

STATE OF COLORADO

Bill Ritter, Jr., Governor
Martha E. Rudolph, Executive Director

Dedicated to protecting and improving the health and environment of the people of Colorado

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Colorado Department
of Public Health
and Environment

May 3, 2010

Colorado Petroleum Products Company
Attention: Clark Thompson
4080 Globeville Road
Denver, Colorado 80216

RE: Compliance Order on Consent, Number: SC-100503-2

Dear Mr. Thompson:

Enclosed for Colorado Petroleum Products Company records you will find your copy, with original signatures, of the recently executed Compliance Order on Consent. Please remember that this agreement is subject to a thirty-day public comment period (paragraph 28). Upon initiation, if the Division receives any comments during this period we will contact your office to discuss. Also, please be advised that the first page of the Order was changed in order to place the assigned Order Number on the final document.

If you have any questions, please don't hesitate to contact Michael Harris at (303) 692-3598 or by electronic mail at michael.harris@state.co.us.

Sincerely,

Russell Zigler, Legal Assistant
Compliance Assurance Section
Enforcement Unit
WATER QUALITY CONTROL DIVISION

Enclosure(s)

cc: Denver Environmental Health
ec: Aaron Urdiales, EPA Region VIII
Doug Camrud, Engineering Section, CDPHE
Dick Parachini, Watershed Program, CDPHE
Gary Beers, Permits Unit, CDPHE
David Neslin, COGCC
Carolyn Schachterle, OPA



COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
DIVISION OF ADMINISTRATION
WATER QUALITY CONTROL DIVISION

COMPLIANCE ORDER ON CONSENT

NUMBER: SC-100503-2

IN THE MATTER OF: COLORADO PETROLEUM PRODUCTS COMPANY
CDPS PERMIT NO. COR-010000
CERTIFICATION NO. COR-010684
DENVER COUNTY, COLORADO

The Colorado Department of Public Health and Environment ("Department"), through the Water Quality Control Division ("Division"), issues this Compliance Order on Consent ("Consent Order"), pursuant to the Division's authority under §§25-8-602 and 605, C.R.S., of the Colorado Water Quality Control Act ("the Act") §§25-8-101 to 703, C.R.S., and its implementing regulations, with the express consent of Colorado Petroleum Products Company ("Colorado Petroleum"). The Division and Colorado Petroleum may be referred to collectively as "the Parties."

STATEMENT OF PURPOSE

1. The mutual objectives of the Parties in entering into this Consent Order are to resolve, without litigation, the civil penalties associated with the violations cited herein and in the Notice of Violation / Cease and Desist Order / Clean-up Order (Number: SO-070514-1) the Division issued to Colorado Petroleum on May 14, 2007.

DIVISION'S FINDINGS OF FACT AND DETERMINATION OF VIOLATIONS

2. Based upon the Division's investigation into and review of the compliance issues identified herein, and in accordance with §§25-8-602 and 605, C.R.S., the Division has made the following determinations regarding Colorado Petroleum and Colorado Petroleum's compliance with the Act, its implementing permit regulations, and the permit certification that was issued to Colorado Petroleum.
3. At all times relevant to the alleged violations identified herein, Colorado Petroleum was a Colorado corporation in good standing and registered to conduct business in the State of Colorado.
4. Colorado Petroleum is a "person" as defined by the Water Quality Control Act, §25-8-103(13), C.R.S. and its implementing permit regulation, 5 CCR 1002-61, §61.2(73).

5. Colorado Petroleum operates an industrial facility involved in motor oil and lubricant mixing and packaging, which is located at 4080 Globeville Road, in the City and County of Denver, Colorado (the "Facility"). The Facility is classified within the Standard Industrial Classification (SIC) code 5171 – Petroleum Bulk Stations and Terminals.
6. Colorado Petroleum's activities at the Facility are covered under the Colorado Discharge Permit System General Permit, Number COR-010000, for Stormwater Discharges Associated with Light Industrial Activity (the "Permit").
7. On August 17, 1995, the Division provided Colorado Petroleum Certification Number COR-010684, authorizing Colorado Petroleum to discharge stormwater from the industrial activities associated with the Facility to the South Platte River under the terms and conditions of the Permit. Certification Number COR-010684 remains in effect until June 30, 2011 or until Colorado Petroleum inactivates Permit coverage.
8. The South Platte River is "state waters" as defined by §25-8-103(19), C.R.S. and its implementing permit regulation, 5 CCR 1002-61, §61.2(101).
9. Pursuant to 5 CCR 1002-61, §61.8, a permittee must comply with all the terms and conditions of a permit and violators of the terms and conditions specified in a permit may be subject to civil and criminal liability pursuant to sections 25-8-601 through 612, C.R.S.
10. On April 29, 2005 and October 18, 2005, a representative from the Denver Department of Environmental Health (the "Inspector") conducted onsite inspections of the Facility on behalf of the Division, pursuant to the Division's authority under §25-8-306, C.R.S., to determine Colorado Petroleum's compliance with the Water Quality Control Act and the Permit. During each inspection, the Inspector interviewed Colorado Petroleum representatives, conducted a review the Facility's stormwater management records, and conducted a physical inspection of the Facility.

**Failure to Implement and/or Maintain
Best Management Practices to Protect Stormwater Runoff**

11. Pursuant to Part I. B. 3. b. of the Permit, Colorado Petroleum is required to identify potential sources of pollutants at the Facility and implement BMPs to reduce the potential of these sources to contribute pollutants to stormwater discharges. The Permit specifies that where stormwater pollution potential exists, appropriate preventative measures must be taken and documented.
12. The Division has determined that Colorado Petroleum failed to implement and/or maintain functional BMPs at the Facility as described in paragraphs 12(a-1) below:
 - a. During the April 29, 2005 inspection, the Inspector observed petroleum contaminated stormwater along the northwest side of the Facility with no BMPs in place to prevent the contaminated stormwater from discharging from the site.
 - b. During the April 29, 2005 inspection, the Inspector observed petroleum contaminated stormwater along the southeast side of the Facility with no BMPs in place to prevent the contaminated stormwater from discharging from the site.

