STAGE 1 ABATEMENT PLAN

FORMER CAL-MAINE EGG PLANT
BERNALILLO COUNTY, NEW MEXICO

Prepared for:

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and

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LIST OF ACRONYMS AND ABBREVIATIONS

amsl	above mean sea level
bgs	feet below ground surface
COC	chain of custody
DAF	dilution attenuation factor
DP	Discharge Permit
DQOs	data quality objectives
EA	EA Engineering, Science, and Technology, Inc., PBC
EPA	U.S. Environmental Protection Agency
GWQB	Ground Water Quality Bureau
HASP	Health and Safety Plan
ID	identification number
mg/kg	micrograms per kilogram
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NMOSE	New Mexico Office of State Engineer
NMWQCC	New Mexico Water Quality Control Commission
OSHA	Occupational Safety and Health Administration
PPE	personal protective equipment
QAPP	Quality Assurance Project Plan
S1AP	Stage 1 Abatement Plan
SCH 40 PVC	schedule 40 polyvinyl chloride
Site	Cal-Maine Foods, Inc. Former Egg Plant
UST	underground storage tank
VRP	Voluntary Remediation Program

1.0 INTRODUCTION

EA Engineering, Science, and Technology, Inc., PBC (EA) submits this Stage 1 Abatement Plan (S1AP) on behalf of Cal-Maine Foods, Inc. for its Former Egg Plant (Site) in Bernalillo County. The purpose for this investigation is to satisfy the requirements set forth in Title 20, Chapter 6, Part 2, Section 4106c of the New Mexico Administrative Code (20.6.2.4106(c) NMAC). This will provide the data necessary to select and design an effective abatement option. This S1AP covers soil and groundwater sampling protocols and methods to facilitate modifications to this S1AP to complete delineating soil and groundwater contamination toward this end.

The Site was in Stage 1 Abatement from 2008 (Golder, 2008) until 2015. Cal-Maine Foods, Inc. sold the property in 2016 to Rock House CGM, L.L.C. which entered the Site into the Voluntary Remediation Program (20.6.3 NMAC) in 2017. Mr. Pergola withdrew from the VRP in April 2023 and the New Mexico Environment Department (NMED) informed Mr. Pergola and Cal-Maine Foods, Inc. of the need for an abatement plan. This S1AP has been prepared to satisfy this requirement.

This S1AP is organized as follows: Section 1 consists of this introduction, including site location, history, hydrogeology, nature of discharge, and previous investigations. Section 2 presents the known nature and extent of contamination. A scope of work for executing this plan and completing site characterization is included in Section 3. Long-term groundwater monitoring is discussed in Section 4. Section 5 provides a quality assurance project plan (QAPP) to ensure usable data is generated, Section 6 covers reporting, and Section 7 includes a list of references.

A health and safety plan (HASP) to execute this S1AP is included in this report as Appendix A. Field forms are provided in Appendix B.

1.1 SITE LOCATION

The Site is located in southern Bernalillo County, near the intersection of Broadway Avenue and Interstate Highway 25, approximately one-half mile east of the Rio Grande and Barr Drain, and east of the Atchison, Topeka and Santa Fe Railway (Figure 1).

The Site is approximately 65 acres and is located at approximately 4,930 feet above mean sea level (amsl) with significant land slope towards the west. The elevation is 4,950 feet amsl on the east side of the site and slopes down to 4,905 feet amsl on the west side of the site. General storm water flow at Cal-Maine follows these slopes to the west.

1.2 SITE HISTORY

The Site was used as an egg-laying farm from its first development in the early 1950s through 2006. The farm was acquired by Cal-Maine in June 1989. Cal-Maine was the owner and former operator of the egg production facility. Cal-Maine terminated all egg-laying operations at the facility in September 2006. During its history, eight layer houses on the east side of the farm were constructed and demolished; concrete slabs remain for most of these houses. Eight layer houses on the west side of the farm were in use until September 2006, and these houses were demolished in 2012. Three egg processing buildings were constructed over the years. The second

egg processing building constructed burned down in 1985. The third egg processing building still exists. Locations of the former egg processing buildings are depicted on Figure 2.

Three residences on the east side of the property were previously used by onsite workers, and two former residences on the north side of the property are no longer present. The three onsite residences had their own septic systems, and a fourth septic system was associated with the egg production facility (Figure 2).

Compost and manure from the hen houses has been staged onsite in the past, awaiting offsite land application and disposal (Figure 2). These areas have been cleared by Cal-Maine. The area west of the existing hen houses was scraped and cleared as well as the southwest corner of the property in 2009. Scraped material was taken to Western Organic Composting located north of the site for incorporation into compost soil.

Three underground storage tanks (USTs) were removed in 1987. The then NMED Underground Storage Tank Bureau (presently Petroleum Storage Tank Bureau) issued a closure letter. Two of the three groundwater monitoring wells associated with the UST investigation have been plugged and abandoned during this investigation. The remaining well (UST-MW-1) has been included with the abatement plan wells in the sampling regimen.

On February 28, 2006, following a Discharge Permit (DP) application filed on September 5, 2005, the Egg Farm was issued DP-1554, pursuant to the New Mexico Water Quality Act, New Mexico Statutes Annotated 1978, §§74-6-1 through 74-6-17, and the New Mexico Water Quality Control Commission (NMWQCC) Regulations, 20.6.2 NMAC.

As part of previous S1AP activities (prior to VRP enrollment), twelve monitoring wells (MW-2 through MW-13) were installed, 30 direct push soil borings were advanced and 12 soil borings (DP-02, DP-04, DP-07, DP-08 and SB-1 through SB-8) were advanced as shown on Figure 3.

A chronology of Site activities is provided in Table 1. Activities which took place during the VRP investigations will be reviewed and those providing data in furtherance of the goals of the S1AP described in 20.6.2.4106 will be presented in the updated Site Investigation Report prepared under this S1AP.

1.3 SITE HYDROGEOLOGY

The geology and groundwater hydrology of the site are discussed below.

Regional Geology

The physiography of the Albuquerque South Valley area is controlled by the Rio Grande rift. Most of the Albuquerque area lies on an apron of material eroded from the mountains surrounding the rift axis and deposited within it. Thousands of feet of sediment have consolidated to form a porous zone that stores large quantities of water in the Albuquerque Basin.

The major groundwater resource in the Albuquerque, New Mexico, area is the Santa Fe Group Aquifer (Bartolino and Cole 2002). The Santa Fe Group aquifer system is divided into three parts: the upper (from less than 1,000 to 1,500 feet thick), middle (from 250 to 9,000 feet thick), and lower (from less than 1,000 to 3,500 feet thick). Much of the lower part has low permeability and poor water chemistry; thus, groundwater is mostly withdrawn from the upper and middle parts of the aquifer. Only the upper 2,000 feet of the aquifer is typically used for groundwater withdrawal. Groundwater from the Santa Fe Group aquifer system is currently a major source of water for municipal supply, domestic, commercial, and industrial use in the middle Rio Grande Basin.

Site Geology

Based on investigation completed at the site, the subsurface lithology consists predominantly of sand and sand interbedded with clayey sand and silty sand, with increasing clayey sand and sandy clays present along the western portion of the property and with depth as seen in boring MW-10D. These sequences are typical of a fluvial depositional environment. The sand is either light to dark brown, gray or red in color, very fine to fine grained and poorly graded or it is fine to coarse grained and well graded. Sand contains up to 5% subrounded to subangular gravel to diameters of 1-inch. A north-south cross-section along the plume axis is provided as Figure 4.

Site Hydrology

Previous investigations and quarterly groundwater monitoring indicate that groundwater is present beneath the site at depths from 7 feet to 55 feet below top of casing. Groundwater is present at shallower depths near the south, southwestern portion of the property and at greater depths in the central portion of the property where the topographic elevation increases. Water levels remain fairly consistent throughout the year with approximately ½ foot fluctuation. Monitoring well gauging data indicate that the groundwater flow direction at the site varies, with flow toward the south to south-southeast. The gradient at the Site has remained fairly consistent ranging from 0.0008 foot per foot to 0.001 foot per foot. The vertical gradient at the site (as shown by the groundwater elevations at well MW-4 and vertical delineation well MW-10D) is up 0.002 foot per foot.

1.4 NATURE OF DISCHARGE

Contaminants of concern at the Site are nitrate, chloride, sulfate, and total dissolved solids (TDS). Impacts to groundwater present at the Site are a result of various sources; possible sources of contamination that were investigated are shown on Figure 2 and are listed below:

- Past egg farm practices – compositing area located in the northwest corner of the property where deceased hens were placed, manure storage areas, and hen laying areas.

- Septic tanks – former septic tank leach line located west of the main building, residential septic tanks, and septic tank associated with original egg farm (exact location unknown).

- Karler Packing Company - an upgradient source of nitrate contamination that is currently under Abatement.

Based on the investigations conducted, the primary source of contamination is the central and southern portion of the former west-east trending hen houses and the former septic leach lines thought to be located west of the Egg Processing Building. A secondary source of contamination is Karler Packing Company, which has affected the northeastern portion of the Site.

2.0 KNOWN NATURE AND EXTENT OF CONTAMINATION

The nature and extent of soil and groundwater contamination are discussed below. Numerous data were collected during S1AP activities which preceded the VRP phase for the site.

2.1 SOIL CONTAMINATION

Soil samples have been collected in a total of 52 locations at the Site. Twenty two soil borings (MW-2 through MW-9, MW-12, MW-13, DP-02, DP-04, DP-07, DP-08, and SB-1 through SB-8) were installed between 2009 and 2012 via hollow stem auger for soil sample collection (Figure 5). Thirty direct push soil borings as shown in Table 3 were installed in 2010 and 2011 and soil samples collected (Figure 6). Soil samples were analyzed for nitrate and chloride, and sulfate was analyzed in select samples. There is only an NMED Soil Screening Level (SSL) for nitrate. The current November 2022 NMED SSL for residential soil is 125,000 milligrams per kilogram (mg/kg). For risk-based SSLs at a dilution attenuation factor (DAF) of 1, the soil-to-groundwater screening level is 21.3 mg/kg, and for DAF-20 it is 425 mg/kg (NMED 2022). Tables 2 and 3 summarize the soil analytical results.

The soil investigations indicated that nitrate is present in soil near the surface (2 – 4 feet bgs) on the western portion of the Site where the elevation is lower and generally does not extend to deeper depths (water table) except at borings DP-02, MW-5, A-7, C-4, and C-12. The same is true for the soil borings advanced along the southern portion of the property, especially in areas where manure had been stored (borings DP-07 and DP-08). In the manure storage areas nitrate was present in shallow soil but did not extend to depths deeper than 14 - 16 feet bgs or the water table. Along the eastern portion of the property nitrate was elevated in only one boring, SB-8, at 9 – 10 feet bgs and did not extend deeper and did not extend to groundwater.

However, in the southern portion of the west-east trending hen houses (borings E-1.5, and G-1.25) and the location of the septic tank and leach lines (LL-1, LL-4, and SB-1) nitrate contamination was present in soil to depths as great as 18 - 20 feet bgs. Direct nitrate migration to groundwater is suspected in the leach line area.

2.2 GROUNDWATER CONTAMINATION

Grab Groundwater Sample Results

During the direct push boring investigation, grab groundwater samples were collected and analyzed for nitrate, chloride, sulfate, and TDS. The results of the grab groundwater samples are provided in Table 4. The grab groundwater analysis indicated that the highest concentrations of nitrate, chloride, sulfate, and TDS were present near the western end of the leach line, extending west into the low lying area toward well MW-5. Figures depicting the results of the grab

groundwater sampling can be found in the 3rd Updated Site Investigation Report (EA 2010).

Groundwater Existing Condition/Background Wells

There are three upgradient wells, MW-1, MW-3, and MW-6. Wells MW-3 and MW-6 are located along the northern property boundary and well MW-1 is located adjacent to the eastern property boundary in the northern portion of the site. Wells MW-1 and MW-6 are not located near any sources of contamination. Well MW-3 is located adjacent to the former hen mortality area.

Nitrate, chloride, sulfate, and TDS concentrations have been below NMWQCC standards in well MW-6 since the well was installed in 2009. Well MW-3 has been below NMWWCC standards for nitrate and sulfate since the well was installed in 2009, chloride was above its standard during one event in August 2013, while TDS has been above the NMWQCC standard since the well was installed in July 2009. Well MW-1 was originally a discharge plan well that was incorporated into the Abatement Plan. Well MW-1 has been below the NMWQCC standard for sulfate since 2009. Nitrate, chloride and TDS in well MW-1 have all been above the NMWQCC standards during various sampling events. This well is upgradient of Karler Packing, a known source of nitrate contamination.

Summary of Groundwater Data

Groundwater has been sampled and analyzed for nitrate, chloride and sulfate using U.S. Environmental Protection Agency (EPA) Method 300.0, and TDS by Method SM 2540C. Groundwater samples have been collected quarterly from February 2009 to November 2014, with the exception of wells MW-1 and MW-3, which were sampled annually from October 2011 to November 2014. Groundwater analytical results are discussed below and summarized in Table 5.

Nitrate

The nitrate concentrations and the estimated extent of nitrate from the most recent groundwater sampling event in November 2014 are shown on Figure 7. Nitrate has been above the NMWQCC standard of 10 mg/L in eleven of fourteen monitoring wells at the Site during at least one monitoring event. Wells MW-3, MW-6 and MW-11 have never exceeded the nitrate standard. The nitrate concentrations have been variable in wells MW-1, MW-2, and MW-5. Nitrate concentrations have fluctuated from below the standard to just above the standard in wells MW-1 and MW-2. Nitrate concentrations have fluctuated from less than 0.50 mg/L to 320 mg/L in well MW-5, and the highest historical nitrate concentrations have been measured in wells MW-4 and MW-5.

Chloride

The chloride concentrations and the estimated extent of chloride from the most recent groundwater sampling event in November 2014 are shown on Figure 7. Chloride has been above the NMWQCC standard of 250 mg/L in ten of fourteen monitoring wells at the Site. Wells MW-6, MW10D (vertical extent well), MW-11 and MW-13 have never exceeded the chloride

standard. Well MW-3 has only had one exceedance of the chloride standard. The chloride concentrations have ranged from 110 mg/L in wells MW-2 and MW-6 to 1,400 mg/L in well MW-5.

TDS

The TDS concentrations and the estimated extent of TDS from the most recent groundwater sampling event in November 2014 are shown on Figure 7. TDS has been above the NMWQCC standard of 1,000 mg/L in thirteen of fourteen monitoring wells at the Site during at least one monitoring event. Well MW-6 has never exceeded the TDS standard. Well MW-1 has been below the NMWQCC standard for the last five sampling events and well MW-13 has been below the standard for the last two sampling events. Since the start of groundwater monitoring, TDS concentrations have ranged from 620 mg/L in well MW-2 to 6,270 mg/L in well MW-5.

