NORMAN Y. MINETA

SAN JOSE INTERNATIONAL AIRPORT

MASTER PLAN UPDATE PROJECT

SAN JOSE, CALIFORNIA

TWELFTH

ADDENDUM TO THE

ENVIRONMENTAL IMPACT REPORT

City of San Jose Public Project File No. PP 18-059

CITY OF SAN JOSE

MAY 25, 2018

ADDENDUM TO THE FINAL ENVIRONMENTAL IMPACT REPORT FOR THE SAN JOSE INTERNATIONAL AIRPORT MASTER PLAN UPDATE, AS SUPPLEMENTED AND ADDENDED (SCH #1995073066)

Pursuant to Section 15164 of the CEQA Guidelines, the City of San José ("City") has prepared an Addendum to the Final Environmental Impact Report (EIR) for the San José International Airport Master Plan Update, as supplemented and addended (Final EIR), because the proposed project will not (i) result in new significant effects beyond those analyzed in the Final EIR, (ii) increase in severity of previously identified impacts in the Final EIR, or (iii) cause changes in respect to the circumstances under which the project is undertaken to indicate the project's impacts will be greater than those previously analyzed. Therefore, the City can take action on the proposed project as being within the scope of the Final EIR as supplemented and addended.

PROJECT DESCRIPTION AND LOCATION: PP18-059, A PUBLIC PROJECT located at the Norman Y. Mineta San José International Airport on an approximately 1,000-gross-acre site in the HI Heavy Industrial Zoning District for actions related to an approximately 3.72-gross-acre site that is located directly south of the existing Flight Fixed-Base Operator designated for general aviation in the approved Airport Master Plan. Project components include the following:

1) City Council approval of an amended lease agreement between the City and Signature Flight Support adding the project site to the existing leasehold.
2) Future City actions related to the approval of any Development Permit for the construction of an approximately 30,000-square-foot aircraft hangar with attached approximately 4,000-square-foot office space to accommodate up to two large business jet aircraft, approximately 1.85-gross-acres of aircraft apron, and a parking lot for approximately 26 vehicles. The project would occur on an existing paved parking area to the south of the existing Signature Flight Fixed-Base Operator (FBO) hangars.

Council District: 3.

The environmental impacts of this project were addressed by a Final EIR entitled, "San José International Airport Master Plan Update," and findings were adopted by City Council Resolution No. 67380 on June 10, 1997; and by a Final Supplemental EIR entitled, "Norman Y. Mineta San José International Airport Master Plan Update," (SCH # 1995073066) and findings were adopted by City Council Resolution No. 71451 on March 18, 2003, as addended.

The Airport Master Plan Final EIR analyzed a comprehensive and integrated package of improvements to airside and landside facilities at Norman Y. Mineta San José International Airport. Following the approval of the Airport Master Plan in 1997, many of the capital improvement projects have been constructed with subsequent environmental analysis. Specifically, this addendum is the twelfth in a series of addenda that have been prepared to address various modifications to the Airport Master Plan and/or changes in environmental setting/impacts. The following impacts were reviewed and found to be adequately considered by the EIR, as supplemented and addended:

Cultural Resources
Aesthetics
Noise
Public Services and Utilities
Air Quality
Air Safety
Biological Resources
Hazardous Materials
Land Use
Geology & Seismicity
Energy Supply & Natural Resources
Transportation & Circulation
Hydrology & Water Quality

ANALYSIS

The Final EIR, as supplemented and addended, analyzed the environmental impacts of the 1997 Airport Master Plan, which consists of a comprehensive and integrated package of improvements to airside and landside facilities at the Airport. Such improved facilities have the design capacity to fully accommodate the 2027 forecast demand for air passenger, air cargo, and general aviation services resulting in capacity for up to 17.6 million annual passengers. The approximately 70 capital improvement projects identified in the Master Plan, many subsequently completed, include the reconstruction and lengthening of the Airport's two main runways, numerous taxiway improvements, new air cargo and general aviation facilities, several multi-story parking garages, a new fuel storage facility, and new/reconstructed passenger terminals with up to 49 passenger gates.

The proposed project includes the addition of an eighth hangar at the existing general aviation FBO on the west side of the Airport. Specifically, the project includes the development of an aircraft hangar with additional office space, concrete aircraft apron, and landscaping. Consistent with the objectives of the Master Plan, the project will accommodate a portion of the existing and projected demand for general aviation air transportation services at the Norman Y. Mineta San José International Airport.

As discussed in the attached analysis, the development of this project will not result in any new significant impacts not previously disclosed in the Final EIR, nor would they result in a substantial increase in the severity of a previously identified significant impact in the Final EIR as supplemented and addended, because the project is within the scope of development anticipated in the Final EIR. For these reasons, a supplemental or subsequent EIR is not required.

This Addendum will not be circulated for public review, but will be attached to the 1997 San Jose International Airport Master Plan Update Final EIR, as supplemented and addended, pursuant to CEQA Guidelines section 15164(c).

David Keyon
Planner IV

05/30/2018
Date

Rosalynn Hughey, Director
Planning, Building and Code Enforcement

Jenny Nusbaum
Deputy

c: Cary Greene, Airport
Krinjal Mathur, PBCE Environmental Review Team

Attachment: *Analysis supporting the Twelfth Addendum to the 1997 San Jose International Airport Master Plan Update Final EIR, dated May 25, 2018*

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SECTION 1. INTRODUCTION

1.1 OVERVIEW

This document, drafted to comply with the California Environmental Quality Act (Pub. Res. Code § 21000 et seq.) ("CEQA"), is the Tenth Addendum to an Environmental Impact Report ("EIR") on the Master Plan Update (the "Airport Master Plan" or "Master Plan") for the Norman Y. Mineta San Jose International Airport ("SJC" or the "Airport"). The Airport Master Plan's EIR was certified in June 1997 ("SJC Master Plan EIR") and updated with a Supplemental EIR that was certified in January 2003 ("Supplemental EIR").

The purpose of this Addendum is to analyze the environmental impacts associated with a proposed expansion of an existing general aviation facility (the "Project") at SJC to meet the existing and projected demand for corporate jet aircraft services. The Project would be constructed on a 3.72-acre site located on the west side of the Airport on what is currently an unused paved surface parking lot. General aviation facilities to be constructed will include a 30,000 ft^2 aircraft hangar, an aircraft apron, and automobile parking.

Actions associated with the Project will include the City amending its existing long-term ground lease and operating agreement with Signature Flight Support Corporation ("Signature"), the Project applicant, Planning actions in support of the project (including approval of a Site Development Permit), and any Department of Public Works actions required to construct the Project. This Addendum, along with the previous 11 addenda, EIR, and Supplemental EIR, serve as the environmental review for these actions pursuant to CEQA.

1.2 CEQA REQUIREMENTS

CEQA requires local governments to conduct environmental review on public and private development projects. CEQA Guidelines Section 15164(a) states that the lead agency shall prepare an addendum to a previously certified EIR if some changes or additions are necessary but none of the conditions described in Section 15162 calling for preparation of a subsequent EIR have occurred. Section 15164(c) states than an addendum does not need to be circulated for public review. Section 15164(d) provides that the decision-making body shall consider the addendum in conjunction with the EIR prior to making a decision on the project. Section 15164(e) requires documentation of the decision not to prepare a subsequent EIR pursuant to Section 15162.

