

T: 17 R: 13 Sec: 15
Latitude: 31.950431
Longitude: -111.003845
Parcel #: 303-33-013A
SD: 3



PIMA COUNTY
DEPARTMENT OF ENVIRONMENTAL QUALITY
33 N. Stone Avenue, Suite 700
Tucson, Arizona 85701-1429
www.deq.pima.gov

Ursula Kramer, P.E.
Director

(520) 243-7400
FAX (520) 838-7432

January 25, 2013

CERTIFIED MAIL
Return Receipt Requested

ASARCO LLC – Mission Complex
Attn: Thomas H. Phillips, General Manager
4201 W. Pima Mine Road
Sahuarita, AZ 85629

Permit #: 2026

NOTICE OF VIOLATION # PC 1301-055

The Pima County Department of Environmental Quality (PDEQ) has reason to believe that ASARCO LLC – Mission Complex (Asarco) located at 4201 W. Pima Mine Road, Sahuarita, Arizona, has violated requirements of rules within the Pima County Code (PCC) and an applicable permit/license. The alleged violations were determined after reviewing a notification of excess emissions report submitted by Asarco, dated January 11, 2013, a related citizen's complaint and documentation from the on-site inspection conducted by an authorized PDEQ representative on January 10, 2013. The findings of the complaint inspection were reported to Mr. Jamie Ekholm and Mr. Mark Eddy, Environmental Engineers. A complaint inspection report and subsequent compliance determination report are attached.

I. ALLEGED VIOLATIONS – APPEALABLE AGENCY ACTIONS

FINDINGS OF FACT

VIOLATION

**Permit Condition, Part "B", I.C.3
PCC 17.16.050.D**

3. No person shall cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken.

- a. Sources required to obtain an air quality permit under ARS § 49-426, § 49-480 or Rule 17.12.470 may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this provision.
- b. This subsection shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.
- c. This Condition shall not apply to the generation of airborne particulate matter from undisturbed land.

Findings

On January 10, 2013, Asarco permitted diffusion of fugitive emissions from the surface of Tailings Impoundment #8 beyond the property boundary of Helmet Peak Road without taking reasonably necessary and feasible precautions to control wind-blown dust commensurate with the conditions of the impoundment.

Requested Corrective Actions

- Employ control measures commensurate with the conditions of tailings impoundments in stand-by mode to prevent diffusion of visible emissions beyond the property boundary line.

II. CITATION OF AUTHORITY

ARS § 49-471 et seq

17.28.010, PCC Title 17, Violations and Order of Abatement

III. REQUESTED COMPLIANCE DOCUMENTATION

Asarco shall submit a written response to PDEQ within **thirty (30)** calendar days of receipt of this notice. The response shall include:

- Documentation of response actions taken to stabilize the surface of Tailings Impoundment #8 following the excess emissions event of January 10, 2013.
- Submit planned dust control measures for Tailings Impoundment #8 including any changes in operation or monitoring to prevent future violations of this type.

The above documentation shall be deemed "submitted" when received by PDEQ at the following address:

Pima County Department of Environmental Quality
Air Program
Attn: James M. Jones
33 N. Stone Avenue, Suite 700
Tucson, AZ 85701-1429

Or email to: Air.Permits@pima.gov with Subject: NOV PC 1301-055

IV. STATEMENT OF CONSEQUENCES

Failure to achieve compliance or enter into a Consent Order will result in PDEQ initiating a unilateral enforcement action. Achieving compliance does not preclude PDEQ from seeking civil penalties. A unilateral enforcement action may result in a civil penalty. A civil penalty may be imposed for each violation for the entire non-compliance period.

PDEQ believes that alleged violations identified in a Notice of Violation (NOV) are significant and advises you they may be used to determine a pattern of non-compliance or used to determine civil penalties pursuant to ARS § 49-513. As such, PDEQ believes that an NOV is an appealable agency action as defined in ARS § 49-471(4).

A person whose legal rights, duties or privileges were determined by an appealable agency action or who will be adversely affected by an appealable agency action and who exercised any right to comment on the action provided by law, rule or ordinance may appeal the action to the air pollution hearing board established pursuant to ARS § 49-478.

V. ADMINISTRATIVE INFORMATION

OFFER TO MEET

PDEQ personnel are willing to schedule a meeting to discuss the NOV and corrective action. If you would like to meet, please contact me at (520) 243-7400. Before meeting, please submit the following:

- An agenda that specifies the objectives you wish to discuss.
- The names and affiliations of the participants that will be accompanying you.

COMPLIANCE ASSISTANCE

PDEQ personnel are also willing to help you achieve and maintain compliance. If you need assistance complying with the regulations please contact our department at (520) 243-7400.

NOTICE OF NON-DISCRIMINATION

The Pima County Department of Environmental Quality does not discriminate on the basis of race, color, national origin, sex, disability religion, or age in its programs or activities in accordance with applicable laws and regulations. Further, any person who is in need of special services (e.g., written material in large type, signer for the hearing impaired, or for free assistance in Spanish), please contact PDEQ's Environmental Justice Program Manager, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, Phone (520) 243-7446, email beth.gorman@deq.pima.gov.

AVISO DE NO DISCRIMINACIÓN

El Departamento del Condado de Pima de Calidad Ambiental no discrimina en base de la raza, el color, el origen nacional, el sexo, la religión, discapacidad, o la edad en sus programas o actividades de acuerdo con leyes y regulaciones aplicables. Además, cualquier persona que esté necesitando los servicios especiales (e.g., material escrito en letra grande, intérpretes de lenguaje con señas, o para obtener asistencia gratuita en español), por favor contacte a la encargada del Programa de Justicia Ambiental del Departamento Calidad Ambiental del Condado de Pima, Beth Gorman, 33 N. Stone Avenue, Suite 700, Tucson, Arizona, 85701, teléfono (520) 243-7446, email beth.gorman@deq.pima.gov.

