San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING

San Joaquin Valley Air Pollution Control District

2016 Annual Report

Indirect Source Review Program

Reporting Period:
July 1, 2015 to June 30, 2016

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SEYED SADREDIN

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I. EXECUTIVE SUMMARY

This "*2016 Annual Report on the District's Indirect Source Review Program"* was prepared by the San Joaquin Valley Unified Air Pollution Control District (District). This annual report covers the reporting period from July 1, 2015 to June 30, 2016.

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 Particulate Matter and Ozone Attainment Demonstration Plans. The objective of the rule is to reduce emissions of nitrogen oxides (NOx) and particulate matter smaller than ten microns in aerodynamic diameter (PM_{10}) associated with construction and operational activities of development projects occurring within the San Joaquin Valley.

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 NOx or two tons of 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 a portion of the emissions occurring during construction and operational phases through on-site measures, or pay off-site mitigation fees. One hundred percent (100%) of all off-site mitigation fees are used by the District to fund emission reduction projects through its Incentives Programs, achieving emission reductions on 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 projects.

In addition to reducing a portion of the development project's impact on air quality through compliance with District Rule 9510, a developer can further reduce the project's impact on air quality by entering into a "Voluntary Emission Reduction Agreement" (VERA) with the District to address the mitigation requirements under California Environmental Quality Act (CEQA). Under a VERA, the developer may fully mitigate project emission impacts by providing funds to the District, which are then used by the District to administer emission reduction projects on behalf of the developer. The District has entered into twenty-nine VERAs since 2005.

This annual report includes revenues, expenditures, and emission reductions achieved for both ISR and VERA (ISR-VERA program). To date, in addition to avoiding approximately 10,800 tons of NOx and PM_{10} emissions from new development through the incorporation of on-site mitigation and clean-air design measures into projects subject to Rule 9510, the District has confirmed approximately 6,300 tons of reductions in NOx and PM_{10} emissions have been achieved through the investment of ISR and VERA funds in its emission reduction incentive programs.

During this reporting period under the ISR-VERA program the District received 204 Air Impact Assessment (AIA) applications, compared to 175 AIA applications received during the previous reporting period, representing a 17% increase in the number of ISR applications received. In addition, the District adopted two VERAs during this reporting period.

The total amount of funds received for this reporting period was $10,651,943. This is an increase compared to the $3,808,892 received in the previous reporting period. A large portion of the funds received was for the High Speed Rail (HSR) VERAs Construction Packages 1C and 2-3, for a combined total of $8,595,961.

This year the District achieved emission reductions totaling 322 tons NOx and 12 tons PM_{10}, for a combined total of 334 tons at a cost effectiveness of $7,945 per ton of emissions reduced.

II. INTRODUCTION

The San Joaquin Valley is expected to be one of the fastest growing regions in the state through at least 2030. The Demographic Research Unit of the Department of Finance released interim revised population growth projections in December 2014 and expects approximately 25% growth in the Valley's population during the 2015 to 2030 period. In contrast, the total population for the State of California is projected to increase by only 13% over the same period of time.

Population growth results in increased area source emissions from activities such as consumer product use, fuel combustion for heating and cooking, and landscape maintenance. The total number of vehicle miles traveled (VMT) also increases with population growth, resulting in more emissions due to the combustion of vehicle fuels. The projected growth in these so called "indirect source" emissions erodes some of the progress generated by emission reductions achieved through the District's stationary source program and state and federal mobile source controls.

Although the District cannot directly regulate mobile source emissions, it does have 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 was adopted by the District's Governing Board on December 15, 2005, and became effective March 1, 2006. The rule was adopted 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 NO_X or PM_{10} per year.

Developers of projects subject to Rule 9510 must reduce emissions occurring during construction and operational phases through on-site emission reduction measures, or by paying off-site mitigation fees. One hundred percent of all off-site mitigation fees are used by the District to fund emission reduction projects through its Emission Reduction Incentive Programs, 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 projects.