Sulfate

The sulfate concentrations and the estimated extent of sulfate from the most recent groundwater sampling event in November 2014 are shown on Figure 7. Sulfate has been above the NMWQCC standard of 600 mg/L in six of fourteen monitoring wells at the Site during at least one monitoring event. Wells MW-1, MW-3, MW-6, MW-7, MW-9, MW-10D, MW-11, MW-13, and UST-MW-1 have never exceeded the sulfate standard. Of the wells that have exceeded the sulfate standard, not one well has consistently been above standards. Since monitoring has been conducted, sulfate concentrations have ranged from 72 mg/L in well MW-2 to 2,100 mg/L in well MW-4.

3.0 SCOPE OF WORK TO COMPLETE SITE CHARACTERIZATION

The following sections provide the scope of necessary to complete the S1AP requirements stipulated in the Settlement Agreement.

3.1 WELL INVENTORY

EA will update the well inventory of public and private water supply wells located within a 1-mile radius of the site. The inventory will be accomplished through use of New Mexico Office of State Engineer (NMOSE) Point of Diversion Locations https://gis.ose.state.nm.us/gisapps/ose_pod_locations/.

3.2 SOIL BORING AND SAMPLING

If shallow and subsurface soil sampling is specified under modifications to this S1AP, soil boring and sampling will be conducted as follows:

- Shallow soil samples may be collected by EA staff with a decontaminated hand auger
- Drilling and boring will be performed by a New Mexico Licensed Driller

- Boreholes will be advanced using the hollow stem auger method or direct push (e.g., "Geoprobe®")

- Hollow stem auger borings will be sampled every 5 feet using split spoon samplers.

- Direct push borings will be continuously sampled in core barrels lined with acetate sleeves

- Samples will be described using the Unified Soil Classification System

- Non-disposal drilling and sampling equipment (e.g., split spoons) will be decontaminated prior to use and between samples using a laboratory-grade detergent and fresh tap water rinse.

- All soil borings will be logged on standard boring log forms by a trained geologist under the supervision of qualified personnel.

- Soil sample locations will be recorded using a GPS device.

EA will collect soil samples and quality assurance/quality control (QA/QC) samples using dedicated spatulas and will place collected soil in laboratory supplied sample containers. Samples will be logged on chain-of-custody forms and put in a cooler with ice, sealed with custody seals, and submitted to an off-site laboratory for analysis as shown on Table 6.

3.3 MONITORING WELL INSTALLATION

Well MW-5 was apparently destroyed or lost, cannot be located, and will be replaced by well MW-5R. Well MW-6 will have the well head repaired. Monitoring wells installed in the future as a modification of this S1AP will be in accordance with the methods described below.

Monitoring well Construction

The proposed monitoring well will be constructed according to the following specification and in accordance with NMED guidelines and NMOSE rules and regulations (19 NMAC 27.4.29 and 19 NMAC 27.4.30) as follows:

1. Well bore will be drilled by hollow-stem auger; the borehole will be approximately 8-inches in diameter.

2. Well materials shall consist of 2-inch diameter schedule 40 polyvinyl chloride (SCH 40 PVC) flush-thread jointed (American Society for Testing and Materials F480) well screen and casing.

3. Screen shall consist of 15 feet of 0.010-inch machine slotted screen. The screen will be submerged approximately 10 feet and extend 5 feet above water table.

4. Filter pack shall consist of 10-20 mesh silica sand placed from total depth to 1 to 2 feet above the screen.

5. A four-foot-thick hydrated bentonite seal shall be placed above the filter pack.

6. The remainder of the annulus between blank casing and surface shall be grouted with a cement bentonite grout containing 90 percent cement and 10 percent bentonite.

7. Above grade surface completions shall consist of 6-inch diameter above-grade steel shrouds set in two-foot diameter by 4-inch-thick concrete well pad, sloped 0.5" per foot to drain. Well pads shall contain a mat of #3 rebar on 8-inch centers.

Monitoring well construction information will be documented on the Boring/Monitoring Construction Log, included in Appendix B (Field Forms) of this plan.

Monitoring Well Development

After the monitoring well is constructed, it will be developed. Development will be initiated by the surge-and-bail method to clean the filter pack of any fines. The well will be surged and bailed to the extent practicable until the well yields clear water. A minimum of 10 casing volumes will be removed during development. Development shall be under the direct supervision of the site geologist. Deviations from these guidelines will be documented on field forms.

Well Recording with NMOSE

All information regarding the well installation will be filed with NMOSE by the licensed driller, as required by 19 NMAC 27.4.29(N).

Surveying

New monitoring wells will be surveyed by a licensed surveyor. The survey will be done in New Mexico State Plane Coordinates, Central Zone, North American Datum 83 and will include northing and easting to a tenth of a foot accuracy. Elevations of top of casing and ground elevations for wells will be surveyed to the nearest hundredth of a foot.

Investigation-Derived Waste Management

The implementation of the activities outlined in this S1AP will generate drill cuttings from drilling of boreholes, water from well purging for development and prior to sampling, and personal protective equipment (PPE) used by field personnel. Drill cuttings, well development water, and purge water from well sampling will be thin spread near the well in the case of soil, and ground discharged near the well in the case of purge water.

PPE generated during this investigation includes protective gloves, paper towels, and general solid waste. None of this waste will require special handling and will be disposed in trash bins as any other solid waste.

3.4 INITIAL MONITORING WELL AND SITE-WIDE BASELINE SAMPLING

Following construction and development, well MW-5R will be sampled as part of a site-wide baseline monitoring event to establish the current condition. Sampling will be conducted as described in Section 4.

4.0 LONG-TERM GROUNDWATER MONITORING

The following sections discuss the monitoring regimen, sampling protocols, and schedule for long-term monitoring.

4.1 SAMPLING REGIMEN AND SCHEDULE

The S1AP monitoring well installed under this plan will be sampled on a semi-annual basis. If for any reason sample analyses indicate a reduction in monitoring is appropriate, a formal request documenting the reason for the change will be submitted to NMED. The abatement plan wells will be sampled in accordance with procedures outlined in this S1AP. Sampling results and gauging data will be provided to NMED on a semi-annual basis.

4.2 SAMPLING PROTOCOLS

Groundwater sampling will be performed as described below. All monitoring well sampling information shall be logged on a monitoring well sampling form (Appendix B). The following monitoring well sampling procedure will be followed:

1. Gauge Water Level. Measure the depth to water (0.01-foot precision) in the well from the northern side of the PVC well casing (same point from where the well casing was surveyed). Decontaminate the electronic tape after each well gauging in Alconox™ solution followed by potable water rinse.

2. Calculate the Purge Volume. Determine the volume per foot of well depending on well diameter. Multiply this volume by the length of water column in the well. The water column in the well is calculated by subtracting the depth to water measurement from the well depth. Multiply this casing volume by 3 to determine the volume that will have to be purged prior to sampling. Record purge volume on field sampling form.

3. Purge/Development of the Well. The sampler will utilize a graduated bucket to track the purged volume.

4. Water Quality Parameters Measurement. Temperature, pH, electrical conductivity, and oxidation-reduction potential will be field measured during initial well construction and field sampling.

5. Sample Well. After three casing volumes have been purged/developed, the well will be ready to sample.

Sample containers will be filled according to Table 6. The analysis, time of collection, date, and monitoring well number shall be recorded on sample bottle label. The sample containers will be placed in a cooler on ice as soon as they are filled and labeled.

4.3 SAMPLING SCHEDULE

The schedule for the implementation of this S1AP, including six semi-annual groundwater monitoring events, is presented below.

Date	Activity
October 24, 2023	Draft S1AP Submitted
November 24, 2024	NMED Comments on Draft S1AP
December 23, 2024	S1AP Comments Cured
January 12, 2024	NMED Approval of Stage 1 AP
January 29, 2024	Drill and Install MW-5R and repair MW-6
February 8, 2024	Sample MW-5R and complete base-line monitoring event (first semi-annual event)
March 30, 2024	Submit S1AP Site Investigation Report
September 30, 2024	Second semi-annual monitoring event
March 30, 2025	Third semi-annual monitoring event
September 30, 2025	Fourth semi-annual monitoring event
March 30, 2026	Fifth semi-annual monitoring event
September 30, 2026	Sixth semi-annual monitoring event

The monitoring regimen is presented in Table 7.

5.0 QUALITY ASSURANCE PROJECT PLAN

This section includes the QAPP for executing the sampling described in Section 4.0. This QAPP includes elements of the Guidance for Quality Assurance Project Plans (QA/G-5) (EPA 2002) and Guidance on Systematic Planning using the Data Quality Objectives Process (QA/G-4) (EPA 2006).

5.1 GOALS OF S1AP

In summary, the overall data quality objectives (DQOs) for this project are shown in Table 8. The data decisions defined herein are applicable to the Stage 1 Abatement Plan.

5.2 TRAINING

Personnel who work on-site are required to meet the Occupational Safety and Health Administration (OSHA) training requirements defined in Title 29 of the Code of Federal Regulations Part 1910.120(e). These requirements include: (1) 40 hours of formal off-site instruction; (2) a minimum of 3 days of actual on-site field experience under the supervision of a trained and experienced field supervisor; and (3) 8 hours of annual OSHA refresher training. Field personnel who directly supervise employees engaged in hazardous waste operations must also have at least 8 additional hours of specialized supervisor training. The supervisor training covers health and safety program requirements, training requirements, PPE requirements, spill containment program, and health-hazard monitoring procedures and techniques. Before work begins at a specific hazardous waste project site, personnel will be required to undergo site-specific training that thoroughly covers the following areas:

- Names of personnel and alternates responsible for health and safety at the site;
- Health and safety hazards present on site;
- Selection of the appropriate personal protection levels;
- Correct use of PPE;
- Work practices to minimize risks from hazards;
- Safe use of engineering controls and equipment on site; and
- Contents of the site-specific health and safety plan.

5.3 DOCUMENTATION AND RECORDS

Documentation is critical for evaluating the success of any environmental data collection activity. The following sections discuss the requirements for documenting field activities and for preparing laboratory data packages. This section also describes reports that will be generated as a result of this project.

Field Documentation

Field personnel will use field boring logs and field monitoring well sampling forms to document field activities.

Reports Generated

Reporting for this S1AP is addressed in Section 6.0.

5.4 SAMPLE MANAGEMENT

This section describes the requirements for the following:

The following subsections describe sample handling procedures, including sample identification and labeling, documentation, chain of custody (COC), and shipping.

Sample Identification

Each sample collected during site assessment activities will be identified using a unique sample identification (ID) number. The description of the sample type and the monitoring well name, as well as depth of the sample collection point, will be recorded on the COC forms, as well as in the field forms.

Sample IDs will be listed on the sample labels and the COC forms submitted to the laboratory and will be cross-referenced to the point name in field data forms.

Sample Labels

A sample label will be affixed to each sample container. The label will be completed with the following information written in indelible ink:

- Project name and location
- Sample identification number
- Date and time of sample collection
- Preservative used
- Sample collector's initials
- Analysis required
- Each sample will be refrigerated or placed in a cooler containing ice.

Sample Documentation

Documentation during sampling is essential to promote proper sample identification. Field personnel will adhere to the following general guidelines for maintaining field documentation:

- Documentation will be completed in permanent black or blue ink.
- All entries will be legible.
- Errors will be corrected by crossing out the entry with a single line and then dating and initialing the lineout.

Chain of Custody

Field personnel will use standard sample custody procedures to maintain and document sample integrity during collection, transportation, storage, and analysis. A sample will be considered to be in custody if one of the following statements applies:

- It is in a person's physical possession or view.
- It is in a secure area with restricted access.
- It is placed in a container and secured with an official seal in such a way that the sample cannot be reached without breaking the seal.

COC procedures provide an accurate written record that traces the possession of individual samples from the time of collection in the field to the time of acceptance at the laboratory. The COC form will be used to document all samples collected and the analyses requested. Information that the field personnel will record on the COC form includes:

- Project name and number
- Sampling location
- Name and signature of sampler
- Destination of sample (laboratory name)
- Sample ID
- Date and time of collection
- Number and type of containers filled
- Analyses requested
- Preservatives used (if applicable)
- Filtering (if applicable)
- Signatures of individuals involved in custody transfer, including the date and time of transfer
- Project contact and phone number

It is expected that samples will be hand-carried to a local analytical laboratory for analysis.

The laboratory sample custodian will receive all incoming samples, sign the accompanying COC forms, and retain copies of the forms as permanent records. The laboratory sample custodian will record all pertinent information concerning the samples, including the persons delivering the samples, the date and time received, sample condition at the time of receipt (sealed, unsealed, or broken container; temperature; or other relevant remarks), the sample IDs, and any unique laboratory identification numbers for the samples. When the sample transfer process is complete, the custodian is responsible for maintaining internal logbooks, tracking reports, and other records necessary to maintain custody throughout sample preparation and analysis.

The laboratory will provide a secure storage area for all samples. Access to this area will be restricted to authorized personnel. The custodian will ensure that samples requiring special handling, including samples that are heat- or light-sensitive, radioactive, or have other unusual physical characteristics, will be properly stored and maintained prior to analysis.

5.5 ANALYTICAL METHODS

Analytical methods for the project are specified in Table 6. This table also specifies the sample quantities, holding times, and preservatives.

Standards described in *Specifications and Guidance for Obtaining Contaminant-Free Sampling Containers* (EPA, 1992).

5.6 MANAGEMENT OF STAGE 1 AP DEVIATIONS

Minor deviations, including field instrument malfunction (pH meter, etc.) will be addressed by field crew and the project manager and professional judgment will be utilized. Any deviations will be detailed on field forms and included in the final report to NMED. Any deviation considered significant will be addressed by the field crew, project manager and NMED Ground Water Quality Bureau (GWQB) Project Managers. A consensus on correcting the deviation will be achieved prior to executing any work plan changes, if possible. It is expected that the NMED GWQB Project Manager or other agency representative will be available for communication during fieldwork. If a situation arises that requires abatement plan deviation, every attempt will be made to reach an NMED GWQB representative. If attempts are unsuccessful and a deviation from the abatement plan must be made in a timely manner, the project manager will use professional judgment to adjust field work as needed.

5.7 DATA VERIFICATION AND USABILITY

This section describes the procedures that are planned to review and evaluate field and laboratory data. This section also discusses procedures for verifying that the data are sufficient to meet DQOs for the project.

For this project, EA will perform data review on 100 percent of the laboratory results. No validation will be performed. Data will be reviewed for holding times, handling and preservation procedures, chain of custody, acceptance within control limits, and to ensure data meet method control limits for project goals.