Sincerely,



James M. Jones, CEA
Compliance Inspector
Air Program

Attachment: Compliance Determination Report

 cc: Permit File #: 2026



**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PROGRAM**

33 N. STONE AVENUE, SUITE 700
TUCSON, ARIZONA 85701-1429
PHONE (520) 243-7400 FAX (520) 838-7432
www.deq.pima.gov

Compliance Determination Report

Tracking ID: PC 1301-055 / 2026-20D

Permit #: 2026
Source: ASARCO LLC - Mission Complex
Location: 4201 W. Pima Mine Road, Sahuarita AZ
Compliance Status: Non-Compliant

I. BACKGROUND

The Pima County Department of Environmental Quality (PDEQ) received notification by telephone from ASARCO LLC – Mission Complex (Asarco) on January 10, 2013, notifying of excess emissions from Tailings Impoundment #8. Asarco later submitted a written notification dated January 11, 2013, for the excess emissions (Attachment 2). PDEQ received complaints concerning emissions of particulate matter and dust from the Asarco mine tailings located west of La Canada Drive and Sahuarita Road on January 10, 2013. PDEQ dispatched a compliance inspector to conduct an investigation of the Asarco facility (Attachment 2). Photos of the excess emissions were also taken offsite around 12:30 pm by Brad Hughes, an Environmental Specialist with PDEQ, as documentation of the fugitive dust visible emissions (Attachment 3).

The notification of excess emissions and the complaint investigation evidence have been reviewed by PDEQ management. Applicable conditions in the air quality permit have been outlined and findings and deficiencies for which an enforcement action will be taken have been determined and are listed below.

II. REVIEW OF APPLICABLE PERMIT CONDITIONS

Permit Condition:

Part “B”: SPECIFIC CONDITIONS

I. Emission Limitations and Standards.

C. Requirements for Open Areas, Roadways, Streets, Material Handling, Storage Piles, and Tailings.

2. No person shall cause or permit the effluent from a single emission point, multiple emission points, or fugitive emissions source to have an average optical density greater than 20 percent subject to the following provisions:

a. Opacities (optical densities) of an effluent shall be measured by a certified visible emissions evaluator with his natural eyes, approximately following the procedures which were used during his certification, or by an approved and precisely calibrated in-stack monitoring instrument.

b. A violation of an opacity standard shall be determined by measuring and recording a set of consecutive, instantaneous opacities, and calculating the arithmetic average of the measurements within the set unless

otherwise noted herein. The measurements shall be made at approximately fifteen-second intervals for a period of at least six minutes, and the number of required measurements shall be 25. Sets need not be consecutive in time, and in no case shall two sets overlap. If the average opacity of the set of instantaneous measurements exceeds the maximum allowed by any rule, this shall constitute a violation.

Findings:

Asarco employees and the PDEQ inspector reported that they were not able to conduct an EPA Method 9 Visible Emissions observation because of the intermittent and the shifting nature of the particulate emissions generated from the surface of Tailings Impoundment #8 and viewing positions when observing the emissions. Asarco reported that they observed emissions that exceeded 20% opacity on an instantaneous basis and the PDEQ inspector describes observing an emission plume between 1:19 pm and 1:30 pm from Tailings Impoundment #8 that appeared to exceed the 20% opacity standard based on qualitative observations, however no one was able to measure the opacity following the prescribed procedures to determine a violation due to the conditions encountered.

Permit Condition:

Part "B": SPECIFIC CONDITIONS

I. Emission Limitations and Standards.

C. Requirements for Open Areas, Roadways, Streets, Material Handling, Storage Piles, and Tailings.

3. No person shall cause, suffer, allow, or permit diffusion of visible emissions, including fugitive dust, beyond the property boundary line within which the emissions become airborne, without taking reasonably necessary and feasible precautions to control generation of airborne particulate matter. Sources may be required to cease temporarily the activity or operation which is causing or contributing to the emissions until reasonably necessary and feasible precautions are taken.
 - a. Sources required to obtain an air quality permit under ARS § 49-426, § 49-480 or Rule 17.12.470 may request to have the actions constituting reasonably necessary and feasible precautions approved and included as permit conditions. Compliance with such permit conditions shall be considered compliance with this provision.
 - b. This subsection shall not apply when wind speeds exceed twenty-five (25) miles per hour (using the Beaufort Scale of Wind-Speed Equivalents, or as recorded by the National Weather Service). This exception does not apply if control measures have not been taken or were not commensurate with the size or scope of the emission source.
 - c. This Condition shall not apply to the generation of airborne particulate matter from undisturbed land.

Findings:

Asarco submitted a notification of excess emissions dated January 11, 2013, documenting the observation of intermittent dust plumes from the surface of Tailings Impoundment #8 that exceeded 20% opacity on an instantaneous basis and crossed Asarco's property boundary on January 10, 2013. A PDEQ inspector observed visible emissions generated from the surface of Tailings Impoundment #8 blow north across Helmet Peak Road at 1:15 pm and from approximately 1:19 pm to 1:30 pm on January 10, 2013. PDEQ received photographs taken by Brad Hughes at approximately 12:30 pm on January 10, 2013, looking west from Sahuarita Road east of the La Canada Drive / Sahuarita Road intersection of particulate matter emissions generated from Tailings Impoundment #8 that diffused north across Helmet Peak Road.

In their Excess Emissions Report, dated December 14, 2012, Asarco documented and outlined immediate steps that would be taken to mitigate and prevent excess emissions from Tailings Impoundment #8 from what were described as small areas of broken crust. The measures included reapplication of acrylic co-polymer dust suppressant to those areas of Tailings Impoundment #8 where the surface was broken down or showed signs of being compromised, and to begin staging a fleet of earth movers at Tailings Impoundment #8 for use in capping the surface with at least 6 inches of alluvial material. Twenty-seven days later on January 10, 2013, a PDEQ inspector observed multiple subject areas on the surface of Tailings Impoundment #8 that were compromised and generating dust emissions.

PDEQ asserts that the dust control measures taken by Asarco to prevent diffusion of dust beyond the property boundary were not commensurate with the size and scope of Tailings Impoundment #8 based upon the duration and extent of the emissions and the surface condition as observed on December 13, 2013.