CEQA Guidelines Section 15162(a) provides that once an EIR has been certified, no subsequent EIR shall be prepared unless the lead agency determines, on the basis of substantial evidence, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken, which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:

- The project will have one or more significant effects not discussed in the previous EIR; or
- Significant effects previously examined will be substantially more severe than shown in the previous EIR; or
- Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
- Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

This Addendum has been prepared to satisfy the requirements of CEQA Guidelines Sections 15164(a), 15164(d), and 15164(e).

This is the 12th in a series of addenda that have been prepared to address various modifications to the Airport Master Plan and/or changes in environmental setting/impacts, which are incorporated herein by reference. Section 2.2 of this Addendum summarizes the prior modifications to the Airport Master Plan that have been approved by the San Jose City Council.

SECTION 2. OVERVIEW OF THE AIRPORT MASTER PLAN

2.1 DEVELOPMENT AND APPROVAL OF THE MASTER PLAN

SJC is one of the three primary airports that serve the San Francisco Bay Area. The Airport, which is owned and operated by the City of San José, is located on a site of approximately 1,050 acres in Santa Clara County at the southerly end of San Francisco Bay. As shown on Figure 1, the Airport is generally bounded by U.S. 101 on the north, the Guadalupe River and State Route 87 on the east, Interstate 880 on the south, and Coleman Avenue and De la Cruz Boulevard on the west.

In 1988, the City initiated a planning process to update its 1980 Airport Master Plan for SJC. The City's aviation consultants prepared demand forecasts for SJC and evaluated a series of alternative development scenarios which would adequately accommodate some or all of the projected growth in passenger and air cargo traffic at the Airport through a year 2010 planning horizon. Between 1988 and 1995, numerous meetings, workshops, and hearings occurred for the purpose of determining the range and scope of alternatives to be formally evaluated in an EIR. The City began the formal preparation of the Draft EIR for the Master Plan Update in 1995. The Draft EIR, which evaluated four alternatives (including the CEQA-mandated No Project Alternative), was published and circulated in October of 1996. The Final EIR was certified in June of 1997. The SJC Master Plan Update was approved by the San José City Council on June 10, 1997. A Supplemental EIR, which updated the noise analysis and addressed the effects of an Automated People Mover (APM), was certified in 2003. A number of EIR Addenda have also been prepared, as listed in Table 1, to address changes to the environmental setting and/or various amendments to the Airport Master Plan that have been approved since 1997.

2.1.1 Approved Airport Master Plan

The approved Airport Master Plan consists of a comprehensive and integrated package of improvements to airside and landside facilities at SJC, such improved facilities having the design capacity to fully accommodate the 2027 forecast demand for air passenger, air cargo, and general aviation services in a comfortable and efficient manner. The approximately 70 capital improvement projects identified in the Master Plan include the reconstruction and lengthening of the Airport's two main runways, numerous taxiway improvements, new and reconstructed passenger terminals with up to 49 air carrier gates, new air cargo and general aviation facilities, several multi-story parking garages, and a new fuel storage facility. Table 2 summarizes the primary improvements contained in the approved Airport Master Plan.

The 1997 Master Plan EIR analyzed the environmental impacts of the Master Plan based on aviation demand forecasts for a horizon year of 2010. As shown in Table 3, for air passengers and air cargo, the forecasted 2010 activity level was 17.6 million annual passengers and 315,300 annual cargo tonnage, respectively. For general aviation the forecasted demand was for 630 based aircraft with

VICINITY MAP

FIGURE 1

TABLE 1

Approved Amendments to the 1997 SJC Master Plan [a]

Number	Description of Amendment	Type	Approval Date	CEQA Clearance
1	Interim off-Airport Office Space and Reuse of Vacated On-Airport Space for Air Carrier-related Uses	Minor	June 1998	Master Plan EIR Reuse
2	Expanded Fixed Base Operator (FBO) Leasehold for ACM Aviation	Minor	June 1999	Master Plan EIR Reuse
3	Interim Relocation of Federal Inspection Services (FIS) Facility	Minor	June 1999	Master Plan EIR Reuse
4	Interim Rental Car Ready/Return Facility Consolidation	Minor	April 2000	Master Plan EIR Reuse
5	Terminal Area Development Program Modifications (including terminal, parking garage, and roadway project revisions, as well as associated interim facility changes)	Minor	November 2001	Master Plan EIR Addendum #1
6	94th Aero Squadron Early Lease Termination/Removal and Interim Reuse for Runway Project Cement Plant	Minor	December 2001	Master Plan EIR Reuse
7	Relocation of Remote Transmitter/Receiver Facility to North Side of Control Tower & Reuse of Site for General Aviation	Minor	February 2002	Master Plan EIR Reuse
8	Automated People Mover (APM) between Airport and Metro/Airport LRT Station	Minor	March 2003	Master Plan Supplemental EIR
9	Additional General Aviation Facilities on west side of Airport & Designate Employee Parking as ultimate use in Terminal A Parking Garage	Major	April 2003	Master Plan EIR Addendum #2
10	Off-Airport Construction Staging & Change in Designated Location of Future Airline Maintenance/Equipment Storage Facilities	Minor	June 2003	Master Plan EIR Reuse
11	Lease of 52-acre off-Airport Site for the Temporary Relocation of Rental Cars & Employee Parking	Minor	November 2004	Master Plan EIR Addendum #4
12	Square Footage of Centralized Passenger Terminal increased to 1,700,000 square feet	Minor	March 2005	Master Plan EIR Addendum #4
13	Shifted the Master Plan Horizon Year from 2010 to 2017; Modified designs of Terminal Area Facilities; Modified range of interim uses on former-FMC Site	Major	June 2006	Master Plan EIR Addendum #6
14	Change in Eastside Non-Terminal Development Projects to provide flexibility in location, function, & development sequencing	Minor	May 2007	Master Plan EIR Reuse
15	Shifted the Master Plan Horizon Year from 2017 to 2027; Decrease size of air cargo/belly-freight facilities; Increase acreage for general aviation facilities; Modify Taxiways H and K	Major	June 2010	Master Plan EIR Addendum #8

[a] Per Section 25.02.300 of the San José Municipal Code, amendments to the Master Plan Update are classified as "minor" or "major". The criteria for defining minor and major amendments are set forth in that same section of the Municipal Code.

Notes:
EIR Addendum #3 addressed a modification to the Airport Noise Control Program that was approved on October 21, 2003. EIR Addendum #5 addressed the Airport's Gate Management Plan that was approved on November 15, 2005. EIR Addendum #7 addressed the impacts of the Master Plan with regard to its potential to increase terrorist attacks. EIR Addendum #9 evaluated the greenhouse gas impacts of the Master Plan. EIR Addendum #10 addressed the impacts of a new FBO. EIR Addendum #11 addressed the impacts of four interim airline gates. No Master Plan Amendment was involved with any of these EIR Addenda.

