San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

San Joaquin Valley Air Pollution Control District

2011 Annual Report
Indirect Source Review Program

Reporting Period:
March 1, 2010 to June 30, 2011

San Joaquin Valley Unified Air Pollution Control District

Governing Board
December 2012

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I. EXECUTIVE SUMMARY

This "*2011 Annual Report on the District's Indirect Source Review Program"* was prepared by the San Joaquin Valley Unified Air Pollution Control District. District Rule 9510, Indirect Source Review (ISR), was adopted by the District's Governing Board to reduce the impacts of growth in emissions resulting from new land development in the San Joaquin Valley. Rule 9510 is a commitment in the EPA-approved PM_{10} Attainment Demonstration Plan. The objective of the rule is to reduce emissions of NOx and PM_{10} associated with construction and operational activities of development projects occurring within the San Joaquin Valley. When it was adopted, District staff anticipated that the rule would reduce development project impacts on air quality by approximately 10.1 tons per day (NOx+PM_{10}) by 2010. This projection was made before the downturn in the global economy and construction in the US, California, and the San Joaquin Valley, and we now project 10.5 tons per day of emissions reductions will have been achieved by 2012.

District Rule 9510 applies to new development projects that would equal or exceed specific size limits called "applicability thresholds". The applicability thresholds were established at levels intended to capture projects that emit at least two tons of nitrogen oxides (NOx) or two tons of particulate matter smaller than ten microns in aerodynamic diameter (PM_{10}) per year. The rule contains provisions exempting stationary source projects that are subject to the District's stationary source permitting requirements.

Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases, or pay off-site mitigation fees. One hundred percent (100%) of all offsite mitigation fees are used by the District's Emission Reduction Incentive Program (ERIP) to fund emission reduction projects, achieving emission reductions in behalf of the project. Additionally, developers pay an administrative fee equal to four percent (4%) of the required off-site fees. This fee is to cover the District's cost of administering the off-site emission reduction program.

The period covered by previous ISR annual reports was from March 1st of a specific year through the end of February of the following year. This reporting period was inconsistent with the District's overall fiscal year (July 1st- June 30th) reporting processes, and was creating some confusion among some interested stakeholders. To avoid future confusion and streamline the ISR annual reporting process, the annual reporting period for the ISR program is being modified to cover the period from July 1st through the June 30th, consistent with the District fiscal year period. Consequently, for this ISR report, the transitional reporting period will be from March 1st, 2010 through June 30th, 2011 (a 16-month period).

For the 2010-2011 ISR annual reporting period the District's ISR account held a beginning balance of $9,796,629 (including mitigation funds from "Voluntary Emission Reduction Agreements, or VERAs, as discussed in this report). During this reporting period, the District received off-site mitigation fees totaling $1,415,854 resulting in a grand total of $11,097,148 available funds after refunds. The District funded off-site

emission reduction projects totaling $2,048,459 leaving an unexpended balance of $9,048,689. This unexpended balance is expected to be committed to projects during the coming year. Projects funded by the District during this report period achieved emission reductions totaling 1,166.9 tons NOx and 42.4 tons PM_{10}, for a combined total of 1,209.3 tons of reductions and a cost effectiveness of $3,133 per ton.

Compared to the 2009-2010 reporting period, the ISR program experienced a 22.4% increase in Air Impact Assessment (AIA) applications submitted to the District on a monthly average basis: 186 applications received during the 16 months of this reporting period versus 114 received during the previous year. In the meantime, compared to the previous reporting period, the ISR/VERA program encountered a 39.4% increase on a monthly average basis of the amount of off-site mitigation fees collected: $1,415,854 collected during the 16 months of this reporting period compared to $761,782 collected last year. These trends are attributable to the stabilization and the beginning of the rebound of the construction industry in the San Joaquin Valley.

II. INTRODUCTION

The District's population increased by 22% between 1990 and 2000 and 24% between 2000 and 2010, and California's Department of Finance has projected that the San Joaquin Valley Air Basin (SJVAB) will experience an overall increase in population of an additional 26% increase between 2010 and 2020. Population growth results in increased area source emissions from activities such as consumer product use, fuel combustion, and landscape maintenance. Additionally, the total number of vehicle miles traveled (VMT) increases at an even faster rate than population growth. The projected growth in these so called "indirect source" emissions erodes the benefits of emission reductions achieved through the District's stationary source program and the state and federal mobile source controls.