Laboratory personnel will verify analytical data at the time of analysis and reporting and through subsequent reviews of the raw data for any non-conformances to the requirements of the analytical method. Laboratory personnel will make a systematic effort to identify any outliers or errors before they report the data. Outliers that result from errors found during data verification will be identified and corrected; outliers that cannot be attributed to errors in analysis, transcription, or calculation will be clearly identified in the case narrative section of the analytical data package.

All laboratory data will be reviewed to ensure usability. The data evaluation strategy will not be a full data validation process but will determine if the analytical results are within the QC limits set for the project. In this process, the data usability will be assessed. Specifically, sample handling requirements, holding times, duplicate results, and QC control limits will be reviewed.

Field data will be recorded on field forms and will be appended to the Site Investigation Report. Analytical data will be received in electronic form and will be reviewed, summarized, tabulated, analyzed, and provided in the body of the report. The original laboratory data will also be provided in the appendices. As appropriate, some data may be presented graphically. EA will oversee collection of environmental data using the appropriate assessment and audit activities. Any problems encountered during an assessment of field investigation or laboratory activities will require appropriate corrective action to ensure that the problems are resolved.

6.0 REPORTING

The outcome of this S1AP will be documented in a S1AP Site Investigation Report (§4106.C.6.). This report will include a description of field operations, any deviations from the S1AP, the raw and processed analytical data, as well as graphical representations of all spatial data. Supporting information such as evaluation of analytical data from other facilities operating under discharge permits will be included. The report will include a section on data gaps, if any are identified, and recommendations for subsequent data collection

6.1 REPORT SUBMITTAL SCHEDULE

Upon completion of the tasks described above, a S1AP Investigation Report will be prepared. Subsequent assessment work and site investigation report schedules will specified in the modifications to this S1AP The report will document all field activities, results and will include the following:

- Boring/monitoring well logs
- Field data collection forms
- Field notes
- Photographic documentation
- Laboratory data tables
- Contaminant plume maps and potentiometric surface maps
- Laboratory reports

7.0 REFERENCES

Bartelino, James R. and Cole, James C. 2002. Groundwater Resources of the Middle Rio Grande.

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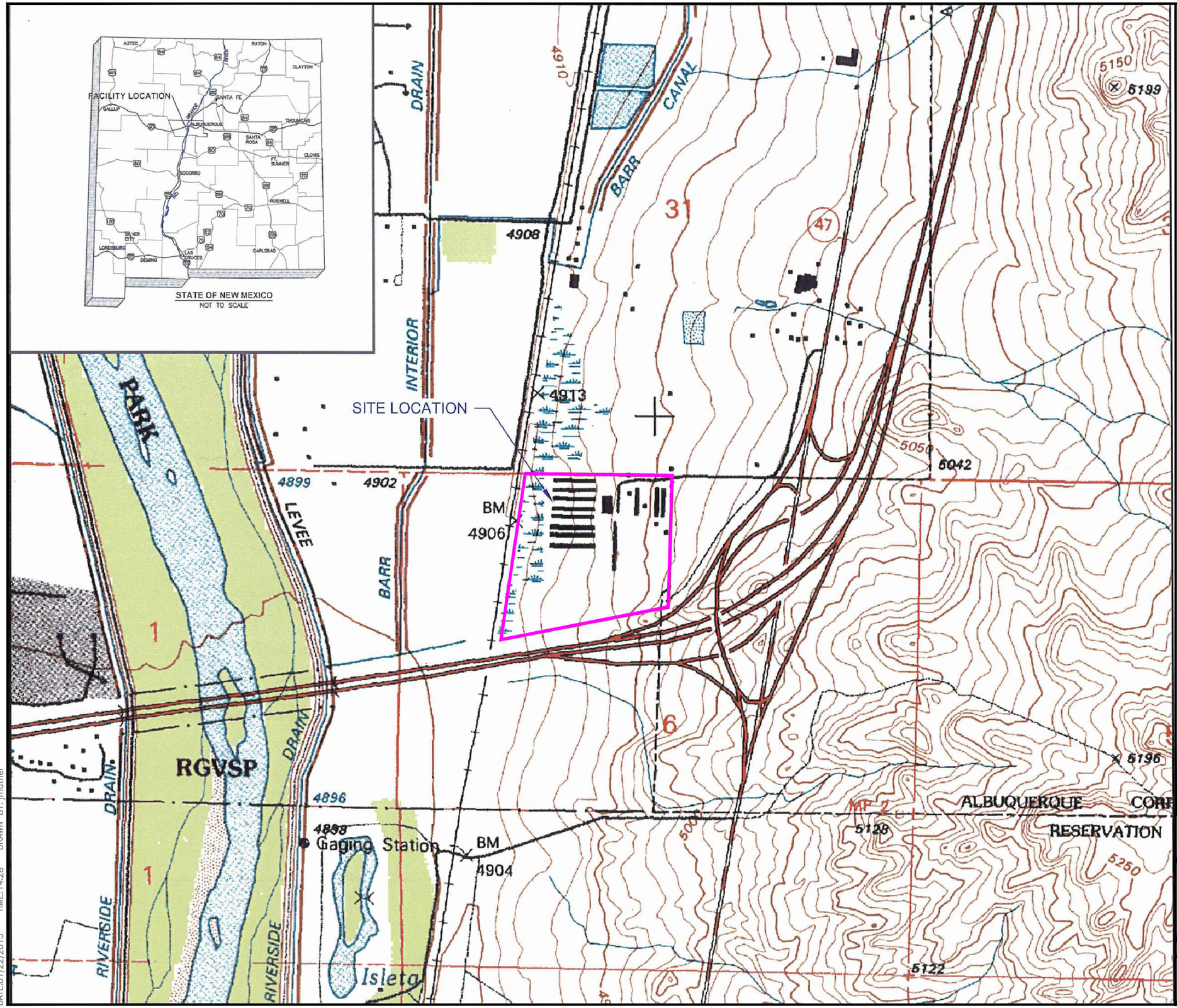
FIGURES



LEGEND:

FACILITY BOUNDARY

250 125 0 250

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 1
SITE LOCATION MAP

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.
320 Gold Avenue, SW Suite 1210
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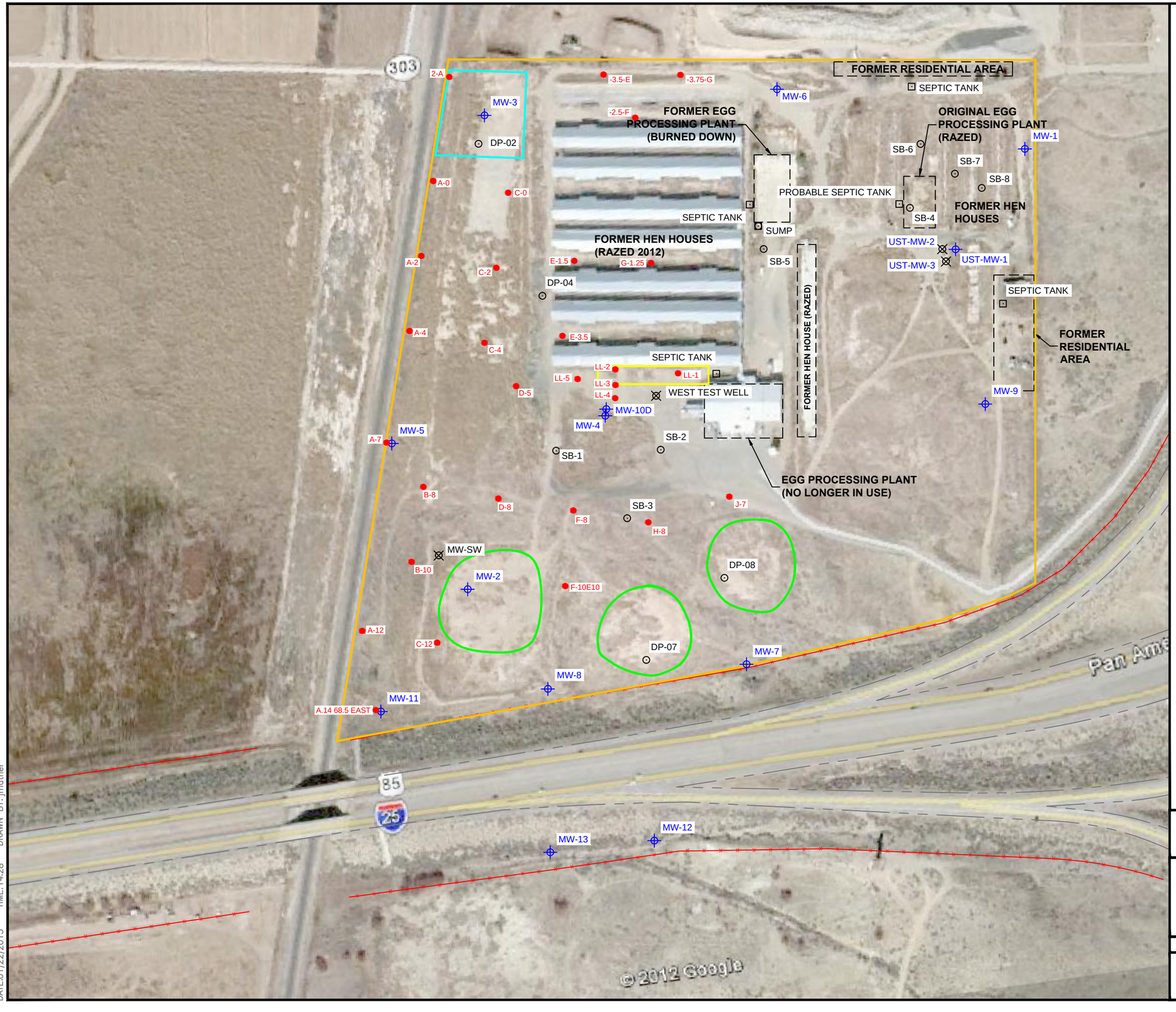

LEGEND:

- EXISTING MONITORING WELL
- WELL PLUGGED AND ABANDONED
- SOIL BORING
- DIRECT PUSH BORING
- SEPTIC TANK
- SUMP
- I-25 SHOULDER
- EXISTING FENCE
- FORMER COMPOSTING AREA
- FORMER MANURE STORAGE AREA
- LEACH FIELD CURRENT AND HISTORIC
- SITE BOUNDARY

250 125 0 250

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 2
SITE LAYOUT MAP

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

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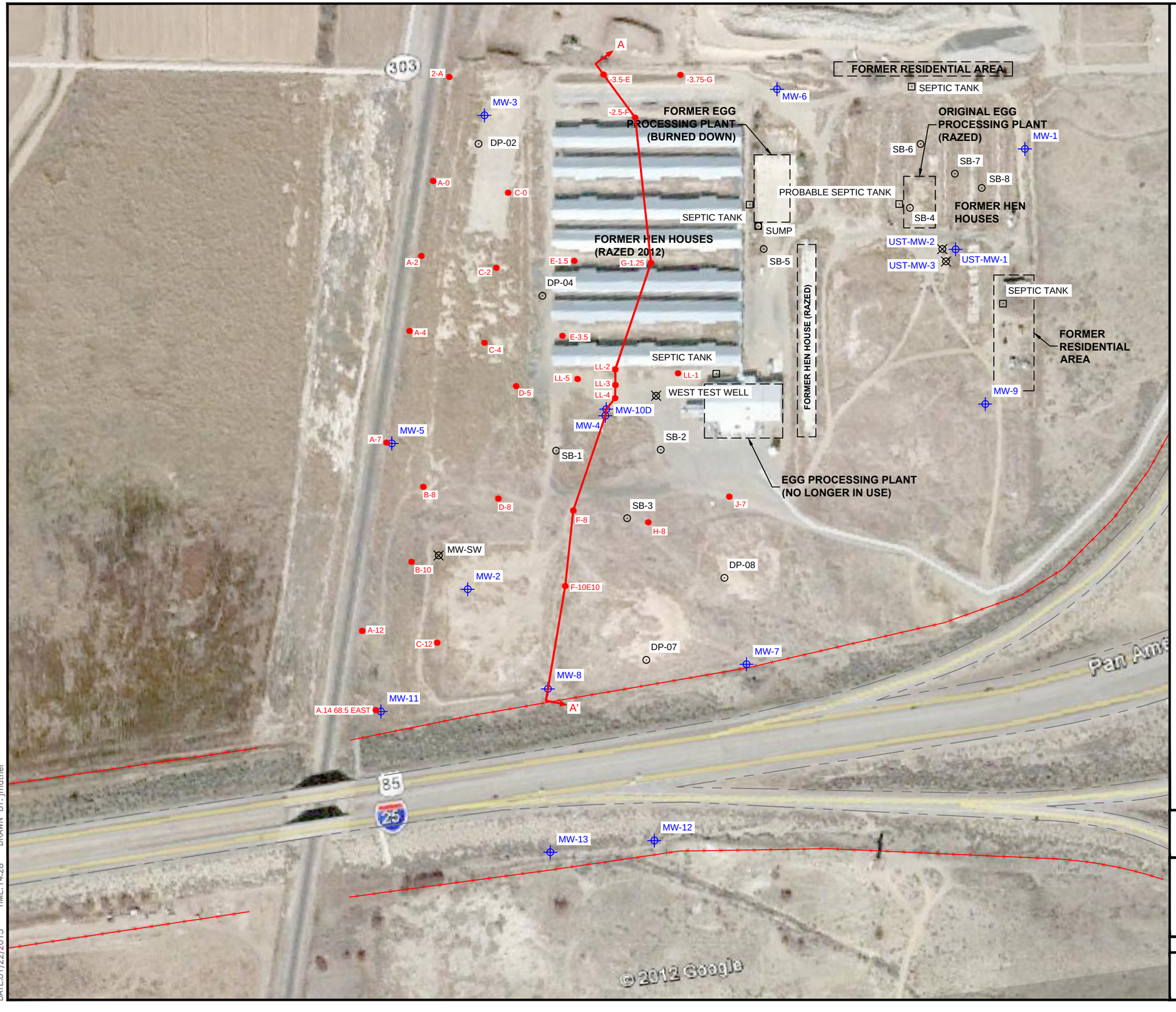

LEGEND:

- EXISTING MONITORING WELL
- WELL PLUGGED AND ABANDONED
- SOIL BORING
- DIRECT PUSH BORING
- SEPTIC TANK
- SUMP
- I-25 SHOULDER
- EXISTING FENCE
- A — A' LOCATION OF CROSS-SECTION

250 125 0 250

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 3
BORING AND MONITORING WELL LOCATIONS