TABLE 2

Summary of Key Projects in the Approved SJC Master Plan [a]

Project Type	Description of Project
Airfield Improvements	- Reconstruct/lengthen Runway 12L/30R to 11,000 feet - Reconstruct/lengthen Runway 12R/30L to 11,000 feet
Passenger Terminals	- Modify existing terminals to create centralized passenger terminal with 49 air carrier gates and 1,700,000 square feet [b]
Public Parking Facilities	- Construct parking garages with 16,200 spaces [c]
Rental Car Facilities	- Construct consolidated parking garage with 6,000 spaces, including 2,000 ready/return spaces
Air Cargo Facilities	- Construct new all-cargo facilities totaling 1,165,100 square feet - Construct new belly-freight facilities totaling 92,400 square feet
Aviation Support Facilities	- Construct new fuel storage facility with capacity of 4,000,000 gallons
General Aviation Facilities	- Provide general aviation facilities on a total of 100 acres on the west side of the Airport
Transportation And Access	- Construct on-Airport APM - Upgrade/widen Terminal Drive - Construct grade separations on Airport Boulevard at Skyport Drive and Airport Boulevard - Construct APM between Airport and Metro/Airport LRT Station

Notes:

[a] Section 2.3.1 (beginning on page 2-5) of the Final EIR contains a listing and description of all SJC Master Plan projects.

[b] Number of air carrier gates limited to 40 by Section 25.04.300(B)(1) of the San José Municipal Code.

[c] Number of public parking spaces limited to 12,700 by Section 25.04.300(B)(3) of the San José Municipal Code.

Source: SJC Master Plan, as amended through June 8, 2010.

TABLE 3

Comparison of Airport Master Plan Activity Levels

	Actual Activity Level		Forecasted Level Used in CEQA Analyses		
Forecast Horizon Year →			**2010**	**2010**	**2027**
	Baseline Used in 1997 EIR (1993)	**Existing (2017)**	**1997 EIR**	**2003 Second EIR Addendum***	**2010/2014 Eighth and Tenth EIR Addenda**
Annual Air Passengers (millions)	7.0	12.5	17.6	17.6	17.6
Annual Air Cargo (tons)	81,237	61,365	315,300	315,300	189,700
General Aviation (based aircraft)	491	133	320	360	209
Annual Aircraft Operations					
Air Passenger	115,832	119,574	243,100	186,400	183,660
Air Cargo	5,044	1,606	13,300	13,100	6,830
General Aviation	176,581	34,518	115,300	129,700	73,200
Military	888	216	800	800	100
Total	298,345	155,914	372,500	330,000	263,790

*As compared to the 1997 EIR, these numbers reflected changes in the projected fleet mix at SJC based on industry practices and trends. These numbers did not change in 2006 when the City amended the Master Plan to extend the Master Plan horizon year from 2010 to 2017. For a discussion of the downturn in the economy and other factors that led to this extension, see Section 3.1 of the Sixth Addendum to the 1997 Master Plan EIR.

Sources:

- Table 2.3.1 of the 1997 Master Plan EIR
- 2nd Addendum to 1997 Master Plan EIR
- 6th Addendum to 1997 Master Plan EIR
- 8th Addendum to 1997 Master Plan EIR
- Summary of Aviation Demand Forecasts (Ricondo & Associates, 2009)
- Annual Status Report on the Airport Master Plan for 2016
-

226,800 annual operations[1], but the Master Plan accommodated (and the EIR analyzed) only 320 based aircraft with 115,300 annual operations.

2.2 IMPLEMENTATION OF THE AIRPORT MASTER PLAN 1997 – 2017

Subsequent to the approval of the Master Plan in 1997, many of the capital improvement projects have been constructed. This includes the majority of the airfield improvement projects such as the extension of the Airport's two main runways to 11,000 feet each and associated taxiway improvements. On the east side of SJC are new and remodeled passenger terminals, a customs facility for international flights, new/expanded parking lots and garages, and a new consolidated rental car facility. A new fuel storage facility has been constructed, as have numerous upgrades to the Airport's roadway system. On the west side of SJC, new general aviation facilities were constructed that include approximately 240,000 ft^2 of aircraft hangars, an approximately 10,000 ft^2 terminal, an outdoor seating area, a ground service equipment (GSE) shop, an aircraft apron, a fuel farm, an automobile parking area, and aircraft taxiway connectors.

The remaining Master Plan capital projects include several taxiway upgrades/extensions, new air cargo facilities on the east side of the Airport, construction of the South Concourse of Terminal B, upgrades and expansion of various support facilities (e.g., maintenance, flight kitchen, rescue/firefighting, etc.), and the buildout of general aviation facilities on the west side of the Airport.

2.2.1 Updates to Forecasts and Airport Master Plan Amendments

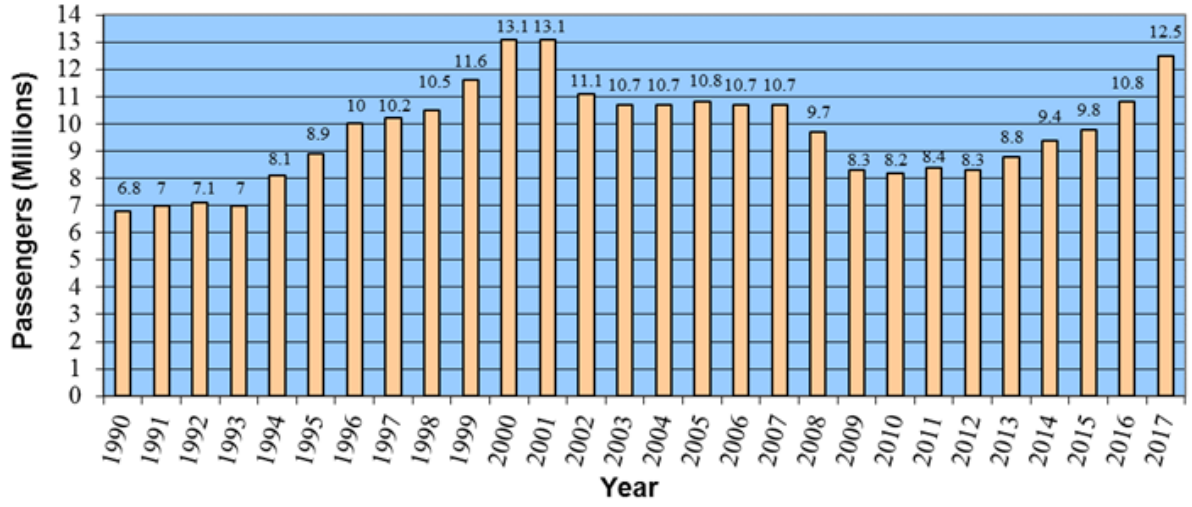
2.2.1.1 *Introduction and Background*

Similar to most master plans that contain numerous individual projects that are implemented over a multi-year period, the City has approved a number of Airport Master Plan amendments to reflect changed conditions in the aviation industry. The following paragraphs summarize the changed conditions and the factors that led to them.

At the time the original demand forecasts were undertaken in 1994, SJC was experiencing substantial annual growth in the number of air passengers using the airport. That substantial growth, which is summarized in Figure 2, was projected to continue through the year 2010. However, several unforeseen events subsequently transpired, which resulted in a major effect on the aviation industry and on activity levels at SJC: 1) terrorist attacks on September 11, 2001; 2) bursting of the high-tech "dot com" bubble in Silicon Valley; 3) substantial increases in the price of aviation fuel; and 4) the widespread economic recession that began in 2008, the recovery from which is ongoing.

[1] An aircraft "operation" is defined as a takeoff or landing. Therefore, if an aircraft flies into the Airport and subsequently takes offs, two operations have occurred.

Figure 2:
Comparison of Annual Air Passenger Activity Levels at SJC



As a result of these events and other factors, the airline industry has been undergoing rapid and significant changes. For example, airlines are frequently modifying their route structure and the markets they serve in response to changes in economic and competitive conditions. In addition, airline start-ups, mergers, reorganizations, and bankruptcies are more common in today's aviation industry than in past years.