- c. During the April 29, 2005 inspection, the Inspector observed petroleum contaminated stormwater along the northeast side of the Facility with no BMPs in place to prevent the contaminated stormwater from discharging from the site.
- d. During the April 29, 2005 inspection, the Inspector observed oil contaminated soil adjacent to the west oil containment area at the Facility. No BMPs were being utilized to clean up the contaminated area or to prevent stormwater from contacting the contaminated soil before discharging from the site.
- e. During the October 18, 2005 inspection, the Inspector observed oil contaminated soil east of the south tank farm at the Facility. No BMPs were being utilized to clean up the contaminated area or to prevent stormwater from contacting contaminated soil before discharging from the site.
- f. During the October 18, 2005 inspection, the Inspector observed oil contaminated soil throughout the east side of the Facility. No BMPs were being utilized to clean up the contaminated areas or to prevent stormwater from contacting contaminated soil before discharging from the site.
- g. During the October 18, 2005 inspection, the Inspector observed leaking valves in the receiving area at the Facility and along the eastern property boundary at the site. No BMPs were observed in place to capture the leaking oil/fluids or to prevent the leaking oil/fluids from discharging from the site during storm events.
- h. During the October 18, 2005 inspection, the Inspector observed leaking oil/fluids from the foundation cracks along the southeastern edge of the Facility. No BMPs were observed in place to capture the leaking oil/fluids or to prevent the leaking oil/fluids from discharging from the site during storm events.
- i. During the October 18, 2005 inspection, the Inspector observed a berm along the eastern perimeter of the Facility. The berm was not being maintained to act as a functional BMP, however, as the berm was cracked in several locations.
- j. During the October 18, 2005 inspection, the Inspector observed no BMPs in place along the northern perimeter of the Facility. The Facility's Stormwater Management Plan ("SWMP") stated that the entire perimeter would be bermed, however no berm was observed in place.
- k. During the October 18, 2005 inspection, the Inspector observed grease covered drums that were being stored along the northern perimeter of the Facility with no BMPs in place to prevent stormwater from contacting the drums before discharging from the site.
- l. During the October 18, 2005 inspection, the Inspector observed a detention pond on the southwest side of the Facility. An oily sheen was observed on the surface of the water in the pond and the liquid levels in the pond were at or very near capacity. The pond was not implemented to act as a functional BMP, however, as nothing was in place to remove oil from the pond before stormwater was allowed to discharge to the storm sewer.

13. Colorado Petroleum's failure to implement and maintain functional BMPs to protect stormwater quality at the Facility constitutes violation(s) of Part I. B. 3. b. of the Permit.

ORDER AND AGREEMENT

14. Based on the foregoing factual and legal determinations, pursuant to its authority under §§25-8-602 and 605, C.R.S., and in satisfaction of the civil penalties associated with the alleged violations cited herein and in the Notice of Violation / Cease and Desist Order / Clean-up Order (Number: SO-070514-1), the Division orders Colorado Petroleum to comply with all provisions of this Consent Order including all requirements set forth below.
15. Colorado Petroleum agrees to the terms and conditions of this Consent Order. Colorado Petroleum agrees that this Consent Order constitutes a notice of alleged violation and an order issued pursuant to §§25-8-602 and 605, C.R.S., and is an enforceable requirement of the Act. Colorado Petroleum also agrees not to challenge directly or collaterally, in any judicial or administrative proceeding brought by the Division or by Colorado Petroleum against the Division:
 - a. The issuance of this Consent Order;
 - b. The factual and legal determinations made by the Division herein; and
 - c. The Division's authority to bring, or the court's jurisdiction to hear, any action to enforce the terms of this Consent Order under the Act.
16. Notwithstanding the above, Colorado Petroleum does not admit to any of the factual or legal determinations made by the Division herein, and any action undertaken by Colorado Petroleum pursuant to this Consent Order shall not constitute evidence of fault by Colorado Petroleum with respect to the conditions of the Facility.

CIVIL PENALTY AND SUPPLEMENTAL ENVIRONMENTAL PROJECT

17. In addition to all other funds necessary to comply with the requirements of this Consent Order, Colorado Petroleum shall pay One Hundred One Thousand Four Hundred Seventy One Dollars (\$101,471.00) in the form of civil penalties and expenditures on a Supplemental Environmental Project ("SEP") in order to achieve settlement of this matter.
18. Based upon the application of the Division's Stormwater Civil Penalty Policy (January 25, 2007), and consistent with Departmental policies for violations of the Act, Colorado Petroleum shall pay Twenty Three Thousand Five Hundred Ninety One Dollars (\$23,591.00) in civil penalties. The Division intends to petition the Executive Director, or her designee, to impose the Twenty Three Thousand Five Hundred Ninety One Dollar (\$23,591.00) civil penalty for the above violation(s) and Colorado Petroleum agrees to make the payment within thirty (30) calendar days of the issuance of a Penalty Order by the Executive Director or her designee. Method of payment shall be by certified or cashier's check drawn to the order of the "Colorado Department of Public Health and Environment," and delivered to:

Michael Harris
Colorado Department of Public Health and Environment
Water Quality Control Division
Mail Code: WQCD-CAS-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530

19. Colorado Petroleum shall also perform the SEP identified below. Colorado Petroleum's total expenditure for the SEP shall not be less than Seventy Seven Thousand Eight Hundred Eighty Dollars (\$77,880.00).
20. Colorado Petroleum shall undertake the following SEP, which the Parties agree is intended to secure significant environmental or public health protection and improvements:
21. Colorado Petroleum shall spend no less than Seventy Seven Thousand Eight Hundred Eighty Dollars (\$77,880.00) on the implementation and completion of energy efficiency/pollution prevention upgrades at its relocated facility in Adams County, as further described in Attachment A. If Colorado Petroleum completes the energy efficiency/pollution prevention upgrades specified in Attachment A and does not expend the full Seventy Seven Thousand Eight Hundred Eighty Dollars (\$77,880.00), Colorado Petroleum may propose an alternate SEP for Division review and approval that accounts for the remaining balance. The alternate SEP proposal shall be submitted to the Division by June 1, 2011.
22. Colorado Petroleum hereby certifies that, as of the date of this Consent Order, it is not under any existing legal obligation to perform or develop the SEP. Colorado Petroleum further certifies that it has not received, and will not receive, credit in any other enforcement action for the SEP. In the event that Colorado Petroleum has, or will receive credit under any other legal obligation for the SEP, Colorado Petroleum shall pay Thirty Eight Thousand Nine Hundred Forty Dollars (\$38,940.00) to the Division as a civil penalty within thirty (30) calendar days of receipt of a demand for payment by the Division. Method of payment shall be as specified in paragraph 18 above.
23. The SEP must be completed to the satisfaction of the Division by June 1, 2011 and must be operated for the useful life of the SEP. In the event that Colorado Petroleum fails to comply with any of the terms or provisions of this Consent Order relating to the performance of the SEP, Colorado Petroleum shall be liable for penalties as follows:
 - a. Payment of a penalty in the amount of Thirty Eight Thousand Nine Hundred Forty Dollars (\$38,940.00). The Division, in its sole discretion, may elect to reduce this penalty for environmental benefits created by the partial performance of the SEP.
 - b. Colorado Petroleum shall pay this penalty within thirty (30) calendar days of receipt of written demand by the Division. Method of payment shall be as specified in paragraph 18 above.