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

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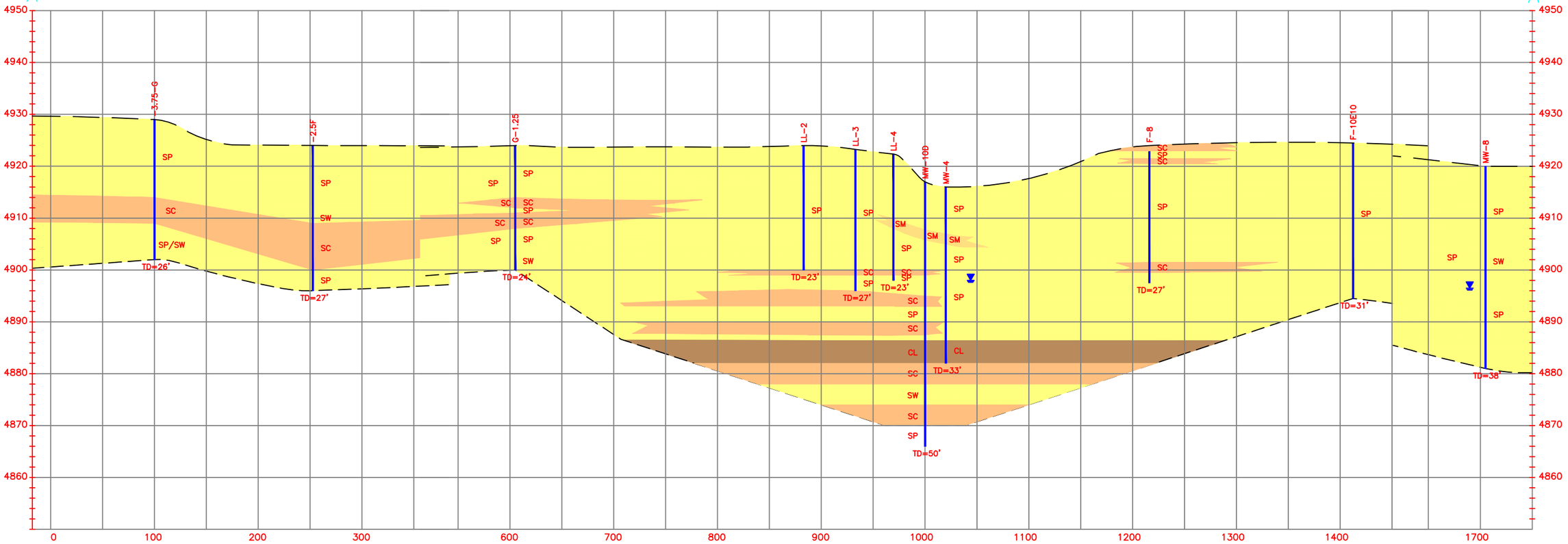
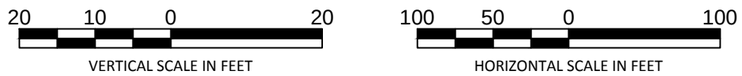
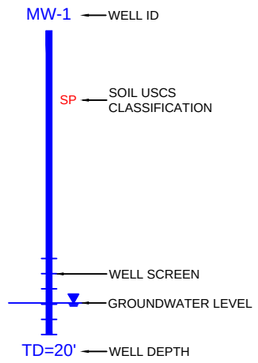




WELL SCHEMATIC



LEGEND:

CL	SANDY CLAY - VERY DARK GRAY, VERY FINE GRAINED, VERY PLASTIC
SC	CLAYEY SAND - DARK YELLOWISH BROWN TO BROWN, VERY FINE TO FINE GRAINED, SLIGHTLY PLASTIC
SM	SILTY SAND - PINK, MINOR GRAVEL, LOOSE
SP	POORLY GRADED TO WELL GRADED SAND - PINK, LIGHT BROWN TO DARK BROWN, YELLOWISH BROWN, FINE TO MEDIUM GRAINED, MINOR SURROUNDED GRAVEL, LOOSE

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 4
CROSS SECTION A-A'

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

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DEPTH	4-6	9-11	14-16	19-21
CHLORIDE	1.3	1.7	2.1	0.7
NITRATE	0.26	0.5	2.2	0.6

DEPTH	4-6	9-11
CHLORIDE	240	34
NITRATE	140	3.9

DEPTH	9-10	19-20	29-30	39-40	41-42
CHLORIDE	<7.5	<7.5	2.0	1.6	23
NITRATE	9.3	4.8	6.6	5.3	6.2
SULFATE	120	110	1,600	1,100	43

DEPTH	9-10	19-20	29-30	39-40	41-42
CHLORIDE	<7.5	10	92	88	69
NITRATE	11	5.0	9.4	4.3	<3.0
SULFATE	63	59	1,100	63	22

DEPTH	4-6	9-11
CHLORIDE	53	150
NITRATE	11	52

DEPTH	9-10	19-20	29-30	39-40	41-42
CHLORIDE	110	37	17	9	27
NITRATE	45	8.9	15	10	13
SULFATE	210	52	79	71	64

DEPTH	4-5	9-11	14-16	19-20
CHLORIDE	21	7.3	6.6	29
NITRATE	20	<1.5	<1.5	20

DEPTH	8-10	18-20	28-30	38-40	48-50
CHLORIDE	13	19	19	18	36
NITRATE	<1.5	<1.5	<1.5	<1.5	<1.5

DEPTH	4-6	4-6
CHLORIDE	52	84
NITRATE	2.9	11

DEPTH	3-5	8-10	13-15	18-20
CHLORIDE	24	98	160	57
NITRATE	42	73	140	48

DEPTH	4-6
CHLORIDE	230
NITRATE	23

DEPTH	9-11	19-21	29-31	39-41	50-55
CHLORIDE	15	10	11	48	87
NITRATE	7.9	3.3	3.1	2.0	<1.5

DEPTH	3-5	8-10	13-15	18-20	33-35
CHLORIDE	18	68	39	27	61
NITRATE	19	110	38	7.0	<1.5

DEPTH	3-5	8-10	13-15	18-20
CHLORIDE	14	15	58	60
NITRATE	3.6	7.9	38	3.3

DEPTH	4-6	9-11	14
CHLORIDE	200	58	260
NITRATE	3.0	0.7	17

DEPTH	4-6	9-11	14-16	19-21	24-26	29-31
CHLORIDE	570	34	56	160	270	86
NITRATE	150	4.2	3.2	1.9	1.0	0.6

DEPTH	4-6	9-11	14-16	19-21	24-26	29-30	34-36
CHLORIDE	4.8	3.6	210	6.5	120	37	9.7
NITRATE	2.6	2.8	26	0.9	1.6	0.4	<0.30

DEPTH	10-12	17-20	28-30
CHLORIDE	39	45	40
NITRATE	<1.5	<1.5	7.8

DEPTH	10-12	20-22	30-35
CHLORIDE	9.3	36	79
NITRATE	3.5	<1.5	<1.5

DEPTH	15-16	19-20
CHLORIDE	65	58
NITRATE	<3.0	<3.0
SULFATE	330	230

DEPTH	14-15	27-28
CHLORIDE	<7.5	25
NITRATE	<1.5	<3.0
SULFATE	22	72

FORMER HEN HOUSE (RAZED 2012)

FORMER HEN HOUSES

ORIGINAL EGG PROCESSING PLANT (RAZED)

PROCESSING PLANT (BURNED DOWN)

EGG PROCESSING PLANT (NO LONGER IN USE)

FORMER RESIDENTIAL AREA

PROBABLE SEPTIC TANK

SEPTIC TANK

SUMP

WEST TEST WELL

FORMER HEN HOUSE (R

MW-1 MW-2 MW-3 MW-4 MW-5 MW-6 MW-7 MW-8 MW-9 MW-10D MW-11 MW-12 MW-13 MW-SW

UST-MW-1 UST-MW-2 UST-MW-3

SB-1 SB-2 SB-3 SB-4 SB-5 SB-6 SB-7 SB-8

DP-02 DP-04 DP-07 DP-08

F-10E10 H-8 E-1.5 G-1.25 C-2 A-4 C-4 LL-1 LL-3 LL-4 LL-5 A.14 68.5 EAST

Pan Am

85 25

LEGEND:

- EXISTING MONITORING WELL
- SOIL BORING
- DIRECT PUSH BORING
- SEPTIC TANK
- SUMP
- WELL PLUGGED AND ABANDONED
- I-25 SHOULDER
- EXISTING FENCE

NOTES:
1. ALL CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM.
2. SAMPLES COLLECTED IN 2009, 2010, 2011, AND 2012.

N

250 125 0 250

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 5
SOIL BORINGS SOIL SAMPLE ANALYTICAL RESULTS

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.
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2-A	NO_3^-	Cl^-
2 - 4 ft	0.38	110
5 - 7 ft	< 6.0	410

-3.5-E	NO_3^-	Cl^-
2 - 4 ft	4.8	< 7.5
10 - 12 ft	8.9	< 7.5
16 - 18 ft	21	12

-3.75-G	NO_3^-	Cl^-
2 - 4 ft	<1.5	< 7.5
10 - 12 ft	6.1	< 15
16 - 18 ft	6.2	25

A-0	NO_3^-	Cl^-
2 - 4 ft	78	590
7 - 8 ft	< 3.0	23

C-0	NO_3^-	Cl^-
2 - 4 ft	28	64
10 - 12 ft	3.4	20

-2.5-F	NO_3^-	Cl^-
2 - 4 ft	110	110
10 - 12 ft	14	5.4
16 - 17 ft	110	42

C-2	NO_3^-	Cl^-
2 - 4 ft	38	110
6 - 8 ft	< 6.0	< 30

E-1.5	NO_3^-	Cl^-
6 - 8 ft	41	51
10 - 12 ft	88	58
16 - 18 ft	97	93

A-2	NO_3^-	Cl^-
2 - 4 ft	66	520

G-1.25	NO_3^-	Cl^-
2 - 4 ft	130	98
10 - 12 ft	82	160
14 - 15 ft	41	65

A-4	NO_3^-	Cl^-
2 - 4 ft	48	280
5 - 6 ft	10	400

C-4	NO_3^-	Cl^-
2 - 4 ft	130	260
4 - 6 ft	150	350

E-3.5	NO_3^-	Cl^-
6 - 8 ft	16	79
10 - 12 ft	11	47
16 - 18 ft	< 6.0	61

LL-2	NO_3^-	Cl^-
16 - 18 ft	< 6.0	< 30
20 - 23 ft	6.3	16

LL-3	NO_3^-	Cl^-
0 - 2 ft	54	63
4 - 6 ft	78	< 30
6 - 8 ft	< 6.0	37

D-5	NO_3^-	Cl^-
2 - 4 ft	10	180
4 - 6 ft	12	89

A-7	NO_3^-	Cl^-
2 - 4 ft	< 6.0	< 30
5 - 6 ft	27	58

LL-5	NO_3^-	Cl^-
2 - 4 ft	77	64
6 - 8 ft	19	39

LL-1	NO_3^-	Cl^-
4 - 8 ft	160	130
8 - 10 ft	120	15

LL-4	NO_3^-	Cl^-
8 - 10 ft	58	< 15
10 - 12 ft	540	< 75

B-8	NO_3^-	Cl^-
2 - 4 ft	40	960
6 - 8 ft	< 6.0	370

J-7	NO_3^-	Cl^-
8 - 10 ft	< 6.0	< 30
16 - 18 ft	< 3.0	< 15
24 - 26 ft	< 3.0	< 15

D-8	NO_3^-	Cl^-
2 - 4 ft	6.1	9.1
6 - 8 ft	9.0	160
15 - 17 ft	13	120

F-8	NO_3^-	Cl^-
6 - 8 ft	230	160
12 - 14 ft	4.7	160
20 - 22 ft	3.1	20

H-8	NO_3^-	Cl^-
8 - 10 ft	< 1.5	24
18 - 20 ft	< 3.0	110
23 - 25 ft	< 3.0	36

B-10	NO_3^-	Cl^-
2 - 4 ft	31	550
6 - 8 ft	6.9	1,500

A-12	NO_3^-	Cl^-
2 - 4 ft	18	< 30

F-10E10	NO_3^-	Cl^-
6 - 8 ft	67	240
12 - 14 ft	26	210
21 - 23 ft	16	100

C-12	NO_3^-	Cl^-
2 - 4 ft	150	62
10 - 12 ft	22	750

A-14 68.5 EAST	NO_3^-	Cl^-
2 - 4 ft	17	< 30

MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, MW-SW, West Test Well, DP-02, DP-04, DP-07, DP-08, SB-1, SB-2, SB-3, SB-4, SB-5, UST-MW-1, UST-MW-2, UST-MW-3

LEGEND:

- Septic Tank
- Sump
- Existing Monitoring Well
- Well Plugged and Abandoned
- Soil Boring
- Direct Push Soil Boring - August 2010

LL-1	NO_3^-	Cl^-
4 - 8 ft	160	130
8 - 10 ft	120	15

- Direct Push Soil Boring - January 2011

G-1.25	NO_3^-	Cl^-
2 - 4 ft	130	98
10 - 12 ft	82	160
14 - 15 ft	41	65

Analyte concentration units are in mg/Kg.
Aerial photograph source - NAIP 2014.