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 includes the following:

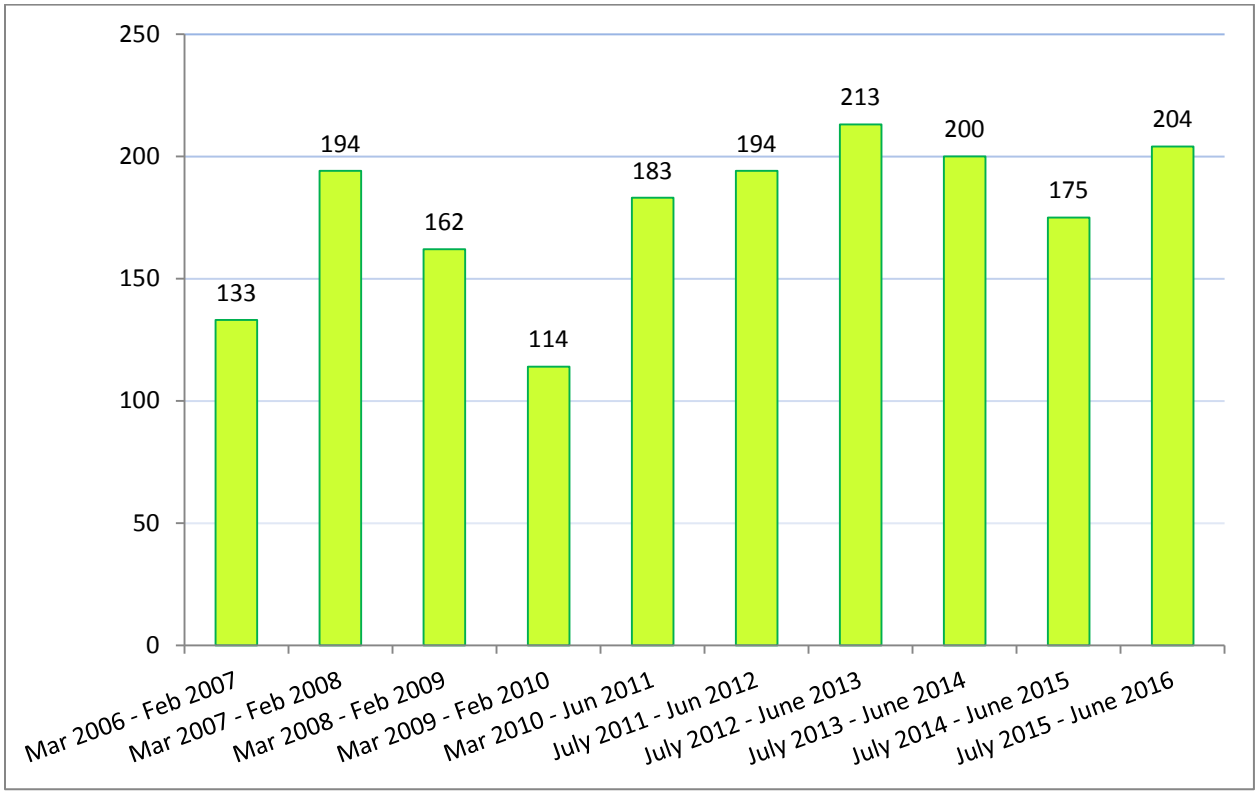
- Total amount of off-site Fees received;
- Total monies spent;
- Total monies remaining;
- Any refunds distributed;
- A list of all projects funded;
- Total emissions reductions realized; and
- The overall cost-effectiveness factor for the projects funded.

III. IMPLEMENTATION

District Rule 9510 (Indirect Source Review)

The number of AIA applications received during this reporting period represents the number of new and revised projects subject to Rule 9510 proposed by developers in the San Joaquin Valley. The number of AIA applications received each year since 2006, the first year of Rule 9510 implementation, is presented in Figure 1. During this reporting period, the District received 204 AIA applications compared to 175 AIA applications received during the previous reporting period, which represents a 17% increase in the number of ISR applications received. The 204 AIA applications received are the second-highest number received since the rule was adopted, and seem to provide evidence for a continuing trend of a stabilizing housing market (see Figure 1 below).