24. Colorado Petroleum shall submit a SEP Completion Report to the Division by June 30, 2011. The SEP Completion Report shall contain the following information:
- a. A detailed description of the SEP as implemented;
 - b. A description of any operating problems encountered and the solutions thereto;
 - c. Itemized costs, documented by copies of purchase orders and receipts or canceled checks or other forms of proof of payment;
 - d. Certification that the SEP has been fully implemented pursuant to the provisions of this Consent Order; and
 - e. A description of the environmental and public health benefits resulting from implementation of the SEP (with quantification of the benefits and pollutant reductions, if feasible).
25. Failure to submit the SEP Completion Report with the required information, or any periodic report, shall be deemed a violation of this Consent Order.
26. Colorado Petroleum shall include the following language in any public statement, oral or written, making reference to the SEP: "This project was undertaken in connection with the settlement of an enforcement action taken by the Colorado Department of Public Health and Environment for violations of the Colorado Water Quality Control Act."

SCOPE AND EFFECT OF CONSENT ORDER

27. The Parties agree and acknowledge that this Consent Order constitutes a full and final settlement of the civil penalties associated with the violations alleged herein and in the May 14, 2007 Notice of Violation / Cease and Desist Order / Clean-up Order (Number: SO-070514-1).
28. This Consent Order is subject to the Division's "Public Notification of Administrative Enforcement Actions Policy," which includes a thirty-day public comment period. The Division and Colorado Petroleum each reserve the right to withdraw consent to this Consent Order if comments received during the thirty-day period result in any proposed modification to the Consent Order.
29. This Consent Order constitutes a final agency order or action upon the date when the Executive Director or her designee imposes the civil penalty following the public comment period. Any violation of the provisions of this Consent Order by Colorado Petroleum, including any false certifications, shall be a violation of a final order or action of the Division for the purpose of §25-8-608, C.R.S., and may result in the assessment of civil penalties of up to ten thousand dollars per day for each day during which such violation occurs.
30. Notwithstanding paragraph 16 above, the violations described in this Consent Order will constitute part of Colorado Petroleum's compliance history for purposes where such history is relevant. This includes considering the violations described above in assessing a penalty for any subsequent violations against Colorado Petroleum. Colorado Petroleum agrees not to challenge the use of the cited violations for any such purpose.

31. This Consent Order does not relieve Colorado Petroleum from complying with all applicable Federal, State, and/or local laws in fulfillment of its obligations hereunder and shall obtain all necessary approvals and/or permits to conduct the activities required by this Consent Order. The Division makes no representation with respect to approvals and/or permits required by Federal, State, or local laws other than those specifically referred to herein.

LIMITATIONS, RELEASES AND RESERVATION OF RIGHTS AND LIABILITY

32. Upon the effective date of this Consent Order, and during its term, this Consent Order shall stand in lieu of any other enforcement action by the Division with respect to civil penalties for the specific instances of violations cited herein and in the may 14, 2007 Notice of Violation / Cease and Desist Order / Clean-up Order (Number: SO-070514-1). The Division reserves the right to bring any action to enforce this Consent Order, including actions for penalties or the collection thereof, and/or injunctive relief.
33. This Consent Order does not grant any release of liability for any violations not specifically cited herein.
34. Nothing in this Consent Order shall preclude the Division from imposing additional requirements in the event that new information is discovered that indicates such requirements are necessary to protect human health or the environment.
35. Upon the effective date of this Consent Order, Colorado Petroleum releases and covenants not to sue the State of Colorado or its employees, agents or representatives as to all common law or statutory claims or counterclaims arising from, or relating to, the violations of the Act specifically addressed herein.
36. Colorado Petroleum shall not seek to hold the State of Colorado or its employees, agents or representatives liable for any injuries or damages to persons or property resulting from acts or omissions of Colorado Petroleum, or those acting for or on behalf of Colorado Petroleum, including its officers, employees, agents, successors, representatives, contractors, consultants or attorneys in carrying out activities pursuant to this Consent Order. Colorado Petroleum shall not hold out the State of Colorado or its employees, agents or representatives as a party to any contract entered into by Colorado Petroleum in carrying out activities pursuant to this Consent Order. Nothing in this Consent Order shall constitute an express or implied waiver of immunity otherwise applicable to the State of Colorado, its employees, agents or representatives.

NOTICES

37. Unless otherwise specified, any report, notice or other communication required under the Consent Order shall be sent to:

For the Division:

Colorado Department of Public Health and Environment
Water Quality Control Division / WQCD-CADM-B2
Attention: Michael Harris
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
Telephone: 303.692.3598
E-mail: michael.harris@state.co.us

For Colorado Petroleum:

Colorado Petroleum Products Company
4080 Globeville Road
Denver, CO 80216
Attention: Clark Thompson
Telephone: 303-294-0302
E-mail: clarkt@colopetro.com

MODIFICATIONS

38. This Consent Order may be modified only upon mutual written agreement of the Parties.

NOTICE OF EFFECTIVE DATE

39. This Consent Order shall be fully effective, enforceable and constitute a final agency action upon the date when the Executive Director or her designee imposes the civil penalty following closure of the public comment period referenced in paragraph 29. If the penalty as described in this Consent Order is not imposed, or an alternate penalty is imposed, this Consent Order becomes null and void.

BINDING EFFECT AND AUTHORIZATION TO SIGN

40. This Consent Order is binding upon Colorado Petroleum and its corporate subsidiaries or parents, their officers, directors, employees, successors in interest, and assigns. The undersigned warrant that they are authorized to legally bind their respective principals to this Consent Order. In the event that a party does not sign this Consent Order within thirty (30) calendar days of the other party's signature, this Consent Order becomes null and void. This Consent Order may be executed in multiple counterparts, each of which shall be deemed an original, but all of which shall constitute one and the same Consent Order.

