
DRAFT ENVIRONMENTAL ASSESSMENT (14-020)

*WARREN ACT CONTRACT FOR CONVEYANCE AND STORAGE OF
GROUNDWATER FROM 4-S RANCH AND SHS RANCH TO DEL PUERTO WATER
DISTRICT*

Appendix A
Reclamation's 2014 Water Quality Monitoring Plan

May 2014

RECLAMATION

Managing Water in the West

2014 Delta-Mendota Canal Groundwater Pump-in Program Water Quality Monitoring Plan



U.S. Department of the Interior
Bureau of Reclamation
Mid-Pacific Region
South-Central California Area Office

Revised: 06 Jan 2014

Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

List of Abbreviations and Acronyms

Authority	San Luis and Delta-Mendota Water Authority
°C	degrees Celsius
DMC	Delta-Mendota Canal
DMC Headworks	DMC Milepost 2.5, Jones Pumping Plant
DMC Check 13	DMC Milepost 70, O'Neill Forebay
DMC Check 20	DMC Milepost 111, near Firebaugh
DMC Check 21	DMC Milepost 116, terminus at Mendota Pool
COC	chain of custody
CVP	Central Valley Project
DFG	California Department of Fish and Game
EC	electrical conductivity, $\mu\text{S}/\text{cm}$
Exchange Contractors	San Joaquin River Exchange Contractors Water Authority
°F	degrees Fahrenheit
mg/L	milligrams per liter, equivalent to parts per million
QA	Quality Assurance
QC	Quality Control
QCO	Quality Control Officer
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
Regional Board	California EPA, Central Valley Regional Water Quality Board
TDS	Total dissolved solids, mg/L
USGS	U.S. Geological Survey
$\mu\text{g}/\text{L}$	micrograms per liter, equivalent to parts per billion
$\mu\text{S}/\text{cm}$	microSiemens per cm, salinity in water

2014 Delta-Mendota Canal Groundwater Pump-in Program Water Quality Monitoring Plan

Introduction

The overall supply of Central Valley Project (CVP) water has been reduced by drought and restrictions on pumping from the Sacramento-San Joaquin Delta. Under the Warren Act of 1911, Reclamation may execute temporary contracts to convey non-project water in excess capacity in federal irrigation canals. In 2014, Reclamation proposes to execute temporary contracts with water districts to convey up to 50,000 acre-feet of groundwater in the Delta-Mendota Canal (DMC) subject to the monitoring and reporting requirements outlined in this document. The following districts could potentially participate in this program:

- Banta-Carbona Irrigation District
- Byron Bethany Irrigation District
- Del Puerto Water District
- Mercy Springs Water District
- Pacheco Water District
- Panoche Water District
- San Luis Water District
- West Stanislaus Irrigation District

This document describes the plan for measuring the changes in the quality of water in the DMC caused by the conveyance of groundwater during 2014, plus changes in groundwater elevation to estimate subsidence. Various agencies will use these data to assess water quality in the DMC, Mendota Pool, and wetlands water supply channels, and physical condition of local groundwater resources.

This document has been prepared by the U.S. Department of the Interior, Bureau of Reclamation (Reclamation), in cooperation with the San Luis & Delta-Mendota Water Authority (Authority), and the San Joaquin River Exchange Contractors Water Authority (Exchange Contractors), with assistance from staff of Banta Carbona Irrigation District, Del Puerto Water District, San Luis Water District, and Panoche Water District. This monitoring plan will be conducted by staff of Reclamation, the Authority, and Water Districts and will complement independent monitoring by other Federal, State, and private agencies.

Several sampling techniques will be used to collect samples of water, including real-time, grab, and composite. The techniques used at each location are summarized in Section 3.

Continuous measurement of specific conductance (salinity) will be recorded at four stations in the canal using sondes connected to digital data loggers. The data will be averaged every 15 minutes, sent via satellite to the California Data Exchange Center where it will be posted in the Internet as preliminary data:

<http://cdec.water.ca.gov/queryDaily.html>

Central Valley Operations Office will post the daily average salinity measurements on its website:

<http://www.usbr.gov/mp/cvo/wqrpt.html>

The real-time data will be collected by Reclamation and used in a mass balance to calculate and predict water quality conditions along the DMC. The calculated results will be reported to various agencies, and compared with independent field measurements collected by the Reclamation, the Exchange Contractors, US Geological Survey, and California EPA Central Valley Regional Water Quality Control Board (Regional Board).

Based on available funding, Reclamation will operate autosamplers at four locations along the DMC and Mendota Pool that will collect daily composite samples for measurement of selenium and salinity.

Reclamation and the Regional Board will collect grab samples from various locations in the watershed to measure selenium and many other parameters.

Reclamation will use these data to assess changes in water quality and groundwater conditions caused by the 2014 Groundwater Pump-in Program, and will implement the terms and conditions of the 2014 Warren Act Contracts, exchange agreements, and the current Letter from the Exchange Contractors to Reclamation (Appendix 1).

Background

The Delta Division of the federal Central Valley Project (CVP) delivers water to almost a million acres of farmland in the San Joaquin Valley of California. The CVP is also the sole source of clean water for state and federal wildlife refuges and many private wetlands in Fresno, Merced, San Joaquin, and Stanislaus Counties.

The source of water for the Division is the northern Sierra mountains, passing through the delta of the Sacramento and San Joaquin Rivers. This water is suitable in quality for irrigation and wetlands. The Central Valley is regularly affected by droughts that reduce the supply of water. Environmental regulations also restrict the operation of the Jones Pumping Plant to divert water from the Delta. The salinity of water in the Delta is highly variable due to the influence of tides and outflow of river water.

The Delta-Mendota Canal carries CVP water to farms, communities, and wetlands between Tracy and Mendota. The 116 mile canal is operated and maintained by the San Luis and Delta-Mendota Water Authority (Authority) under contract with Reclamation.

Inflows of tailwater and subsurface water add contaminants to the canal. The conveyance of groundwater may further degrade the quality of water in the canal.

The districts and refuges in the Delta Division use groundwater to supplement their contractual supply from the CVP. These supplies of groundwater are called “Non-Project Water” because they have not been appropriated by the United States for the purposes of the CVP.

The Warren Act of 1911⁽¹⁾ authorizes Reclamation to execute temporary contracts to impound, store, and carry non-project water in federal irrigation canals when excess capacity is available. Such contracts will be negotiated by Reclamation with Delta Division water districts to allow the introduction of non-project water into the Delta-Mendota Canal to supplement the supply of CVP water to help farmers deliver enough water to irrigate and sustain valuable permanent crops like grapes, citrus, and deciduous fruit, and to sustain the local multi-billion dollar farming economy.

The quality of local groundwater is variable and must be measured to confirm that there will be no harm to downstream water users when the non-project water is pumped into the canal. Reclamation has developed a set of standards for the acceptance of non-project water in the canal based on the requirements of downstream water users.

In 2014, environmental regulations and climate change continue to reduce the supply of surface water for the Central Valley Project. Water managers now must depend on groundwater to supplement a diminished supply of surface water for irrigation. However, continuous pumping of groundwater can quickly reduce local aquifers and can cause irreversible damage to facilities through subsidence.

Reclamation will require information about each source of groundwater and more monitoring of the aquifer to measure overdraft, prevent subsidence, and determine the feasibility of continuing this program in the future. Staff from the Authority and water districts will be required to take regular measurements of depth to groundwater, pump rates, and in-stream salinity measurements.

This monitoring plan will ensure that monitoring data will measure any changes in the quality of CVP water in the Delta-Mendota Canal and Mendota Pool, and assess impacts on local aquifers.

Monitoring Mission and Goals

The mission of this monitoring plan is to produce physical measurements that will determine the changes in the quality of the water in canal caused by the conveyance of groundwater during 2014. The data will be used to implement the terms of the 2013 Warren Act Contracts and exchange agreements, and to ensure that the quality of CVP water is commensurate with the needs and expectations of water users.

¹ Act of February 21, 1911, ch. 141, 36 Stat. 925

The monitoring program will also deal with changes to groundwater resources to identify and prevent long-term problems to local aquifers and facilities.

Program Goals

The general goals of monitoring are:

- Evaluate the quality of water in each well, and
- Confirm that the blend of CVP water and groundwater is suitable for domestic, agricultural, and wetlands uses.
- Provide reliable data for regulation of the 2014 DMC Groundwater Pump-in Program to prevent contamination problems
- Provide measurements of groundwater dynamics (depth, recharge) to identify overdraft and subsidence

Study Area

The Study Area for this program encompasses the Delta-Mendota Canal from Tracy to Mendota, and the Mendota Pool. The canal is divided into two reaches in relation to the O'Neill Forebay and the connection to the State Water Project.

Water Quality Standards

The quality of water in each source of groundwater must meet the standards listed in Tables 6 and 7. The lists have been developed by Reclamation to measure constituents of concern that would affect downstream water users. In particular, the concentration of selenium in any pump-in water shall not exceed 2 µg/L, the limit for the Grasslands wetlands water supply channels specified in the 1998 Basin Plan.² The salinity of each source of pump-in water shall not exceed 1500 mg/L TDS. The other constituents are mainly agricultural chemicals listed in the California Drinking Water Standards (Title 22)³.

² California Regional Water Quality Control Board, Central Valley Region, Fourth Edition of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.
http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr.pdf

³ California Code of regulations, Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010 4037), and Administrative Code (Sections 64401 et seq.), as amended.
<http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-06-24-2010.pdf>

Water Quality Monitoring Plan

In-stream Monitoring

The quality of water in the DMC will be measured at the locations listed in Tables 1, 2, and 3.

Reclamation will operate and maintain the real-time stations listed in Table 1. Based on available funding, Reclamation will continue to collect water samples at the sites listed in Table 2 under the DMC Water Quality Monitoring Program. Reclamation will be responsible for the costs of sampling and analysis of water sampled from the DMC under this monitoring program.

Table 3 is a list of places along the canal near groups of wells that could pump into the canal under this program. If the real-time monitoring is not sufficient to identify in-stream changes in quality caused by the addition of groundwater, Reclamation may require weekly measurements at the checks listed in Table 3 to determine local effects from each group of wells. Furthermore, if flow of CVP water in the canal is limited, Reclamation will require detailed monitoring to identify the individual and cumulative changes in water quality caused by the addition of groundwater.

Table 1. Real-Time Monitoring Stations

Location	Operating Agency	Parameters	Frequency	Remarks
DMC Headworks Milepost 3.5	CVO	EC	Real-time	CDEC Site: DMC
DMC Check 13 Milepost 70	CVO	EC	Real-time	CDEC site : ONI
DMC Check 20 Milepost 111	CVO	EC	Real-time	CDEC site : DM2
DMC Check 21 Milepost 116.5	CVO	EC	Real-time	CDEC site : DM3

Key: CDEC: California Data Exchange Center CVO: Central Valley Operations Office EC: Electrical conductivity

Table 2. Water Quality Monitoring Stations

Location	Operating Agency	Parameters	Frequency	Remarks
DMC Headworks Milepost 3.5	Reclamation	EC, selenium	Daily composite	Autosampler
DMC at McCabe Rd Milepost 68	Reclamation	Various	Monthly	Grab sample
DMC Check 13 Milepost 70	Reclamation	EC, selenium	Daily composite	Autosampler
DMC at Russell Ave Milepost 97.7	Reclamation	EC, selenium, boron, mercury	Monthly	Grab sample
DMC at Telles Farm Bridge Milepost 100	Reclamation	EC, selenium	Monthly	Grabs sampler
DMC at Washoe Ave Milepost 110.1	Reclamation	EC, selenium, boron, mercury	Monthly	Grab sample
DMC Check 21 Milepost 116.5	Reclamation	EC, selenium	Daily composite	Autosampler
CCID Main Canal at Bass Ave	Reclamation	EC, selenium	Daily composite	Autosampler

Key: Reclamation: MP-157 Environmental Monitoring Branch

Table 3. In-Stream Monitoring Stations (Optional)

Location	Responsible Agency	Parameters	Frequency	Remarks
DMC Check 2 Milepost 16.2	SLDMWA	EC	Weekly	Field measurement
DMC Check 3 Milepost 20.6	SLDMWA	EC	Weekly	Field measurement
DMC Check 6 Milepost 34.4	SLDMWA	EC	Weekly	Field measurement
DMC Check 7 Milepost 38.7	SLDMWA	EC	Weekly	Field measurement
DMC Check 9 Milepost 48.6	SLDMWA	EC	Weekly	Field measurement
DMC Check 12 Milepost 64.0	SLDMWA	EC	Weekly	Field measurement
DMC Check 16 Milepost 85.1	SLDMWA	EC	Weekly	Field measurement
DMC at Telles Bridge Milepost 100.9	SLDMWA	EC	Weekly	Field measurement

Key: SLDMWA: San Luis and Delta-Mendota Water Authority

Wellhead Monitoring

Initial Analysis

All districts participating in the 2014 DMC Groundwater Pump-in Program must provide the following information about each well to Reclamation prior to pumping groundwater into the DMC:

- the location of each well, pumping rate, and point of discharge into the DMC;
- complete water quality analyses (Table 5 or 6)⁴
- the depth to groundwater in every well before pumping into the DMC commences.

