NO_x emission limit of 40 nanograms per joule.

<u>Assumed Technologies and Methods:</u> Similar to residential water heaters (NA-1, above), low emission water heaters meeting the above standard are currently available at modest price differentials from standard units.

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3.6.5 Energy Conservation Measures

Stationary source energy conservation control measures designed to reduce NO_x emissions (see Table 3.5-5) are summarized below:

EC-1, Residential Solar Hot Water Heaters - New Homes. Require installation of solar equipment on natural gas-fired and electric water heating systems in all new residential multiand single-family homes.

<u>Assumed Technologies and Methods:</u> Nonconcentrating solar collectors, such as flat plate solar panels, are capable of providing significant energy for residential water heating. The solar collectors, through a heat exchanger, heat water in excess of 140°F for storage in an insulated hot water tank maintained at a level sufficient to heat water for the home. This system can be enhanced to act as the hot water system for hot tubs/spas and swimming pools (see EC-2 and EC-3). Increased electricity consumption will be required for pumps, but substantial natural gas consumption will be saved.

EC-2, Swimming Pool Solar Water Heaters - New. Require installation of flat-plate solar collectors on all new heated swimming pools.

<u>Assumed Technologies and Methods:</u> Flat plate solar panels are capable of providing sufficient water heating capabilities. Please see discussion under EC-1, above.

EC-3, Hot Tub/Spas Solar Water Heaters - New. Require installation of solar equipment on all new residential hot tubs and spas.

<u>Assumed Technologies and Methods:</u> Solar energy could provide 52 percent of the energy needed to heat water for hot tubs/spas. A flat plate solar panel system, described in measure EC-1, above, is a likely system choice.

EC-4, Commercial Solar Hot Water Heaters - New Development. Require installation of solar equipment on natural gas-fired and electric water heating systems in all new commercial buildings.

<u>Assumed Technologies and Methods:</u> Nonconcentrating solar collectors, such as flat plate solar panels, are capable of providing significant energy for commercial water heating. Please see discussion in measure EC-1, above.

EC-5, Residential Solar Hot Water Heaters - Retrofit Existing Homes. Require solar equipment on natural gas-fired and electric water heating systems upon resale of multi- and single-family homes.

<u>Assumed Technologies and Methods:</u> Please see discussion of this measure for new homes (EC-1), above.

EC-6, Swimming Pool Solar Water Heaters - Retrofit. Require installation of flat-plate solar equipment to replace existing natural gas-fired pool heaters upon home resale.

<u>Assumed Technologies and Methods:</u> Please see discussion of this measure for new homes (EC-2), above.

EC-7, Hot Tub/Spas Solar Water Heaters - Retrofit. Require installation of solar equipment to replace existing residential natural gas-fired hot tub and spa heaters upon home resale.

<u>Assumed Technologies and Methods:</u> Please see discussion of this measure for new homes (EC-3), above.

3.7 Transportation Control Measures

This section summarizes transportation control measures designed to reduce CO, ROG and NO_x emissions (Table 3.5-6). As with stationary control measures, these summaries include the assumed control technologies or methods that will be adopted in compliance with each measure.

TC-1, Transportation Demand Management Program. This program will implement measures to reduce vehicle trips and miles traveled by increasing average vehicle occupancies. Components of the program are:

- 1. Employment Based Trip Reductions
- 2. Education Related Trip Reductions
- 3. Heavy Duty Truck Trip Reductions

<u>Assumed Technologies and Methods:</u> Many of these programs will require lifestyle changes resulting In high vehicle occupancy rates, staggered work schedules, and acceptance of alternative transportation mechanisms to the single occupant vehicle.

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TC-2, Alternative Transportation Mode Capacity Expansion Program. This program supports the trip reduction program (TC-1) through the provision of alternatives to single-occupant motor vehicles. The program includes the following:

- 1. Expanded Transit
- 2. Park and Ride Facilities
- 3. High Occupancy Vehicle (HOV) Facilities
- 4. Bicycle and Pedestrian Facilities Program
- 5. Vanpools

<u>Assumed Technologies and Methods:</u> As with measure TC-1, above, many of these programs will require lifestyle changes and acceptance of alternative transportation mechanisms. These measures could mean increased construction activity in the county.

TC-3, Traffic Systems Management Program. This program provides for traffic flow improvements through the following proposed measures:

- 1. Transportation Control Improvements
- 2. Ramp Metering
- 3. Incident Management

<u>Assumed Technologies and Methods:</u> This measure will result in less congestion. No other effects on the public seem probable.

TC-4, Land Use. This program supports the trip reduction program (TC-1) by altering land usage to make pedestrian and transit travel more convenient. Components of the program are:

- 1. Job-Housing Balance
- 2. Mixed Use Development
- 3. Transit Corridor Development

<u>Assumed Technologies and Methods:</u> This measure will result in less congestion. No other adverse environmental effects seem probable.



3.8 Indirect Source Review

The purpose of this control measure is to reduce ROG and NO_x emissions by requiring that new indirect sources mitigate their air quality impacts. Indirect sources are land uses and facilities that do not by themselves produce significant amounts of pollutants, but which generate or attract motor vehicle traffic whose emissions adversely affect air quality. Examples of indirect sources are residential developments, office complexes, and shopping centers. To respond to the California Clean Alr Act, the District will begin development of the indirect source review program in consultation with its contractor in early 1992. The cities and the County in this region will prepare air quality programs or elements for their respective general plans, incorporating features of the indirect source review program. These additions to local general plans are important because they represent the integration of air quality considerations into development policies and requirements. The general plan programs/elements will identify policies and design requirements for new development that will improve accessibility for pedestrians, transit, and bicycles. These policies and design criteria should make it at least as easy to travel by walking or other modes as by car.

<u>Assumed Technologies and Methods:</u> Many of these effects will be site and project specific. One thing seems clear; these programs are likely to result in increased construction in the area.

3.9 Clean Fuels

The California Clean Air Act requires a program to achieve the use of a significant number of low emission motor vehicles in fleets. The ARB has not provided guidance regarding certain aspects of the requirement. In addition, the APCD is currently participating in a multi-client study of an integrated alternative transportation and fuel technologies assessment. Based on the results of this study, the APCD will recommend a proposed program in mid 1992. The proposal will be subject to public review before final adoption. Because this program has not been developed, an environmental assessment is not possible. Accordingly, a clean fuels program is not included in this environmental assessment.

Subsequent to California Clean Alr Act adoption, the Air Resources Board adopted the low emission vehicle (LEV) program, requiring low emission vehicles in general commerce, and not limited to fleets. Concurrent with the LEV program, ARB adopted the Clean Fuels Program, requiring that major gasoline companies supply clean fuels for low emission vehicles. The District is requesting extending the early requirements for clean fuels to San Diego by including its provision in the strategy.

The District will be reviewing the results of the multiclient study and proposing an appropriate fleet program in late 1992.

3.10 Project Alternatives

Two alternatives to the project are considered. The first is the no-project alternative. This alternative assumes that no new or revised measure in the 1991 RAQS is approved, but that all existing regulations continue to be enforced. This alternative allows for a comparison of impacts of the proposed RAQS with the existing conditions.

The second alternative considered is the "less stringent" alternative. The following three areas differentiate this alternative from the project:

Elimination of Selective Catalytic Reduction (SCR): As discussed earlier, SCR requires the storage of quantities of ammonia, a highly volatile compound. This alternative assumes that, because of the hazards to public safety from ammonia storage, all relevant control measures are changed so as to avoid SCR as an adopted technology. Instead, technologies are adopted that are safer but, albeit, less efficient in reducing NO_x emissions.

<u>Assumed Technologies and Methods</u>: Likely alternative technologies to replace SCR are: urea injection (UI), combustion modifications (low-NO_x burners (LNB), flue gas recirculation (FGR), LNB and FGR combined, or use of methanol as an alternative fuel.

UI reduces NO_x emissions by injecting urea around and between the super heater and reheater piping at the top of a boiler. In the chemical reaction that takes place at a temperature between 871°C and 1038°C, urea breaks down into ammonia and carbon monoxide which then reduces NO_x into nitrogen and water. Either moderate or substantial boiler modifications may be required to accommodate UI, depending on individual applications. Also, piping, injection, and monitoring equipment needs to be installed in addition to urea storage equipment. UI can achieve as much as a 70 percent reduction in NO_x .

There are several possible combustion modifications. LNBs provide controlled air and fuel mixing and control the proportion of air to fuel necessary for optimum combustion by controlling the direction and quantity of fuel and air streams at the burner throat. Control efficiencies range from 30 to 60 percent. In FGR applications, combustion products from the exhaust stack, which contain NO_x , are mixed with the incoming combustion air prior to combustion of the fuel. The recirculated combustion products at a heat sink to lower the peak flame temperature which results in reductions in



thermal NO_x formation but negligible reductions of fuel NO_x formation. This technology can achieve between 30 to 35 percent efficiency in removing NO_x. A combination of LNB and FGR can result in a 60 percent control efficiency. A combination of FGR, LNB and UI can achieve efficiencies in excess of 85 percent.

Adopt an Employee Trip Reduction Plan Less Stringent Than the San Diego Association of Governments (SANDAG) TCM Plan: Formulate a less stringent employee trip reduction plan which will be easier for local employers to meet. This will result in a smaller number of riders per vehicle that will, in turn, result in lower reductions in CO, ROG and NO, emissions.

<u>Assumed Technologies and Methods</u>: More vehicle trips as compared to the project and, therefore, more congestion can be expected for this alternative as compared to the project.

Drop Energy Conservation Measures for Existing Homes: Because costs to retrofit homes and equipment to comply with several conservation control measures could be high, these measures are eliminated in this alternative.

<u>Assumed Technologies and Methods</u>: This would reduce costs to the public to retrofit their home heating and water heating systems.



4.0 ENVIRONMENTAL SETTING

4.1 Earth

4.1.1 Geographical Setting

San Diego County is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the Mexican State of Baja California. A map of the area is shown in Figure 4.1-1. The county is divided by the Laguna Mountain Range which runs approximately parallel to the coast about 45 miles inland and separates the coastal area from the desert portion of the county. The Laguna Mountains reach peaks of over 6,000 feet with Cuyamaca Peak rising to 6515 feet, the highest point in the county. The coastal region is made up of coastal terraces that rise from the ocean into wide mesas which then, moving farther east, change into the Laguna Foothills. Farther east, the topography gradually rises to the rugged mountains. On the east side, the mountains drop off rapidly to the Anza-Borrego Desert which is characterized by several broken mountain ranges with the desert valleys in between. To the north of the county are the Santa Ana Mountains which run along the coast of Orange County turning east to join with the Laguna Mountains near the San Diego-Orange County border.

The county is comprised of three distinctive geographic provinces. These provinces from west to east are the Coastal Plain, Interior Upland of Ranges and Valleys (Peninsular Range Province), and the Salton (Imperial) Basin. Each province has a particular association of climate, topography, flora and fauna, and geologic setting. Within each province there are geologic features which are not only different from those found in the other provinces but are unique to their own province.

4.1.2 Seismic Activity

For seismic considerations, the San Diego region extends approximately 60 miles beyond the County boundaries. San Diego County lies within a zone of high earthquake activity. The continental shelf off the coast is broken by numerous faults. The evidence for these faults is based on bathymetry, and a limited number of recorded epicenters. It appears that the extreme western portion of the coastal plain is actually a part of this faulted continental borderland that lies within a regional system of northwest trending faults exhibiting a complex pattern of vertical and lateral separation.

11





There seems to be a more localized group of related faults extending from San Ysidro, through San Diego and Misslon Bays, and Rose Canyon. Although evidence that these faults have been recently active is not readily apparent, the possibility of movement is being studied by the California Division of Mines and Geology.

It has been suggested that the faults in Rose Canyon and the bay areas continue north and off-shore to connect the Newport-Inglewood Fault which was responsible for the 1933 Long Beach earthquake. This system may also be related to the active San Miguel Fault in Baja California (San Diego County, 1975).

Discussion of Individual Faults

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- The <u>Elsinore Fault</u> is the largest, known active fault in San Diego County. It is approximately 135 miles long. The area of most probable activity is between Lake Elsinore and Vallecito Valley, a distance of about sixty miles.
- The <u>San Jacinto Fault</u> is the most active, large fault within San Diego County. It extends for 125 miles from the Imperial Valley to San Bernardino.
- The <u>San Andreas Fault</u> is outside the County but presents a hazard to the San Diego region. It extends for 650 miles from Baja California to the coast north of San Francisco. In Southern California, the San Andreas extends from San Bernardino through the Whitewater Pass and along the east side of the Coachella and Imperial Valleys. Major damaging earthquakes are likely to originate on the southern segment of the San Andreas. The closest inhabited portion of San Diego County is 30 miles away and the coastal area is 85 miles.
- The <u>Rose Canyon Fault</u> extends from La Jolla Cove, south through Rose Canyon, and along the east side of Mission Bay. Recent investigation indicates that there is considerable faulting in San Diego Bay associated with the Rose Canyon Fault which is apparently also continuous offshore to the north.
- The <u>Sweetwater and La Nacion Faults</u> are 4 to 6 miles inland from and parallel to the Rose Canyon Fault and San Diego Bay. Presumably, they are related to the fault system which created the depression now occupied by San Diego Bay and Mission Bay. The Sweetwater and La Nacion Faults do not appear to have been active in recent time.

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 <u>Offshore faulting</u> is extensive along the coast of Southern California and Baja California. The bathymetric (sea floor topography) map shows numerous basins and ridges with steep slopes. This topography and some epicenter data indicates that the offshore area is extensively faulted. The San Clemente Fault, 40 miles off La Jolla is the largest offshore fault.

4.2 Air Quality

4.2.1 Meteorology/Climate

The climate of the San Diego Air Basin, as with all of Southern California, is largely dominated by the strength and position of the semi-permanent high pressure system over the Pacific Ocean. The high pressure ridge over the West Coast creates a repetitive pattern of frequent early morning cloudiness, hazy afternoon sunshine, daytime onshore breezes and little temperature change throughout the year. Limited rainfall occurs in winter when the oceanic high pressure center is at its weakest and at its farthest point south and as the fringes of mid-latitude storms occasionally move through the area. Summers are often completely dry with an average of 10 inches of rain falling each year from November to early April. Unfortunately, the same atmospheric conditions that create a desirable living climate combine to limit the ability of the atmosphere to disperse the air pollution generated by the large population attracted to San Diego County.

Onshore winds across the coastline diminish quickly when they reach the foothill communities east of the City of San Diego, and the sinking air within the offshore high pressure system forms a massive temperature inversion that traps all air pollutants near the ground. The resulting horizontal and vertical stagnation, in conjunction with ample sunshine, cause a number of pollutants to undergo photochemical reactions and form smog. Because coastal areas are ventilated by fresh breezes during the daytime, they generally do not experience the same frequency of air pollution found in some areas east of the City of San Diego. Unhealthful air quality within the San Diego Air Basin's coastal communities may occur at times in summer during limited localized stagnation, but occurs mainly in conjunction with the occasional intrusion of polluted air from the Los Angeles Basin into the county, especially North County. Elevated pollution levels may also occur in winter during calm, stable conditions near freeways, shopping centers, or other major traffic sources, but such clean air violations are highly localized air pollution "hot spots," coastal community air quality is generally quite good.



In summer, moderate breezes of 8 to 12 miles per hour blow inshore by day, and may continue all night (as a light inshore breeze) since the land remains warmer than the ocean. In winter, the inshore flow is weaker, and reverses in the evening as the land becomes cooler than the ocean. Daytime winds across San Diego County are mainly off the ocean from the west-northwest, while nocturnal winds are mainly from the east-northeast. The daytime inshore and nocturnal offshore flow is further focused by local topography which steers winds along the valley axis. The net effect of the regional wind pattern is that daytime air pollutant emissions typically are carried rapidly away from the source and well dispersed.

Both the onshore flow of marine air and the nocturnal drainage winds across the basin are accompanied by two characteristic temperature inversion conditions that further control the rate of air pollution dispersal throughout the region. The daytime cool inshore flow is capped by a deep layer of warm, sinking air. Along the coastline, the marine air layer beneath the inversion cap is deep enough to accommodate any locally generated emissions. However, as the layer moves inland, pollution sources add pollutants from below without any dilution from above. When this progressively polluted layer approaches foothill communities east of coastal developments, it becomes shallower and exposes residents in those areas to the concentrated reacted byproducts of coastal area sources. The slow drainage or stagnation of cool air at night creates localized cold pools while the air above the surface remains warm. Such radiation inversions occur throughout the County, but are strongest within low, channelized river valleys. They may trap vehicular exhaust pollutant such as nitrogen oxides (NOx) near their source until thee inversions are destroyed by surface warming the next morning.

4.2.2 Air Quality Standards

Ambient air quality is given in terms of state and federal standards adopted to protect public health with a margin of safety. In addition to ambient standards, California has adopted episode criteria for oxidants, carbon monoxide, sulfur dioxide, nitrogen dioxide, and particulate matter. The episode levels represent short-term exposures at which public health is threatened. Levels greater than those specified in the California Ambient Air Quality Standard (CAAQS) are called "exceedances."

Table 4.2-1 lists the California and Federal Ambient Air Quality Standards for criteria pollutants. San Diego County currently exceeds the state and federal ambient 1-hour air quality standards for ozone (0.09 and 0.12 parts per million, respectively). A violation of the federal ozone standard occurs if the maximum hourly concentration exceeds the health-based standard of 0.12 parts per million (ppm) at any monitoring station on more than 3 days

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TABLE 4.2-1

California and Federal Ambient Air Quality Standards

| | Augenting | Coltinatio | National | Standards |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------|
| Pollutant | Time | Standards ^{4,0} | Primary bad | Secondary b.s.s |
| Ozone | 1-hour | 0.09 ppm (180 µg/m ³) | 235 #g/m ⁵ (0.12 ppm) | Same |
| Carbon Monoxide 8-hour 9 ppm (10 mg/m ³) 10 mg/m ³ (9 ppm) Same 1-hour 20 ppm (23 mg/m ³) 40 mg/m ³ (35 ppm) Same Ntrogen Dioxide Annual Average 100 µg/m ³ Same | | | | |
| | 1-hour | 20 ppm (23 mg/m ³) | 40 mg/m ³ (35 ppm) | Same |
| (10 mg/m²) (9 ppm) 1-hour 20 ppm (23 mg/m²) 40 mg/m² (35 ppm) Nkrogen Dioxide Annual Average 100 µg/m² (0.05 ppm) 8ame 1-hour 0.25 ppm (470 µg/m²) | | | | |
| | Sullur Dioxide | Annual Average | | 80 #g/m ³ (0.03 ppm) |
| | 24-hour | 0.05 ppm (131 µg/m ³) | 365 sg/m ³ (0.14 ppm) | - |
| | 3-hour | - | - | 1,300 øg/m ⁸ (0.5 ppm) |
| | 1-hour | 0.25 ppm (655 #g/m ³) | - | - |
| Suspended Particulate Matter ¹ | Annual Geometric Mean | · – | 75 µg/m ⁸ | 80 µg, 08 |
| | 24-hour | - | 260 µg/m ³ | 150 µg/m ³ |
| PM-10 | Annual | 30 ⊭g/m ³ | 50 #g/m ⁸ | Same |
| | 24-hour | 50 #g/m ³ | 150 #g/m ³ | Same |
| Sulfates | 24-hour | 25 #g/m ³ | | |
| Lead | 30-day | 1.5 #g/m ³ | | |
| | Quarterly | _ | 1.5 sg/m ³ | Seme |
| Hydrogen Sullide | 1-hour | 0.03 ppm (42 µg/m ³) | - | - |
| Vinyl Chloride | 24-hour | 0.010 ppm (26 sg/m ³) | - | - |
| Visibility ^d | 1 observation | Insufficient amount to 10 miles when the rel | reduce the prevailing v ative humidity is less th | visibility to less than an 70 percent. |
| a California sta (1 hour), nitr | indards are values that ogen clickide, and parti | must not be exceeded. culate matter (PM ₁₀) sta | The carbon monoxide indards are not to be e |), euliur dicxide xceeded. |
| b National star are not to b number of d equal to or i | ndards, other than ozon 9 exceeded more than (ays per calendar year w ess than one, | e and those based on a once per year. The oco with maximum hourly av | annual averages or ann rie standard is attained erage concentrations al | ual geometric means, when the expected bove the standard is |
| c Concentratio parentheses mercury (1,0 mole of gas. | n expressed first in unit are based upon a refer 13.2 millibar); ppm in th | is in which it was promu ence temperature of 25 his table refers to ppm is | igated. Equivalent unit • C and a reference pre ry volume, or micromol | s given in secure of 780 mm of se of pollutant per |
| d National Prin protect the p the state's in | nary Standards: The le sublic health. Each state spiementation plan is ap | vels of air quality neces e must attain the primar pproved by the EPA. | sary with an adequate r y standards no later the | nargin of safety to In three years after |
| e National Sec any known c within a "rea: | ondary Standards: The r anticipated adverse el lonable time" after the l | e levels of air quality neo Nects of a pollutant. Ea mplementation plan is a | cessary to protect the p ch state must attain the pproved by the EPA. | ublic welfare from secondary standards |
| f PM ₁₀ is repla | icing total suspended p | articulates (TSP) as the | particulate matter indic | ator. |
| g Visibility is a | State standard. | | • | |



in any consecutive 3-year period. In other words, an average of only one exceedance of the federal ozone standard per year is allowed. Nonattainment of state ozone standards occurs if there is an exceedance of the CAAQS (0.09 ppm) in the most recent 3 years. Table 4.2-2 shows the number of days exceeding the state and federal ozone standards for the years 1985 through 1989. As a result of this continuing violation of the federal ambient air quality standard for ozone, the San Diego County has been classified as a non-attainment area for ozone by the U.S. Environmental Protection Agency (EPA). The ARB has classified all of San Diego County as nonattainment for the state ozone standard.

The County also exceeds the state and federal annual air quality standards for particulates less than 10 microns in diameter (PM_{10}) and, as a result, is classified as a non-attainment area by both the EPA and ARB. Table 4.2-3 shows the number of days exceeding the annual standards for years 1985 through 1989.

The coastal areas of the County also exceed the federal and state air quality standards for nitrogen dioxide (NO₂) and carbon monoxide (CO). Table 4.2-4 shows the number of days exceeding the 1-hour average standards for NO₂ and Table 4.2-5 shows the number of days exceeding the 8-hour average standards.

4.2.3 Baseline Sources and Conditions

4.2.3.1 Ozone

Ozone, the major constituent of smog, is formed through a complex series of chemical reactions and transformations in the presence of sunlight. Reactive organic gases (ROG) and NO_x are the principal constituents in these reactions. Motor vehicles, electric generating stations, and organic solvents are the major sources of ROG and NO_x in San Diego County.

According to the APCD, ozone is the air pollutant of greatest concern in San Diego County.

4.2.3.2 Particulate Matter (PM₁₀)

Particulate matter consists of particles in the atmosphere resulting from many kinds of industrial and agricultural operations, motor vehicle tires, combustion, and atmospheric photochemical reactions. Natural activities also put particulates into the atmosphere; windraised dust and ocean spray are two such sources of particulates. A large portion of the particulate suspended in the atmosphere is fine than 10 microns (PM_{10}). These small particulates cause the greatest health risk.

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TABLE 4.2-2

Ozone

Number of Days Exceeding Federal and State Standards San Diego County 1985-1989

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|--------------|-----------|--------|----------|----------|------|-----|--------|----------------|-----------|-------|-----|---------------|------|-----------------|----|------|-------|-------|------|------|
| | 19 | NCEN | IRATIO | N > 12 p | him | 0 | NCENT | RATIO | hqq 9< V | E | | | | | | | | | | |
| | 89 | 88 | -18 | 98 | 85 | 68 | 88 | 87 | 98 | 82 | 89 | 88 | 87 | 88 | 8 | 8 | 8 | 87 | \$ | 8 |
| El Cajon | ς γ | œ | 2 | æ | 6 | 38 | 43 | 24 | 55 | 5 | 21 | 19 | I | | 18 | 3/31 | 8/25 | 10/1 | 4/21 | 0E/8 |
| Chula Vista | 2 | 4 | 2 | 2 | - | 21 | 17 | 15 | 20 | 28 | 16 | 22 | 16 | Ŧ | 8 | 9/14 | 6/6 | 11/8 | 8/19 | 10/5 |
| Escondido | 6 | 2 | ç | 3 | 12 | 40 | . 66 | 27 | 12 | 43 | 19 | 18 | 17 | 13 | 17 | 3/31 | 10/9 | 0C/6 | 5/18 | 7/8 |
| Alpine | 38 | 34 | 25 | 11 | 33 | 137 | 137 | 105 | 92 | 128 | 20 | 19 | 17 | 16 | 33 | 3/31 | 8/25 | 6/2 | 9/4 | 8/29 |
| Downtown S.D | 6 | 2 | - | 2 | S | 22 | | 30 | 12 | 23 | 18 | 18 | I | 16 | 16 | 9/14 | 6/3 | 11/8 | 8/19 | 7/2 |
| Oceanside | ce | 1 | 1 | 10 | 15 | 21 | 22 | 19 | 31 | 36 | 19 | 25 | 18 | 19 | 18 | 9/14 | 3/26 | 10/3 | 3/27 | 4/13 |
| Kearny Mesa | 6 | 7 | ŝ | 7 | 1 | 31 | 24 | 22 | 27 | 48 | 23 | 22 | 17 | 15 | 22 | 3/31 | 6/3 | 1/6 | 5/17 | 4/13 |
| L)el Mar | 16 | 6 | : | 13 | 12 | 36 | 90 | 27 | 13 | 48 | 25 | 18 | 29 | 19 | 38 | 9/14 | 3/26 | 10/3 | 4/20 | 6/6 |
| Basinwide | 55 | 45 | 40 | 46 | 50 | 158 | 160 | 128 | 131 | 148 | 25 | 25 | 29 | 19 | 22 | 9/14 | 3/26 | 10/3 | 3/27 | 4/13 |
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Particulate Matter (PM10) San Diego County 1985-1989

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|-------------|-----|-------|----------|----------|-----|---------|---------|-------|-----------------|---|-------|-------|-------|-----|----------|-------|-------|-------|---------|-------|
| NOTIVIS | FED | EKALS | TANUA | KU SQU | (m) |) JS | VTE STA | NDARL |) 30 µg/ | 2 | Ĩ | DEKAL | STANU | | | | DATEC | IXWXI | MUM | |
| | 68 | 88 | 68 | 98 | 85 | 60 | | - | 22 | ł | 02 | | ÀNY I | | | | | | | |
| | | | | | Γ | | | | | | | 8 | 2 | 8 | <u>۽</u> | £ | 8 | 87 | 98 8 | 8 |
| | \$ | Ş | 8 | Ş | • | Ŧ | 37 | 35 | 36 | • | 8 | 8 | 16 | 74 | • | 12/18 | 12/5 | 11/21 | 10/29 | |
| Chula Vista | 37 | 32 | 31 | HC 10 | • | 34 | DE L | 28 | 32 | • | 69 | 85 | 89 | 104 | • | 12/21 | 12/5 | 1/27 | 12/4 | • |
| Oreansule | 38 | 36 | 33 | ĸ | 35 | 35 | 32 | 30 | 32 | 3 | 68 | 18 | 69 | ĸ | 3 | 1/21 | 1/10 | 10/3 | 12/4 | 12/27 |

* Sampling started in 1986

ATTACHMENT B

Page 72

4-9
TABLE 4.2-4

Number of Days and Hours Exceeding State Standard San Diego County 1985-1989 Nitrogen Dioxide

| UMBER | OF DAY | 'S EXCEL | DINC | NUMB | 2 5 5 | 2 | EXI EEL | | ~ | MIX VIX | UN ON | EHOUR | | | | DI NA | AT N I I | |
|---------|-------------------------|-----------------|-----------------|-------------|------------------|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------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| 88 | 69 | 86 | 8 | 89 | 88 | 68 | 98 | 8 | 89 | 88 | 87 | 86 | 8 | 68 | 88 | 87 | 88 | 8 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 16 | 15 | 22 | 1 | 1/18 | 12/21 | 1/27 | 1/13 | 12/20 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | | 16 | 21 | 15 | Ŧ | 16 | 11/15 | 5/5 | 12/10 | 1/18 | 12/23 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 19 | 16 | 13 | Ξ | 11/8 | 2/9 | 1/12 | 1/10 | 1/17 |
| - | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 22 | 28 | 22 | 18 | 21 | 11/15 | 1/26 | 10/3 | 3/21 | 2/15 |
| 0 | - | 0 | 0 | 0 | 0 | m | 0 | 0 | 23 | 19 | 26 | 21 | 19 | 11/15 | 2/9 | 1/26 | 1/18 | 12/28 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 17 | 19 | E | Ξ | 11/15 | 5/9 | 11/24 | 1/25 | 1/17 |
| 0 | 0 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | = | 12 | 17 | 10 | 12 | 12/15 | 12/13 | 1/27 | 12/3 | 12/20 |
| 5 | • • • • • • • • • • • • | • • • • • • • • | • • • • • • • • | | | | 0 0 0 m 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 | $\begin{array}{cccccccccccccccccccccccccccccccccccc$ | | 0 0 0 0 1 0 0 0 0 0 1 0 0 0 0 0 0 1 0 0 0 0 0 0 1 1 0 0 0 0 0 1 0 1 0 0 0 1 1 0 1 0 0 1 1 1 0 0 0 0 0 23 3 0 0 0 0 0 23 3 | $ \begin{array}{cccccccccccccccccccccccccccccccccccc$ | 0 0 0 0 0 0 14 16 15 0 0 0 0 0 0 0 1 16 15 0 0 0 0 0 0 0 1 16 15 1 0 0 0 0 0 1 19 19 16 1 0 0 0 0 0 1 19 16 1 0 0 0 0 1 10 19 16 1 1 0 0 1 10 19 16 16 1 1 0 1 1 1 1 19 26 0 1 0 1 1 1 19 26 23 19 26 1 1 1 1 1 1 1 1 19 16 1 1 1 1 1 1 1 1 1 19 | 0 0 0 0 0 0 0 15 22 0 0 0 0 0 0 0 0 16 15 15 14 0 0 0 0 0 0 0 10 16 15 15 14 1 0 0 0 0 0 1 19 16 13 1 0 0 0 0 0 1 10 16 13 1 0 0 0 0 0 1 10 16 13 1 0 0 0 0 0 22 28 22 18 0 1 0 0 3 0 0 23 19 26 21 0 0 0 0 0 0 23 19 26 21 1 0 0 0 0 0 20 23 19 14 1 0 <td>0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1/18 1/27 1/18 1/18 1/18 1/18 1/18 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10</td></td></td> | 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | 0 0 0 0 0 0 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 <td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1/18 1/27 1/18 1/18 1/18 1/18 1/18 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10</td></td> | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 <td>0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1/18 1/27 1/18 1/18 1/18 1/18 1/18 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10</td> | 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 1/18 1/27 1/18 1/18 1/18 1/18 1/18 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/18 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 1/10 |

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Carbon Monoxide Number of Days Exceeding Federal and State Standards San Diego County 1985-1989

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|-------------|-------|-------|-------------------|--------|-----|------|--------|---------|-----------------|------------|------|----------|--------------|---------|--------|-------|------------------|--------|-----------------|-------|
| | PEDEK | NL8HU | UK AVC IKATIOI | STANU: | AKD | STAT | LEN IF | K AVC : | SIANDA 90 pp | | S C | UNCEN | | V (ppm) | ی ح | | OF MA: VVC CU | NCEN I | EICHT (AITON | |
| | 89 | 88 | 87 | 8 | £ | 68 | 88 | 68 | 86 | ÷ | 89 | 88 | 87 | 88 | 2 | 68 | ¥\$ | 63 | 2 | ¥ |
| L) Cajun | 0 | Ð | 9 | 0 | 0 | 9 | 0 | 0 | 0 | 9 | 63 | 63 | \$ \$ | | 7.0 | 01/1 | 1 | 12/11 | 12/4 | 12/21 |
| Chula Vista | Ð | 0 | Ð | 0 | 0 | Ð | Ð | 0 | 0 | 0 | •• | 36 | • • • • | 5 1 | 39 | 1/20 | 12/5 | 2/5 | 12/4 | 12/3 |
| ubahara | • | Ð | 9 | 9 | | s | - | - | - | _ | 0.01 | 63 | 63 | 16 | 9 8 | 12/22 | 12/1 | 12/10 | | 12/18 |
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| Kearry Mesa | 9 | 9 | 0 | 0 | 0 | | 0 | Ð | 9 | | 8 | 34 | 10 | 8 | 33 | 11/15 | 11/29 | 12/11 | 12/4 | 12/21 |
| Curbside | 2 | 7 | D | - | 2 | 2 | 2 | - | | ~ ~ | 105 | 86 | 6.9 | 104 | 13.0 | 1/20 | 11/29 | 12/10 | 01/1 | 12/20 |

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Page 74

4.2.3.3 Oxides of Nitrogen (NO_x)

Of the number of NO_x compounds, only two play an important role in air pollution: nitric oxide (NO), a colorless, odorless gas; and nitrogen dioxide (NO₂), a reddish-brown irritating gas. NO_x plays a critical role in the photochemical reaction that produces ozone. High temperature combustion causes nitrogen and oxygen to combine and form NO and NO₂. Further reaction produces additional NO_x. Combustion in motor vehicle engines, generating stations, refineries, and other industrial operations is the primary source of NO_x in San Diego County. Overall, motor vehicles account for the largest source of emissions, approximately 60 percent of NO_x and hydrocarbon emissions in San Diego County (SDAPCD, 1989).

4.2.3.4 Carbon Monoxide

Carbon monoxide (CO) is a colorless, odorless, toxic gas produced by incomplete combustion of carbon-containing substances. CO concentrations are generally higher in the winter months during morning hours, when vertical mixing of the atmosphere is limited. Motor vehicles are the primary source of CO in San Diego County. Combustion processes from various industrial sources also produce significant amounts of CO.

4.2.3.5 Sulfur Dioxide

Sulfur dioxide (SO₂) is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid conditions, some of the SO₂ may be changed to sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting with other materials to produce sulfate particulates. Electric utility generating stations and motor vehicles account for the majority of the SO₂ emissions in the County.

4.2.3.6 Hydrocarbons/Reactive Organic Gases (ROG)

Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons, including fossil fuels. Many hydrocarbon compounds are photochemically reactive and play an important role in ozone formation. These hydrocarbons are often referred to as reactive organic gases (ROGs) and are roughly equivalent to nonmethane hydrocarbons. Motor vehicles, organic solvents, petroleum recovery operations, pesticides and herbicides, and organic solvents are all major sources of hydrocarbons in San Diego County.



4.2.4 Transport From The South Coast Air Basin

Exceedances of the ozone standard are not all attributable to pollution generated in San Diego. Many are the result of pollution generated in the South Coast Air Basin (SCAB) and transported to San Diego by meteorological influences. Pollutants blown to San Diego County from the Los Angeles Basin accounted for approximately 75 percent of the days exceeding the federal standard for ozone in 1990 (San Diego Air Pollution Control District, 1990.)

4.3 Water Resources

The combination of reduced local water resources and a marked population increase has made the County of San Diego almost entirely dependent upon imported water. Only 28 percent of the County land area, but 96 percent of the population, is served by imported water.

According to the San Diego County Water Authority (SDCWA), water requirements for the County are expected to increase from approximately 350,000 acre-feet in 1974 to 420,000 acre-feet in the year 2000.

4.3.1 Groundwater/Surface Water

Until 1947, when the first San Diego aqueduct was constructed, domestic, industrial, and agricultural water supplies were totally dependent on local groundwater and surface water. Currently, about 50,000 acre-feet of local water supplements the imported water. In addition, all of the desert and mountain areas, and much of the foothill regions, have no water supply other than locally derived water. In those areas groundwater is the major water resource, as most surface water is too variable to be a reliable water source and rights to this water are held by local water agencies.

Water-bearing rock that will yield groundwater in usable quantity to wells and springs is referred to **as an** aquifer. In San Diego County there are three principal aquifer types:

- Clay, sand and gravel deposits which fill many river valleys, mountain meadows and desert areas;
- Fractured and weathered crystalline rocks in the mountains and foothills; and
- Consolidated sedimentary rocks (Tertiary age) of the coastal plain and desert regions.

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The water table is generally less than 50 feet below the ground surface and approximately follows the surface topography. Groundwater movement through the aquifer is slow, generally ranging from a few inches to tens of feet per year. Under natural conditions, long-term discharge (springs, seeps, stream flow) will equal long-term recharge.

Groundwater mining occurs when withdrawals are made from an aquifer at rates which exceed net recharge. The problem becomes serious when this practice continues over a period of time. Groundwater mining may result in water table declines, increased pumping cost, salt water intrusion, land subsidence, and loss of storage capacity in the aquifer. Mining may occur in aquifer systems having ample recharge, as well as those having negligible recharge.

Recent studies and case histories indicate that the total groundwater resources in the eastern portions of the County are less than previously estimated. The increased use of water and drought have lowered water tables and, in some instances, have reduced the discharge of wells and springs.

4.3.2 Imported Water

The SDCWA purchases about 350,000 acre-feet annually of imported water. Water is conveyed by four parallel aqueducts and stored in reservoirs in the foothills of the coastal plain. Distribution systems for this imported water are presently located only in the western portions of San Diego County. Water is transported through four pipelines to the western third of the County. It is distributed to 96 percent of the County's population by the SDCWA through its 22-member agencies. There are no known active plans for introducing imported water to the eastern portion of the County, although there are no governmental policies to restrict the construction of an aqueduct in this area.

Agricultural water use amounts to 22 percent of the total 350,000 acre-feet of water produced by the SDCWA agencies in 1973. In the past several years, this percentage has steadily decreased, although the number of acre-feet has been increasing. This trend is expected to continue as population grows.

San Diego County's imported water is supplied from the Colorado River.

However, the amount of Colorado River water available to San Diego County will decrease in the future. As a result of the United States Supreme Court decision (Arizona vs. California), California will be subject to the loss of nearly half of its current supply of Colorado River

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water. As a result of this loss, Southern California's contract for Northern California water has been significantly increased by the state.

The overall quality of Colorado River water has been deteriorating over the last several years. The traditional problems of high concentrations of total dissolved solids and hardness have been compounded by other problems:

- Increased recreational use of the watershed upstream of the diversion point of Parker Dam has increased salinity.
- Periodic cleaning of the main aqueduct by the Metropolitan Water District increases the turbidity of water transmitted to San Diego.
- Agricultural irrigation in the Upper Colorado River Basin has increased the salinity of the river.
- From the early 1950's, the construction of new reservoirs in the Upper Colorado River Basin, additional water diverted into the watershed, and irrigation return flows have gradually increased salinity levels of the River.

Water from Northern California is of generally better quality than Colorado River water. With respect to hardness and total dissolved solids; however, it will be poorer from a physical and sanitary standpoint. The State Department of Public Health is requiring complete treatment of water from Northern California before it may be used for domestic purposes. The state also has required since 1989, complete treatment of Colorado River water.

4.4 Biological Resources

San Diego County has a variety of biological habitats, each unique by virtue of its composition and geographic distribution. Table 4.4-1 summarizes the habitat acreage in San Diego County for 1963, as defined by the County General Plan, Conservation Element, and the California Fish and Game Plan.

A number of San Diego County areas have been identified as vegetation and wildlife habitats of national and statewide importance. In addition, habitats within the County support a number of species of wildlife considered by the California Department of Fish and Game, the United States Wildlife Service, and other conservation experts to be endangered, rare or threatened.

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TABLE 4.4-1

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|-------------------------|--------------|---------------------------------------|
| Habitats | 1963 Acreage | Percentage of County Total |
| Chaparral | . 1,121,580 | 41.2 |
| Low Desert | 645,780 | 13.7 |
| Coast Sagebrush | 364,365 | 13.4 |
| Grassiand | 165,388 | 6.1 |
| Urban-Industrial | 122,275 | 4.5 |
| Woodland-Grass | 85,625 | 3.1 |
| Agriculture | 58,147 | 2.1 |
| Pine-Fir-Chaparral | 55,290 | 2.0 |
| Juniper-Pinyon | 35,165 | 1.3 |
| Lakes, Bays, Reservoirs | 32,795 | 1.2 |
| Woodland-Chaparral | 15,570 | 0.6 |
| Barren | 10,950 | 0.4 |
| inland Sagebrush | 5,190 | 0.2 |
| Riparian (Streamside) | 5,000 | 0.2 |
| Marsh | 1,000 | Trace |
| Seasonal Marsh | 1,000 | Trace |

Habitat Acreage in San Diego County

The California Native Plant Society (CNPS) has identified 79 species of plants considered endangered or potentially endangered within San Diego County. The CNPS has identified a total of 169 endangered species in the state of California (Conservation Element 1990).

4.5 Noise

Noise is often used to mean "sound that is unwanted by the listener" because it is unpleasant. Its effects on humans can range from annoyance and interference with various activities to hearing loss and stress-related health problems. Annoyance and feelings of dissatisfaction are typical subjective responses which may occur with very low and relatively infrequent noise levels. In addition, infrequent noise can prevent or interrupt sleep, interfere with speech, and contribute to fatigue and reduced work performance. Noise can also create psychological stress which may be manifest physiologically by increased blood pressure, muscle tension, and cardiovascular problems, and by emotional problems and antisocial behavior. Irritation from noise is caused by the actual intensity of the sound itself and the persistence of that loudness. Noise intensity is commonly measured in decibels (dB).

Sources of environmental noise within San Diego County include:

Roadway traffic

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- Passenger and freight online railroad operations and ground rapid transit systems
- General aviation and military operation, and all other round facilities and maintenance functions related to airport operation
- Industrial and manufacturing plants
- Other ground or stationary noise sources identified by local agencies as contributing to the community noise environment

Specific regulations have been adopted that control the excessive generation of noise. The U.S. Department of Housing and Urban Development (HUD) has an upper level (65 dB) for acceptable exterior residential noise for those projects funded by HUD. This level is not to be exceeded for more than 8 hours per day. In addition, the Federal Highway Administration (FHWA) has set design goals for federally funded highway projects. The American Public Transit Association has proposed guidelines for maximum noise exposure to transit facilities similar to the FHWA and EPA criteria.

The San Diego County General Plan includes a Noise Element mandated by Section 65302 of the State Government Code. This element describes noise conditions and include planning guidelines for determining land use compatibility with community noise levels. Ordinances to control noise generators in these jurisdictions have been established. In addition, the State Vehicle Code (Sections 27200-27207) sets limits for noise emissions from motor vehicles and provides for reductions in noise emission limits for vehicles manufactured after specified dates.

4.6 Light and Glare

Glare in San Diego County is, for the most part, a result of the human-built environment as it reflects natural and man-made light sources. Man-made light and glare are primarily visible at night in the County, but glare is also perceived during daylight hours as reflections from

structures and vehicles. The continuous urban nature of the communities in the County results in the combination of individual sources of light and glare that creates a continuous, unbroken perception of light from great distances.

4.7 Land Use

San Diego County comprises approximately 4,261 square miles of land. Within this area the County Assessor has established eight basic land use designations: residential, commercial, industrial, institutional, recreational, vacant urban, rural (non-irrigated), and irrigated farm. Table 4.7-1 contains the percentage distribution of acreage by land use category for parcels one-half acre or more, comparing 1982 and 1990. The continuing urbanization of the County is evident in the increased share of acreage devoted to urban uses. Combined acreage in residential, commercial and industrial uses increased from 5.2 percent of the total in 1982 to 6.8 percent in 1990 (San Diego Department of Planning and Land Use, 1990).

TABLE 4.7-1

Percentage of Acreage by Land Use Category (for parcels of $\frac{1}{2}$ acre or more) San Diego County

| Land Use | 1982 | 1990 |
|-----------------------|-------|-------|
| Residential | 4.6 | 5.9 |
| Commercial | 0.3 | 0.5 |
| Industrial | 0.3 | 0.4 |
| Institutional | 55.6 | 56.6 |
| Recreational | 0.4 | 0.4 |
| Vacant Urban | 4.2 | 4.8 |
| Rural (Non-Irrigated) | 30.4 | 27.6 |
| Irrigated Farm | 4.2 | 3.8 |
| TOTAL | 100.0 | 100.0 |

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4.8 Natural Resources

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The geology and/or climate of an area over time may create natural resources used by man. The principal natural resources located in San Diego County and identified in the County General Plan Conservation Element are mineral resources. Some of these, such as sand, gravel, and dimension stone, are essential to the construction industry and the region's economy. Other minerals occur in such limited amounts that they are of minor value.

Geologic factors determine the type, location, size, and concentration of all mineral resources. There is a direct association between specific types of mineral deposits and the host rock which contains those deposits. For example, in San Diego County, gold and tungsten occur mainly in metamorphic rocks, while concrete quality sand is found in the floodplains of the major river valleys.

In San Diego County there are four general rock forms:

- Most of the mountainous terrain in the eastern portion of the County is underlain with Cretaceous Are granitic rocks, including diorites, gabbros and quartz diorites.
- Mesozoic Age metamorphic rocks, such as schlst, gneiss, and marble crop out in the western foothills as elongated bands within the granitic rocks and in the desert east of the mountains.
- The coastal or western portion of the County is covered with essentially Tertiary Age flat-lying, consolidated sedimentary rocks. Sandstone, conglomerate and mudstone are the principal rock types. Tertiary Age consolidated sedimentary rocks, which have undergone extensive folding and faulting, crop out in portions of the desert basin in the eastern portion of the County.
- Strips and patches of recent alluvium, including sand, gravel, silt, and clay are found in the river and stream valleys, around the lagoons, in the intermountain valleys, and in the desert basins.

The County has an exceptionally wide variety of mineral deposits. The Conservation Element indicated approximately 425 mines, claims, and claim groups have been located. Of these, 203 are metals, and 222 are nonmetals. These minerals and the number of deposits recorded in the Conservation Element are identified in Table 4.8-1.

TABLE 4.8-1

| Metals | No. of Deposits | Non-Metals | No. of Deposits |
|------------------------------------|--------------------|--------------------------------------------------|--------------------|
| Copper | 7 | Clay | 21 |
| Gold | 130 | Feldspar | 23 |
| Iron | 4 | Gems | 29 |
| Lead | 2 | Graphite | 3 |
| Manganese | 19 | Gypsum | 2 |
| Molybdenum | 6 | Limestone and Dolomite | 15 |
| Tungsten | 26 | Magnesium | 1. |
| Uranium and Thorium | 5 | Obicular gabbro | 15 |
| Miscellaneous | 4 | Prophyllite | 5 |
| (inci. beryllium, nickel, and tin) | | Quartz and Quartzite | 17 |
| | | Salt | 5 |
| | | Sand and Gravel | 50 |
| | | Specialty sands | 3 |
| | | Wallastonite | . 2 |
| | | Miscellaneous | 17 |
| | | (incl. abrasives, boron, calcite, lithium, etc.) | |
| TOTAL: | 203 | TOTAL: | 222 |

Conservation Element - Minerals

The principal metallic commodities that have been mined in the County are gold, tungsten and copper; however, total production of these has been small. Approximately six million dollars worth of gold was produced from 1870 to 1875 and from the late 1880's to 1900. Tungsten was mined during World War I. Presently, there is little serious mining of metals in San Diego County. Most metalliferous deposits not previously mined are either too small or of too low grade to be economically mined at this time.

There is extensive extraction of nonmetals in the County. The following commodities are being commercially extracted:

- Gabbro "Black Granite" near Escondido and Lakeside;
- Silica sand near Oceanside:



- Salt from south San Diego Bay; and
- Sand, gravel and rock at numerous locations.

Gem minerals were actively mined between 1900 and 1912 within the County. Recently many of these mines have been reopened and produce some of the most interesting and important gem deposits in the nation. Gems are found in pegmatite dikes in the Pala, Mesa Grande, Ramona, Rincon, Chihuahua Valley, and Jacumba districts. Production consists of Tourmaline, Spodumene, Beryl, Topaz, Garnet, and Quartz. Some material is cut as gems, but most is sold as specimens for collectors.

Fifty thousand to one hundred thousand tons of salt are produced annually from salt ponds at the south end of San Diego Bay. In addition to their industrial value, the salt ponds provide open space and habitat for shore birds.

4.9 **Population and Housing**

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Population growth is the major determinant of housing need. The San Diego Association of Governments (SANDAG) Series VII forecasts provide a projection of population growth through the year 2010. These projections, which were developed using SANDAG's Regional Model System and policy information for all of the region's jurisdictions, provide a reasonable estimate of the growth potential of each of the unincorporated communities in San Diego County. According to these projections, the population of the unincorporated portions of the County will grow by 81 percent or 278,551 people, between 1986 and 2010. Population growth for the incorporated cities is projected to grow by 39 percent for the same period.

The number of households for the County of San Diego is projected to grow at a rate even faster than population. SANDAG projects that between 1986 and 2010 there is a projected increase of 113,471 new households in the unincorporated areas, for a gain of 108 percent over the 24-year period. The number of new households for the same period in the incorporated areas of the County are projected to increase 49 percent. Table 4.9-1 illustrates these projections.