Figure 1: Number of ISR AIA Applications Received From 2006 to June 30, 2016



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 a "clean construction equipment fleet", which is defined as a construction fleet mix cleaner than the State fleet average. In 2006, the first year of implementation, only 14.3% of approved projects reduced construction exhaust impacts through use of a clean construction equipment fleet. However, during this reporting period, this percentage has risen to approximately 39%.

Another noteworthy change is that developers of large distribution centers are continuing to reduce operational emissions impacts through voluntarily committing to use newer heavy-duty on-road fleet vehicles and maintaining a fleet replacement schedule that ensures older vehicles are replaced in a timely manner. Many lesser but still cumulatively significant reductions in emissions have been garnered by a whole range of effective design principles. Examples include installation of solar power, integrated mixed-use development design, bike lanes, high-efficiency housing design, and many others.

Voluntary Emission Reduction Agreements

A Voluntary Emission Reduction Agreement is an air quality mitigation measure by which a developer can voluntarily enter into a contractual agreement with the District to mitigate a development project's impact on air quality, going beyond reductions achieved by compliance with District Rule 9510. Under the agreement, the developer provides funds to the District to administer the implementation of the VERA. The District then identifies emissions reductions projects, funds those projects, and verifies that the specified emission reductions have been successfully achieved.

Types of emission reduction projects that have been funded in the past include electrification of stationary internal combustion engines (such as agricultural irrigation pumps), replacing old heavy-duty trucks with new, cleaner, more efficient heavy-duty trucks, and replacement of old farm tractors with cleaner tractors. Since 2005, the District has entered into twenty-nine VERAs. It is the District's experience that implementation of a VERA is often a feasible mitigation measure under CEQA, effectively achieving emission reductions necessary to reduce impacts to a less than significant level.

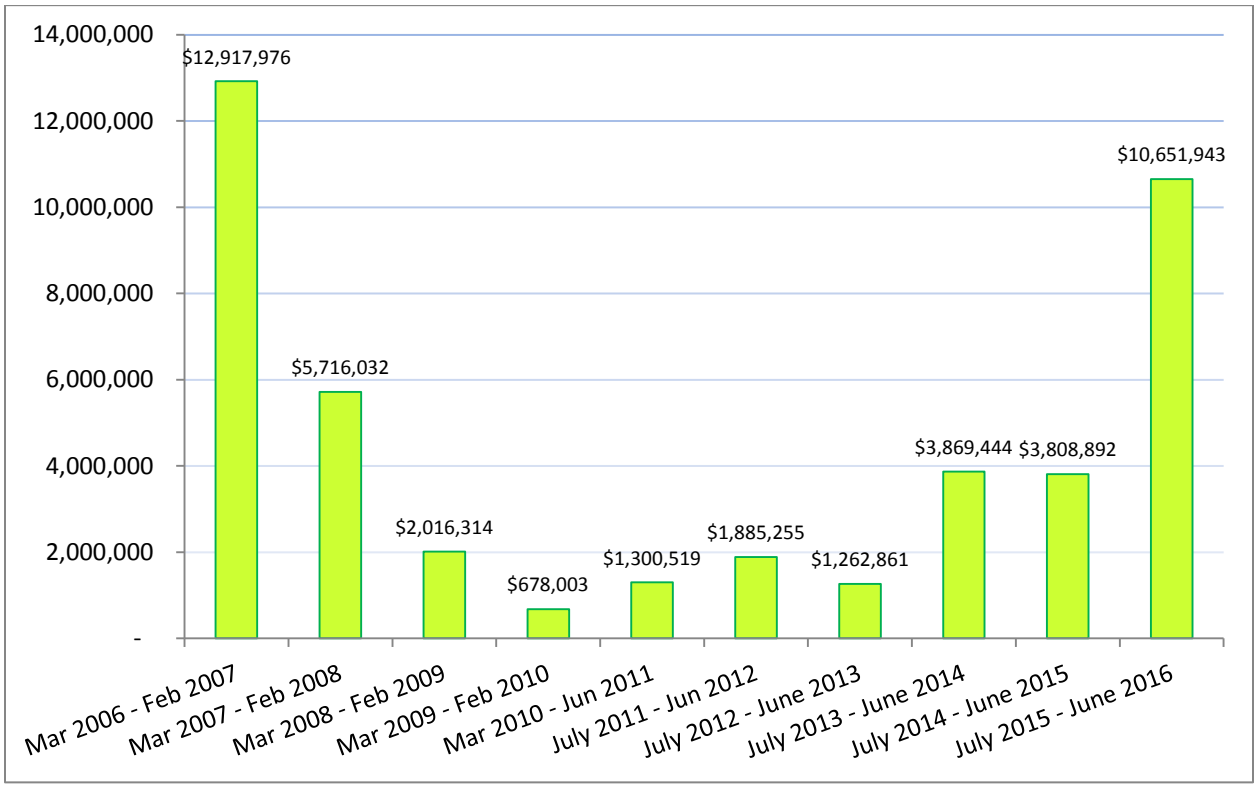
For development projects subject to Rule 9510, the developer must also comply with applicable rule provisions. Emission reductions achieved through implementation of a VERA are credited towards satisfying ISR requirements. This report therefore includes revenues and emission reductions achieved through both the ISR and the VERA process.