Though most of the wells are privately owned, the Districts must provide access to each well for Reclamation and Authority staff.

All water samples must be sampled and preserved according to established protocols in correct containers. Analyses should be conducted by laboratories that have been approved by Reclamation, listed in Table 7. Each sample of well water must be sampled and analyzed at the expense of the well owner. Reclamation staff will review the analytical results and notify the District which wells may pump into the DMC in 2014.

⁴ Note: Laboratory analyses of water in each well may be measured within three years

Compliance Monitoring

Daily Salinity

Mean daily salinity of water in the DMC will be assessed with the sensors along the canal that report real-time data to CDEC, listed in Table 1. Reclamation and the Authority will monitor daily changes in salinity along the canal.

Weekly Monitoring

Reclamation may require weekly measurements of salinity along the DMC if the real-time sensors are not sufficient to identify changes. If necessary, Reclamation will direct the Authority to measure the EC of water in the canal at the places listed in Table 3. These sites are located downstream from clusters of wells that could pump into the DMC. In addition, Reclamation may also direct Authority staff to measure the EC of the water in each active well

The weekly volume of groundwater pumped into the DMC from each well will be measured by the Authority and sent to Reclamation at the end of each week.

Selenium Monitoring

Based on available funds, Reclamation will continue to measure selenium in the canal and Mendota Pool with autosamplers listed in Table 2. Reclamation may collect random samples of water from various active wells; the cost of these selenium tests will be borne by Reclamation. Based on available funds, Reclamation may also measure boron in the canal and wells.

Depth to Groundwater

The Authority will measure the depth to groundwater in each active well quarterly. Table 8 is a summary of measurements collected by the Authority since May 1995. The current depth to groundwater in each well will be compared to the depths listed in Table 8. If the current depth exceeds the maximum depth observed in Table 8, then Reclamation will advise the District to stop pumping from that well until the depth of water in the well recovers to an agreed depth, such as the median observed depth.

Data Compilation and Review

All compliance monitoring data collected by the Authority (i.e., flow/ EC/depth of groundwater in each active well, flow/EC in the DMC) will be entered into worksheets and presented each week to Reclamation via e-mail. Reclamation will review the data to identify changes in the quality of water in the canal and in individual wells, and potential changes in the local aquifer that could lead to overdraft or subsidence.

Water Quality Monitoring Parameters and Data Management

The following sections describe the parameters for real-time and laboratory measurement of water quality, as well as methods for quality control, data management, and data reporting.

Real-Time Water Quality Monitoring Parameters

The Central Valley Operations Office (CVO) operates four sensors along the DMC that measure salinity and temperature of water. These continuous measurements are posted on the Internet in real-time.

Salinity

Salinity is a measure of dissolved solids in water. It is the sum weight of many different elements within a given volume of water, reported in milligrams per liter (mg/L) or parts per million (ppm). Salinity is an ecological factor of considerable importance, influencing the types of organisms that live in a body of water. Also, salinity influences the kinds of plants and fish that will grow in a water body. Salinity can be estimated by measuring the electrical conductivity (EC) of the water.

CVO uses this conversion factor for estimating Total Dissolved Solids (TDS) from

$$\text{TDS (mg/L)} = \text{EC } (\mu\text{S/cm}) * 0.618 + 16$$

Sampling For Laboratory Analyses of Water Quality

The following sections describe constituents for laboratory analyses of water quality, as well as methods for water quality sampling and chain of custody documentation.

Constituents

Table 5 and 6 are lists of constituents to be measured at in each well that will pump into the DMC during 2014. Parameters include selenium, mercury, boron, nutrients, and other compounds that cannot be measured with field sensors. Table 7 is a list of laboratories whose sampling and analytical practices have been approved by Reclamation.

Sampling methods

Grab samples will be collected in a bucket or bottle from the point of discharge into the canal. Samples of canal water should be collected mid-stream from a bridge or check structure. Grab samples should be poured directly into sample bottles appropriate to the analyses. This technique is for samples collected weekly or less frequently. The analytical laboratory will specify the sample volume, type of bottle, need for preservative, and special handling requirements. Reclamation may train field staff on proper sample collection and handling.

Time composite samples will be collected from the DMC by Reclamation using an autosampler. Daily composite samples will consist of up to eight subsamples taken per day and mixed into one sample. Weekly composite samples will consist of seven daily subsamples mixed into one sample.

Chain of Custody documentation

Chain of custody (COC) forms will be used to document sample collection, shipping, storage, preservation, and analysis. All individuals transferring and receiving samples will sign, date, and record the time on the COC that the samples are transferred.

Laboratory COC procedures are described in each laboratory's Quality Assurance Program Manual. Laboratories must receive the COC documentation submitted with each batch of samples and sign, date, and record the time the samples are transferred. Laboratories will also note any sample discrepancies (e.g., labeling, breakage). After generating the laboratory data report for the client, samples will be stored for a minimum of 30 days in a secured area prior to disposal.

Quality Control/ Quality Assurance

Quality control (QC) is the overall system of technical activities that measure the attributes and performance of a process, item, or service against defined standards to verify that stated requirements are met.

Quality assurance (QA) is an integrated system of management activities involving, planning, implementation, documentation, assessment, reporting, and quality improvement to ensure that a process, item, or service is of the type and quality needed and expected by the customer.

QA objectives will be used to validate the data for this project. The data will be accepted, rejected, or qualified based on how sample results compare to established acceptance criteria.

The precision, accuracy, and contamination criteria will be used by the QCO to validate the data for this project. The criteria will be applied to the blind external duplicate/split, blank, reference, or spiked samples submitted with the production samples to the analytical laboratories by the participating agencies to provide an independent assessment of precision, accuracy, and contamination.

Laboratories analyze their own QC samples with the client's samples. Laboratory QC samples, including laboratory fortified blanks, matrix spikes, duplicates, and method blanks, assess precision, accuracy, and contamination. Laboratory QC criteria are stated in the analytical methods or determined by each laboratory. Since internal control ranges are often updated in laboratories based on instrumentation, personnel, or other influences, it is the responsibility of the QCO to verify that these limits are well documented and appropriately updated during system audits. The preferred method of reporting the QC results is for the laboratory to provide a QC summary report with acceptance criteria for each QC parameter of interest.

For water samples, the QCO will use a statistical program to determine if current concentrations for parameters at given sites are consistent with the historical data at these sites. A result is determined to be a historical outlier if it is greater than 3 standard deviations from the average value for the site. The presence of an outlier could indicate an error in the analytical process or a significant change in the environment.

Samples must be prepared, extracted, and analyzed within the recommended holding time for the parameter. Data may be qualified if the sample was analyzed after the holding time expires.

Completeness refers to the percentage of project data that must be successfully collected, validated, and reported to proceed with its intended use in making decisions.

Constraints with regard to time, money, safety, and personnel were some of the factors in choosing the most representative sites for this project. Monitoring sites have been selected by considering the physical, chemical, and biological boundaries that define the system under study.

Sites also were selected to be as representative of the system as possible. However, Reclamation will continue to evaluate the choice of the sites with respect to their representativeness and will make appropriate recommendations to the Contracting Officer given a belief or finding of inadequacy.

Comparability between each agency's data is enhanced through the use of Standard Operating Procedures that detail methods of collection and analysis. Each agency has chosen the best available protocol for the sampling and analyses for which it is responsible based on the agency's own expertise. Audits performed by the QCO will reinforce the methods and practices currently in place and serve to standardize techniques used by the agencies.

Data Management

Real-Time Data – Raw data from field sensors, must be identified as preliminary, subject to change

Provisional Data - Data that have been reviewed by the collecting agency but may be changed pending re-analyses or statistical review

Laboratory Data – Data produced by the laboratory following laboratory QA/QC protocols

In-stream data will be collected by Reclamation. Routine measurements of flow, EC, and depth of groundwater in each well will be collected by the Authority and sent to Reclamation each week.

Reclamation will compile these data in a water balance model developed by Reclamation, the Authority, and Exchange Contractors to predict the change in salinity in the canal with the addition of groundwater.

Real-time data will be used to monitor day-to-day patterns and assess actual conditions. The real-time data will be posted in regular e-mail messages to the districts and Authority. Reclamation will compile all flow, water quality, and groundwater data into a final report for future reference.

Water Quality Requirements

Each week, Reclamation staff will use the real-time salinity measurements (Table 1) and optional weekly in-stream measurements (Table 3) to monitor changes in salinity in the DMC, and determine if the groundwater pump-ins have caused these changes. Reclamation staff will compile other water quality data collected for this program and by others do evaluate changes in the canal.

Reclamation and the Authority will allow groundwater to be pumped into the DMC if such water does not cause the concentration of selenium or salinity in the canal to exceed certain thresholds listed in Tables 4a and 4b.

Table 4a. Maximum Allowable Concentration of Seven Constituents in the Upper DMC (between Jones Pumping Plant and Check 13)

Constituent	Monitoring Location	Maximum concentration in the DMC
Selenium	Check 13	1 µg/L
Specific conductance	Check 13	800 µS/cm
Increase in Conductance	Between Jones PP and Check 13	Less than 50 µS/cm

Reclamation will direct the Authority contact the Districts to stop pumping groundwater into the upper DMC if the concentration of any of these constituents in the canal exceed the maximum allowable concentrations listed in Table 4a.

Table 4b. Maximum Allowable Concentration of Three Constituents in the Lower DMC⁵

Constituent	Monitoring Location	Maximum concentration in the DMC
Selenium	Check 21	2 µg/L
Specific Conductance	Check 21	800 µS/cm
Increase in Conductance	Checks 13 – 20	Not to exceed 50 µS/cm per day for seven consecutive days ⁶
Minimum flow	Check 21	300 cfs

Reclamation will direct the Authority to contact the Districts to stop pumping groundwater into the lower DMC if any of the parameters listed in Table 4b are exceeded, or if flow is insufficient for dilution.

Reclamation will continue to monitor the effects of the six sumps near Firebaugh that pump subsurface groundwater into the canal. Note: the sumps are located downstream of the proposed wells listed in Table 8.

Reclamation reserves the right to modify this monitoring program at any time to change.

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⁵ The 2014 Exchange Contractors letter will have further conditions for the lower portion of the canal.