At SJC, the cumulative effect of all of these changes was a decrease in airport activity between 2000 and 2012. Beginning in 2013 and continuing to the present, this trend has reversed as the economy recovers. Figure 2 depicts these changes.

Such changes have necessitated updates to SJC's aviation forecasts, which in turn has resulted in various changes to the size, function, and location of some of the Airport's planned air passenger, air cargo, and general aviation facilities.

2.2.1.2 *1994 Forecasts*

The original Airport Master Plan horizon year of 2010 was based on aviation demand forecasts that were prepared in 1994. The forecasts, which were utilized throughout the 1997 Master Plan EIR, quantified the expected demand for air transportation services at SJC in 2010, based upon an analysis of economic, employment, and demographic data. Based on those forecasts, a list of airport facility improvement projects to accommodate the projected demand was developed. These projects became the Airport Master Plan that was approved by the San José City Council in 1997.

2.2.1.3 *2003 Forecast Update and Master Plan Amendment*

In 2003, the 1994 assumptions for aircraft fleet mix and aircraft operations projected to occur by 2010 were revised to reflect the latest practices of the airlines, air cargo carriers, and owners/operators of

general aviation aircraft. Also in 2003, the number of based general aviation aircraft at SJC was raised from 320 to 360 to reflect a Master Plan Amendment that allowed the expansion of Atlantic Aviation (formerly the San Jose Jet Center), an existing fixed base operator (FBO) at the Airport.[2] The Atlantic Aviation expansion project was evaluated in the Second EIR Addendum (2003).

2.2.1.4 *2005 Forecast Update and 2006 Master Plan Amendment*

As part of a 2005 financial feasibility analysis, the level of air passenger activity at SJC that was originally projected to be reached by year 2010, was projected not to be reached until year 2017. This updated forecast formed the basis for a decision in 2006 by the City to shift the horizon year for the Airport Master Plan from 2010 to 2017. The shift in horizon year from 2010 to 2017 was evaluated in the Sixth EIR Addendum (2006).

2.2.1.5 *2009 Forecasts and 2010 Master Plan Amendment*

In 2009, the City completed another update to the aviation demand forecasts for SJC. As shown in Table 3, the major findings of the 2009 updated forecast were as follows:

- The level of air passenger activity at SJC that was originally projected to be reached by year 2010 (i.e., 17.6 million annual passengers), and subsequently projected to be reached by 2017, is now projected not to be reached until year 2027.

- For air cargo, the 2009 updated forecast showed a much slower growth rate in future demand than previously projected. As shown in Table 3, the projected annual air cargo volume for year 2027 is 189,700 tons. This demand level is 40% less than the 315,300 tons that had been previously projected to occur by year 2010 and subsequently by 2017.

- For general aviation, the 2009 updated forecast showed a much lower growth rate in future demand than previously projected. As shown in Table 3, the projected demand for year 2027 is 209 based aircraft. This demand level is 42% less than the accommodated demand of 360 based aircraft that had been previously projected for year 2010 and subsequently 2017. In addition, the general aviation environment has changed, and is projected to continue to change, from a fleet comprised largely of single-engine piston aircraft to a fleet comprised largely of corporate jet aircraft. As an example, as shown in Table 4, the 1994 forecasts projected that 9% of all based aircraft in 2010 would be corporate jets, whereas the 2009 forecasts project that 67% of all based aircraft in 2027 will be corporate jets. Actual data, as shown in Table 4, comparing general aviation aircraft based at SJC in 1994 and 2017, confirms the projection and shows that there are fewer piston aircraft and more jets over time. This projected trend will continue based on industry-wide changes in general aviation.

[2] A fixed base operator (FBO) is an aviation term that refers to an airport-based business that typically provides general aviation facilities and services such as aircraft parking, storage, maintenance, servicing, and fueling, as well as pilot/passenger facilities, restaurants, offices, meeting rooms, flight instruction, aircraft rental, pilot supplies, etc.

TABLE 4

Existing and Projected Composition of Based General Aviation Aircraft Fleet Mix

Aircraft Category	Projected		Actual	
	1994 Forecast for Horizon Year 2010	2009 Forecast for Horizon Year 2027	1994	2017
Single-Engine Piston	67 %	23 %	73 %	46 %
Multi-Engine Piston	15 %	3 %	15 %	6 %
Turboprop	5 %	5 %	3 %	6 %
Turbojet	9 %	67 %	7 %	39 %
Helicopter	4 %	2 %	2 %	3 %
Total	100 %	100 %	100 %	100 %

Sources:

- San Jose International Airport Master Plan Update Final Report, 1999.
- Summary of Aviation Demand Forecasts for SJC, Ricondo & Associates, 2009.
- City of San Jose Airport Department (source for 2017 data)

These changes led the City to amend the Master Plan in 2010 to 1) shift the horizon year from 2017 to 2027, 2) relocate and decrease the size of planned air cargo facilities, 3) relocate and increase the size of planned general aviation facilities, and 4) modify two taxiways to accommodate the expanded general aviation facilities. These changes were evaluated in the Eighth EIR Addendum (2010).

2.2.1.6 *Summary*

When compared to the Master Plan in the 1997 EIR, the current data show:

- Air passenger growth is occurring far more slowly than originally projected;
- The post-recession increases in the number of passengers utilizing SJC that began in 2013 and continues today is consistent with the latest forecasts that show continued growth to 17.6 million passengers annually by 2027.
- Total aircraft operations at SJC are lower than projected and are projected to be 29% lower in 2027 than what had been projected for 2010 and subsequently 2017;
- Air cargo volume, measured in tons per year, is lower than projected and is projected to be 40% lower in 2027 than what had been projected for 2010 and subsequently 2017; and
- General aviation activity, expressed as the number of based aircraft, is less than projected and is projected to be 42% lower in 2027 than what had been projected for 2010 and subsequently 2017.

SECTION 3. DESCRIPTION OF PROPOSED PROJECT

3.1 BACKGROUND

In 2014, the City of San Jose approved the construction of a general aviation FBO on a 30-acre site located on the west side of the Airport (refer to Figure 4). The project included seven aircraft hangars providing approximately 240,000 ft^2 of hangar space. Six of the hangers are 30,000 ft^2 and are designed to each accommodate three large cabin business jet aircraft of the types that are currently in common usage. The seventh hangar is 60,000 ft^2, including approximately 6,000 ft^2 of office/shop space. The seventh hangar is designed to accommodate up to one Boeing 767 and one Boeing 757 or similarly-sized aircraft.[3] The project also included an approximately 10,000 ft^2 terminal, a 7,500 ft^2 outdoor seating area, a 3,600 ft^2 ground service equipment (GSE) shop, 17 acres of concrete aircraft apron, a fuel farm, an automobile parking area, and aircraft taxiways. Construction of the project was completed in 2016 and the FBO is fully operational.

3.2 PROPOSED PROJECT

The Project that is being addressed in this 12th EIR Addendum is the expansion of the above-described, existing, general aviation FBO on the west side of the Airport through the addition of an eighth hangar. The 3.72-acre Project site is located directly south of the existing FBO and is designated for general aviation in the approved Airport Master Plan. Consistent with the objectives of the Master Plan, the Project will accommodate a portion of the existing and projected demand for general aviation air transportation services at SJC.