FOR COLORADO PETROLEUM PRODUCTS COMPANY:



Date: 4-15-10

Clark Thompson, President

FOR THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT:



Date: May 3, 2010

Lori M. Gerzina, Manager
Compliance Assurance Section
WATER QUALITY CONTROL DIVISION



Received

FEB 22 2010

February 18, 2010

Colorado Department of Public Health and Environment
Water Quality Control Division / WQCD-B2
Compliance Assurance / Enforcement Program
Attention: Mr. Michael Harris
4300 Cherry Creek Dr. S.
Denver, CO 80246-1530

Water Quality Control

**Subject: Colorado Petroleum Products Company
CDPS Permit No. COR-010000
Certification No. COR-010684
NOV/CDO SO-070514-1
Supplemental Environmental Project
Revised Penalty Mitigation Proposal
CGRS Project # 1-230-457ac**

Dear Mr. Harris:

In accordance with the Colorado Department of Public Health and Environment (CDPHE) Supplemental Environmental Projects (SEP) policy, and in accordance with our previous understanding that the Colorado State University Industrial Assessment Center (IAC) would perform an energy audit for the existing and proposed new facilities for Colorado Petroleum Products (CPP), this revised SEP proposal is submitted for your review and consideration. The CSU IAC audit was performed in the fall of 2009 and the IAC report was issued on December 11, 2009. The SEP proposal herein submitted presents energy-savings projects recommended by the IAC audit that CPP would implement for consideration of corresponding valuation that may be applied for a penalty credit for the referenced NOV/CDO.

Included in this proposal are descriptions of specific energy-savings projects recommended in the IAC Audit that CPP would implement. Through implementation of IAC recommendations, CPP would effectively:

- Reduce electric energy consumption by over 190,000 kilowatt-hours per year; and
- Reduce peak electric demand by 685 kilowatt-months per year (approximately 57.1 kW per month).

Enforcement Action

The CDPHE Water Quality Control Division Clean Water Enforcement Unit issued a Notice of Violation/Cease and Desist/Clean-up Order (NOV/CDO) on May 14, 2007. The site associated with this enforcement action is:

Colorado Petroleum Products Company
4080 Globeville Road
Denver, CO 80216
Denver County

Project Name

This proposed Supplemental Environmental Project (SEP) is titled:

Colorado Petroleum Products Company
Energy Efficiency, Pollution Prevention, and Productivity Improvement
Supplemental Environmental Project

Project Manager

This project will be managed by Paul Sorensen, P.E. of CGRS, Inc. at the following mailing address:

CGRS, Inc.
1301 Academy Court
P.O. Box 1489
Fort Collins, CO 80522
(970) 493-7780

Mr. Sorensen will be responsible for submitting status reports.

CDPHE Contact Person

Mr. Michael Harris
Clean Water Enforcement Unit
Water Quality Control Division
(303) 692-3598

Geographical Area to Benefit From Project

The City and County of Denver, Adams County, and the South Platte River watershed would benefit from this project. In general, the implementation of energy-savings technologies benefits not only the immediate locale, but also the overall region through the reduction in energy consumption and the corresponding reduction in associated carbon dioxide emissions.

The NOV/CDO motivated Colorado Petroleum to evaluate the benefits of relocating their operation to a larger site at 5590 High Street in Adams County. The new site includes a total area of 11.5 acres with a 120,000 square foot building that will enclose the entire Colorado Petroleum operation indoors. The existing warehouse and facility at the High Street location is currently equipped with old and inefficient heating and lighting equipment that contribute to relatively high energy usage.

Type of Project

The proposed SEP fulfills the objectives of the department's SEP policy as follows:

1. **Pollution Prevention Project:** The SEP policy states that "a pollution prevention project is any project the substantially reduces or prevents the generation or creation of pollutants" through a number of actions. The first action listed in the SEP guidelines is "Source Reduction." This practice is precisely what Colorado Petroleum is proposing. By moving to the new location with all oil-handling operations conducted indoors, stormwater will no longer make contact with oil-handling materials and the physical "source" of oil-impacted stormwater runoff will be eliminated, and through implementation of energy savings technologies, the pollution "source reduction" would be in the form of an overall reduction in CO₂ emissions associated with energy

production. Efforts by CPP or any other entity that substantially reduces our collective energy consumption yields a direct benefit to the environment and helps to mitigate global warming and associated climate change.

2. **Pollution Reduction Projects:** A pollution reduction project is defined as “a project that goes substantially beyond compliance with permit or regulatory limitations to further reduce the amount of pollution discharged into the environment.” The proposed SEP meets this objective by reducing carbon emissions associated with energy production.
3. **Environmental Restoration and Protection Projects:** The objective of an environmental restoration and protection project is “to repair damage done to the environment beyond the need to remediate the damage done by the violation.” Observed “damage done to the environment” identified in the NOV/CDO included areas on the Colorado Petroleum property where “petroleum contaminated stormwater” and “oil contaminated soil” was observed. Additionally, grease covered drums being stored outside and an oily sheen on a detention pond on the southwest side of the facility were observed. Although not a specific component of the proposed SEP (energy efficiency), the relocation of their operation and the removal of the current above ground storage tanks and other oil contamination sources will help to facilitate this type of project.
4. **Environmental Assessments:** The SEP policy identifies two types of environmental assessment projects that have been approved: (a) pollution prevention assessments; and (b) development and implementation of environmental management systems.

Pollution prevention assessments are independent, systematic reviews of processes and operations conducted internally. The stated goal of such assessments is to identify opportunities to reduce the use, production, and generation of hazardous and other pollutants. While the proposed SEP may not “reduce the use, production, and generation of hazardous and other pollutants” *on-site*, it is indirectly applicable to Colorado Petroleum through the proven correlation between the implementation of energy savings technologies and the reduction of such pollutants on a regional/global basis through the associated decrease in the facility carbon footprint.

An environmental management system (EMS) is “a systematic, independent and documented verification process, conducted by a third party EMS auditor.” Energy-savings through implementation of the proposed SEP would be readily verified through a review of electricity and natural gas usage compared to projected use without such energy-savings systems in place. In fact, as discussed below, the Colorado State University Industrial Assessment Center conducted an independent energy audit of the facility and developed the energy-savings opportunities that will be implemented under the proposed SEP.

5. **Environmental Education and Training:** “Environmental education projects are intended to improve environmental behavior, raise the public’s awareness of actions it can take to prevent pollution, and promote environmental sustainability.” Through implementation of the energy-savings technologies recommended by the IAC, CPP will have in place highly visible renewable energy components that will become a center of educational attention for the company. CPP could set an example for other industries in the Denver metro area of what can be accomplished through innovation and through a strong desire to use renewable energy resources to the greatest extent practicable.