Deficiency:

Pursuant to Permit Condition Part B, I.C.3 and PCC 17.16.050.D, Asarco permitted the diffusion of visible emissions on January 10, 2013, from the surface of Tailings Impoundment #8 beyond the property boundary of Helmet Peak Road without taking reasonably necessary and feasible precautions to control wind-blown dust that were commensurate with the conditions of the impoundment.

III. COMPLIANCE DETERMINATION

Upon review of the excess emission notification report, the complaint inspection, and compliance history for this source, PDEQ has determined that a Notice of Violation will be issued to Asarco for the above listed deficiencies.

Attachments:

- 
1. Asarco Notification of Excess Emissions Report dated January 11, 2013
 2. PDEQ Complaint Investigation Report dated January 10, 2013
 3. Photo Log of submitted photographs dated January 10, 2013

ATTACHMENT 1
Asarco Notification of Excess Emissions Report dated January 11, 2013



RECEIVED BY
PIMA COUNTY

JAN 11 2013

DEPARTMENT OF
ENVIRONMENTAL QUALITY

January 11, 2013

Mr. Richard Grimaldi
Deputy Director, Environmental Quality Division
Pima County Department of Environmental Quality
33 North Stone Avenue, Suite 700
Tucson, Arizona 85701

RE: ASARCO LLC – Mission Complex
Notification of Excess Emissions – Tailings Impoundment #8

Dear Mr. Grimaldi:

This letter constitutes ASARCO LLC – Mission Complex's (Asarco's) notification of excess emissions required by Permit 2026, Part "A", section XIII.B. The permit's excess emissions reporting requirements require the source to provide a notification by facsimile or telephone within 24 hours of the time the owner or operator first learned of the occurrence of excess emissions. Permit 2026, Part "A", section XIII.B.1.a. The owner or operator is then required to supply a detailed written notification by submission of an "excess emissions report" within 72 hours of the 24-hour notification. Permit 2026, Part "A", section XIII.B.1.b. Both reports are to contain the information outlined in Permit 2026, Part "A", section XIII.B.2.

An initial report was made via phone to the Pima County Department of Environmental Quality, at approximately 12:30 PM on January 10, 2013.

Background.

Fugitive dust emissions from Asarco's tailings impoundments are controlled by a protective crust formed by deposition of wet tailings or by application of an acrylic copolymer. High winds can cause damage to the protective crust on these tailings impoundments by scouring away this crust. In response to a high-wind forecast for the day, Asarco's Environmental Department had conducted bi-weekly observations as required by Asarco's Visual Observation Plan earlier in the day and there were no incidences of emissions from Tailings Impoundment #8 at the time of the observations from Visual Observation Points T-2, T-5 or S-2. There were no incidences of emissions from any of Asarco's other tailings impoundments during the observation period.

As stated above, on January 10, 2013, Asarco environmental personnel were completing a visual survey of all tailings impoundments. At approximately 11:10 AM, Asarco's Environmental Engineers, Jamie Ekholm and Mark Eddy noted visible emissions from Tailings Impoundment #8 from Visual Observation Point T-3 which is located at the northwest corner of Tailings Impoundment #4. They traveled to Tailings Impoundment #8 and attempted to conduct an EPA Method 9 observation from the top of Tailings Impoundment #8. The dust plumes were intermittent and formed on different sections of the impoundment, therefore a Method 9 observation was not practical. However, the opacity did exceed 20% on an instantaneous basis. Winds were moving in a south to southwest to north to northeast direction. Wind speeds were generally in the 15 to 20 mph range with gusts over 25 mph. During the observation period, sustained wind gusts would generate dust plumes that would travel in a north to northeasterly direction across the impoundment. No emissions were observed from other tailings dams, as a result, no attempt to complete Method 9 observations elsewhere was necessary.

Asarco Mission Complex hereby submits the information required by Permit 2026, Part "A", sections XIII.B.2 as follows:

a. The identity of each stack or other emission point where the excess emissions occurred:

Excess emissions were detected from Tailings Impoundment #8. Asarco's Environmental Department, attempted to conduct an EPA Method 9 observation, however it was not practical. The opacity did exceed 20% on an instantaneous basis.

b. The magnitude of the excess emissions expressed in the units of the applicable emission limitation and the operating data and calculations used in determining the magnitude of the excess emissions;

From approximately 10:20 AM to 12:15 PM on January 10, Jamie Ekholm and Mark Eddy conducted a visual survey of emissions for all tailings dams and noted visible emissions from Tailings Impoundment #8 with an instantaneous observation of 20%. Mr. Eddy attempted to complete an EPA Method 9 observation from the top of the western portion of Tailings Impoundment #8 however, due to the shifting of the dust plumes; it was not practical to do so. During the observation period, sustained wind gusts would generate dust plumes that would travel in a north to northeasterly direction across the impoundment. Wind speeds were estimated at 15 to 20 mph with gusts exceeding 25 mph. The plume crossed Asarco's property line after leaving the surface of Tailings Impoundment #8.

c. The time and duration or expected duration of the excess emissions.

With high winds expected on January 10, Mr. Ekholm and Mr. Eddy completed a visual survey of all tailings impoundments with Tailings Impoundment #8 being the only with emissions. Mr. Ekholm and Mr. Eddy observed the surface of Tailings Impoundment #8 from approximately 11:10 AM until 12:15 PM.

At approximately 1:00 PM, Mr. Ekholm and Mr. Eddy escorted PDEQ inspector Mr. James Jones to the surface of Tailings Impoundment #8. At the time of the inspection, the dust plumes had become more dispersed and intermittent. Due to the intermittent nature of the plumes, Mr. Jones was unable to complete a Method 9 observation. Winds were still relatively gusty with gusts observed above 30 mph.

Mr. Ekholm observed Tailings Impoundment #8 from Interstate 19 at approximately 3:45 PM and no dust plumes were observed.

d. The identity of the equipment from which the excess emissions emanated.

The excess emissions occurred from Tailings Impoundment #8.

e. The nature and cause of the emissions.