As shown on Figure 3, the Project site is currently an unused asphalt vehicle surface parking lot. The easterly side of the Project site borders the airfield. The FAA air traffic control tower, aviation communication equipment, and other existing general aviation facilities are located to the south of the Project site. Martin Avenue runs along the westerly side of the Project site. The Project's site plan is shown on Figure 4 and representative building elevations are shown on Figure 5. The Project will be constructed to meet LEED standards.[4] The following paragraphs provide additional detail regarding the proposed Project.

Aircraft Hangar: The Project will construct a 30,000 ft^2 aircraft hangar with an additional 4,000 ft^2 of office space. The hangar will be designed to accommodate two large cabin business jet aircraft of the types that are currently in common usage and will be of the same size and configuration of six of the seven previously-constructed hangars approved in 2014.

[3] Large aircraft such as the Boeing 717/727/737/747/757/767 and/or the Airbus 319/320/330 are in widespread use by passenger airlines and cargo carriers, but some of these aircraft types are configured and operate for business uses. These larger business aircraft currently operate at SJC.

[4] Projects that meet these standards, which were developed by the U.S. Green Business Council, are typically more energy-efficient and have fewer environmental effects when compared to projects that don't meet these standards. For more detail, please see Section 4.5.2.2 of this Addendum.

Aircraft Apron: The Project will include approximately 1.85 acres of concrete aircraft apron (sometimes referred to as "aircraft ramp") between the hangars and the airfield, as shown on Figure 4. The proposed apron would connect to the apron constructed as part of the existing FBO. The aircraft apron is used for a variety of aircraft-related operations including taxiing, maneuvering, fueling, loading/unloading, staging, short-term parking, etc.

Access and Parking: As shown on Figure 4, access to the Project site will be via a driveway on Martin Avenue. On-site parking for employees, customers, and visitors will be provided. A total of approximately 26 parking spaces are proposed.

Landscaping: Landscape on the Martin Avenue side of the Project site will consist mainly of shrub and groundcover planting. As much of the landscape area will be devoted to stormwater treatment, the planting in those areas will consist of plants recommended in the City's stormwater guidelines.

Approximately 4-6 trees are proposed to be installed in the peninsulas within the parking lot to provide shade adjacent to the parking stalls. The tree species will match those on the adjacent site to serve as a visually-unifying element between the existing and proposed sites. In addition, approximately 5-8 street trees will be planted between the proposed new sidewalk and the back of curb along Martin Avenue. The understory planting along the Martin Avenue frontage will match the scheme already installed. The southeast side of the Project site has a small planting buffer that will consist of trees, ground cover and shrubs to form a visual barrier.

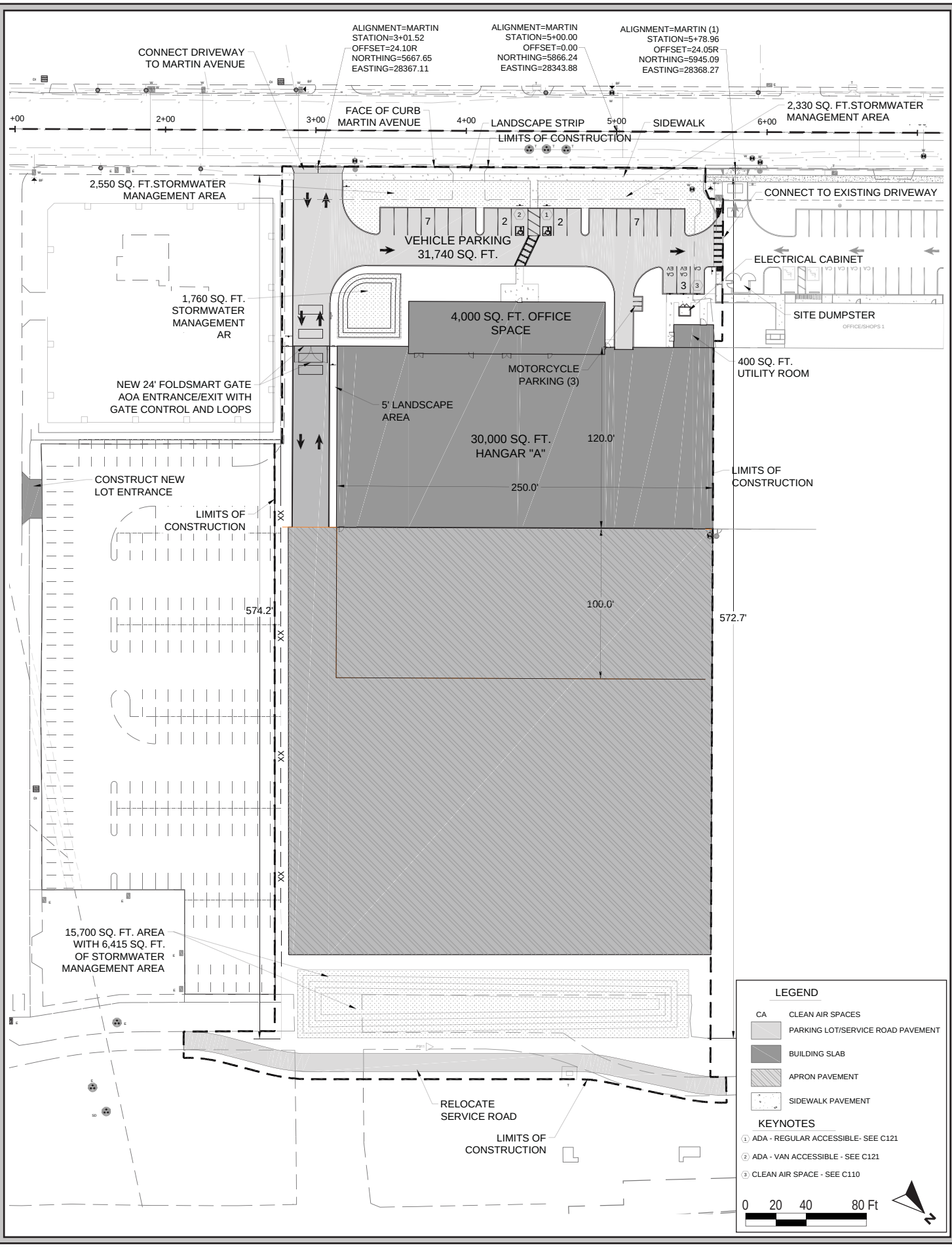
Utilities and Services: Utilities will be provided to the Project via connections to the existing utility systems that are located on or adjacent to the Project site. Stormwater will be treated in stormwater management areas adjacent to the proposed building, parking lot, and aircraft apron prior to discharge into the existing storm drainage system; please see Section 4.7, *Hydrology & Water Quality*, for additional discussion of stormwater treatment. Outdoor lighting will be provided for operational and security purposes; light fixtures will comply with applicable codes that are designed to prevent spillover and glare. The existing service road that parallels the easterly site boundary will be realigned approximately 15 feet from the east Project parcel boundary to the west edge of pavement of the service road to provide adequate separation between vehicles on the service road and aircraft on the apron.

Operations: Based on Signature's experience in operating FBOs, taking into account the business aircraft environment in California and the Bay Area, Signature anticipates that there will be approximately 20-30 new annual aircraft operations when the proposed hangar is fully operational. According to Signature, this estimate is based on the activity levels of the tenants they anticipate will occupy the new hangar. [Note: For the various analyses undertaken for this Addendum, the City is utilizing a more conservative estimate of 2,800 annual aircraft operations. See Section 4.4 for a discussion of the basis for the estimate of 2,800 annual operations.]