Changing demographics and falling family sizes are the reason that households are projected to increase more than population. The maturing of the baby boom generation is putting a large number of people in age groups with a high propensity to be householders. In addition, changes in social trends and increased affluence have resulted in many individuals establishing 1-person households. Also, the expected continuation of low fertility will result in a reduction in the average number of children per household.

ATTACHMENT B

TABLE 4.9-1

Household Growth San Diego County 1980-2000

| | | | | Change 1 | 980-2000 |
|---------|----------------------------------------------|----------------------------------------------------|-------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1980 | 1990 | 1995 | 2000 | Numeric | percent |
| 105,253 | 147,164 | 171,229 | 218,724 | 113,471 | 107.8 |
| 665,829 | 817,600 | 876,950 | 994,049 | 328,220 | 49.3 |
| 771,082 | 964,764 | 1,058,179 | 1,212,773 | 441,691 | 57.3 |
| | 1980 105,253 665,829 771,082 | 19801990105,253147,164665,829817,600771,082964,764 | 198019901995105,253147,164171,229665,829817,600876,950771,082964,7641,058,179 | 1980199019952000105,253147,164171,229218,724665,829817,600876,950994,049771,082964,7641,058,1791,212,773 | 1980 1990 1995 2000 Numeric 105,253 147,164 171,229 218,724 113,471 665,829 817,600 876,950 994,049 328,220 771,082 964,764 1,058,179 1,212,773 441,691 |

SOURCE: SANDAG Series VII Forecasts

4.10 Employment

The San Diego region has experienced very rapid employment growth over the past one and one half decades. The County General Plan Housing Element indicates that between 1975 and 1982 employment growth averaged nearly 27,000 per year, a 38 percent gain over the 7-year period. During the same period, employment state-wide grew by less than 25 percent.

San Diego's economy has experienced significant diversification in the past 15 years. In the late 1960's, San Diego's economy was dominated by the military and the aerospace industry. During the 1970's and early 1980's, San Diego experienced growth in "high-tech" industries (electronics manufacturing, oceanography, research and development) as well as tourism, trade and services. The Housing Element reports that San Diego has been identified as one of the nations nine emerging high tech employment centers. Factors which make San Diego attractive to high technology firms are environment and quality of life, major universities, an adequate labor pool, and a preference by company executives to live in San Diego. On the negative side, the high cost of housing has been cited as a reason for companies choosing locations other than San Diego for expansion.

The rapid employment growth in San Diego has resulted in the immigration of workers to fill the new jobs. These workers and their families have stimulated the demand for housing and have contributed to San Diego's high housing costs. SANDAG estimates that net "employment-related" migration in San Diego has averaged 37,000 per year over the past decade.

A significant amount of employment growth in San Diego County is projected to occur in the unincorporated areas. Average employment growth between 1980 and 1990 In the unincorporated area is projected to be 61.8 percent compared to a County-wide employment growth projection of 20.4 percent. The largest gains are projected for North County, Fallbrook, San Dieguito and Otay. Otay is an area in South San Diego County, just north of the Mexican border.

4.11 Transportation/Circulation

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Transportation facilities located within the County include freeways and highways, streets and roads, public transit, bikeways and aviation facilities. While San Diego County's system offers commuters a range of choices, the automobile is by far the most popular and most frequently chosen method of transportation in the County. The 1990 Draft Regional Transportation Plan prepared by SANDAG reports that during the 10-year period from 1978 to 1988, when population increased by 22 percent, licensed drivers in the region increased by 40 percent (to 1,612,000 drivers), auto registrations increased by 64 percent (to 1,348,000 registrations) and weekday vehicle miles of travel increased by 63 percent. During this same period, increases in freeway facilities (11 percent) and local street and road mileage (16 percent) did not keep up with the increasing demand.

Transit service also plays an important role in the transportation system within the County. Public transit provides a relatively inexpensive and efficient method of transportation, and is the predominant form of transportation for many people, especially students, low income persons and the elderly. The remaining modes of transportation, such as air, rail, bicycle and walking, represent a small but important amount of total trips within the County.

SANDAG is designated by both the state and federal governments as the agency responsible for regional transportation planning. In this role, SANDAG prepares a Regional Transportation Plan (RTP) for the San Diego region. The RTP is updated approximately every two years and includes goals and objectives for all forms of transportation facilities in the County. The road network in the County Circulation Element is coordinated with the freeway and highway system presented in the RTP. By working cooperatively and using common

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information and projections, the County and SANDAG coordinate their plans to provide a regional transportation system that is efficient, safe and convenient.

The County of San Diego is responsible for ensuring the planning, development and maintenance of transportation facilities located in the unincorporated area. In addition, the County works closely with other agencies, including SANDAG, the Metropolitan Transit Development Board (MTDB), the North San Diego County Transit Development Board, and the California Department of Transportation (CALTRANS) to aid in the planning of transportation facilities and services throughout the region.

4.11.1 Roads

Travel by bicycle, car or public transit utilizes roads and bridges. With the increasing population and automobile usage in San Diego County, the amount of traffic on the roads has increased. Expanding the County road and bridge network is a continual process. In 1990, there were approximately 1,864 miles of County-maintained roadways in the unincorporated area, including both Circulation Element and non-Circulation Element roads. Additional roads in the unincorporated area that are not constructed or maintained by the County include freeways, highways and private roads. Road within the incorporated cities are constructed and maintained by the individual municipalities.

4.11.2 Bicycle Facilities

The mild year-round climate in the San Diego region makes the area ideal for the use of bicycles for transportation. Currently, there are over 230,000 bicycle trips made daily within the San Diego region on more than 450 miles of designated bikeways and other roadways. Increased costs for motorized travel congested roads and highways and a greater emphasis on physical fitness have all contributed to greater bicycle ridership. Because of the growing demand for transportation by bicycle, increased attention is being focused on this mode of travel. (San Diego County General Plan, Public Facility Element, March 1991)

Bicycle use, however, has not increased at the rate projected in the 1985 SANDAG Regional Transportation Plan. SANDAG projected a 10 percent increase between 1985 and 1987, while actual ridership during this period increased by only 5 percent. Major reasons for the slower increase in ridership include inadequate funding for bikeway projects, which has resulted in a 50 percent completion rate of planned bikeway projects, and a lack of incentives to encourage bicycle ridership.

4.11.3 Transit Facilities

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The San Diego County Transit System provides public transportation services to the unincorporated area and to 14 of the region's 18 cities. Public transit planning is done on a regional basis by the Metropolitan Transit Development Board, the North County Transit District and SANDAG, with input from the County. The County Department of Public Works completes short-range transit plans and transportation improvement programs for the systems it operates.

The County Transit System utilizes six types of transit services in its effort to provide a functional and responsive transit system. These are Suburban Fixed Route, Commuter Express Bus, Rural Lifeline service, Airporter service, Elderly and Disabled Dial-A-Ride service and General Public Dial-A-Ride services. Through these programs, the County Transit System serves almost two million passengers annually. Table 4.11-1 describes the different types of transit service and lists ridership levels for 89-90 fiscal year. All transit services offered by the County Transit System are provided by private contractors. In 1990, there were 10 contracted transit service providers. Seven contractors used their own vehicles, while the remaining three operate County-owned vehicles. In all cases, County Transit Service contractors provide vehicle maintenance and storage facilities.

4.11.4 Aviation Facilities

Aviation facilities in San Diego County include 40 airports and 39 heliports. Of these facilities, eight of the airports and three of the heliports (located at County airports) are owned by the County. One of the airports, Fallbrook, is leased and operated by a private group. Lindbergh Field, San Diego's major airport serving approximately 11 million passengers per year, is owned and operated by the San Diego Unified Port District.

4.12 Public Services

4.12.1 Law Enforcement

The County Sheriff's Department provides law enforcement services to the County's unincorporated area and by contract to the cities of Del Mar, Encinitas, Imperial Beach, Lemon Grove, Poway, San Marcos, Santee, Solana Beach, and Vista. Other cities provide their own law enforcement support. General services include general patrol, traffic enforcement, criminal investigation, crime prevention, juvenile services, communications dispatch and various management support services.

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TABLE 4.11-1

San Diego County Transit Service 89-90 Fiscai Year

| Service Type | Description of Service | No. of Fixed Routes | Estimated Annual Passengers |
|--------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-----------------------------------|
| Suburban Fixed Route Service | Fixed bus routes serving the cities and communities of La Mesa, Lemon Grove, El Cajon, Santee, Spring Valley, Rancho San Diego, Lakeside, and Alpine. All of the routes offer connections to the San Diego Trolley and to San Diego Transit routes. | 8 | 1,397,000 |
| Commuter Express Bus | Fixed bus routes providing round-trip service from Poway to downtown San Diego, Escondido to downtown San Diego, and Oceanside to downtown San Diego. Connections to other transit services are also available along these routes. | 3 | 170,000 |
| Poway Transit Services | There are three different services provided in the Poway area. The first service consists of fixed bus routes serving Poway with connections to San Diego Transit routes. Second is the Poway Dial-A- Ride,which provides demand-responsive service to the general public. Third is the Poway Airporter, which is a demand-responsive service operating between Poway and the San Diego International Airport-Lindbergh Field. | 3 N/A N/A | 254,700 |
| Rural Bus Service | Fixed bus routes providing service from the rural eastern areas of the County to the cities of El Cajon and La Mesa with connections to San Diego Transit, the San Diego Trolley, and other County Transit System routes. | 7 | 16,800 |
| Elderly and Disabled Dial-A-Ride | Demand-responsive dial-a-ride providing service to elderly and disabled clientele in the cities and communities of El Cajon, La Mesa, Lemon Grove, Spring Valley, Lakeside, and Alpine. | N/A | 46,000 |
| Spring Valley Dial-A-Ride | Demand-responsive dial-a-ride for the general public serving the community of Spring Valley. | N/A | 41,000 |

Page 89

As San Diego County's Chief Law Enforcement Officer, the Sheriff also provides regional law enforcement services for the entire county. These services include: investigation of homicide, arson and fraud, narcotics, child abuse and vice cases; criminal laboratory; crime analysis; automated fingerprint identification; criminal recordkeeping and intelligence; aerial support to law enforcement agencies; emergency planning; and law enforcement training The Sheriff also operates six County detention facilities.

4.12.2 Fire Protection

The multiple agencies providing fire protection in San Diego County can be classified by their primary fire protection responsibilities. Although state and federal agencies and fire protection districts have specific responsibilities for wildland or structural fires, all agencies will, to the extent their resources permit, respond to many types of emergency calls in their respective areas regardless of responsibility. Due to mutual aid and automatic aid response agreements, these agencies frequently work together in fire suppression and emergency service responses. The County General Plan Public Facility Element reports that in 1990 County Services were provided by seven fire agencies. Independent and subsidiary districts totalled 23 fire agencies. Federal and state agencies providing fire protection includes the California Department of Forestry and Fire Protection and the United States Forest Services.

4.12.3 Hazardous Materials Incident Response

Hazardous materials incidents make up a small percentage of total emergency responses. Response to these incidents requires highly trained personnel with expensive, specialized equipment. Under the Hazardous Materials Incident Response Team (HIRT) a combined response with highly trained teams can be provided Countywide. HIRT is provided under a joint powers agreement between the County and all of the region's cities. In addition to providing County-wide hazardous materials incident responses, the program offers hazardous materials emergency training courses to any interested fire agencies throughout the County.

4.12.4 Emergency Medical Services

The Department of Health Services is designated as the County's local emergency medical services agency. The primary functions of the Emergency Medical Service (EMS) division of the County Department of Health Services are regulating, administering, planning, and monitoring the provision of emergency medical service. Two County Service Areas (CSA), CSA 17 (San Dieguito) and CSA 69 (Heartland Paramedic), were established to provide funding for emergency ambulance service, and are administered by the County. Within both

of these districts, advanced life support (paramedic) ambulance service is provided. The service provided from CSA 17 is presently contracted out to a private ambulance company, while service from CSA 69 is provided by the City of Santee an the Lakeside Fire Protection District. The County also sets standards for emergency medical training and certification of personnel, which have a direct impact on the fire agencies providing the service.

4.12.5 Health Care

Health facilities and programs for residents of the entire San Diego region, including both the unincorporated areas and cities, are provided by the County Department of Health Services. Some of these programs are staffed by the County and offered in facilities that are either owned or leased by the County. Other programs are located in facilities that are provided through contracts with private and non-profit agencies. Due to the number of cross-referrals between County programs, health services are often located with or near to other County activities or school facilities.

4.12.6 Schools

The unincorporated area of the County is served by 36 school districts, including unified, elementary and high school districts. Unified school districts offer classes from kindergarten to twelfth grade (abbreviated as K-12).

The schools serving the unincorporated area of San Diego County are under the jurisdiction of 23 elementary school districts 6 high school districts and 7 unified school districts. Another four elementary school districts and three unified school districts (including the San Diego Unified School District which administers almost half the schools of the region) serve only incorporated territory.

Students living in the unincorporated parts of the County attend 225 elementary schools; 47 junior high, middle and intermediate schools; 1 junior/senior high school; 36 senior high schools; and 19 atypical, court and camp schools.

The County Office of Education, is entirely independent of the County government, is a publicly supported local agency with a mandate to operate certain educational programs and provide services to the 43 school districts in the County.

The County is also divided into five community college districts.

4.12.7 Libraries

The San Diego County Library was established in 1912 by resolution of the Board of Supervisors. For taxing purposes, the County Library is a library district, and has its own property tax share. The County Library services approximately 843,000 residents and covers over 3,818 square miles, including the unincorporated area and 11 incorporated cities. The cities served include: Del Mar, El Cajon, Encinitas, Imperial Beach, La Mesa, Lemon Grove, Poway, San Marcos, Santee, Solana Beach an Vista. In 1990, there were approximately 300,000 library card holders in the County Library's service area.

4.12.8 Sewage Treatment Facilities

Community sewer service within the County is provided by municipalities and independent and dependent sewage agencies. Independent sewer districts have independent boards of directors, and provide sewer service to their customers under specific regulations as allowed by their legal authority. Independent sewer districts include sanitary districts, community service districts, and county water districts. The dependent sewage agencies are administered by the County Board of Supervisors acting as the Board of Directors. Each agency provides collection and transmission of sewage. Treatment and reuse of disposal of the wastewater is provided through one of five mechanisms. These include the use of: (1) the San Diego Metropolitan Sewerage System (Metro) for treatment and ocean disposal; (2) Joint Powers Agreements for treatment and ocean disposal; (3) individual treatment and reuse or inland disposal; (4) individual treatment by a district with use of the Oceanside Outfall for disposal; and, (5) treatment and disposal by another agency.

Generally, those agencies near the City of San Diego are members of the Metro system and use this system for treatment and effluent disposal. A number of agencies also use a combination of Metro and inland treatment and disposal. Agencies near the County's coastal areas are generally providing effluent disposal through an ocean outfall. Inland agencies provide treatment and disposal through percolation of effluent into the soil, and reuse through irrigation of native vegetation, agricultural crops and landscaped areas where appropriate, and/or through ocean outfall.

4.12.9 Solid Waste

Currently, the San Diego region is served by nine sanitary landfill sites, five of which are the property of the County and administered by the County Department of Public Works (Borrego Springs, Ramona, Otay, San Marcos and Sycamore). Two sites are under the jurisdiction of

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the City of San Diego and three are the property of the United States Marine Corps at Camp Pendleton. The City of San Diego operates its landfills with its own work force. The County and Marine Corps contract with a private company to perform the daily landfill operations.

Residents of the unincorporated area of the County can bring household garbage and refuse to any of ten rural transfer stations located at Barrett Junction, Boulevard, Campo, Julian, Ocotillo Wells, Vallecito, Palomar Mountain, Ranchita, Sunshine Summit, and Viejas. Alternatively, residents can contract with private hauls to pick up their refuse, as businesses are required to do.

With the increased emphasis on reducing the amount of waste disposed of in landfills, over 25 recycling centers have been created.

Virtually all solid waste generated in the region is stored and disposed in facilities under the jurisdiction of either the County or the City of San Diego. The two jurisdictions have attempted to adopt uniform disposal fees so that wastes are taken to the nearest or most accessible site. The United States Marine Corps disposes of its own waste, with the exception of demolition materials generated from construction projects on Camp Pendleton, which are usually disposed of in County landfills (waste from other military bases is disposed of at City and County facilities).

The County has been designated the solid waste planning and management agency for the region. The San Diego County Integrated Waste Management Task Force, consisting of representatives of the County an each of the region's cities, is responsible for updating and implementing the State-mandated Integrated Waste Management Plan. The County Department of Public Works is serving as staff to the Integrated Waste Management Task Force. In addition, the County is responsible for overall solid waste planning and regulatory control in the unincorporated areas of the County.

The primary permits for solid waste facilities located anywhere in the region are issued by the Regional Water Quality Control Board and the County Department of Health Services (the latter has been designated the Local Enforcement Agency by the State). The County Department of Health Services is responsible for regular inspection of solid waste facilities; it is also the local review agency for the disposal of health-related solid waste storage and disposal throughout the region.

4.13 Energy/Utilities

San Diego County relies primarily on an interrelated energy system. Electricity and natural gas are the primary forms of energy used in industry and households. Petroleum fuels are the primary energy source for most modes of transportation.

4.13.1 Electrical Power

Electricity in San Diego County is supplied by the San Diego Gas and Electric Company (SDG&E). According to SDG&E, approximately 26.1 percent of San Diego's current electric sales of 14,350 gigawatt hours (gWh) comes from fossil fuel. Of the 3,745 gWh generated from fossil fuel plants, 3,463 comes from natural gas with the remainder from oil. Electricity generated from nuclear power totals 3,213 gWh or 22.4 percent of the total. The major portion of San Diego's electrical energy, 51.5 percent, is purchased from other utilities.

SDG&E built a transmission line to Arizona during the early 1980's, which allowed energy reserves from Arizona and New Mexico utilities to be transmitted to San Diego. The imported electricity is produced from less expensive coal-burning plants. San Diego also has the option of importing power generated by hydroelectric plants in the Pacific Northwest.

SDG&E currently has 2,530.2 megawatts (MW) of capacity comprised of 517.2 MW from nuclear units, 1,611 MW from fossil steam units and 402 MW from combustion turbine units. In the next ten years, SDG&E anticipates they will need approximately 1,200 MW of new capacity. This large increase in capacity is partially due to area population and economic growth and partially due to the need to find replacements for power contracts that will end during the next decade (Mitchell, 1991).

The SDG&E utilizes fossil fuel steam units that include the Encina, South Bay, and Silvergate power plants. The Silvergate unit is currently in storage. The locations of these plants are as follows:

- Encina 4600 Carlsbad Blvd. Carlsbad, California
- Silvergate
 1348 Sampson St.
 San Diego, California

South Bay
 990 Bay Blvd.

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Table 4.13-1 describes the generating capabilities in kilowatts (kW) and the operating status of each plant.

TABLE 4.13-1

SDG&E Fossil Steam Units Net kW Capability

| Pi | ant | Oil Fuel Summer and Winter | Status |
|---------------|---------------------|---------------------------------------|----------------|
| Encine | No. 1 | 105,000 | Operational |
| | No. 2 | 104,000 | |
| | No. 3 | 110,000 | |
| | No. 4 | 287,000 | |
| | No. 5 | 315,000 | |
| • · · · | Plant Total | 921,000 | |
| South Bay | No. 1 | 147,000 | Operational |
| · | No. 2 | 150,000 | |
| | No. 3 | 171,000 | |
| | No. 4 | 222,000 | |
| | Plant Total | 690,000 | |
| Silvergate | No. 1 | 40,000 | In Storage |
| | No. 2 | 62,000 | |
| | No. 3 | 64,000 | |
| | No. 4 | 64,000 | · · · · · · |
| | Plant Total | 230,000 | |
| Source: SDG&I | E Official Bating o | f Generating Units Operations Service | e March 1 1001 |

4.13.2 Natural Gas

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San Diego Gas and Electric supplies natural gas to all of San Diego County through a fixed transmission and distribution system. SDG&E currently takes its deliveries of natural gas supplies from or through Southern California Gas Company's (SCGC) transmission system. Delivery of the gas to SDG&E's gas service territory is made through SCGC's Dana Point-to-San Diego transmission pipeline and through the Moreno-to-Rainbow transmission pipeline system.

The Dana Point-to-San Diego pipeline, which is owned by SCGC, is a 12-inch diameter pipeline that runs from Dana Point to La Jolla. This pipeline has a maximum allowable operating pressure (MAOP) of 400 pounds per square inch (psi). On typical days it supplies between 5 and 15 percent of SDG&E's daily gas requirements.

SCGC also owns and operates approximately 35 miles of interconnected 16-inch diameter and 24-inch diameter pipeline between SDG&E's compressor stations at Moreno and Rainbow. In addition the southern 5.5 mile segment of this system has been paralleled and interconnected with a 30-inch diameter section of pipe. These pipelines have a MAOP of 792 psi. On typical days these pipelines provide 85 to 95 percent of SDG&E's gas requirements.

SDG&E has traditionally planned its gas transmission system to be able to serve core (residential) gas customers only on the peak winter day. The current plan for providing this level of service includes mainly pipeline additions once the compressor unit (Unit 10) currently under construction at the Moreno Compressor Station is complete. Planned pipeline additions include the inner Loop Pipeline and the Moreno-Rainbow Pipeline.

Forecasted design peak day core load will increase from 404 MMcf in 1991 to 450 MMcf (million cubic feet) in 2000, an 11 percent increase. Yearly total power plant gas, (a non-core category) is forecasted to more than double by the year 2000. This increase is primarily due to additions of gas-fired generation, decreasing committed firm purchase contracts and decreasing Southwest economy purchases.

4.13.3 Telephone Service

Local telephone service supplied to San Diego County by Pacific Bell. Service by distance carriers, such as Sprint and MCI, is also available.

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4.14 Aesthetics

The approximate 4,000 square miles of land in San Diego County encompass three different regions: the deserts of the east; the central mountains, part of the California Coastal Range; and the valleys, mesas, and plateau bounding the Pacific Ocean on the western edge of the County. Each of these regions has distinctive topography, climate, vegetation, wildlife, land use, and lifestyle. Scenic resources throughout the County are varied and plentiful. Among the major scenic resources are the deserts; snow-capped peaks; rugged mountain; coastal foothills, valleys and canyons; pine forests; citrus and avocado orchards; Pacific Ocean and adjacent beaches, bays and cliffs; early California missions; interesting architecture; and a multitude of breathtaking vistas.

San Diego County's rich and colorful historical heritage dates from the golden era of Spain. Numerous historical sites have been identified by State and local groups throughout the County. The State has officially designated 62 historical landmarks in San Diego County.

San Diego County's rudimentary Scenic Highway Program has led to the designation of two routes in the unincorporated area as Official Scenic Highways. State Route 125 between State Route 94 and U.S. Interstate 8 is an urban highway through rolling topography characterized by medium density hillside residences. State Route 78 within the Anza-Borrego Desert Park is a rural highway.

4.15 Recreation

The County Department of Parks and Recreation, along with individual cities, have the responsibility for planning, developing, operating and maintaining parks and recreation facilities to meet the recreational needs of residents within the County.

The County participates in joint powers agreements and other agreements that establish partnerships with other public and private agencies to develop, operate and maintain recreation facilities on land typically owned by those agencies. Public agencies participating in these agreements include school districts, water districts and community service districts. Private agencies participating in this agreements are usually non-profit organizations. In addition, many parks are provided in the unincorporated area by special districts, school districts and private non-profit organizations without any County involvement.

County parks are divided into two major categories: local parks and regional parks. Local parks are intended to serve the recreational needs of neighborhoods and communities, while



regional parks serve the population of the entire San Diego region. In 1990, there were 579.3 acres of local park land in the unincorporated area of the County, including County parks and parks provided through joint powers agreement between the County and other public and private agencies.

Regional parks within the County serve residents and visitors of the entire County. In 1990, there were 16,330 acres of regional park land provided by the County. This total includes primarily developed regional parks and regional parks that contain some recreation development, but are primarily undeveloped. The majority of dedicated regional park land acreage is undeveloped. Primarily undeveloped regional parks make up over 95 percent of the regional park acreage total. Generally, 80 percent or more of the land in these parks is reserved for preservation, natural resource management and natural open space, and only 20 percent or less is used for recreation development. The use of active recreation areas within regional parks is very high.

4.16 Paleontological and Cultural Sites

In San Diego County most archaeological sites can be separated into three distinct time periods: prehistoric, protohistoric, and historic. All prehistoric archaeology deals with aboriginal culture and systems which existed prior to Spanish colonization in 1769. There was no written language in San Diego County before that time. The social and oral systems were far more complex in order to compensate for the lack of written laws. Archaeologists attempt to delineate and describe these otherwise unrecorded aspects of California heritage. Protohistoric archaeology deals with the remains of aboriginal cultural systems which continued to exist after historic contact, but did not assimilate the technology associated with writing systems. Historical documentation by outside sources (i.e., Spanish) is considered ethnographic anthropological reporting. Historical archaeology deals with uncovering facts that no known historical documentation has provided.

San Diego County contains the physical remains of three general horizons for the prehistoric archaeological period, and three general divisions of the historic period, as listed in Table 4.16-1.

(included)

TABLE 4.16-1

Archaeological Periods

| Culture | Occupation Period |
|-----------------------------|---------------------------------------|
| Paleo Indian (San Dieguito) | 12,500-8,500 years before the present |
| La Jollan | 7,500-1,000 years before the present |
| Kumeyaay | 1,000 years ago to 1769 |
| Spanish | 1769-1834 |
| Mexican | 1834-1850 |
| American | 1850-Present |

The County General Plan Conservation Element indicates that it is estimated that only five percent of the existing archaeological and historical resources have been identified in San Diego County as of 1973 and that the County has lost 36 percent of its projected total archaeological sites within the past 100 years primarily from urban development and vandalism. A number of San Diego County archaeological and historical sites have been identified as being of national, statewide, and local significance.

4.17 Risk of Upset

Risk of upset typically refers to the release of materials, particularly hazardous materials. If released, and depending upon the physical characteristics of the materials, they could pose potential impacts to the surrounding environment.

According to Mike Handman, Coordinator of the San Diego County Hazmat Incident Response Team (HIRT), San Diego County's emergency response team is well equipped and trained to handle hazardous materials releases. The unit responds to over 600 hazardous material incidents annually and maintains \$2.5 million worth of response equipment. The Emergency Response Unit serves the entire County with six separate operating units.

4.18 Public Health

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San Diego County currently exceeds the state and federal ambient one hour air quality standards for ozone. Ozone is an irritant to lungs and, since it is an oxidant, can be destructive to a wide diversity of living and non-living things.

The County also exceeds the state and federal annual air quality standards for particulates less than 10 microns in diameter (PM 10). Particulate matter consists of particles in the atmosphere resulting from many kinds of industrial and agricultural operations, motor vehicle tires, combustion, and atmospheric chemical reactions. Natural activities also generate particulates. Particulates less than 10 microns can cause the greatest health risk through inhalation.

According to San Diego County's Hazardous Waste Management Plan, approximately 93,100 tons of hazardous waste was generated in the County in 1986. However, despite the presence of hazardous materials and waste in the County, most residents have little to no regular exposure to these substances.

4.19 Hazardous Waste

As discussed above (Section 4.18, Public Health), 93,100 tons of hazardous waste was generated in San Diego County in 1986. This waste was then sent off site for treatment or disposal. Of the total volume, 44 percent is generated within the City of San Diego and another 23 percent is generated by the Navy at Naval facilities. Waste generated at private shipyards of work on Navy vessels is considered by the Navy to be the responsibility of the contractor. San Diego County's 9 Treatment, Storage, and Disposal Facilities (TSDF) currently provide industry with a total treatment capacity of 122,700 tons per year (County of San Diego "Hazardous Waste Management Plan 1989-2000", May 1989).

Table 4.19-1 identifies the Class I landfill facilities within California that currently accept hazardous wastes. A Class I landfill refers to the geologic features of the landfill that provide optimum conditions for isolating the disposed wastes from the groundwater. Class I landfills accept hazardous and toxic waste in accordance with the Federal and State regulations. The disposal of hazardous wastes into designated Class I landfills has become increasingly more difficult. These difficulties relate to a number of issues that include: recent legislation banning the land disposal of many wastes; the increased costs of disposal; decreasing number of permitted facilities, and potential future liabilities. Because of these Issues, the disposal of hazardous wastes in landfills can present significant environmental concerns.

TABLE 4.19-1

Existing and Future Class I Landfill Capacity in California

| Facility | County | Existing Permitted Capacity (tons) | Future Planned Capacity (tons) |
|------------------------------|---------------|---------------------------------------|-----------------------------------|
| Casmalia Resources | Santa Barbara | 0 | 1,500,000 ^ª |
| Chemical Waste Management | Kings | 4,800,000 ^b | 6,750,000° |
| GSX Services | Imperial | 1,620,000 | 3,800,000 ^d |
| GSX Services | Kern | 2,400,000° | 3,100,000' |
| TOTAL | | 8,820,000 | 15,150,000 |

The facility is currently not accepting wastes. New facilities are pending permit approval. The approval for the planned capacity is expected by 1992. An additional 3,100,000 tons of capacity will be constructed when the listed future capacity is within 1 year of being full (Lachenmaier; personal communication).

^b Approximately 75 percent of the existing capacity was used as of November 1989 (DHS 1989).

^c Additional capacity is currently being constructed and is expected to be approved and operational in 1 to 2 years (Grisolia; personal communication).

^d The planned capacity is pending permit approval and is expected to be available in approximately 5 years (Shaw; personal communication).

 The existing capacity is permitted for contaminated soils, oils, and petroleum wastes only (non-RCRA wastes), which does not include metals sludge.

^f The planned capacity has already been permitted and includes metals sludge and other RCRA wastes (Almberg, personal communication). Approximately 1,260,000 tons of the permitted capacity will be constructed by August 1990 (DHS 1989). The remaining capacity is to be constructed over the next 20 years.

Source: Supplement to the Draft Environmental Impact Report on the proposed merger of Southern California Edison and San Diego Gas and Electric Companies, August 1990.



Historically, the majority of hazardous wastes generated in San Diego County have been disposed of directly in off-site hazardous waste land disposal facilities in San Diego or adjacent counties that accept hazardous waste. Until November 30, 1984, much of the hazardous waste generated in San Diego County was transported to the BKK landfill in West Covina. However, stricter state and federal regulations resulted in the closure of BKK to hazardous waste disposal. No replacement land disposal facility is currently planned in Southern California. San Diego's hazardous waste is transported to the nearest land disposal sites at Casmalia located in northern Santa Barbara County and Kettleman Hills in Kings County, or out of state.

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5.0 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The reduction of ROG, NO_x , and CO emissions is the goal of the 1991 RAQS. The projected emission reductions stemming from the implementation of this RAQS are summarized in Section 3, Project Description. Section 5 will emphasize the potential environmental impacts that can be associated with the adoption of technologies or compliance methods developed in response to the control measures proposed in the 1991 RAQS. These assumed technologies and compliance methods are discussed in Section 3 and summarized in Table 3.5-7. Section 5 discusses the potential environmental consequences that would result from implementing these likely technologies and compliance methods.

This is a program EIR that assesses the potential environmental impacts associated with the implementation of a regional plan. In a program EIR, specific site data and other quantitative information typically found in a project EIR are not available. Because of this, analysis in a program EIR is necessarily more general and qualitative, as recognized under California Environmental Quality Act (CEQA) Guidelines. The following subsections will discuss the potential adverse environmental impacts of the 1991 RAQS in a general, program EIR approach.

5.1 Earth

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5.1.1 Impacts

No adverse environmental impacts are identified for this issue area.

5.1.2 Mitigation Measures

No mitigation measures are identified for this issue area.

5.2 Air Quality

5.2.1 Impacts

5.2.1.1 Localized Ozone Effects

Over 90 percent of the emitted oxides of nitrogen (NO_x) , $(NO + NO_2)$, is estimated to be nitric oxide (NO). Nitric oxide is a scavenger of ozone, reacting to form nitrogen dioxide (NO_2) .

Thus, a reduction of NO_x can lead to localized increases in ozone. The potential for ozonescavenging was recognized in a recent air quality modeling study performed under the direction of EPA as part of the Federal Implementation Plan for Ventura County (Radian 1989). While this study concluded that NO_x controls were effective in reducing ozone concentrations within the county, it also found that ozone increases can be associated with NO, reductions under certain conditions. For example, NO, reductions from sources concentrated in a specific location may result in a decrease in ozone levels over some portions of a region and an increase in others. This increase is associated with ozonescavenging, where NO emissions reduce ambient ozone concentrations in the short term (e.g., NO + ozone = $NO_2 + O_2$), but later assist in the formation of ozone. The formation occurs once most of the NO is converted to NO₂; the NO₂ serves as the source of oxygen atoms that then react with oxygen (O_2) to form ozone (O_2). While there is a potential for a near-source increase in ozone concentrations, the measures in the 1991 RAQS are assumed to be beneficial from an overall regional perspective due to the overall reduction of both ROG and NO_x. Thus, the impact of a reduction in localized ozone scavenging is not expected to be significant.

5.2.1.2 Ammonia Slip

One concern with using a selective catalytic reduction (SCR) system for controlling NO, emission from boilers and internal combustion (IC) engines is ammonia slip. To ensure maximum NO_x reduction efficiency, sufficient ammonia must be injected into the flue gas to react with all of the NO_x. Ammonia that does not react with the NO_x passes or "slips" through the reactor vessel and is released into the atmosphere from the stack. Ammonia slip begins to increase at NH₃:NO_x molar ratios above 0.8 for high space velocities and 0.9 for low space velocities (Chichanowicz and Offens 1987, EPRI 1986, cited in SCAQMD 1988). According to one source cited by SCAQMD (1988), it is practically impossible to limit ammonia slip to less than 10 parts per million (ppm) and still maintain the desired NO_x reduction level (SCAQMD 1988). Other sources in that document, however, indicate that under normal operation conditions, ammonia sllp is approximately 5 to 10 ppm (SCAQMD and ARB 1981). The Industrial Gas Cleaning Institute indicates that it is common practice for ammonia slip to be held to less than 10 ppm (IGCI 1989). The limit placed on ammonia slip for the initial NO_x concentration is the key design parameter in sizing the catalyst rather than the NO_x reduction requirements. Ammonia slip depends on space velocity, NH₃:NO₂ molar ratio, temperature, and inlet NO, concentrations (Chichanowicz and Offens 1987, cited in SCAQMD 1988).

The 8-hour threshold limit value (TLV) established by the American Council of Governmental Industrial Hygienists (ACGIH) for occupational exposures to ammonia is 25 ppm. (The TLV is a recommended, but not an enforced standard.) A common practice for determining

Page 104

exposure limits for the general population for such substances is to divide the occupational exposure limits by a safety factor of 100. Thus, the conservative population exposure limit would be 0.25 ppm.

While ammonia slip at the flue stack ranges from 5 to 10 ppm, these concentrations are likely to be diluted at ground level. Ammonia will be incorporated into the hot flue gases that will rise well above the ground. In addition, ammonia vapor is less dense than air at the same temperature and pressure (ammonia vapor density is 0.59, air density 1.0 when both are measured at 21°C and 760 mm Hg). As a result of these two factors, ammonia emissions are buoyant and would be expected to rise rapidly to higher altitudes in the atmosphere with little possibility of lingering at ground level (Benchley and Athey 1981, cited in SCAQMD 1988).

These conclusions are substantiated in the findings of a worst-case dispersion analysis that was applied to the Ventura County Ormond Beach facility and are detailed in the 1991 EIR for the Ventura County APCD's Rule 59: Electrical Power Generating Equipment - Oxides of Nitrogen Emissions from Utility Boilers. The dispersion analysis, conducted for Southern California Edison's Ormond Beach Generating Station, predicted a reasonable worst-case maximum ammonia concentration of 0.039 ppm at approximately 1.4 miles from the facility (Ventura County, 1991). This concentration is nearly an order of magnitude below the conservative general population exposure limit of 0.25 ppm.

5.2.1.3 Accidental Release of Ammonia

A major concern with using an SCR system for controlling NO_x emission is the accidental release of ammonia. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two generating plants in the county expected to be affected by this rule are the Encina and South Bay facilities. A third plant, the Silvergate facility, will not be counted under this measure because it is in storage and is not expected to be converted to production status. A full discussion of this issue can be found in Section 5.12 (Public Services), Section 5.17 (Risk of Upset), and Section 5.18 (Human Health).

5.2.1.4 Accidental Release of Vapor Recovery Media

Vapor recovery systems are "add-on" controls designed to reduce ROG emissions. In vapor recovery systems employing carbon adsorption canisters, contaminants are adsorbed onto carbon in concentrated amounts. Improper handling or storing of carbon canisters can result in the accidental release of concentrated compounds, many of which have low vapor

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pressures. This release will result in the volatilization of the compound into the air where it could prove to be harmful to humans or biological resources. However, volatilization is not considered significant because the re-release of these potentially hazardous and toxic compounds into the air will be less than the amount originally trapped by the vapor recovery system. In addition, compliance with existing regulations and proper handling techniques will keep impacts to insignificant levels.

5.2.1.5 Substitution to Low-ROG Substances

In order to reduce ROG emissions, many measures in the RAQS will result in the reformulation of various substances (coatings, solvents, cleaning compounds, and other materials). In some cases, the compounds will be reformulated in a low-ROG form while in others, aqueous solutions (e.g., surfactants) will be substituted. The potential exists that these reformulated substances will contain exempt compounds that are harmful to the air or to human and biological resources.

One such example is the substitute solvent 1,1,1-trichloroethane. Data available on this compound suggest it may be harmful to human health. This solvent is listed under the California Assembly Bill (AB) 2588 (Air Toxics "Hot Spots" Information and Assessment Act) and is listed as a hazardous air pollutant under the 1990 Federal Clean Air Act Amendments. It is however, suspected to contribute to global warming and stratospheric ozone depletion. These impacts, while possible, are speculative and are not considered significant.

5.2.2 Mitigation Measures

5.2.2.1 Localized Ozone Effects

No mitigation measures are identified to directly mitigate localized ozone scavenging. However, this local impact is more than offset by APCD implementing the RAQS, which will significantly reduce region-wide emissions of ROG and NO_x.

5.2.2.2 Ammonia Slip

Ammonia slip can be maintained at low concentrations with the installation of appropriate monitors and controllers within the flue gas system. Control systems that optimize ammonia flow to minimize ammonia slip have been developed and will be required along with regular maintenance of the system if SCR is used as a control technology.

5.2.2.3 Accidental Release of Ammonia

Mitigation measures to minimize the risk of accidental release of ammonia are discussed in Section 5.12 (Public Services), Section 5.17 (Risk of Upset), and Section 5.18 (Human Health). With these measures in effect, the impact of accidental ammonia release is not considered significant.

5.2.2.4 Accidental Release of Vapor Recovery Media

The San Diego County APCD will coordinate and cooperate with responsible agencies to ensure compliance with existing regulations regarding handling and transport of hazardous materials. As part of the permit conditions, the APCD can require continuous regeneration of carbon in carbon adsorption systems. Because steam regeneration has the potential for discharge of contaminants to water resources, the APCD could require these systems to use thermal rather than steam regeneration of carbon.

5.2.2.5 Substitution to Low-ROG Substances

In order to reduce the risk of unwitting dumping or release of hazardous and toxic materials, the APCD will coordinate with responsible agencies to promote programs to increase public awareness of these potential impacts and to insure standard handling procedures are followed.

5.3 Water Resources

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5.3.1 Impacts

5.3.1.1 Accidental Release of Ammonia

A major concern with using an SCR system for controlling NO_x emissions is the release of ammonia. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two facilities in the county expected to be affected by this rule are the Encina and South Bay plants. A full discussion of this issue can be found in Section 5.12 (Public Services), Section 5.17 (Risk of Upset), and Section 5.18 (Human Health).

SCR utilizes iarge amounts of ammonia that will need to be stored onsite. While anhydrous ammonia is stored as a pressurized liquid, it is a gas at ambient temperatures and pressures (i.e., 20°C and 1 atmosphere). As a result, if a leak were to occur, ammonia would be

expected to change to a vapor state quickly. Ammonia vapor is heavier than air and has a high affinity for water. An ammonia gas cloud that reaches a surface water body would be expected to dissolve quickly into the water. If sufficient gas is absorbed, the water would become considerably more alkaline. In addition, ammonia is rapidly consumed by living organisms. It is expected that even a catastrophic release that reaches a fresh water resource will be moderated and dissipated within a short time (days), leaving no significant long-term impact on either the surface or groundwater resources. Ammonia reaching seawater would have no significant effect, since seawater has an excellent buffering capacity. No significant impacts on water resources are expected.

5.3.1.2 Accidental Release of Vapor Recovery Media

This topic was discussed in Section 5.2 (Air Quality). In vapor recovery systems employing carbon adsorption canisters, contaminants are adsorbed onto carbon in concentrated amounts. Improper handling and storage of carbon canisters can result in accidental release of the concentrated compounds into the groundwater or sewer system. This represents a possibly adverse impact to water resources. However, compliance with existing regulations will keep impacts to insignificant levels.

Another threat to water resources involves vapor recovery systems that employ steam to regenerate carbon. Used primarily to recover solvents, these systems eliminate the disposal of carbon canisters, but produce contaminated water as a waste stream. This waste represents a possible adverse impact if the contaminated water is discharged to surrounding bodies of water. The impact is not considered significant because sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal.

5.3.1.3 Substitution to Low-ROG Substances

As discussed in Section 5.2 (Air Quality), many measures in the RAQS will result in the reformulation of various substances which might contain compounds harmful to the environment. Of special concern to water resources are reformulations that result in water based (aqueous) solvents and cleaners. These products can contain potentially harmful compounds, such as methylene chloride. In addition, wet scrubbing systems, by their very function, result in a wastewater stream containing potentially harmful compounds. Because the general public might tend to view water-based products as less harmful than other solvents and cleaners, the potential exists for improper handling and disposal of these materials when they contain hazardous or toxic compounds. However, this is not considered significant, because of compliance with existing regulations.


5.3.2 Mitigation Measures

5.3.2.1 Accidental Release of Ammonia

This impact is not expected to be significant. Specific measures to mitigate impacts to water resources are not required. Mitigation measures to prevent and contain spills or other accidental releases of ammonia have been discussed elsewhere (see Sections 5.12 and 5.18).

5.3.2.2 Accidental Release of Vapor Recovery Media

APCD will cooperate and coordinate with responsible agencies to ensure compliance with existing regulations regarding wastewater handling and the transport and handling of hazardous materials. APCD can promote and encourage continuous regeneration of carbon in carbon adsorption systems, and in these systems, promote adoption of thermal rather than steam regeneration of carbon.

5.3.2.3 Substitution to Low-ROG Substances

In order to reduce the risk of unwitting dumping or release of hazardous and toxic materials, the APCD will coordinate with responsible agencies to promote programs to increase public awareness of these potential impacts and to ensure compliance with proper handling procedures. In wet scrubbing operations, pre-treatment of wastewater will be required and discharge requirements will be enforced.

5.4 Biological Resources

5.4.1 Impacts

5.4.1.1 Effect of Construction on Biological Habitat

Various measures in the 1991 RAQS require the construction of new facilities (bikeways, park and ride lots, storage facilities, and a light rail system). The development and use of land for these purposes could reduce or eliminate plant and animal habitat. At this stage in the RAQS, the amount of land needed and exact locations are unknown; however, the additional amount of land expected to be required is small. Details will be available as each measure is proposed and reviewed. Although details are unavailable at this time, impacts from this are not considered significant due to the relatively small amount of land required and the ability to locate facilities away from sensitive resources.

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5.4.1.2 Accidental Release of a Catalyst Used in SCR

Manufacturers of the catalyst material used in the SCR process report that the catalyst material contains small amounts of vanadium pentoxide. The properties of this material and its potential health impacts are more fully discussed in Section 5.18 (Human Health). According to one source, vanadium pentoxide can be lethal to fathead minnows with lethal doses ranging from 13 ppm to 55 ppm (DOG-USCG, 1984). However, release into the environment is considered unlikely because it is tightly bound to the catalyst substrate (SCAQMD, 1988). In addition, the SCAQMD surveyed various catalyst vendors and reported that in 199 catalyst installations and removals, no accidents occurred (SCAQMD, 1988). For these reasons, this is not considered a significant impact.

5.4.1.3 Ammonia Slip

The phenomenon of ammonia slip is discussed in Section 5.2 (Air Quality). Through atmospheric deposition, some ammonia may indirectly affect water resources. However, these concentrations are anticipated to be very low in a properly operating system. Therefore, this impact is not considered significant.

5.4.1.4 Accidental Release of Ammonia

A major concern with using an SCR system for controlling NO_x emission is the release of ammonia. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two facilities in the county expected to be affected by this rule are the Encina and South Ban generating stations. A full discussion of this issue can be found in Section 5.12 (Public Services), Section 5.17 (Risk of Upset), and Section 5.18 (Human Health).

In the event of a catastrophic release of ammonia, the potential exists for a toxic cloud of ammonia gas to drift into sensitive habitats. Although the chances for such an occurrence are small, if a catastrophic release occurs, it could cause a significant impact to biological resources. After mitigation measures are applied, the impact is not considered significant.

5.4.1.5 Accidental Release of Vapor Recovery Media

The nature and likelihood of a release into the environment is discussed in Section 5.2 (Air Quality) and Section 5.3 (Water Resources). Numerous compounds are involved in vapor recovery, and many of these, such as benzene, toluene, and trichloroethylene, are hazardous to plant and animal life. Biological resources can be adversely affected if vapor recovery

1999-001-400

media such as carbon canisters are handled or disposed of improperly. However, this impact is not considered significant, because compliance with current regulations concerning the handling and disposal of hazardous materials reduces this risk to insignificance.

5.4.1.6 Substitution to Low-ROG Substances

The 1991 RAQS has many measures requiring reduction of ROG in various substances. In order to comply with these measures, substances such as solvents, coatings, and cleaning solutions will be reformulated. This issue was discussed in Section 5.2 (Air Quality) and Section 5.3 (Water Resources). The possibility exists that these reformulated substances will contain compounds that are harmful to plants and animals. Another possibility is that these reformulated substances will be water based (aqueous) products containing harmful toxics and hazardous compounds. The improper handling or disposal of these substances could pose a risk to biological resources. Compliance with current regulations concerning the handling and disposal of hazardous and toxic materials reduces this risk to insignificance.

5.4.2 Mitigation Measures

5.4.2.1 Effect of Construction on Biological Habitat

Several measures can be taken to mitigate this impact. All efforts will be made to site such facilities away from biologically sensitive areas. Monitoring of ongoing programs will be supported and continuous coordination and cooperation will be maintained with relevant agencies such as the California Fish and Game Department and other resource agencies. Current surveys of endangered species will be required, and measures will be formulated to ensure that there are sufficient open spaces and conservation areas. With implementation of these mitigation measures, this impact is not considered significant.

5.4.2.2 Accidental Release of a Catalyst Used in SCR

No mitigation measures are identified for this impact.

5.4.2.3 Ammonia Silp

Mitigation measures are discussed in Section 5.2 (Air Quality).

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5.4.2.4 Accidental Release of Ammonia

The only potential impacts to living resources stem from accidental catastrophic release of ammonia. Mitigation measures concerning safety and an emergency response plan are discussed in Section 5.12 (Public Services). With these measures, the likelihood of a harmful release is very low, and this impact is not considered significant.

5.4.2.5 Accidental Release of Vapor Recovery Media

Mitigation measures are discussed in Section 5.2 (Air Quality) and 5.3 (Water Resources).

5.4.2.6 Substitution to Low-ROG Substances

No mitigation measures are identified for this impact.

5.5 Noise

5.5.1 Impacts

5.5.1.1 Reduced Congestion Could Cause Increased Vehicle Speeds

Many of the transportation control measures identified in the RAQS will result in reduced congestion on roadways. The reduced congestion could be accompanied by increases in average vehicle speed with resultant potential increases in noise levels along roadways, especially during peak commute times. This is not considered a significant impact because the increase in noise levels are expected to be minimal, and major increases are typically mitigated through actions taken concurrently with roadway improvements.

5.5.1.2 Emission Control Equipment

Many measures in the RAQS will result in applicants installing various types of emission control equipment (e.g., radiant burners, blowers and fans, compressors, and flares). Installation will take place at existing industrial sites where the additional noise is not expected to be significant. In certain circumstances, this equipment could increase noise to objectionable levels. However, compliance with noise ordinances that are in effect throughout the county will mitigate the impact of noise to insignificance.

5.5.2 Mitigation Measures

5.5.2.1 Reduced Congestion Could Cause Increased Vehicle Speeds

As roadway improvements are made, project analysis will determine the need for specific mitigation. No mitigation measures are identified for the impact of speeding traffic.

5.5.2.2 Emission Control Equipment

If an area is adversely affected by increased noise levels from emission control equipment, noise ordinances will require that noise abatement measures, such as mufflers and insulation, be utilized.

5.6 Light and Glare

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5.6.1 Impacts

No adverse environmental impacts were identified in this issue area.

5.6.2 Mitigation Measures

No mitigation measures are identified for this issue area.

5.7 Land Use

5.7.1 Impacts

Several transportation control measures could have secondary adverse impacts on land use in the San Diego APCD. Trip reduction measures might create a demand for satellite offices or work centers that could lead to alternations in current patterns of land use. On the other hand, this might also have the beneficial effect of increasing population density around central work areas which might reduce population pressures on other undeveloped areas. Local General Plans and Zoning Codes should provide a public forum designed to reduce any environmental impacts on land use to insignificance.