In March 2012, Asarco made a number of administrative and operational changes dealing with how tailings impoundments are managed. Beginning on March 20, 2012, Asarco hired a private contractor (Environmental Products and Applications, Inc. or EP & A) to place Tailings Impoundment #8 into a stand-by mode by spraying the surface with an acrylic co-polymer dust suppressant. EP & A completed spraying the majority of the surface by April 27, 2012. Those portions not sprayed were later sprayed by Asarco's newly formed Tailings Management Group once the area was stable enough for equipment to reach.

Once spraying was complete, Asarco's Environmental Department completed monthly spot checks of the surface to determine the overall stability of the tailings surface, with the most recent spot check being conducted on November 29. No major issues were noted during any of these monthly spot checks. Asarco experienced frequent high wind episodes after the dust suppressant application and these resulted in no fugitive dust emissions. Monsoon rains during the summer also did little to compromise the surface.

In preparation for higher winds during the autumn and winter months, Asarco's Tailings Management Group began reapplying the acrylic co-polymer dust suppressant beginning on September 21, 2012 and concluding on November 2, 2012.

During a December 13, 2012 wind event, an inspection of the surface of Tailings Impoundment #8 appeared to show compromised areas. It is difficult to ascertain why these certain small sections of the surface were compromised. As these sections were the cause of the fugitive dust event, Asarco took immediate action to spray these sections with water. Once Asarco gained control of the surface, the reapplication of acrylic co-polymer commenced. The spraying of the acrylic co-polymer was ongoing up until the January 10 event.

Asarco believes small areas of broken crust and associated wind gusts on January 10 were the cause of the excess emissions as described above.

f. The steps taken, if the excess emissions were the result of a malfunction, to remedy the malfunction and the steps taken or planned to prevent the recurrence of the malfunction.

It does not appear that the excess emissions were the result of a malfunction.

g. The steps that were or are being taken to limit the excess emissions.

Over the previous months, Asarco has taken many steps to limit excess emissions on Tailings Impoundment #8 as well as all of its active and inactive tailings impoundments.

- Asarco formed a Tailings Management Group in March 2012 to focus and dedicate resources specifically to tailings management. The group consists of one supervisor and a designated crew concentrating on all aspects of tailings management (environmental and operations).
- Asarco began an alternative operating scenario by discontinuing its past practice of operating Tailings Impoundment #7 and #8 simultaneously. Instead, Asarco placed Tailings Impoundment #8 in "Stand-by Mode" and sealed the surface with an acrylic co-polymer dust suppressant.
- As soon as the individuals from the Tailings Management Group noticed dust emissions from the surface of Tailings Impoundment #8, they immediately dispatched water/polymer trucks to the surface. As it was much quicker to fill the trucks with water, the decision was made to hold off on the use of the acrylic co-polymer dust suppressant until the group was able to gain control of the fugitive dust event. Three trucks were used on January 10 to respond to the event and approximately 129,000 gallons of water and one load of acrylic co-polymer was applied.
- The recent rain event during the evening of January 10 and the morning of January 11 coupled with forecasted cooler weather has greatly reduced the chances of fugitive dust emissions.
- Although Asarco had been reapplying acrylic co-polymer to the surface of Tailings Impoundment #8 since the December 13th incident, on Friday January

11, Asarco focused the reapplication of the acrylic co-polymer dust suppressant to those areas of Tailings Impoundment #8 where dust plumes from the previous day were evident.

- On Wednesday, December 26, 2012, Asarco broke ground on a borrow area located to the west of Tailings Impoundment #8. On Monday January 7, Asarco began the process of capping the surface of Tailings Impoundment #8 with at least 6 inches of alluvial material. Crews will be working 12 hour shifts, 7 days a week until the surface has been completely capped. The alluvial material was used with great success on Asarco's reclaimed Tailings Impoundments #1, #2, and #3 located on the Tohono O'odham Nation land north of Pima Mine Road. Until the surface has been completely capped with the alluvial material, Asarco will continue the use of the acrylic co-polymer dust suppressant on the surface.
- Beginning the week of January 14, Asarco will begin constructing windbreaks on the surface of Tailings Impoundment #8 to further prevent surface erosion.

h. If the source's permit contains procedures governing source operation during periods of startup or malfunction and the excess emissions resulted from startup or malfunction, a list of the steps taken to comply with the permit procedures.

It does not appear at this time that the dust was the result of a malfunction.

* * *

Asarco believes it has acted in a proactive manner to control fugitive dust emissions from Tailings Impoundment #8. If you have additional questions or concerns, please let me know.

In accordance with Part "A", Section VIII of Air Quality Operating Permit No. 2026, I certify that based on information and belief formed after reasonable inquiry of Asarco staff, the statements and information in this compliance certification and attached documents are true, and complete

Signature 
Responsible Official/Authorized Representative

Printed Name and Title: Thomas H. Phillips, General Manager

Date: 1-11-13

ATTACHMENT 2
PDEQ Complaint Investigation Report dated January 10, 2013



**PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR PROGRAM**

33 N. STONE AVENUE, SUITE 700
TUCSON, ARIZONA 85701-1429
PHONE (520) 243-7400 FAX (520) 838-7432
www.deq.pima.gov

Complaint Investigation Report

Tracking ID: PC 1301-055

Permit #: 2026

Source: ASARCO LLC - Mission Complex

Location: 4201 W. Pima Mine Road, Sahuarita, AZ

Date: January 10, 2013

Spoke With: Mr. Jamie Ekholm

Arrival Time: 1:15 PM

Mr. Mark Eddy

Departure Time: 2:38 PM

Phone #: (520) 393-4671

Inspector: James M. Jones

Reason for Inspection: Complaints

I. PRE-INSPECTION NARRATIVE

On January 10, 2013, the Pima County Department of Environmental Quality (PDEQ) received complaints concerning emissions of particulate matter and dust from the ASARCO LLC – Mission Complex (Asarco) mine tailings located west of La Canada Drive and Sahuarita Road. I drove to Asarco to conduct a complaint investigation.