Project Description

The proposed project is based on recommendations developed through an energy audit of the facility conducted by the Colorado State University Industrial Assessment Center (CSU IAC). The CSU IAC is supported by the U.S. Department of Energy through the Office of Industrial Technologies. The objective of the CSU IAC is to "identify, evaluate, and recommend - through analyses of industrial plants' operations - the most significant opportunities to conserve energy, prevent pollution, and increase productivity, thereby reducing associated costs and increasing profits." The CSU IAC report identifies "economic benefits for energy efficiency, pollution prevention, and productivity improvement." Much of the following project description is taken directly from the CSU IAC report.

The IAC report presents two categories of recommendations: "1) recommendations associated with improving production operations; 2) recommendations for improving the building and grounds. The assessment recommendations (ARs) presented in this report would:

- reduce electric energy consumption by 193,900 kilowatt-hours per year.
- reduce peak electric demand by 685 kilowatt-months per year (about 57.1 kW per month).

The total cost savings for the ideas presented are \$20,630 per year. The total expected implementation cost is \$77,880. Thus, the simple payback period is about 3.8 years. The recommendations are listed in the table below and are presented in detail in Sections 3 and 4."

AR No	Assessment Recommendation	Resource Savings per year	Cost Savings per year	Implement Cost	Payback years
PRODUCTION-RELATED RECOMMENDATIONS					
1	Replace Existing Motors with Premium Efficiency Motors	6,300 kWh electricity 47 kW-mo. demand	\$1,000	\$8,310	8.3
BUILDING-RELATED RECOMMENDATIONS					
2	Replace 400W Metal Halide Fixtures with High Bay Fluorescent Fixtures and Lighting	132,700 kWh electricity 401 kW-mo. demand	\$12,360	\$26,680	2.2
3	Retrofit Existing 8 Foot T12 Fluorescent Fixtures with End-to-End 4 Foot T8	15,900 kWh electricity 72 kW-mo. demand	\$2,020	\$21,680	10.7
4	Install Photovoltaic Cells to Supply Power to the Plant	14,600 kWh electricity 77 kW-mo. demand	\$1,920	\$10,500	5.5
5	Replace Existing T12 Lighting with T8 Lighting	17,500 kWh electricity 69 kW-mo. demand	\$1,710	\$9,070	5.3
6	Install Energy Efficient LED Exit Signs	3,000 kWh electricity 4 kW-mo. demand	\$1,020	\$1,060	1.0
7	Replace Incandescent Lamps with Compact Fluorescent Lamps	3,900 kWh electricity 15 kW-mo. demand	\$600	\$580	1.0
TOTALS			\$20,630	\$77,880	3.8

Each of the above ARs is briefly described below, including corresponding proposed implementation tasks to be completed by CPP. For a more in depth analysis of these ARs, please refer to the CSU IAC Report which the IAC previously provided to the WQCD. For certain ARs, for example AR4, installation of photovoltaic cells, CPP may go beyond the IAC recommendations by installing a larger system.

1. AR1: Replace Existing Motors with Premium Efficiency Motors

Premium efficiency motors are available to replace older, less efficient motors. Energy efficient motors are constructed with better bearings and windings to reduce frictional and electric resistance losses. Depending on the horsepower rating of a given energy efficient motor, operating efficiencies may be from 1% to 10% higher than the operating efficiencies of the existing motors. In general, if the motor is larger in size, the efficiency increase will be smaller. Normally, a cost premium (or cost differential) must be paid for the energy efficient motors. Premium efficiency motors have an even higher efficiency than energy efficient motors and consequently are slightly more expensive than energy efficient motors.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>6,300 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$230 /yr</i>
<i>Estimated Peak Electric Demand Savings:</i>	<i>47 kW-mo./yr</i>
<i>Estimated Peak Electric Demand Cost Savings:</i>	<i>\$770 /yr</i>
<i>Estimated Total Cost Savings:</i>	<i>\$1,000 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$18,610</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$0</i>
<i>Utility Rebate:</i>	<i>\$10,300</i>
<i>Estimated Total Implementation Cost:</i>	<i>\$8,310</i>
<i>Simple Payback Period:</i>	<i>8.3 years</i>

Typically, a premium motor is installed when a motor fails and needs replacement. When a motor fails, three options are available; replacing the motor with a premium efficiency motor, replacing the motor with the same efficiency motor, and having the motor rewind thereby decreasing its efficiency. New motor rebates available from Xcel Energy provide incentive to replace certain motors immediately rather than to wait for burnout. The IAC audit provides a detailed list of motors that would qualify for the Xcel rebate.

Implementation tasks involve the CPP management decision to replace the listed motors with premium efficiency motors. No operational or process changes would be associated with this effort. Implementation costs and the payback period are summarized in the table below:

Implementation Costs and Payback Periods for Motor Replacement

Driven Equipment/ Location	Motor Size hp	Qty	Discounted Cost per motor	Total Cost	Xcel Energy Rebate per motor	Total Rebate	Total Cost	Total Cost Savings per year	Simple Payback years
Float Oil Pump - Worthington	75	1	\$5,295	\$5,295	\$2,250	\$2,250	\$3,045	\$203	15.0
North Tank Farm - 3.5" Worthington pump	30	1	\$2,202	\$2,202	\$1,000	\$1,000	\$1,202	\$103	11.7
New Bldg - D/C 2" Gould Pump	25	1	\$1,856	\$1,856	\$1,000	\$1,000	\$856	\$0	0.0
North Tank Farm Motor Oil Pump; 3" Blackmer Pump	15	1	\$1,170	\$1,170	\$750	\$750	\$420	\$43	9.8
North Tank Farm Red Line Pump; 4" Blackmer Pump	15	1	\$1,170	\$1,170	\$750	\$750	\$420	\$39	10.8
Pit Pump - 3" Viking Pump	10	1	\$759	\$759	\$500	\$500	\$259	\$81	3.2
South Tank Farm - Yard Pump; 3" Blackmer pump	10	1	\$759	\$759	\$500	\$500	\$259	\$67	3.9
North Tank Farm Hyd. Pump; 2.5" Viking pump	10	1	\$759	\$759	\$500	\$500	\$259	\$60	4.3
New Bldg - 2" Blackmer Pump	10	1	\$759	\$759	\$500	\$500	\$259	\$66	3.9
New Bldg - 2" Worthington Pump	10	2	\$759	\$1,518	\$500	\$1,000	\$518	\$154	3.4
New Bldg - New Qt Filler	10	1	\$759	\$759	\$500	\$500	\$259	\$76	3.4
Pit - Middle Pump; 2" Viking Pump	7.5	1	\$672	\$672	\$450	\$450	\$222	\$41	5.4
Tote Pump - 2" Graco Pump Next to Drum Filler	5	1	\$466	\$466	\$300	\$300	\$166	\$40	4.2
South Tank Farm - Antifreeze pump; 2" Viking pump	5	1	\$466	\$466	\$300	\$300	\$166	\$29	5.7
TOTALS		15		\$18,610		\$10,300	\$8,310	\$1,002	8.3

From the table, the cost of replacing selected motors with premium efficient motors will result in a total implementation cost of about \$8,310. The cost savings of about \$1,000/yr will pay for the implementation cost in about 8.3 years. However, it must be noted that the IAC recommendation for Premium Efficiency Motors does not include installation costs, nor does it include the requirement for explosion proof motors. Accordingly, the cost incurred by CPP to implement this recommendation will be slightly higher than as presented in the IAC report. Notwithstanding this fact however, CPP remains committed to implement this AR.