Increased pedestrian and bicycling activities will reduce parking needs but might require additional land for pedestrian and bicycle routes and support facilities (e.g., showers and lockers). Additional land requirements are expected to be minimal because bicycle lanes can typically be incorporated into existing roadways with minimal demand for additional land, and

additional support facilities can be located at existing facilities. While locating bicycle routes along busy streets could exacerbate traffic congestion, this might be offset by the number of cars eliminated from roadways as a result of these measures. Again, General Plans and Zoning Codes can incorporate bicycle and pedestrian routes in their planning process to reduce impacts to insignificance and ensure consistency with local and regional land use planning.

5.7.2 Mitigation Measures

The APCD will advise and assist local agencies regarding the potential conflicts and impacts from new satellite work centers and bicycle and pedestrian routes and facilities so that these can be incorporated into the Circulation Element of local jurisdictions' General Plan.

5.8 Natural Resources

5.8.1 Impacts

No adverse environmental impacts were identified in this issue area, as the control measures, as a whole, will not likely require substantial use of resources.

5.8.2 Mitigation Measures

- No mitigation measures are identified for this issue area.

5.9 Population/Housing

5.9.1 Impacts

Many transportation control measures could result in implementing alternative work schedules, telecommuting to work (using facsimile machines, computers, etc.), and providing alternative transportation modes for workers. These measures could affect the distribution and density of population growth in the San Diego APCD. They are not anticipated to affect overall growth in the area because urban areas in close proximity to San Diego (e.g., Los Angeles and Ventura County), which compete with San Diego for population growth, are currently adopting similar measures.

Some measures might tend to make people seek housing near transportation centers, which could result in housing shortages. On the other hand, the adoption of alternative transportation modes (buses, trains, etc) will result in people attempting to locate nearer high

employment areas, which will have beneficial impacts to the environment. The potential magnitude of population and housing relocation is not known at this time. It would depend on the number of affected workers, the availability and cost of housing, other personal preference factors, and specific details of the transportation control measures that have not as yet been made definite. Because results are currently speculative, this impact is not considered significant at this time. When individual projects are initiated, appropriate public and environmental review and documentation will be required, including identification of impacts and mitigation measures.

5.9.2 Mitigation Measures

No significant mitigation measures are identified for the impacts of transportation control measures on housing and population.

5.10 Employment

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5.10.1 Impacts

No adverse environmental impacts are identified in this issue area.

5.10.2 Mitigation Measures

No mitigation measures are identified for this issue area.

5.11 Transportation/Circulation

5.11.1 Impacts

No adverse environmental impacts are identified in this issue area.

5.11.2 Mitigation Measures

No mitigation measures are identified for this issue area.

5.12 Public Services

5.12.1 impacts

5.12.1.1 Effects on Wastewater Treatment Facilities

Many compliance methods or technologies use or produce hazardous materials. For example, the use of steam regeneration of carbon in vapor recovery systems produces a stream of contaminated water. Also, wet scrubber devices create wastewater streams which can contain compounds such as ethylene glycol, cadmium, dioxin, ethylene dichloride, and chloroform. The additional wastewater generated by implementation of the RAQS is expected to be negligible. However, if improperty handled or discharged, these hazardous substances in the wastewater stream might have adverse effects on wastewater treatment facilities. This impact has the potential to be significant, although discharge to sewer systems is regulated; compliance with sewer discharge permit requirements will minimize these impacts.

5.12.1.2 Accidental Release of Ammonia

A major concern with using SCR for controlling NO_x emissions is the accidental release of ammonia. Further discussion of this issue can be found in Section 5.17 (Risk of Upset).

The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (Measure NI-1). As discussed in Section 5.17 (Risk of Upset), only two facilities are expected to be affected by this rule - the Encina and South Bay generating plants, which are owned and operated by San Diego Gas and Electric Company (SDG&E). Another plant that qualifies under the control measure is the Silvergate plant, but this facility is in storage and is not expected to be operational in the future.

Large releases of ammonia could result in an explosion and subsequent fire if sufficient heat is applied to the pressurized ammonia storage tank. Such an incident Is not likely to occur if the appropriate American National Standards Institute (ANSI) standards are applied in the design and construction of the ammonia system. If a major catastrophic release of anhydrous ammonia were to occur with the storage and use of ammonia, additional fire protection/emergency response capabilities from local and county response agencies might be necessary.

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Adequate emergency facilities exist in the county. The San Diego County HAZMAT Incident Response Team (HIRT) serves the entire county with six separate operating units. According to Mike Handman, HIRT Coordinator, the team is specifically trained to handle ammonia releases.

impacts to local and county fire protection/emergency response agencies are not expected to be significant with the implementation of the proposed NO_x reduction measure.

5.12.2 Mitigation Measures

5.12.2.1 Effects on Wastewater Treatment Facilities

The pretreatment of wastewater will be required when wet scrubbers are installed, and the enforcement of discharge requirements will minimize this impact. These measures reduce the effects of wastewater treatment facilities to less than significant.

5.12.2.2 Accidental Release of Ammonia

With proper storage and handling of hazardous materials, the impact to fire protection/emergency response will be small. While adequate emergency facilities exist, the potential for their use can be reduced by requiring on-site emergency equipment, training of personnel, and the establishment an emergency response plan. With proper adherence to standards and implementation of the emergence response plan, this impact is not considered significant.

5.13 Energy/Utilities

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5.13.1 Impacts

5.13.1.1 Energy Requirements of Emission Controls

Many measures in the RAQS will require applicants to install various types of emission control equipment such as blowers and fans, compressors, refrigeration and compression units, and monitoring equipment. All of these require electricity to operate. The exact extent of this cannot be determined at this time, but it is not expected to be large relative to the SDG&E system. SDG&E is one of the few utilities in California that must build capacity in the near future, and any increase in electrical demand might make it difficult and costiy both to meet this new load and to find emission offsets for this increased electrical production under New Source Review. (Mitchell, 1991) However, because the 1991 RAQS also proposes

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energy conservation measures which will counter balance these potential small Increases, these impacts are not considered significant.

5.13.1.2 Energy Requirements of SCR

One concern with using an SCR system for controlling NO_x emissions is the potential increase in the use of natural gas. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two facilities in the county expected to be affected by this rule are the Encina and South Bay generating plants.

Although natural gas is a nonrenewable resource, the increased use required by SCR is not expected to represent a significant impact on total county-wide use. Furthermore, the 1991 RAQS, in total, could result in a decline in natural gas usage because of the reductions in natural gas usage that are anticipated from energy conservation control measures that are proposed.

5.13.1.3 Induced Residential Switching from Gas to Electric Water Heating

Two proposed control measures will require residential households to install solar assist equipment on natural-gas-fired water heating in new homes (EC-1) and in existing homes when the house is sold (EC-5). In order to avoid a large capital expenditure on a solar system, residents (or builders of new homes) might choose to install electric water heating in the home. According to a spokesperson from San Diego Gas and Electric (SDG&E), if all residential natural gas customers (over 645,000) converted to electric water heating, this would cause an increase in electric capacity needs that would equal approximately 1/3 of their current total system capacity. SDG&E's "expects" approximately 50 percent of homes to convert to electric water heating, amounting to about 1/6 of SDG&E's current capacity needs (Kane, 1991).

The extent that residential homes might be converted to electric water heating will depend on the life cycle cost of a solar assist natural gas system, with high capital costs and low operating costs, compared to electric water heating, with relatively lower initial costs but high operating costs. Rough estimates of annualized costs (a measure of life-cycle costs) indicates that electric water is slightly higher in overall cost. However, the decision to switch to electric water heating involves weighing the pros and cons of qualitative attributes of the two systems.

For example, while solar assist water heating might seem to some people to be a risky or new technology with high initial costs, it does result in substantially lower operating costs and less dependence on the uncertainties of rising electric rates, which might make the solar assist home more attractive to prospective buyers.

While it is impossible to know at this time exactly what percent of homes might convert to electric water heaters, it is not unreasonable to assume a lower bound of 10 to 15 percent. Because SDG&E is capacity constrained and will need to expand in the near future to meet load growth, increasing their current capacity needs by as little as 10 percent in the long term could be significant.

5.13.2 Mitigation Measures

5.13.2.1 Energy Requirements of Emission Controls

The APCD will coordinate and cooperate with governments and utilities to promote electricity conservation programs. An active conservation program is believed capable of nullifying increases in demands for electricity that are caused by the 1991 RAQS. With this mitigation measure, this issue is not considered significant.

5.13.2.2 Energy Requirements of SCR

No mitigation measures are identified for this issue.

5.13.2.3 Induced Residential Switching from Gas to Electric Water Heating

Owing to the potential for significant impacts from home owners or builders switching from natural gas to electric water heaters, the San Diego APCD will amend these conservation control measures (EC-1 and EC-5) to also require homes with electric water heaters to install solar assist units. This eliminates the homeowner's incentive to switch to electric water heating and reduces this impact to insignificance.

5.14 Aesthetics

5.14.1 Impacts: Emission Control Equipment

Emission control equipment, especially add-on equipment such as SCR and certain vapor recovery systems, can be bulky and/or architecturally deficient relative to surrounding structures. Such equipment is typically installed at existing industrial sites where visual impacts would be insignificant.

5.14.2 Mitigation Measures: Emission Control Equipment

If equipment is to be installed at a facility with potential visual impacts, the permitting process will consider equipment screening devices, alternative equipment placement, and other design and placement strategies which can minimize visual impacts. The APCD will coordinate and cooperate with responsible agencies to ensure that these measures are instituted.

5.15 Recreation

5.15.1 Impacts: Accidental Release of Ammonia

A major concern with using an SCR system for controlling NO_x emission is the catastrophic release of ammonia. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two facilities in the county expected to be affected by this rule are the Encina and South Bay generating stations. Further discussion of this issue can be found in Section 5.12 (Public Services), Section 5.17 (Risk of Upset), and Section 5.18 (Human Health).

The potential for a significant impact to recreation due to the minor release of ammonia is expected to be very low. However, significant impacts could result from a major release of ammonia. In the event of such a release, there could be toxic effects to plants and animals at nearby recreational sites.

The likelihood of a major release of ammonia is extremely low. However, if a release occurs and specific environmental conditions are met, the environmental Impact could be significant.

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5.15.2 Mitigation Measures: Accidental Release of Ammonia

The potential for recreational resource impacts is related to the design of emission control equipment and the safety procedures governing their use. Without proper design and safety, a potential exists for significant impact to recreational resources. Mitigation measures concerning these issues were summarized in Section 5.12 (Public Services), and no additional mitigation measures are identified beyond these. With these mitigation measures, the likelihood of harmful release is very low, and this impact is not considered significant.

5.16 Cultural Resources

5.16.1 Impacts

No adverse environmental impacts were identified in this issue area, as it is not currently possible to determine the location and size of construction activities that will occur as a result of the implementation of the 1991 RAQS.

5.16.2 Mitigation Measures

No adverse environmental impacts were identified in this issue area. Before specific construction activities occur, cultural resource surveys may be required.

5.17 Risk of Upset

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In order to eliminate possible confusion regarding the difference between risk of upset and human health, clarification is provided here. The impact on human health examines the potential Impact on the health of workers and the public under normal operating procedures and incorporates the probability of an event. On the other hand, the risk of upset addresses impacts on the public in case of an accident. It ignores the probability and assumes the accident occurs.

5.17.1 Impacts: Accidental Release of Ammonia

A major concern with using SCR for controlling NO_x emissions is the accidental release of ammonia. The major application of SCR will result from the control measure's requiring substantial reductions in NO_x from electric powered generating equipment (Measure NI-1). Only two facilities in the county are expected to be affected by this rule: Encina and South Bay generating stations, both of which are owned and operated by San Diego Gas and

Electric Company (SDG&E). A third SDG&E plant (Silvergate) is in storage and is not expected to be operational.

The South Coast Air Quality Management District's (*SCAQMD*) Revised Draft Environmental Impact Report for Rule 1135 indicates that, although the accidental release of ammonia can occur during production and storage, most accidents involving frequent and significant exposure to individuals occur during the transportation and use of ammonia. (Rule 1135 establishes annual emission limits for generating stations located within the South Coast Air Basin.)

The Rule 1135 DEIR indicates that hazardous materials were shipped nationwide 250,000 times per day in 1983. For the 10-year period between 1971 and 1980, there were 248 deaths nationwide resulting from accidents occurring during the transport of hazardous materials. Of these 248 deaths, 200 involved highway transport and 44 involved railway transport. Over 200 of these deaths were associated with the transport of gasoline, 26 deaths involved liquified petroleum gas, and 14 deaths involved ammonia transport. Deaths involving the transportation of ammonia represent less than 0.01 percent of the total number of hazardous material shipments per day. The Rule 1135 DEIR also reports that 240 ammonia releases were reported in 1987. One fatality involving the driver of an ammonia transport vehicle was reported. Injuries resulting from exposure to ammonia vapors reported in 1987 primarily involved workers in buildings where ammonia had been released.

The Rule 1135 DEIR also provides statewide and local ammonia use information. According to this document, the total ammonia market in California is estimated at 125,000 tons per year, with a majority used for agricultural purposes. Approximately 21,000 tons per year were used for industrial purposes within the boundaries of the South Coast Air Basin. This area comprises the counties of Los Angeles, Orange, Riverside, and nonrural San Bernardino County. According to the Rule 1135 DEIR, the National Response Center (NRC) received reports on 18 local releases from fixed (stationary) sources in the South Coast Air Basin in 1987. According to the NRC, these incidents resulted in no injuries or fatalities.

The SCR technology will require that anhydrous ammonia be stored on site. It has been estimated that the compound will be stored in several large-volume, pressurized containers at each plant. A potential for a risk of upset involving a major release of anhydrous ammonia is possible; however, such a release is extremely unlikely. The catastrophic release of a large volume of ammonia would result in a cloud of gas that could cover several acres. Ammonia concentrations would be diluted and mixed rapidly with air. The characteristics of the cloud would be strongly affected by atmospheric, geographic, geologic, and hydrologic features. However, impacts to public health could be significant. A discussion of these health impacts

is included in Section 5.18 (Human Health). Since a catastrophic spiil could also affect water and living resources, the impact on such resources from this type of event is discussed in Sections 5.3 and 5.4, respectively. An accidental release of ammonia could impact the recreational resources surrounding the plants, and such impacts are discussed in Section 5.15 (Recreation). Finally, because fire departments will respond to a major ammonia release, a discussion of the potential impact to fire protection/emergency response capabilities is included in Section 5.12 (Public Services).

5.17.2 Mitigation Measures: Accidental Release of Ammonia

Mitigation measures center around proper adherence to standards, proper training of personnel onsite, and implementation of an emergency response plan. These measures were discussed in Section 5.12 (Public Services). No further mitigation measures are recommended. With implementation of these mitigation measures, the potential for a risk of upset involving the release of ammonia is minimized. However, in the unlikely event of a catastrophic spill, the impacts could be significant.

5.18 Human Health

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5.18.1 Impacts

5.18.1.1 Accidental Release of a Catalyst Used in SCR

Manufacturers of the catalyst material used in the SCR process report that the catalyst material contains small amounts of vanadium pentoxide. Vanadium also is a widely distributed element occurring in many types of fuel. Ingested vanadium pentoxide is relatively nontoxic due to poor absorption in the gastrointestinal tract. The inhalation of soluble forms of vanadium pentoxide can produce such respiratory symptoms as tracheitis, bronchitis, emphysema, pulmonary edema, or bronchial pneumonia (SCAQMD 1988). A researcher cited in the SCAQMD Revised Draft EIR for Rule 1135 indicated that no studies of long-term exposure to vanadium pentoxide exposure have shown evidence of lung lesions.

Release of this compound can occur in two ways. First, the catalyst material erodes due to particulates in the flue gas passing over the catalyst. This erosion will result in subsequent inhalation or ingestion of the compound by both onsite personnel and the public. This erosion is a primary concern on coal-fired units because of the high levels of fly ash in the flue gas. However, catalyst erosion has not been demonstrated to be a problem on units fired with natural gas. As discussed in Section 5.17 (Risk of Upset), measures requiring SCR

apply to two electric generating stations. Because both of these stations are fired with natural gas, impact from release of the catalyst due to erosion is not considered significant.

The second method of release of this catalyst is during change-out. Manufacturers report that the SCR catalyst material typically has a life span of 2 to 4 years, while industry is reporting life spans of more than 10 years for gas-fired facilities. The catalyst will need to be replaced once its useful life has ended. There is the potential that, during the removal and installation of catalyst material, plant personnel may be exposed to the vanadium pentoxide component of the material. During change-out, the material could be dropped, thereby releasing particulates of vanadium pentoxide. However, release into the environment during change-out is considered unlikely because this compound is tightly bound to the catalyst substrate (SCAQMD, 1988). In addition, the SCAQMD surveyed various catalyst vendors and reported that no accidents occurred during 199 catalyst installations and removals (SCAQMD, 1988). For these reasons, accidental catalyst release is not considered a significant impact.

5.18.1.2 Ammonia Slip

Ammonia slip is a concern with using SCR systems for controlling NO_x emissions. This phenomenon was also discussed in Section 5.2 (Air Quality). To ensure maximum NO_x reduction efficiency, sufficient ammonia must be injected into the flue gas to react with all the NO_x. Ammonia that does not react with NO_x passes or "slips" through the reactor vessel and is released into the atmosphere. The SCAQMD and the ARB have determined that under normal operating conditions, ammonia concentrations during "slip" conditions range from 5 to 10 ppm.

The current recommended occupational standard for ammonia is 25 ppm (ACGIH, 1986), whereas the federal permissible exposure level (PEL) established by the Occupational Safety and Health Administration (OSHA) is 50 ppm. Thus, concentrations typically found in the flue gas would be considered acceptable. A common practice for determining exposure limits for the general population for such substances is to divide the occupational exposure limits by a safety factor of 100. Thus, the population exposure limit would be 0.25 ppm.

As discussed in Section 5.2 (Air Quality), flue gases are quite hot and rise rapidly into the atmosphere. In this process, the emitted gases are dispersed well away from ground level. Because of this dispersion pattern, it is doubtful that ammonia concentrations within the breathing zone of either the public or workers will exceed the odor detection threshold of between 1 and 5 ppm. The SCAQMD reports that maximum ground-level concentrations of ammonia would be less than 1 ppm at the point of maximum impact (SCAQMD 1988). As

discussed in Section 5.2 (Air Quality), these conclusions are reinforced by the findings of a worst-case dispersion analysis that was applied to the Ventura County Ormond Beach facility.

Based upon the expected concentration of ammonia generated during ammonia slip and the characteristics of dispersion and dilution, a significant impact to the public health is not expected from this form of release.

5.18.1.3 Accidental Release of Ammonia

A major concern with using an SCR system for controlling NO_x emission is the accidental release and subsequent exposure of plant personnel and the public to ammonia during routine operations. The major application of SCR will result from the control measure requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). Only two facilities in the county are expected to be affected by this rule — Encina and South Bay generating stations — both of which are owned and operated by San Diego Gas and Electric Company (SDG&E). A third SDG&E plant (Silvergate) is in storage and is not expected to be operational.

Anhydrous ammonia is a colorless, strongly alkaline, and extremely soluble gas with a characteristic pungent odor. The health effect of primary concern with ammonia is the acute irritation of the lungs. It is listed under the federal Superfund Amendments and Reauthorization Act (SARA) of 1986 as an extremely hazardous substance because it is a strong irritant, and exposure to high concentrations between 5,000 and 10,000 parts per million (ppm) can result in death from bronchial spasms. Although the health impacts associated with exposure to anhydrous ammonia can potentially be life threatening, based upon industrial experience as reported by the National Response Center (NRC) and local fire prevention records to date, the potential for such a scenario to develop in an industrial setting is highly unlikely.

Accidental releases of ammonia can be distinguished in two forms: minor and major releases. Minor or small releases refer to leaks and spills associated with routine operational activities involving pipes, valves, pressure-relief devices, or shipping containers. Another characteristic of these releases is that onsite personnel can readily control the release and exposure to ammonia vapors. The Occupational Safety and Health Administration (OSHA) has established a permissible exposure limit (PEL) for ammonia of 50 ppm over an 8-hour time-weighted average. The American Conference of Governmental and Industrial Hygienists (ACGIH) reports irritating symptoms at a concentration between 20 and 25 ppm. The ACGIH has recommended an occupational standard of 25 ppm to protect against Irritation to the eyes and respiratory tract. The OSHA PEL is the enforced standard, while the ACGIH limit is

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a recommended, but unenforced limit. Existing regulations require plant personnel to be trained in the use of the appropriate personal protective equipment when working in and around ammonia vapors. As a result of this training, it is assumed that the impact on worker health will not be significant.

Ammonia is classified by the U.S. Department of Transportation as a nonflammable gas. Vapors can ignite at high temperatures in the presence of a flame or spark at concentrations in air of 16 to 25 percent of ammonia. A major release under such conditions could involve the rupture and/or explosion of an ammonia storage tank or tanks on the plant premises. A major release could also potentially occur during the transportation of the anhydrous ammonia to the plant sites. As discussed in Section 5.17 (Risk of Upset), the potential for such a major release exists. However, the potential can be significantly reduced by following recommended safety standards and practices.

Adherence to proper safety policies and practices that will be needed during the design, construction, and operation of emission control equipment will minimize the potential health impacts associated with implementation of the proposed rule.

All equipment used to store and dispense ammonia must be designed to meet the requirements identified under the American National Standards Institute code (ANSI 1981). The transportation of ammonia must meet the standards identified by the U.S. Department of Transportation. Personnel handling ammonia must strictly adhere to the requirements set forth under OSHA and the relevant recommendations set forth by ANSI.

OSHA and DOT require the use of proper clothing, including goggles and rubber or plastic gauntlet gloves impervious to ammonia, during the handling of the ammonia. ANSI also recommends the following safety and protective equipment for each ammonia installation: hooded ventilation, safety showers, respiratory devices, and rescue harnesses. All safety equipment should be located close to the ammonia storage and transport containers.

OSHA also requires training for all personnel who handle ammonia. Training includes information on the potential hazards and precautions associated with anhydrous ammonia. Personnel will also be trained in the use of personal protective equipment and the routine maintenance of ammonia-related equipment. ANSI recommends that, if leaks occur in a permanent storage installation, only personnel trained and designated to act in such emergencies remain onsite. With respect to the shipment of anhydrous ammonia, the DOT requires and ANSI suggests that conspicuously marked warning placards be posted to identify the presence of ammonia.

The likelihood of a catastrophic release of ammonia is low. However, if a release occurs and environmental conditions are right, the environmental impact will be significant both to onsite personnel and to the public. With enforcement of the appropriate mitigation measures (identified in Section 5.18.2) and considering the low probability of a major ammonia release, the impact is not considered significant.

5.18.1.4 Accidental Release of Vapor Recovery Media

The nature and likelihood of a release of toxic gases into the environment was discussed in Section 5.2 (Air Quality) and Section 5.3 (Water Resources). Numerous compounds are involved in vapor recovery, and many of these, such as benzene, toluene, and trichloroethylene, are hazardous to human health. A health risk exists if vapor recovery media, such as carbon canisters or the waste stream from the regeneration of carbon, are handled or disposed of improperly. However, this impact is not considered significant, because compliance with current regulations concerning the handling and disposal of hazardous materials would reduce this risk to insignificance.

5.18.1.5 Substitution to Low-ROG Substances

The 1991 RAQS has many measures requiring reduction of ROG in various substances. In order to comply with these measures, substances such as solvents, coatings, and cleaning solutions will be reformulated. This issue was discussed in Section 5.2 (Air Quality) and Section 5.3 (Water Resources). The possibility exists that these reformulated substances will contain exempt compounds that are harmful to humans. Another possibility is that these reformulated substances will be water based (aqueous) products containing harmful toxics and hazardous compounds. Improper handling or disposal of these substances could pose a health risk. Compliance with current regulations concerning the handling and disposal of hazardous and toxic materials reduces this risk to insignificance.

5.18.1.6 Reformulation of Barbecue Charcoal Lighter Fluid

The California Air Resources Board (ARB) has adopted new regulatory standards that require sales of certified charcoal lighter fluid meeting a specific formulation criterion. Volatile organic compound (VOC) emissions from charcoal ignition with charcoal lighter fluid must be less than or equal to 0.20 pound of VOC per ignition. The RAQS will adopt the ARB regulation for charcoal lighter fluid. No adverse environmental impacts are expected as a result of this reformulation of chemical lighter fluid.

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5.18.2 Mitigation Measures

5.18.2.1 Accidental Release of a Catalyst Used in SCR

Mitigation measures are discussed in Section 5.2 (Air Quality) and Section 5.3 (Water Resources).

5.18.2.2 Ammonia Slip

Mitigation measures are discussed in Section 5.2 (Air Quality).

5.18.2.3 Accidental Release of Ammonia

The potential for impacts to human health is related to the design of emission control equipment, the safety procedures governing their use, and the implementation of an emergency response plan. Mitigation measures concerning these issues were summarized in Section 5.12 (Public Services), and no mitigation measures are identified beyond these. With proper design, safety criteria, and emergency response plan, the potential for significant impact Is expected to be substantially reduced. As a result, this impact is not considered significant.

5.18.2.4 Accidental Release of Vapor Recovery Media

Mitigation measures are discussed in Section 5.2 (Air Quality) and Section 5.4 (Biological Resources).

5.18.2.5 Substitution to Low-ROG Substances

Mitigation measures are discussed in Section 5.2 (Air Quality) and Section 5.4 (Biological Resources).

5.18.2.6 Reformulation of Barbecue Charcoal Lighter Fluid

Adoption of the ARB regulation of limiting VOC emissions to less than or equal to 0.20 pound of VOC per ignition will not result in adverse impacts to the environment. Therefore, no mitigation measures are necessary or proposed.



5.19 Hazardous Waste

5.19.1 Impacts

5.19.1.1 Catalyst Used in SCR

As discussed in Section 5.18 (Human Health), vanadium pentoxide is contained in the catalyst material of SCR processes. SCR catalysts typically have a life span of 2 to 4 years. Once spent, the catalyst must be removed and disposed of. The major application of SCR will result from the control measure's requiring substantial reductions in NO_x from electric powered generating equipment (measure NI-1). The two facilities in the county expected to be affected by this rule are Encina and South Bay generating stations, both of which are owned and operated by San Diego Gas and Electric Company (SDG&E). A third SDG&E plant (Silvergate) is in storage and is not expected to be operational. Disposal alternatives include recycling the catalyst, returning it to the vendor, and disposing of it in a Class I landfill. Land disposal of spent catalyst is expected to be the least desirable alternative because of high disposal costs, potential future liabilities, and negative impacts to landfills (California Public Utilities Commission 1990). Because land disposal of the spent catalyst is not likely, this impact is not considered significant.

5.19.1.2 Additional Hazardous Wastes Generated From Emission Controls

Other control measures can generate hazardous wastes. (For example, carbon, from carbon adsorption systems, is a hazardous material.) These materials could impact landfills in the region.

5.19.2 Mitigation Measures

5.19.2.1 Catalyst Used in SCR

The APCD will coordinate with other agencies to ensure that the catalyst material from SCR is recycled or returned to the original vendor for processing and not disposed of in Class I landfills.

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5.19.2.2 Additional Hazardous Wastes Generated From Emission Controls

Where feasible, APCD will encourage recycling. In carbon adsorption systems, APCD will promote continuous carbon regeneration with thermal rather than steam regeneration. Where feasible, APCD also will encourage thermal incineration as a means of disposing of hazardous materials.



6.0 ALTERNATIVES TO THE PROJECT

The California Environmental Quality Act (CEQA) requires an EIR to describe reasonable alternatives to the proposed project that could feasibly attain the project's basic objectives. The alternative discussion must also evaluate the comparative merits of each alternative and include an analysis of whether their implementation would result in lower environmental impacts than the proposed project. The proposed 1991 RAQS is the District's preferred alternative for compliance with the California Clean Air Act and for achieving the objective of improved air quality within San Diego County.

This section evaluates two additional alternatives: the no-project alternative and the less stringent control alternative. A discussion of these alternatives is provided below.

6.1 No-Project Alternative

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The no-project alternative consists of not implementing the proposed 1991 RAQS. Existing rules and regulations in effect would continue in place and any future air quality regulation would be in accordance with the existing strategy. No additional air pollution control requirements would be imposed, although existing state and local regulations, especially with respect to motor vehicle emissions, would continue to control some emissions in the future. No new NO_x and ROG controls would be imposed by regulation except for those required under new source review (NSR). NSR is typically considered to be a form of emission prevention, rather than an emission reduction program.

Under this alternative, the District would fail to meet the requirements of the California Clean Air Act. This failure could result in the imposition of sanctions by the state Air Resources Board (ARB).

The potential individual environmental impacts associated with implementation of the no-project alternative are discussed below.

6.1.1 Air Quality

The control strategies included in the existing RAQS are minimal and are not sufficient to attain the federal ozone standard. Consequently, the most significant impact associated with the no-project alternative is the detrimental effect on public health and welfare resulting from the reduction in air quality. There would be higher emissions, overall, of both ROG and NO_x

and subsequent limited progress made toward reducing ozone levels. A secondary benefit of reduced NO_x emissions is the reduction of other air pollutants. NO_x is a contributor to elevated concentrations of particulate matter less than 10 microns (PM_{10}), poor visibility, and acid deposition. Implementation of the no-project alternative would cause an increase in these conditions as compared to the proposed project.

The implementation of the no-project alternative would eliminate the potential for increased emissions of pollutants associated with the additional control measures under the proposed project. These pollutants include potential PM_{10} generated from ammonia use, ammonia emissions generated during the phenomena of ammonia "slip," or ammonia emissions associated with accidental releases. However, the proposed project will result in lower levels of NO_x and ROG emissions. Therefore, with respect to air quality, the benefits described for the project would not occur and the goals of the project would not be accomplished.

6.1.2 Water Resources

Potential impacts with the proposed project include the contamination of groundwater from the discharge of ammonia and other toxic chemicals to water resources. However, incremental impacts associated with the RAQS as compared to the no-project alternative are relatively small. There are two reasons for this. First, the 1991 RAQS contains measures for implementation which are incremental to existing rules. Thus, the no-project alternative already contains rules which have similar impacts to those of the 1991 RAQS. Second, under the no-project alternative, new or modified sources will be subject to the same requirements as measures in the RAQS because of New Source Review (NSR). The intent of NSR is to ensure that all new projects generate no net emission increases for regulated pollutants. Therefore, using best available control technologies (BACT) under NSR, new projects would still be subject to controls even if they are not necessarily included under the no-project alternative.

6.1.3 Biological Resources

The potential impacts to biological resources with the implementation of the proposed project include the release of harmful chemicals to the environment. In addition, possible construction activities resulting from the RAQS could threaten areas with sensitive biological habitat. However, incremental impacts are relatively small. Reasons for this were discussed above in Section 6.1.2 (Water Resources).

6.1.4 Risk of Upset

With the increased use and storage of ammonia under the proposed project, the potential for catastrophic release is increased. But, ammonia would be used under current NSR requirements. Therefore, the no-project alternative is considered only a slight improvement over the proposed project.

6.1.5 Human Health

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Under the no-project alternative, residents of San Diego County would be exposed to higher concentrations of NO_x and ROG. Ozone concentrations would continue to exceed both the state and federal standards that have been established at levels designed to protect public health. The exposure to these pollutants would be considered more adverse compared to the small potential increase in exposure to the hazardous chemicals associated with specific control technologies identified in the proposed project.

6.1.6 Hazardous Waste

The proposed plan would result in the generation of additional hazardous wastes. However, the impacts to Class I landfills is not expected to be significant, as quantities would be small, and, in most cases, recycling appears feasible. Therefore, no significant difference is expected between impacts associated with the no-project alternative and the proposed project.

6.2 Less Stringent Alternative

This alternative has three components. First, it proposes to drop energy conservation measures for existing homes because of their potential financial burden to homeowners. This will reduce future costs to the public to retrofit homes before resale. No significant environmental impacts are anticipated from this as compared to the RAQS Project. Second, this alternative will adopt less stringent employee trip reduction measures, resulting in more vehicle trips than the Project. Finally, this alternative is designed to eliminate or reduce risks associated with the use and transportation of anhydrous ammonia required in selective catalytic reduction (SCR) applications while retaining as much of the integrity of the proposed plan as possible. Accordingly, the less stringent control alternative consists of eliminating SCR as the preferred alternative technology for controlling NO_x emissions from boilers used in the generations of electric power (NI-1). Urea injection with combustion modification (UI/CM) will be the alternative to SCR. Two facilities in the county are expected to be affected by this rule — the Encina and South Bay generating plants, which are owned and

1999-001-400

operated by San Diego Gas and Electric Company (SDG&E). Another plant that qualifies under the control measure is the Silvergate plant, but this facility is in storage and is not expected to be operational in the future.

6.2.1 Air Quality/Public Health

The proposed project calls for the use of SCR. This process involves the use of anhydrous ammonia. The potential for upsets and subsequent impacts to public health would not be present under the less stringent alternative; however, more NO_x would be generated using the combined UI/CM technology. This technology is less efficient at removing NO_x emissions compared to SCR (VCAPCD, 1990).

The proposed project will result in lower emission levels of NO_x but an increased potential for accidental ammonia release which can be partially mitigated through safety procedures and emergency response plans. These impacts are considered less likely and less severe than impacts to both air quality and public health from more NO_x emissions associated with the less stringent alternative.

By adoption of a less stringent trip reduction program, more vehicle trips and more congestion can be expected. This will result in higher automobile emissions of CO, ROG, and NO_x . As yet, the exact magnitude of these increased emissions has not been quantified. However, dropping ARB-recommended guidelines for a trip reduction program and adopting a less stringent program might be viewed by the ARB as failing to adopt all feasible measures in the RAQS.

6.2.2 Water Resources

Another impact associated with implementation of the less stringent control alternative would be the potential impacts to existing water supplies. The urea injection process requires that solid urea be reconstituted with water prior to use. Large amounts of water would be necessary and such an increased use could be considered significant relative to current drought conditions.

7.0 CUMULATIVE IMPACTS

The California Environmental Quality Act (CEQA) requires an EIR to discuss cumulative impacts. Cumulative impacts can result from individually minor but collectively significant impacts from projects taking place over a period of time. This involves an assessment of the 1991 RAQS relative to other individual projects related to or affected by this project. Because this is a program EIR, the impacts discussed in Section 5 address the potential cumulative environmental effects of all measures proposed for implementation in the 1991 RAQS.

The 1991 Regional Air Quality Strategy is a regional plan. Because of its widespread effect, it impacts and is impacted by projects both within San Diego County and in adjacent air districts. Projects within the county which could provide cumulative impacts include commercial, residential, and agricultural development consistent with the San Diego County General Plan. Attainment plans prepared by adjacent air pollution control districts will also produce effects which would be cumulative to those discussed in Section 5.

Although the impacts of a single project or plan may not be significant when considered in isolation, the cumulative impacts of associated projects may be significant when these projects are considered collectively. Because of this fact, the following issue areas are addressed in this section: air quality, water resources, energy, and hazardous waste generation and disposal.

7.1 Air Quality

The South Coast Air Basin (SCAB) is located immediately north of San Diego County and has similar air quality problems and concerns. Depending on wind and other conditions, pollutants can move from SCAB into San Diego County. The RAQS is intended to improve air quality in the county. Specifically, the RAQS will significantly reduce emissions of NO_x and ROG, the two key precursors to ozone. Thus, air quality will be improved in adjacent air districts which might otherwise be adversely affected by these pollutants generated in San Diego County. Conversely, because these adjacent regions have plans for improving the air quality for their respective jurisdictions, a reduction in pollutants transported into San Diego County is expected.

Electrification is a favored approach to improving air quality in the South Coast Air Quality Management Plan (AQMP). The EIR for Santa Barbara County's RAQS (SBCAPCD, 1990) provides a detailed discussion of the adverse air quality impacts of generating electricity to

provide for the added cumulative demand caused by the various attainment plans within the region. Impacts to air quality will depend on many variables, including how additional electricity is produced, where it is produced, and at what time it is produced. The conclusion reached in the document is that there are too few data to provide any more than highly speculative results. Nevertheless, the potential exists for increased electric production in the southern California area which can lead to increases in NO_x and ROG emissions. In San Diego County, it is believed these increases will be offset by the reductions in emissions that stem from conservation measures that are either contained directly in the RAQS or are instituted as conservation based mitigation measures to offset increased electric use from the RAQS.

Greenhouse gases allow incoming solar radiation to pass through the earth's atmosphere but trap outgoing infrared radiation like the panels of a greenhouse. Some experts believe increasing levels of greenhouse gases threaten to warm the earth by as much as 4 to 9 degrees fahrenheit over the next 50 to 100 years (AOR, 1989). Many measures in the RAQS will result in reformulation of compounds to various low-ROG substances. One potential substitute is 1,1,1-trichloroethane, a greenhouse gas. While potential releases of these compounds are possible, their volumes are small compared to total global contributions of greenhouse gases and are not considered significant. Nevertheless, these small, local releases could contribute in a small way to the cumulative global greenhouse effect.

7.2 Water

If urea injection is used in the less stringent alternative to reduce NO_x emissions, this could cause an impact to water resources. Two major factors combine to make the impact cumulative and potentially significant. First, the southwestern United States is in the fifth year of a drought. Water resources are being drawn down and supplies are being rationed. Second, the population of San Diego County in particular, and Southern California in general, is expected to continue to increase. This increased development would be expected to produce a continued increase in water demand. Given the current climate of uncertainty about water supplies, it would be reasonable to expect a short-term significant impact on water supply; the impact would be expected to be insignificant when water supplies return to their expected pre-drought levels.

7.3 Energy and Utilities

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There will be increased overall energy demands due to the implementation of the rules in the RAQS. These demands could be significant when considered in light of the projected employment and population growth of the region. Many control technologies either require energy for implementation or cause a reduction in efficiency of energy use. Opposing such a trend would be an improvement in energy efficiency in motors and implementation of conservation measures. Such an improvement is reasonable to expect, given the significant increase in the market for electrical motors and SDG&E's intention of promoting conservation programs (Mitchell, 1991). Thus, the potential exists for a cumulative impact to energy from the RAQS, but a prediction of its magnitude would be speculative. As a result, this is too speculative to be considered a significant adverse impact.

7.4 Hazardous Waste

As discussed in Section 5.19, many measures in the 1991 RAQS will result in increased quantities of hazardous materials which could significantly impact Class I landfills in the region. When considered along with the use of recycling and thermal incinerators as methods of mitigating the disposal problem, these impacts are not considered significant. However, when considered along with the projected regional growth in population and employment, the potential exists for cumulative impacts to hazardous waste disposal efforts. Because the magnitude of these predicted cumulative impacts is speculative (but possibly small relative to county totals) this is not considered significant.



8.0 SIGNIFICANT IRREVERSIBLE IMPACTS

Potentially significant environmental impacts identified in Section 5 are reduced to a level that are less than significant as a result of mitigation measures. Of the remaining potentially significant issue areas, only the impact from the use of selective catalytic reduction (SCR) is considered to have potential irreversible effects.

SCR systems are used to reduce NO_x emissions from boilers. Significant impacts from the RAQS could result from a catastrophic release of ammonia. However, because effects from an ammonia release would be short-term, these impacts would not be irreversible.

In the less stringent alternative, the use of urea injection with combustion modifications (UI/CM) as a substitute for using SCR to reduce NO_x emissions requires relatively large quantities of water. This increased use of water could be a significant short-term impact to local water supplies because of the current drought. These impacts are not considered irreversible because of their essential short-term nature.

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9.0 RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

The long-term effect of the RAQS is to improve air quality, resulting in improved public health and welfare. The overall long-term effect is therefore beneficial to society. In order to achieve this long-term beneficial effect, short-term adverse impacts from implementation of the 1991 RAQS might be experienced. With the exception of the risk of upset from the use of ammonia in selective catalytic reduction, these impacts are reduced to insignificant after implementing mitigation measures. As discussed in Section 8, no potentially long-term and irreversible impacts are associated with the 1991 RAQS. Therefore, implementation of the 1991 RAQS is not expected to have adverse effects on long-term productivity in the area.

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10.0 GROWTH-INDUCING IMPACTS

The objective of the RAQS is an improvement in air quality. Insofar as better air could lead to increased growth, the plan could produce higher growth. It would be highly speculative, however, to attempt to separate normal growth as discussed in the San Diego General Plan from that specifically resulting from the 1991 RAQS. Any such growth-inducing impacts are expected to be small and, therefore, insignificant.

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Page 144
12.0 ADDENDUM

The Draft Environmental Impact Report (EIR) for the San Diego 1991 Regional Air Quality Strategy (RAQS) was issued on August 1, 1991 and circulated for a 45-day public comment period, which closed on September 16, 1991. A public hearing to solicit input and comments was held on September 12, 1991. Upon receipt of comments, the Final EIR was prepared by the consultant for the lead agency, the San Diego Air Pollution Control District (APCD) and submitted to the APCD on October 2, 1991.

Subsequently, the San Diego Association of Governments (SANDAG) amended the Transportation Control Measures (TCM) Plan for the San Diego Air Quality Plan and submitted it to the San Diego APCD for approval.

Through an addendum to the Final EIR for the San Diego 1991 RAQS, dated April 1992, the Transportation Control Measures Plan is incorporated into the 1991 RAQS. The stated goal of the TCM Plan is to reduce traffic congestion and vehicle emissions in the San Diego air basin in order to meet the requirements of the Congestion Management Act and California Clean Air Act of 1988.

The environmental impacts of the TCM are expected to be very similar to the environmental impacts of the transportation measures detailed in the Draft EIR. The exception is that the TCM Plan does not specify any parking management control measures, except as an option for employers; thus the impacts and mitigation measures for parking controls that were addressed in the Draft EIR are no longer applicable.

A subsequent EIR is not required under California Environmental Quality Act (CEQA) Section 15162 because:

- Incorporation of the TCM does not introduce new significant environmental impacts,
- No substantial changes have been made that would require important revisions to the Final EIR,
- No new information of substantial importance to the RAQS has been introduced, and
- The TCM could not have been made a part of the Final EIR because the final revisions to the TCM Plan were not made by SANDAG until March 27, 1992.

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Under Sections 21083 and 21087 of the Public Resources Code and Section 15164 of CEQA, this addendum need not be circulated for public review and has been attached to this Final EIR. This addendum meets the requirements of Section 15164 of CEQA because:

- None of the conditions as described in Section 15162 of CEQA and listed above have occurred,
- Incorporation of the SANDAG TCM Plan required only minor technical changes to be made to the Final EIR to make it adequate under CEQA, and
- Changes to the Final EIR as a result of this addendum do not raise important new issues on the significant effects on the environment as a result of the TCM Plan.



APPENDIX A

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NOTICE OF PREPARATION AND INITIAL STUDY





R. J. Sommerville Air Pollution Control Officer

May 23, 1991

NOTICE OF PREPARATION OF A DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE SAN DIEGO 1991 REGIONAL AIR QUALITY STRATEGY

The San Diego County Air Pollution Control District, acting as lead agency, has determined that the above referenced project may have a significant effect on the environment and that an Environmental Impact Report (EIR) should be prepared. A copy of the Initial Study is attached. A location map is contained in the Initial Study.

The purpose of this notice is to call your attention to this project and to request that your organization assist us in identifying the scope and content of the environmental information that should be addressed in the EIR. Your agency/organization has been identified as a(n):

- ____ Responsible Agency
- _____ Trustee Agency
- _____ Distribution Agency
- Transportation Planning Agency or Public Agency having responsibility for transportation facilities
 - _____ Adjacent Air Quality AgencyInterested Party
 - _____ Interested Party

Pursuant to California state law, this information must be submitted to us no later than 30 days after your receipt of this letter.

Please send your response to me at the address shown below. If you have any questions or concerns, or would like to discuss the contents of this notice, please contact Robert Mross at (619) 694-3336 as soon as possible.

Sincerely,

H. PAUL SIDHU Deputy Director

HPS:RM:jo

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Attachment: Initial Study

AIR POLLUTION CONTROL DISTRICT 9150 Chesapeake Drive, San Diego, California 92123-1095 (619) 694-3307 FAX (619) 694-2730

Initial Study San Diego County Air Pollution Control District San Diego 1991 Regional Air Quality Strategy

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ENSR Document No. 1999-001-100 May 1991

Prepared for

San Diego County Air Pollution Control District San Diego, California

ENSR Consulting and Engineering 1220 Avenida Acaso Camarillo, California 93012



CONTENTS

| 1.0 | INT | RODUC | TION | | | . 1-1 |
|-----|-------------|----------------|------------|-----------------------------------------|---------------|---------------|
| | 1.1 | Projec | t Name | | | . 1-1 |
| | 1. 2 | Projec | t Applican | nt | | . 1-1 |
| | 1.3 | Projec | t Location | 1 | | . 1-1 |
| | 1.4 | Need | for Assess | sment of Environmental Impacts | | . 1-1 |
| | 1.5 | Backg | round | • • • • • • • • • • • • • • • • • • • • | • • • • • • • | . 1-3 |
| 2.0 | PRC | JECT I | DESCRIPT | TION | • • • • • • • | . 2- 1 |
| 3.0 | INIT | | | Скызт | | 3-1 |
| | 3.1 | Check | list | ····· | · · · · · · · | . 3-1 |
| | 3.2 | Discus | sion of Re | esponses to the Checklist | | . 3-1 |
| | _ | | | | | |
| 4.0 | DET | ERMIN | ATION OF | | ••••• | . 4-1 |
| | | | | | | |
| APP | END | CES | | | | |
| | END | Y A1 O | ONTROI | MEAGUREO | | |
| 50 | CON | | | MEASURES Eq | | - . |
| 0.0 | 5 1 | Station | MEAGUNE | es | • • • • • • | . 5-1 |
| | J. 1 | 511 | Reactive | | • • • • • • | . 5-1 |
| | | J. 1. 1 | 5111 | Industrial Specific Controls | • • • • • • | . 5-1 |
| | | | 5110 | Areguide Controls | • • • • • • | . 5-1 |
| | | 512 | Ovidee | | • • • • • • | . 5-4 |
| | | U . 1.2 | 5.1.2.1 | | • • • • • • | . 3-3 |
| | | | 5.1.2.2 | Areawide Controls | • • • • • • | 5-5 |
| | | | 5.1.2.3 | Energy Conservation | • • • • • • | 5-7 |
| | 5.2 | Transp | ortation C | Control Measures | | 5-8 |
| | | · | | | | - • |
| APP | ENDI | X B: M | AILING LI | ST | | |
| 6.0 | MAI | | ST | | | 6-1 |

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1.0 INTRODUCTION

1.1 Project Name

This project is the San Diego 1991 Regional Air Quality Strategy (RAQS). A complete discussion of the 1991 RAQS will be found in the *Draft 1991 San Diego County Regional Air Quality Strategy*.

1.2 Project Applicant

The project applicant is the County of San Diego, Air Pollution Control District (APCD or District), which is located at 9150 Chesapeake Drive, San Diego, California 92123.

1.3 Project Location

The San Diego 1991 Regional Air Quality Strategy will affect sources of air emissions located throughout San Diego County, California. San Diego County is the southwestern most county in California. A map of San Diego County is included as Figure 1-1.

1.4 Need for Assessment of Environmental Impacts

The California Environmental Quality Act (CEQA) requires the evaluation of the environmental impacts of proposed projects and the consideration of feasible methods to reduce, avoid, or eliminate identified significant adverse environmental impacts. In addition, CEQA requires that projects carried out by public agencies be subject to the same level of public review and consideration as private projects requiring approval by public agencies. To fulfill the purpose and intent of CEQA, the APCD is distributing this Initial Study (IS) for the 1991 RAQS. The primary purpose of the 1991 RAQS is to comply with requirements of the California Clean Air Act of 1988 (CCAA).

CEQA allows for one of three determinations for a project depending upon the magnitude of impact to the environment and/or the level of public concern surrounding the project. Where the project has no impact or the impacts can be mitigated, a negative declaration or mitigated negative declaration, respectively, can be prepared. Where the project could significantly impact the environment or is potentially controversial, a full environmental impact report (EIR) is called for.

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Due to the scope of the 1991 RAQS and the potential for the project to have a significant effect on the environment, a full environmental impact report (EIR) will be prepared. The EIR for the 1991 RAQS will be prepared as a "Program EIR" as defined in Section 15168 of the CEQA guidelines. The EIR will include a discussion of the expected environmental impacts associated with implementation of the 1991 RAQS. The focus of the EIR will be to examine the collective impact of proposed control measures. Environmental impacts and mitigation measures will be presented for the 1991 RAQS. Alternatives to the 1991 RAQS also will be analyzed in this EIR.

1.5 Background

The federal Clean Air Act (CAA) Amendments of 1977 required all states to attain the National Ambient Air Quality Standards by December 31, 1987. These amendments required states to submit plans that "demonstrated" attainment of the applicable standards by the statutory deadline.