The District has longstanding statutory authority to regulate indirect sources of air pollution. Pursuant to this authority, the District made a federally enforceable commitment to regulate indirect sources when it adopted its PM_{10} Attainment Plan in June 2003. Subsequently, the California State Legislature passed Senate Bill 709, Florez, in the fall of 2003, which Governor Gray Davis subsequently signed and codified into the Health and Safety Code in §40604. This additional legislation required the District to adopt, by regulation, a schedule of fees to be assessed on area wide or indirect sources of emissions that are regulated by the District.

District Rule 9510 (Indirect Source Review) was adopted by the District's Board on December 15, 2005, and became effective March 1, 2006. District Rule 9510 (ISR) was adopted by the District's Board to reduce the impacts of growth in emissions resulting from new land development in the San Joaquin Valley. The rule applies to new residential and non-residential development projects, including transportation and transit projects, which equal or exceed established applicability thresholds. The applicability thresholds are established at levels intended to capture projects that emit at least two

tons of nitrogen oxides (NOx) or two tons of particulate matter smaller than ten microns in aerodynamic diameter (PM_{10}) per year. Upon full implementation, it is anticipated that the rule will reduce development project impacts on air quality by 10.1 tons per day ($NOx+PM_{10}$).

Developers of projects subject to ISR must reduce emissions occurring during construction and operational phases, or pay off-site mitigation fees. One hundred percent of all offsite mitigation fees are used by the District's Emission Reduction Incentive Program (ERIP) to fund emission reduction projects, achieving emission reductions in behalf of the project. Additionally, developers pay an administrative fee equal to four percent (4%) of the required off-site fees. This fee is to cover the District's cost of administering the off-site emission reduction program.

This report was prepared pursuant to provisions of Rule 9510 that require the District to prepare an annual report regarding expenditure of received funds and achieved emission reductions. Pursuant to Rule 9510, Section 10.4, the annual report should include the following:

- Total amount of Off-Site Fees received;
- Total monies spent;
- Total monies remaining;
- Any refunds distributed;
- A list of all projects funded;
- Total emissions reductions realized; and
- The overall cost-effectiveness factor for the projects funded.

III. IMPLEMENTATION

District Rule 9510 (Indirect Source Review)

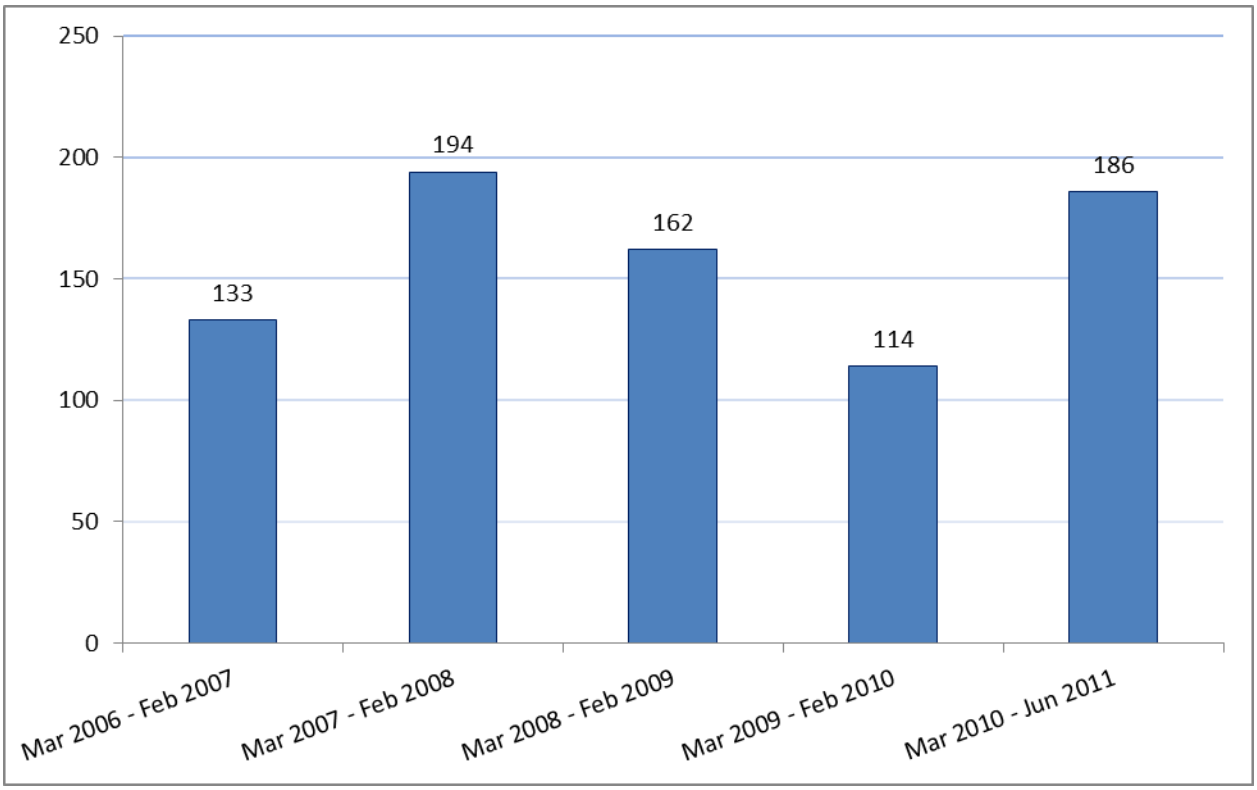
Through implementation of the ISR rule, District staff is seeing positive changes in development practices. Since adoption of the rule, developers have voluntarily begun to incorporate many air-friendly design changes into their projects. For instance, significant reductions in emissions have occurred through the use of cleaner construction equipment. In 2006, the first year of implementation, only 14.3% of approved projects reduced construction exhaust impacts through use of construction equipment that is cleaner than the state fleet average. During the 2011 reporting period, the percentage of projects for which the use of "clean construction equipment" has been proposed remained high, at approximately 50%.