II. INSPECTION NARRATIVE

I drove to the Sahuarita Road exit from I-19 and observed particulate emissions generated from the surface of Asarco Tailings Impoundment #8 diffusing north across the property boundary at Helmet Peak Road around 1:15 pm (Attachment 1, Photo No.'s 1-2).

I pulled over and called and spoke with Mr. Thomas Phillips, General Manager of Asarco. I informed him that PDEQ had received complaints of particulate emissions from the tailings near the intersection of La Canada Drive and Sahuarita Road. I informed him that I was presently at the intersection and was observing particulate emissions crossing the property boundary and stated that I desired to conduct an on-site inspection of Tailings Impoundment #8. I asked if he could arrange to send a representative to meet me at the northwest entrance to Tailings Impoundment #8 off of Helmet Peak Road. Mr. Phillips said that he would arrange to have a representative meet me there. I thanked him and ended the call.

I drove to the entrance road off of Helmet Peak Road and observed and photographed emissions generated from the surface of Tailings Impoundment #8 that diffused across Helmet Peak Road between 1:19 pm and 1:30 pm. I did not conduct an EPA Method 9 Visible Emissions (VE) observation due to the distance and sun angle relative to the emissions plume. Based on my qualitative observations of the plume, its density, and duration; it appeared to exceed the 20%

opacity standard. I measured a wind speed 16.5 mph (max) near the entrance with a Kestrel meter, but I also noted that the entrance area is somewhat screened by geographic features and vegetation that can reduce the measured wind speed relative to what the actual conditions on the tailings impoundment were at the time. I observed a number of Asarco water trucks and a pickup vehicle travel through the entrance toward the impoundment while waiting for an Asarco representative to meet me at the entrance. I watched and observed an emissions plume generating continuously for around 10 minutes which extended across the surface of the tailings impoundment and beyond Helmet Peak Road to the north (Attachment 1, Photo No.'s 3-8).

I was met by Mr. Jamie Ekholm and Mr. Mark Eddy, Environmental Engineers with Asarco, around 1:35 pm. I initiated inspections rights protocol and Mr. Ekholm signed the form (Attachment 2). Mr. Ekholm informed me that Asarco had phoned PDEQ to report excess emissions from Tailings Impoundment #8 prior to my arrival. During the course of the inspection Mr. Ekholm informed me that Mr. Eddy and he had first observed emissions from the impoundment while they had been conducting bi-weekly fugitive emission observations. I asked if he had been able to conduct an EPA Method 9 observation. He stated that they were not able to conduct a Method 9 observation because of the difficulties presented by the shifting nature of the winds and areas generating emissions.

I requested to be taken to the access roadway that extends out to the decant tower from the west side of Tailings Impoundment #8 to get a better view of the conditions on the surface. I drove with Mr. Ekholm and Mr. Eddy to the location. I inquired when Asarco had begun the reapplication of polymer to stabilize sections of the surface as indicated in the Excess Emissions report submitted to PDEQ the previous month. Mr. Ekholm affirmed that they had begun within a few days after the rain that occurred on December 14, 2012. As we approached, I observed a cleared area on the west side of the impoundment from the access road. Earthmoving operations had begun for the development and construction of the roadway to the west side of the impoundment to allow heavy equipment transport of alluvial material to the surface of the impoundment. I inquired about this operation and Mr. Ekholm stated that this operation also started soon after the previous emissions event in December. Mr. Ekholm also stated that Asarco was obtaining and scheduling a number of additional scrapers to facilitate the transport of the material and to cap the surface of the impoundment with alluvial material (Attachment 1, Photo No.'s 9-10).

Over approximately the next 45 minutes between 1:45 pm and 2:30 pm during the course of the inspection on the surface of the impoundment, a number of areas were observed that were generating particulate emissions. I was not able to conduct an EPA Method 9 VE observation due to shifting wind conditions that caused the generation of particulate emissions from varied areas of the surface at different times. There were also frequent periods where I did not observe emissions from my vantage while observing the conditions on the impoundment.

I initially recorded a wind speed of 26.6 mph (max) with my Kestrel meter on the south side of the access roadway to the decant tower around 1:37 pm. I later recorded a wind speed of 37 mph (max) while on the impoundment surface near the area of the decant tower. The winds were generally steady with intermittent gusts. The wind direction was variable and changing in direction from south to southwest during the course of my inspection (Attachment 3).

I observed 3 or 4 vehicles operating in rotation on the surface of the impoundment applying water to dust generating areas in an attempt to mitigate the particulate emissions occurring at the time. I observed a vehicle out in the northeast quadrant applying water to an area where emissions were generated. From my point of view the emissions were traveling downwind toward the northwest in the direction of my line of sight and not amenable to an EPA Method 9 VE observation from my location.

I walked out to the decant tower to observe the surface conditions and get to a different position to conduct an EPA Method 9 VE observation. As we approached the tower I observed some heavy rutting from vehicle tracks that ran towards the northwest. I spoke with Mr. Ekholm about the stability of the surface near the decant tower. He said that that the immediate area close to the tower still had some areas wherein vehicles could get stuck or have difficulty traversing the area. I also observed an area to the southwest that had heavy rutting from vehicles that appeared to be further out from the decant tower (Attachment 1, Photo No.'s 11-12).

I observed a plume of emissions generated from a central area towards the east side of the impoundment surface and began to prepare and take an EPA Method 9 VE observation; however, shortly after, within a minute, the plume had dissipated. Later, another plume had formed behind me originating in the southwest area, however this too, also dissipated, shortly thereafter (Attachment 1, Photo No.'s 13-14).

I walked east from the decant tower out towards the area where I had observed the continuous emission plume earlier in the inspection. I observed the surface in the area around the decant tower and the surface of the dam in the various directions (Attachment 1, Photo, No.'s 15-23).

During the course of the inspection, I observed emissions generated from a number of areas on the surface. These areas included: the northeast and northwest quadrants of the impoundment, an area parallel to the east side of the impoundment centered primarily in line with the decant tower but extending out to the north and south, and in the southeast and south-central areas of the impoundment.