⁶ Equivalent to 30 mg/L Total Dissolved Solids

**Table 5. Water Quality Standards for Acceptance of Ground Water in the Upper Delta-Mendota Canal
Jones Pumping Plant to Check 13 (O'Neill Forebay)**

Constituent	Units	Maximum Contaminant Level		Detection Limit for Reporting		CAS Registry Number	Recommended Analytical Method
Primary							
Aluminum	mg/L	1	(1)	0.05	(2)	7429-90-5	EPA 200.7
Antimony	mg/L	0.006	(1)	0.006	(2)	7440-36-0	EPA 200.8
Arsenic	mg/L	0.01	(1)	0.002	(2)	7440-38-2	EPA 200.8
Barium	mg/L	1	(1)	0.1	(2)	7440-39-3	EPA 200.7
Beryllium	mg/L	0.004	(1)	0.001	(2)	7440-41-7	EPA 200.7
Boron	mg/L	0.7	(13)			7440-42-8	EPA 200.7
Cadmium	mg/L	0.005	(1)	0.001	(2)	7440-43-9	EPA 200.7
Chromium, total	mg/L	0.05	(1)	0.01	(2)	7440-47-3	EPA 200.7
Lead	mg/L	0.015	(9)	0.005	(8)	7439-92-1	EPA 200.8
Mercury	mg/L	0.002	(1)	0.001	(2)	7439-97-6	EPA 245.1
Nickel	mg/L	0.1	(1)	0.01	(2)	7440-02-0	EPA 200.7
Nitrate (as NO ₃)	mg/L	45	(1)	2	(2)	7727-37-9	EPA 300.1
Nitrate + Nitrite (sum as nitrogen)	mg/L	10	(1)				EPA 353.2
Nitrite (as nitrogen)	mg/L	1	(1)	0.4	(2)	14797-65-0	EPA 300.1
Selenium	mg/L	0.002	(10)	0.0004		7782-49-2	EPA 200.8
Thallium	mg/L	0.002	(1)	0.001	(2)	7440-28-0	EPA 200.8
Secondary							
Chloride	mg/L	250	(7)			16887-00-6	EPA 300.1
Copper	mg/L	1	(10)	0.05	(8)	7440-50-8	EPA 200.7
Iron	mg/L	0.3	(6)			7439-89-6	EPA 200.7
Manganese	mg/L	0.05	(6)			7439-96-5	EPA 200.7
Molybdenum	mg/L	0.01	(11)			7439-98-7	EPA 200.7
Silver	mg/L	0.1	(6)			7440-22-4	EPA 200.7
Sodium	mg/L	69	(12)			7440-23-5	EPA 200.7
Specific Conductance	µS/cm	2,200	(7)				SM 2510 B
Sulfate	mg/L	250	(7)			14808-79-8	EPA 300.1
Total Dissolved Solids	mg/L	1,500	(7)				SM 2540 C
Zinc	mg/L	5	(6)			7440-66-6	EPA 200.7
Radioactivity							
Gross Alpha	pCi/L	15	(3)	3	(3)		SM 7110C
Organic Chemicals							
Dibromochloropropane (DBCP)	µg/L	1	(4)	0.5	(5)	96-12-8	EPA 504.1
Ethylene Dibromide (EDB)	µg/L	18	(4)	2	(5)	206-93-4	EPA 504.1
Chlordane	µg/L	18	(4)	5	(5)	57-74-9	EPA 505
Endrin	µg/L	0.1	(4)	0.1	(5)	72-20-8	EPA 505
Heptachlor	µg/L	25	(4)	0	(5)	76-44-8	EPA 505
Heptachlor Epoxide	µg/L	70	(4)	10	(5)	1024-57-3	EPA 505
Lindane	µg/L	160	(4)	0	(5)	58-89-9	EPA 505
Methoxychlor	µg/L	0.2	(4)	0.01	(5)	72-43-5	EPA 505
Toxaphene	µg/L	2	(4)	0.1	(5)	8001-35-2	EPA 505
Diazinon	µg/L	0.16	(11)			333-41-5	EPA 507
Atrazine	µg/L	700	(4)	25	(5)	1912-24-9	EPA 508.1
Simazine	µg/L	0.01	(4)	0.01	(5)	122-34-9	EPA 508.1
Bentazon	µg/L	0.01	(4)	0.01	(5)	25057-89-0	EPA 515.1-4
2, 4, 5-TP (Silvex)	µg/L	30	(4)	10	(5)	93-72-1	EPA 515.1-4
2,4-D	µg/L	0.2	(4)	0.2	(5)	94-75-7	EPA 515.1-4
Molinate	µg/L	20	(4)	2	(5)	2212-67-1	EPA 525.2
Thiobencarb	µg/L	50	(4)	1	(5)	28249-77-6	EPA 525.2
Carbofuran	µg/L	4	(4)	1	(5)	1563-66-2	EPA 531.1-2
Glyphosate	µg/L	70	(4)	1	(5)	1071-83-6	EPA 547
Chlorpyrifos	µg/L	0.025	(11)			2921-88-2	EPA 8141

**Table 5. Water Quality Standards for Acceptance of Ground Water in the Upper Delta-Mendota Canal
Jones Pumping Plant to Check 13 (O'Neill Forebay)**

Sources:

Sources:

Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

- (1) Title 22, Table 64431-A Maximum Contaminant Levels, Inorganic Chemicals
- (2) Title 22, Table 64432-A Detection Limits for Reporting (DLRs) for Regulated Inorganic Chemicals
- (3) Title 22, Table 64442 Radionuclide Maximum Contaminant Levels (MCLs) and Detection Levels for Purposes of Reporting
- (4) Title 22, Table 64444-A Maximum Contaminant Levels, Organic Chemicals
- (5) Title 22, Table 64445.1-A Detection Limits for Purposes of reporting (DLRs) for Regulated Organic Chemicals
- (6) Title 22, Table 64449-A Secondary Maximum Contaminant Levels "Consumer Acceptance Contaminant Levels"
- (7) Title 22, Table 64449-B Secondary Maximum Contaminant Levels "Consumer Acceptance Contaminant Level Ranges"
- (8) Title 22, Table 64678-A DLRs for Lead and Copper
- (9) Title 22, Section 64678 (d) Lead Action level

2013 California Drinking Water Regulations: <http://www.cdph.ca.gov/certlic/drinkingwater/Pages/Lawbook.aspx>
<http://www.cdph.ca.gov/certlic/drinkingwater/Documents/Lawbook/dwregulations-2013-07-01.pdf>

California Regional Water Quality Control Board, Central Valley Region, Fourth Edition of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins.

- (10) Basin Plan, Table III-1 (ug/L) (selenium in Grasslands water supply channels)
- (11) Basin Plan, Table III-2A (ug/L) (chlorpyrifos & diazinon in San Joaquin River from Mendota to Vernalis)

Sacramento & San Joaquin River Basin Plan 2009

http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr.pdf

Ayers, R. S. and D. W. Westcot, *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations - Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985).

- (12) Ayers, Table 1 (mg/L) (sodium)
- (13) Ayers, Table 21 (mg/L) (boron)

Water Quality Standards for Agriculture 1985

<http://www.fao.org/DOCREP/003/T0234E/T0234E00.HTM>

revised: 06 Jan 2014

**Table 6. Water Quality Standards for Acceptance of Groundwater in the lower Delta-Mendota Canal
Check 13 (O'Neill Forebay) To Check 21 (Mendota Pool)**

Constituent	Units	Maximum Contaminant Level		CAS Registry Number	Recommended Analytical Method
Bicarbonate	mg/L	61	(5)	71-52-3	SM 2320 A
Boron	mg/L	0.7	(3)	7440-42-8	EPA 200.7
Calcium	mg/L	80	(5)	7440-70-2	EPA 200.5
Chloride	mg/L	40	(5)	189689-94-9	EPA 300.1
Chlorpyrifos	µg/L	0.025	(2)	2921-88-2	EPA 8141
Chromium, total	µg/L	50	(1)	7440-47-3	EPA 200.7
Diazinon	µg/L	0.16	(2)	333-41-5	EPA 507
Hardness	mg/L				calculated
Magnesium	mg/L	16	(5)	7439-95-4	EPA 200.5
Mercury	µg/L	2	(1)	7439-97-6	EPA 245.1
Molybdenum	µg/L	10	(3)	7439-98-7	EPA 200.7
Nickel	µg/L	100	(1)	7440-02-0	EPA 200.7
Nitrate (as NO ₃)	mg/L	45	(1)	7727-37-9	EPA 300.1
Nitrite (as nitrogen)	mg/L	1	(1)	14797-65-0	EPA 300.1
pH	units	5.0 - 7.0	(5)		EPA 150.1
Potassium	mg/L	4.5	(5)	7440-09-7	EPA 200.5
SAR		<2	(5)		calculated
Selenium	µg/L	2	(2)	7782-49-2	EPA 200.8
Sodium	mg/L	69	(3)	7440-23-5	EPA 200.7
Specific Conductance	µS/cm	1,230	(4)		SM 2510 B
Sulfate	mg/L	250	(1)	14808-79-8	EPA 300.1
Total Dissolved Solids	mg/L	800	(4)		SM 2540 C

(1) Title 22. The Domestic Water Quality and Monitoring Regulations specified by the State of California Health and Safety Code (Sections 4010-4037), and Administrative Code (Sections 64401 et seq.), as amended.

(2) California Regional Water Quality Control Board, Central Valley Region, Fourth Edition of the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. Table III-2A

(3) Ayers, R. S. and D. W. Westcot, *Water Quality for Agriculture*, Food and Agriculture Organization of the United Nations - Irrigation and Drainage Paper No. 29, Rev. 1, Rome (1985).

(4) Second Amended Contract for Exchange of Waters, No 11r-1144, Article 9. Quality of Substitute Water.

(5) Spectrum Analytic, Inc. Guide to Interpreting Irrigation Water Analysis. Washington C.H., Ohio
http://www.spectrumanalytic.com/support/library/rf/A_Guide_to_Interpreting_Irrigation_Water_Analysis.htm

revised 06 Jan 2014

RECLAMATION

Managing Water in the West

Table 7a. Approved Laboratory List for the Mid-Pacific Region Environmental Monitoring Branch

APPL Laboratory	<u>Address</u>	908 North Temperance Avenue, Clovis, CA 93611
	<u>Contact</u>	Renee' Patterson, Project Manager
	<u>P/F</u>	(559) 275-2175 / (559) 275-4422
	<u>Email</u>	rpatterson@applinc.com; danderson@applinc.com;
	<u>Methods</u>	<i>Approved for inorganic and organic parameters in water and soil</i>
Basic Laboratory	<u>Address</u>	2218 Railroad Avenue Redding, CA 96001 USA
	<u>Contact</u>	Josh Kirkpatrick, Nathan Hawley, Melissa Hawley
	<u>P/F</u>	(530) 243-7234 / (530) 243-7494
	<u>Email</u>	jkirkpatrick@basiclab.com (QA and PM); nhawley@basiclab.com, mhawley@basiclab.com (invoices); poilar@basiclab.com (sample custody), khawley@basiclab.com (sample custody)
	<u>Methods</u>	<i>Approved for inorganic/organic parameters</i>
California Laboratory Services	<u>Address</u>	3249 Fitzgerald Road Rancho Cordova, CA 95742
	<u>Contact</u>	Scott Furnas
	<u>P/F</u>	(916) 638-7301 / (916) 638-4510
	<u>Email</u>	janetm@californialab.com (QA); scottf@californialab.com (PM)
	<u>Methods</u>	<i>Approved for inorganic, organic, and microbiological parameters</i>
Calscience Environmental Laboratories	<u>Address</u>	7440 Lincoln Way; Garden Grove, CA 92841
	<u>Contact</u>	Don Burley
	<u>P/F</u>	714-895-5494 (ext. 203)/714-894-7501
	<u>Email</u>	DBurley@calscience.com
	<u>Methods</u>	<i>Approved for inorganic and organic parameters in water, sediment, and soil.</i>
Caltest Analytical Laboratory	<u>Address</u>	1885 N. Kelly Rd. Napa, CA 94558
	<u>Contact</u>	Mike Hamilton, Patrick Ingram (Lab Director)
	<u>P/F</u>	(707) 258-4000/(707) 226-1001
	<u>Email</u>	Mike_Hamilton@caltestlabs.com; Patrick_Ingram@caltestlabs.com info@caltestlabs.com
	<u>Methods</u>	<i>Approved for inorganic and microbiological parameters</i>
Dept. of Fish & Game - WPCL	<u>Address</u>	2005 Nimbus Road Rancho Cordova, CA 95670 USA
	<u>Contact</u>	David B. Crane - Laboratory Director, Patty Bucknell - Inorganic Chemist (916) 358-4398 Gail Chow - QA Manager + re-analysis requests (916) 358-2840
	<u>P/F</u>	(916) 358-2858 / (916) 985-4301, Sample Receiving: (916) 358-0319 Scott or Mary
	<u>Email</u>	dcrane@ospr.dfg.ca.gov; pbucknell@ospr.dfg.ca.gov; gcho@ospr.dfg.ca.gov
	<u>Methods</u>	<i>Approved only for metals analysis in tissue, organics pending</i>