Another noteworthy change is that developers of large distribution centers reduced operational impacts through voluntarily committing to use newer, heavy-heavy duty on-road fleet vehicles and maintaining a fleet replacement schedule that ensures older vehicles are replaced in a timely manner. In addition, many lesser but still cumulatively significant reductions in emissions have been garnered by a whole range of effective

design principles, like installation of solar power, integrated mixed-use development design, bike lanes, high-efficiency housing design, and many others.

A summary of Air Impact Assessment (AIA) applications received since 2006, the first year of implementation, is presented in Figure 1 below. Compared to the 2009-2010 reporting period, the ISR program experienced a 22.4% increase in Air Impact Assessment (AIA) applications submitted to the District on a monthly average basis: 186 applications received during the 16 months of this reporting period versus 114 received during the previous year. This trend is attributable to the stabilization and the beginning of the rebound of the construction industry in the San Joaquin Valley with plans for future constructions.

Figure 1: Number of ISR Applications Received From 2006 to June 30, 2011



Compared to the previous reporting period, the amount of ISR off-site mitigation fees collected on a monthly average basis decreased by a 34.9%: $661,438 collected during the 16 months of this reporting period compared to $761,782 collected last year. This trend is attributable to the continued decline in the current new housing and commercial development. The 22.4% increase of ISR applications received during this reporting period compared to the previous year, on a monthly basis, will show a positive impact on future amount of ISR off-site mitigation fees received by the District.