N

100 50 0 100 200

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 6
DIRECT PUSH BORING SOIL ANALYTICAL RESULTS

PROJECT #: 1464502	PROJECT PHASE: 08	PROJECT MANAGER: TM

320 Gold Avenue, SW Suite 1210
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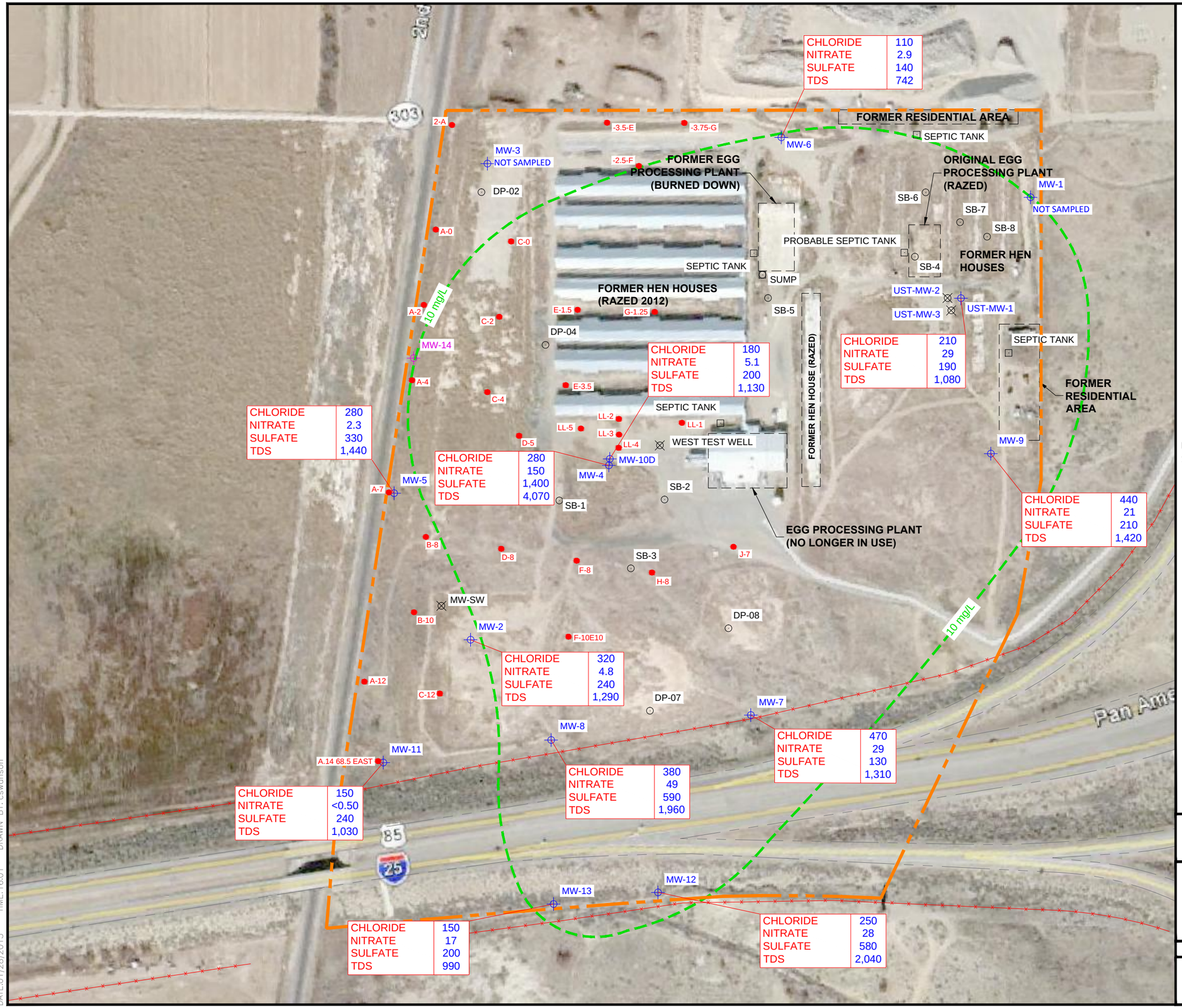
EA ENGINEERING, SCIENCE, AND TECHNOLOGY, INC.

01-22-2015 P:\gis\Projects\1464501 CalMaine\Jan11_Figure 6_DP_Soil_Analyte.mxd



LEGEND:

- PROPOSED MONITORING WELL
- EXISTING MONITORING WELL
- SOIL BORING
- DIRECT PUSH BORING
- SEPTIC TANK
- SUMP
- WELL PLUGGED AND ABANDONED
- TDS — TOTAL DISSOLVED SOLIDS
- I-25 SHOULDER
- EXISTING FENCE
- STAGE 1 ABATEMENT AREA
- 10 mg/L — ESTIMATED EXTENT OF NITRATE IN GROUNDWATER (10 mg/L)

NOTES:

1. ALL CONCENTRATIONS ARE IN MILLIGRAM PER LITER (mg/L).

250 125 0 250

SCALE IN FEET

FORMER CAL-MAINE EGG FARM
ALBUQUERQUE, NEW MEXICO

FIGURE 7
SUMMARY OF GROUND WATER ANALYTICAL RESULTS NOVEMBER 2014

PROJECT #:	1464502	PROJECT PHASE:	09	PROJECT MANAGER:	TM

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TABLES

TABLE 1. CHRONOLOGY OF EVENTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Date	Event
1950's	Egg laying farm first developed
1956-1987	Olson Industries operated and owned egg farm
1961	Aerial photograph indicates that a possible lagoon is present near western property boundary. Six layer houses and original processing plant are present
1987-1989	Sunny Fresh Foods operated and owned egg farm
1985	Second egg processing building was destroyed by a fire
1987	Three underground storage tanks (USTs) were removed
Jun-89	Cal-Maine Foods, Inc. operated and owned egg farm
May 93	New Mexico Environment Department (NMED) Underground Storage Tank Bureau issued closure letter in association with USTs that were removed
1993	Cal-Maine Foods, Inc. purchased 7.85 acres located along western property boundary from Western Organic
Sep-05	Discharge Plan was submitted to NMED
Feb-06	Discharge Plan DP-1554 was issued to Cal-Maine Foods, Inc.
Sep-06	Cal-Maine Foods, Inc. terminated all egg-laying operations at the facility.
Jun-08	Abatement Letter Issued to Cal-Maine Foods, Inc.
Feb-09	Site Investigation Report in support of Stage 1 Abatement Plan was submitted to NMED
Aug-09	1st Quarterly Groundwater Monitoring Event was submitted to NMED
Sep-09	2nd Modified Stage 1 Abatement Plan submitted to NMED
Dec-09	Site Investigation specified in 2nd Modified Stage1Abatement Plan was implemented in the field and 2nd Quarter Groundwater Monitoring conducted
Feb-10	2nd Site Investigation, 2nd Quarterly Groundwater Monitoring Report and a 3rd Modified Stage 1 Abatement Plan was submitted to NMED
Apr-10	3rd Quarterly Groundwater Monitoring Report was submitted to NMED
Aug-10	4th Quarterly Groundwater Monitoring Report was submitted to NMED
Aug-10	Site Investigation specified in 3nd Modified Stage1Abatement Plan was implemented in the field
Sep-10	Updated 3rd Site Investigation Report submitted
Nov-10	5th Quarterly Groundwater Monitoring Report was submitted to NMED
Dec-11	4th Modified Stage 1 Abatement Plan submitted to NMED
Jan-11	Site Investigation and 2nd Groundwater Monitoring activities were implemented in the field

TABLE 1. CHRONOLOGY OF EVENTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Date	Event
Mar-11	Updated 4th Site Investigation and 6th Quarterly Monitoring Report submitted to NMED
May-11	Notice of Deficiency (NOD) issued by NMED
Feb-12	Settlement Agreement to resolve NOD was reached
Oct-12	Supplementary Site Investigation Report submitted to NMED
Oct-14	NMED approved Final Site Investigation Report and required Cal-Maine to submit a Stage 2 Abatement Plan
Jan-15	Stage 2 Abatement Plan submitted to NMED
Feb-16	Cal-Maine Foods sells property to Karl Pergola, Rockhouse CGM L.L.C. dba New Mexico Terminal Services
Jan-17	New Mexico Terminal Services Site in Albuquerque, Voluntary Remediation Program Site No. 53161001
Apr-23	Karl Pergola requests termination of Voluntary Remediation Agreement
Aug-23	NMED terminates Voluntary Remediation Agreement for New Mexico Terminal Services Site, No. 53161001
Aug-23	NMED informs Karl Pergola, Owner, New Mexico Terminal Services and Todd Walters, Vice President/Chief Operating Officer, Cal-Maine Foods that a Stage 1 Abatement Plan is required for the Site
Oct-23	EA submits Stage 1 Abatement Plan

TABLE 2. SUMMARY OF SOIL BORING SOIL SAMPLE RESULTS
FORMER CAL-MAINE EGG FARM, ALBUQUERQUE, NEW MEXICO

Boring	Date Sampled	Sample Depth (feet)	Chloride (mg/kg)	Nitrate-N (mg/kg)	Sulfate (mg/kg)
MW-2	17-Feb-09	4 - 6	200	3.0	NA
	17-Feb-09	9 - 11	58	0.7	NA
	17-Feb-09	14	260	17	NA
MW-3	16-Feb-09	4 - 6	240	140	NA
	16-Feb-09	9 -11	34	3.9	NA
MW-4	18-Feb-09	4 - 6	52	2.9	NA
	18-Feb-09	9 - 11	84	11	NA
MW-5	17-Feb-09	4 - 6	230	23	NA
MW-6	16-Feb-09	4 - 6	1.3	0.26J	NA
	16-Feb-09	9 - 11	1.7	0.5	NA
	16-Feb-09	14 - 16	2.1	2.2	NA
	16-Feb-09	19 - 21	0.7	0.6	NA
MW-7	15-Dec-09	10-12	9.3	3.5	NA
	15-Dec-09	20-22	36	< 1.5	NA
	15-Dec-09	30-35	7.9	< 1.5	NA
MW-8	15-Dec-09	10-12	39	< 1.5	NA
	15-Dec-09	17-20	45	< 1.5	NA
	15-Dec-09	28-30	40	7.8	NA
MW-9	14-Dec-09	9-11	15	7.9	NA
	14-Dec-09	19-21	10	3.3	NA
	14-Dec-09	29-31	11	3.1	NA
	14-Dec-09	39-41	48	2.0	NA
	14-Dec-09	50-55	87	<1.5	NA
MW-12	5-Sep-12	14-15	<7.5	<1.5	22
	5-Sep-12	27-28	25	<3.0	72
MW-13	6-Sep-12	15-16	65	<3.0	330
	6-Sep-12	19-20	58	<3.0	230
DP-02	16-Feb-09	4 - 6	53	11	NA
	16-Feb-09	9 -11	150	52	NA
DP-04	16-Feb-09	4 - 5	21	20	NA
	16-Feb-09	9 - 11	7.3	<1.5	NA
	16-Feb-09	14 - 16	6.6	<1.5	NA
	16-Feb-09	19 - 20	29	20	NA

TABLE 2. SUMMARY OF SOIL BORING SOIL SAMPLE RESULTS
FORMER CAL-MAINE EGG FARM, ALBUQUERQUE, NEW MEXICO

Boring	Date Sampled	Sample Depth (feet)	Chloride (mg/kg)	Nitrate-N (mg/kg)	Sulfate (mg/kg)
DP-07	17-Feb-09	4 - 6	570	150	NA
	17-Feb-09	9 - 11	34	4.2	NA
	17-Feb-09	14 - 16	56	3.2	NA
	17-Feb-09	19 - 21	160	1.9	NA
	17-Feb-09	24 - 26	270	1.0	NA
	17-Feb-09	29 - 31	86	0.6	NA
DP-08	18-Feb-09	4 - 6	4.8	2.6	NA
	18-Feb-09	9 - 11	3.6	2.8	NA
	18-Feb-09	14 - 16	210	26	NA
	18-Feb-09	19 - 21	6.5	0.9	NA
	18-Feb-09	24 - 26	120	1.6	NA
	18-Feb-09	29 - 30	37	0.4	NA
	18-Feb-09	34 - 36	9.7	<0.30	NA
SB-1	17-Dec-09	3-5	24	42	NA
	17-Dec-09	8-10	98	73	NA
	17-Dec-09	13-15	160	140	NA
	17-Dec-09	18-20	57	48	NA
SB-2	17-Dec-09	3-5	14	3.6	NA
	17-Dec-09	8-10	15	7.9	NA
	17-Dec-09	13-15	58	38	NA
	17-Dec-09	18-20	60	3.3	NA
SB-3	17-Dec-09	3-5	18	19	NA
	17-Dec-09	8-10	68	110	NA
	17-Dec-09	13-15	39	38	NA
	17-Feb-09	18-20	27	7.0	NA
	17-Dec-09	33-35	61	< 1.5	NA
SB-4	16-Dec-09	8-10	13	< 1.5	NA
	16-Dec-09	18-20	19	< 1.5	NA
	16-Dec-09	28-30	19	< 1.5	NA
	16-Dec-09	38-40	18	< 1.5	NA
	16-Dec-09	48-50	36	< 1.5	NA

TABLE 2. SUMMARY OF SOIL BORING SOIL SAMPLE RESULTS
FORMER CAL-MAINE EGG FARM, ALBUQUERQUE, NEW MEXICO

Boring	Date Sampled	Sample Depth (feet)	Chloride (mg/kg)	Nitrate-N (mg/kg)	Sulfate (mg/kg)
SB-5	16-Dec-09	8-10	25	61.0	NA
	16-Dec-09	18-20	30	27.0	NA
	16-Dec-09	28-30	11	2.7	NA
SB-6	6-Sep-12	9-10	<7.5	11	63
	6-Sep-12	19-20	10	5.0	59
	6-Sep-12	29-30	92	9.4	1,100
	6-Sep-12	39-40	88	4.3	63
	6-Sep-12	41-42	69	<3.0	22
SB-7	5-Sep-12	9-10	<7.5	9.3	120
	5-Sep-12	19-20	<7.5	4.8	110
	5-Sep-12	29-30	2.0	6.6	1,600
	5-Sep-12	39-40	1.6	5.3	1,100
	5-Sep-12	46-47	23	6.2	43
SB-8	6-Sep-12	9-10	110	45	210
	6-Sep-12	19-20	37	8.9	52
	6-Sep-12	29-30	17	15	79
	6-Sep-12	39-40	9	10	71
	6-Sep-12	49-50	27	13	64
NMED Soil Screening Levels (mg/kg)			NA	DAF-1: 21.3	
				DAF-20: 425	

NOTES:
Nitrate and Chloride data are by EPA Method 300.0
J = Analyte detected below quantitation limits
NA = not applicable
mg/kg = milligram / kilogram
< = less than

TABLE 3. SUMMARY OF DIRECT PUSH SOIL BORING SOIL ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Boring	Date Sampled	Location Rationale	Sample Depth (feet)	Nitrate (mg/kg)	Chloride (mg/kg)
2-A	19-Aug-10	Upgradient MW-5	2 - 4	0.38	110
			5 - 7	< 6.0	410
A-0	18-Aug-10	Upgradient MW-5	2 - 4	78	590
			7 - 8	< 3.0	23
A-2	18-Aug-10	Upgradient MW-5	2 - 4	66	520
A-4	17-Aug-10	Upgradient MW-5	2 - 4	48	280
			5 - 6	10	400
A-7	17-Aug-10	Cross-gradient MW-5	2 - 4	< 6.0	< 30
			5 - 6	27	58
A-12	18-Aug-10	Downgradient MW-5	2 - 4	18	< 30
A-14 68.5 EAST	17-Aug-10	Upgradient MW-5	2 - 4	17	< 30
B-8	17-Aug-10	Downgradient MW-5 & Leach Line	2 - 4	40	960
			6 - 8	< 6.0	370
B-10	18-Aug-10	Downgradient MW-5 & Leach Line	2 - 4	31	550
			6 - 8	6.9	1,500
C-0	18-Aug-10	Upgradient MW-5 & Leach Line	2 - 4	28	64
			10 - 12	3.4	20
C-2	18-Aug-10	Upgradient MW-5 & Leach Line	2 - 4	38	110
			6 - 8	< 6.0	< 30
C-4	19-Aug-10	Upgradient MW-5 & Leach Line	2 - 4	130	260
			4 - 6	150	350
C-12	18-Aug-10	Downgradient MW-5 & Leach Line	2 - 4	150	62
			10 - 12	22	750
D-5	19-Aug-10	Cross-gradient Leach Line	2 - 4	10	180
			4 - 6	12	89
D-8	17-Aug-10	Downgradient Leach Line	2 - 4	6.1	9.1
			6 - 8	9.0	160
			15 - 17	13	120
-3.5-E	24-Jan-11	Upgradient Hen Houses	2 - 4	4.8	<7.5
			10 - 12	8.9	<7.5
			16 - 18	21	12
E-1.5	20-Aug-10	Upgradient Leach Line	6 - 8	41	51
			10 - 12	88	58
			16 - 18	97	93
E-3.5	20-Aug-10	Upgradient Leach Line	6 - 8	16	79
			10 - 12	11	47
			16 - 18	< 6.0	61
-2.5-F	24-Jan-11	Upgradient Hen Houses	2 - 4	110	110
			10 - 12	14	5.4
			16 - 17	110	42
F-8	17-Aug-10	Downgradient Leach Line	6 - 8	230	160
			12 - 14	4.7	160
			20 - 22	3.1	20
F-10E10*	19-Aug-10	Downgradient Leach Line	6 - 8	67	240
			12 - 14	26	210
			21 - 23	16	100