The areas I traversed in the immediate vicinity of the decant tower had a tiled appearance and were encrusted and stable. I observed sizable areas looking east and north where I had earlier observed the generation of particulate emissions that did not appear to have a heavy or recent coating of polymer applied. I observed, at a distance, areas toward the south that appeared to have recent coats of polymer applied as indicated by a green color. Mr. Ekholm stated that they had observed emissions continue to be generated even from areas where polymer dust suppressant was reapplied. We discussed the factors that affect the emission control effectiveness and Mr. Eddy commented that the dilution ratio of the polymer suppressant was a factor.

I observed a smaller track vehicle parked on the center dam roadway that was not being used at the time. I commented and asked about it, as I had not seen this vehicle before. Mr. Ekholm stated that this vehicle was a vehicle owned by the contractor that had previously applied polymer to the tailings impoundment surface.

I later asked Mr. Ekholm and Mr. Eddy to drive me around the perimeter road to view the impoundment surface from the southwest side. I walked up a berm in this location and observed the impoundment surface. The immediate surface near the edge of the impoundment was encrusted and areas in the southeast appeared to be coated with polymer and stable at the time. I observed from this location for a few minutes and observed emissions which appeared to be generating in the east central and south central areas of the impoundment (Attachment 1, Photo No.'s 24-25).

We drove around the perimeter roadway. I observed some buildup of light colored surface tailing particulates deposited on the side of the east berm in the area north of the halfway point, as well as on the sides of the northeast corner and north berm. I did not observe an emissions plume being generated at the time as we rounded the corner and headed toward the exit.

III. EXIT INTERVIEW

I informed Mr. Ekholm and Mr. Eddy that I observed emissions diffusing across the property boundary of Helmet Peak Road from the surface of Tailings Impoundment #8. I informed them PDEQ would review the excess emissions report when submitted and site inspection findings and make a compliance determination. I thanked them for their cooperation and concluded the inspection.

Attachments:

- 
1. Inspection Photos dated 1/10/2013
 2. Notification of Inspection Rights Form dated 1/10/2013
 3. National Weather Service data dated 1/8-15/2013

ATTACHMENT 1
Inspection Photos

Site Location: ASARCO LLC – Mission Complex 4201 W. Pima Mine Road, Sahuarita, AZ	Photographer: J. M. Jones	Tracking #: PC 1301-055
--	-------------------------------------	-----------------------------------

Photo No. 1
Date: 1/10/2013
Photo Description: View of emissions generated from the top of tailings dam #8 diffusing across Helmet Peak Road.



Photo No. 2
Date: 1/10/2013
Photo Description: Closer view of emissions generated from the surface.



<p>Photo No. 3</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking east on Helmet Peak Road of particulate emissions from tailings impoundment #8 diffusing across Helmet Peak Road around 1:19 pm</p>	

<p>Photo No. 4</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>Another view looking southeast across the top of the impoundment from the entrance.</p>	

<p>Photo No. 5</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View around 1:25 pm looking east from Helmet Peak Road.</p>	

<p>Photo No. 6</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View across impoundment of emissions generated on the surface. A water truck can be observed left of center in the photograph upstream of the effluent emissions.</p>	

<p>Photo No. 7</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>Wide angle view of particulate emissions observed around 1:27 pm.</p>	

<p>Photo No. 8</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of particulate emissions from tailings impoundment around 1:31 pm.</p>	

<p>Photo No. 9</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of the beginning of the deposition of alluvial material on the surface of tailing impoundment #8. The roadway and access to the alluvial material was also constructed.</p>	

<p>Photo No. 10</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of the area to the west of the west dam of tailings impoundment #8 that where alluvial material is being excavated and in order to begin capping the surface of the impoundment.</p>	

<p>Photo No. 11</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View from the surface of the dam looking toward the Northeast from the path to the decant tower. A water truck is visible applying water to the northeast area to mitigate emissions that were being generated from this area. I also observed some deep rutting as observed here that indicated that some regions nearer the decant tower are still susceptible to vehicles getting stuck or having a hard time traversing the surface.</p>	

<p>Photo No. 12</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of the surface from in front of the decant tower looking toward the south. I observed some rutted areas to the south where some vehicles had difficulty traversing and the possibility of getting stuck near the decant tower. There was a 200-300' zone around the tower that larger vehicles did not traverse. While little polymer application was visible, the ground was relatively stable and encrusted in this area.</p>	

<p>Photo No. 13</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking toward the east dam from the decant tower. Emissions were generating from an area west of the east dam parallel to the dam through a long section extending from just beyond the midpoint to the north dam.</p>	

<p>Photo No. 14</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking west from near the decant tower of emissions generated from a southwest area and flowing north.</p>	

<p>Photo No. 15</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking towards the south from near the decant tower showing an area towards the south and southeast that was generating particulate emissions. Some areas where the surface has been wetted can be seen in the foreground.</p>	

<p>Photo No. 16</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking Northeast from an area a few hundred feet in front of the decant tower. Tailings dam #7 can be seen to the far left. This photo was taken while walking east toward the area where emissions were observed generated earlier.</p>	

<p>Photo No. 17</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking northeast after walking a considerable distance east of the decant tower toward the area where emissions were observed generating earlier but still some distance further east.</p>	

<p>Photo No. 18</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of the east dam looking east from the same location above.</p>	

<p>Photo No. 19</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View looking toward the southeast from the location above. Areas where polymer has been applied can be observed toward the south.</p>	

<p>Photo No. 20</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View toward the south from the location above.</p>	

Photo No. 21	
Date: 1/10/2013	
Photo Description: View toward the southwest from the location above.	

Photo No. 22	
Date: 1/10/2013	
Photo Description: View looking toward the west from the decant tower area.	

<p>Photo No. 23</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View if a water truck applying water to mitigate and stabilize areas to the south of the decant tower pathway.</p>	

<p>Photo No. 24</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>View of the surface looking toward the northeast from an area on the west dam near the southwest corner of the impoundment. The decant tower can be seen toward the left.</p> <p>Emissions can be seen generating again from a central area just west of the east dam.</p>	

Photo No. 25

Date:
1/10/2013

Photo Description:

Another view showing some emissions generating in the south central area that are partially obscuring the decant tower.