Signature also anticipates that there will be approximately two based aircraft at the FBO, taking into account its expected tenants and the aircraft owned and operated by those tenants. For additional discussion of the Project's capacity, as measured in number of based aircraft, please see Section 4.1.

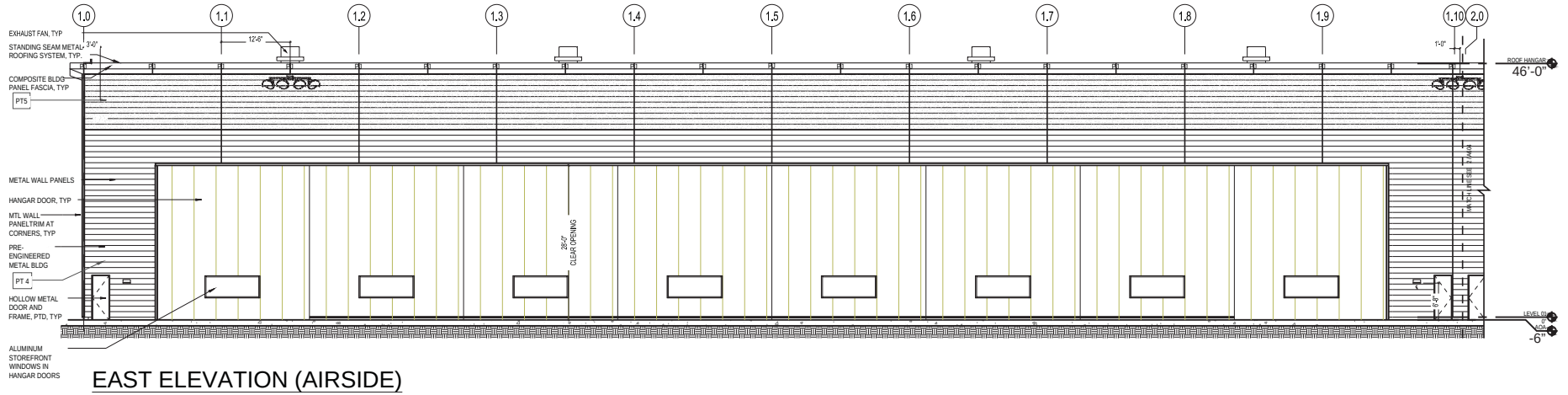
AERIAL OF PROJECT AREA

FIGURE 3

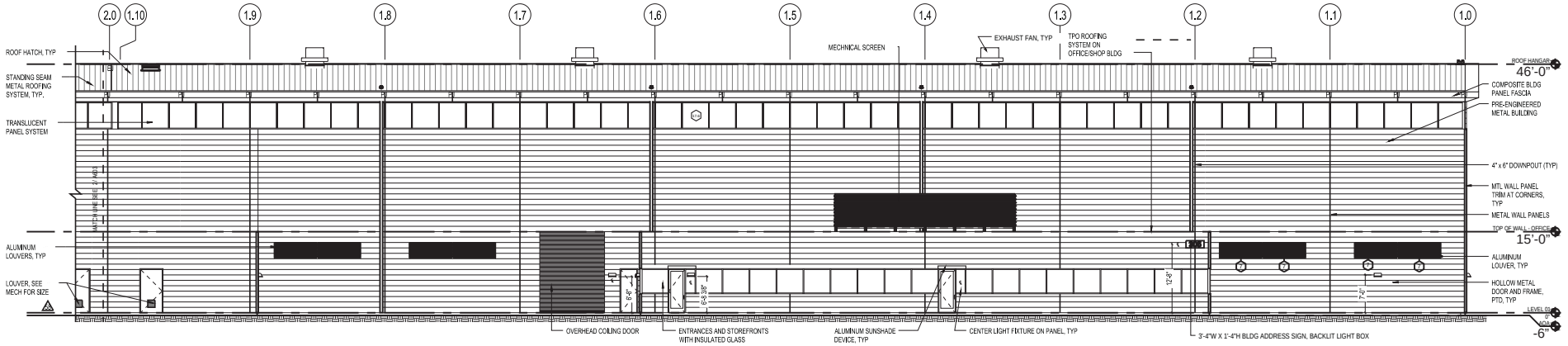


SITE PLAN

FIGURE 4



EAST ELEVATION (AIRSIDE)



WEST ELEVATION (LANDSIDE)

PROPOSED BUILDING ELEVATIONS

FIGURE 5

SECTION 4. ENVIRONMENTAL IMPACTS OF THE PROJECT[5]

4.1 INTRODUCTION

In order to assess many of the environmental impacts of the Project, including ground traffic, air traffic, noise, and air quality, the first step is for the CEQA Lead Agency to independently determine the capacity of the facilities being constructed. This is a crucial step in the analysis of every type of project, whether residential, commercial, industrial, institutional, recreational, etc. For example, for residential projects, capacity is typically expressed as the number of dwelling units; for commercial, the amount of square footage; for hotels, the number of rooms; and so forth.

For general aviation, capacity is expressed in the number of based aircraft. Once that number is determined, then one is able to calculate the expected number of operations, expected number of vehicle trips, emissions of air pollutants, noise emissions, etc.

Signature, the project applicant, has indicated to the City that the facilities they propose to construct, taking into account the tenants and types of aircraft that they anticipate serving, will accommodate two based aircraft. This number of aircraft reflects Signature's anticipation that their tenants will have large corporate jet aircraft in their fleet. Given Signature's anticipated tenants, a capacity of two based aircraft would not be unreasonable.

As part of the 2014 Tenth Addendum completed for the existing FBO adjacent to the Project site, the City undertook an independent evaluation of the proposed facilities in terms of their capacity, taking into account the current and projected corporate general aviation fleet mix, as well as typical FBO operational practices at airports around the United States. This evaluation assumed that most FBOs will work to accommodate requests to base an aircraft at their facility if there is room to do so, because that is the essence of their business. Because the Project proposes a 30,000 ft^2 aircraft hangar, which is the same size as one of the six of the hangars evaluated in the 2014 Tenth Addendum, the methodologies used in the previous analysis can be applied to the proposed Project. The City's evaluation included two different methodologies:

Methodology #1 – Based Aircraft per Acre: The Project will occupy 3.72 acres of the approximately 100 acres designated for 209 based general aviation aircraft, as forecasted by year 2027 in the amended Master Plan. The 100 acres was based on a 2009 analysis prepared for SJC by Ricondo & Associates as part of the process to amend the Master Plan to reflect the latest forecasts.[6] Ricondo calculated that the Airport should designate 102 acres for general aviation to accommodate the forecast of 209 based aircraft, taking into account the trend toward a higher percentage of larger corporate jets. [Note: Given land availability constraints at SJC, only 100 acres were available, just shy of the 102 acres calculated

[5] The analysis of impacts in Section 4 follows the same order and addresses the same topics as those contained in Chapter 3 of the SJC Master Plan EIR.

[6] "Cargo and General Aviation Facility Requirements for Norman Y. Mineta San Jose International Airport", Ricondo & Associates, October 8, 2009.

by Ricondo.] Assuming a rough proportionate distribution of the 209 aircraft across the 100 acres, the Project could accommodate approximately eight based aircraft (3.7% of the total).