The California Clean Air Act of 1988 (CCAA) added Chapter 10, District Plans to Attain State Ambient Air quality standards, to Part 3 of Division 26 of the California Health & Safety Code (HSC). This chapter of the HSC requires, among other things, that districts develop plans to achieve the state ambient air quality standards as expeditiously as practical. These plans must include regulations that require control technologies for reducing emissions from existing sources. For air districts that do not project attainment of the state standards until after 1994, the CCAA imposes additional requirements. These include:

- Modify existing permitting regulations, known as New Source Review, to ensure that there is no net increase in emissions of nonattainment pollutants or their precursors from all new or modified stationary sources.
- Institute transportation control measures to reduce the rate of increase in vehicle trips and miles travelled and increase vehicle occupancy rates.
- Institute an indirect source review (ISR) program to mitigate air quality impacts from emissions of indirect sources, such as shopping centers and office complexes.
- Require the application of best available retrofit control technology (BARCT) for existing emission sources.



As part of the CCAA planning process, the Air Resources Board (ARB) formally designated San Diego County as a nonattainment area for the state standards for ozone and particulate matter less than 10 microns in diameter (PM_{10}) in June 1989. The western portion of San Diego County (west of the mountains) is also a nonattainment area for carbon monoxide (CO) and nitrogen dioxide (NO₂).

Ozone (smog) is a pollutant of great concern in San Diego County. In 1990, San Diego County exceeded the federal ozone standard on 39 days and the state standard on 139 days. This is an improvement from 10 years previously when the federal standard was exceeded on 87 days and the state standard on 167 days in 1980. Pollution transported from the Los Angeles basin is a contributor to these violations. The CCAA requires the South Coast Air Quality Management District to mitigate the impact of its emissions from Los Angeles County to San Diego County.

The CCAA requires that a revised plan to control smog, carbon monoxide, and nitrogen dioxide be submitted to the ARB this year to provide for attainment of the air quality standards as expeditiously as practicable. Actions to address state particulate standards are deferred until an ARB report on the feasibility of attaining these standards is submitted to the Legislature in 1991, and specific requirements are established by the state.

An area's air pollution is severe if the state board finds and determines that the district cannot attain and maintain the applicable state standard until after December 31, 1997. San Diego has not yet been formally designated as a severe nonattainment area. Appropriate designation will not occur until after the initial plans are submitted to the ARB in 1991. However, attainment of the ozone standard in San Diego County by December 1997 is unlikely, and the ARB has required that the San Diego APCD prepare the 1991 RAQS to meet all the requirements for a severe area.

The CCAA issues several mandates for severe nonattainment areas. Among these are the following requirements:

- Attainment of the state air quality standards by the earliest practicable date.
- Annual emission reductions of 5 percent per year beginning in 1988 for all air pollutants for which state standards are not met.
- A permitting program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors from all new or modified permitted stationary sources.



- The application of best available retrofit control technology (BARCT) for existing emission sources.
- Provisions to develop area and indirect source control programs.
- Adoption and implementation of transportation control measures to substantially reduce trip growth and vehicle miles travelled growth, achieve a 1.5 average vehicle occupancy for weekday commute trips by 1999, and have no net increase in vehicle emissions after 1997.
- Measures to achieve the use of a significant number of low-emission motor vehicles by operators of motor vehicle fleets.
- Submission of an attainment plan by June 1991 and triennial updates thereafter.

According to CCAA, if the 1991 RAQS is unable to meet the above mentioned 5 percent requirement, then all feasible measures must be implemented. Preliminary analysis by the APCD indicates that the 5 percent annual reduction target will not be met in San Diego County, and all feasible measures will be required.

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2.0 PROJECT DESCRIPTION

As stated in Section 1, San Diego County exceeds the state and federal standards for ozone, NO_2 and CO. The proposed 1991 RAQS is a regional plan whose purpose is improving air quality in the county by reducing ozone concentrations. Ozone is the product of a complex chain of chemical reactions which occur in the atmosphere in the presence of sunlight. The primary compounds in these chemical reactions are reactive organic gases (ROG) and oxides of nitrogen (NO_x). Thus, ROG and NO_x are said to be precursors to the formation of ozone.

The proposed San Diego 1991 Regional Air Quality Strategy (RAQS) contains control strategies designed to improve air quality by concurrently reducing emissions of ROG and NO_x . These strategies comprise specific control measures that are organized into two basic types: 1) stationary sources, which include both point and area source control measures, and 2) transportation control measures, designed to reduce emissions from transportation related sources.

The APCD has identified over fifty individual industrial and areawide control tactics. Appendix-A contains a list of all tactics currently under consideration for inclusion in the 1991 RAQS. Individual industrial tactics concern point sources of emissions of ROG or NO_x . Examples include coatings (e.g. paints), cleaning solvents, semiconductor manufacturing, and combustion modifications (e.g., flue gas recirculation) and/or post combustion modifications (e.g., selective catalytic reduction) of boilers and engines. Areawide sources are small sources scattered across the county, whose cumulative effect on air quality can be significant. Examples include space heating and air conditioning, household products, and charcoal lighter fluid. Many of the industrial and areawide control tactics for reducing ROG and NO_x emissions, which will be included in the 1991 RAQS, will ultimately also help attain the state standard for PM₁₀ and NO₂.

Transportation Control Measures (TCM) are being proposed, which, in coordination with California's new motor vehicle emission standards, will help achieve reductions in ROG, NO_x and CO. These measures are grouped under four major headings: a trip reduction program to reduce vehicles on roads, a transportation capacity expansion program to provide alternatives to single-occupant motor vehicles, a traffic systems management program to improve traffic flow, and an indirect source control program to require that new indirect sources of ROG and NO_x emissions mitigate their air quality impacts. Additionally, measures are being developed to achieve the use of a significant number of low emission vehicles by operators of motor vehicle fleets.

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Most of the control measures require local implementation, although some are statewide measures adopted by ARB to meet CCAA mandates. The 1991 RAQS will consist of the following elements:

- <u>Air Quality</u>: This element evaluates historical and current air quality data.
- <u>Baseline Emissions Inventory</u>: This element provides point and area source inventories of emissions of ROG, NO_x, and CO for the 1991 RAQS base year.
 Forecasts of future year emissions are projected from the base year.
- Stationary and Area Source Control Measures: This element includes the evaluation of new and existing control measures to reduce ROG and NO_x emissions from stationary and area sources. Control measures are evaluated for alternative control technologies or strategies, control measure efficiency, emission reduction potential, and cost effectiveness. Tactics considered for inclusion in the 1991 RAQS as stationary and areawide source control measures are identified in Appendix A.
- Mobile Source and Transportation Control Measures: This element includes the evaluation of new and existing control measures to reduce ROG and NO_x emissions from mobile sources. These control measures are identified in Appendix A.
- <u>Emission Forecasts</u>: Emission forecasts of future ROG and NO_x emissions are made for the purpose of assessing future emissions. The forecasts are generated by projecting the baseline inventory into the future, taking into account the effects of expected socioeconomic changes and the impact of proposed emission control measures.
- <u>Air Quality Modeling</u>: Air quality models are used to predict future air quality, given future emissions. While not precise, these models provide reasonable estimates of the potential effects of large-scale regional emission changes on air quality. Air quality modeling is not required for the 1991 RAQS; only implementation of all feasible measures is required. Triennial updates will introduce modeling.
- <u>Plan Implementation</u>: The key to achieving the aims of the 1991 RAQS is to adopt and implement rules based on the proposed control measures contained in the 1991 RAQS. This involves identifying the agencies responsible for implementing the proposed measures, determining the rulemaking schedule, defining education and information programs aimed at informing the public about air quality concerns,



establishing procedures to evaluate and mitigate emissions growth from specific types of projects, and determining how the 1991 RAQS will be monitored.

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3.0 INITIAL STUDY CHECKLIST

3.1 Checklist

For each issue listed in the Table 3-1, Environmental Checklist Form, a determination was made as to whether the project (individually or cumulatively) would have an effect on the environment, and whether the effect would be significant. This checklist is followed in the next section with the rationale for the determination of each issue. Those issues considered to be either of significance or are of unknown significance are discussed briefly here since they will be the focus of a more extensive treatment in the EIR.

3.2 Discussion of Responses to the Checklist

For each issue marked "Yes" or "Maybe" in Table 3-1, the following discussion is provided:

- 1g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards: Some control measures may require adoption of selective catalytic reduction (SCR) which necessitates the use and storage of large quantities of ammonia. Siting and design of ammonia storage systems at industrial locations could increase the likelihood of a catastrophic release of ammonia due to earthquakes or other geologic hazards. The significance of such potential impacts will be examined in the EIR.
- 2a. Substantial air emissions or deterioration of amblent air quality: The 1991 RAQS is intended to reduce air pollutant emissions and improve ambient air quality. However, some of the control measures might cause indirect increases in emissions of harmful compounds. For example, certain types of control equipment under consideration in the 1991 RAQS could result in emissions of criteria air pollutants; afterburners installed to incinerate emissions of reactive organic gases (ROG) involve combustion and would therefore emit nitrogen oxides, carbon monoxide, and particulate matter. Also, certain measures could result in emissions of hazardous or toxic substances. For example, the adoption of SCR requires the use and storage of ammonia, a toxic substance, which will be released into the atmosphere. The significance of these potential emissions will be examined in the EIR.

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| No. | issue Area | Yes | Maybe | No |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-------|------------|
| 1. | Earth. Will the proposal result in: | | | |
| | a. Unstable earth conditions or in changes in geologic substructures? | | | x |
| | b. Disruptions, displacements, compaction or overcovering of the soil? | | | X |
| | c. Change in topography or ground surface relief features? | | | X |
| | d. The destruction, covering or modification of any unique geologic or physical features? | | | x |
| | e. Any increase in wind or water erosion of soils, either on or off the site? | | | x |
| | f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake? | | | × |
| | g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards? | | x | |
| 2. | Air. Will the proposal result in: | | | |
| | a. Significant air emissions for some air contaminants? | | X | |
| | b. The creation of objectionable odors? | | x | |
| | c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally? | | x | |
| 3. | Water. Will the proposal result in: | | | |
| | a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters? | | | x |
| | b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff? | | | . X |
| | c. Alterations to the course or flow of flood waters? | | | X |
| | d. Change in the amount of surface water in any water body? | | | x |
| | e. Discharge into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity? | - | x | |
| | f. Alteration of the direction or rate of flow of ground water? | | | X |
| | g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations? | | | x |
| | h. Substantial reduction in the amount of water otherwise available for public water supplies? | | x | |
| | Exposure of people or property to water related hazards such as flooding or tidal waves? | | | x |

Table 3-1 Environmental Checklist Form



4.0 DETERMINATION OF ENVIRONMENTAL DOCUMENT

DETERMINATION OF ENVIRONMENTAL DOCUMENT

- [] I find the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION should be prepared.
- [] I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure(s) described in Section C of the Initial Study will be applied to the project. A MITIGATED NEGATIVE DECLARATION should be prepared.
- [X] I find the proposed project, individually and/or cumulatively, MAY have a significant effect on the environment and determine that an ENVIRONMENTAL IMPACT REPORT is required.

H. Paul Sidhu

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/ Date

H. Paul Sidnu Deputy Director County of San Diego Air Pollution Control District



- 17a. Creation of any health hazard or potential health hazard: Certain control measures might create indirect health hazards. For example, in SCR systems, there is the potential for release of ammonia during operation or transportation; in vapor recovery systems, accidental release of vapor recovery media can result in release of harmful toxics. The significance of such potential impacts on health will be examined in the EIR.
- **17b. Exposure of people to potential health hazards:** Please see the discussion for item 17a, directly above.
 - **19. Impact on the quality or quantity of existing recreational opportunities:** Certain control measures could impact recreation sites. For example, in SCR systems, the catastrophic release of ammonia during operations or transportation could cause short-term harm to resources in recreational areas. The significance of such potential impacts will be examined in the EIR.

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- 13d. Alterations to present patterns of circulation or movement of people and/or goods: Please see the discussion under item 13c, directly above. Also, New Source Review and Indirect Source Control programs could alter the spatial distribution of required transportation facilities. The significance of such potential impacts on transportation systems will be examined in the EIR.
- 14a. Effects on fire protection: Certain control measures require the use of hazardous materials. The increased risk of a major accident could increase demands for emergency services and facilities in the area. The significance of these potential impacts will be examined in the EIR.
- 14b. Effects on police protection: Please see the discussion for item 14a, directly above.
- 14f. Effects on other government services: Please see discussion for item 14a, directly above.
- **15a. Use of substantial amounts of fuel or energy:** Some stationary source control measures could increase the demand for energy from nonrenewable fossil fuels and/or electricity due to the installation of emission control equipment. On the other hand, transportation control measures designed to reduce automobile use should decrease the demand for nonrenewable fuels. The significance of such potential impacts on energy demand will be examined in the EIR.
- 15b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy: Please see discussion for item 15a, directly above.
 - 16. Result in a need for new systems, or substantial alterations to existing utilities: Some control measures could affect utilities in the area. For example, as mentioned in 15a and 15b, directly above, certain control measures might increase the demand for natural gas and/or electricity to power control equipment. The significance of such potential impacts on utilities will be examined in the EIR.



- 6a. Increases in existing noise levels: Certain control measures could cause increases in noise levels. For example, some emission control equipment could increase noise levels to objectionable levels. Also, trip reduction programs, if successful, will result in fewer vehicles on the road which, in turn, could lead to increased vehicle speeds and noise, especially at peak traffic hours. The significance of these potential impacts on noise levels will be examined in the EIR.
- 8. Substantial alteration of the present or planned iand use In the area: Some control measures, such as indirect source review, could lead to changes in land use patterns that could have an impact on community character. In addition, loss of agricultural (or other) land could result from construction of transportation facilities. The significance of such potential impacts on land use will be examined in the EIR.
- 9. Increases in the rate of use of any natural resource: Some stationary source control measures could increase the demand for energy from nonrenewable fossil fuels due to the installation of control equipment. The significance of such potential impacts on natural resources will be examined in the EIR.
- 10a. Risk of an explosion or the release of hazardous substances in the event of an accident or upset condition: Some control measures could increase the likelihood of a major accident. For example, in SCR systems, the catastrophic release of ammonia during operations or transportation could occur. The significance of such potential impacts will be examined in the EIR.
 - 11. Alter the location, distribution, density or growth rate of population in the area: Control measures such as New Source Review and Indirect Source Control could alter the spatial distribution, if not the level, of population in the area. The significance of such potential impacts on population will be examined in the EIR.
- 13c. Substantial impact upon existing transportation systems: Transportation control measures will reduce vehicle trips and vehicle miles travelled; however, some secondary impacts on the transportation system could result from the proposed control measures. For example, certain measures could increase the demand for pedestrian and bicycle facilities and increase the demand for bus transit services. The significance of such potential impacts on transportation systems will be examined in the EIR.



- 2b. The creation of objectionable odors: Some control measures require the use or collection of compounds which could cause objectionable odors. For example, in SCR systems, small amounts of ammonia are released. The significance of these potential impacts will be examined in the EIR.
- 2c. Alternation of air movement, moisture, or temperature, or any change in climate, either locally or regionally: Reformulating coatings, cleaners and solvents to low-ROG content might result in compounds being used that are hazardous or toxic. For example, one such substitute solvent, 1,1,1-trichloroethane, while not currently classified as a toxic air contaminant, is suspected as a contributor to global warming and stratospheric ozone depletion. The significance of these potential impacts will be examined in the EIR.
- 3e. Discharge Into surface waters, or any alteration of surface water quality, including but not limited to temperature, dissolved oxygen, or turbidity: Certain control measures could affect water quality. For example, improper disposal or handling of spent vapor recovery media, such as carbon canisters, can result in release of toxics and hydrocarbons that would be harmful to water resources if released in sewers or waterways. Also, methanol, as a fuel substitute, can adversely affect water quality. Its corrosiveness increases the likelihood of a spill and its miscibility increases the extent of contamination to ground water if accidentally released. The significance of these potential impacts on water quality will be examined in the EIR.
- 3h. Substantial reduction in the amount of water otherwise available for public water supplies: Certain types of control measures, such as wet scrubbers or urea injection, could increase water consumption. The significance of these potential impacts on water supply will be examined in the EIR.
- 5d. Deterioration to existing fish or wildlife habitat: Certain control measures could affect wildlife habitat: transportation construction projects could eliminate or reduce habitat; in SCR systems, the accidental, catastrophic release of ammonia during operations or transportation could present a risk to biological resources. The significance of these potential impacts on biological habitat will be examined in the EIR.

| No. | o. Issue Area | | Maybe | No |
|-----|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-------|----|
| 20. | Cultural Resources. Will the proposal: | | | |
| | a. Result in the alteration of or the destruction of a prehistoric or historic archaeological site? | | | X |
| | b. Result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object? | | | × |
| | c. Have the potential to cause a physical change which would affect unique ethnic cultural values? | | | X |
| | d. Restrict existing religious or sacred used within the potential impact area? | | | х |
| 21 | Mandatory Findings of Significance. Does the project have: | | | |
| | a. The potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory? | | × | |
| | b. The potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.) | | | × |
| | c. Impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.) | | x | |
| | d. Environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly? | | x | |

Table 3-1 (Continued) Environmental Checklist Form

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Table 3-1 (Continued) Environmental Checklist Form

| No. | Issue Area | Yes | Maybe | No |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|----|
| 13. | Transportation/Circulation. Will the proposal result in: | | | |
| | a. Generation of substantial additional vehicular movement? | | | X |
| | b. Effects on existing parking facilities, or demand for new parking? | | | х |
| | c. Substantial impact upon existing transportation systems? | | x | |
| | d. Alterations to present patterns of circulation or movement of people and/or goods? | | x | |
| | e. Alterations to waterborne, rail or air traffic? | | | x |
| | f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians? | | | x |
| 14. | Public Services. Will the proposal have an effect upon, or result in a need for, new or altered governmental services in any of the following areas: | | | |
| | a. Fire protection? | | x | |
| | b. Police protection? | | x | |
| | c. Schools? | | | x |
| | d. Parks or other recreational facilities? | | | x |
| | e. Maintenance of public facilities, including roads? | | | X |
| | f. Other government services? | | x | |
| 15. | Energy. Will the proposal result in: | | | |
| | a. Use of substantial amounts of fuel or energy? | | x | |
| | b. Substantial increase in demand upon existing sources of energy, or require the development of new sources of energy? | | x | |
| 16. | Utilities. Will the proposal result in a need for new systems, or substantial alterations to existing utilities. | | X | |
| 17. | Human Health. Will the proposal result in: | ан. 8- т | | |
| | a. Creation of any health hazard or potential health hazard (excluding mental health)? | | X | |
| | b. Exposure of people to potential health hazards? | | x | |
| 18. | Assthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view? | | | x |
| 19. | Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities? | | x | |

| No. | Issue Area | Yes | Maybe | No |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|------------|----|
| 4. | Plant Life. Will the proposal result in: | | | |
| | a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)? | | | x |
| | b. Reduction of the numbers of any unique, rare or endangered species of plants? | | | X |
| | c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species? | | | x |
| | d. Reduction in acreage of any agricultural crop? | | | X |
| 5. | Animal Life. Will the proposal result in: | | | |
| | a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)? | | | x |
| ÷ | b. Reduction of the numbers of any unique, rare or endangered species or animals? | | | x |
| | c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals? | | | x |
| | d. Deterioration to existing fish or wildlife habitat? | | x | |
| 6. | Noise. Will the proposal result in: | a da Maria | | |
| | a. Increases in existing noise levels? | | x | |
| | b. Exposure of people to severe noise levels? | | | X |
| 7. | Light and Glare. Will the proposal produce new light or glare? | | | x |
| 8. | Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area? | | x | |
| 9. | Natural Resources. Will the proposal result in increases in the rate of use of any natural resource? | | X . | |
| 10. | Risk of Upset. Will the proposal involve: | | | |
| | a. A risk of an explosion or the release of hazardous substances (including, but not limited to oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions? | | x | |
| | b. Possible interference with an emergency response plan or an emergency evacuation plan? | | | × |
| 11. | Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area? | | × | |
| 12. | Housing. Will the proposal affect existing housing, or create a demand for additional housing? | | | × |

Table 3-1 (Continued) Environmental Checklist Form

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CONTROL MEASURES

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5.0 CONTROL MEASURES

This appendix contains a list of all tactics that have been identified by the APCD as potential measures to be implemented as future rules. Existing rules that have been implemented by the APCD are not a part of this project and, therefore, are not discussed here. However, some tactics contain proposed revisions to existing rules, and these tactics are presented here.

5.1 Stationary Source Control Measures

Plan.

5.1.1 Reactive Organic Gases

5.1.1.1 Industrial Specific Controls

The following are stationary source, industrial control tactics designed to reduce reactive organic gases (ROG):

- Automobile Refinishing. Require the use of low volatile organic compounds (VOC) coatings and solvents, high transfer efficiency application equipment, improved procedures for storage and handling of cleanup solvents, use of enclosed systems for equipment cleaning, improved maintenance and operating procedures, and proper record keeping.
- Wood Furniture Coating. Revise Rule 67.11 to require use of low VOC coatings or add-on control equipment and elimination of low usage exemption.
- Marine Vessel Coating Operations. Require lower solvent content coatings and cleanup materials and closed applicator cleaning systems for coating operations associated with construction and repair of marine vessels.
- Solvent Cleaning and Degreasing. Revise Rules 67.6 and 11 to require emission controls and permits for currently exempt degreasers, remote reservoir cleaners, and strip tanks; increase freeboard ratio and require freeboard chillers for vapor degreasers; additional controls, lip exhausts and carbon absorbers for vapor degreasers emitting 10 tons/year or more.



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- Polyester Resin Operations. Revise Rule 67.12, Polyester Resin Operations, which requires material and process changes to reduce styrene emissions, use of low VOC solvents or reclamation systems for cleaning solvents, higher efficiency application equipment, special procedures for storage of cleanup solvents and solvent-laden materials, and record keeping for polyester resin operations.
- Cleanup Solvents. Require the use of lower VOC content cleaning solvents and improved solvent handling procedures for cleaning of equipment and materials used in surface coating operations.
- Plastic Parts, Rubber, Composites & Glass Coating Operations. Requires use of low ROG coating and cleanup solvents for plastic, rubber, and composite coatings; process changes or add-on control for glass coating, high transfer efficiency application equipment, enclosed systems for equipment cleaning; improved maintenance and operating procedures; and proper record keeping.
- Foam Blowing/Plastics Expanding. Require the use of alternate blowing agents or the addition of control equipment such as a carbon adsorption unit or an incinerator.
- Adhesives. Require the use of lower VOC content adhesive formulations or add-on control equipment; use of adhesive application equipment with higher transfer efficiency; use of low VOC content solvents and enclosed systems for equipment and surface cleanup operations; and improved record keeping of VOC containing materials.
- Petroleum Dry Cleaning. Revise Rule 67.2, Dry Cleaning Equipment Using Petroleum-Based Solvent, by lowering the petroleum solvent usage exemption limit and increasing the ROG emission control level for large petroleum-based solvent dry cleaning facilities.
- Keip Processing and Bio-Polymer Manufacturing. Revise Rule 67.10, Keip Processing and Bio-polymer Manufacturing Operations, to increase required efficiency of control from 90 to 95 percent.
- Paint and Ink Manufacturing. Require use of add-on control equipment for large companies, use of low VOC cleaning materials or solvent reclamation, and use enclosed systems for cleaning tools and equipment; require proper record keeping.



- Metal Parts and Products Coating. Enforce control of emissions from surface coating of metal parts and products by use of low VOC solvents, high efficiency application equipment, special procedures for storage and use of cleanup solvents; require improved record keeping and tightening of exemption requirements.
- Can and Coll Coating. Revise Rule 67.4 to require use of zero VOC (ROG) compounds as can end sealing coatings for can coating operations, and use of zero VOC coatings or add-on control devices for coil coating operations.
- **Commercial Bakerles.** Require 90 percent reduction of ROG emissions from commercial bakeries producing more than 1,000,000 pounds of bread per year.
- Semiconductor Manufacturing and Electronic Packaging Operations. Require use of add-on control devices for slip casting; use of lower VOC content or lower vapor pressure materials for tool and equipment cleaning; improved housekeeping practices for handling of organic solvents; proper record keeping.
- Underground Storage Tank Removal. This tactic reduces ROG emissions which occur as a result of excavation and/or treatment of soil contaminated by leaking underground storage tanks and pipelines.
- Underground Storage Tank Removal and Soil Contamination. Delineate special procedures for underground storage tank (UST) removal and handling of excavated soil and installation of emission controls in soil decontamination projects.
- Polyester and Epoxy Resin Operations. Revise Rule 67.12, Polyester Resin Operations, to eliminate the low usage exemption; to extend the application of cleanup solvent control requirements to also cover epoxy resin operations; and to require add-on controls for large polyester resin operations.
- Tank Degassing. Restrict uncontrolled degassing and emission control during cleaning and decommissioning of above ground gasoline storage tanks.
- Groundwater Decontamination. Require use of water phase carbon adsorption or add-on control equipment of air stripping operations in groundwater decontamination projects; initiate special reporting, monitoring and record keeping requirements.



APPENDIX B

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RESPONSES TO NOTICE OF PREPARATION AND INITIAL STUDY

STATE OF CALIFORNIA-THE RESOURCES AGENCY

DEPARTMENT OF FISH AND GAME

330 Golden Shore, Suite 50 Long Beach, CA 90802 (213) 590-5113

June 14, 1991

Mr. Robert Mross San Diego Pollution Control District 9150 Chesapeake Drive San Diego, California 92123-1095

Dear Mr. Mross:

We have reviewed the Notice of Preparation for the San Diego 1991 Regional Air Quality Strategy (SCH 91061009). To enable our staff to adequately review and comment on this project, we recommend the following information be included in the Draft Environmental Impact Report:

- 1. A complete assessment of flora and fauna within and adjacent to the project area, with particular emphasis upon identifying endangered, threatened and locally unique species and sensitive and critical habitats.
- 2. A discussion of direct, indirect, and cumulative impacts expected to adversely affect biological resources, with specific measures to offset such impacts.
- 3. A discussion of potential adverse impacts from any increased runoff, sedimentation, soil erosion, and/or urban pollutants on streams and watercourses on or near the project site, with mitigation measures proposed to alleviate such impacts. Stream buffer areas and maintenance in their natural condition through non-structural flood control methods should also be considered in order to continue their high value as wildlife corridors.

More generally, there should be discussion of alternatives to not only minimize adverse impacts to wildlife, but to include direct benefit to wildlife and wildlife habitat. Those discussions should consider the Department of Fish and Game's policy that there should be no net loss of wetland acreage or habitat values. We oppose projects which do not provide adequate mitigation for such losses.



PETE WILSON, Governor



United States Department of the Interior

NATIONAL PARK SERVICE Cabrillo National Monument P. O. Box 6670 San Diego, California 92106

IN REPLY REFER TO:

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May 31, 1991

Mr. H. Paul Sidhu Air Pollution Control District 9150 Chesapeake Drive San Diego. California 92123-1095

Dear Mr. Sidhu:

The following are our comments on the Notice of Preparation of your Draft Environmental Impact Report for the San Diego 1991 Regional Air Quality Strategy.

Cabrillo National Monument offers visitors from around the world an unequaled view of the City of San Diego. Over the last ten years, that view has steadily deteriorated due to air pollution. We are glad that measures to improve air quality in San Diego are being taken. It can not but help improve the quality of life for all San Diegans and give a better view to the 1.5 million visitors who visit the park. If a platform is needed to present the story of air quality to the public, Cabrillo National Monument would be a good place to present that story.

We believe that the natural areas of coastal sage scrub at Cabrillo have been negatively impacted by air pollution. The variety and quantity of lichens found here has diminished over the years.

We wish to remain on your mailing list and receive any further information you can give us regarding this subject.

Sincerely,

m. DAllis

Terry M. DiMattio Superintendent



CITY OF SANTEE

City Manager Ronaid L. Bailard

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June 21, 1991

H. Paul Sidhu Deputy Director Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1095

Re: NOP for Draft Environmental Impact Report for the San Diego 1991 Regional Air Quality Strategy

Dear Mr. Sidhu:

The City of Santee appreciates the opportunity to respond to the above referenced Notice of Preparation. Staff has analyzed the NOP and has the following comments:

1. As an alternative proposal, the Transportation Demand Management Program, as currently proposed by SANDAG, should be analyzed. Through continued negotiations, all or part of this alternative program may eventually become APCD's proposal as well.

Further comments may be forthcoming pursuant to City Council review next week. If you have any questions, do not hesitate to contact me at 258-4100.

Sincerely,

4

2 welland Douglas Williford, APCP

Principal Planner Department of Planning and Community Development

DW:sm

10765 Woodside Avenue • Santee, California 92071-3198 • (619) 562-6153

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STATE OF CALIFORNIA - BUSINESS, TRANSPORTATION AND HOUSING AGENCY

DEPARTMENT OF TRANSPORTATION : DISTRICT 11, P.O. BOX 85408, SAN DIEGO 92180-5408

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July 10, 1991

AROSS Robert Ross SDAPCD 9150 Chesapeake Drive San Diego, CA 92123-1095

Dear Mr. Ross:

Notice of Preparation of a DEIR for the San Diego 1991 Regional Air Quality <u>Strategy - SCH 91061009</u>

Caltrans District 11 looks forward to the opportunity to review the referenced EIR.

Sincerely,

JESUS M. GARCIA District Director

By

T. CHESHIRE, Chief JAMES Environmental Planning Branch



PETE WILSON, Boverner



APPENDIX C

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EIR MAILING LIST

AQS Report Mail List

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Page 180
AQS Report Mail List

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Page 182

AQS Report Mail List

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APPENDIX D

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TRANSCRIPT OF PUBLIC MEETING AND RESPONSES TO PUBLIC COMMENTS

SAN DIEGO AIR POLLUTION CONTROL DISTRICT PUBLIC WORKSHOP FOR DISCUSSION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE 1991 REGIONAL AIR QUALITY STRATEGY

TAKEN AT SAN DIEGO, CALIFORNIA SEPTEMBER 12, 1991

KAREN A. BLACK, REPORTER CERTIFICATE NO. 8997

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JAN WHITE & ASSOCIATES CERTIFIED SHORTHAND REPORTERS THE KOLL CENTER 501 WEST BROADWAY, SUITE 1335 SAN DIEGO, CALIFORNIA 92101 (619) 234-0991





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JAN WHITE & ASSOCIATES

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| 1 | SPEAKER APPEARANCES |
| 2 | PAUL DAVIS |
| 3 | JEFF BAXTER |
| 4 | RICHARD SIMON |
| 5 | JERRY KANE |
| 6 | PETER FORD |
| 7 | ALSO PRESENT: |
| 8 | SUNNY BARRETT |
| 9 | DORN BISHOP |
| 10 | WILLIAM TAYLOR |
| 11 | SALLY MORROW |
| 12 | H. PAUL SIDHU, DEPUTY DIRECTOR |
| 13 | AIR POLLUTION CONTROL DISTRICT 9150 CHESAPEAKE DRIVE |
| 14 | SAN DIEGO, CA 92123-1095 |
| 15 | ROBERT J. MROSS, ASSOCIATE AIR RESOURCES SPECIALIST |
| 16 | AIR RESOURCES & STRATEGY DEVELOPMENT DIVISION AIR POLLUTION CONTROL DISTRICT |
| 17 | 9150 CHESAPEAKE DRIVE SAN DIEGO, CA 92123 |
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| 1 | MR. DAVIS: WE MIGHT AS WELL GET STARTED. |
|----|----------------------------------------------------------|
| 2 | MY NAME IS PAUL DAVIS. I AM WITH THE AIR POLLUTION |
| 3 | CONTROL DISTRICT, AND I AM PROGRAM POLICY SPECIALIST FOR |
| 4 | THE DISTRICT. |
| 5 | I WOULD LIKE TO THANK YOU FOLKS FOR COMING |
| 6 | OUT TO THE WORKSHOP TODAY. THE WORKSHOP TODAY IS ON THE |
| 7 | DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE PROPOSED 1991 |
| 8 | REGIONAL AIR QUALITY STRATEGY. |
| 9 | I WOULD LIKE TO MAKE SOMETHING CLEAR AS WE |
| 10 | START THIS. THIS IS NOT A TRADITIONAL WORKSHOP IN THE |
| 11 | DISTRICT'S TRADITIONAL WORKSHOP SENSE. OUR WORKSHOPS |
| 12 | USUALLY INVOLVE TAKING REGULATIONS TO THE PUBLIC FOR |
| 13 | PUBLIC REVIEW AND COMMENT IN AN EFFORT TO TRY AND WORK |
| 14 | OUT WITH INDUSTRY AND AFFECTED PARTIES ITEMS OF CONCERN |
| 15 | WITHIN THE PROPOSED REGULATORY MEASURES. |
| 16 | IN THIS CASE, HOWEVER, WE'RE NOT DISCUSSING |
| 17 | A PROPOSED REGULATORY MEASURE; WE'RE DISCUSSING |
| 18 | ENVIRONMENTAL ASSESSMENT AND THE FORM OF THE DRAFT |
| 19 | ENVIRONMENTAL IMPACT REPORT FOR THE REGIONAL AIR QUALITY |
| 20 | STRATEGY. |
| 21 | THE PURPOSE OF THIS WORKSHOP IS NOT TO |
| 22 | DISCUSS WHETHER OR NOT ANY ITEM BELONGS IN THE STATEGY. |
| 23 | THE PURPOSE OF THIS WORKSHOP IS TO EXPRESSLY DISCUSS THE |
| 24 | ASSESSMENT OF THE STRATEGY IN THE DRAFT EIR. |
| 25 | WITH THAT HAVING BEEN SAID, I WANT TO GIVE A |
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BRIEF BACKGROUND. I WILL THEN TURN IT OVER TO JEFF 1 2 BAXTER AND RICK SIMON FROM ENSR, THE PEOPLE WHO PREPARED THE DOCUMENT, FOR A BRIEF DISCUSSION OF SOME OF THE ITEMS 3 THAT ARE IN THE DRAFT EIR. 4 5 WE ARE NOT GOING TO GET LOCKED INTO A DIALOGUE TODAY. THE RESPONSE TO THE COMMENTS THAT ARE 6 RAISED TODAY WILL BE ADDRESSED IN THE FINAL EIR. 7 IF THERE IS A BRIEF RESPONSE WE CAN GIVE TO A COMMENT OR 8 SOMETHING FOR CLARIFICATION, WE WILL BE GLAD TO PROVIDE 9 10 THAT, BUT THE PURPOSE OF THIS WORKSHOP IS MERELY TO RECEIVE COMMENTS SO THAT THEY CAN BE RESPONDED TO IN THE 11 FINAL EIR. 12 THE PROJECT THAT'S COVERED BY THE DRAFT EIR 13 IS THE REGIONAL AIR QUALITY STRATEGY BEING DEVELOPED 14 PURSUANT TO THE CALIFORNIA CLEAN AIR ACT OF 1988. 15 TO THE 16 EXTENT FEASIBLE, THIS ROUND OF AIR QUALITY PLANNING WILL ALSO TRY TO INCORPORATE OR NOT RUN COUNTER TO 17 18 REQUIREMENTS THAT ARE IN THE FEDERAL CLEAN AIR ACTS 19 AMENDED IN 1990. THE REGIONAL AIR QUALITY STRATEGY IS 20 21 DESIGNED TO ADDRESS THE THREE POLLUTANTS FOR WHICH SAN DIEGO COUNTY IS NOW ON ATTAINMENT AND FOR WHICH THE 22 23 CALIFORNIA CLEAN AIR ACT REQUIRES A REGIONAL AIR QUALITY STRATEGY: CARBONMONOXIDE, OZONE, AND NITROGEN DIOXIDE. 24 25 NITROGEN DIOXIDE, WHILE WE ARE TECHNICALLY A

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|----|-----------------------------------------------------------|
| 1 | NONATTAINMENT AREA, IT'S LIKELY THAT ATTAINMENT IS ON THE |
| 2 | HORIZON. HOWEVER, THE STATE OF CALIFORNIA HAS INDICATED |
| 3 | THAT IT CONSIDERS NITROGEN DIOXIDE TO BE AN EQUAL |
| 4 | CONTRIBUTOR TO THE OZONE PROBLEM AS REACTIVE ORGANIC |
| 5 | GASES, REACTIVE HYDROCARBONS, WHATEVER NAME YOU WISH TO |
| 6 | ATTRIBUTE TO IT. |
| 7 | THE STRATEGY IS REQUIRED BY LAW TO ACHIEVE A |
| 8 | FIVE PERCENT PER YEAR REDUCTION IN NONATTAINMENT |
| 9 | POLLUTANTS OR THEIR PRECURSORS. IF THAT'S NOT FEASIBLE, |
| 10 | THEN WE ARE TO IMPLEMENT ALL FEASIBLE MEASURES ON AN |
| 11 | EXPEDITIOUS SCHEDULE. |
| 12 | THE DISTRICT HAS MAINTAINED FOR QUITE |
| 13 | A WHILE THAT IT IS HIGHLY UNLIKELY WE WILL ATTAIN FIVE |
| 14 | PERCENT PER YEAR. |
| 15 | GIVEN THAT, WE'RE THROWN INTO WHAT WE REFER |
| 16 | TO AS PLAN B, ALL FEASIBLE MEASURES ON AN EXPEDITIOUS |
| 17 | SCHEDULE. THAT IS THE PROPOSED STRATEGY THAT HAS BEEN |
| 18 | EVALUATED BY THIS DRAFT EIR. IT COVERS SAN DIEGO COUNTY. |
| 19 | IT COVERS SAN DIEGO COUNTY'S POLITICAL BOUNDARIES THAT |
| 20 | ARE APPROXIMATELY THE GEOGRAPHIC BOUNDARIES FOR THE AIR |
| 21 | BASIN. |
| 22 | THAT'S A BRIEF OVERVIEW OF THE PROJECT AND |
| 23 | HOW WE GOT TO WHERE WE ARE. WITH THAT, I WANT TO TURN IT |
| 24 | OVER TO MR. BAXTER FOR A BRIEF DISCUSSION ON ITEMS THAT |
| 25 | NEED TO BE DISCUSSED IN THE EIR. |

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| 1 | MR. BAXTER: THANK YOU, PAUL. THE 1991 |
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| 2 | REGIONAL AIR QUALITY STRATEGY IS A REGIONAL PLAN PURSUANT |
| 3 | TO THE CALIFORNIA CLEAN AIR ACT. THE EIR THAT WAS |
| 4 | PERFORMED IS A PROGRAM EIR UNLIKE AN EIR YOU MIGHT SEE ON |
| 5 | A SPECIFIC PROJECT WHERE IT MIGHT CITE SPECIFIC DATA. A |
| 6 | PROGRAM EIR TAKES A MORE QUALITATIVE AND AGGREGATE |
| 7 | APPROACH TO THE PROBLEM. |
| 8 | WE LOOKED AT THE 1991 RAQS IN A GENERAL |
| 9 | SENSE. WE ALSO LOOKED AT TWO ALTERNATIVES: THE NO |
| 10 | PROJECT ALTERNATIVE AND THE LESS STRINGENT ALTERNATIVE. |
| 11 | THE LESS STRINGENT ALTERNATIVE INCLUDED NO |
| 12 | SELECTIVE CATALYTIC REDUCTION OF RULES. IT WAS A |
| 13 | THERE WERE NO ENERGY CONSERVATION MEASURES BEING DELETED |
| 14 | FROM THE 1991 RAQS, AND THERE WAS AN ALTERNATIVE |
| 15 | PREPRODUCTION PLANT IN THE REGIONAL ALTERNATIVE. |
| 16 | I WAS ASKED TODAY PRETTY MUCH TO JUST |
| 17 | DISCUSS THE ITEMS THAT TURNED OUT TO BE SIGNIFICANT AFTER |
| 18 | MITIGATION, AND THAT'S WHAT I WILL DO. |
| 19 | ON THE 1991 RAQS OF THE EIR, THERE WAS ONE |
| 20 | MAJOR ISSUE THAT WAS SIGNIFICANT, AND THAT WAS THE RISK |
| 21 | OF UPSET DUE TO THE USE, STORAGE, AND TRANSPORT OF |
| 22 | ANHYDROUS AMMONIA. ACCIDENTS CAN OCCUR DURING TRANSPORT, |
| 23 | THE USE, OR THE STORAGE OF THE AMMONIA. |
| 24 | IN THE 1991 REGIONAL AIR QUALITY STRATEGY, |
| 25 | THE MAIN SOURCE OF AN INCREASE IN THE USE OF ANHYDROUS |

JAN WHITE & ASSOCIATES

Page 191

| | 7 |
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| 1 | AMMONIA COMES FROM THE REQUIREMENT OF SELECTIVE CATALYTIC |
| 2 | REDUCTION FOR LARGE UTILITY BOILERS, AND THIS WOULD APPLY |
| 3 | MOSTLY THIS WOULD BE DIRECTED MOSTLY TOWARD SAN DIEGO |
| 4 | GAS AND ELECTRIC'S SCENE AND SOUTH BAY GENERATION |
| 5 | STATIONS WHERE THE SCR IS USED AS A CONTROL MEASURE TO |
| 6 | REDUCE NITRATE OXIDE EMISSIONS FROM THE ELECTIC POWER |
| 7 | GENERATION STATIONS. ANHYDROUS AMMONIA IS A HAZARDOUS |
| 8 | MATERIAL, AND IF EMITTED IN LARGE CONCENTRATIONS, CAN BE |
| 9 | A SERIOUS HAZARD. |
| 10 | NOW, WHILE THE HANDLING AND MAINTAINING AND |
| 11 | SAFETY PROCEDURES DEALING WITH ANHYDROUS AMMONIA ARE WELL - |
| 12 | UNDERSTOOD AND PRACTICED IN INDUSTRY TODAY, AND THE |
| 13 | CHANCE OF A RISK OF UPSET ARE SMALL, IF IT DOES HAPPEN, |
| 14 | IT WOULD BE SIGNIFICANT IF AN UPSET DID OCCUR. |
| 15 | THE MITIGATION MEASURES THAT ARE PROPOSED |
| 16 | WILL BE TO REQUIRE A PROPER AND SUFFICIENT TRAINING ON |
| 17 | THE PART OF ON-SITE PERSONNEL IN CASE OF AN ACCIDENT, AND |
| 18 | ALSO THE IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN TO |
| 19 | REDUCE TIME TO GET HELP AND TO GET PROPER PROCEDURES |
| 20 | HANDLED IN A QUICK AND CORRECT WAY. |
| 21 | AGAIN, THOUGH, WE FELT THAT THIS WAS A |
| 22 | SIGNIFICANT IMPACT, BECAUSE IF IT DOES OCCUR, IT WILL BE |
| 23 | SIGNIFICANT EVEN THOUGH IT'S HIGHLY UNLIKELY. |
| 24 | I MIGHT MENTION ONE OTHER AREA THAT CAME |
| 25 | UP, AND THAT IS IN SOME OF THE LAND USE MEASURES FOR |
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JAN WHITE & ASSOCIATES

Page 192

8 1 GROWTH-INDUCING MEASURES IN THE PLAN MAY WELL RESTRICT 2 PARKING, AND WILL RESTRICT PARKING IN PARKING ZONES. AND WHILE THIS COULD LEAD TO INCREASED PARKING OFF STREET, 3 WHICH WOULD CAUSE QUITE A BIT OF DIFFICULTY TO LOCAL 4 MERCHANTS AND TO HOUSEHOLDS, WE DIDN'T FEEL THIS WAS 5 6 SIGNIFICANT, BY THE WAY, BECAUSE LOCAL PARKING ORDINANCES 7 AND VARIOUS PROCEDURES SHOULD OVERCOME AND ALLEVIATE ANY KIND OF IMPACT FROM THIS. 8 9 THAT PRETTY MUCH WRAPS UP THE SIGNIFICANT 10 IMPACTS AFTER MITIGATION. 11 MR. DAVIS: THANK YOU, JEFF. WITH THAT, 12 WHAT I WOULD LIKE TO DO, GIVEN THE SMALL CROWD HERE 13 TODAY, JUST THOSE OF YOU WHO WERE HERE IN THIS ROOM FOR 14 THE CRITERIA WORKSHOP PROBABLY RECALL THE STANDING ROOM 15 ONLY. I MADE UP A SPEAKERS' LIST HERE. HAS EVERYONE 16 SIGNED WHO WOULD LIKE TO SPEAK? 17 MR. KANE: I GUESS I HAVEN'T YET. 18 MR. DAVIS: WITH THAT, I WOULD JUST LIKE TO 19 CLOSE OUT OUR PRESENTATION BY INDICATING THAT THE 20 DISTRICT -- THE DISTRICT WAS NOT CONVINCED THAT LEGAL 21 REQUIREMENTS IMPOSED BY THE CALIFORNIA ENVIRONMENTAL 22 QUALITY ACT REQUIRED ENVIRONMENTAL IMPACT REPORT FOR THIS 23 PROJECT. 24 HOWEVER, GIVEN THE REGIONAL SIGNIFICANCE, WE 25 FELT IT PRUDENT TO FOLLOW THE SEQUEL PROCEDURES TO ALLOW

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FOR THE MAXIMUM DEGREE OF PUBLIC PARTICIPATION IN THE
 DEVELOPMENT OF THE REGIONAL AIR QUALITY STRATEGY. THE
 COMMENTS RAISED TODAY AND THE WRITTEN COMMENTS THAT HAVE
 BEEN RECEIVED WILL BE ADDRESSED PURSUANT TO PROCEDURE
 GUIDELINES IN THE FINAL ENVIRONMENTAL REPORT.

6 SO WITH THAT, PETE FORD, WHY DON'T I TURN 7 THIS OVER TO YOU, AND I'LL JUST LET YOU STAND AND MAKE 8 YOUR COMMENTS. PLEASE IDENTIFY YOURSELF SO THAT FOR THE 9 RECORD WE HAVE INDICATED WHO YOU ARE AND WHO YOU 10 REPRESENT.

MR. FORD: I'M PETE FORD. I WORK WITH SAN
DIEGO GAS AND ELECTRIC, AND MY COMMENTS PRIMARILY ARE ON
THE MANDATING OF SOLAR HOT WATER HEATING IN THE
RESIDENTIAL AREA. WE HAVE SUBMITTED WRITTEN COMMENTS,
AND I AM NOT GOING TO GO INTO GREAT DETAIL AS TO WHAT IT
INVOLVES.

WHAT I WOULD LIKE TO DO IS JUST EMPHASIZE
THE FACT THAT WE FEEL WE'VE UNDERSTATED THE IMPACT ON
SDG&E AND ON THE RESIDENTIAL CUSTOMERS WHO ARE GOING TO
MANDATE TO INSTALL THIS AT TIME OF SALE.

WE FEEL THAT GIVEN THE ALTERNATIVE OF ABOUT
A 4,000 TO \$5,000 INCREASE COST TO THE SALE OF THEIR
HOUSE, THEY WILL OPT FOR THE LESS EXPENSIVE ALTERNATIVE
OF INSTALLING AN ELECTRIC WATER HEATER.