ATTACHMENT 2
Inspection Rights



PIMA COUNTY DEPARTMENT OF ENVIRONMENTAL QUALITY

33 N. Stone Avenue, Suite 700
Tucson, Arizona 85701-1429
Phone (520) 243-7400 Fax (520) 838-7432
www.deq.pima.gov

NOTIFICATION OF INSPECTION RIGHTS

REGULATED PERSON INFORMATION (Company, Agency, Organization or Individual)

Regulated Person ASARCO, LLC Permit # 2026
On-site Representative Title
Site Location To: Kings Dam # 8 - Helmer Peak Rd.
Site Contact Jamil Ekholm Phone
Mailing Address

PDEQ INFORMATION

Inspector Name James M. Jones Phone 243-7348
Inspection Date 1/10/2013 Time 1:20-30
Accompanied by N/A

INSPECTION RIGHTS

Upon entry to the premises, the Pima County Department of Environmental Quality (PDEQ) inspector(s) met with the regulated person or authorized on-site representative, presented photo identification indicating that they are a PDEQ employee(s) and explained:

- The purpose of the inspection is to determine compliance with Air Quality Regulations or Pima County Code (PCC) Title 17. The inspection is being conducted pursuant to Arizona Revised Statutes (A.R.S.) §49-471 et seq. and PCC 17.20.050.
Inspection fee: \$ or A portion of Activity Permit Fee or portion of your annual emission fee
Regulated person or on-site representative may accompany the PDEQ inspector(s) on the premises, except during confidential interviews.
The regulated person has the right to have on request: copies of any original documents taken by PDEQ during the inspection, a split of any samples taken during the inspection if the split of any samples would not prohibit an analysis from being conducted or render an analysis inconclusive, copies of any analysis performed on samples taken during the inspection, and copies of any documents relied on to determine compliance with licensure or regulatory requirements.

Each person interviewed during the inspection will be informed that statements made by the person may be included in the inspection report.

Each person whose conversation is tape recorded will be informed that the conversation is being tape recorded.

- Administrative hearing rights to appeal an administrative order or permit decision that was made as a result of the inspection are set forth in A.R.S. §49.511, 49.490, 49.496 and 49.497 et seq. Rights relating to an appeal of a final agency decision are found in A.R.S. §49.480.02 and 49.482 et seq.

Questions or comments on these procedures, your inspection and due process rights or this form may be directed to the Pima County Department of Environmental Quality (PDEQ) inspector listed on this form at (520) 243-7400.

While you have the right to decline to sign this form, the PDEQ representative(s) may still proceed with the inspection pursuant to PCC 17.20.050.

I have read this notification and discussed any questions or concerns with the PDEQ inspector(s).

Signature Date 1/10/13

refused to sign the Notification.

Authorized on-site representative is not present at the facility.

ATTACHMENT 3
National Weather Service Data, January 8-15, 2013

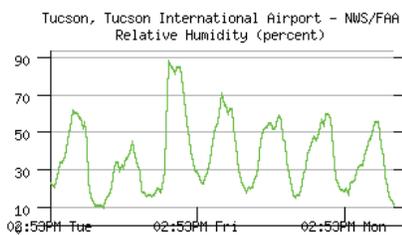
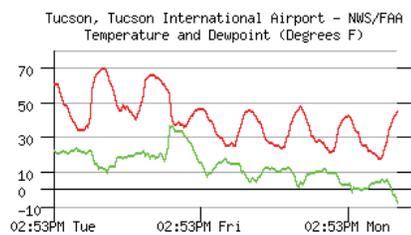
Close window

Quick 7-Day View

Show 2 Days

Show Raw Observations

For Information Regarding the Accuracy of This Data: [MesoWest Disclaimer](#) and [\(MesoWest FAQ\)](#)



Weather Conditions for:

Tucson, Tucson International Airport, AZ (KTUS)

Elev: 2546 ft; Latitude: 32.13153; Longitude: -110.95635

Current time: Tue, 15 Jan 3:44 pm (MST)

Most Recent Observation: Tue, 15 Jan 2:53 pm MST (MST)