Table 7a. Approved Laboratory List for the Mid-Pacific Region Environmental Monitoring Branch

Eurofins Eaton Analytical, Inc. (formerly MWH Laboratories)	<u>Address</u>	750 Royal Oaks Drive Ste. 100 Monrovia, CA 91016 USA
	<u>Contact</u>	Linda Geddes (Project Manager), Rick Zimmer (quotes)
	<u>P/F</u>	(626) 386-1100, Linda - (626) 386-1163, Rick - (626) 386-1157
	<u>Email</u>	lindageddes@eurofinsus.com
	<u>Methods</u>	<i>Approved for all inorganic, organic, and radiochemistry parameters in water</i>
Fruit Growers Laboratory	<u>Address</u>	853 Corporation Street Santa Paula, CA 93060 USA
	<u>Contact</u>	David Terz, QA Director
	<u>P/F</u>	(805) 392-2024 / (805) 525-4172
	<u>Email</u>	davidt@fglinc.com
	<u>Methods</u>	<i>Approved for general physical analysis in soils and most inorganic and organic parameters in water and soil; not approved for mercury in water or silver in soil.</i>
Sierra Foothill Laboratory, Inc.	<u>Address</u>	255 Scottsville Blvd, Jackson, CA 95642
	<u>Contact</u>	Sandy Nurse (Owner) or Karen Lantz (Program Manager)
	<u>P/F</u>	(209) 223-2800 / (209) 223-2747
	<u>Email</u>	sandy@sierrafoothilllab.com, CC: dale@sierrafoothilllab.com
	<u>Methods</u>	<i>Approved for all inorganic parameters (except low level TKN), microbiological parameters, acute and chronic toxicity.</i>
South Dakota Agricultural Laboratories	<u>Address</u>	Brookings Biospace, 1006 32nd Avenue, Suites 103,105, Brookings, SD 57006-4728
	<u>Contact</u>	Regina Wixon, Jessie Davis, Steven Hauger (sample custodian)
	<u>P/F</u>	(605) 692-7325/(605) 692-7326
	<u>Email</u>	regina.wixon@sdaglabs.com, annie.mouw@sdaglabs.com, emily.weissenfluh@sdaglabs.com, darin.wixon@sdaglabs.com
	<u>Methods</u>	<i>Approved for selenium analysis</i>
TestAmerica	<u>Address</u>	880 Riverside Parkway West Sacramento, CA 95605 USA
	<u>Contact</u>	Linda Laver
	<u>P/F</u>	(916) 374-4362 / (916) 372-1059 fax
	<u>Email</u>	Linda.Laver@TestAmericaInc.com
	<u>Methods</u>	<i>Approved for all inorganic parameters and hazardous waste organics. Ag analysis in sediment, when known quantity is present, request 6010B</i>
Western Environmental Testing Laboratories	<u>Address</u>	475 East Greg Street # 119 Sparks, NV 89431 USA
	<u>Contact</u>	Kurt Clarkson/Logan Greenwood (Client Services), Andy Smith (Lab Drctr)
	<u>P/F</u>	(775) 355-0202 / (775) 355-0817
	<u>Email</u>	kurtc@wetlaboratory.com, logang@wetlaboratory.com, andy@wetlaboratory.com
	<u>Methods</u>	<i>Approved for inorganic parameters (metals, general chemistry) and coliforms.</i>

Revised: 09 Dec 2013

Table 7b. Approved Laboratory Matrix for the Mid-Pacific Region Environmental Monitoring Branch (MP-157)

Laboratory	Water					Sediment/Soil				Tissue/Vegetation	
	Inorganic	Organic	Micro-biological	Radio-chemistry	Toxicity	Inorganic	Organic	General physical	Toxicity	Inorganics	Organics
APPL Laboratory	X	X				X	X				
Basic Laboratory	X	X				X	X				
California Laboratory Services	X	X	X			X	X				
Calscience Environmental Laboratories	X	X				X	X				
Caltest Analytical Laboratory	X		X								
Dept. of Fish & Game - WPCL		pending				X	pending			X	pending
Eurofins Eaton Analytical, Inc. (formerly MWH Laboratories)	X	X		X							
Fruit Growers Laboratory	X (not for mercury)	X				X (not for silver)	X	X			
Sierra Foothill Laboratory, Inc.	X (not for TKN)		X		X				X		
South Dakota Agricultural Laboratories	selenium					selenium				selenium	
TestAmerica	X	X				X	X				
Western Environmental Testing Laboratories	X		X								

revised: 11 Dec 2013

Table 8. Summary of Depth to Groundwater in Wells Beside the Delta-Mendota Canal (feet)
May 1995 - Dec 2012

DMC Milepost	Max	Min	Average	Median	Recent	Last measure	Count
12.37L	327.8	164.2	228.7	223.0	210.7	Dec-12	59
12.69L	244.8	201.4	221.9	219.7	209.0	Dec-12	59
12.75R	295.0	212.0	248.7	252.0	239.7	Dec-12	58
13.31L	275.8	201.4	226.1	222.0	209.9	Dec-12	58
14.26R	268.5	218.4	237.9	237.0	227.2	Dec-12	58
15.11R	264.0	200.0	240.7	241.5	233.5	Dec-12	59
21.25L	169.5	106.0	125.4	117.5	142.3	Dec-12	57
21.86L	130.0	89.6	108.9	109.0	114.0	Dec-12	59
22.77R	170.0	39.2	135.0	135.1	137.6	Dec-12	59
23.41L	254.0	141.0	189.7	185.0	168.1	Dec-12	59
30.43R	169.8	121.8	145.7	147.2	149.8	Dec-12	59
30.43L	191.0	102.0	127.7	124.7	191.0	Jun-12	59
31.60L	277.0	110.1	203.9	231.0	135.6	Dec-12	59
33.71L	198.6	130.9	162.3	165.2	139.2	Dec-12	59
35.73R	287.0	146.8	165.8	164.0	174.5	Dec-12	59
36.01L	290.0	137.2	201.3	181.2	181.2	Dec-12	57
36.80L	204.0	111.0	154.8	154.3	154.3	Dec-12	58
37.10L	277.0	158.0	191.3	189.5	173.7	Dec-12	58
37.32L	200.0	150.8	165.3	162.0	164.0	Mar-10	58
37.58L	170.0	127.8	145.9	142.7	146.0	Sep-11	58
45.78R	127.2	83.0	101.1	97.5	107.8	Dec-12	58
48.97L	130.0	71.0	96.1	94.0	71.0	Mar-10	49
48.96LNEW	96.0	88.0	93.3	96.0	96.0	Jun-10	6
48.97L	101.0	101.0	101.0	101.0	101.0	Mar-11	10
51.66L	150.4	86.4	109.8	108.5	110.8	Dec-12	58
58.28L	69.0	27.0	45.3	43.3	59.9	Mar-12	57
60.06R	95.0	37.6	68.3	69.0	78.2	Dec-12	57
66.71L	54.0	19.8	37.1	38.0	43.5	Dec-12	57
78.31L	49.3	21.9	29.7	28.0	38.8	Dec-12	66
79.13R	111.8	57.8	82.4	86.2	81.7	Dec-12	66
79.13L	132.1	63.3	92.6	90.7	132.1	Dec-12	14
79.60L	83.2	52.9	65.2	62.3	59.6	Mar-11	66
80.03L	80.0	16.0	36.2	35.8	44.5	Dec-12	66
80.03R	143.5	73.0	105.7	107.0	94.9	Dec-12	15
80.62R	100.2	47.8	62.7	61.0	80.0	Dec-12	66
80.62L	69.0	19.4	44.0	43.6	51.1	Dec-12	66
81.08-R	72.5	55.1	60.8	58.7	58.7	Dec-12	14
83.08-R	64.9	37.6	46.8	44.1	46.5	Dec-12	41
83.67-L	71.6	12.0	25.3	24.1	25.6	Dec-12	41
90.18R	201.3	103.9	140.9	134.6	178.4	Dec-12	66
90.19L1	218.5	98.9	145.6	138.0	138.3	Dec-12	66
90.19L2	190.0	72.0	132.5	126.3	144.3	Dec-12	66
90.39R	212.0	105.0	139.7	134.1	145.0	Dec-12	66
90.60L	192.0	28.7	139.2	134.2	167.8	Dec-12	66
90.61R	198.0	104.0	138.2	135.0	142.4	Dec-12	66
90.91L	285.9	93.2	143.9	136.5	137.8	Dec-12	66
91.15L	287.7	97.4	139.2	134.0	140.6	Dec-12	66

Table 8. Summary of Depth to Groundwater in Wells Beside the Delta-Mendota Canal (feet)
May 1995 - Dec 2012

DMC Milepost	Max	Min	Average	Median	Recent	Last measure	Count
91.36L	217.0	10.3	96.1	116.9	13.3	Dec-12	66
91.57R	222.2	91.8	135.5	128.5	143.0	Dec-12	66
91.68R	219.6	99.2	145.5	140.0	168.9	Dec-12	66
91.77R	172.2	96.0	127.1	124.2	out	Sep-03	66
91.80L	195.2	93.1	135.7	132.6	141.7	Dec-12	66
92.00R	172.6	109.0	137.7	131.2	out	Sep-03	66
92.14L	215.1	98.8	144.0	139.8	145.0	Dec-12	66
92.20R	220.0	95.8	141.6	142.0	142.0	Dec-12	66
92.72L	218.3	100.2	147.0	135.8	146.6	Dec-12	66
93.20L	296.1	102.2	140.9	131.8	173.2	Dec-12	66
93.27R	228.4	115.0	159.4	154.0	179.6	Dec-12	65
93.27L	218.9	100.8	146.1	141.9	165.6	Dec-12	66
94.26L	228.1	99.7	144.8	135.2	177.2	Dec-12	66
95.62L	213.4	99.6	145.2	132.0	172.1	Dec-12	66
97.28L	159.9	34.0	71.8	58.6	91.1	Dec-12	66
98.74L	114.2	39.2	53.9	46.0	56.9	Mar-11	66
99.24L	158.3	31.5	63.7	53.1	136.7	Dec-12	66
99.82L	190.3	19.5	69.8	56.0	88.1	Dec-12	66
100.24L	144.1	28.1	61.8	52.0	71.1	Dec-12	66
100.65L	137.6	36.5	67.0	64.5	94.4	Dec-12	66
100.85L	133.6	39.0	60.6	58.3	73.7	Dec-12	65
101.27L	131.4	37.4	66.3	57.0	72.1	Dec-12	65
102.04R	130.0	38.0	63.8	54.0	62.8	Dec-12	65
106.20R	138.3	60.7	91.6	85.0	97.1	Dec-12	65
113.72L	29.2	13.2	21.6	21.6	n/a	Mar-05	65
115.32R	82.9	18.5	30.0	31.0	24.6	Dec-12	65
115.62L	42.0	12.2	25.6	24.3	18.2	Dec-12	64
115.84R	39.2	14.9	24.7	23.0	22.6	Dec-12	65
116.40L1	77.0	14.2	29.5	27.7	20.6	Dec-12	65
116.40L2	74.0	11.3	30.6	24.1	31.2	Dec-12	65

Subsidence Wells near Russell Ave

97.69LH-2	23.1	23.0	23.0	23.0			11
97.69LH-3	17.3	17.3	17.3	17.3			16
97.69LH-4	no data						
97.69LH-5	139.5	131.5	137.1	137.7			16
97.69LH-6	209.9	64.3	134.4	134.3			16

Source: San Luis & Delta-Mendota Water Authority

Appendix 1. 2014 Letter from Exchange Contractors

DRAFT ENVIRONMENTAL ASSESSMENT (14-020)

*WARREN ACT CONTRACT FOR CONVEYANCE AND STORAGE OF
GROUNDWATER FROM 4-S RANCH AND SHS RANCH TO DEL PUERTO WATER
DISTRICT*

Appendix B
Reclamation's Cultural Resources Determination

May 2014

CULTURAL RESOURCE COMPLIANCE

Reclamation Division of Environmental Affairs

MP-153

MP-153 Tracking Number: 14-SCAO-184

Project Name: Warren Act Contract for Conveyance and Storage of Groundwater from 4-S Ranch and SHS Ranch to Del Puerto Water District (DPWD)

NEPA Document: SCCAO-EA-14-020

NEPA Contact: Rain Emerson, Natural Resource Specialist

MP 153 Cultural Resources Reviewer: William Soule, Archaeologist

Date: 05/01/2014

Reclamation proposes to approve a Warren Act contract for the introduction of up to 23,000 acre-feet annually of non-Central Valley Project (CVP) water into the Delta-Mendota Canal (DMC) for storage and conveyance to DPWD for a period not to exceed four years. This is the type of undertaking that does not have the potential to cause effects to historic properties, should such historic properties be present, pursuant to the National Historic Preservation Act (NHPA) Section 106 regulations codified at 36 CFR Part 800.3(a)(1).