Methodology #2 – Based Aircraft in Proposed Hangar: As part of the preparation of the 2014 Tenth Addendum, the City retained Jacobs Engineering, a firm that specializes in the design of airport facilities throughout the world, took the plans for the Signature FBO and "placed" corporate aircraft into the hangars in a manner consistent with typical corporate FBO operations in the United States. This exercise utilized a mix of common corporate aircraft types consistent with the mix of aircraft expected to occupy a FBO. Because each of the six of the hangars in the existing FBO each have the same square footage as the hangar proposed by the Project (i.e., 30,000 ft^2), the results of the previous analysis can be applied to the proposed Project. The results show that the Project could reasonably accommodate up to eight based aircraft, as shown on Figure 6.

Based on the identical results of these two methodologies, all of the analyses throughout this Addendum will use eight based aircraft as the maximum capacity of the Project.

There are currently 133 based general aviation aircraft at SJC.[7] If the eight aircraft associated with the Project are added to the existing number, the total of 141 would be substantially below the 320 based aircraft analyzed in the 1997 Master Plan EIR and below the 209 based aircraft analyzed in the 2010 Eighth Addendum. Therefore, the number of based aircraft under "existing plus Project conditions" is less than the total number of based aircraft analyzed in the prior environmental analysis.

4.2 LAND USE

4.2.1 Background

Section 3.1 of the 1997 Master Plan EIR evaluated the land use impacts of the Master Plan in terms of 1) changes to on-Airport use, and 2) compatibility with adjacent land uses. The EIR concluded that all of the capital improvement projects that would be constructed under the Master Plan would not result in any significant on-Airport land use impacts because:

- Development would be consistent with all applicable FAA and Airport Land Use Commission (ALUC) safety zones, including runway protection zones and object free areas.
- Development would be consistent with the use of and plans for the Airport, namely, its safe and effective function as a major air transportation facility;
- Development would be consistent with the current uses at the Airport; and
- Conversion of prime farmland acreage to aviation uses would not be a significant impact.

[7] Existing general aviation facilities occupy approximately 81 acres of the Airport. Under the "Based Aircraft per Acre" methodology, 81 acres of the approximately 100 acres designated for 209 based aircraft forecasted for year 2027 is projected to accommodate 169 aircraft. The fact that there are presently fewer aircraft than projected in the Eighth Addendum means that the "existing conditions" scenario has less activity, and therefore less impact, than what was previously disclosed.

NOTES: (1) HANGAR DIMENSIONS 120'X150', 180'X330".
(2) AIRCRAFT FLEET SHOWN: HAWKER 900, FALCON 900, CESSNA CITATION III, BEECHCRAFT SUPER KING AIR, GULFSTREAM IV, BOEING 757-200

SOURCES: (1) PROPOSED SIGNATURE FLIGHT SUPPORT DEVELOPMENT: AMERICAN INFRASTRUCTURE DEVELOPMENT, INC.
(2) BASE MAP: MINETA SAN JOSE INTERNATIONAL AIRPORT;

Legend
- Existing Hangars
- Existing Terminal
- Proposed Hangar

N

ESTIMATED BASED AIRCRAFT CAPACITY OF THE PROJECT FIGURE 6

The EIR also concluded that implementation of the Master Plan would not result in a significant land use impact in terms of inconsistency with adjacent land uses because 1) it would not displace a large number of people, 2) would not conflict with established uses, and 3) would not disrupt or divide the physical arrangement of an established community.[8]

4.2.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project proposes to construct a general aviation facility on a 3.72-acre site located on the west side of SJC. The site was originally designated for future air cargo facilities in the 1997 Master Plan, but was redesignated for general aviation facilities when the Master Plan was amended in 2010 to reflect updated forecasts. Consistent with those forecasts, this Addendum is analyzing development of a general aviation facility on this 3.72-acre site. The FAA-approved Airport Layout Plan (ALP), which is the official document that sets forth the layout and development of SJC in accordance with FAA design standards, also designates the Project site for general aviation. Figure 7 shows the Project's footprint within the area designated for general aviation on the ALP.

As shown on Figure 3, the Project site is currently an unused asphalt surface parking lot. The parking lot was formerly used for employee and public parking on an interim basis while new facilities were being constructed on the east side of the Airport. This parking lot is no longer required because in 2011, employee parking was moved from this site to a dedicated area in the terminal area. Further, in 2011, long-term parking was moved from this area to an interim surface lot on the former rental car/ready return parking lot site. This lot is currently providing sufficient capacity to meet the long-term parking demand.

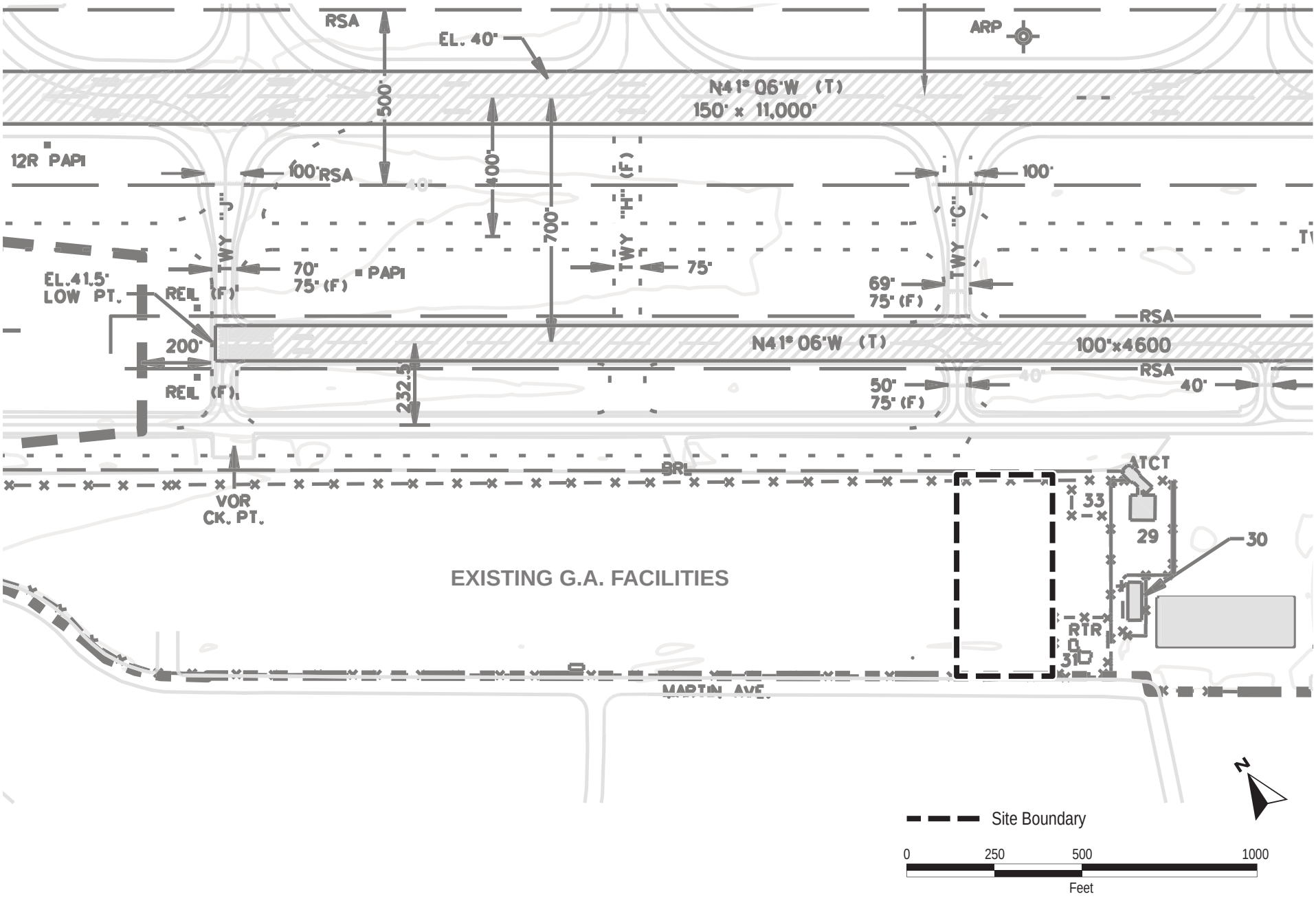
The easterly side of the site borders the airfield. The FAA control tower, aviation communication equipment[9], and general aviation facilities are located to the south of the site. Martin Avenue is along the westerly side of the site, with commercial and industrial uses located on the far side of Martin Avenue. There are no nearby residences, schools, or other land uses that would be incompatible with the Project. From the Project site, the distances to the closest school and closest residence are more than one-mile and more than one-half mile, respectively. As such, the Project is consistent with the current use of the Airport and the surrounding land uses.