Time (MST)	Temp. (f)	Dew (f)	Relative (%)	Wind (f)	Wind Direction	Wind Speed (mph)	Visibility (miles)	WX	Clouds	Sea Level	Altimeter Setting (inches)	Station Pressure (inches)	Precip 1 hour (inches)	Precip 3 hour (inches)	Precip 6 hour (inches)	Precip 24 hour (inches)	6 Hr Max Temp	6 Hr Min Temp	24 Hr Max Temp	24 Hr Min Temp	Quality Control
15 Jan 2:53 pm MST	45	-7	11	N		6	10.00	CLR		1025.6	30.27	27.601									OK
15 Jan 1:53 pm MST	43	-3	14	NE		5	10.00	CLR		1026.2	30.29	27.619									OK
15 Jan 12:53 pm MST	40	-2	16	VRBL		5	10.00	CLR		1026.3	30.29	27.619									OK
15 Jan 11:53 am MST	38	2	21	CALM			10.00	CLR		1027.1	30.31	27.638									OK
15 Jan 10:53 am MST	34	4	27	CALM			10.00	CLR		1028.3	30.34	27.666					34	17			OK
15 Jan 9:53 am MST	29	6	37	CALM			10.00	CLR		1028.9	30.35	27.675									OK
15 Jan 8:53 am MST	24	5	43	CALM			10.00	CLR		1028.8	30.34	27.666									OK
15 Jan 7:53 am MST	19	6	56	SSE		5	10.00	CLR		1028.0	30.31	27.638									OK
15 Jan 6:53 am MST	18	5	56	SE		5	10.00	CLR		1027.5	30.30	27.629									OK
15 Jan 5:53 am MST	18	5	56	SSE		5	10.00	CLR		1026.5	30.27	27.601									OK
15 Jan 4:53 am MST	20	5	52	CALM			10.00	CLR		1025.7	30.26	27.591					27	19			OK
15 Jan 3:53 am MST	21	4	47	SE		5	10.00	CLR		1025.3	30.26	27.591									OK
15 Jan 2:53 am MST	21	4	47	SSE		3	10.00	CLR		1024.7	30.24	27.573									OK
15 Jan 1:53 am MST	23	3	42	SSW		5	10.00	CLR			30.22	27.554									OK
15 Jan 12:53 am MST	23	1	38	S		6	10.00	CLR			30.21	27.545									OK
14 Jan 11:53 pm MST	26	1	33	CALM			10.00	CLR			30.21	27.545						44	26		OK
14 Jan 10:53 pm MST	26	1	33	W		8	10.00	CLR			30.21	27.545					40	26			OK
14 Jan 9:53 pm MST	26	0	32	WSW		7	10.00	CLR			30.20	27.536									OK
14 Jan 8:53 pm MST	28	0	29	WSW		5	10.00	CLR			30.19	27.526									OK
14 Jan 7:53 pm MST	33	1	25	WNW		8	10.00	CLR			30.18	27.517									OK
14 Jan 6:53 pm MST	34	1	24	NW		8	10.00	CLR			30.16	27.499									OK
14 Jan 5:53 pm MST	36	2	23	26 NNW		16	10.00	CLR			30.14	27.480									OK
14 Jan 4:53 pm MST	40	-1	17	33 WNW		12G21	10.00	CLR			30.11	27.452									OK
14 Jan 3:53 pm MST	42	4	20	NW		10	10.00	FEW070			30.10	27.443									OK
14 Jan 2:53 pm MST	43	3	19	WSW		8	10.00				30.08	27.424									OK
14 Jan 12:53 pm MST	41	3	20	WSW		5	10.00				30.09	27.434									OK
14 Jan 11:53 am MST	39	3	22				10.00	CLR			30.11	27.452									OK
14 Jan 10:53 am MST	37	5	26	WSW		6	10.00	CLR		1021.0	30.14	27.480					37	21			OK
14 Jan 9:53 am MST	34	8	33	WSW		3	10.00	CLR		1021.2	30.14	27.480									OK
14 Jan 8:53 am MST	26	10	50	S		3	10.00	CLR		1021.1	30.12	27.462									OK
14 Jan 7:53 am MST	23	10	58	S		6	10.00	CLR		1020.5	30.11	27.452									OK
14 Jan 6:53 am MST	22	10	60	SE		8	10.00	CLR		1019.6	30.09	27.434									OK
14 Jan 5:53 am MST	22	10	60	SE		5	10.00	CLR		1019.1	30.07	27.415									OK
14 Jan 4:53 am MST	24	10	54	SSE		5	10.00	CLR		1018.6	30.07	27.415					30	24			OK
14 Jan 3:53 am MST	25	12	57	SSE		6	10.00	CLR		1018.4	30.07	27.415									OK
14 Jan 2:53 am MST	27	12	53	SSE		6	10.00	CLR		1018.3	30.07	27.415									OK
14 Jan 1:53 am MST	28	11	48	SSE		6	10.00	CLR		1018.0	30.06	27.406									OK
14 Jan 12:53 am MST	29	11	46	CALM			10.00	CLR		1017.7	30.05	27.397									OK
13 Jan 11:53 pm MST	28	11	48	S		3	10.00	CLR		1017.6	30.04	27.387						48	23		OK
13 Jan 10:53 pm MST	29	10	44	CALM			10.00	CLR		1017.4	30.03	27.378					45	28			OK
13 Jan 9:53 pm MST	31	10	41	SSW		3	10.00	CLR		1017.1	30.02	27.369									OK
13 Jan 8:53 pm MST	32	10	39	SSW		5	10.00	CLR		1016.9	30.01	27.359									OK
13 Jan 7:53 pm MST	37	9	31	NNW		5	10.00	CLR		1017.0	30.02	27.369									OK
13 Jan 6:53 pm MST	39	9	28	NW		8	10.00	CLR		1017.0	30.02	27.369									OK
13 Jan 5:53 pm MST	42	6	22				10.00	CLR		1016.6	30.01	27.359									OK
13 Jan 4:53 pm MST	45	3	17	WNW		9	10.00	CLR		1016.2	30.01	27.359					48	37			OK
13 Jan 3:53 pm MST	48	5	17	NNW		8	10.00	CLR		1015.8	30.00	27.350									OK
13 Jan 2:53 pm MST	47	2	15	N		5	10.00	CLR		1015.5	29.99	27.341									OK
13 Jan 1:53 pm MST	45	3	17	VRBL		3	10.00	CLR		1015.9	30.00	27.350									OK
13 Jan 12:53 pm MST	44	7	21	CALM			10.00	CLR		1016.4	30.02	27.369									OK
13 Jan 11:53 am MST	41	10	28	CALM			10.00	CLR		1018.1	30.06	27.406									OK
13 Jan 10:53 am MST	37	12	35	CALM			10.00	CLR		1019.7	30.10	27.443					37	23			OK

ATTACHMENT 3
Photo Log of submitted photographs dated January 10, 2013

Site Location:

ASARCO LLC – Mission Complex
4201 W. Pima Mine Road, Sahuarita, AZ

Photographer:
Brad Hughes

Tracking #:
PC 1301-055

Photo No. 1

Date:
1/10/2013

Photo Description:

View of emissions from Tailings Impoundment #8. View looking west taken from the north side of Sahuarita Road.



Photo No. 2

Date:
1/10/2013

Photo Description:

Another view of emissions generated from Tailings Impoundment #8. View looking west from north side of Sahuarita Road.



<p>Photo No. 3</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>Another view of emissions generated from Tailings Impoundment #8. View looking west from north side of Sahuarita Road.</p>	

<p>Photo No. 4</p>	
<p>Date: 1/10/2013</p>	
<p>Photo Description:</p> <p>Another view looking west towards the La Canada Drive / Sahuarita Road intersection.</p>	