TABLE 3. SUMMARY OF DIRECT PUSH SOIL BORING SOIL ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Boring	Date Sampled	Location Rationale	Sample Depth (feet)	Nitrate (mg/kg)	Chloride (mg/kg)
G-1.25	24-Jan-11	Upgradient Hen Houses	2 - 4	130	98
			10 - 12	82	160
			14 - 15	41	65
-3.75-G	24-Jan-11	Upgradient Hen Houses	2 - 4	<1.5	<7.5
			10 - 12	6.1	<15
			16 - 18	6.2	25
H-8	17-Aug-10	Downgradient Leach Line	8 - 10	< 1.5	24
			18 - 20	< 3.0	110
			23 - 25	< 3.0	36
J-7	20-Aug-10	Cross-gradient Leach Line	8 - 10	< 6.0	< 30
			16 - 18	< 3.0	< 15
			24 - 26	< 3.0	< 15
LL-1	19-Aug-10	Leach Line	4 - 8	160	130
			8 - 10	120	15
LL-2	19-Aug-10	Leach Line	16 - 18	< 6.0	< 30
			20 - 23	6.3	16
LL-3	19-Aug-10	Leach Line	0 - 2	54	63
			4 - 6	78	< 30
			6 - 8	< 6.0	37
LL-4	20-Aug-10	Leach Line	8 - 10	58	< 15
			10 - 12	540	< 75
LL-5	20-Aug-10	Leach Line	2 - 4	77	64
			6 - 8	19	39
NMED Soil Screening Levels (mg/kg)				DAF-1: 21.3 DAF-20: 425	NA

NOTES:
Nitrate and Chloride data are by EPA Method 300.0
J = Analyte detected below quantitation limits
NA = not applicable
DAF = Dilution Attenuation Factor - values December 2014
* sample location 10 feet east of F-10

TABLE 4. SUMMARY OF GRAB GROUNDWATER ANALYTICAL RESULTS FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Soil Boring	Date Sampled	Chloride (mg/L)	Nitrate-N (mg/L)	TDS (mg/L)	Sulfate (mg/L)	E.C. (µS/cm)*
Grab Water Samples Collected From Open Augers						
2-A	19-Aug-10	300	1.8	1510	290	1907
A-0	18-Aug-10	250	30	2100	390	2900
A-2	18-Aug-10	1400	< 4.0	4350	1200	5880
A-4	17-Aug-10	600	48	2080	260	3250
A-7	17-Aug-10	830	82	4200	960	4770
A-12	18-Aug-10	160	< 0.10	975	240	1405
A-14 68.5 EAST	17-Aug-10	400	< 2.0	2870	1200	3000
B-8	17-Aug-10	1100	0.44	2800	540	4110
B-10	18-Aug-10	790	< 0.10	2750	890	4100
C-0	18-Aug-10	240	32	2210	320	3100
C-2	18-Aug-10	170	< 1.0	2170	240	2890
C-4	19-Aug-10	1500	72	5650	1300	7480
C-12	18-Aug-10	320	< 0.21	1080	240	1756
D-5	19-Aug-10	920	970	8910	1100	11330
D-8	17-Aug-10	1000	110	7310	3600	9040
-3.5-E	24-Jan-11	120	1.6	920	83	1461
E-1.5	20-Aug-10	87	150	2630	460	3230
E-3.5	20-Aug-10	290	100	5500	1300	5510
-2.5-F	24-Jan-11	130	11	980	160	1323
F-8	17-Aug-10	140	36	2150	740	2880
F-10E10	19-Aug-10	300	24	2490	1300	3160
-3.75-G	24-Jan-11	150	0.79	900	97	1128
G-1.25	24-Jan-11	63	62	2000	270	1715
H-8	17-Aug-10	370	55	2920	1300	3910
J-7	20-Aug-10	410	27	2400	520	2430
LL-5	20-Aug-10	43	8.8	3300	130	1235
NMWQCC Standard		**250**	**10**	**1000**	**600**	**NA**

NOTES:
Chloride, Nitrate, and Sulfate data are by EPA Method 300.0
TDS by EPA Method SM 2540 C
TDS = Total dissolved solids
NMED = New Mexico Environment Department
NMED sampled Karler Packing Wells
NMWQCC = New Mexico Water Quality Control
*E.C. = Electric Conductivity, field measurement
Shaded cells indicate exceedance of NMWQCC Standard

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-1	27-Aug-14	340	11	990	79
	6-Aug-13	230	8.9	815	89
	31-Jul-12	220	8.6	826	90
	26-Jul-11	230	10	810	93
	25-Jan-11	340	13	980	85
	8-Oct-10	400	15	1,040	86
	1-Jul-10	370	20	1,140	83
	29-Mar-10	400	15	1,040	88
	18-Dec-09	530	15	1,270	97
	28-Jul-09	460	16	1,280	NA
	30-Jan-09	420	15	1,000	NA
	13-May-08	510	15	1,200	NA
	16-Jul-07	420	15	1,500	NA
	26-Apr-05	270	4.1	NA	NA
MW-2	20-Nov-14	320	4.8	1,290	250
	27-Aug-14	580	13	2,050	540
	21-May-14	510	13	2,010	470
	19-Feb-14	540	13	2,220	540
	19-Nov-13	350	6.5	1,560	350
	7-Aug-13	520	13	2,110	530
	6-May-13	630	19	2,510	650
	6-Feb-13	350	5.2	1,360	260
	6-Nov-12	220	0.85	912	160
	31-Jul-12	690	19	2,550	670
	1-May-12	560	14	2,080	460
	2-Feb-12	330	5.2	1,380	260
	1-Nov-11	180	<0.10	735	100
	26-Jul-11	370	6.1	1,530	320
	20-Apr-11	310	4.8	1,330	230
	25-Jan-11	140	<0.10	855	78
	8-Oct-10	140	<1.0	615	72
	1-Jul-10	340	6.3	1,530	280
	29-Mar-10	150	0.38	680	82
	18-Dec-09	140	0.28	980	86
	28-Jul-09	190	1.8	660	NA
	19-Feb-09	110	1.0	620	NA

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-3	27-Aug-14	240	0.46	1,250	130
	6-Aug-13	270	1.7	1,310	120
	31-Jul-12	230	2.7	1,220	98
	26-Jul-11	210	5.2	1,380	100
	20-Apr-11	230	7.3	1,380	130
	25-Jan-11	230	8.4	1,100	110
	8-Oct-10	220	5.8	1,250	150
	1-Jul-10	210	6.0	1,260	140
	29-Mar-10	210	4.0	1,050	120
	18-Dec-09	200	3.2	1,600	150
	28-Jul-09	190	1.7	1,300	NA
	19-Feb-09	160	1.8	980	NA
MW-4	20-Nov-14	280	150	4,070	1,400
	27-Aug-14	230	120	3,720	1,400
	21-May-14	310	88	3,940	1,200
	20-Feb-14	400	87	4,240	1,100
	19-Nov-13	230	51	3,250	1,000
	7-Aug-13	340	62	3,350	640
	6-May-13	360	62	3,380	580
	6-Feb-13	350	66	3,220	540
	6-Nov-12	380	63	3,310	660
	31-Jul-12	370	97	3,850	940
	1-May-12	390	110	4,100	1,100
	3-Feb-12	400	110	4,120	1,000
	2-Nov-11	390	140	4,340	1,200
	26-Jul-11	390	120	4,570	1,300
	21-Apr-11	400	120	4,320	1,400
	25-Jan-11	410	130	4,560	1,400
	8-Oct-10	410	110	4,250	1,400
	1-Jul-10	390	220	5,320	1,500
	29-Mar-10	440	140	4,910	1,800
	18-Dec-09	480	160	5,780	2,100
	28-Jul-09	550	150	4,830	2,000
	19-Feb-09	490	180	5,600	NA
NMED Split	19-Feb-09	456	180	5,560	2,060

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-5	20-Nov-14	280	2.3	1,440	330
	27-Aug-14	1,400	170	5,250	1,100
	21-May-14	1,300	160	5,250	1,000
	19-Feb-14	1,300	170	5,250	1,100
	19-Nov-13	1,200	160	4,810	940
	6-Aug-13	780	70	3,260	690
	6-May-13	270	0.31	1,280	300
	6-Feb-13	270	0.52	1,360	310
	6-Nov-12	280	<0.50	1,410	300
	31-Jul-12	400	5.8	1,780	440
	1-May-12	970	140	3,900	690
	3-Feb-12	860	150	3,900	730
	2-Nov-11	1,000	170	4,040	860
	26-Jul-11	760	100	3,030	680
	21-Apr-11	950	130	3,680	930
	25-Jan-11	810	52	2,860	820
	8-Oct-10	440	1.5	1,680	570
	1-Jul-10	1,100	320	4,620	630
	29-Mar-10	1,300	270	5,250	880
	8-Jan-10	1,400	280	5,910	890
	18-Dec-09	1,400	320	6,270	880
	28-Jul-09	380	13	1,720	NA
	19-Feb-09	240	2.6	1,000	NA
NMED Split	19-Feb-09	227	3.1	1,090	244
MW-6	20-Nov-14	110	2.9	742	140
	27-Aug-14	110	3.5	785	140
	21-May-14	130	3.7	756	130
	19-Feb-14	120	4.0	840	120
	19-Nov-13	120	4.1	740	130
	6-Aug-13	120	4.0	730	130
	6-May-13	130	4.3	810	120
	6-Feb-13	130	3.9	750	120
	6-Nov-12	130	4.0	760	130
	31-Jul-12	140	4.4	722	120
	1-May-12	130	4.1	708	100
	2-Feb-12	140	4.2	735	110
	1-Nov-11	140	4.2	690	120
	26-Jul-11	140	4.2	730	120
	20-Apr-11	150	4.4	910	120
	25-Jan-11	150	4.1	855	120
	8-Oct-10	150	4.5	770	120
	1-Jul-10	150	6.1	785	130
	29-Mar-10	150	4.5	830	120
	18-Dec-09	150	4.5	920	130

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-7	20-Nov-14	470	29	1,310	130
	27-Aug-14	450	26	1,550	120
	21-May-14	410	27	1,620	120
	19-Feb-14	390	23	1,360	110
	19-Nov-13	410	25	1,550	110
	7-Aug-13	400	26	1,510	110
	6-May-13	390	26	1,320	110
	6-Feb-13	400	26	1,380	110
	6-Nov-12	398	28	1,430	110
	31-Jul-12	380	24	1,340	100
	1-May-12	400	21	1,170	96
	2-Feb-12	390	22	1,220	100
	1-Nov-11	430	22	1,190	100
	26-Jul-11	380	22	1,350	95
	21-Apr-11	400	23	1,110	100
	25-Jan-11	390	22	1,310	100
	8-Oct-10	380	23	1,110	100
	1-Jul-10	340	28	1,340	97
	29-Mar-10	350	21	1,040	97
	17-Dec-09	340	19	1,400	89
MW-8	20-Nov-14	380	49	1,960	590
	27-Aug-14	400	44	2,140	800
	21-May-14	350	47	2,240	680
	19-Feb-14	360	43	2,070	630
	19-Nov-13	400	45	2,000	550
	7-Aug-13	360	32	1,970	580
	6-May-13	420	44	2,090	670
	6-Feb-13	440	44	1,950	540
	6-Nov-12	480	49	2,020	510
	31-Jul-12	230	44	2,140	560
	1-May-12	480	47	1,900	440
	2-Feb-12	490	50	1,960	490
	2-Nov-11	330	16	1,410	370
	26-Jul-11	530	53	1,960	390
	21-Apr-11	520	56	1,910	350
	25-Jan-11	560	52	2,120	430
	8-Oct-10	380	30	1,480	370
	1-Jul-10	530	79	1,860	310
	29-Mar-10	480	46	1,520	290
	17-Dec-09	470	38	1,850	240

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-9	20-Nov-14	440	21	1,420	210
	27-Aug-14	460	21	1,560	220
	21-May-14	440	22	1,600	230
	19-Feb-14	440	21	1,560	220
	19-Nov-13	420	22	1,590	210
	7-Aug-13	430	22	1,620	220
	6-May-13	420	21	1,450	210
	6-Feb-13	430	22	1,460	230
	6-Nov-12	460	22	1,530	220
	31-Jul-12	420	21	1,520	220
	1-May-12	430	18	1,370	200
	2-Feb-12	440	19	1,440	220
	1-Nov-11	490	21	1,430	220
	26-Jul-11	410	18	1,540	190
	21-Apr-11	470	18	1,340	210
	25-Jan-11	490	17	1,540	190
	8-Oct-10	470	15	1,440	190
	1-Jul-10	450	21	1,560	190
	29-Mar-10	450	14	1,250	190
	16-Dec-09	440	14	1,300	170
Prior to Development	14-Dec-09	260	9.2	1,980	180
MW-10D	20-Nov-14	180	5.1	1,130	200
	27-Aug-14	200	5.7	1,160	240
	21-May-14	180	5.6	1,120	210
	19-Feb-14	180	7.0	1,120	190
	19-Nov-13	180	7.3	1,090	190
	6-Aug-13	170	9.0	1,100	190
	6-May-13	170	10	1,080	200
	6-Feb-13	160	9.2	1,070	190
	6-Nov-12	180	8.8	1,070	190
	31-Jul-12	170	10	1,060	180
	1-May-12	170	8.2	1,090	180
	3-Feb-12	180	6.5	1,110	210
	1-Nov-11	190	11	1,060	210
	26-Jul-11	170	11	1,060	200
	21-Apr-11	160	14	1,040	200
	25-Jan-11	150	23	1,100	210