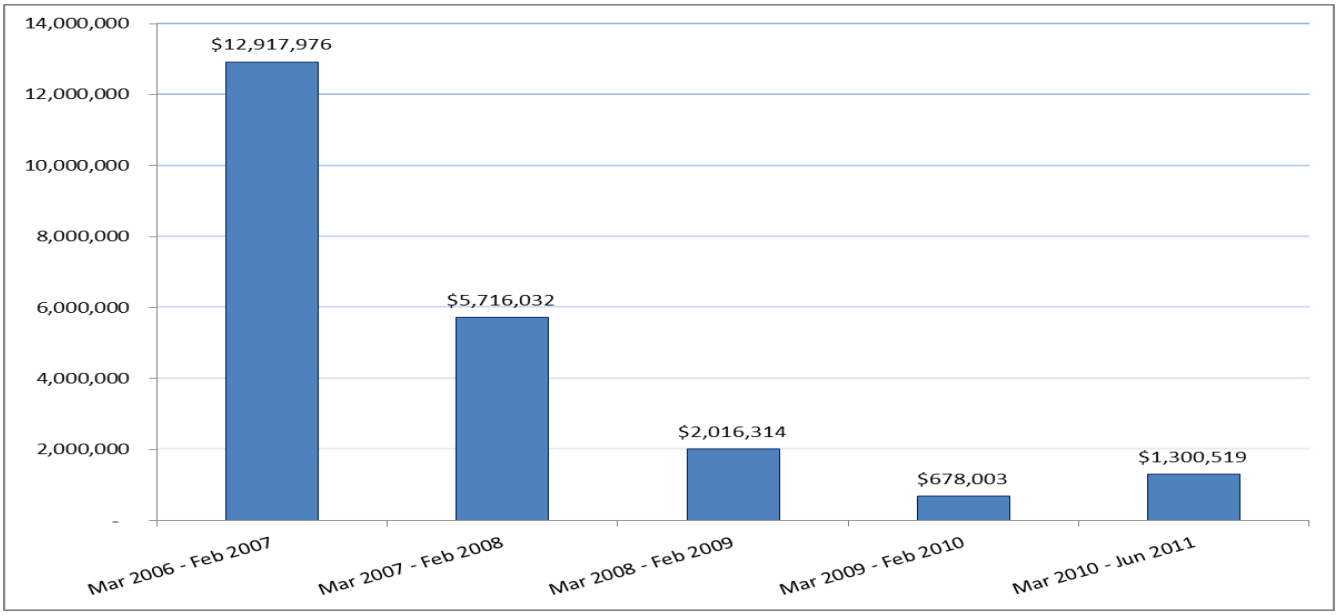
Voluntary Emission Reduction Agreements

A Voluntary Emission Reduction Agreement (VERA) is an air quality mitigation measure by which a developer voluntarily enters into a contractual agreement with the District to reduce a development project's impact on air quality beyond that achieved by compliance with District Rule 9510. By fully mitigating the project's impact on air quality, a developer can address one of the issues that have led to California Environmental Quality Act (CEQA) legal challenges to development projects within the San Joaquin Valley Air Basin.

Implementation of a VERA is complementary to ISR; project emissions are characterized, mitigation funds are paid to the District, the District administers the funds to secure the required emission reduction projects. For development projects subject to ISR, the developer must also comply with applicable rule provisions. To avoid double counting, emission reductions achieved through implementation of a VERA are credited towards satisfying ISR requirements. This report therefore includes revenues and emission reductions achieved through the VERA process.

As presented in Figure 2 below, compared to the previous reporting period, the ISR/VERA program encountered a 43.9% increase in the amount of off-site mitigation fees collected after refunds on a monthly average basis: $1,300,519 during the 16 months of this reporting period compared to $678,003 from last year. This trend is attributable to the stabilization and the beginning of the rebound of the construction industry in the San Joaquin Valley as discussed above.

Figure 2: ISR/VERA Program Off-site Mitigation Fees Received from 2006 to June 30, 2011



IV. FISCAL SUMMARY

As presented in Table 1 below, the ISR/VERA off-site mitigation fee account held a beginning balance of $9,796,629 in March 2010. During this reporting period, the District received off-site mitigation fees totaling $1,415,854 resulting in a grand total of available fees of $11,097,148 for this reporting period. The District funded off-site emission reduction projects totaling $2,048,459 leaving an unexpended balance of $9,048,689. The District expects to commit this unexpended balance to emission reduction projects during the coming year.

Table 1: ISR/VERA Fiscal Summary (March 1, 2010 – June 30, 2011)

ISR/VERA Fiscal Summary	ISR	VERA	Total
Beginning Balance	$9,169,616	$627,013	$9,796,629
Off-Site Mitigation Fees Collected	$661,438	$754,416	$1,415,854
Off-Site Mitigation Fees Refunded	-$33,517	-$81,818	-$115,335
Off-Site Mitigation Fees Available after Refunds	$627,921	$672598	$1,300,519
Available Balance	$9,797,537	$1,299,611	$11,097,148
Amount Spent	-$1,758,259	-$290,200	-$2,048,459
Ending Balance	$8,039,278	$1,009,411	$9,048,689

V. EMISSIONS REDUCTION SUMMARY

Achieved Off-Site Emission Reductions

During this reporting period, the District used ISR and VERA fees to fund 88 emission reduction projects affecting 97 units. The vast majority of funded projects consisted of replacement of diesel powered agricultural tractors. In addition to the replacement of tractors, additional emission reductions were achieved by re-powering various types of diesel powered equipment such as agricultural irrigation pumps. Overall, emission reduction projects achieved total reductions of 1,166.9 tons NOx and 42.4 tons PM_{10}, for a combined total of 1,209.3 tons and a cost effectiveness of $3,133 per ton (Table 2). Additionally, funded projects reduced emissions of reactive organic gases (ROG) by 2.8 tons.