2. AR2: Replace 400W Metal Halide Fixtures with High Bay Fluorescent Fixtures

The existing 400W metal halide lamps in the plant could be replaced with high bay fluorescent fixtures, some of which could be fitted with lighting motion sensors for further savings. Savings will result from reduced expenditures for electric energy, peak demand, and labor costs. There are 96 metal halide high bay fixtures with 400W lamps in the warehouse area and 50 metal halide high bay fixtures in the plant of the new building that are expected to provide lighting for 2,600 h/yr. The power of each fixture, including ballast power, is 458W. New developments with fluorescent lighting, specifically high-output T5 lamps (lamps are 5 x 1/8" = 5/8" in diameter) and specially designed high-bay fluorescent fixtures, may provide a better option than 400W metal halide lamps. These fixture, contain four to eight very bright lamps in a smaller luminaire with high-efficiency reflectors that deliver almost all of the light downward.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>132,700 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$5,070 /yr</i>
<i>Estimated Peak Demand Savings:</i>	<i>401 kW-mo/yr</i>
<i>Estimated Peak Demand Cost Savings:</i>	<i>\$6,930 /yr</i>
<i>Recurring Savings for Lamp Replacement:</i>	<i>\$210 /yr - material</i>
	<i>\$150 /yr - labor</i>
<i>Estimated Total Savings:</i>	<i>\$12,360 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$41,100</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$5,100</i>
<i>Utility Rebate:</i>	<i>\$19,520</i>
<i>Total Estimated Implementation Cost:</i>	<i>\$26,680</i>
<i>Simple Payback Period:</i>	<i>2.2 years</i>

Initial replacement labor costs are the one-time costs to install each new high bay fluorescent fixture. This cost is assumed to be \$30 for each high-bay T5 fixture. The recurring labor cost for the existing and proposed lamps is the cost for maintenance personnel to replace lamps (in either the existing or proposed fixtures) after they burn out. This cost is assumed to be \$15/fixture. The basis for these costs is maintenance personnel at a rate of \$30/h. The implementation cost includes the equipment and labor costs required for the new lamps. Installation of the high bay fluorescent fixtures requires that the current fixtures be replaced. The high bay fluorescent fixtures cost \$205 each. The lamp cost (discounted) per fluorescent fixture (of four lamps) is \$13.20. The initial replacement labor costs are assumed to be \$30 for each fixture. The estimated implementation cost is calculated to be \$38,280. When including available rebates through Xcel totaling \$16,060, the net implementation cost decreases to \$22,220. With projected cost savings through implementation of this AR to be \$10,170 per year, a pay-back period of 2.2 years is projected.

The warehouse area is likely to be lightly occupied during production operations and when unoccupied, the lights are not expected to be turned off. Lighting unoccupied areas generates added electric energy costs for this facility. Motion sensors are an uncomplicated and efficient way to reduce this wasted energy. The cost of motion sensors is approximately \$75.00 each. Considering 15 minutes of installation time per motion sensor at a labor cost of \$30/h, the installation labor cost for each sensor is \$7.50. Thus, the total implementation cost is $96 \text{ sensors} \times (\$75.00 + \$7.50 - \$36.00) = \$4,460$. The cost savings of \$2,190/yr will pay for the total implementation cost in about 2.0 years.

3. AR3: Retrofit Existing 8 Foot T12 Fluorescent Fixtures with End-to-End 4 Foot T8 Retrofit Kits

The existing eight-foot, two-lamp fluorescent fixtures throughout the new building having 60W T12 (lamps are $12 \times 1/8" = 1 \frac{1}{2}"$ in diameter) lamps may be fitted with new end-to-end two-lamp total retrofit kit with normal ballast factor electronic ballasts and 32W T8 lamps (lamps are $8 \times 1/8" = 1"$ in diameter). Savings will result from reduced expenditures for electric energy, peak demand, and lamp replacement costs. At the new building, there are 181 eight-foot, two-lamp fluorescent fixtures with 60W T12 lamps in the production areas and the basement that are expected to provide lighting for 2,600 h per year, and another 18 of the same fixtures in the loading dock and freezer areas that are expected to provide light for 3,120 h per year. The total wattage per fixture is 126W for the two-lamp fixtures.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>15,900 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$590 /yr</i>
<i>Estimated Peak Electric Demand Savings:</i>	<i>72 kW-mo/yr</i>
<i>Estimated Peak Electric Demand Cost Savings:</i>	<i>\$1,190 /yr</i>
<i>Recurring Savings for Lamp Replacement:</i>	<i>\$210 /yr raw material savings \$30 /yr labor savings</i>
<i>Estimated Total Savings:</i>	<i>\$2,020 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$20,080</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$6,000</i>
<i>Estimated Utility Rebate:</i>	<i>\$4,400</i>
<i>Total Estimated Implementation Cost:</i>	<i>\$21,680</i>
<i>Simple Payback Period:</i>	<i>10.7 years</i>

The IAC report provides calculations that show the total implementation cost to be \$26,080. A rebate is available from Xcel Energy at \$22/fixture, or a total of 200 fixtures × \$22/fixture = \$4,400. Thus, the net cost after rebates is \$26,080 - \$4,400 = \$21,680. The cost savings of \$2,020/yr will pay for the implementation cost in about 10.7 years.

4. AR4: Install Photovoltaic Cells to Supply Power to the Plant

A 10 kW photovoltaic (PV) array could be installed on the roof of the warehouse of the new building to supply additional electricity to the plant during the day, thereby reducing the need for electric energy and demand. Energy and cost savings would result from alternative production of electricity. Using power from photovoltaic arrays is one way to take advantage of the plentiful sunshine in Colorado, and the economic incentives available from the Federal government to implement renewable energy technologies.