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OUR GRID DOES NOT SUPPORT THE ELECTRIC WATER

| l | HEATER IN THE MARKET THAT HAS 94 PERCENT SATURATION IN |
|----|----------------------------------------------------------|
| 2 | GAS AT THIS TIME, AND IF LESS THAN HALF OF THOSE PEOPLE |
| 3 | DO OPT FOR THAT ALTERNATIVE, WE'RE LOOKING AT |
| 4 | APPROXIMATELY ABOUT A THIRD INCREASE IN OUR GENERATING |
| 5 | CAPACITY REQUIREMENT. IT'S ABOUT 307 SOME-ODD |
| 6 | MEGAWATTS. THAT'S ABOUT AS FAR AS I'LL TAKE IT. |
| 7 | MR. DAVIS: THANK YOU, PETER. JERRY. |
| 8 | MR. KANE: JERRY KANE, SDG&E. JUST A BRIEF |
| 9 | COMMENT PERHAPS JUST A QUESTION ON THE CLEARLY |
| 10 | SIGNIFICANT POTENTIAL IMPACTS OF AN AMMONIA SPILL WHEN |
| 11 | TRUCKING THE AMMONIA TO A POWER PLANT. THERE IS QUITE |
| 12 | CLEAR THE SIGNIFICANT POTENTIAL RISK. I HAVE IDENTIFIED |
| 13 | MITIGATION MEASURES TO INCLUDE EMERGENCY RESPONSE |
| 14 | TRAINING, ET CETERA, AND THEN THE RESIDUAL IMPACT AFTER |
| 15 | THAT MITIGATION AS BEING NOT SIGNIFICANT. |
| 16 | I BELIEVE THAT THE RESIDUAL IMPACT IS |
| 17 | GREATER THAN NONSIGNIFICANT AS YOU INDICATED FOR THE |
| 18 | FOLLOWING REASON: IF THERE WAS AN AMMONIA SPILL, THE |
| 19 | IMPACT ON THE COMMUNITY WOULD BE ESSENTIALLY |
| 20 | INSTANTANEOUS. I DON'T SEE HOW EMERGENCY RESPONSE |
| 21 | TRAINING TO SPEED UP A RESPONSE CAN HANDLE AN |
| 22 | INSTANTANEOUS IMPACT; THEREFORE, WE DISAGREE WITH YOUR |
| 23 | CLAIM THAT THE RESIDUAL IMPACT WOULD NOT BE SIGNIFICANT. |
| 24 | MR. DAVIS: THANK YOU. |
| 25 | MR. SIMON: WE'LL ADDRESS THAT IN THE |
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| l | FINAL | |
| 2 | MR. BAXTER: I THINK THERE WAS SOME | |
| 3 | CONFUSION. YOU MEAN ON THE HUMAN HEALTH? | |
| 4 | MR. KANE: ON THAT AND IN OTHER IMPACTS. | |
| 5 | MR. BAXTER: WE'LL ADDRESS THAT IN THE | |
| 6 | MR. KANE: MAYBE I'M MISUNDERSTANDING | |
| 7 | SOMETHING. PERHAPS YOU CAN EXPLAIN WHAT I'M NOT SEEING. | |
| 8 | MR. SIMON: OKAY. I GOT IT. | |
| 9 | MR. KANE: ALL RIGHT. | |
| 10 | MR. DAVIS: ANY OTHER SPEAKERS' COMMENTS? | £ |
| 11 | WITH THAT, I'D LIKE TO THANK EVERYONE FOR COMING. | |
| 12 | THE FINAL ENVIRONMENTAL IMPACT REPORT WILL | |
| 13 | BE CONSIDERED BY THE AIR POLLUTION CONTROL BOARD WHEN IT | I |
| 14 | CONSIDERS THE ADOPTION OF THE REGIONAL AIR QUALITY | |
| 15 | STRATEGY WHICH WE ANTICIPATE IN NOVEMBER. THANK YOU VER | Y |
| 16 | MUCH. | |
| 17 | (WHEREUPON, THE MEETING WAS CONCLUDED AT | |
| 18 | 9:20 A.M.) | |
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| 1 2 3 | STATE OF CALIFORNIA) COUNTY OF SAN DIEGO) |
| 4 | I, KAREN A. BLACK, A CERTIFIED SHORTHAND REPORTER, |
| 6 | FOREGOING SAN DIEGO AIR POLLUTION CONTROL DISTRICT PUBLIC |
| 7 | WORKSHOP FOR DISCUSSION OF THE DRAFT ENVIRONMENTAL IMPACT |
| 8 | REPORT FOR THE 1991 REGIONAL AIR QUALITY STRATEGY WAS |
| 9 | REPORTED BY ME IN SHORTHAND, AT THE TIME AND PLACE HEREIN |
| 10 | NAMED; THAT SAID WORKSHOP WAS THEN TRANSCRIBED THROUGH |
| 11 | COMPUTER-AIDED TRANSCRIPTION, AND THE FOREGOING |
| 12 | TRANSCRIPT CONTAINS A TRUE RECORD OF SAID HEARING. |
| 13 | IN WITNESS WHEREOF, I HAVE HEREUNTO SET MY HAND ON |
| 14 | THIS 1941 DAY OF SEPTEMBER, 1991, AT SAN DIEGO COUNTY, |
| 15 | CALIFORNIA. |
| 16 17 | Karen C Blue K |
| 18 | KAREN A. BLACK |
| 19 | CERTIFICATE NO. 8997 |
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JAN WHITE & 1 ASSOCIATES

RESPONSES TO PUBLIC COMMENTS

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1. Comment beginning on Page 9, line 10 and ending on Page 10, line 7

Please see modifications to text in Section 5.13.1.3 and Section 5.13.2.3.

2. Comment beginning on Page 10, line 8 and ending on Page 11, line 9

The potential for an ammonia spill during transportation is very small (as discussed in Section 5.17 and 5.18.1.3 of the text), and, therefore, is not considered a significant impact to public health and safety. If there is a catastrophic spill, the impacts could be significant from the point of view of a risk of upset.



APPENDIX E

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COMMENTS AND RESPONSES TO COMMENTS TO DRAFT EIR

| RESPONSES TO COMMENTS | Letter #1: Chief Administrative Officer, County of San Diego | Note: This first letter was in response to the Initial Study and Notice of Preparation but was received by the consultant after the draft EIR was printed and distributed. Accordingly, this letter and responses to it are included here. | | | 1-1 This comment is noted. | | ATTACHMI | ENT B |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|-------|
| NORMAN W HICKEY COLOR ADMINISTRATIVE OFFICE AN ALLER ADMINISTRATIVE OFFICE | June 28, 1991 | TO: Richard Sommerville, Director Air Pollution Control District FROM: Norman W. Hickey Chief Administrative Officer | COMMENTS ON NOTICE OF PREPARATION OF A DRAFT EIR FOR 1991 REGIONAL AIR QUALITY Strategy | Staff from the Department of Planning and Land Use (DPLU) has reviewed the Notice of Preparation (NOP) for the draft Environmental Impact Report (EIR) for the San Diego 1991 Regional Air Quality Strategy and has the following comments: | O The MOP lists the County (DPLU) as an interested party. The County is a responsible agency per Section 15041 of the State California Environmental Quality Act (CEQA) Guidelines. All local land use and Environmental Quality act or (CEQA) Guidelines. All local land use and Environmental Quality agencies should be listed as responsible agency. The approximation of the part a responsible agency may require changes in a project to lessen or avoid only the effects. either direct or indirect, of the part of the project which the agency will be called on to carry out or approve. There will be several instances in which DPLU will be carrying out portions of this plan. Examples included implementation of indirect source controls, and inspections for architectural coatings, low-NOx water heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, and solar pool heaters, | The State CEQA Guidelines discourage single purpose agencies as lead agencies for preparation of an EIR. According to Section 15051.1 of the Guidelines, the lead agency will normally be the agency with general governmental powers, such as a city of county, rather than an agency with a single or limited purpose such as an air pollution control district or a district which will provide a public service or public utility to the project. "Mhile it is appropriate for the AFCD to be the lead agency in this case, it may be important to obtain input of responsible agencies with evolving strategy. | | |

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This comment is noted. ų 2 1 မှ ģ 1-7 1-2 1-3 1 - 8 1-0 4 1-6 1-7 impact on the availability of paid and unpaid parking in the region. Requirements for paid parking at company lots could significantly impact the parking availability in the surrounding residential and retail properties through "spiil not Is Increase in traffic hazards to motor vehicle, bicyclists; or use without prior provision of improved facilities implies that these modes will be employed on a system that was designed exclusively for automobile use. The impact of these programs on pedestrian and bicyclist health and safety use could alter the supply, demand, and certainly the distribution unclear how this will impact the affordability of housing. It is not clear if indirect source controls are part of this EIR or will be in a later EIR after the indirect source control program is , D0 of housing. The price of the types of pedestrian and transit improvements to be required will also affect housing. It is also Effects on parking - Regulation XIV will have a significant Section 15131 of the State CEQA Guidelines allows for consideration of economic and social effects of a project in the preparation of an EIR. The NOP Environmental Checklist, however, does not include socio-teconomic issues. The impacts of these programs on the regional economy should be addressed. This is especially pertinent in light of recent comments published by large local firms stating that the costs of Housing - Indirect source controls will have an impact on the area's housing stock. Strategies to increase housing density along transit corridors, encourage job-housing balance and mixed The following items for the Environmental Checklist were marked for "no response required, but these environmental and planning issues will be Maintenance of public facilities - Public improvements for transit, bicycles, and pedestrians will all require costly maintenance. The fiscal impact of requiring these improvements on local governmental agencies should be addressed (see discussion below). source control program is to encourage the use of alternative modes of transportation to the single occupant vehicle, it must be assumed that the demand and supply of pedestrians - Encouraging increased pedestrian and bicycle The strategy calls for transit improvements and expansion, yet it is clear if transit agencies are also included as responsible agencies. the San Diego Association of Governments (SANDAG) also a responsible primary goal of the Transportation Control Measures and Alterations to waterborne, rail or air traffic - [f these modes of transportation will be affected of on-street parking. impacted and should be addressed: must be addressed indirect over" developed ċ e. e. ي. agency? 12. 4. Ξ. É Е.

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Please see modifications to text in Section 5.9.

Please see text, Section 5.11.

- should be noted that financial/economic issues such as these are beyond the scope necessary for the Regional Transportation Plan has been identified. The remaining significantly impacted. The increase in demand on primary public transit, including (SANDAG), it is not expected that the demand on waterborne and air traffic will be environmental impacts are anticipated. Approximately 67 percent of the funding state funds or federal funds. While this is not considered a significant impact, it bus and trolley service, resulting from the Trip Reduction Program (TRP) will be funding is expected to come from some combination of tolls, development fees, accounted for in the Regional Transportation Plan. As a result, no significant According to George Frank of the San Diego Association of Governments of this EIR, as explained in the response to comment 1-7, below.
- described in this comment will be analyzed by appropriate agencies with specific At this phase of the planning process, details concerning many aspects of the transportation control measures have not been made definite. Issues such as projects as they are proposed for adoption and implementation
- impact analysis in an environmental impact report (EIR). Section 15382 of the CEQA Ł enalysis of economic impacts is not a part of the project description for this EIR and, potentially substantial, adverse change in any of the physical conditions within the change by itself shall not be considered a significant effect on the environment." The California Environmental Quality Act (CEQA) does not require an economic Guidelines states "Significant effect on the environment means a substantial, or area affected by the project including land, air water, ... An economic or social consequently, is beyond the scope of this EIR.

Please see response to comment 1-6, above. <u>9</u>

Anorapanah Anora ATTACHMENT B Second second second Statistical and a second Statestickers. This comment is noted. Structure (199 Contraction of the local data 6 place - control fills Power Science 6-1 in a state Attachment B of the County CEQA Guidelines summarizes the requirements for inclusion on the County's (DPLU) list of qualified consultants. The APDD has selected an environmental consultant that is <u>not</u> on the DPLU list of qualified consultants. The District should contact DPLU to determine the procedure for adding your consultant to the qualified list. Regulation XIV were so prohibitive that the firms would consider leaving the area rather than submitting to the conditions of the ordinance. The Department of Public Works will respond to the NOP through a separate letter. If you have any questions on these comments, please contact me. · And the second second 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 - 100 galan in shake trative Officer Same constants Respectfully, NWH:RR:d]d/ss Wief Admini 1 0 8 Page 202 ----

| | | | RESPONSES TO COMMENTS | Letter # 2: San Diego Gas and Electric 2-1 This commert is noted 2-2 Please see modifications to text in Section 5.13.1.3 and Section 5.13.2.3. | | Remainstance Remainstance Remainstance Remainstance Remainstance Remainstance Remainstance Remainstance Remainstance |
|----------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| South San Diago Gas & Electric San Diago Gas & Electric San Diago Gas & Electric | September 11, 1991 | Mr. Paul Sidhu Deputy Director San Diego APCD 9150 Chesapeake Dr. San Diego, CA 92123 | SUBJECT: DEIR COMMENTS - 1991 REGIONAL AIR QUALITY STRATEGY, RESIDENTIAL SOLAR WATER HEATING. | The enclosed comments focus on retrofit cost underestimations and 2-1 the economic incentive to utilize electric water heating in lieu of solar. Electric water heating will significantly increase demand on the SpGEE electric supply system. As a result, Section 3.6.5 significantly underestimates the quantity and impact of increased demand electricity consumption due to these measures. Section 5.13.1.1 states that RAOS in general will increase electricity consumption but that increase is not expected to be large relative to the SDGEE system. This is incorrect. Electricity consumption increase operating load by more than 1/3 of SDGEE's generating capability. Perhaps these obstacles explain why South Coast AQMD encourages, but does not mandate, the use of solar. SDGEE suggests the solar measures heatents. | Sincerely, JLK:ab JLK:ab cc: LJBrunton | Manda Andrea |

ATTACHMENT^B

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Page 203

INSTALLATION OF RESIDENTIAL SOLAR HOT WATER HEATERS NEW AND RETROFIT

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The following comments are offered for record relative to considertation by the San Diego APCD to adopt tactics requiring the addition of solar heating to gas fired hot water heaters for the residential sector. Comments apply to both of the following Tactics:

(a) RESIDENTIAL SOLAR HOT WATER HEATERS - NEW (b) RESIDENTIAL SOLAR HOT WATER HEATERS - RETROFIT (b)

Report Attached to Letter #2

Please see responses to letter #2.

1.0 CONCERNS

1.1 General: The proposed Tactic for requiring addition of Solar Water Heating to residential dwellings at the time of sale and for all new construction has serious impacts on SDG&E gas and electric service. Faced with the requirement of adding solar beat as a condition of tale, versus the option of replacing the gas water heater with an electric unit, at a fraction of the cost, both the building industry and estizing residential customens will opt for the electric alternity. San Diego for a known regulation contributes directly and significantly to the requirement for new generation facilities and does not provide San Diego residents with an alternative which is in their best interests.

Without the rebates available from the Federal Government, the State of California, and local Utilities, as in years past, solar technology does not represent a cost effective atternative for residential customers and places an inordinate burden on SDG&E services. By mandating that solar technology be installed, competition for solar projects will be effectively eliminated, causing increases in the installed costs of these systems and further conversions of gas fired water beaters to electric.

- 1.2 Worst Case Impact: Currently, if all residential gas water beaters were converted to electric heat, a worst case equivalent of 2,909 MW of connected electric load would result, translating to 1,293 MW of operating load, or 743 MW of directly coincident On Peak summer operating load, based on 646,487 residential gas customens and 4.5 kW of connected load per water beater and considering operating diversity³. In addition, natural gas consumption by residential water heating alone represents 14.9 billion cubic feet, or 24 % of the total gas consumption by all SDG&E customers accluding SDG&E interdepartmental usage.
- 1.3 Demand Side Management: Not only are SDG&E services seriously affected, but these tactics are in direct conflict with Public Utilities Commission mandates for Demand Side Management and threases to reverse all progress made thus far in this direction. Such demand management programs in place at SDG&E represent a part of the overall resource plan which will allow SDG&E to serve its customers in the future. This resource plan does not include the addition of electric water heating and will not support the additional demand required.
- 1.4 Research and Development: Future research and development projects will also be affected through solar technology mandates such as those being considered. Any regulation which requires a specific technology be installed over another results in an extreme disincentive to continue alternative developments. Technology mandates by the APCD will reduce motivation for development of clean combustion sources by excluding such developments from future consideration. Potential loss of future emissions reduction occurs as a result.

Report Attached to Letter #2 (cont.)

Please see responses to letter #2.

Read Society

Receiption of the second Andreas and Abora a suid Report Attached to Letter #2 (cont.) For control -Ruhaman and Please see responses to letter #2. Saulania al 1 equipment fuel source, the energy budget must be maintained for new construction, and electric equipment in fact, falls within the required budget, therefore supporting conversion of Retrofit Requirements: For existing dwellings, Title 24 requires no specific compliance, calculation, or other guidelines regarding the replacement of water heating systems using a different fuel source. Replacement of gas equipment with the electric alternative of equal capacity is allowable, without detriment. General: A review of Title 24 requirements, specifically Section 2-5351, sets forth annual energy budgets required for residential facilities at the time of construction. While it has been suggested to the APCD, in the Workshops held recently, that Title 24 does not allow conversion of gas to electric water heating, this is in fact a fallacy. Regardless of the Any code requiring that residential water heaters be replaced with equipment using a little fuel source would not be enforceable and would result in anti-competitive direction and are therefore not included in local codes. The resulting consequence is that conversion from gas to electric in order to avoid the cost associated with solar installations is in compliance with Parameters: The following parameters are used to form the basis of determining the impact requirements, or regulations prohibiting the conversion of gas fired water heating to electric. However, permits are required for this work and are issued without plans and specifications. The City of San Diego Building Department indicates no applicable codes, local codes as well as California Energy Commission Title 24 requirements. San Diego Gas & Electric Comments APCD Residential Solar Hot Water Heater Tactics September 1991 **TITLE 24 REQUIREMENTS** 1.11 LOCAL BUILDING CODES gas equipment to electric. on SDG&E services: SDG&E IMPACTS 11 Requirements: 1 5.0 2.1 2.2 3.1 3.0 4.0 4.1

| 96,383 Units ¹ | 646,487 Net 2 | 83 Percent ' 94 Percent ' | 4.50 kW * | 1.15 kW ¹ | 1.75 EW ¹ | 239 Therms 4 | 506 Therma |
|--------------------------------------------------|---------------------------------------------------------------------------------------------------|--------------------------------------|----------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------|
| Residential Dwelling Sales (Jan 1990 - Jan 1991) | Number of SDG&E Residential Gas Customers (12 Mo. ending 7/91) Gas Availability (Positionical) | Gas Service Utilized, When Available | Electric Water Heater Average Connected Load | Electric Water Heater Summer On Peak Coincident Operating Load | Electric Water Heater Winter On Peak Coincident Operating Load | Residential Water Heater Gas Usage (Annual per Heater) | Residential Total Gas Usage (Annual per Dweiling) |

Page 206

- 4.2 Residential Gas Consumption: Traditionally, the SDG&E gas department places significant emphasis on providing quality service to core residential customers. These customers made up 51 % of the total therm consumption by all customers, excluding SDG&E interdepartmental, over the 12 months ending July 1991. Of this, an 47% of residential gas consumption is used for water beating⁴.
- 4.3 Affected Population: From the San Diego Tax Assessor files, there were 96,383 residential units sold during 1990. Of this, using the SDG&E data of 83% of all residences having natural gas availability, and 94% of those with gas available using this fuel for water heat, then:

(96,383 Units)(0.83)(0.94) = 75,198 Units

Which represents the approximate number of residential dwellings, including new construction, sold each year in San Diego which utilize natural gas as a source of water heating. In addition, given the 646,487 residential customers with gas sorvice, the sales figures represent 1256 of all gas customer dwellings per year are sold. Simple mathematics shows that within 10 years, considering diversity, the requirement for solar heating on residential dwellings will have affected all gas customers. From this, a large fraction are expected to install electric water heating at the time of sale.

- 4.4 Expected Impact Electric: If only 50% of existing customers choose the electric alternative, an additional 1,454 MW of connected load, or 372 MW of operating summer On Peak load will result directly coincident with the SDG&E electric system aummer peak. In winter, an increase in required demand on the SDG&E electric system aummer peak. In winter, an increase in required demand on the SDG&E electric system aummer peak. In winter, an increase in required demand on the SDG&E electric system aummer peak. In winter, an increase in required demand on the SDG&E electric system aummer peak. In with the with the winter peak. These values represent an overall operating condition, accounting for connected load diversity, of 1.15 kW contribution per heater converted to electric for the On Peak aummer period and 1.75 kW per heater for the On Peak aummer period and 1.75 kW per heater for the On Peak aummer period and 1.75 kW per heater for the On Peak aummer period and 1.75 kW per heater for the On Peak aummer period. Data is representative of all residential customers having electric water heating, per the attached graphs developed by SDG&E Load Research as a part of a pilot program to cycle residential water heaten.⁴
- 4.5 Clarification: It is also worth noting that those customern electing to replace their gas water beater with electric upon resule of their home will not necessarily see the increase in utility bills due to this particular conversion. Such increases will be passed on to the new ownern and will be significant. San Diego Gas & Electric revenues will increase due to these conversions and concern from SDG&E is not expressed in the area of lost natural gas revenues, rather, concern is expressed in meeting the electric demand and undenutilization of an existing gas distribution system.

Report Attached to Letter #2 (cont.)

Please see responses to letter #2.

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5.0 SYSTEM INSTALLATION COSTS

- 5.1 General: The proposed Tactics for residential solar utilize installed costs based on conversations with non-union solar contractors currently experiencing fierce competition for projects in a dwindling market. Such installed costs are not representative of the impacts that mandated projects would have, causing increased prices and reduced competition, leading to non cost effective installations from both the APCD and the residential customer's financial viewpoints.
- 5.2 Installation Costs: To better assess the overall cost effectiveness of implementing solar heat on residential gas fired water heaters, industry standards are preferred over the verbal conversations used for Tactics formulation. Accepted standards for estimation of costs associated with the installation of solar equipment are found through use of either Richardson's or Means Mechanical estimating guides. Copies of applicable pages of the 1991 Means Mechanical Cost Data are attached for your reference and reflect installed costs based on the type of system desired.

Review of this data indicates that to install a complete solar heating system providing residential hot water would cost at minimum \$4,500. To this, the Means City Index of \$112.1 per \$100 applies, as does the added 2% costs for construction permits and 2% cost for contractor insurance. Net result, using this Means standard, is a minimum installed cost of \$5,200, based on union mechanical contractor wage scales. When considering non-union labor, a price reduction is pousible (\$1,000 to \$1,500); however, the APCD is advised to consider impacts of basing proposed regulation on non-union labor. System installed costs should therefore be revised to reflect actual values of \$3,800 through \$5,200 to include performance by both union and non-union contractors and to reflect accepted industry standards. The value of \$2,000 per site stand as a part of the Tactic is inadequate and bound be revised to reflect an average of \$4,500. Consideration of retroft vs. new development projects is also warranted, recognizing that large new developments, installed on will results hish.

6.0 APCD COST EFFECTIVENESS

6.1

Revised Cost Effectivement: With consideration to the above, and utilizing remaining parameters stated in the APCD tactic, cost effectivements for the two residential solar tactics proposed should be revised. Note that SDG&E disagrees with the proposed compliance rate specified, due to the concerns stated herein, however, this parameter is utilized to present a common basis with the proposed tactic for cost effectiveness calculation.

Report Attached to Letter #2 (cont.)

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Please see responses to letter #2.

Applicable Parameters: Base Installed Cost of Residential Solar Heating Avoided Gas Energy Billing Annual Solar System Maintenance Costs Capital Recovery Factor (15 Years @ 10% Instread) Current Residential Gas Water Heater NOx Reduction Current Residential Gas Water Heater CO Reduction Percent Compliance Rate (Retrofit) Percent Compliance Rate (Retrofit)

54,500 Per Unit 5 123 Per Year 5 15 Per Year

2.53 lbYear 0.24 lbYear 52% 95%

0.13147

Annualized Solar Costs:

(\$4,500)(0.13147) + 15 = \$607/Year

NOx Cost Effectiveness:

New: [(\$607/Year-0.52(\$123/Year)]/(2.53 lb/Year) = \$215/lb NOx Retrofit: [(\$607/Year-0.52(\$123/Year)]/[(2.53 lb/Year)(0.95)] = \$226/lb NOx

CO Cost Effectiveness:

New: [{5607/Year-0.52(\$123/Year)]/(0.24 lb/Year) = \$2,263/lb CO Retrofit: [{5607/Year-0.52(\$123/Year)]/[(0.24 lb/Year)(0.95)] = \$2,382/lb CO Indicating that the cost effectiveness values contained within the Tactics should be increased in excess of 142% to reflect actual values.

6.2 Solar Technology Ranking: A review of all proposed tactics presented by the APCD reveals that cost effectivements of solar equipment is already second only to fuel cells in terms of non-cost effective results. Revision in accordance with the above detactionates the cost effectivenese, but still maintains solar at the last cost effective tactic next to requiring fuel cells. Others of magnitude septements this technology and a cost effective solution, raising the question of the feasibility of this measure and suggesting that both the lack of cost effectiveness and the adverse impacts require that proposed solar mandates be abandoned.

7.0 SCAQMD

7.1 Solar Standards: Discussions between SDG&E and the South Coast AQMD indicate that solar mandates are being rejected in that air quality district and are included only as an optional method of compliance with more stringent emission standards. Such standards are porposed to be technology neutral, allowing a variety of measures to attain compliance.

Report Attached to Letter #2 (cont.)

Please see responses to letter #2.

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7.2 Residential dwellings less than 2,000 square feet are also ignored in the SCAQMD proposals and focus is instead placed on the larger size residential sector. Recommend that the San Diego APCD verify these directions being taken by the SCAQMD and revise current proposals to incorporate less stringent measures.

8.0 CONCLUSIONS

8.1 <u>Alternatives</u>: Realizing that there are emissions produced as a result of gas fired residential water beaters. San Diego Gas & Electric, although in opposition to technology mandates, particularly solar, would be willing to support measures which increase customers energy efficiency and/or provide cost effective reductions based on customers financial requirement. Recommend that alternatives be reviewed in lieu of solar water heating which set emission levels according to currently available technology.

Use of condensing water heater designs, fiber matrix and low NOx burners, pulse combustion and similar developments in combustion would better fit both the interests of the APCD and the affected population. Condensing designal increase field efficiency in near 100% vs. the current 80% levels for non-condensing equipment. These efficiency increases reduce emissions directly by requiring less combustion per usable BTU and attain stack temperatures near ambient. Condensed acid requires non corrosive construction and higher cost equipment; however, financial benefits are also present. Low NOx burners and flue gas recirculation technologies also represent a decrease in emissions and would be preferred over solar installations. With these technologies, increases in fuel do occur which would need to be balanced against total emissions. Educational programs informing customers of benefits acquired through insulating water heaters, cycling during non use periods, and lowering household water temperatures would also provide cost effective results. 8.2 General: With consideration to the preceding, the recommendation is put forth that adoption of solar measures by the San Diego APCD be rejected. The adverse effects and the lack of cost effectiveness auggest that solar technologies be considered not feasible in preparing the Regional Air Quality Strategy for 1991, particularly for the residential water heating sector. The potential addition of electric demand directly coincident with the SDG&E summer On Peak period, coupled with elimination of gas system utilization presents impacts on SDG&E which are in direct conflict with Public Utility Commission mandates for demand management and eliminates all progress made thus far. Consideration of future generation requirements by SDG&E to meet possible demands should also be weighed along with the lack of cost effectiveness as consideration for abandonment of solar technology in the residential sector.

Report Attached to Letter #2 (cont.)

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In addition, conversion of gas fired water heating to electric generates emissions at the power plant, offsetting potential gains in emission reduction and should be factored into proposals. Since alternative measures exist which are preferable to solar water heating, SDG&E recommends that other alternatives be pursued.

References:

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San Diego County Tax Assessor Files SDG&E R.2 Report, July 1991 SDG&E Home Energy Survey, 1989 Mamfacurrer Catalogn, 30 to 50 Gal Siza SDG&E Residential Peakshift Graphs - Water Heater Timer Project (Attachment B) SDG&E Conditional Demand Sudy of Residential Unit Energy Consumption, 12/90 Means Mechanical Estimating Guide, 1991 (Attachment A) APCD Residential Solar Hot Water Heater Tactic 50 1- 60

Report Attached to Letter #2 (cont.)

Please see responses to letter #2.

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| | | nental Impact Report Diego 1991 Regional Air | ted the scope and Letter # 4: City of Powe summer to Section 15044 of for your consideration. | 4-1 Please see mo | and discussion of # such potential impacts Section 5.7 (Land Use) of invironmental impacts res are required for this host there are absolutely no potential impact The potential impact and is should not be omitted cogram EIR.) A must be included. | measures to reduce an (Nox), and reactive Transportation Mode ram), and TC-4 (Land on 4.2.3.1. (Ozone), 4-2 | • (619) 748-6600, 695-1400 | Approximation Approximation Ap |
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| CITY OF POWA COLDSWITH Mayor LOCLY Depay Mayor LICCT Repay Mayor HICCTSON Consciences THY NCCTTRE, Councilmenter III NICCTTRE, Councilmenter III NICCTTRE, Councilmenter September 16, 1991 | Robert J. Mross San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1095 | SUBJECT: City of Powery Comments on the Draft Environm (Draft EIR - SCH #91061009) for the Draft San I Quality Strategy (PAOS) | Dear Mr. Mross: The City of Poway Planning Services Department has evaluat contents of the subject Draft EIR for the 1991 RAOS and pur the State CEOA Guidelines submits the following comments f | Land Use | 1. It is stated in the environmental initial study checklist a responses to the checklist (#B) that the significance of on land use will be examined in the EIR. However, in the draft EIR the statement is made that no adverse er were identified and subsequently no migpation measur area. With no written analysis, is it to be concluded th adverse environmental impacts to land use by the proj comments in the initial study indicated that they would be addressed in the EIR. This analysis because this is a program EIR. (See comments for produced to that they would be addressed in the environments to the environments to the environments to the adverse that see a program EIR. (See comments for program EIR.) | 2. It is stated in the draft EIR that transportation control r emissions of carbon monoxide (CO), oxides of nitroge organic compounds (ROC) numbers TC-2 (Aternative Capacity Expansion), TC-3 (Traffic Management Progr Use) have yet to be adopted. Further stated in Sectio | City Hall Located at 13325 Clwc Center I - Maliing Address: P.O. Box 789, Poway, California 92074-0789 | , համությունը։ Ուսուսումը ճերերույթ Ուսուսուսուց ներերույթ |

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| Robert J. Mross September 16, 1991 Page 2 | | | | | | | | | | |
| 4.2.3.2 (Particulate Matter), 4.2.3.3. (Nox), 4.2.3.4) (CO), 4.2.3.5 (Sulfur Dioxide), and 4.2.3.6 (Hydrocarbons/Reactive Organic Gases), that motor vehicle emissions are a major contributor of the total emissions from baseline sources | · · · | 4-3 | Please see ! | modifications (| o text in Sect | ion 5.9 | | | | |
| The prevalent land use patterns encourage and will continue to encourage the use of the automobile; hence, there will continue to be emissions from these sources. It is recommended that programs TC-2, TC-3, and TC-4 be coordinated such that regional air quality concerns may be addressed in a | | 4-4 | This comme | ant is noted. | | | | | | |
| curritrementative marker. Find to the adoption of these programs, the potential environmental impacts of their implementation should be subject to environmental review pursuant to Section 15168(c). | _ | 4-5 | Section 2 is | a súmmary ol | ithe EIR. For | detailed dis | cussions, pla | ease see Se | ction 5. | |
| Population/Housing | | | | | | | | | | |
| 1. It is stated in the environmental initial study checklist and discussion of responses to the checklist (#11) that there may be alterations to the location, distribution, density, or growth rate of population in the area, and that the significance of such potential impacts on population will be examined in the EIR. However, in Section 5.9 (Housing/Population) of the draft EIR, it is stated that no adverse environmental impacts nor mitigation measures were identified for this issue area. With no written analysis, is to be concluded that there are absolutely no adverse environmental impacts to housing/population by the potential impacts and the initial study indicated that there were potential impacts and that they would be addressed in the EIR. This analysis should not be omitted because this is a program EIR. (See comments for program EIR.) A discussion of impacts to the environments for provided to this area must be provided. | €0 1 1 1 1 | | | | | | | | | |
| 2. As mentioned in the discussion on land use, control measure strategy TC-4 (Land Use) should also be examined in terms of impacts upon the location, distribution, density, or growth rate of population in the area. Efforts should be made to coordinate programs through consultation with public agencies, especially SANDAG. All programs should be subject to environmental review prior to their adoption. | 4 | | | | | | | | | |
| Effects Not Found to be Stanticant |] | | | | | | | | | |
| It is stated in Section 15128 of the Guidelines: "An EIR shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR." Section 2.3 of the draft EIR of the 1991 RACS does not state any of the reasons that | • 9 • • • | | | | · | | | | | |

Performance in the

Page 214

ATTACHMENT B

Robert J. Mross September 16, 1991 Page 3 are required pursuant to Section 15128 of the Guidelines. These should be included to substantiate any claims made.

Environmental Setting

It is stated in Section 15125(b) of the Guidelines: "The EIR shall discuss any inconsistencies between the proposed project and applicable general plans and regionel plans." Since their are no adopted plans for control measures TC-2, TC-3, and TC-4, the inconsistencies cannot be determined and evaluated. This does not preclude discussion of inconsistencies between regional plans and local general plans, especially in terms of land use.

The City of Powery Planning Services Department appreciates the opportunity to comment on the scope and content of the draft EIR. It is requested that the draft EIR be revised to incorporate appropriate analysis of land use and population/housing and that the final EIR be sent to the Powery Planning Services Department as scon as it is available in order to review the document for revisions that are made to the draft EIR and the response to the above comments. The contact person is Matthew Fagan, 679.4260.

4-7

Sincerely,

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Winght - Musiller Ela

Reba Wright-Quastier, Ph.D., AICP Director of Planning Services

RWQ:is

MPP/MPOBALTR

4-6 This is beyond the scope of this EIR.

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4-7 This comment is noted. Also, please see modifications to text in Sections 5.7 and 5.9. above. 1000 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 1100 - 11

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Supplemental Environmental Impact Report

FOR THE

PROPOSED 1998 REGIONAL AIR QUALITY STRATEGY REVISION FOR THE SAN DIEGO AIR BASIN

FINAL

San Diego County Air Pollution Control District

June 1998

Prepared by G. Carl Selnick

San Diego Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1096
SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT FOR THE 1998 REGIONAL AIR QUALITY STRATEGY REVISION FOR THE SAN DIEGO AIR BASIN

TABLE OF CONTENTS

I. SUMMARY

III.

IV.

II. PROJECT DESCRIPTION

| Project Location | . 3 |
|---------------------------------------------------------------------|-----|
| ADDITIONAL CONTROL MEASURES | |
| Local Control Measures | . 3 |
| Statewide Control Measures | . 4 |
| REEVALUATION OF CONTROL MEASURE FEASIBILITY | |
| Semiconductor Manufacturing | . 4 |
| Marina Gasoline Refueling | . 5 |
| Further Control of Petroleum Dry Cleaning | . 5 |
| Mandatory Solar Hot Water Heaters | . 5 |
| Mandatory Travel Reduction Programs | . 6 |
| Future Consideration of Amending State Emission Offset Requirements | . 6 |
| | |
| 1998 RAQS REVISION CONTROL MEASURE ADOPTION SCHEDULE | . 6 |
| | |
| | _ |
| ENVIRONMENTAL SETTING | . 7 |
| | |
| POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT | |
| Deschadulad Massures | 0 |
| | . 0 |

| Rescheduled Measures | 8 |
|------------------------------------------------------------|----|
| Indefinitely Delayed Measures | 8 |
| Deleted Measures | 9 |
| Additional Measures | 9 |
| Overall Net Emissions Reduction Effects 1 | 10 |
| Toxic Air Contaminants Effects 1 | 10 |
| Table 1 - Emissions Impacts of Control Strategy Revision 1 | 11 |

PAGE

TABLE OF CONTENTS - continued

V. ALTERNATIVES TO THE PROPOSED ACTION

"NO PROJECT" ALTERNATIVE

| | Rescheduled Measures Indefinitely Delayed Measures Deleted Measures Additional Measures | 14 14 15 15 |
|-------|----------------------------------------------------------------------------------------------------------------------------------|----------------------|
| | NO DELAYS OR DELETIONS ALTERNATIVE | 15 |
| | MAXIMALLY ACCELERATED ADOPTION OF ADDITIONAL MEASURES ALTERNATIVE | 16 |
| VI. | EVALUATION OF POTENTIAL CUMULATIVE AIR QUALITY IMPACTS OF THE PROPOSED PROJECT AND OTHER CONTEMPORANEOUS DISTRICT PROJECTS | 16 |
| VII. | OTHER CEQA REQUIREMENTS | 17 |
| VIII. | OVERRIDING CONSIDERATIONS | 17 |
| IX. | DETERMINATION OF DEPARTMENT OF FISH & GAME DE MINIMIS IMPACT FINDING | 18 |
| X. | PUBLIC COMMENTS AND DISTRICT RESPONSES | 21 |

I. SUMMARY

A. Project Name:

Adoption of the 1998 Regional Air Quality Strategy Revision for the San Diego Air Basin

B. Project Applicant:

San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, California 92123-1095

C. Project Description:

The San Diego County Air Pollution Control District (the District) is proposing to revise the San Diego Regional Air Quality Strategy (RAQS). The RAQS was developed pursuant to California Clean Air Act requirements and identifies emission control measures to be implemented to provide expeditious progress toward attaining the state ozone ambient air quality standard. Pursuant to state law the District is required to review and, if necessary, revise the RAQS at least every three years [California Health and Safety Code (H&SC) §40924(b)(2) and §40925(a-b)]. The District is proposing the 1998 RAQS Revision, reflecting new data on control effectiveness, costs, and feasibility. The proposed 1998 RAQS Revision would incorporate twelve additional local and statewide control measures not reflected in the RAQS as last revised in the 1995 Triennial RAQS Update, delete nine control measures determined infeasible, indefinitely delay two measures awaiting development of acceptable technology, and reschedule to 1998-2000 the Thus, the "project" for this Supplemental six remaining measures not yet adopted. Environmental Impact Report (EIR) is proposed revisions to the RAQS control strategy, relative to the 1995 Triennial RAQS Update. A fully detailed description of the project is provided in Section II of this Supplemental EIR.

D. Environmental Effects:

Relationship to Previous Program EIR

When the 1991 RAQS was adopted (June 30, 1992), a program Environmental Impact Report (EIR) was prepared, pursuant to the California Environmental Quality Act (CEQA) and the state's CEQA Guidelines, assessing the potential environmental impacts resulting from implementing the control measures in the RAQS (Final EIR for San Diego 1991 Regional Air Quality Strategy, April 1992). Pursuant to CEQA Guidelines §15163, this Supplemental EIR focuses on the potential environmental impacts from implementing the proposed control strategy changes (1998 RAQS Revision) described in Section II below.

The proposed additional District control measures would further tighten existing District rules, requiring extending the application of control technologies already required by existing District rules adopted pursuant to the 1991 RAQS. Chapter 5 of the program EIR discussed the potential environmental impacts of those control technologies and identified measures to mitigate potential environmental effects of the control technologies to be used for the additional District control measures in the proposed 1998 RAQS Revision, the program EIR effectively discussed the potential environmental effects of the additional measures. The program EIR concluded that, with implementation of the mitigation measures, the potential impacts of those control technologies would be insignificant. The proposed control measures in the 1998 RAQS Revision would not result in additional or different impacts beyond those addressed in the program EIR. Consequently, the program EIR remains the applicable environmental document for the additional District control measures proposed in the 1998 RAQS Revision.

For the statewide control measures being incorporated into the 1998 RAQS Revision, a program environmental analysis performed by the state Air Resources Board was included in the 1994 Ozone State Implementation Plan (SIP) Revision (<u>California State Implementation Plan for Ozone, Volume II: The Air Resources Board's Mobile Source and Consumer Products Elements</u>, Chapter IV: California Environmental Quality Act Analysis, November 15, 1994). That program environmental analysis remains applicable for those measures.

Previous Proposed Negative Declaration

In January 1998, the District issued for public comment a draft Initial Study for this project, which found no significant impacts and proposed a Negative Declaration. However, one comment received in response to the proposed Negative Declaration asserted that further evaluation is needed on the potential for cumulative air quality impacts that could result from the proposed deletion of infeasible control measures, along with the proposed delay and rescheduling of the control measures that are yet to be adopted, as well as the potential future deletion of state "nonet-increase" offset requirements, and other new District projects. Therefore, the District prepared this Supplemental Environmental Impact Report (EIR) to assure adequate consideration of the potential for such impacts. The Revised Initial Study providing the basis for recommending preparation of a Supplemental EIR is included in Attachment 1. Since only minor additions (addressing delayed, deleted, and additional measures; adoption schedule changes; and other contemporaneous District projects) are necessary to make the previous EIR apply to the 1998 RAQS Revision, a Supplemental EIR is appropriate rather than a full Subsequent EIR.

Evaluation of Potential Impacts and Effects on the Environment of the Proposed Project

No adverse environmental impacts would result from the proposed revisions to the RAQS control strategy. Potential emissions reductions that would be foregone by rescheduling, delaying or deleting measures would be more than offset by reductions resulting from additional control measures incorporated into the proposed 1998 RAQS Revision. Consequently, the control strategy overall changes in the proposed 1998 RAQS Revision provide increased emissions reductions relative to the 1995 RAQS and thus benefit air quality. A complete

discussion of potential air quality impacts of the proposed 1998 RAQS Revision is provided in Section IV of this Supplemental EIR.

One comment on the proposed Negative Declaration asserted that further evaluation is needed on the potential for cumulative air quality impacts that could result from the proposed 1998 RAQS Revision along with the potential future deletion of state "no-net-increase" NSR offset requirements, and other new District projects, such as permitting Navy dredging of San Diego Harbor. The potential NSR revisions would not be contemporaneous with the Navy dredging, because the dredging will be completed before the NSR revisions could be adopted. Since, as discussed in the previous paragraph, the proposed 1998 RAQS Revision would provide net air quality benefits, adoption of the proposed 1998 RAQS Revision would not contribute to any cumulative air quality impacts of other contemporaneous projects. For a discussion of the cumulative impacts of the entire RAQS as a whole, refer to Chapter 7 of the previously referenced program EIR on the 1991 RAQS.

The emphasis of RAQS control measures is on VOC and NOx reductions, not on toxics. Consequently, no significant adverse toxics effects are expected to result from the delay and deletion of control measures in the 1998 RAQS Revision. District Rule 1200 - Toxics New Source Review requires that the potential health impacts of new, modified and relocated sources of toxic air contaminants be evaluated and establishes acceptable risk criteria. Rule 1210 - Toxic Air Contaminants Public Health Risks, Public Notification and Risk Reduction specifies procedures for public notification and reduction of risk for facilities that are subject to provisions of the Air Toxics Hot Spots Program (AB 2588) and exceed the criteria specified in the rule.

Therefore, the proposed changes to the RAQS are not substantial and will not result in new or more severe significant environmental impacts.

II. PROJECT DESCRIPTION

<u>Project Location</u>: Entire area within the boundaries of San Diego County. San Diego County is the southwestern-most county in California.

The San Diego County Air Pollution Control District (the District) is proposing to revise the San Diego Regional Air Quality Strategy (RAQS). The RAQS was developed pursuant to California Clean Air Act requirements and identifies emission control measures to be implemented to provide expeditious progress toward attaining state ambient air quality standards. Pursuant to state law the District is required to review and, if necessary, revise the RAQS at least every three years [California Health and Safety Code (H&SC) §40924(b)(2) and §40925(a-b)]. The District is proposing the 1998 RAQS Revision, reflecting new data on control effectiveness, costs, and feasibility. The proposed 1998 RAQS Revision would incorporate twelve additional local and statewide control measures not reflected in the RAQS as last revised in the 1995 Triennial RAQS Update, delete nine control measures determined infeasible, indefinitely delay two measures awaiting development of acceptable technology, and reschedule to 1998-2000 the six remaining

measures not yet adopted. Thus, the "project" for this Supplemental EIR is proposed revisions to the RAQS control strategy, relative to the 1995 Triennial RAQS Update.

ADDITIONAL CONTROL MEASURES

Local Control Measures

The proposed 1998 RAQS Revision incorporates two District rule amendments adopted in 1997. Rule 67.10, Kelp Processing and Bio-Polymer Manufacturing Operations, was amended on June 25, 1997, requiring an additional 1.2 ton per day volatile organic compounds (VOC) reduction by 1999. Additionally, amendments to Rule 67.9, Aerospace Coating Operations, adopted April 30, 1997, resulted in an additional 2 tons per year (<0.01 tons per day) VOC reductions.

Existing Rule 67.6, Solvent Cleaning Operations, is proposed to be amended in 1999. This amendment would require further control of degreasers, including the use of aqueous or other low-VOC solvents where feasible. Alternatively, air-tight or airless cleaning systems may be used. Further evaluation during rule development will be conducted to refine an estimate of potential VOC emissions reductions from degreasers in the San Diego region. However, the reductions could range from of 0 to 0.9 ton per day.

Existing Rule 67.24, Bakery Ovens, is proposed to be amended in 2000 to implement Best Available Retrofit Control Technology (BARCT). This amendment would lower the facility exemption threshold to 25 tons per year VOC emissions from the current 50 tons per year. Additionally, the feasibility of increasing the VOC control requirement from 90% to 95% will be investigated. Potential VOC emissions reductions from the proposed Bakery Ovens BARCT control measure could range from 0 to 0.1 ton per day.

The 1998 RAQS Revision also proposes investigating the potential for amending existing Rule 61.2, Transfer of Volatile Organic Compounds Into Mobile Transport Tanks, to determine the feasibility and potential emissions reductions from lowering an exemption threshold level in that rule.

Statewide Control Measures

The 1995 Triennial RAQS Update incorporated into the RAQS the 1994 Ozone State Implementation Plan (SIP) Revision for San Diego County. The 1994 Ozone SIP Revision identifies emission control measures being implemented in San Diego County to attain the federal one-hour ozone standard by November 15, 1999. Certain statewide consumer product and mobile source control measures to which the state Air Resources Board (ARB) committed in the 1994 Ozone SIP Revision for other nonattainment areas in California were not reflected in the SIP Revision for San Diego County because they were not needed to demonstrate attainment of the federal one-hour ozone standard in San Diego County. However, because these measures are being implemented statewide, including in San Diego County, they will reduce emissions in San Diego County. The proposed 1998 RAQS Revision incorporates those measures, because the RAQS aims toward expeditious attainment of the more stringent state ozone standard, and state law requires inclusion of every feasible measure in the air quality plan. The additional statewide control measures being incorporated into the 1998 RAQS Revision will provide emissions reductions not previously anticipated in the RAQS.

The statewide measures incorporated into the 1998 RAQS Revision include four new motor vehicle control measures and three Consumer Products control measures:

- M3) Accelerated Ultra-Low Emission Vehicle Requirement for Medium-Duty Vehicles
- M5) Additional Reductions from Heavy-Duty Diesel Vehicles
- M6) Lower Federal Emission Standards for Heavy-Duty Diesel Vehicles
- M8) Lower Emission Standards for Heavy-Duty Gasoline Vehicles
- CP2) Additional Consumer Product Categories
- CP3) Aerosol Paints
- CP4) Advanced Technology and Market Incentives for Consumer Products

REEVALUATION OF CONTROL MEASURE FEASIBILITY

The proposed 1998 RAQS Revision would delete from the RAQS nine control measures determined infeasible based on updated analyses of emissions reduction potential and cost-effectiveness, and recent amendments to state law. These measures would have minimal emissions reduction potential but would impose considerable control costs. Emissions reductions foregone by deleting these infeasible measures would be more than offset by reductions resulting from additional control measures incorporated into the proposed 1998 RAQS Revision.

Semiconductor Manufacturing

This control measure would apply to semiconductor manufacturing and electronic packaging operations. It would require reducing VOC emissions by process modifications or add-on control equipment, and using low VOC cleaning materials.

In 1991, there were seven facilities in San Diego County manufacturing or packaging semiconductors, with total VOC emissions of approximately 71 tons per year. In 1997, there were 22 facilities emitting approximately 35 tons of VOC per year.

Some facilities have already made process modifications and other improvements resulting in emissions reductions. Control measure implementation would reduce VOC emissions an estimated less than 15 tons per year (0.06 tons per day). This small potential reduction does not warrant expending resources developing, adopting and implementing a new rule, including preparing a socio-economic impact assessment. Implementing the measure would cause it to divert limited staff resources away from implementing more beneficial scheduled measures. Furthermore, any new sources will be subject to Best Available Control Technology (BACT) requirements of the New Source Review (NSR) rules if VOC emissions exceed ten pounds per

day. Therefore, the Semiconductor Manufacturing control measure is proposed to be deleted from the RAQS.

Marina Gasoline Refueling

This control measure would require installing Phase II gasoline vapor recovery equipment at marina fuel docks to control VOC emissions during the fueling of marine vessels (mostly pleasure craft). In 1991, there were 11 marinas with gasoline refueling operations, with estimated VOC emissions totaling 8.3 tons per year. There are now seven facilities with VOC emissions totaling less than 5 tons per year. Each has installed Phase I vapor recovery equipment. Expected remaining emissions reduction from the proposed control measure would be 2.5 tons per year (0.007 tons per day) with an estimated cost-effectiveness of \$8 per pound of VOC emissions reduced. The low throughput in these facilities does not justify the additional expense for installing the Phase II control equipment. The control measure would provide negligible emissions reductions and is not economically feasible. Therefore, the Marina Gasoline Refueling control measure is proposed to be deleted from the RAQS.

Further Control of Petroleum Dry Cleaning

The Petroleum Dry Cleaning control measure was intended to amend existing Rule 67.2 - Dry Cleaning Equipment Using Petroleum-Based Solvent. The amendments would have decreased the exemption limit and required secondary emission control at one large facility (US Navy Training Center). In 1991, eight sources were subject to Rule 67.2, with total VOC emissions of 40 tons per year. Besides the Navy source, only one additional facility would have been affected by the proposed measure.

However, by 1996, six of the eight sources were closed, including both facilities subject to the proposed control measure. Only two small operations remain in the District; their combined VOC emissions are 5.8 tons per year. Both are in compliance with the current Rule 67.2 and the proposed control measure would not provide additional emissions reductions. Consequently, this measure is no longer applicable to the District. Any new sources will be subject to BACT requirements of the NSR rules if VOC emissions exceed ten pounds per day. Therefore, the Petroleum Dry Cleaning control measure is proposed to be deleted from the RAQS.

Mandatory Solar Hot Water Heaters

The District has determined that implementing the three mandatory solar hot water heater measures is infeasible due to unacceptably high control costs. The cost-effectiveness ranges, per pound of NOx reduced, as identified in the 1991 RAQS for the three measures are:

| New Residential Solar Hot Water Heaters, | \$44 - \$131 |
|-----------------------------------------------|-----------------|
| Retrofit Residential Solar Hot Water Heaters, | \$49 - \$146 |
| New Commercial Solar Hot Water Heaters, | Savings - \$158 |

By contrast, the maximum NOx control cost imposed under current District rules is \$7 per pound. Pursuant to state requirements that air quality strategies include every feasible measure, a

measure can be deemed infeasible based on cost. Thus, the solar hot water heater control measures are not economically feasible. Therefore, in the 1995 Annual Progress Report, the District proposed deleting these measures from the RAQS adoption schedule in this update.