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
MW-11	20-Nov-14	150	<0.50	1,030	240
	27-Aug-14	170	<0.10	1,060	270
	21-May-14	190	<1.0	1,100	290
	19-Feb-14	170	<0.10	1,110	260
	19-Nov-13	170	<0.10	1,070	250
	6-Aug-13	170	<0.10	1,040	230
	6-May-13	170	<0.10	1,060	250
	6-Feb-13	180	<0.10	1,100	280
	6-Nov-12	180	<0.50	1,160	300
	31-Jul-12	170	<0.10	1,210	310
	1-May-12	160	<0.10	1,140	280
	2-Feb-12	180	<0.10	1,200	330
	1-Nov-11	170	<1.0	1,070	290
	26-Jul-11	150	<0.10	1,050	250
	21-Apr-11	170	<0.10	1,100	290
	25-Jan-11	180	<0.10	1,140	330
MW-12	20-Nov-14	250	28	2,040	580
	27-Aug-14	290	30	2,020	670
	21-May-14	260	29	2,080	590
	19-Feb-14	280	25	1,980	580
	19-Nov-13	290	27	2,030	660
	6-Aug-13	280	23	1,930	570
	6-May-13	290	26	2,040	630
	6-Feb-13	310	11	1,440	370
	6-Nov-12	310	16	1,650	460
	6-Sep-12	290	27	1,890	560
MW-13	20-Nov-14	150	17	990	200
	27-Aug-14	150	17	975	210
	21-May-14	170	18	1,120	220
	19-Feb-14	150	17	1,050	200
	19-Nov-13	160	18	1,010	210
	6-Aug-13	160	17	1,020	210
	6-May-13	170	18	1,200	240
	6-Feb-13	160	18	1,080	210
	6-Nov-12	160	19	1,050	210
	6-Sep-12	170	21	1,180	210

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
UST MW-1	20-Nov-14	210	29	1,080	190
	27-Aug-14	230	35	1,160	220
	21-May-14	180	18	932	160
	19-Feb-14	200	21	996	170
	19-Nov-13	200	18	964	160
	7-Aug-13	200	23	1,110	230
	6-May-13	210	25	1,080	220
	6-Feb-13	200	20	987	160
	6-Nov-12	210	21	1,020	180
	31-Jul-12	230	30	1,190	230
	1-May-12	230	27	1,100	200
	2-Feb-12	260	32	1,300	310
	2-Nov-11	260	34	1,400	350
	26-Jul-11	330	48	1,600	350
	21-Apr-11	340	66	1,780	470
	25-Jan-11	350	67	1,840	510
	8-Oct-10	360	64	1,530	360
	1-Jul-10	250	41	1,180	210
	29-Mar-10	310	47	1,440	310
	18-Dec-09	300	50	1,520	330
	28-Jul-09	360	69	1,930	NA
	19-Feb-09	290	70	2,000	NA
MW-SW	30-Jan-09	540	<0.1	1,600	NA
	13-May-08	450	ND	1,300	NA
	27-Aug-07	390	ND	1,700	NA
	16-Jul-07	380	ND	2,300	NA
	26-Apr-05	630	0.25	NA	NA
West Test Well	30-Jan-09	310	62	3,300	NA
	13-May-08	280	47	3,100	NA
	5-Dec-07	420	48	3,500	NA
	27-Nov-07	460	42	4,000	NA

TABLE 5. SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Monitoring Well/Boring	Date Sampled	Chloride (mg/L)	Nitrate (mg/L)	TDS (mg/L)	Sulfate (mg/L)
Grab Water Samples Collected From Open Augers					
DP-02	16-Feb-09	140	2.5	NA	NA
DP-04	16-Feb-09	66	3.8	NA	NA
DP-07	17-Feb-09	310	18	NA	NA
NMED Split	17-Feb-09	284	19	1,250	212
DP-08	18-Feb-09	630	27	NA	NA
NMED Split	18-Feb-09	537	26	1,860	278
SB-1	17-Dec-09	1,100	240	9,740	4,100
SB-2	17-Dec-09	430	42	3,000	780
SB-3	17-Dec-09	340	5.9	2,030	560
SB-4	16-Dec-09	67	10	1,590	250
SB-5	16-Dec-09	230	25	1,400	170
Karler Packing Wells					
MW-2	28-May-08	126	9.2	802	NA
MW-4	28-May-08	484	76	2,510	NA
NMWQCC Standard		**250**	**10**	**1,000**	**600**

NOTES:
Chloride, Nitrate, and Sulfate data are by EPA Method 300.0
TDS by EPA Method SM 2540 C
mg/l = milligram(s) per liter
TDS = Total dissolved solids
NMED = New Mexico Environment Department
NMED sampled Karler Packing Wells
NMWQCC = New Mexico Water Quality Control
Shaded indicates results above NMWQCC Standard

TABLE 6. SAMPLE ANALYTICAL AND QUALITY CONTROL REQUIREMENTS
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Target Analytes	Matrix	Analytical Method	Sample Container	Preservative	Holding Time
Nitrate/Nitrite	Soil	EPA 300.0	8-ounce glass soil jar	Cool to <6°C	28 days
Chloride	Soil	EPA 300.0	8-ounce glass soil jar	Cool to <6°C	28 days
Nitrate/Nitrite	Water	EPA 300.0	250 mL HDP	Cool to <6°C, H_2SO_4 pH<2	28 days
Chloride	Water	EPA 300.0	250 mL HDP	Cool to <6°C	28 days
Sulfate	Water	EPA 300.0	250 mL HDP	Cool to <6°C	28 days
Total Dissolved Solids (TDS)	Water	SM 2540 C	250 mL HDP	Cool to <6°C	7 days

Notes:
EPA = U.S. Environmental Protection Agency

TABLE 7. MONITORING REGIMEN
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

Well ID	Monitoring Rationale	Monitoring Regimen - Semi Annual					
	Plume Position	Gauge	Field Parameters	Nitrate	Chloride	TDS	Sulfate
MW-1	Upgradient/Background	X	X	X	X	X	X
MW-2	Downgradient	X	X	X	X	X	X
MW-3	Upgradient/Background	X	X	X	X	X	X
MW-4	Source	X	X	X	X	X	X
MW-5R	Cross-gradient/Sentinal	X	X	X	X	X	X
MW-6	Upgradient/Background	X	X	X	X	X	X
MW-7	Downgradient	X	X	X	X	X	X
MW-8	Downgradient	X	X	X	X	X	X
MW-9	Cross-gradient/Sentinal	X	X	X	X	X	X
MW-10D	Vertical Delineation	X	X	X	X	X	X
MW-11	Downgradient/Sentinal	X	X	X	X	X	X
MW-12	Downgradient/Sentinal	X	X	X	X	X	X
MW-13	Downgradient/Sentinal	X	X	X	X	X	X
MW-14	Cross-gradient/Sentinal	X	X	X	X	X	X
UST-MW-1	Downgradient	X	X	X	X	X	X

NOTES:
Nitrate, chloride, and sulfate by EPA Method 300.0
TDS = Total dissolved solids by Method SM 2540
Parameters include: pH, specific conductence, dissolved oxygen and oxidation reduction potential.

TABLE 8. DATA QUALITY OBJECTIVES
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

STEP 1: State the Problem

- The Cal-Maine Egg Farm operated under various owners between the early 1950s until September 2006.
- Groundwater samples collected from monitoring wells installed at the facility recorded concentrations of nitrate, chloride, and TDS in excess of WQCC Standards (20 NMAC 6.2.3103)

STEP 2: Identify the Decisions

The decisions defined herein are applicable to both the Stage 1 Abatement Plan as well as addressing soils contamination under the Volunteer Remediation Program, should Cal-Maine decide to enter that program.

- (1): Define the PSAs and determine if there is a potential for the levels of contamination in soils to constitute either a health hazard or a threat to groundwater, and
- (2) Perform the hydrogeologic characterization of the area and gain knowledge about the on site, upgradient, and downgradient groundwater quality conditions, and plume delineation.

STEP 3: Identify Inputs to the Decisions

- (1)(a) for shallow soils (0-2 ft bgs), the input to this decision are sample results for nitrate as nitrogen; the comparison standards are the SSLs for residential future land use. (b) for deep soils, the inputs to the decision are the analytical results of deep samples; the comparison standards are the soil concentrations at DAF 1 for the areas where either no significant vertical gradient was present (such as the composting area and the low spots), groundwater is shallow, or waste quantities were small and the gradients sporadic (such as in the drain areas); this is a conservative approach to the evaluation of these areas; (c) for deep soil samples collected from borings located in areas where wastewater was disposed of for a long period of time, like the leach field, the input to the decision are still the analytical results of deep samples (collected as deep as 12 ft bgs), but the comparison standards are the soil concentrations at DAF 20 for the leach field,
- (2) for shallow groundwater, the inputs to the decision are stratigraphic information obtained during borehole drilling, soils characteristics calculated based on the type of subsurface soils, definition of groundwater direction through gauging of monitoring wells, and analytical results for samples collected from monitoring and production wells; the comparison standards are the WQCC standards for nitrate, chloride, and TDS.

STEP 4: Define Study Boundaries

- The horizontal study boundary is confined to Egg Farm boundary and discrete off-site monitoring well locations to be determined with NMED support
- The vertical extent of the study area is estimated from the soil surface to approximately 120 feet below ground surface; the vertical boundary will be determined by the depth to groundwater and the requirement to have well screens submerged 15 feet below the first water table encountered.
- The temporal boundary extends through the period of performance of this project.

STEP 5: Develop Decision Rules

- (1)(a): if shallow soils nitrate/nitrite concentrations are below the residential SSLs, no further investigation is necessary and the site is adequate for unrestricted use; the concentrations will also be compared to the standards for industrial/occupational and construction scenarios which are higher and as such, much less likely to be exceeded; if soils nitrate/nitrite concentrations are exceeding the residential levels, Stage 2 Abatement may be required; (b) if in the composting area, the drains, and the low spots the concentrations of nitrate/nitrite in the bottom sample (6-8 ft bgs) are below the soil concentrations at DAF 1, then there is no threat that nitrate/nitrite will leach to groundwater; if the concentrations of nitrate/nitrite in the bottom sample (6-8 ft bgs) are above the soil concentrations at DAF 1, then

TABLE 8. DATA QUALITY OBJECTIVES
FORMER CAL-MAINE EGG FARM, BERNALILLO COUNTY, NEW MEXICO

additional evaluation will be necessary. (c) if in the leach field area concentrations of soil samples as deep as 12 ft bgs are below the soil concentrations at DAF 20, there is minimal threat that nitrate/nitirte will leach to groundwater; if the concentrations of nitrate in the bottom sample (10-12 ft bgs) are above the soil concentrations at DAF 20, then additional evaluation will be necessary.

- (2) if data are deemed to completely define the extent of contamination and concentrations of nitrate, chloride, and TDS are below the WQCC standards, a Stage 2 abatement plan will consist of 8 quarters of monitoring to ascertain that the water quality underneath the facility remains below standards; if the concentrations are above standards, an evaluation of those concentrations will be performed considering the upgradient concentrations (considered the background, as defined by 20 NMAC 6.2.7) at the facility and thus the contribution of the facility to groundwater quality will be assessed. Data will be evaluated regarding its completeness to design an effective Stage 2 abatement plan. If necessary, data gaps will be defined and further investigation will be required to complete the data gaps.

STEP 6: Specify Tolerable Limits on Decision Errors

- No statistical analyses will be performed on the results of sample analyses. Data will be evaluated as outlined in Section 5.7 of this Stage 1 Abatement Plan.

STEP 7: Optimize the Sampling Design

- The locations of the monitoring well and soil boring locations will be selected to obtain sufficient understanding of groundwater contamination to develop an effective Stage 2 Abatement Plan.
- Additional locations may be selected at a later data in case data collection is not supportive of an effective abatement remedy design.

Notes:

Cal-Maine	Cal-Maine Foods, Inc.
NMED	New Mexico Environment Department
SSL	Soil Screening Level
TDS	Total dissolved solids
WQCC	New Mexico Water Quality Control Commission

APPENDIX A

HEALTH AND SAFETY PLAN

Site Name: Cal-Maine Foods	**Site Contact:** Rob Holloday	**Telephone:** 601-948-6813
Location: 9615 Broadway Blvd. Albuquerque, NM	**Client Contact:** Rob Holladay	**Telephone**: 601-948-6813
EPA I.D. No.: N/A	**Prepared By:** Alex Spiller	**Date:** January 18, 2011
Project No.	**Date of Proposed Activities:** December 2023 to December 2026	

Objectives:

All personnel working on this site are trained in accordance with 29 CFR 1910.120 and are currently active in a medical monitoring program to perform work on a hazardous waste site.

The objective of this health and safety plan (HSP) is to list the site-specific hazards and the hazards controls to be used to ensure worker safety for the following activities:

- Install soil borings and monitor wells and collect soil and groundwater samples.

Site Type: *Check as many as applicable.*

- ☒ Active
- ☐ Inactive
- ☒ Secure
- ☐ Unsecure
- ☐ Industrial Waste
- ☐ Landfill
- ☐ Confined space **(must use long form)**
- ☐ Uncontrolled Waste **(must use long form)**
- ☐ Well field
- ☐ Underground storage tank
- ☐ Unknown **(must use long form)**
- ☒ Other *(Egg Farm)*

Site Description/History and Site Activities:

Cal-Maine Foods is an egg distribution center that was previously an egg laying farm. Groundwater collected from monitor wells at the site indicated that nitrates, Total Kjeldahl Nitrogen (TKN) and chlorides were present at the site. Investigation activities will be conducted at the site that will include installation of soil borings and new monitor wells and collecting soil and groundwater samples.

Note: A site map, definitions, and additional information about this form are provided on the last three pages of this form.

Waste Management Practices:

All solid investigation derived waste will be spread near the wells on the property. Development and purge water will be discharged to ground surface in the vicinity of the wells.