The achieved cost effectiveness for this reporting period is $3,133 per ton of pollutant reduced (NOx and PM_{10} combined), somewhat higher than the cost effectiveness

achieved during the previous reporting period ($2,264 per ton). This increase is attributable to the volume of projects funded during this reporting period compared to the previous year where only few projects were funded, making this reporting period more representative of the actual cost of agricultural tractors replacement.

A complete list of all projects funded is presented in Appendix A.

Table 2: ISR/VERA Off-Site Emission Reductions (March 1, 2010 – June 30, 2011)

Achieved Emission Reductions (Tons)				Amount Spent ($)	Cost Effectiveness ($/Ton)
Source	**NOx**	**PM_{10}**	**Total**		
ISR	1,119.6 *tons*	41.4 *tons*	1,161.0 *tons*	$1,758,259	$2,232*/ton*
VERA	47.3 *tons*	1.0 *tons*	48.3 *tons*	$290,200	$10,166*/ton*
Grand Total	**1,166.9 *tons***	**42.4 *tons***	**1,209.3 *tons***	**$2,048,459**	**$3,133*/ton***

Projected Emission Reductions

Projected emission reductions are a combination of emission reductions to be achieved in the future through implementation of project design elements at full project build out and through funding off-site emission reductions projects, using off-site mitigation fees. For this reporting period, implementation of ISR resulted in combined projected on-site and off-site emission reductions totaling 1,774.8 tons of NOx and 597.1 tons of PM_{10} (Table 3).

Table 3: Emission Reductions from Approved ISR Projects (March 1, 2010 – June 30, 2011)

Projected Emission Reductions (Tons)			
Source	**NOx**	**PM_{10}**	**Total**
On-site Emission Reductions	1,473.6 *tons*	360.2 *tons*	**1,833.8** *tons*
Off-site Emission Reductions	301.2 *tons*	236.9 *tons*	**538.1** *tons*
Total	**1,774.8 *tons***	**597.1 *tons***	**2,371.9 *tons***

APPENDIX A

List of all emission reduction projects funded by the ISR/VERA Program

EMISSION REDUCTIONS PROJECTS
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Project #	Project Type	Unit	NOx (Tons/Project life)	PM (Tons/Project life)
C-2721	Agricultural Tractor	1	14.000	0.430
C-3124	Agricultural Tractor	1	19.000	0.680
C-3026	Agricultural Tractor	1	18.300	0.650
C-2710	Agricultural Tractor	1	14.500	0.730
C-2709	Agricultural Tractor	1	14.500	0.730
C-2705	Agricultural Tractor	1	9.700	0.460
C-2825	Agricultural Tractor	1	31.700	1.310
C-3175	Agricultural Tractor	1	19.600	0.640
C-3182	Loader	1	16.300	0.550
C-3180	Agricultural Tractor	1	21.800	0.700
C-3197-A	Agricultural Tractor	1	19.500	0.550
C-2764	Agricultural Tractor	1	8.700	0.250
C-3106-A	Agricultural Tractor	1	14.500	0.700
C-2978-A	Agricultural Tractor	1	6.700	0.280
C-3195-A	Agricultural Tractor	1	21.600	0.770
C-3229-A	Agricultural Tractor	1	15.800	0.620
C-2785	Agricultural Tractor	1	8.400	0.280
C-2977	Agricultural Tractor	1	6.400	0.230
C-3198-A	Agricultural Tractor	1	53.800	1.810
C-2693	Agricultural Tractor	1	13.400	0.420
C-2834	Agricultural Tractor	1	9.900	0.310
C-3021	Agricultural Tractor	1	18.800	0.900
C-2733-A	Agricultural Tractor	1	2.900	0.140
C-2917	Agricultural Tractor	1	10.100	0.480
C-3036-A	Agricultural Tractor	1	9.900	0.320
C-3079-A	Agricultural Tractor	1	27.900	0.900
C-3080-A	Agricultural Tractor	1	26.300	0.950
C-3170-A	Agricultural Tractor	1	16.100	0.770
C-3166-A	Agricultural Tractor	1	12.800	0.610
C-3174-A	Agricultural Tractor	1	16.100	0.770