Landowners of 4-S Ranch and SHS Ranch would pump groundwater from 13 existing wells for discharge into the Eastside Bypass and/or Bear Creek. The wells would pump 24 hours a day for approximately 8 months in order to provide up to 23,000 AF. Water would then flow downstream to the San Joaquin River where it would be pumped from the Patterson Irrigation District (PID) intakes located at river mile 98.5 on the San Joaquin River, subject to any regulatory requirements and/or conditions governing such diversions. The pumped water would then be conveyed through PID's main canal distribution system and introduced into the DMC at milepost (MP) 42.53L. A portion of the conveyed water would be delivered to water users within PID pursuant to an agreement between DPWD and PID. The remaining non-CVP water would be discharged into the DMC for conveyance to DPWD. Any water not delivered to DPWD would be stored in San Luis Reservoir for later delivery to DPWD via exchange with Reclamation.

After reviewing the materials submitted by SCAO, I concur with a determination in SCCAO-EA-14-20 which states that neither the proposed action nor the no action alternative have the potential to cause effects to historic properties pursuant to the NHPA Section 106 regulations codified at 36 CFR Part 800.3(a)(1). With this determination, Reclamation has no further NHPA Section 106 obligations. This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for

CULTURAL RESOURCE COMPLIANCE
Reclamation Division of Environmental Affairs
MP-153

this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150)

DRAFT ENVIRONMENTAL ASSESSMENT (14-020)

*WARREN ACT CONTRACT FOR CONVEYANCE AND STORAGE OF
GROUNDWATER FROM 4-S RANCH AND SHS RANCH TO DEL PUERTO WATER
DISTRICT*

Appendix C
Reclamation's Indian Trust Assets Determination

May 2014



Emerson, Rain <remerson@usbr.gov>

14-020 For Review

RIVERA, PATRICIA <privera@usbr.gov>

Thu, May 1, 2014 at 10:39 AM

To: "Emerson, Rain" <remerson@usbr.gov>

Cc: Kristi Seabrook <kseabrook@usbr.gov>, "Williams, Mary D (Diane)" <marywilliams@usbr.gov>

Rain,

I reviewed the proposed action to issue a Warren Act contract for the introduction of up to 23,000 acre-feet per year of non-Central Valley Project (CVP) water into the Delta-Mendota Canal for storage and conveyance to Del Puerto Water District for a period not to exceed four years. Conveyance and storage of non-CVP water in Federal facilities is subject to available capacity, conveyance losses, and Reclamation's then-current water quality requirements. All water introduced and stored in Federal facilities would be moved before the end of the four-year period. Source of the non-CVP water would be groundwater pumped from existing wells beneath the Properties.

The proposed action does not have a potential to impact Indian Trust Assets.

Patricia Rivera
Native American Affairs Program Manager
US Bureau of Reclamation
Mid-Pacific Region
2800 Sacramento, California 95825
(916) 978-5194

DRAFT ENVIRONMENTAL ASSESSMENT (14-020)

*WARREN ACT CONTRACT FOR CONVEYANCE AND STORAGE OF
GROUNDWATER FROM 4-S RANCH AND SHS RANCH TO DEL PUERTO WATER
DISTRICT*

Appendix D
Groundwater Quality Testing Results

May 2014



908 North Temperance Ave. ▽ Clovis, CA 93611 ▽ Phone 559-275-2175 ▽ Fax 559-275-4422

State Certification Number: CA1312 (WW & DW)
NELAP Certification number: 05233CA (HW)

August 17, 2012

Sloan Cattle Company
264 I Street
Los Banos, California 93632

Attn: Steve Sloan

Subject: Report of Data: Case 68384

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Sloan,

Ten water samples for project "4-S" were received on August 2, 2012, in good condition. Written results are being provided on this August 17, 2012, for the requested analyses. All holding times were met.

For the EPA 200.8 analysis, the samples were digested according to EPA method 200.8/11.2.

The selenium analysis was subcontracted to South Dakota Agricultural Laboratories. Their report is attached.

No unusual problem or complication was encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/sdm
Enclosure
cc: File

Number of pages in this report: _____

Metals Results

ARF: 68384

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sloan Cattle Co.
264 I St.
Los Banos, CA 93632

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY65877 -Client Sample ID: 4-S WELL#1		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65878 -Client Sample ID: 4-S WELL#2		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.6	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65879 -Client Sample ID: 4-S WELL#3		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65880 -Client Sample ID: 4-S WELL#4		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65881 -Client Sample ID: 4-S WELL#5		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65882 -Client Sample ID: 4-S WELL#6		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	6.3	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65883 -Client Sample ID: 4-S WELL#7		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	6.0	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65884 -Client Sample ID: 4-S WELL#8		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65885 -Client Sample ID: 4-S WELL#9		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12
APPL ID: AY65886 -Client Sample ID: 4-S WELL #10		-Sample Collection Date: 08/02/12 Project: 4-S				
200.8	ARSENIC (AS)	1.7	0.5	ug/L	08/03/12	08/03/12
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12

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APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date	QC Group
200.8	ARSENIC (AS)	Not detected	0.5	ug/L	08/03/12	08/03/12	#2008-120803A-AY65886
200.8	LEAD (PB)	Not detected	0.2	ug/L	08/03/12	08/03/12	#2008-120803A-AY65886

Laboratory Control Spike Recovery

METALS

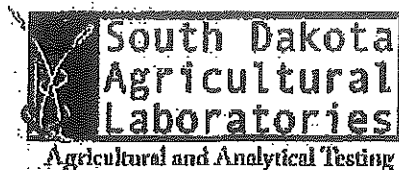
APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
200.8	ARSENIC (AS)	100.0	111	111	80-120	08/03/12	08/03/12	#2008-120803A-AY65886
200.8	LEAD (PB)	100.0	106	106	80-120	08/03/12	08/03/12	#2008-120803A-AY65886

Comments: _____

Performed By:

1006 32nd Avenue
Brookings Biospace 106
Brookings, SD 57006-4728
Telephone (605)692-7325
Fax (605)692-7326
Web <http://www.sdaglabs.com>



Report Date: 8/8/2012

Final Report

Report ID

Report Of Analysis

Stephane Maupas

908 North Temperance Avenue
Clovis, CA 93611

Received: August 06, 2012

Reported: August 08, 2012

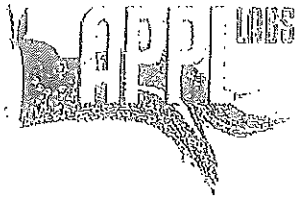
Package #: 20120806-008

<u>12S07822</u>	4-S Well #1 AY66877	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07823</u>	4-S Well #2 AY66878	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07824</u>	4-S Well #3 AY66879	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07825</u>	4-S Well #4 AY66880	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07826</u>	4-S Well #5 AY66881	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07827</u>	4-S Well #6 AY66882	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			0.548	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07828</u>	4-S Well #7 AY66883	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			0.489	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07829</u>	4-S Well #8 AY66884	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07830</u>	4-S Well #9 AY66885	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)
<u>12S07831</u>	4-S Well #10 AY66886	8/2/2012				
Selenium ug/L (ppb)			<u>Result</u>	<u>LOD</u>	<u>LOQ</u>	<u>Method</u>
			< 0.4	0.1	0.4	SM3500-Se-C(fluorometric)

Reviewed By: Regina Wixon Ph.D.

The analytical results on this report reflect what was found in the laboratory sample as it was received at the laboratory. Guidelines on taking a representative sample are available at <http://www.sdaglabs.com/index.php/guides>.

End of Report



908 North Temperance Ave. ▽ Clovis, CA 93611 ▽ Phone 559-275-2175 ▽ Fax 559-275-4422

State Certification Number: CA1312 (WW & DW)
NELAP Certification number: 05233CA (HW)

July 19, 2012

Sloan Cattle Company
264 I St
Los Banos, California 93635

Attn: Steve Sloan

Subject: Report of Data: Case 67941

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Sloan,

Four water samples for project "4-S Ranch" were received on May 31, 2012, in good condition. Written results are being provided on this July 19, 2012, for the requested analyses. All holding times were met.

For the EPA 8141A analysis, the samples were extracted according to the EPA method 3510C. In the lab control spike, Chlorpyrifos recovers above the 105% upper control limit at 108%. Chlorpyrifos was not detected in the samples, and all other spike recoveries were acceptable.

For the EPA 6010B analysis, the samples were digested according to EPA method 3010A

For the EPA 7470A analysis, the samples were digested and analyzed according to the method.

For the EPA 160.1 and SM 2510B analyses, the samples were prepared and analyzed according to the methods.

No unusual problem or complication was encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.

Sharon Dehmloew, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: 19

EPA 8141A OF Pesticide Water Low

Sloan Cattle Company
264 I St.
Los Banos, CA 93635

Attn: Steve Sloan

Project: 4-S

Sample ID: 4-S WELL #1

Sample Collection Date: 05/31/12

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

ARF: 67941

APPL ID: AY82704

QCG: #814LL-120604A-169178

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	06/04/12	07/03/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DEF	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	EPN	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PENSULFOTHION	Not detected	0.50	ug/L	06/04/12	07/03/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	06/04/12	07/03/12
EPA 8141A	NALED	Not detected	0.50	ug/L	06/04/12	07/03/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	78.3	65-145	%	06/04/12	07/03/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	84.7	57-125	%	06/04/12	07/03/12

Quant Method: OPF0703.M
Run #: 0703013
Instrument: Ople
Sequence: 120703
Dilution Factor: 1
Initials: LA

Printed: 07/19/12 12:15:31 PM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St.
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S

Sample ID: 4-S WELL #3

Sample Collection Date: 05/31/12

ARF: 67941

APPL ID: AY62705

QCG: #814LL-120604A-169178

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	06/04/12	07/03/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	CHLORPYRIFOS (DURBAN)	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DEF	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	06/04/12	07/03/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	EPN	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	06/04/12	07/03/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	06/04/12	07/03/12
EPA 8141A	NALED	Not detected	0.50	ug/L	06/04/12	07/03/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	RÖNNEL	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	06/04/12	07/03/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	06/04/12	07/03/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	74.3	65-145	%	06/04/12	07/03/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	82.5	57-125	%	06/04/12	07/03/12

Quant Method: OPF0703.M
Run #: 0703014
Instrument: Opie
Sequence: 120703
Dilution Factor: 1
Initials: LA

Printed: 07/19/12 12:15:31 PM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St.
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S

ARF: 67941

Sample ID: 4-S WELL #4

APPL ID: AY62706

Sample Collection Date: 05/31/12

QCG: #814LL-120604A-169178

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	06/04/12	07/04/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DEF	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	EPN	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	06/04/12	07/04/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	06/04/12	07/04/12
EPA 8141A	NALED	Not detected	0.50	ug/L	06/04/12	07/04/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	80.5	65-145	%	06/04/12	07/04/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	85.8	57-125	%	06/04/12	07/04/12

Quant Method: OPF0703.M
Run #: 0703015
Instrument: Opie
Sequence: 120703
Dilution Factor: 1
Initials: LA

Printed: 07/19/12 12:15:31 PM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St.
Los Banos, CA 93636