During this reporting period, the District adopted two VERAs. The adopted VERAs were for the High Speed Rail (HSR) VERA Construction Package 2-3 and the Grapevine/Tejon Ranch development project.

ISR-VERA Funds

As presented in Figure 2 below, the total amount of funds received in the ISR-VERA program during this reporting period increased from $3,808,892 to $10,651,943.

Figure 2: ISR-VERA Program Funds Received From 2006 to June 30, 2016



The District received $2,031,740 in ISR funds and $8,620,203 in VERA funds for a combined total of $10,651,943. A large portion of the VERA funds received was for the High Speed Rail (HSR) VERAs. The District received $282,945 for the HSR Construction Package 1C, and $8,313,016 for the HSR Construction Package 2-3 for a total of $8,595,961 under the HSR VERA.

IV. FISCAL SUMMARY

As presented in Table 1 below, the District's ISR-VERA account held a beginning balance of $3,900,170. During this reporting period, the District received funds totaling $10,651,943. The District refunded $8,197 for excess funds resulting from a VERA. The District funded off-site emission reduction projects totaling $2,653,765 during this reporting period, and has encumbered $1,631,683 in contracts for emission reduction projects in the process of being implemented, leaving an unencumbered balance of $10,258,469. The vast majority of the HSR funds, $8,313,016 or 97%, was received in the second half of this reporting period and is currently in the process of being encumbered for emission reduction projects.

Table 1: ISR-VERA Fiscal Summary (July 1, 2015 – June 30, 2016)

ISR-VERA Fiscal Summary	ISR	VERA	Total
Beginning Fund Balance	**$2,558,996**	**$1,341,174**	**$3,900,170**
Amount Received	$2,031,740	$8,620,203	$10,651,943
Amount Refunded	$0	-$8,197	-$8,197
Amount Spent	-$1,258,176	-$1,395,589	-$2,653,765
Ending Fund Balance	$3,332,560	$8,557,592	$11,890,152
Encumbered Amount	-$1,285,600	-$346,083	-$1,631,683
Ending Unencumbered Balance	**$2,046,960**	**$8,211,509**	**$10,258,469**

V. EMISSIONS REDUCTION SUMMARY

Achieved Off-Site Emission Reductions

During this reporting period, the District spent ISR and VERA monies to fund 86 emission reduction projects affecting 87 units. The monies were used to fund replacement of old heavy-duty off-road vehicles and on-road vehicles with newer, cleaner versions.