Furthermore, the 1991 RAQS overstated anticipated NOx reductions and cost-effectiveness of the solar water heaters measures because the effect of low-NOx gas-fired water heaters being implemented was not considered. The 1991 RAQS analysis assumed solar water heaters would supplement standard water heaters. However, as previously discussed, the RAQS includes a control measure requiring low-NOx water heaters. Since low-NOx water heaters reduce NOx emissions by roughly 50 percent relative to standard water heaters, supplementing a low-NOx water heater with a solar unit would yield half the anticipated emissions reductions. Since the anticipated NOX reductions for the solar water heater measures were overstated by a factor of two, the costs per pound of NOX reduced were proportionally understated. Therefore, the control measures for New Residential Solar Hot Water Heaters, Retrofit Residential Solar Hot Water Heaters, and New Commercial Solar Hot Water Heaters are proposed to be deleted from the RAQS.

Mandatory Travel Reduction Programs

The Employee Commute Travel Reduction Program (formerly Rule 1301) was deleted from the RAQS in the 1995 Triennial RAQS Update, pursuant to H&SC §40929, because the program is no longer required under federal law. The 1995 Triennial RAQS Update also relisted as "unscheduled" the Student Travel Reduction Program because the need for the program under state law was in question. Subsequently, all state requirements for mandatory trip reduction programs were eliminated by Assembly Bill 3048 (Statutes of 1996, Chapter 777). Consequently, the Student Travel Reduction Program, the Non-Commute Travel Reduction Programs and the Goods Movement/Truck Operation Programs are not economically or politically feasible; and no emissions reductions are credited in the RAQS. Therefore, the Student Travel Reduction Program are proposed to be deleted from the RAQS.

Future Consideration of Amending State Emission Offset Requirements

The proposed 1998 RAQS Revision reflects the District's intent to consider amending the New Source Review (NSR) rules to delete the state emission offset requirements ("no-net-increase" provision), as authorized by H&SC §40918.5. No emissions reduction credit for NSR rules is considered in the RAQS. In addition, pursuant to H&SC §40918.5, the state emission offset requirements cannot be deleted unless they are unnecessary to achieve and maintain the state ambient air quality standards by the earliest practicable date. Consequently, amendments to the NSR rules would not have any potential environmental effect relative to the RAQS. Further information on potential effects is not yet available. A separate CEQA review will be performed prior to adopting any proposed NSR rule amendments deleting state offset requirements to examine any potential environmental effects attributable to deleting state offset requirements.

1998 RAQS REVISION CONTROL MEASURE ADOPTION SCHEDULE

The remaining measures identified in the RAQS but not yet adopted would be rescheduled for adoption in the 1998 through 2000 period, with three exceptions. First, Further Control of Wood Products Coating is being delayed until acceptable low-emitting coating technology becomes available for applicable applications. Second, Commercial Charbroiling is being rescheduled for adoption one year after the South Coast Air Quality Management District adopts a rule controlling most charbroiling operations. Third, Bulk Gasoline Storage Tank Degassing will be evaluated to determine if it can be implemented using existing New Source Review rules.

The proposed 1998 RAQS Revision reschedules adoption of the following control measures as indicated below:

| Control Measure | |
|---------------------------------------------------------------------------------|------|
| | Year |
| Adhesives Operations | 1998 |
| Low-NOx Water Heaters | 1998 |
| Low-NOx Furnaces | 1998 |
| Further Control of Stationary Combustion Turbines (BARCT) | 1998 |
| Further Control of Stationary Reciprocating Internal Combustion Engines (BARCT) | 1999 |
| Plastic Parts, Rubber, Composite, and Glass Coating | 2000 |

The air quality impacts of these implementation schedule revisions are discussed in Section IV of this Supplemental EIR.

III. ENVIRONMENTAL SETTING

The Program EIR, Chapter 4, adequately discusses the overall environmental setting of San Diego County. The Environmental Setting discussion in this Supplemental EIR focuses on improvements in air quality since preparation of the Program EIR. Air quality improvements are further discussed in the 1998 RAQS Revision.

San Diego County's air quality has improved significantly during the 1990s. In 1989, the 9 parts per hundred million (pphm) one-hour state ozone standard was exceeded in the county on 158 days, and the 12 pphm one-hour federal ozone standard was exceeded on 55 days. In 1997, how-ever, the state standard was exceeded only 43 times, and the federal standard was exceeded just once. Peak ozone concentrations at Alpine, the site with highest concentrations, decreased 11%, between the 1986-1988 base period and the 1994-1996 period. Countywide area-weighted exposure (reflecting the geographic extent of air pollution) decreased 51%, while population-weighted exposure (emphasizing air pollution levels in populated areas) decreased 61%.

The carbon monoxide (CO) standards have not been exceeded since 1990. Consequently, the County was redesignated to attainment for the state CO standards in 1993. Attainment of the

federal CO standards was promulgated just recently, along with federal approval of the state's CO maintenance plan. Therefore, CO is no longer being addressed in the RAQS.

IV. POTENTIAL ENVIRONMENTAL EFFECTS OF THE PROPOSED PROJECT

CEQA Guidelines §15126(a) require an EIR to identify and focus on the significant environmental effects of the proposed project. CEQA Guidelines §15126(b) require an EIR to describe any significant environmental effects which cannot be avoided if the proposal is implemented. As discussed below, this supplemental EIR finds that the proposed 1998 RAQS Revision would not cause any significant adverse impacts on the environment.

Changes to the control strategy in the proposed 1998 RAQS Revision reflect an updated reevaluation of the emissions reduction potential and feasibility of the previously scheduled RAQS control measures that have not yet been adopted. Table 1 indicates the potential emissions reductions that would be foregone by rescheduling six control measures to 1998-2000, indefinitely delaying two measures that await development of acceptable technology, and deleting from the RAQS the nine control measures determined infeasible. Additional control measures being incorporated into the proposed 1998 RAQS Revision would provide emissions reductions not anticipated in the 1995 Triennial RAQS Update, and compensate for the foregone reductions.

Rescheduled Measures

The impact of rescheduling the Adhesives, Water Heaters and Furnaces measures to 1998 is insignificant because complying low-emitting products are already being used in San Diego County as a result of rules adopted by other California air districts. Thus, emissions reductions are already being achieved prior to adoption of the local rules. Rule adoption will effectively prohibit any future reintroduction of higher-emitting technologies into the region.

Rescheduling the Turbines BARCT measure to 1998 is insignificant because the turbines that would have been required to install further control under the measure are at the end of their useful life and are already scheduled to be replaced by new turbines subject to BACT, on a schedule similar to what would be required by the control measure.

The proposed 1998 RAQS Revision scheduling adoption of a Reciprocating Engines BARCT rule for 1999 does not represent a delay of implementation relative to the 1995 RAQS. There was no firm commitment in the 1995 RAQS regarding further control of reciprocating engines. Rather, the 1995 RAQS only stated that the rule <u>may</u> be tightened in 1996 or 1997 <u>if necessary to meet BARCT requirements</u>. Statewide BARCT for Reciprocating Engines has not yet been determined. A workshop to discuss the statewide BARCT determination was held in January 1998. A major issue is that cost-effective BARCT-level control technology is not yet available for diesel engines, which constitute the majority of the emissions from the category in the San Diego area.

The impact of rescheduling the Plastic Parts, Rubber, Composite, and Glass Coating control measure to 2000 would be only 24 tons per year (0.1 tons per day) regionwide for the three years 1998-2000. This small loss of potential emissions reductions is considered insignificant in light

of the overall air quality benefits of the proposed 1998 RAQS Revision discussed later in this section.

Indefinitely Delayed Measures

The indefinite delaying of two VOC control measures that await development of acceptable technology, Commercial Charbroiling and Further Control of Wood Products Coating, would result in potential VOC emissions reductions of 0.52 and 0.14 ton per day, respectively, being foregone in the short term until the measures are implemented. This small loss of potential emissions reductions is considered insignificant in light of the overall air quality benefits of the proposed 1998 RAQS Revision discussed later in this section.

Deleted Measures

Because some Semiconductor Manufacturing facilities have already made process modifications and other improvements resulting in emissions reductions, deletion of this control measure would forego only 0.06 tons per day potential VOC emissions reductions. This small loss of potential emissions reductions is considered insignificant in light of the overall air quality benefits of the proposed 1998 RAQS Revision discussed later in this section.

Due to low throughputs at the seven Marina Gasoline Refueling facilities, deletion of the control measure would forego <0.01 ton per day potential VOC emissions reductions. This small loss of potential emissions reductions is considered insignificant in light of the overall air quality bene-fits of the proposed 1998 RAQS Revision discussed later in this section.

Deletion of the measure proposing Further Control of Petroleum Dry Cleaning would have no environmental impact. The Petroleum Dry Cleaning sources that would have been subject to control under that measure have shut down. Consequently, no emissions reductions are available from implementing the measure.

Deletion of the three travel reduction programs would also have no impact, because the current RAQS did not credit the programs with any emissions reductions. The 1995 RAQS claimed no emissions reductions credit for the Student Travel Reduction Program because the measure was unscheduled. The RAQS claimed no emissions reductions credit for the Non-Commute Travel Reduction Program because the quantity of reductions was uncertain. The RAQS claimed no emissions reductions credit for the Truck Operations Program because it was a contingency measure.

The 1991 RAQS overstated anticipated NOx reductions from the three solar water heaters measures by a factor of two because it did not account for the effect of low-NOx water heaters being implemented concurrently with the solar water heaters. Since low-NOx water heaters reduce NOx emissions by roughly 50 percent relative to standard water heaters, supplementing a low-NOx water heater with a solar unit would yield half the anticipated emissions reductions. Because the solar units would be installed gradually, only upon sale of a property, the emissions reduction potential would be small initially and increase gradually over many years. The 1991 RAQS estimated the solar water heaters measures would provide 0.91 ton per day NOx reduction in 1997 and 3.75 tons per day by 2010, assuming implementation starting in 1994. Considering the effects of low-NOx water heaters, those estimates should be divided by two. Furthermore, because the soonest the measures could possibly start being implemented now is 1999, only the first year of implementation could be realized in 1999. Therefore, the previously estimated 1997 reduction (reflecting assumed 3 years implementation) would further need to be divided by three to indicate current potential reductions in 1999. Thus, the proposed deletion of the three solar water heaters measures would result in foregoing potential NOx emissions reductions of 0.15 ton per day short-term (1999) and 1.88 ton per day long-term (2010). This small loss of potential emissions reductions is considered insignificant in light of the overall air quality benefits of the proposed 1998 RAQS Revision discussed later in this section.

Additional Measures

The adopted District measures affecting kelp processing and bio-polymer manufacturing and aerospace coating operations will provide 1.2 tons per day additional VOC reductions by 1999. Potential emissions reductions estimates for the other scheduled additional control measures are presently uncertain. The Further Control of Solvent Cleaning proposed to be adopted in 1999 could potentially reduce VOC emissions 0-0.9 ton per day. The Further Control of Bakery Ovens proposed to be adopted in 2000 could potentially reduce VOC emissions 0-0.1 ton per day. Further Control of Transfer of Volatile Organic Compounds Into Mobile Transport Tanks is proposed to be studied to determine the feasibility and potential emission reductions.

Proposed statewide long-term control measures affecting consumer products and motor vehicles are expected to provide 14.52 tons per day additional VOC emissions reductions and 20.27 tons per day additional NOx emissions reductions by 2010. The additional motor vehicle measures are also expected to provide short-term NOx reductions of 0.18 ton per day by 1999.

Overall Net Emissions Reduction Effects

As indicated in Table 1, the additional reductions occur over time frames equivalent to those of the rescheduled, delayed and deleted measures and more than compensate for the potential reductions that would be foregone. Foregone VOC reductions decrease between the short term (1999) and the long term (2010) because rescheduled and delayed VOC measures will be implemented in the long term. Foregone NOx reductions increase between the short term and the long term because the deleted NOx measures (solar water heaters) would have been implemented The proposed additional measures are gradually over many years as properties are sold. expected to provide emission reductions not anticipated in the 1995 RAQS. The benefits of the additional measures increase from the short term to the long term because the additional motor vehicle control measures would be implemented gradually as new vehicles replace older vehicles. The short term net effect would be net emissions reductions of 0.37 ton per day VOC and 0.03 ton per day NOx in 1999. By 2010, the net benefits would be 15.65 tons per day VOC and 18.39 tons per day NOx. Consequently, the control strategy changes in the proposed 1998 RAQS Revision overall provide increased emissions reductions relative to the 1995 RAQS and thus benefit air quality.

Toxic Air Contaminants Effects

The emphasis of RAQS control measures is on VOC and NOx reductions, not on toxics. Consequently, no significant adverse toxics effects are expected to result from the delay and deletion of control measures in the 1998 RAQS Revision. District Rule 1200 - Toxics New Source Review requires that the potential health impacts of new, modified and relocated sources of toxic air contaminants be evaluated and establishes acceptable risk criteria. Rule 1210 - Toxic Air Contaminants Public Health Risks, Public Notification and Risk Reduction specifies procedures for public notification and reduction of risk for facilities that are subject to provisions of the Air Toxics Hot Spots Program (AB 2588) and exceed the criteria specified in the rule.

| | 1999 VOC | 2010 VOC |
|------------------------------------------------------------|-----------------------|-------------------|
| VOC CONTROL MEASURES | Reductions (tons/day) | Reductions |
| FORECOME REDUCTIONS | (tons/day) | (tons/day) |
| FOREGONE REDUCTIONS | | |
| Rescheduled Measures | 03 | 0 |
| Adhesives Operations (1998) | 04 | 0 |
| Plastic Parts, Rubber, Composite, and Glass Coating (2000) | 0.1 | 0 |
| Subtotal | 0.1 | 0.00 |
| Indefinitely Delayed Measures | o 1 dh | 0 |
| Further Control of Wood Products Coating | 0.14 ⁰ | 0 |
| Commercial Charbroiling | 0.520 | 0 |
| Subtotal | 0.66 | 0.00 |
| Deleted Measures | | |
| Semiconductor Manufacturing | 0.06 | 0.06 |
| Marina Fueling Operations | < 0.01 | < 0.01 |
| Further Control of Petroleum Dry Cleaning | 0 ^c | <u>0</u> c |
| Student Travel Reduction Program | 0ª | 0d |
| Non-Commute Travel Reduction Program | 0e | <u>0e</u> |
| Truck Operation Program | 01 | 01 |
| Subtotal | 0.07 | 0.07 |
| Total Foregone VOC Reductions | 0.83 | 0.07 |
| ADDITIONAL REDUCTIONS | | |
| Short-Term Measures | | |
| Further Control of Kelp Processing and Bio-Polymer | 1.2 | 1.2 |
| Manufacturing Operations (adopted 1997, implemented 1999) | | |
| Further Control of Aerospace Coating Operations (1997) | < 0.01 | < 0.01 |
| Further Control of Solvent Cleaning (1999) | 0-0.9g | 0-0.9g |
| Further Control of Bakery Ovens (2000) | 0-0.1g | 0-0.1g |
| Subtotal | >1.2 | >1.2 |
| Long-Term Measures | | |
| Additional Consumer Product Categories | 0 | 5h |
| Aerosol Paints | 0 | 1.5 ^h |
| Advanced Technology for Consumer Products | 0 | 6 ^h |
| Further Control of Medium-Duty Vehicles | 0 | 0.77h |
| State Control of Heavy-Duty Diesel Vehicles | 0 | 0.92 ^h |
| Federal Control of Heavy-Duty Diesel Vehicles | 0 | 0.29h |
| Further Control of Heavy-Duty Gasoline Vehicles | 0 | 0.04 ^h |
| Subtotal | 0.0 | 14.52 |

TABLE 1 EMISSIONS IMPACTS OF CONTROL STRATEGY REVISION

| Total Additional VOC Reductions | >1.2 | 15.72 |
|---------------------------------|------|-------|
| NET VOC BENEFIT | 0.37 | 15.65 |

TABLE 1 (continued)EMISSIONS IMPACTS OF CONTROL STRATEGY REVISION

| | 1999 NOx | 2010 NOx |
|-----------------------------------------------------------|--------------------|--------------------|
| NOx CONTROL MEASURES | Reductions | Reductions |
| | (tons/day) | (tons/day) |
| FOREGONE REDUCTIONS | | |
| Rescheduled Measures | | |
| Low-NOx Water Heaters (1998) | 0a | 0 |
| Low-NOx Furnaces (1998) | 0a | 0 |
| Further Control of Stationary Combustion Turbines (BARCT) | 0 ⁱ | 0 |
| (1998) | | |
| Further Control of Stationary Reciprocating Internal | 0j | 0 |
| Combustion Engines (BARCT) (1999) | | |
| Subtotal | 0.00 | 0.00 |
| Deleted Measures | | |
| New Residential Solar Hot Water Heaters | 0.05 ^k | 0.64 ^k |
| Retrofit Residential Solar Hot Water Heaters | 0.10 ^k | 1.22 ^k |
| New Commercial Solar Hot Water Heaters | <0.01 ^k | 0.02 ^k |
| Student Travel Reduction Program | 0d | 0^{d} |
| Non-Commute Travel Reduction Program | 0e | 0e |
| Truck Operation Program | 0^{f} | 0^{f} |
| Subtotal | 0.15 | 1.88 |
| Total Foregone NOx Reductions | 0.15 | 1.88 |
| ADDITIONAL REDUCTIONS | | |
| Further Control of Medium-Duty Vehicles | 0.17 ^h | 6.57 ^h |
| State Control of Heavy-Duty Diesel Vehicles | 0 | 10.43 ^h |
| Federal Control of Heavy-Duty Diesel Vehicles | 0 | 2.83 ^h |
| Further Control of Heavy-Duty Gasoline Vehicles | 0.01 ^h | 0.44 ^h |
| Total Additional NOx Reductions | 0.18 | 20.27 |
| NET NOX BENEFIT | 0.03 | 18.39 |

Notes to Table 1

- a. The impact of rescheduling the Adhesives, Water Heaters and Furnaces measures to 1998 is insignificant, because complying low-emitting products are already being used in San Diego County as a result of rules adopted by other California air districts.
- b. The emissions reductions estimate is retained from the 1991 RAQS.
- c. The Petroleum Dry Cleaning sources that would have been subject to control have shut down. Consequently, no emissions reductions are available.
- d. The 1995 RAQS claimed no emissions reductions credit for the Student Travel Reduction Program because the measure was unscheduled.
- e. The RAQS claimed no emissions reductions credit for the Non-Commute Travel Reduction Program because the quantity of reductions was uncertain.
- f. The RAQS claimed no emissions reductions credit for the Truck Operations Program because it was a contingency measure.
- g. Potential emissions reductions estimates for these control measures are presently uncertain and, therefore, are not relied on in this analysis of net effects.
- h. Estimates provided by ARB.
- i. Rescheduling the Turbines BARCT measure to 1998 is insignificant, because the turbines that would have been required to install further control under the measure are at the end of their useful life and are already scheduled to be replaced by new turbines subject to BACT.
- j. The proposed 1998 RAQS Revision scheduling adoption of a Reciprocating Engines BARCT rule for 1999 does not represent a delay of implementation relative to the 1995 RAQS.
- k. The 1991 RAQS overstated anticipated NOx reductions from the three solar water heaters measures by a factor of two, because it did not account for the effect of low-NOx water heaters being implemented concurrently with the solar water heaters.

V. ALTERNATIVES TO THE PROPOSED ACTION

Pursuant to CEQA Guidelines §15126(d), an EIR is required to discuss alternatives to the proposed action that would avoid or substantially lessen any identified significant adverse impacts on the environment. This Supplemental EIR finds that the proposed 1998 RAQS Revision would not cause any significant adverse impacts on the environment. Nevertheless, the following discussion considers three potential alternatives that could provide even greater air quality benefits than the proposal, if they could feasibly be implemented: the "No Project" alternative, the No Delays or Deletions alternative, and the Maximally Accelerated Adoption alternative. However, as discussed below, the alternatives are not feasible.

"No Project" Alternative

The "No Project" alternative would be to not revise the RAQS control strategy as proposed. All previously scheduled control measures would have to be developed and implemented immediately. Three additional District control measures would not be scheduled for adoption. However, the statewide additional measures and the two additional District measures adopted in 1997 would still be implemented.

Implementing the previously scheduled measures immediately would, if feasible, provide 0.83 ton per day VOC and 1.88 ton per day NOx reductions. However, not implementing the three additional District control measures would forego up to 1 ton per day of potential VOC reductions. Therefore, the No Project alternative, if feasible, could have up to a 0.17 ton per day VOC disbenefit and a 1.88 ton per day NOx benefit relative to the proposed action. However, for the reasons discussed below for each measure, the No Project alternative is not feasible.

Rescheduled Measures

The control measures for Adhesives, Turbines, Water Heaters and Furnaces are already being developed to be adopted as soon as possible in 1998. Thus, the proposal and the alternative are identical regarding these measures. The Reciprocating Engines measure is also being developed for adoption as soon as possible, but no later than 1999.

For Plastic Parts, Rubber, Composite, and Glass Coating, proposed to be rescheduled for adoption in 2000, accelerating adoption to 1998 would require additional engineering staff resources beyond those currently available at the District. Due to time required for hiring and training staff, it would not be feasible to adopt this rule during 1998. Therefore, implementing this measure immediately is not a feasible alternative.

Indefinitely Delayed Measures

The control measures for Commercial Charbroiling and Further Control of Wood Products Coating are proposed to be indefinitely delayed to await development of acceptable control technologies. Immediate adoption of the previously proposed emissions limits would force affected businesses to either purchase control technologies that are overly expensive and/or unproven, and/or which could potentially negatively affect the quality of their products, or to cease the subject emitting activities. In either case, the resultant economic hardship could possibly cause the affected companies to go out of business. Therefore, implementing these measures immediately is not a feasible alternative.

Deleted Measures

Nine previously scheduled control measures are proposed to be deleted from the RAQS, because the District has determined the measures not to be feasible measures, based on updated analyses of emissions reduction potential and cost-effectiveness, and recent amendments to state law. The alternative of immediately adopting these nine infeasible measures is, therefore, not a feasible alternative.

The Semiconductor Manufacturing control measure is not a feasible measure because the small potential reduction does not warrant expending resources developing, adopting and implementing a new rule, including preparing a socio-economic impact assessment. Implementing the measure would cause it to divert limited staff resources away from implementing more beneficial scheduled measures. Therefore, implementing this measure is not a feasible alternative.

The Marina Gasoline Refueling control measure would provide negligible emissions reductions and is not economically feasible because the low throughput in the subject facilities does not justify the additional expense for installing the Phase II control equipment (\$8 per pound of VOC emissions reduced). Therefore, implementing this measure is not a feasible alternative.

The Petroleum Dry Cleaning sources that would have been subject to control under that measure have shut down. Consequently, no emissions reductions are available from implementing the measure. Therefore, implementing this measure is not a feasible alternative.

The solar hot water heaters control measures are not economically feasible, due to excessively high control costs, ranging up to hundreds of dollars per pound of NOx reduced. Therefore, implementing these three measures is not a feasible alternative.

All state requirements for mandatory trip reduction programs were eliminated by Assembly Bill 3048 (Statutes of 1996, Chapter 777). Consequently, the Student Travel Reduction Program, the Non-Commute Travel Reduction Programs and the Goods Movement/Truck Operation Program proposed in the 1991 RAQS are no longer statutorily mandated. H&SC §40717.6 prohibits regulation of non-commute shopping trips. The Student Travel Reduction Program was estimated to potentially cost more than \$16 per pound of ozone precursors reduced, and thus would not be economically feasible. The Goods Movement/Truck Operation Program was made a contingency measure, rather than being scheduled for implementation, because of political feasibility issues. Furthermore, no emissions reductions are credited in the RAQS for those measures. Therefore, implementing these three measures is not a feasible alternative.

Additional Measures

Not implementing the proposed additional District measures would have a potential adverse air quality impact, and, therefore, would not be an environmentally beneficial alternative.

NO DELAYS OR DELETIONS ALTERNATIVE

The No Delays or Deletions alternative would be similar to the No Project alternative, except the additional measures would be scheduled for adoption as proposed in the 1998 RAQS Revision. This alternative would avoid the environmental disbenefit of the No Project alternative, because the additional measures would be implemented. Therefore, the No Delays or Deletions alternative would, if feasible, provide 0.83 ton per day VOC and 1.88 ton per day NOx greater reductions than the proposed action. However, the No Delays or Deletions alternative is not feasible for the same reasons explained above under the No Project alternative.

MAXIMALLY ACCELERATED ADOPTION OF ADDITIONAL MEASURES ALTERNATIVE

In the Maximally Accelerated Adoption of Additional Measures alternative, the additional District measures would all be adopted in 1998, rather than 1999-2000 as scheduled in the proposal, while the previously scheduled measures would be rescheduled, delayed or deleted as in the proposal. Further Control of Solvent Cleaning is proposed to be adopted in 1999; Further Control of Bakery Ovens is proposed to be adopted in 2000; and Further Control of Transfer of Volatile Organic Compounds Into Mobile Transport Tanks is proposed to be studied to determine the feasibility and potential emission reductions. Accelerating adoption of these measures to 1998 could provide up to 1 ton per day short-term additional VOC reductions in the interim period, but would require additional engineering staff resources beyond those currently available at the District. Due to time required for hiring and training staff, it would not be feasible to adopt these rules during 1998. Therefore, implementing these measures immediately is not a feasible alternative.

VI. EVALUATION OF POTENTIAL CUMULATIVE AIR QUALITY IMPACTS OF THE PROPOSED PROJECT AND OTHER CONTEMPORANEOUS DISTRICT PROJECTS

CEQA Guidelines §15130(a) requires an EIR to discuss any significant cumulative impacts. According to S. Kostka and M. Zischke, <u>Practice Under the California Environmental Quality</u> <u>Act</u>, at page 534 (Continuing Education of the Bar, California, November 1997) "A cumulative impact of a project is an impact to which that project contributes and to which other projects contribute as well. The project must make some contribution to the impact; otherwise, it cannot be characterized as a cumulative impact of that project." Since, as discussed in Section IV of this Supplemental EIR, the proposed 1998 RAQS Revision would provide net air quality benefits in both the short-term and the long-term, adoption of the proposed 1998 RAQS Revision would not contribute to any cumulative adverse air quality impacts of other contemporaneous projects.

For a discussion of the cumulative impacts of the entire RAQS as a whole, refer to Chapter 7 of the previously referenced program EIR on the 1991 RAQS.

One comment on the proposed Negative Declaration asserted that further evaluation would be needed on the potential for cumulative air quality impacts that could result from the proposed 1998 RAQS Revision along with the potential future deletion of state "no-net-increase" NSR offset requirements, and other new District projects, such as permitting Navy dredging of San Diego Harbor. The dredging is occurring only until September 1998. The potential deletion of state offset requirements is not expected to be adopted until sometime after the dredging is completed. Therefore, the air quality effects of those two projects would not be cumulative with each other, and, as indicated above, the proposed 1998 RAQS Revision would not contribute to any cumulative impacts with either project. The environmental impacts of the dredging are discussed in the Navy's "Homeporting Project" Environmental Impact Statement, certified on December 22, 1995, and the Addendum to the Previously Certified Environmental Impact Report for Navy Homeporting Project for Issuance of Required Air Pollution Control District Permits, dated February 27, 1998. Regarding potential NSR revisions, further information on potential effects is not yet available. A separate CEQA review will be performed prior to adopting any proposed NSR rule amendments deleting state offset requirements to examine any potential environmental effects attributable to deleting state offset requirements, and potential cumulative effects of such revisions will be considered in that review.

VII. OTHER CEQA REQUIREMENTS

CEQA Guidelines §15126(c) requires an EIR to describe mitigation measures proposed to minimize the significant environmental effects of the proposed project. Since Section IV of this Supplemental EIR finds no significant environmental effects of the proposed project, no mitigation measures are required.

CEQA Guidelines §15126(e) and §15127 require an EIR to discuss the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity. However, the statutory requirement for that discussion was repealed by Chapter 1230 of the Statutes of 1994.

CEQA Guidelines §15126(f) requires an EIR to discuss any significant irreversible environmental changes which would be involved in the proposed action should it be implemented. The proposed 1998 RAQS Revision would not result in any significant irreversible environmental changes.

CEQA Guidelines §15126(g) requires an EIR to discuss the growth-inducing impact of the proposed action. There would be no significant direct growth-inducing impact of the proposed action. However, the proposed 1998 RAQS Revision would 1) delete from the RAQS adoption schedule potentially costly control measures affecting both home owners and businesses, and 2) incorporate additional control measures that would provide some additional air quality bene-fits. Therefore, by both reducing regulatory costs and improving air quality, the proposed 1998 RAQS Revision would make San Diego County a somewhat more attractive place to live and do business. Consequently, the project could conceivably be considered to have a potential for an indirect growth-inducing impact. However, the proposed 1998 RAQS Revision would provide only small incremental improvements in overall regulatory costs and air quality, and there are many other factors considered in relocating decisions that may be given greater weight. Therefore, the potential growth-inducing impact of the project is not expected to be significant, and such an impact is almost completely speculative.

VIII. OVERRIDING CONSIDERATIONS

This Supplemental EIR finds no significant adverse environmental effects of the proposed project. Therefore, there is no requirement for a statement of overriding considerations. However, even if some environmental impact were found, there are two overriding considerations that make adoption of the proposed 1998 RAQS Revision appropriate.

One overriding consideration is that the additional control measures incorporated into the proposed 1998 RAQS Revision would provide significant air quality benefits, as discussed in Section IV of this Supplemental EIR, that are far greater than any potential adverse effects. The second overriding consideration is that the control measures proposed to be deleted or indefinitely delayed in the proposed 1998 RAQS Revision are currently not feasible. Adopting those measures as expected in the 1995 RAQS would force affected businesses to either purchase control technologies that may be overly expensive and/or unproved, and/or which could potentially negatively affect the quality of their products, or else to cease the subject emitting activities. In either case, the resultant economic hardship could possibly cause the affected companies to go out of business. Adopting the proposed 1998 RAQS Revision would avoid these potential economic impacts of the 1995 RAQS.

IX. DETERMINATION OF DEPARTMENT OF FISH & GAME DE MINIMIS IMPACT FINDING

Based on the information contained in this Supplemental EIR and the entire record before the San Diego County Air Pollution Control District, there is no evidence that adopting the 1998 Regional Air Quality Strategy Revision for the San Diego Air Basin will have any potential for adverse effect on wildlife resources or the habitat upon which the wildlife depends; and,

The San Diego County Air Pollution Control District has, on the basis of substantial evidence, rebutted the presumption of adverse effect to the resources set forth in California Code of Regulations, Title 14, §753.5(d).

X. PUBLIC COMMENTS AND DISTRICT RESPONSE

Public comments on the Draft Supplemental Environmental Impact Report and District responses are attached.

SAN DIEGO COUNTY AIR POLLUTION CONTROL DISTRICT

ADDENDUM TO THE PREVIOUSLY CERTIFIED FINAL ENVIRONMENTAL IMPACT REPORT FOR THE 1991 SAN DIEGO REGIONAL AIR QUALITY STRATEGY

PREPARED FOR THE PROPOSED 2001 TRIENNIAL REGIONAL AIR QUALITY STRATEGY REVISION

August 2001

Prepared by: San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1096

II. PROJECT DESCRIPTION

Overview

The proposed 2001 Triennial RAQS Revision would incorporate three additional control measures not reflected in the 1998 Triennial RAQS Revision, requiring further control of architectural coatings, vapor recovery systems at gasoline refueling stations, and new residential water heaters. Additionally, a control measure identified in the 1998 Triennial RAQS Revision for further evaluation, control of bulk gasoline storage tank degassing, is proposed for adoption. Further, a study is planned to investigate the feasibility of reducing emissions from small boilers and large water heaters sized between 75,000 and 5 million Btu per hour.

Three control measures, scheduled in the 1998 RAQS Revision for adoption in 1999 and 2000, have been delayed due to unresolved issues regarding their technical feasibility, emission reduction potential or cost-effectiveness. These measures would control emissions from solvent cleaning operations, bakery ovens, and coating of plastic parts, rubber, composites and glass. Each of these measures is retained in the proposed 2001 RAQS Revision.

The proposed 2001 RAQS Revision also includes a reevaluation and reaffirmation of the 1998 finding pursuant to state law that state emission offset requirements are not necessary for San Diego County to achieve state clean air standards by the earliest practicable date. State law requires this reevaluation and results do not warrant changes to the District's existing New Source Review rules. Therefore, this reevaluation is not further considered in this EIR Addendum.

Additional Control Measures

Pursuant to state law, a primary focus of the proposed 2001 Triennial RAQS Revision is identifying feasible control measures to be developed and adopted during the 2001-2003 period to further reduce emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx), precursors to the photochemical formation of ozone. Accordingly, three additional control measures have been identified.

<u>Further Control of Architectural Coatings</u>. Rule 67.0 amendments are proposed for adoption in late 2001. This measure would further control VOC emissions from coatings used on stationary structures, appurtenances, and pavement, consistent with a Suggested Control Measure for Architectural Coatings, adopted by ARB in June 2000.

<u>Enhanced Vapor Recovery Program.</u> Amendments to Rule 61.3 (Transfer of VOC into Stationary Storage Tanks) and Rule 61.4 (Transfer of VOC into Vehicle Fuel Tanks) are proposed for adoption in 2002, as necessary to implement the enhanced vapor recovery program approved by ARB in March 2000, to further reduce VOC emissions at gasoline refueling stations.

<u>Further Control of New Residential Water Heaters.</u> Rule 69.5 amendments are proposed for adoption in 2003. This measure would reduce NOx emissions from new residential-type water heating units by 50%, in-line with South Coast Air Quality Management District's (AQMD's) recently revised rule. (Existing units would not be affected.) The current standard of 40 nanograms per joule of heat output will be reduced to 20 nanograms.

<u>Bulk Gasoline Storage Tank Degassing.</u> The District proposes requiring use of VOC control equipment (providing at least 90% control) for degassing of above-ground gasoline storage tanks at bulk plants and terminals during cleaning, repairing, or decommissioning operations, and that the equipment be permitted, either by the District or another air district (if such equipment is also used in another district). This measure would be implemented under existing Rule 10 (Permits) upon District Board adoption of the 2001 Triennial RAQS Revision, or rulemaking if necessary.

Finally, a study is planned to investigate the feasibility of reducing emissions from small boilers and large water heaters sized between 75,000 and 5 million Btu per hour. An associated control measure is not scheduled for adoption in the proposed 2001 Triennial RAQS Revision and, therefore, is not further considered in this EIR Addendum.

<u>Previously Scheduled Measures</u>

Five of eight control measures scheduled in the 1998 RAQS Revision for adoption during the 1998-2000 period were adopted, collectively providing more emission reductions than anticipated in the 1998 RAQS for these measures. (See Table 1 below). The remaining three measures have been delayed due to unresolved issues regarding technical feasibility, emission reduction potential, or cost-effectiveness. The District will retain these measures in the RAQS and pursue rule adoption, if appropriate, after the outstanding issues are resolved.

<u>Plastic Parts, Rubber, Composite and Glass Coating Operations.</u> This control measure (adopt a new rule) would require using low-VOC coatings and cleaning materials and high-transferefficiency application equipment, or alternatively, add-on control equipment. It was scheduled in the 1998 RAQS for adoption in 2000, if the measure was determined feasible during subsequent rulemaking.

Rule adoption has been delayed because further investigation during rule development revealed reductions of only 0.03 tons per day could be achieved, rather than 0.10 tons per day as estimated in the 1998 RAQS Revision. The potential emission reduction has decreased because some facilities have closed and others are now utilizing lower-VOC solvents. The control measure is being retained in the RAQS, to be reconsidered for adoption during the next triennial planning cycle after higher-reduction control measures are developed.

<u>Further Control of Bakery Ovens.</u> This control measure (amend Rule 67.24) would increase the VOC control requirement on affected bakeries from 90% to 95% and lower the exemption threshold from 50 to 25 tons per year. It was scheduled in the 1998 RAQS for adoption in 2000, if the measure was determined feasible during subsequent rulemaking.

Finally, a study is planned to investigate the feasibility of reducing emissions from small boilers and large water heaters sized between 75,000 and 5 million Btu per hour. An associated control measure is not scheduled for adoption in the proposed 2001 Triennial RAQS Revision and, therefore, is not further considered in this EIR Addendum.

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Five of eight control measures scheduled in the 1998 RAQS Revision for adoption during the 1998-2000 period were adopted, collectively providing more emission reductions than anticipated in the 1998 RAQS for these measures. (See Table 1 below). The remaining three measures have been delayed due to unresolved issues regarding their technical feasibility, emission reduction potential, or cost-effectiveness. The District will retain these measures as part of the RAQS and pursue rule adoption, as appropriate, after the outstanding issues are resolved:

<u>Plastic Parts, Rubber, Composite and Glass Coating Operations.</u> This control measure (adopt a new rule) would require using low-VOC coatings and cleaning materials and high-transferefficiency application equipment, or alternatively, add-on control equipment. It was scheduled in the 1998 RAQS for adoption in 2000, if the measure was determined feasible during subsequent rulemaking.

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<u>Further Control of Bakery Ovens.</u> This control measure (amend Rule 67.24) would increase the VOC control requirement on affected bakeries from 90% to 95% and lower the exemption threshold from 50 to 25 tons per year. It was scheduled in the 1998 RAQS for adoption in 2000, if the measure was determined feasible during subsequent rulemaking.

Rule adoption has been delayed because there are currently no bakeries in San Diego County with VOC emissions between 25 and 50 tons per year, and thus the lower threshold would not provide any emission reductions. Additionally, the District discovered data during preliminary rule development that casts doubt on whether the 95% control requirement can feasibly be achieved. The feasibility of this requirement is being evaluated, and rule adoption will be delayed until the issue is resolved.

<u>Further Control of Solvent Cleaning Operations</u>. This control measure (amend Rule 67.6) would require use of aqueous or other low-VOC solvents for degreasing operations, or use of air pollution control devices, consistent with South Coast AQMD Rules 1122 and 1171. It was scheduled in the 1998 RAQS for adoption in 1999, if the measure was determined feasible during subsequent rulemaking.

Rule adoption has been delayed because information from cleaning-unit retailers and consultants working in the South Coast area indicates that many South Coast businesses remain dependent on petroleum-based cleaning solvents, thereby reducing the emission reduction benefits of the

regulation. Additionally, because of the increased electricity needed to heat and pump aqueous solvents, rising electricity costs have a significant impact on cost-effectiveness, especially when coupled with the reduced emission benefits resulting from non-compliance. A rule-effectiveness study will be conducted by the California Air Resources Board to identify industrial sectors or applications where implementing the requirements has proved infeasible. The District will proceed with appropriate Rule 67.6 amendments upon completion of the study, incorporating any necessary modifications in light of the study results.

III. Evaluation of Impacts

The District has evaluated potential air contaminant emission impacts of the proposed 2001 Triennial RAQS Revision, which are summarized in Table 1. Based on this information, the District concludes that relative to the 1998 RAQS Revision, the proposed control strategy changes provide increased ozone precursor emission reductions and no increase in emissions of other air contaminants, and thus benefit air quality. Specifically:

- Rules adopted during 1998-2000 are collectively providing more emission reductions than anticipated for these measures in the 1998 RAQS. An additional 0.54 tons per day and 0.23 tons per day reduction in VOC and NOx emissions, respectively, are provided.
- While three measures scheduled in the 1998 RAQS have been delayed due to issues regarding their feasibility, the measures have been retained in the 2001 Triennial RAQS Revision and rule adoption will be pursued, as appropriate, after the issues are resolved.
- Three new measures are scheduled in the 2001 RAQS Revision for adoption during the 2001 2003 planning cycle, providing an additional 3.5 tons per day and 1 ton per day reduction in VOC and NOx emissions, respectively.

Additionally, based on District evaluation of the Final EIR for the 1991 RAQS, the Supplemental EIR for the 1998 RAQS Revision, CEQA documents prepared by ARB and other California air districts for measures similar to those included in the proposed 2001 RAQS Revision, and various technical documents used in developing the proposed control measures, the District further concludes:

- The project will not involve new significant environmental effects or a substantial increase in the severity of significant effects previously identified;
- No mitigation measures or alternatives previously found not to be feasible would be feasible; and
- There are no mitigation measures or alternatives which are considerably different from those previously analyzed that would substantially reduce significant effects.

Since the criteria triggering the preparation of a subsequent EIR pursuant to CEQA Guidelines Section 15162 do not apply, this addendum to the previously certified EIR has been prepared in accordance with CEQA Guidelines Section 15164 to accurately reflect the proposed 2001 Triennial RAQS Revision.

ATTACHMENT B

TABLE 1EMISSIONS REDUCTIONS COMPARATIVE ANALYSIS2001 RAQS REVISION VERSUS 1998 RAQS REVISION

| Control Measure | 1998 RAQS Adoption Schedule | Actual Adoption Date | Year of Full Imple- mentation | Pollutant | 1998 RAQS Expected Emission Reductions (tons/day) | 2001 RAQS Revised Emission Reductions (tons/day) |
|------------------------------------------------------|--------------------------------------|----------------------------|----------------------------------------|-----------------|---------------------------------------------------------------|--------------------------------------------------------------|
| | MEASUI | RES ADOF | TED DUR | ING 1998-2 | 2000 | |
| Low-NO _X Furnaces | 1998 | 6/17/98 | 2008 | NO _X | 0.30 | 0.30 |
| Low-NO _X Water Heaters | 1998 | 6/17/98 | 2008 | NO _X | 0.87 | 0.87 |
| Stationary Combustion Turbines BARCT | 1998 | 12/16/98 | 2002 | NO _X | 0.38 | 0.07 |
| Adhesives Operations | 1998 | 12/16/98 | 1998 | VOC | 0.22 | 0.76 |
| Stationary Internal Combustion Engines BARCT | 1999 | 11/15/00 | 2003 | NO _X | 0.68 | 1.32 |
| | | DELAYE | ED MEASU | <u>RES</u> | | |
| Further Control of Solvent Cleaning Operations | 1999 | Delayed | _ | VOC | 0 - 0.9 | 0 - 0.9 |
| Further Control of Bakery Ovens | 2000 | Delayed | — | VOC | 0 - 0.1 | 0 - 0.02 |
| Plastic, Rubber, Composite, and Glass Coating | 2000 | Delayed | | VOC | 0.10 | 0 - 0.03 |
| | ADDI | CIONAL SC | HEDULED | MEASURE | <u>S</u> | |
| Bulk Gasoline Storage Tank Degassing | Study | 2001 | 2001 | VOC | 0.75 | 0-0.71 |
| Further Control of Architectural Coatings | _ | 2001 | 2004 | VOC | — | 1.5 |
| Enhanced Vapor Recovery | _ | 2002 | 2008 | VOC | — | 2 |
| Further Control of Water Heaters | _ | 2003 | 2014 | NO _X | | 1 |
| | TOTALS | | | | | |
| TOTAL VOC | | | | | 1.07 - 2.07 | 4.26 - 5.92 |
| TOTAL NOx | | | | | 2.23 | 3.56 |

ATTACHMENT B



Air Pollution Control Board

| Greg Cox | District 1 |
|------------------|------------|
| Dianne Jacob | District 2 |
| Pam Slater-Price | District 3 |
| Ron Roberts | District 4 |
| Bill Hom | District 5 |

May 12, 2004

CEQA Initial Study - Environmental Checklist Form (Based on the State CEQA Guidelines, Appendix G Rev. 12/98)

1. PROJECT TITLE:

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

2. LEAD AGENCY NAME AND ADDRESS:

San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, California 92123-1096

3. LEAD AGENCY CONTACT:

Robert Reider Supervising Air Resources Specialist (858) 650-4670 E-mail: Robert.Reider@sdcounty.ca.gov

4. PARTICIPANTS IN THE PREPARATION OF THIS INITIAL STUDY:

San Diego County Air Pollution Control District Robert Reider, Supervising Air Resources Specialist Carl Selnick, Air Quality Specialist

San Diego County Office of County Counsel Terence Dutton, Sr. Deputy County Counsel

5. PROJECT LOCATION:

The project applies within the jurisdiction of the San Diego County Air Pollution Control District (APCD), which covers the entire area within the incorporated and unincorporated portions of San Diego County, the southwestern-most county in the State of California (Figure 1). San Diego County encompasses 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the State of Baja California, Mexico.



Figure 1.

Project Location

San Diego County

6. PROJECT SPONSOR'S NAME AND ADDRESS:

San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1096

7. PROJECT DESCRIPTION:

Overview

The Regional Air Quality Strategy (RAQS), which was initially adopted in 1992, was developed pursuant to the California Clean Air Act. It identifies feasible control measures for emission sources under APCD purview—stationary sources—to reduce emissions and provide expeditious progress toward attaining the State ambient air quality standard for ozone. (Mobile sources of emissions are under the purview of the U.S. Environmental Protection Agency or California Air Resources Board (ARB).)

State law requires the APCD to revise the RAQS every three years to include an updated schedule for expeditiously adopting every feasible control measure. Accordingly, the RAQS was amended in 1995, 1998, and 2001. The APCD now proposes the 2004 Triennial RAQS Revision, reflecting new data on technological feasibility, cost-effectiveness, and emission reduction potential of stationary-source control measures.

Proposed Control Measures

The primary focus of the proposed 2004 Triennial RAQS Revision is identifying technologically feasible and cost-effective control measures to be scheduled for rule development during the 2004-2007 period to reduce emissions of volatile organic compounds (VOC) and oxides of nitrogen (NOx), precursors to the photochemical formation of ozone. Eight emission control measures are identified in the proposal. Upon full implementation, these eight measures will collectively reduce ozone-precursor emissions in San Diego County by an estimated 5 tons/day—3 tons/day reduction in VOC emissions and 2 tons/day reduction in NOx emissions.

A description of each proposed measure is provided below. The first measure reflects a new Statewide control program. Measures 2 through 6 are based on emission controls already being implemented in other air districts. Lastly, Measures 7 and 8 respond to recent and anticipated updates to ARB requirements for Best Available Retrofit Control Technology (BARCT).

- 1. Enhanced Vapor Recovery Program. This measure addresses gasoline vapor emissions from gasoline service stations. New Rules 61.3.1 (Transfer of Gasoline Into Stationary Underground Storage Tanks) and 61.4.1 (Transfer of Gasoline From Stationary Underground Storage Tanks Into Vehicle Fuel Tanks) are proposed for adoption in 2004 to implement and provide consistency with the Statewide enhanced vapor recovery program approved by ARB in March 2000. Upon full implementation, this measure is projected to reduce VOC emissions in the County by approximately 2 tons/day.
- 2. Further Control of Solvent Cleaning Operations. This measure addresses VOC emissions generated by the application of solvents (held in a tank or reservoir) to remove unwanted materials, such as dirt and oils, from a surface. Rule 67.6 amendments are proposed for adoption in 2005 to require use of low-VOC aqueous solvents where feasible, consistent with requirements of several air districts. This measure is estimated to reduce VOC emissions by up to 0.9 tons/day.
- 3. **Further Control of Industrial and Commercial Boilers.** Currently, Rule 69.2 exempts from NOx emission standards any unit with an annual heat input of less than 220,000 therms (for units with a heat input rating of less than or equal to 50

million (MM) BTU/hour). These units are subject only to operational standards, such as unit maintenance and recordkeeping. The APCD is evaluating possible amendments to Rule 69.2 to lower the exemption level (potentially to 90,000 therms/year, consistent with state BARCT guidance). By requiring emission controls averaging 60% efficiency for about 100 affected units, this measure could reduce NOx emissions by an estimated 40 tons/year (0.1 ton/day). The APCD will further evaluate the cost-effectiveness of this measure before formally proposing rule amendments in 2004. Additionally, the APCD will evaluate the feasibility of more stringent emission limits recently adopted by the San Joaquin Valley air district.

- 4. **Small Boilers.** The APCD proposes to develop a new Rule 69.2.1 in 2005 to reduce NOx emissions from boilers with a heat input rating between 1 MMBTU/hour and 5 MMBTU/hour, consistent with rules of the Ventura County and South Coast air districts. There are an estimated 300 boilers of that size range in San Diego County, cumulatively emitting an estimated 160 tons/year of NOx. Assuming a 70% reduction on average, NOx emissions would be reduced by an estimated 110 tons/year (0.3 ton/day). The APCD will be further evaluating the cost-effectiveness and technological feasibility of this measure before formally proposing the new rule.
- 5. Large Commercial Water Heaters. The APCD proposes to develop a new Rule 69.5.1 in 2005 to control NOx emissions from new large commercial water heaters with a heat input rating between 75,000 BTU/hour and 1 MMBTU/hour, consistent with similar South Coast and Ventura County rules. The APCD will first evaluate the technological feasibility, emission reduction potential, and cost-effectiveness, and assess the number and types of existing units in San Diego County and the commercial availability of units complying with the South Coast and Ventura County rules. Although the emission reduction potential is not yet precisely known, it is considered potentially significant enough to warrant scheduling development of the measure.
- 6. Further Control of New Residential Water Heaters. This measure would reduce NOx emissions from new residential-type units by 75%. (Existing units would not be affected.) The current standard in Rule 69.5 of 40 nanograms per joule of heat output would be reduced to 10 nanograms, consistent with South Coast's rule. Rule 69.5 amendments are proposed for adoption in 2007, if an assessment in 2006 finds complying units are commercially available and cost-effective. Upon full implementation, this measure is projected to reduce NOx emissions by approximately 1.5 tons/day.
- 7. Stationary Reciprocating Internal Combustion Engines BARCT Update. ARB issued BARCT requirements for Spark-Ignited Stationary Reciprocating Internal Combustion Engines in 2001, after the APCD had already adopted Rule 69.4.1 in 2000 to apply BARCT to such engines. The APCD will evaluate the feasibility of incorporating the new BARCT requirements as amendments to Rule
69.4.1, based on technological and economic considerations specific to affected sources, estimate the potential emission reductions that could be achieved by those requirements, and, in 2006, propose amendments to Rule 69.4.1 that are determined feasible and cost-effective.