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S

Sample ID: 4-S WELL #5

Sample Collection Date: 05/31/12

ARF: 67941

APPL ID: AY62707

QCG: #814LL-120604A-169178

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	06/04/12	07/04/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DEF	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	06/04/12	07/04/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	EPN	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	06/04/12	07/04/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	06/04/12	07/04/12
EPA 8141A	NALED	Not detected	0.50	ug/L	06/04/12	07/04/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	06/04/12	07/04/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	06/04/12	07/04/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	76.6	65-145	%	06/04/12	07/04/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	81.1	57-125	%	06/04/12	07/04/12

Quant Method: OPF0703.M
Run #: 0703016
Instrument: Opie
Sequence: 120703
Dilution Factor: 1
Initials: LA

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Form 1 - APPL Standard GC - No MC

Metals Results

ARF: 67941

Sloan Cattle Company
2641 St.
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY62704 -Client Sample ID: 4-S WELL #1 -Sample Collection Date: 05/31/12 Project: 4-S						
6010B	BORON (B)	104	50.0	ug/L	06/06/12	06/09/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	MOLYBDENUM (MO)	6.0	5.0	ug/L	06/06/12	06/09/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	06/06/12	06/09/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	06/13/12	06/14/12
APPL ID: AY62705 -Client Sample ID: 4-S WELL #3 -Sample Collection Date: 05/31/12 Project: 4-S						
6010B	BORON (B)	99.3	50.0	ug/L	06/06/12	06/09/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	MOLYBDENUM (MO)	5.6	5.0	ug/L	06/06/12	06/09/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	06/06/12	06/09/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	06/13/12	06/14/12
APPL ID: AY62706 -Client Sample ID: 4-S WELL #4 -Sample Collection Date: 05/31/12 Project: 4-S						
6010B	BORON (B)	98.7	50.0	ug/L	06/06/12	06/09/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	MOLYBDENUM (MO)	5.7	5.0	ug/L	06/06/12	06/09/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	06/06/12	06/09/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	06/13/12	06/14/12
APPL ID: AY62707 -Client Sample ID: 4-S WELL #5 -Sample Collection Date: 05/31/12 Project: 4-S						
6010B	BORON (B)	101	50.0	ug/L	06/06/12	06/09/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	MOLYBDENUM (MO)	5.6	5.0	ug/L	06/06/12	06/09/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	06/06/12	06/09/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	06/06/12	06/09/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	06/13/12	06/14/12

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Wetlab Results

ARF: 67841

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Sloan Calife Company

264 I St.

Los Banos, CA 93635

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY62704 -Client Sample ID: 4-S WELL #1 -Sample Collection Date: 05/31/12 Project: 4-S						
EPA 160.1	TOTAL DISSOLVED SOLID	625	10	mg/L	06/04/12	06/04/12
SM 2510B	SPECIFIC CONDUCTANC	949	3.0 umhos/cm @ 25C		06/15/12	06/15/12
APPL ID: AY62706 -Client Sample ID: 4-S WELL #3 -Sample Collection Date: 05/31/12 Project: 4-S						
EPA 160.1	TOTAL DISSOLVED SOLID	616	10	mg/L	06/04/12	06/04/12
SM 2510B	SPECIFIC CONDUCTANC	893	3.0 umhos/cm @ 25C		06/15/12	06/15/12
APPL ID: AY62706 -Client Sample ID: 4-S WELL #4 -Sample Collection Date: 05/31/12 Project: 4-S						
EPA 160.1	TOTAL DISSOLVED SOLID	615	10	mg/L	06/04/12	06/04/12
SM 2510B	SPECIFIC CONDUCTANC	933	3.0 umhos/cm @ 25C		06/15/12	06/15/12
APPL ID: AY62707 -Client Sample ID: 4-S WELL #5 -Sample Collection Date: 05/31/12 Project: 4-S						
EPA 160.1	TOTAL DISSOLVED SOLID	618	10	mg/L	06/04/12	06/04/12
SM 2510B	SPECIFIC CONDUCTANC	955	3.0 umhos/cm @ 25C		06/15/12	06/15/12

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Method Blank
EPA 8141A OP Pesticide Water Low

Blank Name/QCG: 120604W-62704 - 169178
Batch ID: #814LL-120604A

APFL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	AZINPHOSMETHYL	Not detected	1.0	ug/L	06/04/12	07/03/12
BLANK	BOLSTAR	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	CHLORPYRIFOS (DURBAN)	Not detected	0.05	ug/L	06/04/12	07/03/12
BLANK	COUMAPHOS	Not detected	0.20	ug/L	06/04/12	07/03/12
BLANK	DEF	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	DEMETON (TOTAL)	Not detected	0.20	ug/L	06/04/12	07/03/12
BLANK	DIAZINON	Not detected	0.05	ug/L	06/04/12	07/03/12
BLANK	DICHLORVOS	Not detected	0.20	ug/L	06/04/12	07/03/12
BLANK	DIMETHOATE	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	DISULFOTON	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	EPN	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	EPTC	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	ETHION	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	ETHOPROP	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	FENSULFOTHION	Not detected	0.50	ug/L	06/04/12	07/03/12
BLANK	FENTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	MALATHION	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	MERPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	MEVINPHOS	Not detected	0.70	ug/L	06/04/12	07/03/12
BLANK	NALED	Not detected	0.50	ug/L	06/04/12	07/03/12
BLANK	PARATHION, ETHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	PARATHION, METHYL	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	PHORATE	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	RONNEL	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	STIROPHOS	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	SULFOTEP	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	TOKUTHION	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	TRICHLORONATE	Not detected	0.10	ug/L	06/04/12	07/03/12
BLANK	TRIFLURALIN	Not detected	0.05	ug/L	06/04/12	07/03/12
BLANK	SURROGATE: TRIBUTYLPHOSPHATE (S)	81.4	65-145	%	06/04/12	07/03/12
BLANK	SURROGATE: TRIPHENYLPHOSPHATE (S)	80.9	57-125	%	06/04/12	07/03/12

Quant Method: OPF0703.M
Run #: 0703011
Instrument: Opie
Sequence: 120703
Initials: LA

Laboratory Control Spike Recovery

EPA 8141A OP Pesticide Water Low

APPL ID: 120604W-62704 LCS - 169173

Batch ID: #814LL-120604A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
AZINPHOSMETHYL	10.00	10.0	100	12-169
BOLSTAR	20.0	18.3	91.5	33-149
CHLORPYRIFOS (DURSBAN)	10.00	10.8	108 #	66-105
COUMAPHOS	10.00	11.2	112	27-166
DEF	20.0	18.0	90.0	64-146
DEMETON (TOTAL)	10.00	8.90	89.0	10-184
DIAZINON	10.00	9.39	93.9	63-116
DICHLORVOS	20.0	19.5	97.5	10-189
DIMETHOATE	10.00	11.3	113	30-150
DISULFOTON	10.00	8.66	86.6	46-120
EPN	10.00	10.0	100	35-169
EPTC	10.00	8.28	82.8	27-136
ETHION	10.00	8.97	89.7	47-137
ETHOPROP	10.00	9.96	99.6	54-142
FENSULFOTHION	10.00	9.88	98.8	15-179
FENTHION	10.00	10.1	101	29-144
MALATHION	10.00	10.2	102	39-147
MERPHOS	20.0	18.0	90.0	45-155
MEVINPHOS	10.00	11.4	114	13-183
NALED	20.0	19.5	97.5	0-182
PARATHION, ETHYL	10.00	10.6	106	35-138
PARATHION, METHYL	10.00	11.3	113	33-136
PHORATE	10.00	9.82	98.2	24-136
PROWL (PENDIMETHALIN)	10.00	10.2	102	43-151
RÖNNEL	10.00	10.8	108	48-134
STIROPPOS	10.00	10.1	101	34-168
SULFOTEP	10.00	8.70	87.0	59-124
TOKUTHION	10.00	9.00	90.0	49-140
TRICHLORONATE	10.00	11.1	111	37-143
TRIFLURALIN	10.00	11.2	112	42-123
SURROGATE: TRIBUTYLPHOSPHATE (	10.00	9.98	99.8	65-145

= Recovery is outside QC limits.

Comments:

Primary	SPK
Quant Method :	OPF0703.M
Extraction Date :	06/04/12
Analysis Date :	07/03/12
Instrument :	Opie
Run :	0703012
Initials :	LA

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APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8141A OP Pesticide Water Low

APPL ID: 120604W-62704 LCS - 169178
Batch ID: #814LL-120604A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
SURROGATE: TRIPHENYLPHOSPHATE	10.00	8.66	86.6	57-125

= Recovery is outside QC limits.

Comments:

Primary	SPK
Quant Method :	OPF0703.M
Extraction Date :	06/04/12
Analysis Date :	07/03/12
Instrument :	Opie.
Run :	0703012
Initials :	LA

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APPL Standard LCS

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date	QC Group
7470A/7470A	MERCURY (HG)	Not detected	0.2	ug/L	06/13/12	06/14/12	#HG-120613A-AY62689
6010B/3010A	BORON (B)	Not detected	50.0	ug/L	06/06/12	06/09/12	#MTL1-120606A1-AY62707
6010B/3010A	CHROMIUM (CR)	Not detected	5.0	ug/L	06/06/12	06/09/12	#MTL1-120606A1-AY62707
6010B/3010A	MOLYBDENUM (MO)	Not detected	5.0	ug/L	06/06/12	06/09/12	#MTL1-120606A1-AY62707
6010B/3010A	NICKEL (NI)	Not detected	5.0	ug/L	06/06/12	06/09/12	#MTL1-120606A1-AY62707
6010B/3010A	SELENIUM (SE)	Not detected	5.0	ug/L	06/06/12	06/09/12	#MTL1-120606A1-AY62707

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010B	BORON (B)	250	273	109	80-120	06/06/12	06/09/12	#MTL1-120606A1-AY62707
EPA 6010B	CHROMIUM (CR)	250	274	110	80-120	06/06/12	06/09/12	#MTL1-120606A1-AY62707
EPA 6010B	MOLYBDENUM (MO)	250	275	110	80-120	06/06/12	06/09/12	#MTL1-120606A1-AY62707
EPA 6010B	NICKEL (NI)	250	277	111	80-120	06/06/12	06/09/12	#MTL1-120606A1-AY62707
EPA 6010B	SELENIUM (SE)	250	272	109	80-120	06/06/12	06/09/12	#MTL1-120606A1-AY62707

Comments:

Laboratory Control Spike Recovery

METALS

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 7470A	MERCURY (HG)	4.00	4.0	100	85-115	06/13/12	06/14/12	#HG-120613A-AY62689

121

Comments:

Matrix Spike Recoveries

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample ID: AY62707
Client ID: 4-S WELL #5

Method	Compound Name	Spike Lvl ug/L	Matrix Res ug/L	SPK Res ug/L	DUP Res ug/L	SPK % - Recovery	DUP % Recovery	RPD	RPD Limits	Recovery Extract	Analysis Date-Spk	Extract Date-Spk	Analysis Date-Dup	QC Group	QC Sample
EPA 60108	BORON (B)	250	101	387	345	114	97.6	11.5	20	80-120	06/06/12	06/09/12	06/06/12	06/09/12	167954
EPA 60108	CHROMIUM (CR)	250	ND	284	241	114	96.4	16.4	20	80-120	06/06/12	06/09/12	06/06/12	06/09/12	167954
EPA 60108	MOLYBDENUM (MO)	250	5.6	277	238	109	93.0	15.1	20	80-120	06/06/12	06/09/12	06/06/12	06/09/12	167954
EPA 60108	NICKEL (NI)	250	ND	272	233	109	93.2	15.4	20	80-120	06/06/12	06/09/12	06/06/12	06/09/12	167954
EPA 60108	SELENIUM (SE)	250	ND	274	240	110	96.0	13.2	20	80-120	06/06/12	06/09/12	06/06/12	06/09/12	167954

Comments:

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	Units	Prep Date	Anal Date	QC Group
SM 2510B	SPECIFIC CONDUCTANCE	Not detected	3.0	umhos/cm @ 25C	06/15/12	06/15/12	#EC-120615A-AY62704
EPA 160.1	TOTAL DISSOLVED SOLIDS	Not detected	10	mg/L	06/04/12	06/04/12	#TDS-120604A-AY62704

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Laboratory Control Spike Recoveries

WETLAB DISSOLVED

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	QC Group
EPA 160.1	TOTAL DISSOLVED SOLID	221	226	235	102	106	3.9	20	80-120	06/04/12	06/04/12	#IDS-120604A-AY62704

Comments: _____

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/cm @ 2	SPK Res mg/cm @ 10s/cm	DUP Res mg/cm @ 10s/cm	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	QC Group
SM 2510B	SPECIFIC CONDUCTANCE	1412	1340	1360	94.9	96.3	1.5	20	80-120	06/15/12	06/15/12	06/15/12 #EC-120615A-AY62704

Comments:

WETLAB

Sample/Sample Duplicate Results

Sloan Cattle Company
2641 St.