Typically, emission reduction projects go through a thorough application review before the contract for these projects between the District and the project applicant is executed. Once executed, funds are then encumbered for that project. The contract is valid for a limited amount of time to allow for the purchase of the new equipment and to submit a reimbursement request. Once the reimbursement request is approved, the funds encumbered for the emission reduction project are spent (reimbursed to the project applicant). This process typically takes several months for completion. Therefore, depending on the types of emission reduction projects available for funding, the funds received during this reporting period may result in the funds being spent in same reporting period or in the following reporting periods.

Emission reduction projects achieved total reductions of 322 tons NOx and 12 tons PM_{10}, for a combined total of 334 tons, at a cost effectiveness of $7,945 per ton (Table 2 below). Additionally, funded projects reduced emissions of reactive organic gases (ROG) by 38 tons. A complete list of all projects funded is presented in Appendix A.

Achieved emission reductions presented in the table below represent only emission reductions from projects that have been completed and paid during this reporting period, and the cost effectiveness is based on those projects.

Table 2: ISR-VERA Off-Site Emission Reductions (July 1, 2015 – June 30, 2016)

Achieved Emission Reductions				Amount Spent ($)	Cost Effectiveness ($/ton)
Source	**NOx**	**PM_{10}**	**Total**		
ISR	141 tons	7 tons	148 tons	$1,258,176	$8,501/ton
VERA	181 tons	5 tons	186 tons	$1,395,589	$7,503/ton
Grand Total	**322 tons**	**12 tons**	**334 tons**	**$2,653,765**	**$7,945/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 1,062 tons of NOx and 1,179 tons of PM_{10} (Table 3 below).

Table 3: Emission Reductions from Approved ISR Projects (July 1, 2015 – June 30, 2016)

Projected Emission Reductions (tons)			
Source	**NOx**	**PM_{10}**	**Total**
On-site Emission Reductions	475 tons	711 tons	**1,186 tons**
Off-site Emission Reductions	587 tons	468 tons	**1,055 tons**
Total	**1,062 tons**	**1,179 tons**	**2,241 tons**

APPENDIX A

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

EMISSION REDUCTIONS PROJECTS
ISR Annual Report / July 2015 – June 2016

Project #	Project Type	Number of Unit	NOx (Tons/Project life)	PM10 (Tons/Project life)
C-25226	Agricultural Tractor	1	0.22	0.03
C-26432	Agricultural Tractor	1	4.44	0.19
C-23154	Agricultural Tractor	1	3.83	0.16
C-24359	Agricultural Tractor	1	1.38	0.07
C-26769	Agricultural Tractor	1	4.17	0.21
C-24608	Agricultural Tractor	1	8.57	0.02
C-23821	Agricultural Tractor	1	1.95	0.12
C-23359	Agricultural Tractor	1	1.18	0.08
C-25837	Agricultural Tractor	1	6.73	0.42
C-24749	Agricultural Tractor	1	0.28	0.05
C-24748	Agricultural Tractor	1	0.28	0.05
C-24744	Agricultural Tractor	1	0.11	0.03
C-24743	Agricultural Tractor	1	0.28	0.05
C-24740	Agricultural Tractor	1	0.28	0.05
C-24742	Agricultural Tractor	1	0.28	0.05
C-24741	Agricultural Tractor	1	0.28	0.05
C-24747	Agricultural Tractor	1	0.28	0.05
C-24746	Agricultural Tractor	1	0.28	0.05
C-24745	Agricultural Tractor	1	0.28	0.05
C-27995	Agricultural Tractor	1	5.14	0.20
C-37484	Agricultural Tractor	1	4.15	0.15
C-27796	Agricultural Tractor	1	0.28	0.04
C-31045	Agricultural Tractor	1	2.76	0.17
C-27503	Agricultural Tractor	1	2.91	0.19
C-24550	Agricultural Tractor	1	4.10	0.17
C-28058	Agricultural Tractor	1	1.02	0.07
C-24780	Agricultural Tractor	2	5.09	0.15
C-30250	Agricultural Tractor	1	0.69	0.05