S-1797	Agricultural Tractor	1	14.600	0.520
S-1798	Agricultural Tractor	1	17.100	0.610
S-1860-A	Agricultural Tractor	1	23.200	1.070
S-1856	Agricultural Tractor	2	18.000	0.630
S-1744-A	Agricultural Tractor	1	9.200	0.610
S-1837-A	Agricultural Tractor	1	9.300	0.330
C-3148	Agricultural Tractor	1	18.500	0.530
C-2872-A	Agricultural Tractor	1	12.900	0.420
C-3149	Agricultural Tractor	1	18.900	0.550
C-2794	Agricultural Loader	1	17.500	0.550
C-3179	Agricultural Tractor	1	7.300	0.350
C-3097	Agricultural Tractor	1	18.700	0.650
N-1323	Agricultural Tractor	1	21.700	0.670
N-1360	Agricultural Tractor	1	2.800	0.130
N-1389	Agricultural Tractor	1	14.500	0.580
N-1297	Agricultural Tractor	1	7.900	0.280
N-1586-A	Agricultural Tractor	1	6.700	0.210
N-1366	Agricultural Tractor	1	22.200	0.720
N-1459	Agricultural Tractor	1	26.800	0.560
N-1527	Agricultural Tractor	1	9.100	0.340
N-1611	Agricultural Tractor	1	18.400	0.670
N-1648	Agricultural Tractor	1	31.800	0.950
N-1651	Agricultural Tractor	1	18.200	0.650
N-1337-A	Agricultural Tractor	2	11.500	0.410
N-1485	Agricultural Tractor	1	16.700	0.540
N-1467-A	Agricultural Tractor	1	12.200	0.400
N-1466-A	Agricultural Tractor	1	6.500	0.290
N-1488	Agricultural Tractor	1	12.000	0.490
N-1489	Agricultural Tractor	1	7.000	0.200
N-1490	Agricultural Tractor	1	10.600	0.400
N-1492	Agricultural Tractor	1	8.000	0.300
N-1504	Agricultural Tractor	1	13.400	0.430
N-1398	Agricultural Tractor	1	3.400	0.230
N-1397	Agricultural Tractor	1	6.200	0.290
N-1312	Agricultural Tractor	1	3.900	0.190
N-1484	Agricultural Tractor	1	8.700	0.410
N-1616	Agricultural Tractor	1	12.100	0.570
N-1387-A	Agricultural Tractor	1	3.000	0.180
N-1395	Agricultural Tractor	1	1.800	0.110
N-1399	Agricultural Tractor	1	4.000	0.200
N-1559	Agricultural Tractor	1	9.700	0.600

S-1776	Agricultural Tractor	1	18.500	0.600
S-1708	Agricultural Tractor	1	27.400	0.980
S-1703	Agricultural Tractor	1	16.400	0.590
S-1808-A	Agricultural Tractor	1	18.000	0.580
S-1722-A	Agricultural Tractor	1	8.700	0.290
S-1723-A	Agricultural Tractor	1	8.700	0.280
S-1721-A	Agricultural Tractor	1	6.900	0.350
C-3308-A	Irrigation Pump	1	1.330	0.050
S-1890-A	Irrigation Pump	2	0.700	0.027
S-1890-A	Irrigation Pump	1	0.380	0.018
C-4043-A	Irrigation Pump	1	4.860	-0.010
C-3828-A	Irrigation Pump	1	17.790	0.860
C-4200-A	Irrigation Pump	1	7.600	-0.050
C-4200-A	Irrigation Pump	4	2.550	-0.040
C-4200-A	Irrigation Pump	3	4.230	-0.090
C-4260-A	Irrigation Pump	1	3.130	0.320
C-4200-A	Irrigation Pump	2	4.730	-0.100
	Total	**97**	**1,166.9 tons**	**42.4 tons**
	Number of projects	**88**		