Los Banos, CA 93635

Attn: Steve Sloan

Project: 4-S

Sample ID: AY62704

Client ID: 4-S WELL #1

APPL Inc.,
908 North Temperance Avenue
Clovis, CA 93611

ARF: 67941

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	Max	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SM 2510B	SPECIFIC CONDUCTANCE	AY62704	949	950	0.1	20	3.0	umhos/cm @ 25C	06/15/12	06/15/12	06/15/12	06/15/12



908 North Temperance Ave. ▽ Clovis, CA 93611 ▽ Phone 559-275-2175 ▽ Fax 559-275-4422

State Certification Number: CA1312 (WW & DW)
NELAP Certification number: 05233CA (HW)

June 25, 2012

Sloan Cattle Company
264 I St
Los Banos, California 93635

Attn: Steve Sloan

Subject: Report of Data: Case 67805

Results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Dear Mr. Sloan,

Six water samples for project "4-S Ranch" were received on May 17, 2012, in good condition. Written results are being provided on this June 25, 2012, for the requested analyses. All holding times were met.

For the EPA 8141A analysis, the samples were extracted according to the EPA method 3510C. For the 120523A extraction batch, there were six target analytes which recovered low in the lab control spike and surrogates recovered low in the blank and LCS: Chlorpyrifos recovers below 66% at 47.6%, DEF below 64% at 55.5%, Diazinon below 63% at 38.8%, Ethoprop below 54% at 51.1%, Sulfotep below 59% at 38.4%, and Tokuthion below 49% at 42.6%. There was no volume remaining to re-extract the sample (4-S Well #7) associated with the LCS and blank. All acceptance criteria were met in the 120523B extraction batch.

For the EPA 6010B analysis, the samples were digested according to EPA method 3010A

For the EPA 7470A analysis, the samples were digested and analyzed according to the method.

For the EPA 160.1 and SM 2510B analyses, the samples were prepared and analyzed according to the methods.

No unusual problem or complication was encountered with this sample set.

If you have any questions or require further information, please contact us at your convenience. Thank you for choosing APPL, Inc.

I certify that this data package complies with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. These test results meet all requirements of NELAC. Release of the hard copy has been authorized by the Laboratory Manager or her designee, as verified by the following signature.



Sharon Dehmlow, Laboratory Director
APPL, Inc.

SD/cm
Enclosure
cc: File

Number of pages in this report: 23

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

Sample ID: 4-S WELL #6

Sample Collection Date: 05/16/12

ARF: 67805

APPL ID: AY61645

QCG: #814LL-120523B-168332

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/18/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/18/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	84.5	65-145	%	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	89.8	57-125	%	05/23/12	06/18/12

Quant Method: OPF0618.M
Run #: 0618016
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

Sample ID: 4-S WELL #8

Sample Collection Date: 05/16/12

ARF: 67805

APPL ID: AY61646

QCG: #814LL-120523B-168332

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/18/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/18/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	92.9	65-145	%	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	115	57-125	%	05/23/12	06/18/12

Quant Method: OPF0618.M
Run #: 0618017
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

Sample ID: 4-S WELL #9

Sample Collection Date: 05/16/12

ARF: 67805

APPL ID: AY61647

QCG: #814LL-120523B-168332

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/19/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/19/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	85.4	65-145	%	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	93.0	57-125	%	05/23/12	06/19/12

Quant Method: OPF0618.M
Run #: 0618018
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

Sample ID: 4-S WEL I#10

Sample Collection Date: 05/16/12

ARF: 67805

APPL ID: AY61648

QCG: #814LL-120523B-168332

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/19/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/19/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	85.6	65-145	%	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	93.8	57-125	%	05/23/12	06/19/12

Quant Method: OPF0618.M
Run #: 0618019
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

Sample ID: 4-S WELL #2

Sample Collection Date: 05/16/12

ARF: 67805

APPL ID: AY61649

QCG: #814LL-120523B-168332

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/19/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/19/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/19/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/19/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	75.3	65-145	%	05/23/12	06/19/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	80.4	57-125	%	05/23/12	06/19/12

Quant Method: OPF0618.M
Run #: 0618020
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

EPA 8141A OP Pesticide Water Low

Sloan Cattle Company
264 I St
Los Banos, CA 93635

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Attn: Steve Sloan

Project: 4-S RANCH

ARF: 67805

Sample ID: 4-S WELL #7

APPL ID: AY61650

Sample Collection Date: 05/16/12

QCG: #814LL-120523A-168330

Method	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
EPA 8141A	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/18/12
EPA 8141A	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DEF	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/18/12
EPA 8141A	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPN	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	EPTC	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	FENTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MALATHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/18/12
EPA 8141A	NALED	Not detected	0.50	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PHORATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	RONNEL	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	STIROPPOS	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/18/12
EPA 8141A	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIBUTYLPHOSPHATE (S)	71.2	65-145	%	05/23/12	06/18/12
EPA 8141A	SURROGATE: TRIPHENYLPHOSPHATE (S)	79.5	57-125	%	05/23/12	06/18/12

Quant Method: OPF0618.M
Run #: 0618013
Instrument: Opie
Sequence: 120618
Dilution Factor: 1
Initials: LA

Printed: 06/25/12 11:55:33 AM
Form 1 - APPL Standard GC - No MC

Metals Results

ARF: 67805

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Sloan Cattle Company

264 I St

Los Banos, CA 93635

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY61645 -Client Sample ID: 4-S WELL #6 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
6010B	BORON (B)	Not detected	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	47.1	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12
APPL ID: AY61646 -Client Sample ID: 4-S WELL #8 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
6010B	BORON (B)	Not detected	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12
APPL ID: AY61647 -Client Sample ID: 4-S WELL #9 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
6010B	BORON (B)	Not detected	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12
APPL ID: AY61648 -Client Sample ID: 4-S WELL #10 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
6010B	BORON (B)	Not detected	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12
APPL ID: AY61649 -Client Sample ID: 4-S WELL #2 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
6010B	BORON (B)	99.2	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	6.0	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12

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Metals Results

ARF: 67805

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Sloan Cattle Company

264 I St

Los Banos, CA 93635

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY61650		-Client Sample ID: 4-S WELL #7		-Sample Collection Date: 05/16/12		Project: 4-S RANCH
6010B	BORON (B)	96.0	50.0	ug/L	05/21/12	05/22/12
6010B	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	MOLYBDENUM (MO)	5.9	5.0	ug/L	05/21/12	05/22/12
6010B	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12
6010B	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12
7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12

Printed: 05/30/12 5:58:41 PM

Wetlab Results

ARF: 67805

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sloan Cattle Company
264 I St
Los Banos, CA 93635

Attn: Steve Sloan

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date
APPL ID: AY61645 -Client Sample ID: 4-S WELL #6 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	329	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	455	3.0 µmhos/cm @ 25C		06/07/12	06/07/12
APPL ID: AY61646 -Client Sample ID: 4-S WELL #8 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	325	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	459	3.0 µmhos/cm @ 25C		06/07/12	06/07/12
APPL ID: AY61647 -Client Sample ID: 4-S WELL #9 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	327	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	461	3.0 µmhos/cm @ 25C		06/07/12	06/07/12
APPL ID: AY61648 -Client Sample ID: 4-S WELL #10 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	325	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	462	3.0 µmhos/cm @ 25C		06/07/12	06/07/12
APPL ID: AY61649 -Client Sample ID: 4-S WELL #2 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	671	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	1010	3.0 µmhos/cm @ 25C		06/07/12	06/07/12
APPL ID: AY61650 -Client Sample ID: 4-S WELL #7 -Sample Collection Date: 05/16/12 Project: 4-S RANCH						
EPA 160.1	TOTAL DISSOLVED SOLID	671	10	mg/L	05/21/12	05/21/12
SM 2510B	SPECIFIC CONDUCTANC	1010	3.0 µmhos/cm @ 25C		06/07/12	06/07/12

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Method Blank

EPA 8141A OP Pesticide Water Low

Blank Name/QCG: 120523W-61650 - 168330
Batch ID: #814LL-120523A

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/18/12
BLANK	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	CHLORPYRIFOS (DURSBAN)	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DEF	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	EPN	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	EPTC	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	ETHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/18/12
BLANK	FENTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MALATHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/18/12
BLANK	NALED	Not detected	0.50	ug/L	05/23/12	06/18/12
BLANK	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PHORATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	RONNEL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	SURROGATE: TRIBUTYLPHOSPHATE (S)	12.5 #	65-145	%	05/23/12	06/18/12
BLANK	SURROGATE: TRIPHENYLPHOSPHATE (S)	7.10 #	57-125	%	05/23/12	06/18/12

= Recovery (or RPD) is outside QC limits.

Quant Method: OPF0618.M
Run #: 0618011
Instrument: Opie
Sequence: 120618
Initials: LA

Method Blank

EPA 8141A OP Pesticide Water Low

Blank Name/QCG: 120523W-61645 - 168332
Batch ID: #814LL-120523B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Sample Type	Analyte	Result	PQL	Units	Extraction Date	Analysis Date
BLANK	AZINPHOSMETHYL	Not detected	1.0	ug/L	05/23/12	06/18/12
BLANK	BOLSTAR	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	CHLORPYRIFOS (DURBAN)	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	COUMAPHOS	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DEF	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	DEMETON (TOTAL)	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DIAZINON	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	DICHLORVOS	Not detected	0.20	ug/L	05/23/12	06/18/12
BLANK	DIMETHOATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	DISULFOTON	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	EPN	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	EPTC	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	ETHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	ETHOPROP	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	FENSULFOTHION	Not detected	0.50	ug/L	05/23/12	06/18/12
BLANK	FENTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MALATHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MERPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	MEVINPHOS	Not detected	0.70	ug/L	05/23/12	06/18/12
BLANK	NALED	Not detected	0.50	ug/L	05/23/12	06/18/12
BLANK	PARATHION, ETHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PARATHION, METHYL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PHORATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	PROWL (PENDIMETHALIN)	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	RONNEL	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	STIROPHOS	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	SULFOTEP	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TOKUTHION	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TRICHLORONATE	Not detected	0.10	ug/L	05/23/12	06/18/12
BLANK	TRIFLURALIN	Not detected	0.05	ug/L	05/23/12	06/18/12
BLANK	SURROGATE: TRIBUTYLPHOSPHATE (S)	85.4	65-145	%	05/23/12	06/18/12
BLANK	SURROGATE: TRIPHENYLPHOSPHATE (S)	94.0	57-125	%	05/23/12	06/18/12

Quant Method: OPF0618.M
Run #: 0618014
Instrument: Opie
Sequence: 120618
Initials: LA

Laboratory Control Spike Recovery

EPA 8141A OP Pesticide Water Low

APPL ID: 120523W-61650 LCS - 168330

Batch ID: #814LL-120523A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
AZINPHOSMETHYL	10.00	3.58	35.8	12-169
BOLSTAR	20.0	8.63	43.2	33-149
CHLORPYRIFOS (DURSBAN)	10.00	4.76	47.6 #	66-105
COUMAPHOS	10.00	3.10	31.0	27-166
DEF	20.0	11.1	55.5 #	64-146
DEMETON (TOTAL)	10.00	6.14	61.4	10-184
DIAZINON	10.00	3.88	38.8 #	63-116
DICHLORVOS	10.00	14.8	148	10-189
DIMETHOATE	10.00	5.49	54.9	30-150
DISULFOTON	10.00	5.32	53.2	46-120
EPN	10.00	4.72	47.2	35-169
EPTC	10.00	6.84	68.4	27-136
ETHION	10.00	4.76	47.6	47-137
ETHOPROP	10.00	5.11	51.1 #	54-142
FENSULFOTHION	10.00	2.93	29.3	15-179
FENTHION	10.00	5.53	55.3	29-144
MALATHION	10.00	5.26	52.6	39-147
MERPHOS	10.00	8.52	85.2	45-155
MEVINPHOS	10.00	7.82	78.2	13-183
NALED	20.0	14.8	74.0	0-182
PARATHION, ETHYL	10.00	5.58	55.8	35-138
PARATHION, METHYL	10.00	6.27	62.7	33-136
PHORATE	10.00	3.84	38.4	24-136
PROWL (PENDIMETHALIN)	10.00	5.28	52.8	43-151
RONNEL	10.00	5.94	59.4	48-134
STIOPHOS	10.00	3.66	36.6	34-168
SULFOTEP	10.00	3.84	38.4 #	59-124
TOKUTHION	10.00	4.26	42.6 #	49-140
TRICHLORONATE	10.00	5.11	51.1	37-143
TRIFLURALIN	10.00	4.97	49.7	42-123
<hr/>				
SURROGATE: TRIBUTYLPHOSPHATE (	10.00	4.51	45.1 #	65-145

= Recovery is outside QC limits.