8. Stationary Combustion Turbines BARCT Update. ARB is currently developing additional guidance regarding control of turbines. After ARB issues that guidance, the APCD will determine what revisions to Rule 69.3.1 would be necessary to incorporate new or revised BARCT requirements into Rule 69.3.1. After identifying potential rule revisions, the APCD will evaluate the feasibility of incorporating those revisions based on technological and economic considerations specific to each affected source, estimate the potential emission reductions that could be achieved by those requirements, and, in 2006, propose amendments to Rule 69.3.1 that are determined feasible and cost-effective.

Deleted Measures

Two measures—(1) Further Control of Bakery Ovens, and (2) Plastic Parts, Rubber, Composite and Glass Coating Operations—are proposed for deletion from the RAQS due to minimal emission benefits and, in the case of the first measure, issues regarding technological feasibility and cost-effectiveness. The minimal emission reductions that would be foregone by deleting these two measures—a total of 0.02 ton/day reduction in VOC emissions—would be more than offset by the estimated 3 tons/day reduction in VOC emissions provided by new control measures being added to the RAQS.

Further Study Measures

To ensure the RAQS continues to include every feasible control measure applicable to emission sources under APCD authority, the APCD is also reviewing adopted rules of other California air districts, as required by ARB, to determine if there are any other feasible control measures to incorporate into the RAQS in the future. The APCD analysis indicates that, while the eight proposed control measures identified above are likely to have the greatest emission reduction potential, there are some additional source categories for which other air districts have more stringent emission limits than corresponding San Diego APCD rules. These rules are identified in the proposed 2004 Triennial RAQS Revision as "Further Study Measures," to be assessed during the 2004-2006 planning period to determine whether the more stringent emission limits are feasible for San Diego sources.

Further Study Measures that are determined feasible will be scheduled for rule development in the next proposed triennial revision of the RAQS, which is anticipated in 2007 and is not part of the proposed project addressed herein. Predicting the outcome of future feasibility assessments is highly speculative. At such time the assessments are completed and a proposed 2007 Triennial RAQS

Revision is developed, CEQA will apply and the potential environmental consequences will be addressed and considered prior to project approval and implementation. Consequently, the Further Study Measures are not further considered in this Initial Study.

Incentive Programs

The proposed 2004 Triennial RAQS Revision includes a summary of existing financial incentive programs for reducing emissions in San Diego County. Financial incentive programs augment traditional regulatory programs to further encourage technology development and provide cost-effective emission reductions not easily achieved by regulations. Local projects funded during the 2000-2003 period provided combined emission reductions of 2.5 tons/day (901 tons/year) of ozone precursors (VOC plus NOx), as well as 1.5 tons/day (559 tons/year) of carbon monoxide (CO) reductions and 0.1 ton/day (44 tons/year) of particulate matter (PM) reductions.

No actions affecting incentive programs are proposed in the 2004 Triennial RAQS Revision. Consequently, incentive programs are not further considered in this Initial Study.

State Offset Exemption

In 1998, the APCD amended its New Source Review (NSR) Rules 20.1-20.4 to repeal State emission offset requirements, as authorized by State law (AB 3319, 1996 Statutes). The proposed 2004 Triennial RAQS Revision includes a detailed reassessment and reaffirmation of the APCD's previous findings that State emission offset requirements are not necessary for San Diego County to achieve and maintain the State ozone standard by the earliest practicable date. State law requires this reassessment and results do not warrant amendments to NSR rules. Consequently, the reassessment is not further considered in this Initial Study.

8. ENVIRONMENTAL AND REGULATORY ISSUES:

Relationship to Other CEQA Documents

APCD Documents. Pursuant to CEQA requirements, on June 30, 1992, the Air Pollution Control Board (the "Board") certified a Final Environmental Impact Report (EIR) for the 1991 RAQS, addressing the environmental consequences of RAQS implementation. Subsequently, on June 17, 1998, the Board certified a Supplemental EIR addressing the 1998 RAQS Revision and supplementing the Final EIR for the 1991 RAQS. On August 8, 2001, the Board certified an Addendum to the

Final EIR, addressing the 2001 RAQS Revision. These CEQA documents are incorporated herein by reference.¹

The Initial Study contained herein focuses on potential environmental consequences of implementing the proposed 2004 Triennial RAQS Revision. Implementation would involve further application of emission control technologies that are already required by existing APCD rules adopted pursuant to the 1991 RAQS and/or subsequent RAQS revisions, including: the substitution of low-VOC substances for solvents; NOx emission controls for water heaters and boilers (in residential, commercial, or industrial applications); and NOx emission control equipment for stationary gas turbines and stationary engines. The environmental consequences of those control technologies were addressed in the previous environmental assessments identified above, in which the APCD found no significant adverse impacts on the environment would result.

The proposed control measures in the 2004 Triennial RAQS Revision will not result in additional or different impacts beyond those addressed in the previous environmental assessments identified above. Therefore, those environmental assessments remain as applicable environmental documents for the proposed 2004 Triennial RAQS Revision.

ARB Document. When adopting the Statewide control measure that is reflected in the proposed 2004 Triennial RAQS Revision—the Enhanced Vapor Recovery (EVR) Program—ARB found that the program "will have no significant adverse environmental impacts and the [EVR] regulations are projected to have a positive air quality impact."² The APCD has reviewed ARB's analyses^{3.4} and agrees with these findings. The local control measure is consistent with the Statewide program and will not result in additional or different impacts beyond those previously addressed by ARB. It is therefore concluded that the local EVR measure will have no significant adverse impacts on the environment.

Documents of Other Air Districts. In evaluating environmental consequences of the proposed project, APCD staff reviewed and considered environmental assessments prepared by other California air districts addressing control measures similar to those included in the proposed 2004 Triennial RAQS Revision. Those

These documents are available at the APCD offices at 9150 Chesapeake Drive, San Diego, CA.

^{*} "Resolution 00-9," State of California Air Resources Board, March 23, 2000. This document is available at the APCD offices at 9150 Chesapeake Drive, San Diego, CA.

[&]quot;Initial Statement of Reasons for Proposed Amendments to the Vapor Recovery Certification and Test Procedures for Gasoline Loading and Motor Vehicle Gasoline Refueling at Service Stations," State of California Air Resources Board, February 4, 2000. This document is available at the APCD offices at 9150 Chesapeake Drive, San Diego, CA.

[&]quot;Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response," State of California Air Resources Board, March 23, 2000. This document is available at the APCD offices at 9150 Chesapeake Drive, San Diego, CA.

documents are identified below.⁵ The APCD concurs with the methodologies and determinations made therein—that the specified control measure would not have a significant adverse impact on the environment.

- "Negative Declaration for the Revised San Francisco Bay Area 2001 Ozone Attainment Plan," Bay Area Air Quality Management District, October 24, 2001. [This document includes an assessment of the environmental consequences of low-VOC solvent cleaning operations.]
- "Final Environmental Assessment for Proposed Amended Rule 1171–Solvent Cleaning Operations," South Coast Air Quality Management District, September 1999.
- "Final Staff Report-Rule 74.6, Surface Cleaning and Degreasing," Ventura County Air Pollution Control District, September 15, 2003.
- "Final Environmental Assessment for Proposed Amended Rule 1121–Control of Nitrogen Oxides from Residential Type Natural Gas-Fired Water Heaters," South Coast Air Quality Management District, November 24, 1999.
- "Board Agenda Item–Proposed Rule 360, Emissions of Oxides of Nitrogen from Large Water Heaters and Small Boilers," Santa Barbara County Air Pollution Control District, October 17, 2002.
- "Environmental Analysis: Rules 4351 [Boilers, Steam Generators, and Process Heaters-Phase 1], 4305 [Boilers, Steam Generators, and Process Heaters-Phase 2], and 4306 [Boilers, Steam Generators, and Process Heaters-Phase 3]," San Joaquin Valley Unified Air Pollution Control District, July 17, 2003.

Refinement During Rule Development

The proposed 2004 Triennial RAQS Revision reflects the APCD's projection of future regulatory activity for purposes of providing expeditious progress toward attaining the State ozone standard. As planned activities, the control measures are initial proposals based on currently available information, and are subject to the rule development process and Board consideration prior to implementation.

The rule development process includes many steps, including review of control measures and adopted rules in other regions, consultation with affected parties, development of draft rules, workshops with affected and interested parties, development of technical support documentation, and rule consideration and adoption by the Board at a public hearing. During rule development, new information may become available regarding the availability of control technologies, emission reduction potential, costs of measures, and other factors. Consequently, the scheduling of rule adoption or the estimated emission benefits may ultimately differ

⁵ These documents are available at the APCD offices at 9150 Chesapeake Drive, San Diego, CA.

from that identified in the proposed 2004 Triennial RAQS Revision. However, predicting such differences would be highly speculative.

9. ENVIRONMENTAL SETTING:

Topography

San Diego County is divided by the Laguna Mountain Range, which runs approximately parallel to the coast about 45 miles inland and separates the coastal area from the desert portion of the County. The Laguna Mountains reach peaks of over 6,000 feet with Hot Springs Mountain peak rising to 6,533 feet, the highest point in the county. The coastal region is made up of coastal terraces that rise from the ocean into wide mesas which then, moving farther east, transition into the Laguna Foothills. Farther east, the topography gradually rises to the rugged mountains. On the east side, the mountains drop off rapidly to the Anza-Borrego Desert, which is characterized by several broken mountain ranges with desert valleys in between. To the north of San Diego County are the Santa Ana Mountains which run along the coast of Orange County, turning east to join with the Laguna Mountains near the San Diego-Orange County border.

<u>Climatology</u>

The climate of San Diego County, as with all of Southern California, is largely dominated by the strength and position of the semi-permanent, high-pressure system over the Pacific Ocean (known as the Pacific High). This high-pressure ridge over the West Coast often creates a pattern of late-night and early-morning low clouds, afternoon sunshine, daytime onshore breezes, and little temperature variation year-round. The climatic classification for the San Diego region is a Mediterranean climate, with warm, dry summers and mild, wet winters. Average annual precipitation ranges from approximately 10 inches on the coast to over 30 inches in the mountains to the east. The desert regions of San Diego County generally receive between 4 and 6 inches per year.

The favorable climate of San Diego County works to create air pollution problems. Sinking, or subsiding air from the Pacific High creates a temperature inversion (known as a subsidence inversion), which acts as a lid to vertical dispersion of pollutants. Weak summertime pressure gradients further limit horizontal dispersion of pollutants in the mixed layer below the subsidence inversion. Poorly dispersed anthropogenic (man made) emissions, combined with strong sunshine, lead to photochemical reactions that create ozone in this surface layer.

Daytime onshore flow (i.e., sea breeze) and nighttime offshore flow (i.e., land breeze) are quite common in Southern California. The sea breeze helps to moderate daytime temperatures in the western portion of San Diego County, which

greatly adds to the climatic draw of the region. This also leads to emissions being blown out to sea at night and returning to land the following day. Under certain conditions, this atmospheric oscillation results in the offshore transport of air from the Los Angeles region to San Diego County, which can result in high ozone concentrations being measured at San Diego County air pollution monitoring stations. Transport of air pollutants from Los Angeles to San Diego has also been shown to occur aloft within the stable layer of the elevated subsidence inversion. In this layer, removed from fresh emissions of oxides of nitrogen (which would scavenge and reduce ozone concentrations), high levels of ozone are transported into San Diego County.

Ambient Air Quality Standards

Federal and State ambient air quality standards have been established for ozone, inhalable particulate matter, carbon monoxide, nitrogen dioxide, lead, and sulfur dioxide. Additional state standards have been established for sulfates and hydrogen sulfide.

Ambient air quality standards are required to include a reasonable margin of safety to protect against potential hazards that research may not have yet identified. The levels of the federal and State standards may differ because the State standards provide a wider margin of safety than the federal standards.

San Diego County has experienced substantial improvement in ambient air quality over the past two decades as a result of emission control efforts. Notwithstanding this improvement, ozone and inhalable particulate matter still occur in concentrations sufficient to violate either federal or state standards in San Diego County.

Air Quality Improvement Trend

The APCD operates an extensive ambient air monitoring network, continuously monitoring air pollution levels at numerous sites throughout San Diego County in compliance with federal and state requirements. Data generated at these monitors are used to define the nature and severity of air pollution in San Diego County and to determine attainment status.

San Diego County exceeded the State ozone standard on 23 days in 2003, down from 160 days just 15 years earlier (1988). Over the same 15-year period, the region's population grew 30% (from 2.3 million to 3 million) and daily motor vehicle mileage increased 45% (from 56 million to 81 million miles). The substantial air quality progress despite this growth clearly shows air pollution control measures are working. Nevertheless, continued emission reduction efforts are needed in order to attain the State ozone standard. Further, continued growth of motor vehicle usage and population will continue creating challenges in controlling emissions to improve air quality.

Toxic Air Contaminants. Two of the APCD's air monitoring stations, in Chula Vista and El Cajon, measure toxic air contaminants. These are constituents of certain VOC, particulate matter, and other contaminants that are believed to be carcinogenic with no identified threshold below which no adverse health effects occur. Since 1990, a 60% reduction in the incremental cancer risk from measured air toxics has been observed in El Cajon and a 52% reduction in Chula Vista.⁶

[&]quot;Incremental cancer risk" is a calculation of possible additional cases of cancer, for every one million people, over a lifetime of exposure to toxic air contaminants.

10. OTHER PUBLIC AGENCY INVOLVEMENT:

Identify public agencies whose approvals are, or may be, required (e.g., permits, financing approval, or participation agreement):

Agency Action

ARB Approval of RAQS Revision

11. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below, if any, would be potentially affected by this project.

| Aesthetics | Agriculture Resources | Air Quality |
|-------------------------------|---------------------------|------------------------|
| Biological Resources | Cultural Resources | Geology / Soils |
| Hazards / Haz. Materials | Hydrology/Water Quality | Land Use / Planning |
| Mineral Resources | □ Noise | Population / Housing |
| Public Services | Recreation | Transportation/Traffic |
| Utilities / Service Systems | Mandatory Findings of Sig | gnificance |
| No Potentially Significant Ir | npacts | |

12. DETERMINATION:

On the basis of this initial evaluation:

- ✓ I find the proposed project, in accordance with those findings made pursuant to CEQA Guideline §15252, COULD NOT have a significant effect on the environment, and that a NEGATIVE DECLARATION revealing no significant impacts will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will NOT be significant effects in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION revealing no significant impacts will be prepared.

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

-] I find that the proposed project MAY have a significant effect(s) on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) will be prepared.
- ☐ I find that the proposed project MAY have a "potentially significant impact" on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT (EIR) is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.
- On the basis of this Initial Study, I believe the following: there are no new significant environmental effects and no substantial increase in severity of effects identified in an earlier NEGATIVE DECLARATION or ENVIRONMENTAL IMPACT REPORT for the proposed project or property are present as the result of either 1) changes in the project; 2) changes in circumstances under which the project is undertaken; or 3) new information which could not have been known without the exercise of reasonable diligence at the time the previous Negative Declaration was adopted or Environmental Impact Report was certified. Therefore, the previously adopted NEGATIVE DECLARATION or certified ENVIRONMENTAL IMPACT REPORT will be considered adequate upon completion of an ADDENDUM to reflect minor technical changes.
- On the basis of this Initial Study, I believe the following: new significant environmental effects or an substantial increase in severity of effects identified in an earlier Negative Declaration or Environmental Impact Report for the proposed project or property are present as the result of either 1) changes in the project; 2) changes in circumstances under which the project is undertaken; or 3) new information which could not have been known without the exercise of reasonable diligence at the time the original earlier Negative Declaration or Environmental Impact Report was adopted. Therefore, a SUBSEQUENT/SUPPLEMENTAL ENVIRONMENTAL IMPACT REPORT is required.

Signature

Date

Robert C. Reider Printed Name Supervising Air Resources Specialist

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

13. EVALUATION OF ENVIRONMENTAL IMPACTS:

Environmental Checklist

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|----|----------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| 1. | AESTHETICS. Would the project: | | | |
| a) | Have a substantial adverse effect on a scenic vista? | | | |
| b) | Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | | | M |
| c) | Substantially degrade the existing visual character or quality of the site and its surroundings? | | | Ø |
| d) | Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | | | Ø |

(a) through (d): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not have a substantial adverse effect on a scenic vista; would not substantially damage scenic resources; would not substantially degrade the existing visual character or quality of the surroundings; and would not create a new source of light or glare adversely affecting day or nighttime views.

Based on the above discussion, project implementation would not have a significant adverse impact on aesthetics.

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| 11. | AGRICULTURAL RESOURCES. Would the project: | | | |
| a) | Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland mapping and Monitoring Program of the California Resources Agency, to non- agricultural use? | | | |
| b) | Conflict with existing zoning for agricultural use, or a Williamson Act contract? | | | Ŋ |
| c) | Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use? | | | Ø |

(a) through (c): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not convert prime or unique farmland or farmland of Statewide importance to non-agricultural use; would not conflict with existing zoning for agricultural use, or a Williamson contract; and would not involve other changes that might ultimately result in the conversion of farmland to non-agricultural use.

Based on the above discussion, project implementation would not have a significant adverse impact on agricultural resources.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|----------------------------------------|
| III. | AIR QUALITY. Would the project: | | | ······································ |
| a) | Conflict with or obstruct implementation of the applicable air quality plan? | | | |
| b) | Violate any air quality standard or contribute to an existing or projected air quality violation? | | | Ø |
| C) | Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)? | | | |
| d) | Expose sensitive receptors to substantial pollutant concentrations? | | | |
| e) | Create objectionable odors affecting a substantial number of people? | | | |

(a) through (e): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not conflict with or obstruct implementation of the air quality plan; would not violate any air quality standard or contribute to an existing or projected air quality violation; would not result in a cumulatively considerable net increase of any criteria pollutant for which San Diego County is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors); would not create objectionable odors affecting a substantial number of people.

Based on the above discussion, project implementation would not have a significant adverse impact on air quality.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| IV. | BIOLOGICAL RESOURCES. Would the project: | i | | |
| a) | Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | |
| b) | Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service? | | | Ø |
| c) | Have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | | | |
| d) | Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? | | | Ŋ |
| e) | Conflicting with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | | | Ŋ |
| f) | Conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? | | | Ø |

(a) through (f): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; would not have a substantial adverse effect on federally protected wetlands as defined by §404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means; would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites; would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and would not conflict with the provisions of an adopted Habitat Conservation plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Based on the above discussion, project implementation would not have a significant adverse impact on biological resources.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| V . | CULTURAL RESOURCES. Would the project: | | | |
| a) | Cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5? | | | Ø |
| b) | Cause a substantial adverse change in the significance of an archaeological resource as defined in CEQA Guidelines Section 15064.5? | | | |
| c) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | | | |
| d) | Disturb any human remains, including those interred outside of formal cemeteries? | | | Ø |

(a) through (d): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not cause a substantial adverse change in the significance of a historical or archaeological resource as defined in CEQA Guidelines Section 15064.5; would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; and would not disturb any human remains, including those interred outside of formal cemeteries.

Based on the above discussion, project implementation would not have a significant adverse impact on cultural resources.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| VI. | GEOLOGY / SOILS. Would the project: | | | |
| a) | Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: | | | Ø |
| | Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence? | | | ₽ |
| | Strong seismic ground shaking? | | | Ø |
| | Seismic–related ground failure, including liquefaction? | | | |
| | Landslides? | | | Ŋ |
| b) | Result in substantial soil erosion or the loss of topsoil? | | | Ø |
| c) | Be located on a geologic unit or soil that is unstable or that would become unstable due to the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? | | | Ø |
| d) | Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? | | | Ø |
| e) | Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water? | | | Ø |

(a) through (e): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not require any activities which would expose people to the risk of loss, injury, or death associated with earthquakes, seismic ground shaking, seismic-related ground failure or landslides; would not require any construction activities that would create soil erosion or loss of topsoil; would not require the construction of any building or structure, thereby resulting in a potential to be located

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Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

on an unstable geologic unit or on expansive soil; and would not require the installation of septic tanks or wastewater systems.

Based on the above discussion, project implementation would not have a significant adverse impact on geology/soils.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| VII. | HAZARDS / HAZARDOUS MATERIALS. Would the project: | | | |
| a) | Create a significant hazard to the public or the environment through the routine transport, use, and disposal of hazardous materials? | | | N |
| b) | Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment? | | | Ø |
| c) | Emit hazardous emissions, or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | | | Ø |
| d) | Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would create a significant hazard to the public or the environment? | | | |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | | | |
| f) | For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area? | | | Ø |

| VII. Con | HAZARDS / HAZARDOUS MATERIALS- tinued | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| g) | Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | | | Ø |
| h) | Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands? | | | |
| i) | Significantly increased fire hazard in areas with flammable materials? | | | |

(a) through (i): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not create a significant hazard to the public, or emit hazardous emissions/handle hazardous materials within one-quarter mile of an existing or proposed school; would not require the construction of any building, structure or facility which could potentially be located on a site pursuant to Government Code §65962.5, or located within an airport land use plan, within two miles of a public airport or within the vicinity of a private airstrip; would not interfere with an adopted emergency response or evacuation plan; would not expose people or structures to wildland fires; and would not increase fire hazards in areas with flammable materials.

Based on the above discussion, project implementation would not have a significant adverse impact with respect to hazards/hazardous materials.

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| VIII. | HYDROLOGY / WATER QUALITY. Would the project: | £ | | |
| a) | Violate any water quality standards or waste discharge requirements? | | | |
| b) | Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre- existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)? | | | |
| C) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or off-site? | | | |
| d) | Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site? | | | |
| e) | Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff? | | | Ø |
| f) | Otherwise substantially degrade water quality? | | | |
| g) | Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? | | | Ø |

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

| VIII. HYDROLOGY / WATER QUALITY- Continued | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|------------------------------------|-----------|
| Place within a 100-year flood hazard structures which would impede or re flood flaws? | l area 🛛 direct | | Ø |
| Expose people or structures significant risk of loss, injury or involving flooding, including flooding result of the failure of a levee or dam | to a □ death ⊨as a ? | | Ø |
| j) Inundation by seiche, tsunam mudflow? | , or 🗆 | | |
| k) Exceed wastewater trea requirements of the applicable Re Water Quality Control Board? | tment D gional | | |
| I) Require or result in the construction new water or wastewater treat facilities or expansion of existing fact the construction of which could significant environmental effects? | on of tment ilities, cause | | Ø |
| m) Require or result in the constructing new storm water drainage facilities, expansion of existing facilities, construction of which could significant environmental effects? | on of es or the cause | | Ø |
| n) Have sufficient water supplies availa serve the project from ex entitlements and resources, or are n expanded entitlements needed? | ble to □ tisting ew or | | Ø |
| Require in a determination by wastewater treatment provider serves or may serve the project that adequate capacity to serve the pro projected demand in addition to provider's existing commitments? | the □ which it has ject's the | | Ø |

(a) through (o): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not violate any water quality standards or waste discharge requirements; would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge; would not require construction or other

activities which could substantially alter the existing drainage pattern of a site or area in a manner resulting in substantial erosion or siltation on- or off-site; would not require construction or other activities which could substantially increase the amount of runoff water in a manner resulting in substantial flooding or erosion or siltation onor off-site, or which could exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; would not otherwise substantially degrade water quality; would not require placing housing or structures within a 100-year flood hazard area; would not result in exposing people or structures to a significant risk of loss, injury, or death, or inundation by seiche, tsunami, or mudflow; would not result in an exceedance of wastewater treatment requirements, require or result in the construction of new water or wastewater treatment or storm water drainage facilities or expansion of existing facilities; and would not affect water supplies.

Based on the above discussion, project implementation would not have a significant adverse impact on hydrology/water quality.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| IX. | LAND USE / PLANNING. Would the project: | | | |
| a) | Physically divide an established community? | | | |
| b) | Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect? | | | |
| C) | Conflict with any applicable habitat conservation or natural community conservation plan? | | | Ŋ |

(a) through (c): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not physically divide an established community; would not conflict with any land use plan, policy, or regulation adopted for the purpose of

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

avoiding or mitigating an environmental effect; and would not conflict with any applicable habitat conservation or natural community conservation plan.

Based on the above discussion, project implementation would not have a significant adverse impact on land use/planning.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|----|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| Х. | MINERAL RESOURCES. Would the project: | | | |
| a) | Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? | | | Ø |
| b) | Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan? | | | |

(a) and (b): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not result in the loss of availability of known mineral resources or the loss of availability of a locally important mineral resource recovery site.

Based on the above discussion, project implementation would not have a significant adverse impact on mineral resources.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XI. | NOISE. Would the project result in: | | | |
| a) | Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies? | | | Ø |
| b) | Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels? | | | |
| c) | A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project? | | | Ø |
| d) | A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project? | | | Ø |
| e) | For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | | | |
| f) | For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels? | | | Ø |

(a) through (f): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not expose persons to noise levels in excess of applicable standards; would not expose people to excessive groundborne vibration or noise; would not result in a substantial permanent, temporary, or periodic increase in ambient noise levels; and would not affect any airport land use plan or private airstrip.

Based on the above discussion, project implementation would not have a significant adverse noise impact.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XII. | POPULATION / HOUSING. Would the project: | | | |
| a) | Induce substantial growth in an area either directly (for example, by proposing new homes and businesses) or indirectly (e.g. through extension of roads or other infrastructure)? | | | Ø |
| b) | Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere? | | | |
| c) | Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere? | | | Ø |

(a) through (c): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not induce substantial growth, or displace housing or people, requiring the construction of replacement housing.

Based on the above discussion, project implementation would not have a significant adverse impact on population/housing.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XIII. PUBLIC SERVICES. Would the proposal result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: | | | - |
| a) Fire protection? | | | Ø |
| b) Police protection? | | | Ø |
| c) Schools? | | | Ø |
| d) Parks? | | | M |
| e) Other public facilities? | | | Ø |

(a) through (e): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities; would not result in the need for new or physically altered government facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives as they relate to fire protection, police protection, schools, parks, or other public services or facilities.

Based on the above discussion, project implementation would not have a significant adverse impact on public services.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XIV. | RECREATION. | | | |
| a) | Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.? | | | Ø |
| b) | Does the project include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | | | |

(a) and (b): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not increase the need for additional parks or other recreational facilities or cause the deterioration of existing facilities; and would not require the development of new recreational facilities or require the construction or expansion of recreational facilities that might have an adverse effect on the environment.

Based on the above discussion, project implementation would not have a significant adverse impact on recreation.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XV. | TRANSPORTATION / TRAFFIC. Would the project: | | | |
| a) | Cause an increase in traffic that is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)? | | | ₽ |
| b) | Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways? | | | Ø |
| C) | Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks? | | | Ø |
| d) | Substantially increase hazards due to a design feature (e.g. sharp curves or dangerous intersections) or incompatible uses (e.g. farm equipment)? | | | Ŋ |
| e) | Result in inadequate emergency access? | | | Ø |
| f) | Result in inadequate parking capacity? | | | |
| g) | Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g. bus turnouts, bicycle racks)? | | | |

(a) through (g): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; would not exceed, either individually or cumulatively, a level of standard established by the regional congestion management agency for any road or highway; would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; would not result in inadequate

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

emergency access or parking capacity; and would not conflict with adopted policies, plans, or programs supporting alternative transportation.

Based on the above discussion, project implementation would not have a significant adverse impact on transportation/traffic.

| | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XVI. UTILITIES / SERVICE SYSTEMS. Would the project: | | | |
| a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board? | | | Ø |
| b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | Ø |
| c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects? | | | N |
| d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed? | | | Ø |
| e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments? | | | Ø |
| f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs? | | | Ø |
| g) Comply with federal, state, and local statutes and regulations related to solid waste? | | | Ø |

(a) through (g): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary

sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on analyses identified in Section 8 above (see "Relationship to Other CEQA Documents"), project implementation would not exceed wastewater treatment requirements of the regional water quality control board; would not require or result in the construction of new water, wastewater treatment, or storm water drainage facilities, or expansion of existing facilities; would not require water supplies in excess of existing entitlements and resources or require new or expanded entitlements; would not require additional wastewater treatment capacity or landfill capacity; and would comply with federal, state, and local statutes and regulations related to solid waste.

Based on the above discussion, project implementation would not have a significant adverse impact on utilities/service systems.

| | | Potentially Significant Impact | Less Than Significant Impact | No Impact |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|------------------------------------|-----------|
| XVI | . MANDATORY FINDINGS OF SIGNIFICANCE. | | | |
| a) | Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory? | | | Ø |
| b) | Does the project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | | | |
| C) | Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | | | Ø |

(a) through (c): The proposed 2004 Triennial RAQS Revision consists of a set of control measures applicable to emission sources under APCD purview (stationary sources) to be developed into rules and implemented to improve ambient air quality. (See "Project Description" in Section 7 above.) Based on the analyses identified in Section 8 above, project implementation would not: (1) have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory; (2) would not have impacts that are individually limited, but cumulatively considerable; and (3) would not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly.

Based on the above discussion, project implementation would not have a significant adverse impact with respect to the mandatory findings of significance.

ATTACHMENT B

Air Pollution Control Board

| Greg Cox | District 1 |
|------------------|------------|
| Dianne Jacob | District 2 |
| Pam Slater-Price | District 3 |
| Ron Roberts | District 4 |
| Bill Hom | District 5 |



May 12, 2004

NEGATIVE DECLARATION

14. PROJECT TITLE:

Proposed 2004 Triennial Revision of the Regional Air Quality Strategy

15. PROJECT APPLICANT:

San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, California 92123-1096

16. PROJECT LOCATION:

The project applies within the jurisdiction of the San Diego County Air Pollution Control District (APCD), which covers the entire area within the incorporated and unincorporated portions of San Diego County, the southwestern-most county in the State of California. San Diego County encompasses approximately 4,260 square miles and is bounded on the north by Orange and Riverside Counties, on the east by Imperial County, on the west by the Pacific Ocean, and on the south by the State of Baja California, Mexico.

17. PROJECT DESCRIPTION:

The Regional Air Quality Strategy (RAQS), which was initially adopted in 1992, was developed pursuant to the California Clean Air Act. It identifies feasible control measures for emission sources under APCD purview—stationary sources—to reduce emissions and provide expeditious progress toward attaining the State ambient air quality standard for ozone.

State law requires the APCD to revise the RAQS every three years to include an updated schedule for expeditiously adopting every feasible control measure. Accordingly, the RAQS was amended in 1995, 1998, and 2001. The APCD now proposes the 2004 Triennial RAQS Revision, reflecting new data on technological feasibility, cost-effectiveness, and emission reduction potential of stationary-source control measures.

Eight emission control measures are identified in the proposal, to be scheduled for rule development during the 2004-2007 period: (1) Implementation of the Enhanced Vapor Recovery Program; (2) Further Control of Solvent Cleaning Operations; (3) Further Control of Industrial and Commercial Boilers; (4) Control of Small Boilers; (5) Control of Large Commercial Water Heaters; (6) Further Control of New Residential Water

NEGATIVE DECLARATION:

Ozone Redesignation Request and Maintenance Plan

Heaters; (7) Further Control of Stationary Reciprocating Internal Combustion Engines; and (8) Further Control of Stationary Combustion Turbines.

Upon full implementation, these eight measures will collectively reduce ozone-precursor emissions—volatile organic compounds (VOC) and oxides of nitrogen (NOx)—by an estimated 5 tons/day (3 tons/day reduction in VOC emissions and 2 tons/day reduction in NOx emissions).

Additionally, two measures—(1) Further Control of Bakery Ovens, and (2) Control of Plastic Parts, Rubber, Composite and Glass Coating Operations—are proposed for deletion from the RAQS due to minimal emission benefits and, in the case of the first measure, issues regarding technological feasibility and cost-effectiveness. The minimal emission reductions that would be foregone by deleting these two measures—a total of 0.02 ton/day reduction in VOC emissions—would be more than offset by the estimated 3 tons/day reduction in VOC emissions provided by new control measures being added to the RAQS.

18. FINDING:

The San Diego County APCD, acting as lead agency, has completed an Initial Study for the project pursuant to the California Environmental Quality Act. Based on the Initial Study and the entire record before the APCD, there is no substantial evidence that the proposed 2004 Triennial RAQS Revision may have a significant adverse effect on the environment.

This Negative Declaration reflects the independent judgment of the decision-making authority.

19. REQUIRED MITIGATION MEASURES:

No mitigation measures are required.

20. CRITICAL PROJECT DESIGN ELEMENTS THAT MUST BECOME CONDITIONS OF APPROVAL:

None required.

21. LOCATION AND CUSTODIAN OF RECORD:

The documents and other materials on which the proposed decision to adopt the Negative Declaration is based are located at the San Diego County Air Pollution Control District, 9150 Chesapeake Drive, San Diego, California 92123-1096; the custodian is Robert C. Reider, Supervising Air Resources Specialist.

Note: This Negative Declaration becomes final upon approval by the Air Pollution Control Board.

CALIFORNIA DEPARTMENT OF FISH AND GAME CERTIFICATE OF FEE EXEMPTION

De Minimis Impact Finding

| Project Title: | Proposed 2004 Triennial Revision of the Regional Air Quality Strategy |
|--------------------|------------------------------------------------------------------------------------------------------|
| Project Location: | Entire Area of San Diego County, California |
| Project Proponent: | San Diego County Air Pollution Control District 9150 Chesapeake Drive San Diego, CA 92123-1096 |

Project Description:

The Regional Air Quality Control Strategy (RAQS), initially adopted in 1992, was developed pursuant to state law and identifies emission control measures to be implemented to provide expeditious progress toward attaining the state ambient air quality standard for ozone. The San Diego County Air Pollution Control District (District) is required to review and, if necessary, revise the RAQS at least every three years, reflecting updated information regarding technology availability, emission reduction potential, and cost-effectiveness of measures. The proposed 2004 RAQS Revision identifies eight control measures to be scheduled for rule development during the 2004-2007 period, which will collectively provide 5 tons/day reduction in ozone precursor emissions.

Findings of Exemption:

Pursuant to the California Environmental Quality Act (CEQA), an Initial Study has been prepared by the lead agency (District) evaluating the potential environmental consequences resulting from the project. Based on the Initial Study findings, a Negative Declaration has been prepared pursuant to CEQA. Based on the entire record before the District, there is no evidence that the project may have any potential for adverse effect on wildlife resources or the habitat on which the wildlife depends; and,

The San Diego County Air Pollution Control District has, on the basis of substantial evidence, rebutted the presumption of adverse effect to the resources listed in Title 14, California Code of Regulations, Section 753.5(d).

Certification:

I hereby certify that the lead agency has made the above findings of fact and that based upon the Initial Study, Negative Declaration, and record as a whole the project will not individually or cumulatively have an adverse effect on wildlife resources or the habitat upon which the wildlife depends, as defined in Section 711.2 of the Fish and Game Code.

RICHARD J. SMITH

Title: Lead Agency: Air Pollution Control Director San Diego County Air Pollution Control District

Date:

Environmental Review Update Checklist Form For projects with Previously Approved Environmental Documents

FOR PURPOSES OF CONSIDERATION OF THE PROPOSED 2009 REGIONAL AIR QUALITY STRATEGY REVISION

The California Environmental Quality Act (CEQA) Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted Negative Declaration (ND) or a previously certified environmental impact report (EIR) covering the project for which a subsequent discretionary action is required. This Environmental Review Update Checklist Form has been prepared in accordance with CEQA Guidelines Section 15164(e) to explain the rationale for determining whether any additional environmental documentation is needed for the subject discretionary action.

- 1. Background on the previously certified EIR:
 - A programmatic Environmental Impact Report (EIR) for the 1991 San Diego Regional Air Quality Strategy (RAQS) was certified by the County of San Diego Air Pollution Control Board on June 30, 1992. The certified programmatic EIR analyzed the potential environmental impacts of the various control technologies for implementing the control measures proposed in the 1991 RAQS and found that any potential adverse environmental impacts would be mitigated below a level of significance.
 - A Supplemental EIR addressing the 1998 RAQS Revision and supplementing the Final EIR for the 1991 RAQS was certified by the County of San Diego Air Pollution Control Board on June 17, 1998. This Supplemental EIR found that the proposed 1998 changes to the RAQS were not substantial and would not result in new or more severe significant environmental impacts.
 - An Addendum to the previously certified Final Environmental Impact Report for the 1991 San Diego Regional Air Quality Strategy was approved by the Air Pollution Control Board on August 8, 2001. This addendum found that the proposed 2001 RAQS Revision would not require major revisions to the previous EIR, result in any new significant adverse impacts, make previously identified significant adverse impacts more severe, or require new mitigation measures or alternatives.
 - A Negative Declaration addressing the 2004 RAQS Revision was adopted by the County of San Diego Air Pollution Control Board on July 28, 2004. The Negative Declaration was based on a finding of no substantial evidence that the proposed 2004 Triennial RAQS Revision would have a significant adverse effect on the environment.

2. Lead agency name and address:

San Diego County Air Pollution Control District 10124 Old Grove Road San Diego, California 92131

3. a. Lead agency contact:

Robert Reider Supervising Air Resources Specialist (858) 586-2640 E-mail: <u>Robert.Reider@sdcounty.ca.gov</u>

b. Project applicant's name and address:

San Diego County Air Pollution Control District 10124 Old Grove Road San Diego, California 92131

4. Summary of the project:

San Diego County is a nonattainment area for State ambient air quality standards for ozone. Pursuant to the California Clean Air Act, air districts in nonattainment areas are required to prepare and implement air quality strategies identifying all feasible emission control measures to locally attain State ozone standards by the earliest practicable date. Accordingly, the Regional Air Quality Strategy (RAQS) for San Diego County was developed and adopted in 1992, identifying every feasible control measure to reduce emissions of ozone precursors (oxides of nitrogen (NOx) and volatile organic compounds (VOC)) from stationary emission sources under authority of the San Diego County Air Pollution Control District (District).

- 2 -

The California Clean Air Act also requires triennial RAQS progress reports and RAQS revisions, identifying the status of scheduled control measures and incorporating any new control measures that are determined feasible based on updated information regarding technology availability, emission reduction potential, and cost-effectiveness. Accordingly, the RAQS was revised in 1995, 1998, 2001, and 2004.¹

The 2009 RAQS Revision is now proposed for adoption to ensure continued compliance with the every feasible measure mandate, and would provide greater emission reductions in ozone precursors than the previous RAQS Revision. The proposal reflects the District's projection of future regulatory activity for purposes of

['] Completion in 2007 of the "Eight-Hour Ozone Attainment Plan for San Diego County" (a federally mandated plan to attain federal ozone standards) precluded a RAQS update in 2007. All rule development activities continued in the interim.

providing expeditious progress toward attaining State ozone standards. A primary focus is identifying new feasible control measures that, in the future, will be developed into proposed rules and considered for adoption by the District Board in specified years. Also addressed is the rule development status of previously scheduled measures and their updated rule adoption schedules. Lastly, as required by State law, the proposed 2009 RAQS Revision includes a detailed reassessment and reaffirmation of the District's previous findings that State emission offset requirements are not necessary for San Diego County to achieve and maintain State ozone standards by the earliest practicable date. Discussion of these project elements is presented below.

New Additional Control Measures

- 1. Further Control of Automotive Refinishing. Existing District Rule 67.20, adopted in 1996, limits VOC emissions from automotive refinishing/painting operations. The California Air Resources Board (ARB) adopted a Suggested Control Measure (SCM) in 2005 for Automotive Refinishing that contains more-stringent VOC content limits than those contained in existing Rule 67.20. (ARB prepares SCMs to promote statewide consistency among districts in control requirements for source categories of statewide significance.) The District proposes to develop and consider adopting Rule 67.20 amendments in 2009 to incorporate the SCM provisions that are determined to be feasible and cost-effective for San Diego sources. Estimated VOC emission reductions are 0.6 ton/day. Adopting the measure helps ensure continued compliance with the State law requirement for incorporating every feasible measure, and continued progress toward attaining the State ozone standards.
- 2. Further Control of Architectural Coatings. Existing District Rule 67.0, last amended in 2001, limits VOC emissions from architectural coatings. ARB updated its SCM for Architectural Coatings in 2007 to establish more-stringent VOC content limits than those contained in existing Rule 67.0. The District proposes to develop and consider adoption of Rule 67.0 amendments in 2010 to incorporate the SCM provisions that are determined to be feasible and cost-effective for San Diego sources. Estimated VOC emission reductions are 2.25 tons/day. Adopting the measure helps ensure continued compliance with the State law requirement for incorporating every feasible measure, and continued progress toward attaining the State ozone standards.
- 3. Further Control of Adhesive and Sealant Application Operations. The 2004 RAQS Revision includes a "further study measure" in which the District committed to evaluate the feasibility of incorporating more stringent VOC content limits in existing Rule 67.21 (Adhesive and Sealant Operations), similar to existing requirements of South Coast Air Quality Management District (SCAQMD) Rule 1168. This measure was subsequently evaluated and determined to be feasible due to a large, cost-effective emission reduction potential. (Compliant adhesive materials are readily available and cost no more than non-compliant ones.) Accordingly, corresponding Rule 67.21 amendments
were given a high priority and were adopted on May 14, 2008, lowering VOC content limits for numerous adhesive categories. Estimated VOC emission reductions are 1.56 tons/day.

4. Low-VOC Solvent Wipe Cleaning. The 2004 RAQS Revision includes a "further study" measure in which the District committed to evaluate the feasibility of reducing VOC emissions from solvent wipe cleaning operations, which are currently regulated under existing District Rule 66 (Organic Solvents) and several industrial category-specific rules. This measure was subsequently evaluated and determined to be feasible. Accordingly, the District proposes to develop and consider adoption of implementing rule amendments in 2009. Estimated VOC emission reductions are 0.57 ton/day.

Rescheduled Measures

1. Further Control of Stationary Combustion Turbines. The 2004 RAQS Revision includes a District commitment to evaluate the feasibility of reducing high NOx emission rates from older peaking power plants and, if feasible, to propose corresponding amendments to Rule 69.3.1 (Stationary Combustion Turbines). This measure was subsequently evaluated and determined to be feasible. Corresponding amendments to Rule 69.3.1 are proposed for adoption in 2009, to establish a declining cap on NOx emissions from older peaking power plants when operating during a forecasted high ozone day, unless an electrical grid emergency requires their use.

The 2004 RAQS Revision projected a 2006 adoption date for the Rule 69.3.1 amendments. A specific quantity of associated emission reductions was not claimed in the RAQS and, therefore, is not affected by the proposed rescheduled 2009 adoption.

As currently envisioned, the proposed amendments to Rule 69.3.1 will provide an estimated average NOx reduction of 0.5 ton/day on days when the emission limit is invoked, and potentially as high as 1.7 tons/day on the peak day. These emission reduction estimates are reflected in the proposed 2009 RAQS Revision.

2. Small Boilers and Large Water Heaters. The 2004 RAQS Revision includes a District commitment to evaluate the feasibility of reducing NOx emissions from small boilers with rated heat input capacities from 1 million to 5 million British Thermal Units (BTU)/hour. This measure was subsequently evaluated and determined to be feasible. Similarly, the District committed to evaluating the feasibility of reducing NOx emissions from large water heaters rated from 0.075 million to 1 million BTU/hour. This measure was subsequently evaluated and determined to be feasible, but only for units rated from 0.6 million to 1 million BTU/hour. New rules to implement these control measures are proposed for development and adoption in 2009, providing an estimated combined 0.38 ton/day NOx emission reduction.

The 2004 RAQS Revision projected a 2005 adoption date for the proposed new rules. A specific quantity of emission reductions was not claimed for the large water heater measure, and therefore is not affected by the updated rulemaking schedule or the modified applicability threshold.

Rescheduling implementation of the small boilers measure from 2005 to 2009 has delayed a fraction of the associated emission reduction. The measure applies to new boilers and emission reductions are achieved when a boiler is replaced at the end of its estimated 20-year useful life. This corresponds to 5% turnover of affected boilers per year. Therefore, delaying rulemaking by four years delays 20% of the associated NOx emission reduction. This equates to less than 0.1 ton/day of delayed NOx emission reduction, an amount considered to be less than significant, because it is de minimis in relation to the overall emission inventory and is more than compensated by emission reductions from other ozone-precursor control measures proposed for inclusion in the RAQS.

3. **Further Control of New Residential Water Heaters**. Existing District Rule 69.5, adopted in 1998, limits NOx emissions from new residential water heaters in San Diego County. SCAQMD's corresponding Rule 1121 has even lower, technology-forcing NOx emission limits. Therefore, the 2004 RAQS Revision includes a District commitment to develop and consider adopting corresponding amendments to Rule 69.5 at such time that complying units are commercially available.

Control technology has not developed as rapidly as expected in response to SCAQMD's rule. Consequently, compliant units for some types and sizes of residential water heaters are not yet commercially available and manufacturers have obtained temporary variances from SCAQMD's rule.

This control measure is retained in the proposed 2009 RAQS Revision, and corresponding amendments to District Rule 69.5 will be developed at such time complying units are readily available for all types and sizes of subject water heaters. Estimated NOx emission reductions are 0.7 ton/day.

Deleted Measures

1. The 2004 RAQS Revision includes a conditional District commitment to amend Rule 69.2 (Large Boilers) in 2004 to lower the exemption threshold and tighten the NOx emission limits, only if further evaluation revealed that the resulting emission reductions would be cost-effective. This measure was subsequently evaluated and the cost-effectiveness was determined to be unacceptable at \$24 per pound of NOx reduced, with only a small emission reduction potential (0.1 ton/day). Therefore, the measure is now proposed for removal from the RAQS. Also, to the extent that the retrofit emission control devices that would have been required under the measure may have resulted in lower fuel efficiencies and thus higher carbon dioxide emissions, the deletion of the measure allows the revised control strategy to provide a reduction in greenhouse gas emissions relative to the previous strategy.

2. The 2004 RAQS Revision includes a District commitment to evaluate existing Rule 69.4.1 (Stationary Engines–Best Available Retrofit Control Technology) to verify compliance with ARB's Best Available Retrofit Control Technology requirements. Further, any rule amendments needed for consistency with ARB's requirements would be proposed in 2006. Rule 69.4.1 was subsequently evaluated and determined to be at least as stringent as ARB's requirements. Therefore, no rule amendments are necessary and the measure is now proposed for removal from the RAQS.

Further Study Measure

1. Indirect Source Rules (addressing vehicle trips, and associated emissions attributed to new land developments) have been adopted by some other air districts, including San Joaquin Valley and Imperial County, and are being planned in the SCAQMD. These districts have differing approaches to their indirect source control requirements, and an evaluation of these rules is proposed to better understand their requirements, evaluate the potential feasibility for San Diego's sources, and determine whether a local Indirect Source Rule would provide significant emission reductions beyond that achieved by the District's existing voluntary Indirect Source Program. That detailed analysis will require more time than was available during preparation of the proposed 2009 RAQS Revision. Therefore, the proposal includes a "further study" control measure for indirect sources. The District will evaluate the various approaches of other air districts and will determine which program elements, if any, are feasible for implementation in San Diego County.

If an Indirect Source Rule is determined feasible for San Diego County, it will be proposed in a subsequent RAQS Revision for future rule development and consideration of adoption. Predicting the outcome of this future feasibility assessment is highly speculative. If a proposed rule is developed, CEQA will apply and the potential environmental consequences will be addressed and considered prior to project approval and implementation. Consequently, the Further Study Measure is not further considered in this Initial Study.

Incentive Programs

The proposed 2009 RAQS Revision includes a summary of existing financial incentive programs for reducing mobile source emissions in San Diego County. Financial incentive programs augment traditional regulatory programs to further encourage technology development and provide cost-effective emission reductions not easily achieved by regulations. Local projects funded during the 2003-2007 period provided combined emission reductions of 3.1 tons/day (1102 tons/year) of ozone precursors (VOC plus NOx), as well as 0.1 ton/day (33 tons/year) of carbon

monoxide (CO) reductions and 0.1 ton/day (43 tons/year) of particulate matter (PM) reductions.

No actions affecting incentive programs are proposed in the 2009 RAQS Revision. Consequently, incentive programs are not further considered in this Initial Study.