Waste Types:	☒ Liquid	☒ Solid	☐ Sludge	☐ Gas
Waste / Chemical Characteristics:	☐ Corrosive	☐ Oxidizer	☐ Flammable	
☐ Toxic	☐ Explosive	☐ Volatile	☐ Radioactive	
☐ Reactive	☐ Inert		☐ Other *(specify)* _____	

Chemical / Health Hazards of Concern:

☐ Explosion or fire hazard – monitor with combustible gas meter	☒ Inorganic chemicals (nitrate and chloride)
☐ Oxygen deficiency – monitor with oxygen meter	☐ Organic chemicals (PCP)
☐ Landfill gases – monitor with methane and hydrogen sulfide meter	☐ Petroleum Hydrocarbons (as TPH DRO)
☐ Surface tanks	☐ Underground storage tanks
☐ Potential inhalation or skin absorption hazard that is immediately dangerous to life and health (IDLH) – **must use long form**	☐ Other *(specify)* _____

Explosion or Fire Potential:	☐ High	☐ Medium	☒ Low	☐ Unknown

Radiological Hazards of Concern:

- ☐ Ionizing radiation (Radioactive materials, X-ray) **(must use long form)**
- ☐ Non-ionizing radiation (ultraviolet, lasers)

Safety Hazards of Concern: (Based on anticipated clean-up operations)

- ☐ Heavy Equipment
- ☐ Pinch points
- ☒ Energized and rotating equipment (drill rig)
- ☐ Steam cleaning equipment
- ☐ Excavations
- ☐ Welding or torch cutting (Hot work)
- ☐ Sharp Objects
- ☐ Hazardous energy sources (electrical, hydraulic)
- ☒ Buried utilities
- ☒ Overhead utilities
- ☐ Suspended loads
- ☐ Buried drums
- ☐ Work over or near water
- ☐ Work from elevated platforms
- ☐ Manual Lifting
- ☐ Other *(specify)* _____

Physical Hazards of Concern:

- ☐ Heat stress
- ☒ Cold stress
- ☒ Slips, trips, falls
- ☐ Illumination
- ☐ Vibration
- ☒ Noise
- ☒ Solar (sunburn)
- ☐ Unstable or steep terrain
- ☐ Other *(specify)* _____

Biological Hazards of Concern:

- ☐ Poisonous plants (poison ivy, poison oak)
- ☐ Spiders (black widow or brown recluse spiders)
- ☐ Medical waste
- ☒ Snakes (rattlesnakes)
- ☐ Stinging insects (bees, wasps)
- ☐ Animals (feral dogs, mountain lions, etc.)
- ☐ Blood or other body fluids

Unexploded Ordnance:

- ☐ Unexploded Ordnance (UXO) **(must use long form)**
- ☐ Chemical Warfare Materials (CWM) **(must use long form)**
- ☐ Explosive ordnance waste (OEW) **(must use long form)**

Chemical Products EA Engineering Will Use or Store On Site: (Attach a Material Safety Data Sheet [MSDS] for each item.)

☒ Alconox® or Liquinox®

☐ Hydrochloric acid (HCl)

☐ Nitric Acid (HNO_3)

☐ Sodium hydroxide (NaOH)

☒ Sulfuric Acid (H_2SO_4)

☐ Other *(specify)* _____

☐ Other *(specify)* _____

☐ Other *(specify)* _____

☐ Other *(specify)* _____

☐ Other *(specify)* _____

☐ Other *(specify)* _____

Chemicals Present at Site	Highest Observed Concentration (specify units and media)	PEL/TLV (specify ppm or mg/m^3)	IDLH Level (specify ppm or mg/m^3)	Symptoms and Effects of Acute Exposure	Photo-ionization Potential (eV)
Groundwater has elevated levels of nitrate, chloride and total dissolved solids. Neither of these substances is listed as a chemical hazard in the NIOSH Pocket Guide to Chemical Hazards. No other chemicals are known to be present at the site.	GW - Nitrate – 320 mg/L GW - Chloride – 1400 mg/L GW – Sulfate - 4100 mg/L	NA	NA	NA	NA

Notes: NIOSH Pocket Guide to Chemical Hazards, September 2005

CARC = Carcinogenic eV = Electron volt	GW = Ground water IDLH = Immediately dangerous to life or health mg/L = Milligram per liter mg/m^3 = Milligram per cubic meter	NA = Not available PEL = Permissible exposure limit	ppm = Part per million TLV = Threshold limit value

Field Activities Covered Under This Plan:

Task Description	Type	Level of Protection: Primary	Level of Protection: Contingency	Date of Activities
1 Installing borings and monitor wells, plugging and abandoning temporary monitor wells, soil and groundwater sampling	☐ Intrusive ☒ Nonintrusive	☐ C ☒ D	☐ C ☐ D	24 Jan 2011 to 28 Jan 2011
2	☐ Intrusive ☐ Nonintrusive	☐ C ☐ D	☐ C ☐ D	

Site Personnel and Responsibilities (include subcontractors):

Employee Name and Office Code	Task	Responsibilities
Teri McMillan	1	Project Manager or Designated Leader: Directs project investigation activities, makes site safety coordinator (SSC) aware of pertinent project developments and plans, and maintains communications with client as necessary.
Alex Spiller, Anna Baudino	1	Site Safety Coordinator (SSC): Ensures that appropriate personal protective equipment (PPE) is available, enforces proper utilization of PPE by on-site personnel, suspends investigative work if he or she believes that site personnel are or may be exposed to an immediate health hazard, implements the health and safety plan, and reports any observed deviations from anticipated conditions described in the health and safety plan to the health and safety representative.
Teri McMillan, Alex Spiller, Anna Baudino	1	Field Personnel: Complete tasks as directed by the program manager, field team leader, and SSC and follow all procedures and guidelines established in the EA Engineering Health and Safety Manual.

Protective Equipment: (Indicate type or material as necessary for each task; attach additional sheets as necessary)

Task: ☒ 1 ☐ 2	Task: ☐ 1 ☐ 2
Level: ☐ C ☒ D	Level: ☐ C ☐ D
☒ Primary ☐ Contingency	☐ Primary ☐ Contingency
RESPIRATORY	**RESPIRATORY**
☒ Not needed	☐ Not needed
☐ APR: _____	☐ APR: _____
☐ Cartridge: _____	☐ Cartridge: _____
☐ Escape mask: _____	☐ Escape mask: _____
☐ Other: _____	☐ Other: _____
PROTECTIVE CLOTHING	**PROTECTIVE CLOTHING**
☒ Not needed	☐ Not needed
☐ Tyvek® coveralls: _____	☐ Tyvek® coveralls: _____
☐ Saranex® coveralls: _____	☐ Saranex® coveralls: _____
☐ Coveralls: _____	☐ Coveralls: _____
☐ Other: _____	☐ Other: _____
HEAD AND EYE	**HEAD AND EYE**
☐ Not needed	☐ Not needed
☒ Safety glasses: _____	☐ Safety glasses: _____
☐ Face shield: _____	☐ Face shield: _____
☐ Goggles: _____	☐ Goggles: _____
☒ Hard hat: _____	☐ Hard hat: _____
☐ Other: _____	☐ Other: _____
GLOVES	**GLOVES**
☐ Not needed	☐ Not needed
☐ Undergloves: _____	☐ Undergloves: _____
☒ Gloves: Nitrile _____	☐ Gloves: Nitrile _____
☐ Overgloves: _____	☐ Overgloves: _____
FIRST AID EQUIPMENT	**FIRST AID EQUIPMENT**
☐ Not needed	☐ Not needed
☒ Standard First Aid kit	☐ Standard First Aid kit
☐ Portable eyewash	☐ Portable eyewash
BOOTS	**BOOTS**
☐ Not needed	☐ Not needed
☒ Work boots: Steel-Toe/Steel	☐ Work boots: _____
☐ Overboots: _____	☐ Overboots: _____
OTHER	**OTHER**
☒ (specify): Hearing Protection	☐ (specify): _____

Note: APR = Air purifying respirator

Monitoring Equipment: (Specify instruments needed for each task; attach additional sheets as necessary)				
Instrument	Task	Instrument Reading	Action Guideline	Comments
Combustible gas indicator model:	☐ 1	0 to 10% LEL	No explosion hazard	☒ Not needed
	☐ 2	10 to 25% LEL	Potential explosion hazard; notify SSC	
		> 25% LEL	Explosion hazard; interrupt task; evacuate site, notify SSC	
O2 meter model:	☐ 1	> 23.5% O2	Potential fire hazard; evacuate site	☒ Not needed
	☐ 2	23.5 to 19.5% O2	Oxygen level normal	
		< 19.5% O2	Oxygen deficiency; interrupt task; evacuate site; notify SSC	
Photoionization detector model: ☐ 11.7 eV ☐ 10.6 eV ☐ 9.8 eV ☐ ____eV	☐ 1	>0 to 5 ppm above background	Level D	☒ Not needed
	☐ 2	>5 to 50 ppm above background	Level C	
		>50 ppm above background	Evacuate site; notify SSC	
Flame ionization detector model:	☐ 1	>0 to 5 ppm above background	Level D	☒ Not needed
	☐ 2	>5 to 50 ppm above background	Level C	
		>50 ppm above background	Evacuate site; notify SSC	
Detector tubes models:	☐ 1 ☐ 2	Specify:	Specify:	Note: This action level for upgrading the level of protection is one-half of the contaminant's PEL. If the PEL is reached, evacuate the site and notify the SSC. ☒ Not needed
Respirable dust monitor model:	☐ 1 ☐ 2	Specify:	Specify:	☒ Not needed
Other: (specify):	☐ 1 ☐ 2	Specify:	Specify:	☒ Not needed

Notes: eV = Electron volt
LEL = Lower explosive limit
PEL = Permissible exposure limit
ppm = Part per million
O_2 = Oxygen

Site Map (if available):

See Attachment

Additional Comments:	**Emergency Contacts:**	**Telephone**
EA Engineering site workers will contain and absorb any chemicals used or transferred on site.	U.S. Coast Guard National Response Center	800/424-8802
	InfoTrac	800/535-5053
	Fire department	911
	Police department	911
	EA Engineering Personnel:	
	Corporate Human Resource Manager: Michele Bailey	410/584-7000
	Corporate Health & Safety Manager: Pete Garger	410/527-2412
	Office Health & Safety Coordinator: Luis Vega	972/459-5040
	Program Manager: Fritz Meyer	410/527-2425
	Site Safety Coordinator: Teri McMillan	505/259-6779

Personnel Decontamination and Disposal Method:	**Medical Emergency:**
Personnel will follow the U.S. Environmental Protection Agency's "Standard Operating Safety Guides" for decontamination procedures for Level D personal protection. The following decontamination stations should be set up in each decontamination zone: • All equipment will be decontaminated in a designated area All disposable equipment and gloves will be double-bagged or containerized in an acceptable manner and disposed of in accordance with local regulations.	Hospital Name: Presbyterian Hospital Hospital Address: 1100 Central Ave. Albuquerque, New Mexico Hospital Telephone: Emergency – 911 General – (505)- 272-2111 Ambulance Telephone: 911 <u>Route to Hospital:</u> (see next page for route map) (1) Exit the site turn right onto Broadway Blvd. (2) Proceed north on Broadway Blvd. to Rio Bravo turn right onto Rio Bravo. (3) Proceed east on Rio Bravo and enter I-25 North. (4) Take I-25 North and exit at Central Ave. Turn right onto Central Ave. (5) The hospital is located on the right. Approximate drive time on this route is 8 to 15 minutes.

Note: This page must be posted on site.

Hospital Route Map (if available):

Note: This page must be posted on site.

APPROVAL AND SIGN-OFF FORM

Project No. 1464501.0002

I have read, understood, and agree with the information set forth in this Health and Safety Plan and will follow the direction of the Site Safety Coordinator as well as procedures and guidelines established in the EA Engineering Health and Safety Manual. I understand the training and medical requirements for conducting field work and have met these requirements.

Name	Signature	Date
Name	Signature	Date
Name	Signature	Date
Name	Signature	Date

APPROVALS: (Two Signatures Required)

Site Safety Coordinator	Date
Health and Safety Coordinator	Date

DEFINITIONS

Intrusive - Work involving excavation to any depth, drilling, opening of monitoring wells, most sampling, and Geoprobe® work

Nonintrusive - Generally refers to site walk-throughs or field reconnaissance

Levels of Protection

Level D - Hard hat, safety boots, and glasses, may include protective clothing such as gloves, boot covers, and Tyvek® or Saranex® coveralls

Level C - Hard hat, safety boots, glasses, and air purifying respirators with appropriate cartridges, **PLUS** protective clothing such as gloves, boot covers, and Tyvek® or Saranex® coveralls

Emergency Contacts

InfoTrac - For issues related to incidents involving the transportation of hazardous chemicals; this hotline provides accident assistance 24 hours per day, 7 days per week

U.S. Coast Guard National Response Center - For issues related to spill containment, cleanup, and damage assessment; this hotline will direct spill information to the appropriate state or region

Health and Safety Plan Short Form

- Used for field projects of limited duration and with relatively limited activities; may be filled in with handwritten text
- Limitations:
  - No Level B or A work
  - Limited number of tasks
  - No confined space entry
  - No unexploded ordnance work or radiation hazard

APPENDIX B

FIELD FORMS

EA Engineering, Science, and Technology, Inc.

BORING/WELL CONSTRUCTION LOG

Project: Former Cal-Maine Egg Farm	Project Number:
Drilling Company:	Start Time/Date:
Drilling Rig/Bit:	Completion Time/Date:
Driller:	Final Depth:
Boring/Well ID:	Logged By: Page 1 of 1

Sample Type	Sample Recovery (in)	Sample Interval	Electrical Conductivity	USCS Soil Type	Depth, ft bgs	Soil Description (soil type, color, density/consitency, plasticity, moisture, grain size, angularity/minerology, other)	Boring and/or Well Details
					1		
					2		
					3		
					4		
					5		
					6		
					7		
					8		
					9		
					10		
					11		
					12		
					13		
					14		
					15		
					16		
					17		
					18		
					19		
					20		
					21		
					22		
					23		
					24		
					25		
					26		
					27		
					28		
					29		
					30		
					31		
					32		
					33		
					34		
					35		
						Collected grab water sample Y N	
						Grab water sample EC (uS/cm) =	
						Total Depth =	
						Depth to Water =	

CC = Continuous Core NA= Not Analyzed Cut = Cuttings

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MONITORING WELL SAMPLING FIELD FORM

FLUID LEVEL DATA

Well ID _____ Date gauged _____

Site _____ Time gauged _____

Depth to PSH _____ Feet Well diameter _____ Inches

Depth to water _____ Feet Height of fluid column _____ Feet

Total depth _____ Feet Volume in well _____ Gallons

NAPL thickness _____ Feet

(3 well volumes = _____ gallons)

After Bailing NAPL

Depth to PSH _____ Feet

Depth to water _____ Feet

NAPL thickness _____ Feet

NAPL Recovered _____ Gallons

GROUNDWATER SAMPLING DATA

Time/date purged _____ Purge Method _____

Time	Purge Volume (gal)	Temp (˚C)	SpC (µs/cm)	pH	ORP (mV)	DO (mg/L)

Actual purge volume _____ gal. Field measurements stabilized within ± 10%? _____

Time/date sampled _____ Purged/sampled by _____

Sample method _____

Requested analyses _____

Comments/observations _____

Well Casing Volumes

2" diameter = 0.17 gal/ft 4" diameter = 0.66 gal/ft 6" diameter = 1.50 gal/ft