As documented in the CSU IAC report, energy and cost savings associated with this recommended PV system are summarized in the table below.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>14,600 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$560 /yr</i>
<i>Estimated Peak Demand Savings:</i>	<i>77 kW-mo/yr</i>
<i>Estimated Peak Demand Cost Savings:</i>	<i>\$1,360 /yr</i>
<i>Estimated Total Savings:</i>	<i>\$1,920 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$65,000</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$0</i>
<i>Utility Rebate:</i>	<i>\$54,500</i>
<i>Estimated Implementation Cost:</i>	<i>\$10,500</i>
<i>Simple Payback Period:</i>	<i>5.5 years</i>

Current technology PV cells are about 10 to 12% efficient in converting sunlight into electric energy (the rest escapes as heat), while up to 14% is possible for more costly cells. Payback periods are typically 10 years for user installed residential systems, and over 20 years for commercial installations. However, rebates are in place in Colorado via Amendment 37 that provide a cash rebate of \$2.00/W (based on the total PV system power rating), and Renewable Energy Credit (REC) of \$1.50/W as a one-time payment for the system's lifetime, for a total initial credit of \$3.50/W. In addition, a Federal Treasury Energy Grant of 30% (starting 2009) based on the total cost of the installation is available, and are uncapped for commercial/business systems. The effect of credits and tax incentives may be able to cover 70% of the system cost, and thus could make the payback appear reasonable.

Implementation will require the purchase and installation of a 10 kW system. In general, a 10kW system would cover about 1,000 ft² of roof space, consisting of about 60 panels.

The implementation cost includes the installed cost of the system less utility rebates, renewable energy credits, and a 30% Federal grant. The CSU IAC report calculates the installation cost at \$65,000. The total implementation cost is the installation cost minus rebates and credits, including a Federal Grant (\$19,500) and utility credits (\$35,000) for a net installed implementation cost of \$10,500. The IAC report states that the total cost savings of \$1,920/year will pay for the net total implementation cost in about 5.5 years.

The CSU IAC cannot recommend or endorse any specific products or services, but they do provide contact information for a number of solar energy providers. Believing that a larger photovoltaic system may be better for this facility, CPP did contact one such recommended provider to get a quote for a much larger system. Whereas CSU IAC recommends a 10kW system, CPP received a quote for a 102.6 kW roof-mounted PV system. The system quoted consists of 380 270-watt ET Solar photovoltaic panels, one 100-kW inverter, a roof mounting system and all components for a complete turnkey installation. The quoted price is \$568,045. Although this cost may be prohibitive at the current time, even considering rebates and credits, CPP demonstrates its intent to pursue this renewable energy source in the future, particularly with SEP approval.

5. AR5: Replace Existing T12 Lighting with T8 Lighting

The existing four-foot fluorescent four-lamp and two-lamp fixtures throughout the production and office areas with 34W T12 lamps may be fitted with new premium efficient electronic ballasts and 28W T8 lamps. Savings will result from reduced expenditures for electric energy, peak demand, and lamp replacement costs. At the new building, there are 104 four-lamp fixtures in office spaces that are projected will provide lighting 3,120 h/yr. In the plant there are six four-lamp fixtures and 22 two-lamp fixtures that will operate for 2,600 h/yr. Each fixture contains 34W T12 lamps. All fixtures are assumed to be powered by a Philips Advance R-2S40-TP (or comparable) magnetic, rapid start ballast that powers two lamps per ballast (rated at 0.9 ballast factor; 0.63 amps at 120V or 72W per ballast).

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>17,500 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$640 /yr</i>
<i>Estimated Peak Electric Demand Savings:</i>	<i>69 kW-mo/yr</i>
<i>Estimated Peak Electric Demand Cost Savings:</i>	<i>\$1,140 /yr</i>
<i>Recurring Savings for Lamp Replacement:</i>	<i>(\$100) /yr - material \$30 /yr - labor</i>
<i>Estimated Total Savings:</i>	<i>\$1,710 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$9,990</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$1,980</i>
<i>Estimated Utility Rebate:</i>	<i>\$2,900</i>
<i>Total Estimated Implementation Cost:</i>	<i>\$9,070</i>
<i>Simple Payback Period:</i>	<i>5.3 years</i>

The initial replacement ballast labor costs include costs to install new electronic ballasts and are assumed to be \$15 for each fixture, based on 30 minutes of labor per fixture for maintenance personnel at a rate of \$30/h. The recurring labor cost is the cost for maintenance personnel to replace all lamps in an existing or proposed fixture after they have burned out. This cost is assumed to be 2 minutes per lamp or \$1/lamp using a labor rate of \$30/h. Facility personnel can vary these costs and times as needed if these rates change.

Thus, the recurring cost is the cost of lamps and lamp replacement labor over the life of each lamp. For example, for the existing four-lamp fixtures, the recurring cost is equal to a lamp cost of \$1.95 per lamp × 4 lamps = \$7.90 per fixture plus a replacement labor cost of \$4.00 per fixture or \$11.90/fixture. These recurring costs are considered for the life of the lamps, but are counted as annual savings or costs.

The energy savings through implementation of AR5 is projected by the CSU IAC to be 17,500 kWh/year, with an associated energy cost savings of \$640/yr. The IAC projects the total implementation cost to be \$11,970. With an estimated implementation cost of \$9,070, and with the IAC-estimated cost savings of \$1,710/yr, the IAC projects an approximate 5.3 year pay-back period.

6. AR6: Install Energy Efficient LED Exit Signs

The existing exit signs with compact fluorescent lamps should be replaced with energy efficient exit signs that utilize LED lamps. These LED exit signs use less energy than standard lamps and result in reduced lamp and labor costs for lamp replacements. Based on a survey conducted during the site visit, there are 14 exit signs in the offices. There are 11 exit signs (4 upstairs and 7 downstairs) with two 15W incandescent lamps in each sign and three exit signs with two 5W compact fluorescent lamps in each sign. The exit signs can be replaced with plastic red LED exit signs. LED replacement fixtures offer a longer life than the compact fluorescent fixtures currently in use (10,000 hours for compact fluorescent lamps and 219,000 for LED lamps). The LED replacements also use less power per fixture while meeting specifications on light output, offering substantial energy savings.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>3,000 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$110 /yr</i>
<i>Estimated Electric Demand Savings:</i>	<i>4 kW-mo/yr</i>
<i>Estimated Electric Demand Cost Savings:</i>	<i>\$70 /yr</i>
<i>Recurring Savings for Lamp Replacement:</i>	<i>\$460 /yr - material \$380 /yr - labor</i>
<i>Estimated Total Savings:</i>	<i>\$1,020 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$1,030</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$200</i>
<i>Utility Rebate:</i>	<i>\$170</i>
<i>Total Estimated Implementation Cost:</i>	<i>\$1,060</i>
<i>Simple Payback Period:</i>	<i>1.0 years</i>