C-25228	Agricultural Tractor	1	0.40	0.06
C-30715	Agricultural Tractor	1	0.17	0.02
C-41050	Agricultural Tractor	1	0.78	0.10
C-25580	Agricultural Tractor	1	0.31	0.05
C-32006	Agricultural Tractor	1	1.19	0.06
C-29375	Agricultural Tractor	1	0.16	0.03
C-27960	Agricultural Tractor	1	0.18	0.02
C-30417	Agricultural Tractor	1	2.11	0.11
C-26400	Agricultural Tractor	1	0.09	0.02
C-30724	Agricultural Tractor	1	1.08	0.15
C-31024	Agricultural Tractor	1	1.08	0.07
C-31833	Agricultural Tractor	1	2.28	0.09
C-31642	Agricultural Tractor	1	1.21	0.08
C-29747	Agricultural Tractor	1	1.71	0.11
C-26431	Agricultural Tractor	1	36.53	1.84
C-30805	Agricultural Tractor	1	1.72	0.07
C-26411	Agricultural Tractor	1	7.36	0.27
C-27785	Agricultural Tractor	1	1.05	0.05
C-33524	Agricultural Tractor	1	2.71	0.14
C-29440	Agricultural Tractor	1	1.06	0.05
C-30236	Agricultural Tractor	1	15.96	0.81
C-30652	Agricultural Tractor	1	0.55	0.04
C-21606	Agricultural Tractor	1	10.73	0.39
C-23355	Agricultural Tractor	1	1.33	0.09
C-23541	Agricultural Tractor	1	0.50	0.07
C-40742	General On-Road Heavy Duty	1	4.55	0
C-26647	Agricultural Tractor	1	1.75	0.09
C-40859	General On-Road Heavy Duty	1	7.08	0
C-40891	General On-Road Heavy Duty	1	5.67	0
C-41002	General On-Road Heavy Duty	1	6.42	0
C-41004	General On-Road Heavy Duty	1	6.04	0
C-41003	General On-Road Heavy Duty	1	4.86	0
C-32030	Agricultural Tractor	1	16.06	0.58
C-26080	Agricultural Tractor	1	7.14	0.26
C-29856	Agricultural Tractor	1	26.70	1.04
C-41691	General On-Road Heavy Duty	1	4.78	0
C-32062	Agricultural Tractor	1	16.93	0.72
C-41360	General On-Road Heavy Duty	1	4.67	0

C-41359	General On-Road Heavy Duty	1	7.03	0
C-41367	General On-Road Heavy Duty	1	3.67	0
C-40308	General On-Road Heavy Duty	1	5.50	0
C-41257	General On-Road Heavy Duty	1	6.06	0
C-27700	Agricultural Tractor	1	2.12	0.13
C-27715	Agricultural Tractor	1	2.12	0.13
C-27714	Agricultural Tractor	1	2.12	0.13
C-27713	Agricultural Tractor	1	2.12	0.13
C-27712	Agricultural Tractor	1	2.12	0.13
C-27710	Agricultural Tractor	1	2.12	0.13
C-27709	Agricultural Tractor	1	2.12	0.13
C-27708	Agricultural Tractor	1	2.12	0.13
C-27707	Agricultural Tractor	1	2.12	0.13
C-27706	Agricultural Tractor	1	2.12	0.13
C-27705	Agricultural Tractor	1	2.12	0.13
C-27703	Agricultural Tractor	1	2.12	0.13
C-27702	Agricultural Tractor	1	2.12	0.13
C-27701	Agricultural Tractor	1	2.12	0.13
C-27717	Agricultural Tractor	1	2.12	0.13
C-27716	Agricultural Tractor	1	2.12	0.13