State Offset Exemption

In 1998, the District amended its New Source Review (NSR) Rules 20.1-20.4 to repeal State emission offset requirements, as authorized by State law (Cal. Health and Safety Code §40918.5 et. seq.). The proposed 2009 RAQS Revision includes a detailed reassessment and reaffirmation of the District's previous findings that emission reductions from unbanked shutdowns compensate for permitted emission increases from sources that may have triggered State offset requirements, and that the repeal of State offset requirements has not significantly impacted the projected trend of decreasing total ozone-precursor emissions in San Diego County, nor is it anticipated to in the future. Consequently, State emission offset requirements are not necessary for San Diego County to achieve and maintain the State ozone standard by the earliest practicable date. State law requires this reassessment and results do not warrant any proposed amendments of NSR rules. Consequently, the reassessment is not further considered in this Initial Study.

5. Does the project for which a subsequent discretionary action is now proposed differ in any way from the previously approved project?



This discretionary action differs from the previously approved project because the project proposes to:

- Adopt more stringent emissions limits using similar control technologies for the same control measures as analyzed in the previous programmatic EIR.
- Adopt the revised control measures on a new updated adoption schedule.
- 6. SUBJECT AREAS DETERMINED TO HAVE NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT ENVIRONMENTAL EFFECTS COMPARED TO THOSE IDENTIFIED IN THE PREVIOUS ND OR EIR. The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

MNONE

| Aesthetics | Agriculture Resources | Air Quality |
|---------------------------|---------------------------|------------------------|
| Biological Resources | Cultural Resources | Geology/Soils |
| Hazards & Haz. Materials | Hydrology/Water Quality | Land Use/Planning |
| Mineral Resources | Noise | Population/Housing |
| Public Services | Recreation | Transportation/Traffic |
| Utilities/Service Systems | Mandatory Findings of Sig | nificance |
| | | |

DETERMINATION:

On the basis of this analysis, the Air Pollution Control District has determined that:

- ✓ No substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously certified EIR is adequate upon completion of an ADDENDUM.
- Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). However all new significant environmental effects or a substantial increase in severity of previously identified significant effects are clearly avoidable through the incorporation of mitigation measures agreed to by the project applicant. Therefore, a SUBSEQUENT ND is required.
- Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND or EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, a SUBSEQUENT or SUPPLEMENTAL EIR is required.

| | | | 4. | | |
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Date

Printed Name

Title

INTRODUCTION

CEQA Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted ND or a previously certified EIR for the project.

CEQA Guidelines, Section 15162(a) and 15163 state that when an ND has been adopted or an EIR certified for a project, no Subsequent or Supplemental EIR or Subsequent Negative Declaration shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole public record, one or more of the following: 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.

- 10 -

- 2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- 3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration; or
 - b. Significant effects previously examined will be substantially more severe than shown in the previously adopted Negative Declaration or previously certified EIR; or
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous Negative Declaration or EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines, Section 15164(a) states that an Addendum to a previously certified EIR may be prepared if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a Subsequent or Supplemental EIR have occurred.

CEQA Guidelines, Section 15164(b) states that an Addendum to a previously adopted Negative Declaration may be prepared if only minor technical changes or additions are necessary.

If the factors listed in CEQA Guidelines Sections 15162, 15163, or 15164 have not occurred or are not met, no changes to the previously certified EIR or previously adopted ND are necessary.

The following responses detail any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that may cause one or more effects to environmental resources. The responses support the "Determination," above, as to the type of environmental documentation required, if any.

ENVIRONMENTAL REVIEW UPDATE CHECKLIST

I. AESTHETICS – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to aesthetic resources including: scenic vistas; scenic resources including, but not limited to, trees, rock outcroppings, or historic buildings within a state scenic highway; existing visual character or guality of the site and its surroundings; or day or nighttime views in the area?

| ΥĒS | - | NO |) |
|-----|---|-------------|---|
| | | \boxtimes | |

No significant impacts to aesthetics were anticipated by the previous EIR. It was acknowledged that some emission control equipment can be architecturally unappealing, but it would typically be installed at existing industrial sites where visual impacts would be insignificant. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

II. AGRICULTURAL RESOURCES -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to agricultural resources including: conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and/or conflicts with existing zoning for agricultural use or Williamson Act contract?

| YES | NO |
|-----|-------------|
| | \boxtimes |

Potential impacts to agricultural resources from RAQS implementation were analyzed in the previous environmental document. No significant impacts to agricultural resources were identified. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

III. AIR QUALITY -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to air quality including: conflicts with or obstruction of implementation of the San Diego Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP); violation of any air quality standard or substantial contribution to an existing or projected air quality violation; a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality

YES

| NO |
|-------------|
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- 12 -

Net Ozone Air Quality Benefit

The previous EIR identified no significant unmitigable impacts to air quality from adoption of the RAQS. In fact, it showed that air quality would improve with implementation of the RAQS. Since the RAQS was adopted in 1992, implementation of its control measures has reduced VOC emissions by about 13 tons per day and NOx by about 14 tons per day. Meanwhile, air quality has improved by nearly 80% from 97 exceedances of the State 1-hour ozone standard in 1992 to 21 in 2007. Pursuant to State law, the updated RAQS must be at least as effective in improving ozone air quality as the previous RAQS version. Indeed, the proposed 2009 RAQS Revision provides considerable additional reductions of ozone precursor emissions in the region, thereby satisfying this requirement.

As discussed above in Section 4 (Project Description), one NOx control measure (addressing large boilers) originally scheduled in the 2004 RAQS Revision, which would have provided 0.1 ton/day reduction, has been determined infeasible upon analysis due to unacceptable cost-effectiveness. further Additionally. implementation of one other NOx control measure (addressing small boilers and large water heaters) has been delayed by four years, temporarily delaying NOx emission reductions by less than 0.1 ton/day. These amounts are considered less than significant and will not measurably impact ambient concentrations of NO2 (for which the region is designated attainment) nor region wide ozone levels. Further, four new VOC control measures have been scheduled in the proposed 2009 RAQS Revision for development and consideration of adoption during the 2008-2010 These four measures—addressing automotive refinishing, architectural period. coatings, adhesive operations, and solvent wipe cleaning-will potentially provide approximately 5 tons/day additional reductions in VOC emissions. Consequently, this proposed RAQS Revision will provide additional ozone-precursor emission reductions relative to the RAQS as amended in 2004 and, therefore, is more effective in improving air quality.

In addition to being ozone precursors, some VOCs can also cause odors, and some are toxic air contaminants. Therefore, the additional VOC emission reductions contemplated by the 2009 RAQS Revision could also result in reductions in human exposure to odors and toxic air contaminants.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs), comparable to a greenhouse, which captures and traps radiant energy. GHGs are emitted by natural processes and human activities. The six major GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6),

hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs). Scientific consensus, as reflected in recent reports issued by the United Nations Intergovernmental Panel on Climate Change, is that the majority of the observed climate change over the last 50 years can be attributable to increased concentration of GHGs in the atmosphere due to human activities, particularly increased consumption of fossil fuels. Further, GHG emissions are projected to further increase, causing additional climate change including more droughts, more frequent and extreme heat waves, erratic storm and flood events, decreases in winter snowpack, a rise in sea level, increases in water temperatures, an increase in coastal erosion, intrusion of sea water, an increase in the duration of wildfire season, and increased occurrences of unhealthy ozone levels. Consequently, efforts are now underway at the local, State, federal, and world-wide levels to control and reduce GHG emissions from human activities.

- 13 -

Implementation of the proposed 2009 RAQS Revision will likely reduce GHG emissions and, therefore, will not contribute to climate change. The proposed control measures addressing coatings, solvents, and adhesives require reductions in VOC emissions and do not affect those processes which would result in GHG emissions, such as CO2, CH4, N2O, SF6, HFCs and PFCs. The proposed control measures addressing combustion devices (turbines, boilers, and water heaters) will most likely result in better air-fuel controls on most affected units, increasing thermal efficiency and reducing fuel consumption and associated GHG emissions.

IV. BIOLOGICAL RESOURCES -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to biological resources including: adverse effects on any sensitive natural community (including riparian habitat) or species identified as a candidate, sensitive, or special status species in a local or regional plan, policy, or regulation, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; adverse effects to federally protected wetlands as defined by Section 404 of the Clean Water Act; interference with the movement of any native resident or migratory fish or wildlife species or with wildlife corridors, or impeding the use of native wildlife nursery sites; and/or conflicts with the provisions of any adopted Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional or state habitat conservation plan, policies or ordinances?



No significant impacts to biological resources were anticipated by the previous EIR. Potential impacts identified from construction of alternative transportation facilities would be mitigated to a level of less than significant. The 2009 RAQS does not contemplate the construction of additional alternative transportation facilities. Additionally, possible impacts were also identified for an unlikely accidental release from selective catalytic reduction (SCR) NOx emission control systems, but the 2009 RAQS does not propose any additional or different SCR requirements. Thus, there are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR. V. CULTURAL RESOURCES -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to cultural resources including: causing a change in the significance of a historical or archaeological resource as defined in State CEQA Guidelines Section 15064.5; destroying a unique paleontological resource or site or unique geologic feature; and/or disturbing any human remains, including those interred outside of formal cemeteries?

- 14 -



No impacts to cultural resources were anticipated by the previous EIR. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

<u>VI. GEOLOGY AND SOILS</u> -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from geology and soils including: exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic-related ground failure, including liquefaction, strong seismic ground shaking, or landslides; result in substantial soil erosion or the loss of topsoil; produce unstable geological conditions that will result in adverse impacts resulting from landslides, lateral spreading, subsidence, liquefaction or collapse; being located on expansive soil creating substantial risks to life or property; and/or having soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

NO

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No impacts to geology and soils were anticipated by the previous EIR. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

YES

<u>VII. HAZARDS AND HAZARDOUS MATERIALS</u> -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from hazards and hazardous materials including: creation of a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials or wastes; creation of a significant hazard to the public or the environment through foreseeable upset and accident conditions involving the release of hazardous materials into the environment; production of hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 creating a hazard to the public or the environment; location within an airport land use plan

or, where such a plan has not been adopted, within two miles of a public airport or public use airport; within the vicinity of a private airstrip resulting in a safety hazard for people residing or working in the project area; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

- 15 -



No significant impacts to hazards and hazardous materials were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release from selective catalytic reduction (SCR) NOx emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning handling and disposal of hazardous materials. However, that is not an issue for this project because the 2009 RAQS does not propose any additional or different SCR requirements. Thus, there are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

VIII. HYDROLOGY AND WATER QUALITY -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to hydrology and water quality including: violation of any waste discharge requirements; an increase in any listed pollutant to an impaired water body listed under section 303(d) of the Clean Water Act ; cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation of beneficial uses; substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion, siltation or flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems; provide substantial additional sources of polluted runoff; place housing or other structures which would impede or redirect flood flows within a 100year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps; expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or inundation by seiche, tsunami, or mudflow?



No significant impacts to hydrology and water quality were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. There are

no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

- 16 -

IX. LAND USE AND PLANNING -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to land use and planning including: physically dividing an established community; and/or conflicts with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

No significant impacts to land use and planning were anticipated by the previous EIR. Potential land use impacts identified for transportation control measures would be reduced to insignificance by incorporating the transportation measures into the planning processes for general plans and zoning codes. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

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X. MINERAL RESOURCES -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to mineral resources including: the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or loss of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

| YES | NC |
|-----|-------------|
| | \boxtimes |

No impacts to mineral resources were anticipated by the previous EIR. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

XI. NOISE -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from noise including: exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; a substantial temporary or periodic increase in ambient noise levels in the project; for projects located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or for projects within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?





No significant impacts to noise were anticipated by the previous EIR. Compliance with existing noise ordinances will mitigate the potential impact of noise from emission control equipment to a level of less than significant. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

II. POPULATION AND HOUSING -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects to population and housing including displacing substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?

| YES | NO |
|-----|-------------|
| | \boxtimes |

No significant impacts to population and housing were anticipated by the previous EIR. Identified potential impacts of transportation control measures on population and housing were too speculative to be considered significant. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

XIII. PUBLIC SERVICES -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, or other public facilities?

| YES | NO |
|-----|-------------|
| | \boxtimes |

No significant impacts to public services were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

<u>XIV. RECREATION</u> -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or that include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?



NO \boxtimes

No significant impacts to recreation were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release from selective catalytic reduction (SCR) NOx emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning handling of hazardous materials. However, that is not an issue for this project because the 2009 RAQS does not propose any additional or different SCR requirements. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

XV. TRANSPORTATION/TRAFFIC -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to transportation/traffic including: an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system; exceedance, either individually or cumulatively, of a level of service standard established by the county congestion management agency for designated roads or highways; a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks; substantial increase in hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); inadequate emergency access; inadequate parking capacity; and/or a conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

| YES | NO |
|-----|-------------|
| | \boxtimes |

No impacts to transportation/traffic were anticipated by the previous EIR. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

XVI. UTILITIES AND SERVICE SYSTEMS -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to utilities and service systems including: exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities, new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; require new or expanded entitlements to water supplies or new water resources to serve the project; result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or noncompliance with federal, state, and local statutes and regulations related to solid waste? YES NO

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No significant impacts to utilities and service systems were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. There are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE: Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in any mandatory finding of significance listed below?

Does the project degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below selfsustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

| YES | NO |
|-----|-------------|
| | \boxtimes |

The previous EIR did not identify any impacts which would necessitate mandatory findings of significance. This RAQS Revision proposes the adoption of more stringent emissions limits using similar control technologies for the same control measures as analyzed in the previous programmatic EIR. Thus, the proposed action will result in further enhancement of the quality of the environment, by further reducing air pollution in the San Diego Air Basin. This will result in beneficial impacts to human health and the environment. Thus, there are no changes in the project, changes in circumstance, or new information of substantial importance that results in major revisions of the previous EIR.



2016 EIR Addendum

FOR PURPOSES OF CONSIDERATION OF THE PROPOSED 2016 REGIONAL AIR QUALITY STRATEGY (RAQS) REVISION FOR SAN DIEGO COUNTY

September 30, 2016

Environmental Review Update Checklist Form For Projects with Previously Approved Environmental Documents

The California Environmental Quality Act (CEQA) Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted Negative Declaration (ND) or a previously certified environmental impact report (EIR) covering the project for which a subsequent discretionary action is required. This Environmental Review Update Checklist Form has been prepared in accordance with CEQA Guidelines Section 15164(e) to explain the rationale for determining whether any additional environmental documentation is needed for the subject discretionary action.

- 1. Background on the previously certified EIR:
 - A programmatic Environmental Impact Report (EIR) for the 1991 San Diego County Regional Air Quality Strategy (RAQS) was certified by the County of San Diego Air Pollution Control Board (Board) on June 30, 1992. The certified programmatic EIR analyzed the potential environmental impacts of the various control technologies for implementing the control measures proposed in the 1991 RAQS and found that any potential adverse environmental impacts would be mitigated below a level of significance.
 - A Supplemental EIR addressing the 1998 RAQS Revision and supplementing the Final EIR for the 1991 RAQS was certified by the Board on June 17, 1998. This Supplemental EIR found that the proposed 1998 changes to the RAQS were not substantial and would not result in new or more severe significant environmental impacts.
 - An Addendum to the previously certified Final Environmental Impact Report for the 1991 San Diego County Regional Air Quality Strategy was approved by the Board on August 8, 2001. This addendum found that the proposed 2001 RAQS Revision would not require major revisions to the previous EIR, result in any new significant adverse impacts, make previously identified significant adverse impacts more severe, or require new mitigation measures or alternatives.
 - A Negative Declaration addressing the 2004 RAQS Revision was adopted by the Board on July 28, 2004. The Negative Declaration was based on a finding of no substantial evidence that the proposed 2004 RAQS Revision would have a significant adverse effect on the environment.

EIR Addendum for the 2016 RAQS Revision

- An Addendum to the previously certified Final Environmental Impact Report for the 1991 San Diego County Regional Air Quality Strategy was approved by the Board on April 22, 2009. This addendum found that the proposed 2009 RAQS Revision would not require major revisions to the previous EIR, result in any new significant adverse impacts, make previously identified significant adverse impacts more severe, or require new mitigation measures or alternatives.
- 2. Lead agency name and address:

San Diego County Air Pollution Control District 10124 Old Grove Road San Diego, California 92131

3. a. Lead agency contact:

Andy Hamilton Supervising Air Resources Specialist (858) 586-2641 E-mail: <u>Andy.Hamilton@sdcounty.ca.gov</u>

b. Project applicant's name and address:

San Diego County Air Pollution Control District 10124 Old Grove Road San Diego, California 92131

4. Summary of the project:

San Diego County is a nonattainment area for California ambient air quality standards for ozone. Pursuant to the California Clean Air Act, air districts in nonattainment areas are required to prepare and implement air quality strategies identifying all feasible emission control measures to locally attain state ozone standards by the earliest practicable date. Accordingly, the Regional Air Quality Strategy (RAQS) for San Diego County was developed and adopted in 1992, identifying all feasible control measures to reduce emissions of ozone precursors (oxides of nitrogen (NOx) and volatile organic compounds (VOC)) from stationary emission sources under the authority of the San Diego County Air Pollution Control District (District).

The California Clean Air Act also requires periodic RAQS revisions identifying the status of scheduled control measures and incorporating any new control measures determined feasible. Such evaluations are based on updated information regarding technology availability,

emission reduction potential, and cost-effectiveness. Accordingly, the RAQS was revised in 1995, 1998, 2001, 2004, and 2009.¹

The proposed 2016 RAQS Revision ensures continued compliance with the all-feasiblemeasure requirement. It also provides more ozone precursor emission reductions compared to previous RAQS revisions, and reflects the District's tentative schedule of future regulatory activity. These possible control measures will be evaluated and, if warranted, developed into proposed rules for Board consideration in future years. The proposed 2016 RAQS Revision also provides an update on previously scheduled measures from the 2009 RAQS Revision, and outlines the District's incentive program to further emissions. Lastly, as required by state law, the document includes a reassessment and reaffirmation of the District's previous findings that state emission offset requirements are not necessary for San Diego County to achieve and maintain state ozone standards by the earliest practicable date. Discussion of each project element is included below.

Study Measures for Evaluation and/or Adoption

- A. Further Control of Stationary Reciprocating Internal Combustion Engines BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT). Existing Rule 69.4.1, Stationary Reciprocating Internal Combustion Engines – BARCT, was adopted in 2000 and applies to both gas and liquid-fueled engines. Since adoption, other air districts including South Coast Air Quality Management District (SCAQMD) (Rules 1110), have tightened their emission limits and have also been more prescriptive in the equipment subject to regulation. If similar controls were adopted in San Diego County, annual emission reductions are estimated to be approximately 42 tons of NOx per year (0.12 tons per day) when fully implemented. Amendments may also be warranted to ensure the existing Rule is consistent with the federal New Source Performance Standard (NSPS) IIII and state Stationary Diesel Engine Air Toxic Control Measure. Preliminary costeffectiveness is estimated to range between \$1 and \$4 per pound of NOx reduced. As such, the District has scheduled further evaluation of a proposed amendment to Rule 69.4.1, and if warranted, will consider adoption of the lower emission limits during the next three years.
- B. Further Control of New Water Heaters, Small Boilers, Process Heaters, and Steam Generators between 75,000 and 600,000 British Thermal Units per hour (BTU/hour). The District currently regulates water heaters and boilers of various sizes through multiple rules. However, large water heaters between 75,000 and 600,000 BTU/hour are currently not regulated in San Diego County. Several other California air districts regulate equipment in this size range, including SCAQMD Rule 1146.2 which limits NOx emissions for units between 75,000 and 2 million BTU/hour. At a previous public workshop discussing Rule 69.5.1, water heater manufacturers and distributors requested that District staff consider adopting control requirements matching those in

¹ Completion of federal plans in 2007 and 2012 addressing national ozone standards precluded RAQS revisions in these years. Pursuant to state law, all rule development activities addressing state ozone planning requirements continued in the interim.

SCAQMD for water heaters larger than 75,000 BTU/hour, to prevent uncontrolled units from being purchased in San Diego County and exported to the South Coast Air Basin. At the time, further controls for units in this size range were not cost-effective.

In 2016, the District preliminarily re-evaluated the feasibility of amending Rule 69.2.1 to reflect a lower limit of 20 parts per million by volume (ppmv) NOx for all new boilers and large water heaters between 75,000 and 2 million BTU/hour. Preliminary cost-effectiveness was estimated from \$1 to \$9 per pound of NOx reduced. Potential emission reductions from full implementation of the proposed measure are approximately 0.80 tons of NOx per day. Consequently, the District will further evaluate adoption of the lower emission limit, and if warranted, will schedule a potential amendment to Rule 69.2.1 during the next three years.

C. Control of Emissions from Composting Operations (Non-Residential). Currently, the District does not specifically regulate emissions from composting operations. However, these operations emit VOC through decomposition of organic materials (such as green and wood waste, animal manure, and food waste) during chipping and grinding, stockpiling, and composting activities. Moreover, composting activities are expected to increase in the region in response to federal, state, and local mandates for waste diversion and waste reduction. Accordingly, the District will investigate the feasibility of a measure to control VOC emissions from these sources.

Other California air districts have adopted composting rules, including SCAQMD (Rule 1133, 1133.2, and Rule 1133.3) and San Joaquin Valley Air Pollution Control District (SJVAPCD) (Rule 4565 and 4566). These rules establish best management practices (BMPs) for chipping and grinding of green waste to produce materials for composting or other uses, and to better manage stockpile operations to reduce VOC emissions. Accordingly, the District will evaluate these rules to determine which standards, if any, are feasible for implementation in San Diego County.

Importantly, other public agencies within California (including the California Department of Resources Recycling and Recovery and solid waste local enforcement agencies) are engaged in or are considering regulating composting activities to address other environmental objectives, such as landfill diversion and water quality. This has resulted in a dynamic regulatory environment, which will require the District to closely coordinate with other agencies and affected composting facilities to ensure that a possible District rule to control VOC emissions would be feasible, and consistent with other regulatory requirements.

SCAQMD estimated a reduction of 328.5 tons of VOC per year (0.9 tons per day) from 17 composting facilities within the SCAQMD region. Preliminary estimates for annual emission reductions in San Diego County, if similar controls are found to be feasible, are at least 120 tons per year (0.3 tons per day), about a 40% reduction in VOC emissions for these facilities. Consequently, the District has scheduled further evaluation of the proposed measure, and if warranted, will consider adoption of a new rule during the next three years.

D. Further Control of Marine Coatings. District Rule 67.18 sets VOC limits for primers, coatings, topcoats, and sealers used in the coating of marine and fresh water vessels, oil drilling platforms, navigational aids, and structures intended for exposure to a marine environment. Limits vary depending on the material, but range between 275 and 700 grams of VOC per liter of coating, which generally aligns with other air districts' standards. The rule was last amended on May 15, 1996.

An assessment is necessary to determine whether lower VOC limits of marine coating materials could occur. Consideration will also be given to lowering the VOC limits of cleaning materials used in marine coating operations, which is currently set at 200 grams or less of VOC per liter of coating. Anticipated emission reductions from these minor amendments are expected to reduce emissions by 4 tons of VOC per year (0.01 tons per day), with cost-effectiveness to be determined at a later date. Consequently, the District has scheduled further evaluation of a proposed amendment to Rule 67.18, and if warranted, will consider adoption of the lower emission limits during the next three years.

- E. Further Control of Natural Gas-Fired Fan-Type Central Furnaces. The District adopted Rule 69.6 on June 17, 1998. The rule established NOx emission limits of 40 ng/J for new residential furnaces. On September 5, 2014, SCAQMD amended their equivalent rule (Rule 1111) to further tighten the NOx emission limit for furnaces by 65%, to 14 ng/J. Because the tightened emission limit is technology forcing, complying units are not currently available. SCAQMD Rule 1111 also phases the requirement in over four years as manufacturers comply with the new emission limits. The District will monitor the forthcoming availability of complying units. When a sufficient number of compliant models are found to be available, the District will schedule further evaluation of a proposed amendment to Rule 69.6, and if warranted, will consider adoption of the lower emission limit during the next three years.
- F. **Further Control of Aerospace Coating Operations**. Emissions in this source category have greatly declined in San Diego County since 1990 due to three factors: the implementation of District Rule 67.9, the decline in government funding for aerospace operations and, in particular, the closing of one large facility. Total VOC emissions from this source category are now estimated to be 30 tons per year.

SCAQMD Rule 1124 contains similar VOC limits in most coating categories. However, some categories contain lower limits, including adhesive bonding primers, antichafe coatings, dry lubricative materials (nonfastener), form release coatings, fuel tank coatings, paint strippers, and sealants. In San Diego County, VOC emissions from these coating materials that exceed the limits in Rule 1124 are estimated to be less than two tons per year. Emission reductions anticipated from adopting the Rule 1124 limits are estimated to be less than two tons per year (0.005 tons per day).

Despite limited potential emission reductions, the District has scheduled further evaluation of a proposed amendment to Rule 67.9 to refresh the rule and update emission limits as needed to meet federal requirements. If warranted, the District will consider adoption of the modifications during the next three years

G. Medium Boilers, Process Heaters, and Steam Generators. There are an estimated 500 boilers rated between 2-5 million BTU/hour in San Diego County, cumulatively emitting an estimated 200 tons per year of NOx. Possible NOx control requirements (similar to those in Rule 69.2.1) for boilers in this size range were evaluated in 2011-12 and determined infeasible due to poor cost-effectiveness.

Some air districts with worse air quality and more demanding requirements for emission reductions have implemented NOx regulatory controls on boilers in this size range. Control costs may have dropped over time as a result; therefore, the District will further evaluate the feasibility of a possible rule to control NOx emissions from such boilers in San Diego County during the next three years. This could include a possible requirement that boiler manufacturers certify new units as meeting a specified NOx emission limit (e.g., 30 parts per million by volume) or that operators of existing units obtain a District permit. Based on a preliminary evaluation, this measure could reduce NOx emissions upon full implementation by an estimated 89.5 tons per year (0.25 tons per day).

Deleted Measures

A. **High Emitting Spray Booth Facilities**. The 2009 RAQS Revision included a commitment to analyze emission reductions from high-emitting spray booth facilities in San Diego County. SCAQMD's comparable rule (Rule 1132) applies to spray booths emitting more than 20 tons of VOC per year. This rule requires a further 65% emission reduction of VOC from these operations beyond that required by other SCAQMD coating rules. The District currently has no comparable rule.

Recent District emission inventory data indicate there is one facility in San Diego County for which VOC emissions from one spray booth (or a combination of spray booths) exceed 20 tons per year. However, only 25% of the facility's VOC emissions are from coatings specifically applied in a spray booth. The remainder of emissions emanate from area sources, which are coatings applied to large vessels where no spray booth could reasonably accommodate their large size. The facility has voluntarily installed controls on all seven spray booths with a control efficiency of 95%. Additionally, the coatings being applied are controlled through other existing state and local measures.

Since controls are already installed on all facilities, there are no additional emission reductions that could be obtained by adopting a similar measure in San Diego County. As such, no further evaluation of this source category is necessary at this time, and the measure has been removed from the RAQS.

B. Equipment Leaks. This source category is regulated by Bay Area Air Quality Management District (BAAQMD) Rule 8-18, which establishes vapor and liquid leak standards to reduce VOC emissions from leaking equipment at refineries, bulk terminals, bulk plants and chemical plants. The 2009 RAQS Revision identified this rule as a low priority item in San Diego County due to the limited emission reduction potential for adopting a new rule.

Rule 8-18 exempts many facilities, however connections between loading racks at bulk terminals and bulk plants and the vehicle (mobile transports) being loaded are regulated. The rule sets inspection frequency criteria (daily visual, quarterly instrument checks for most components), repair requirements, and leak standards – three drops per minute for liquid leaks, 100 ppmv as methane for most vapor leaks, and 500 ppmv as methane for pumps, compressors and pressure relief devices.

The most recent inventory of these sources showed approximately 12 tons per year of total VOC emissions from loading rack operations. Fugitive vapor and liquid leak emissions emanating from hard-piped components, pumps and compressors comprise only seven tons of VOC per year. Furthermore, fugitive vapor emissions from operations subject to other District rules have drastically declined since 2013 because of plant process changes and refined calculation methods. It is anticipated that requiring additional requirements to control leaks from these facilities would not be cost-effective because of the low emission reduction potential. Accordingly, the District does not plan any further evaluation of this source category at this time, and the measure has been removed from the RAQS.

C. **Indirect Source Rule**. The 2009 RAQS Revision included a commitment to analyze the feasibility of adopting an Indirect Source Rule (addressing vehicle trips, and associated emissions attributed to new land developments). Other air districts, including SJVAPCD and Imperial County Air Pollution Control District, have adopted similar rules. These districts have differing approaches to their indirect source control requirements; therefore an evaluation of these rules was necessary to better understand their requirements and applicability in San Diego County. In addition, the analysis would determine whether a local Indirect Source Rule would provide significant emission reductions beyond that achieved by the District's existing voluntary Indirect Source Program.

The District determined that an Indirect Source Rule is not feasible for the San Diego region because associated emission reductions would not be substantial beyond current efforts to reduce VMT. Specifically, in 2015, the San Diego Association of Governments (SANDAG) on behalf of its 19 affiliated local jurisdictions adopted a Regional Transportation Plan (RTP)/Sustainable Community Strategy (SCS) that projects far greater reliance on walking, bicycling, and transit to meet future travel needs. By federal law, the RTP must be based on local general plans. Since the early 2000's, most of the region's jurisdictions have adopted land use strategies that reduce future low-density development in open space areas, in favor of higher-density developments in areas with existing infrastructure, residents, and services.

In addition to changes in the emphasis of regional planning for transportation, state laws and the state's CEQA guidance have been evolving significantly in recent years. These include CEQA Guidance modifications in 2009 by the Office of Planning and Research (OPR) to recommend parking supply not be included in CEQA reviews of new development, and placed greater emphasis on safety of bicycling and walking. In addition, the legislature adopted laws reducing CEQA review requirements for bicycle facilities and local bicycle master plans. Most significantly, Senate Bill (SB) 743 (2013) directed OPR to revise the guidelines to eliminate categorization of traffic congestion as an environmental impact, and to recommend alternative transportation metrics emphasizing bicycling, walking, transit, and greater diversity of land uses (which promotes alternatives to driving). In January 2016, OPR issued draft amendments to the CEQA guidance that effectively changes the state's required traffic metric from Level of Service (traffic flow) to Vehicle Miles Travelled (total driving). This change will incentivize developers and cities to minimize driving in the same way that adopted Indirect Source Rules do, but will operate statewide and affect a greater variety of project types.

Adoption of new planning goals or transportation metrics does not by itself ensure that all development or infrastructure projects will minimize indirect source emissions to the same extent an Indirect Source Rule might have. It is possible, for example, that jurisdictions or Metropolitan Planning Organizations (MPO's) will approve projects that are exceptions to their adopted plans. However, based on past planning trends, exceptions are most likely to be relatively rare.

For the foregoing reasons, the District does not consider an Indirect Source Rule to provide additional emission reductions, and would in fact be duplicative to planning efforts already operating on a larger scale and addressing a greater variety of potential sources. Accordingly, the District does not plan any further evaluation of this source category at this time, and the measure has been removed from the RAQS.

Incentive Programs

The proposed 2016 RAQS Revision includes a summary of existing financial incentive programs for reducing mobile source emissions in San Diego County. Financial incentive programs augment traditional regulatory programs to further encourage technology development and provide cost-effective emission reductions not easily achieved by regulations. Local projects funded during the 2007-2015 period provided combined VOC and NOx emission reductions of approximately 2.5 tons per day (926 tons per year), as well as 0.4 tons per day (157 tons per year) of carbon monoxide (CO) reductions and 0.09 tons per day (32 tons per year) of particulate matter (PM) reductions.

No actions affecting ongoing incentive programs are included in the proposed 2016 RAQS Revision. These programs will continue to be implemented regardless of whether the 2016 RAQS Revision is adopted. Consequently, incentive programs are not further considered in this 2016 Addendum.

State Offset Exemption

In 1998, the District amended its New Source Review (NSR) Rules 20.1-20.4 to repeal state emission offset requirements, as authorized by state law (California Health and Safety Code §40918.5 et. seq.). The proposed 2016 RAQS Revision includes a detailed reassessment and reaffirmation of the District's previous findings that emission reductions from unbanked shutdowns compensate for permitted emission increases from sources that may have triggered

state offset requirements. Furthermore, the repeal of state offset requirements has not significantly impacted the projected trend of decreasing total ozone-precursor emissions in San Diego County, nor is it anticipated to in the future. Consequently, state emission offset requirements are not necessary for the county to achieve and maintain the state ozone standard by the earliest practicable date. State law requires this reassessment and results do not warrant any proposed amendments of NSR rules. Consequently, the reassessment is not further considered in this 2016 Addendum.

5. DOES THE PROJECT FOR WHICH A SUBSEQUENT DISCRETIONARY ACTION IS NOW PROPOSED DIFFER IN ANY WAY FROM THE PREVIOUSLY APPROVED PROJECT?

| YES | NO |
|-----------|----|
| \square | |

This discretionary action differs from the previously approved project because the project proposes to:

- Evaluate more stringent emissions limits using similar control technologies for the same control measures as analyzed in the previous programmatic EIR;
- Consider adoption of the revised control measures on an updated adoption schedule;
- Consider adoption of possible new control measures regulating emissions from composting operations (non-residential).
- 6. SUBJECT AREAS DETERMINED TO HAVE NEW OR SUBSTANTIALLY MORE SEVERE SIGNIFICANT ENVIRONMENTAL EFFECTS COMPARED TO THOSE IDENTIFIED IN THE PREVIOUS ND OR EIR. The subject areas checked below were determined to be new significant environmental effects or to be previously identified effects that have a substantial increase in severity either due to a change in project, change in circumstances or new information of substantial importance, as indicated by the checklist and discussion on the following pages.

| NONE | | | |
|--------------------------|-----------------------------------|---------------------------------------|--|
| Aesthetics | Agriculture & Forest Resources | Air Quality | |
| Biological Resources | Cultural Resources | Geology/Soils | |
| Greenhouse Gas Emissions | Hazards & Haz. Materials | Hydrology/Water Quality | |
| Land Use/Planning | Mineral Resources | D Noise | |
| Population/Housing | Public Services | Recreation | |
| Transportation/Traffic | Utilities/Service Systems | Mandatory Findings of Significance | |

DETERMINATION:

On the basis of this analysis, the San Diego County Air Pollution Control District has determined that:

| No substantial changes are proposed in the project and there are no substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Also, there is no "new information of substantial importance" as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, the previously certified EIR is adequate upon completion of an ADDENDUM. |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). However all new significant environmental effects or a substantial increase in severity of previously identified significant effects are clearly avoidable through the incorporation of mitigation measures agreed to by the project applicant. Therefore, a SUBSEQUENT ND is required. |
| Substantial changes are proposed in the project or there are substantial changes in the circumstances under which the project will be undertaken that will require major revisions to the previous ND or EIR due to the involvement of significant new environmental effects or a substantial increase in the severity of previously identified significant effects. Or, there is "new information of substantial importance," as that term is used in CEQA Guidelines Section 15162(a)(3). Therefore, a SUBSEQUENT or SUPPLEMENTAL EIR is required. |

| Signature | |
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Date

Andy Hamilton Printed Name Supervising Air Resources Specialist Title

INTRODUCTION

CEQA Guidelines Sections 15162 through 15164 set forth the criteria for determining the appropriate additional environmental documentation, if any, to be completed when there is a previously adopted ND or a previously certified EIR for the project.

CEQA Guidelines, Section 15162(a) and 15163 state that when an ND has been adopted or an EIR certified for a project, no Subsequent or Supplemental EIR or Subsequent Negative Declaration shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in light of the whole public record, one or more of the following:

- 1. Substantial changes are proposed in the project which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- 2. Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects.
- 3. New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous EIR or Negative Declaration; or
 - b. Significant effects previously examined will be substantially more severe than shown in the previously adopted Negative Declaration or previously certified EIR; or
 - c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - d. Mitigation measures or alternatives which are considerably different from those analyzed in the previous Negative Declaration or EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

CEQA Guidelines, Section 15164(a) states that an Addendum to a previously certified EIR may be prepared if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a Subsequent or Supplemental EIR have occurred.

CEQA Guidelines, Section 15164(b) states that an Addendum to a previously adopted Negative Declaration may be prepared if only minor technical changes or additions are necessary.

If the factors listed in CEQA Guidelines Sections 15162, 15163, or 15164 have not occurred or are not met, no changes to the previously certified EIR or previously adopted ND are necessary.

The following responses detail any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that may cause one or more effects to environmental resources. The responses support the "Determination," above, as to the type of environmental documentation required, if any.

ENVIRONMENTAL REVIEW UPDATE CHECKLIST

<u>I. AESTHETICS</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to aesthetic resources including: scenic vistas; scenic resources including, but not limited to, trees, rock outcroppings, or historic buildings within a state scenic highway; existing visual character or quality of the site and its surroundings; or day or nighttime views in the area?

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No significant impacts to aesthetics were anticipated by the previous EIR. It was acknowledged that some emission control equipment can be architecturally unappealing, but it would typically be installed at existing industrial sites where visual impacts would be insignificant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

II. AGRICULTURE & FOREST RESOURCES - Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to agriculture or forestry resources including: conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use and/or conflicts with existing zoning for agricultural use or Williamson Act contract, result in the loss of forest land or conversion of forest land to non-forest use, conflict with existing zoning for, or cause rezoning of, forest land (as defined by Public Resources Code section 12220(g), timberland (as defined by Public resources Code section 4526), or timberland zoned Timberland Production [as defined by Government Code section 51104(g)], or involve other changes in the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural non-forest conversion of forest land use? use or to

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Potential impacts to agriculture and forestry resources from RAQS implementation were analyzed in the previous environmental document. No significant impacts to agricultural resources were identified. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

III. AIR QUALITY – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to air quality including: conflicts with or obstruction of implementation of the San Diego County Regional Air Quality Strategy (RAQS) or applicable portions of the State Implementation Plan (SIP); violation of any air quality standard or substantial contribution to an existing or projected air quality violation; a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors); exposure of sensitive receptors to substantial pollutant concentrations; or creation of objectionable odors affecting a substantial number of people?

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Net Ozone Air Quality Benefit - The previous EIR identified no significant unmitigable impacts to air quality from adoption of the RAQS. In fact, it showed that air quality would improve with implementation of the RAQS. Air quality has continued to improve since the initial RAQS adoption. State one-hour ozone standard exceedances declined nearly 98%, going from 168 in 1977, to just three in 2015. Additionally, 172 exceedances of the state eight-hour standard in 1977 dropped to 36 exceedances in 2015, a nearly 79% improvement. Pursuant to state law, a RAQS revision must at least as effective in improving air quality as the previous RAQS version. Indeed, the proposed 2016 RAQS Revision provides considerable additional ozone precursor emission reductions, thereby satisfying this requirement.

Three VOC control measures and four NOx control measures have been tentatively scheduled for further evaluation during the next three years for feasibility and rule adoption, if warranted. Based on a preliminary evaluation, these seven measures would collectively reduce VOC emissions by 0.3 tons per day, and NOx emissions by approximately 1.2 tons per day. Consequently, the proposed RAQS Revision will provide additional emission reductions relative to the previous RAQS Revision, and therefore is more effective in improving regional air quality. Additionally, some VOC are toxic air contaminants and can cause odors. Therefore, additional VOC reductions contemplated in the proposed 2016 RAQS Revision could also result in reduced human exposure to toxic air contaminants and odors.

There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

IV. BIOLOGICAL RESOURCES – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to biological resources including: adverse effects on any sensitive natural community (including riparian habitat) or species identified as a candidate, sensitive, or special status species in a local or regional plan, policy, or regulation, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service; adverse effects to federally protected wetlands as defined by Section 404 of the Clean Water Act; interference with the movement of any native resident or migratory fish or wildlife species or with wildlife corridors, or impeding the use of native wildlife nursery sites; and/or conflicts with the provisions of any adopted

Habitat Conservation Plan, Natural Communities Conservation Plan, or other approved local, regional or state habitat conservation plan, policies or ordinances?

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| Potentially Significant Impact | Mitigation Incorporated | Less Than Significant Impact | No Impact |
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No significant impacts to biological resources were anticipated by the previous EIR. Potential impacts identified from construction of alternative transportation facilities would be mitigated to a level of less than significant. The proposed 2016 RAQS Revision does not contemplate the construction of additional alternative transportation facilities. Additionally, possible impacts were also identified for an unlikely accidental release from selective catalytic reduction (SCR) NOx emission control systems, but the proposed 2016 RAQS Revision does not include any additional or different SCR requirements. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

<u>V. CULTURAL RESOURCES</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to cultural resources including: causing a change in the significance of a historical or archaeological resource as defined in State CEQA Guidelines Section 15064.5; destroying a unique paleontological resource or site or unique geologic feature; and/or disturbing any human remains, including those interred outside of formal cemeteries?

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No impacts to cultural resources were anticipated by the previous EIR. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

<u>VI. GEOLOGY AND SOILS</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from geology and soils including: exposure of people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, seismic-related ground failure, including liquefaction, strong seismic ground shaking, or landslides; result in substantial soil erosion or the loss of topsoil; produce unstable geological conditions that will result in adverse impacts resulting from landslides, lateral spreading, subsidence, liquefaction or collapse; being located on expansive soil creating substantial risks to life or property; and/or having soils incapable of adequately supporting

the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

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No impacts to geology and soils were anticipated by the previous EIR. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

VII. GREENHOUSE GAS (GHG) EMISSIONS – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects related to environmental effects associated with greenhouse gas emissions or compliance with applicable plans, policies or regulations adopted for the purpose of reducing greenhouse gas emissions?

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Net GHG Emissions Benefit – Gases that trap heat in the atmosphere are often called greenhouse gases (GHGs), comparable to a greenhouse, which captures and traps radiant energy. The State CEQA Guidelines were amended in March 2010 to require that potential environmental effects of greenhouse gas emissions be addressed in CEQA documents. GHGs are emitted by natural processes and human activities. The six major GHGs are carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulfur hexafluoride (SF6), hydrofluorocarbons (HFCs), and perfluorocarbon (PFCs). Scientific consensus, as reflected in recent reports issued by the United Nations Intergovernmental Panel on Climate Change, is that the majority of the observed climate change over the last 50 years can be attributable to increased concentration of GHGs in the atmosphere due to human activities, particularly increased combustion of fossil fuels.

Further increases in GHG emissions are expected to contribute to cause additional climate change, which may results in more droughts, more frequent and extreme heat waves, erratic storm and flood events, decreases in winter snowpack, a rise in sea level, increases in water temperatures, an increase in coastal erosion, intrusion of sea water, an increase in the duration of wildfire season, and increased occurrences of unhealthy ozone levels. Consequently, efforts are now underway at local, state, federal, and international levels to control GHG emission increases from human activities.

Implementation of the proposed 2016 RAQS Revision is likely to reduce GHG emissions and, therefore, will not locally contribute to climate change. The proposed future control measures to be evaluated during the next three years stand to reduce VOC and NOx emissions, which indirectly affect GHG pollutant levels. The proposed measures are not likely to increase GHG pollutants such as CO2, CH4, N2O, SF6, HFCs and PFCs. Instead, many of these proposed measures will likely provide GHG emission reduction co-benefits that result in better air-fuel controls. These controls will increase

thermal efficiency and reduce fuel combustion and associated GHG emissions.

No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

VIII. HAZARDS AND HAZARDOUS MATERIALS - Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from hazards and hazardous materials including: creation of a significant hazard to the public or the environment through the routine transport, storage, use, or disposal of hazardous materials or wastes; creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment; production of hazardous emissions or handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school; location on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 creating a hazard to the public or the environment; location within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport; within the vicinity of a private airstrip resulting in a safety hazard for people residing or working in the project area; impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan; and/or exposure of people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

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No significant impacts to hazards and hazardous materials were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release from SCR NOx emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning handling and disposal of hazardous materials. However, that issue does not apply to this project because the proposed 2016 RAQS Revision does not propose any additional or different SCR requirements. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

IX. HYDROLOGY AND WATER QUALITY – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to hydrology and water quality including: violation of any waste discharge requirements; an increase in any listed pollutant to an impaired water body listed under section 303(d) of the Clean Water Act ; cause or contribute to an exceedance of applicable surface or groundwater receiving water quality objectives or degradation

of beneficial uses; substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level; substantially alter the existing drainage pattern of the site or area in a manner which would result in substantial erosion, siltation or flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems; provide substantial additional sources of polluted runoff; place housing or other structures which would impede or redirect flood flows within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, including County Floodplain Maps; expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam; and/or inundation by seiche, tsunami, or mudflow?

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No significant impacts to hydrology and water quality were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

<u>X. LAND USE AND PLANNING</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to land use and planning including: physically dividing an established community; and/or conflicts with any applicable land use or habitat conversation plan, policy, or regulation of an agency with jurisdiction over the project adopted for the purpose of avoiding or mitigating an environmental effect?

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| Potentially Significant Impact | Mitigation Incorporated | Less Than Significant Impact | No Impact |
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No significant impacts to land use and planning were anticipated by the previous EIR. Potential land use impacts identified for transportation control measures would be reduced to insignificance by incorporating the transportation measures into the planning processes for general plans and zoning codes. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

<u>XI. MINERAL RESOURCES</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause one or more effects to mineral resources including: the loss of availability of a known mineral resource that would be of value to the region and the residents of the state; and/or loss of locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

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No impacts to mineral resources were anticipated by the previous EIR. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

XII. NOISE – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects from noise including: exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies; exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels; a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project; a substantial temporary or periodic increase in ambient noise levels in the project slocated within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, or for projects within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

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| Potentially Significant Impact | Mitigation Incorporated | Less Than Significant Impact | No Impact |
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No significant impacts to noise were anticipated by the previous EIR. Compliance with existing noise ordinances will mitigate the potential impact of noise from emission control equipment to a level of less than significant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

<u>XIII. POPULATION AND HOUSING</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more effects to population and housing including: inducing substantial population growth in an area, either directly or indirectly; or

displacing substantial numbers of existing housing or people, necessitating the construction of replacement housing elsewhere?

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| Potentially Significant Impact | Mitigation Incorporated | Less Than Significant Impact | No Impact |
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No significant impacts to population and housing were anticipated by the previous EIR. Identified potential impacts of transportation control measures on population and housing were too speculative to be considered significant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

XIV. PUBLIC SERVICES – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in one or more substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services: fire protection, police protection, schools, parks, or other public facilities?

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No significant impacts to public services were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.
<u>XV. RECREATION</u> – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in an increase in the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or that include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

| Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--------------------------------|-------------------------------------------------------|------------------------------|-----------|
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No significant impacts to recreation were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release from SCR NOx emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning handling of hazardous materials. However, that issue does not apply to this project because the proposed 2016 RAQS Revision does not propose any additional or different SCR requirements. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

XVI. TRANSPORTATION/TRAFFIC – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to transportation/traffic including: conflicts with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system (e.g. intersections, streets, highways and freeways, pedestrian and bicycle paths, mass transit, etc.); exceedance, either individually or cumulatively, of a level of service standard established by the county congestion management agency for designated roads or highways; a change in air traffic patterns, including either an increase in traffic levels or a change in location that result in substantial safety risks; substantial increase in hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); inadequate emergency access; and/or a conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?

| Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--------------------------------|-------------------------------------------------------|------------------------------|-------------|
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No impacts to transportation/traffic were anticipated by the previous EIR. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

XVII. UTILITIES AND SERVICE SYSTEMS -- Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that cause effects to utilities and service systems including: exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board; require or result in the construction of new water or wastewater treatment facilities, new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; require new or expanded entitlements to water supplies or new water resources to serve the project; result in a determination by the wastewater treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments; be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs; and/or noncompliance with federal, state, and local statutes and regulations related to solid waste?

| Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--------------------------------|-------------------------------------------------------|------------------------------|-----------|
| | | \boxtimes | |

No significant impacts to utilities and service systems were anticipated by the previous EIR. Possible impacts were identified for an unlikely accidental release of toxic substances from emission control systems. The previous EIR identified mitigation that sources must comply with existing regulations concerning wastewater treatment and hazardous materials disposal. Therefore, the potential impacts were considered less than significant. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE – Since the previous EIR was certified, are there any changes in the project, changes in circumstances under which the project is undertaken and/or "new information of substantial importance" that result in any mandatory finding of significance listed below?

- Does the project degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?
- Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?
- Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?

| | Less Than Significant with | | |
|--------------------------------|----------------------------|------------------------------|-----------|
| Potentially Significant Impact | Mitigation Incorporated | Less Than Significant Impact | No Impact |
| | | \boxtimes | |

The previous EIR did not identify any impacts which would necessitate mandatory findings of significance. This proposed 2016 RAQS Revision proposes the adoption of more stringent emissions limits using similar control technologies for the same control measures as analyzed in the previous programmatic EIR. Thus, the proposed action will result in further enhancement of the quality of the environment, by further reducing air pollution in San Diego County. This will result in beneficial impacts to human health and the environment. No new impacts would be expected from adoption of the potential new or amended control measures. These measures will be analyzed individually for environmental impacts if and when they are proposed for adoption. There are no changes in the project, changes in circumstance, or new information of substantial importance that involve significant new environmental effects or a substantial increase in the severity of previously identified environmental effects.