The implementation cost for this recommendation includes the equipment and labor costs required for the new lamps. Using the Grainger's price, plastic LED exit signs can be purchased for \$73.20 each. Labor costs are estimated as 30 minutes per exit sign \times \$30/h for maintenance personnel = \$15/exit sign. Thus, the implementation cost is \$88.20 per exit sign. The total implementation cost for 14 fixtures is 14 fixtures \times \$88.20/fixture = \$1,230. A rebate is available from Xcel Energy for replacement of incandescent exit signs at a rate of \$15/fixture, or a total of 11 fixtures \times \$15/fixture = \$170. Thus, the net cost after rebates is \$1,230 - \$170 = \$1,060. The cost savings of \$1,020/yr will pay for the implementation cost in 1.0 year.

7. Replace Incandescent Lamps with Compact Fluorescent Lamps

The 32 existing 65W incandescent spotlights in the offices of the new building could be replaced with compact fluorescent lamps. Savings will result from reduced expenditures for electric energy, peak demand, and labor costs. In the new building, there are 32 65W incandescent spotlights in the offices that are projected will operate for 3,120 h/yr. New developments with fluorescent lighting, specifically compact fluorescent lamps, may provide a better option than incandescent lamps. These lamps use less energy while providing a similar light level. The energy savings from replacing incandescent lamps with compact fluorescent lamps can exceed 50% (depending on how inefficient the lamps being replaced are). For example, a 65W incandescent lamp can be replaced with a PAR38 Compact Fluorescent that consumes 26 watts including the ballasts. Due to the higher lamp efficacy (lumens per watt) of the compact fluorescent lamps, the light output of the compact fluorescent will exceed that of the incandescent lamp.

RESULTS SUMMARY	
<i>Estimated Electric Energy Savings:</i>	<i>3,900 kWh/yr</i>
<i>Estimated Electric Energy Cost Savings:</i>	<i>\$140 /yr</i>
<i>Estimated Peak Demand Savings:</i>	<i>15 kW-mo/yr</i>
<i>Estimated Peak Demand Cost Savings:</i>	<i>\$250 /yr</i>
<i>Recurring Savings for Lamp Replacement:</i>	<i>\$170 /yr - material</i> <i>\$40 /yr - labor</i>
<i>Estimated Total Savings:</i>	<i>\$600 /yr</i>
<i>Estimated Implementation Capital Cost:</i>	<i>\$550</i>
<i>Other Estimated Implementation Costs:</i>	<i>\$30</i>
<i>Utility Rebate:</i>	<i>\$0</i>
<i>Total Estimated Implementation Cost:</i>	<i>\$580</i>
<i>Simple Payback Period:</i>	<i>1.0 year</i>

Installation of the compact fluorescent lamps requires the current lamps be replaced. The fluorescent lamps cost \$17.06 each. The initial replacement labor costs are assumed to be \$1 for each fixture. Thus, the estimated implementation cost is \$580. The annual cost savings of \$600/yr would pay for the implementation cost in 1.0 year.

Expected Environmental and/or Public Health Benefits

As documented in the CSU IAC report, reductions in air pollution are projected due to the proposed energy efficiency opportunities. In general the electric energy savings will decrease carbon dioxide (CO₂), carbon (C), sulfur dioxide (SO₂), and oxides of nitrogen (NO_x) emissions at the utility's power generating station. Natural gas savings will decrease mainly CO₂ emissions at the plant. The emission reductions are products of the energy reductions and the following emissions factors:

- For Electric Energy Savings:
 - CO₂ reductions of 1.88308 lbs/kWh
 - SO₂ reductions of 0.00232 lbs/kWh
 - NO_x reductions of 0.00281 lbs/kWh
 - CH₄ reductions of 0.00002288 lbs/kWh
- For Natural Gas Energy Savings:
 - CO₂ reductions of 113 lbs/MMBtu

The emission factors for electric power generating plants are based on data available from the U.S. Environmental Protection Agency's Emissions & Generation Resource Integrated Database (eGRID) available at <http://www.epa.gov/cleanenergy/egrid/index.htm>. The emission factors above are specifically for all generating stations in the Rocky Mountain Power Authority for Western Electricity Coordinating Council (WECC) data year 2005 and include the mix of generation modes (hydroelectric

power plants, coal-burning power plants, gas-fired power plants, etc.). For the total electric energy savings of 193,900 kWh/yr presented in the CSU IAC report, the emissions reductions are estimated as follows:

- CO₂: 365,100 lbs/yr (182.6 tons CO₂/yr);
- SO₂: 450 lbs SO₂/yr;
- NO_x: 550 lbs NO_x/yr; and
- CH₄: 4 lbs CH₄/yr.

The expected environmental and public health benefits are significant. Moreover, through implementation of this proposed SEP, CPP will become an example for other industries in the Denver-metro area of what can be accomplished through the implementation of renewable energy technologies and energy savings management decisions.

Project Budget

The projected budget to implement the recommendations of the CSU IAC report is \$77,880.

Project Schedule

Colorado Petroleum is currently working to resolve remaining details with respect to a move of this magnitude. Implementation of energy savings technologies presented herein will proceed as quickly as possible. Colorado Petroleum anticipates that relocation activities will be initiated by mid-2010.

Reporting

Project reports will be submitted to CDPHE as required to allow for verification of project implantation, to verify and document the proper expenditure for SEP funds, and to evaluate the effectiveness and benefits of the SEP. An SEP completion report will be submitted within 2 months of project completion. WQCD will be kept informed of implementation progress through the submittal of regular progress reports.

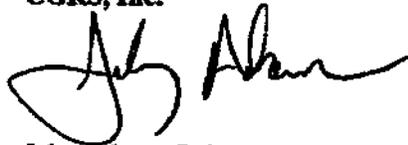
We look forward to receiving your comments regarding this proposed SEP project, and further look forward to implementing the proposed actions. Please contact Mr. Joby Adams or myself at (970) 493-7780 if you have any comments, questions, or required additional information.

Sincerely,
CGRS, Inc.



Paul Sorensen, P.E.
Project Manager/Engineer

Reviewed by,
CGRS, Inc.

A handwritten signature in black ink, appearing to read "Joby Adams". The signature is fluid and cursive, with a large initial "J" and "A".

Joby Adams, P.G.
Principal/Hydrogeologist

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