Comments:

Primary	SPK
Quant Method :	OPF0618.M
Extraction Date :	05/23/12
Analysis Date :	06/18/12
Instrument :	Opie
Run :	0618012
Initials :	LA

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APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8141A OP Pesticide Water Low

APPL ID: 120523W-61650 LCS - 168330

Batch ID: #814LL-120523A

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
SURROGATE: TRIPHENYLPHOSPHATE	10.00	4.04	40.4 #	57-125

= Recovery is outside QC limits.

Comments: _____

Primary	SPK
Quant Method :	OPF0618.M
Extraction Date :	05/23/12
Analysis Date :	06/18/12
Instrument :	Opie
Run :	0618012
Initials :	LA

Printed: 06/25/12 11:55:25 AM

APPL Standard LCS

Laboratory Control Spike Recovery

EPA 8141A OP Pesticide Water Low

APPL ID: 120523W-61645 LCS - 168332
Batch ID: #814LL-120523B

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
AZINPHOSMETHYL	10.00	9.49	94.9	12-169
BOLSTAR	20.0	16.5	82.5	33-149
CHLORPYRIFOS (DURSBAN)	10.00	9.76	97.6	66-105
COUMAPHOS	10.00	10.3	103	27-166
DEF	20.0	22.6	113	64-146
DEMETON (TOTAL)	10.00	8.50	85.0	10-184
DIAZINON	10.00	8.24	82.4	63-116
DICHLORVOS	10.00	18.6	186	10-189
DIMETHOATE	10.00	10.2	102	30-150
DISULFOTON	10.00	8.50	85.0	46-120
EPN	10.00	9.29	92.9	35-169
EPTC	10.00	8.71	87.1	27-136
ETHION	10.00	8.06	80.6	47-137
ETHOPROP	10.00	8.47	84.7	54-142
FENSULFOTHION	10.00	9.06	90.6	15-179
FENTHION	10.00	9.12	91.2	29-144
MALATHION	10.00	9.94	99.4	39-147
MERPHOS	20.0	17.6	88.0	45-155
MEVINPHOS	10.00	11.2	112	13-183
NALED	20.0	18.6	93.0	0-182
PARATHION, ETHYL	10.00	9.52	95.2	35-138
PARATHION, METHYL	10.00	8.99	89.9	33-136
PHORATE	10.00	7.89	78.9	24-136
PROWL (PENDIMETHALIN)	10.00	8.96	89.6	43-151
RONNEL	10.00	9.70	97.0	48-134
STIROPHOS	10.00	10.4	104	34-168
SULFOTEP	10.00	7.89	78.9	59-124
TOKUTHION	10.00	8.78	87.8	49-140
TRICHLORONATE	10.00	9.77	97.7	37-143
TRIFLURALIN	10.00	10.9	109	42-123
SURROGATE: TRIBUTYLPHOSPHATE (	10.00	8.78	87.8	65-145

Comments: _____

Primary	SPK
Quant Method :	OPF0618.M
Extraction Date :	05/23/12
Analysis Date :	06/18/12
Instrument :	Opie
Run :	0618015
Initials :	LA

Printed: 06/25/12 11:55:24 AM
APPL Standard LCS

Laboratory Control Spike Recovery
EPA 8141A OP Pesticide Water Low

APPL ID: 120523W-61645 LCS - 168332

Batch ID: #814LL-120523B

APPL Inc.

908 North Temperance Avenue

Clovis, CA 93611

Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits
SURROGATE: TRIPHENYLPHOSPHATE	10.00	9.29	92.9	57-125

Comments: _____

<u>Primary</u>	<u>SPK</u>
Quant Method :	OPF0618.M
Extraction Date :	05/23/12
Analysis Date :	06/18/12
Instrument :	Opie
Run :	0618015
Initials :	LA

Printed: 06/25/12 11:55:24 AM

APPL Standard LCS

METALS BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	Units	Prep Date	Analysis Date	QC Group
7470A/7470A	MERCURY (HG)	Not detected	0.2	ug/L	05/23/12	05/25/12	#HG-120523B-AY61652
6010B/3010A	BORON (B)	Not detected	50.0	ug/L	05/21/12	05/22/12	#MTL1-120521A-AY61645
6010B/3010A	CHROMIUM (CR)	Not detected	5.0	ug/L	05/21/12	05/22/12	#MTL1-120521A-AY61645
6010B/3010A	MOLYBDENUM (MO)	Not detected	5.0	ug/L	05/21/12	05/22/12	#MTL1-120521A-AY61645
6010B/3010A	NICKEL (NI)	Not detected	5.0	ug/L	05/21/12	05/22/12	#MTL1-120521A-AY61645
6010B/3010A	SELENIUM (SE)	Not detected	5.0	ug/L	05/21/12	05/22/12	#MTL1-120521A-AY61645

Laboratory Control Spike Recovery

METALS

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Level ug/L	SPK Result ug/L	SPK % Recovery	Recovery Limits	Extract Date	Analysis Date	QC Group
EPA 6010B	BORON (B)	250	272	109	80-120	05/21/12	05/22/12	#MTL1-120521A-AY61645
EPA 6010B	CHROMIUM (CR)	250	288	115	80-120	05/21/12	05/22/12	#MTL1-120521A-AY61645
EPA 6010B	MOLYBDENUM (MO)	250	284	114	80-120	05/21/12	05/22/12	#MTL1-120521A-AY61645
EPA 6010B	NICKEL (NI)	250	289	116	80-120	05/21/12	05/22/12	#MTL1-120521A-AY61645
EPA 6010B	SELENIUM (SE)	250	253	101	80-120	05/21/12	05/22/12	#MTL1-120521A-AY61645
EPA 7470A	MERCURY (HG)	4.00	4.4	110	85-115	05/23/12	05/25/12	#HG-120523B-AY61652

Comments:

WETLAB BLANK

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Analyte	Result	PQL	Units	Prep Date	Anal Date	QC Group
SM 2510B	SPECIFIC CONDUCTANCE	Not detected	3.0	umhos/cm @ 25C	06/07/12	06/07/12	#EC-120607C-AY61645
EPA 160.1	TOTAL DISSOLVED SOLIDS	Not detected	10	mg/L	05/21/12	05/21/12	#TDS-A120521-AY61645

Laboratory Control Spike Recoveries

WETLAB DISSOLVED

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl mg/L	SPK Res mg/L	DUP Res mg/L	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	Analysis Date-Dup	QC Group
EPA 160.1	TOTAL DISSOLVED SOLID	221	222	222	100	100	0.0	20	80-120	05/21/12	05/21/12	05/21/12	05/21/12	#TDS-A120521-AY61645

Comments: _____

Laboratory Control Spike Recoveries

WETLAB

APPL Inc.
908 North Temperance Avenue
Clovis, CA 93611

Method	Compound Name	Spike Lvl µhos/cm @ 2	SPK Res µhos/cm @ 10s/cm	DUP Res µhos/cm @ 10s/cm	SPK % Recov	DUP % Recov	RPD	RPD Max	QC Limits	Extract Date-Spk	Analysis Date-Spk	Extract Date-Dup	QC Group
SM 2510B	SPECIFIC CONDUCTANCE	1412	1350	1350	95.6	95.6	0.0	20	80-120	06/07/12	06/07/12	06/07/12	#EC-120607C-AY61645

Comments: _____

WETLAB

Sample/Sample Duplicate Results

Sloan Cattle Company
264 I St
Los Banos, CA 93635
Attn: Steve Sloan
Project: 4-S RANCH

Sample ID: AY61645

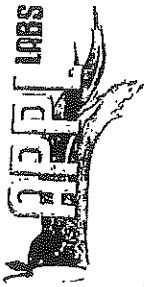
Client ID: 4-S WELL #6

APPL Inc.

908 North Temperance Avenue
Clovis, CA 93611

ARF: 67805

Method	Analyte	Sample ID	Sample Result	Sample Dup Result	RPD	RPD Max	PQL	Units	Sample Extract Date	Sample Analysis Date	Sample Dup Extract Date	Sample Dup Analysis Date
SM 2510B	SPECIFIC CONDUCTANCE	AY61645	455	461	1.3	20	3.0	units/cm @ 25C	06/07/12	06/07/12	06/07/12	06/07/12



APPL, Inc.
908 N Temperance Ave
Clovis, CA 93611

Phone: (559) 275-2175
Fax: (559) 275-4422

67805

CHAIN OF CUSTODY RECORD

Report to:		PLEASE PRINT	
Company Name: <u>Sloan Cattle Company</u>		Phone: <u>(809) 886-5900</u>	
Address: <u>864 T Street</u>		Fax: <u>(809) 886-5655</u>	
Attn: <u>Steve Sloan</u>		Attn: <u>Steve Sloan</u>	
Project Name/Number: <u>4-S/XXXX</u>		Sampler (Print): <u>Brett Sloan</u>	
Purchase Order Number: <u>XXXX</u>		Sampler (Signature): <u>[Signature]</u>	
Sample Identification		Location	
4-S Well #6		5-16-12 4:20pm PST 3	
4-S Well #8		5-16-12 5:00pm PST 3	
4-S Well #9		5-16-12 5:15pm PST 3	
4-S Well #10		5-16-12 5:30pm PST 3	
4-S Well #11		5-16-12 5:39pm PST 3	
4-S Well #7		5-16-12 4:00pm PST 3	
Shuttle Temperature: <u>15°C</u>		Turnaround Requested: Check one <input type="checkbox"/> Standard 2-3 wk <input type="checkbox"/> One week <input type="checkbox"/> 24/48 Hrs. <input type="checkbox"/> Other	
Relinquished by sampler: <u>Mari Staley</u>		Received by: <u>[Signature]</u>	
Relinquished by: <u>[Signature]</u>		Received by: <u>[Signature]</u>	
White: Return to client with report		Yellow: Laboratory Copy	
Pink: Sampler		See reverse side for Container Preservation and Sampling Information	

Invoice to: C.O.C. 35974

PLEASE PRINT

Company Name: Sloan Cattle Company Phone: (809) 886-5900

Address: 864 T Street

Fax: (809) 886-5655

Attn: Steve Sloan

Analysis Requested/Method Number

Date Shipped:

Carrier:

Waybill No.:

Comments:

No. of Containers

Matrix

Soil

Sed

Aq

Barium

Chromium

EC

EXT-EMSA

Mercury

Nickel

Selenium

TMS

Sample Disposal:

☐ Return to client

☐ Disposal by Lab (30-day retention)

Relinquished by:

Relinquished by:

Received by:

Received by:

Date

Date

Time

Time

1730

6.17.12

1730

Received at lab by:

[Signature]