Since the site is paved and part of the existing airport, the Project will not result in the loss of prime farmland.

Aircraft access between the Project site and the existing taxiway and runway infrastructure at the Airport will be via existing taxiway connectors that were constructed in 2014-16 as part of the original FBO facility. No new taxiway connectors are proposed as part of this Project. Therefore, since no new connections are proposed, no analysis of potential safety issues associated with changes in access to the taxiway and runway infrastructure is warranted.

[8] The 1997 EIR did determine that a proposed fuel storage facility on a separate parcel of land from the main Airport property (i.e., across U.S. 101 and adjacent to the Guadalupe River) would result in a significant land use compatibility impact because of the project's location and mitigation was required. That parcel, however, is not located near, and would not be affected by, the proposed Project, nor is that parcel near where the Project's fuel facility is proposed to be located.

[9] This is a series of antennae and associated equipment known as the Remote Transmitter/Receiver (RTR) facility.



PROJECT LOCATION ON APPROVED ALP

FIGURE 7

In addition, the FAA reviewed the building to be constructed by the Project in accordance with the requirements of Part 77 of the Federal Aviation Regulations (FAR). Part 77 of the FAR establishes imaginary surfaces for airports and runways as a means to identify objects that are obstructions to air navigation, including buildings. The imaginary surfaces radiate out several miles from the airport and are defined as a certain altitude above mean sea level (msl). The FAA also reviewed the Project regarding its location adjacent to equipment used for aviation communication.

In a letter dated January 30, 2018, the FAA concluded that hangar building proposed to be constructed by the Project would not be a hazard to air navigation. The FAA also found that the Project would not interfere with the operation of the FAA's aviation communication equipment. The FAA's letter is attached as Appendix A.

4.2.3 Conclusion

The Project is compatible with the Airport Master Plan and the FAA-approved ALP, both of which designate the Project site for general aviation facilities. The Project would comply with all relevant FAA safety policies and, therefore, would be compatible with the operation of the Airport as a major air transportation facility. The Project would be compatible with the adjacent land uses.

The Project will not result in any new significant land use impacts and/or land use impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant land use impacts than were previously analyzed.

4.3 CULTURAL RESOURCES

4.3.1 Background

Section 3.2 of the 1997 Master Plan EIR included an assessment of the potential for development at the Airport to impact buried archaeological resources. The assessment, which was based largely on the results of a comprehensive on-Airport archaeological testing program, determined that certain areas of the Airport were archaeologically-sensitive, as shown on Figure 3.2.1 in the EIR. The EIR concluded that construction at such locations could encounter and disturb archaeological resources, which would be a significant impact. Therefore, mitigation was required for all projects within the archaeologically-sensitive areas, consisting of the monitoring of all subsurface construction activity by a qualified archaeologist. The archaeologist has the authority to stop work within the vicinity of any archaeological find so that the resource can be evaluated. This measure has been implemented, as applicable, on all capital improvement projects at the Airport that have been completed to date.

4.3.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project proposes to construct a general aviation facility on a 3.72-acre site located on the west side of SJC. There are no buildings located on the site. The western portion of the site is, however, located

within an area designated as archaeologically-sensitive in the 1997 EIR.[10] Although the site was paved as a parking lot subsequent to the completion of the EIR and no resources were found during its construction, there is still the potential for the Project to encounter archaeological resources because deeper subsurface work will be required for building foundations, utilities, foundation to support aircraft parking, etc. Therefore, the Project will implement the EIR mitigation measure that requires all subsurface work to be monitoring by a qualified archaeologist. Per the EIR Mitigation Measure 1 and SEIR Mitigation Measure 1, if archaeological resources are encountered, the archaeologist will stop work within a 100-foot radius of the find. The archaeologist will evaluate the find and identify appropriate mitigation. In addition, if human remains are encountered, the archaeologist will immediately notify the County Coroner and, if the remains are determined to be Native Americans, the Native American Heritage Commission will also be contacted.

4.3.3 Conclusion

The Project will result in the construction of facilities at a location already identified for construction in the Master Plan and accompanying EIR. The Project will not result in any new significant cultural resources impacts and/or cultural resources impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant cultural resources impacts than were previously analyzed.

4.4 TRANSPORTATION AND CIRCULATION

4.4.1 Ground Transportation

4.4.1.1 *Background*

The volume of ground traffic associated with SJC is directly related to the level of activity that occurs at the Airport. Each of the three major components of air transportation (i.e., air passengers, air cargo, and general aviation) contributes to the total volume of ground traffic at SJC.

The traffic impacts disclosed in Section 3.3 of the 1997 Master Plan EIR were based on the volume of traffic that was projected to occur under forecasted activity levels, as summarized in Table 5. The data in Table 5 also show the effect on PM peak-hour traffic volumes resulting from two Master Plan amendments that occurred subsequent to the completion of the 1997 Master Plan EIR:

- A 2003 amendment to increase the number of based general aviation aircraft from 320 to 360 to accommodate an expansion of general aviation facilities by Atlantic Aviation (formerly known as the San Jose Jet Center).

[10] The existing Signature FBO is also in an archaeologically-sensitive area. Archaeological monitoring was undertaken during its construction and no cultural resources were found.

- A 2010 amendment to reflect updated forecasts, specifically a decrease in the projected number of based general aviation aircraft from 360 to 209 and a decrease in the projected annual volume of air cargo from 315,300 tons to 189,700 tons. [Note: as shown in Table 3, in 2017, there were 133 based general aviation aircraft at SJC. This number is consistent with the forecast of 209 general aviation aircraft at SJC by 2027.]

As shown in Table 5, traffic volumes under the amended Master Plan are projected to be 5.6% lower than the levels disclosed in the traffic analysis contained in the 1997 EIR.

TABLE 5

SJC Master Plan Weekday PM Peak-Hour Traffic Volumes

		1997 Master Plan, as Disclosed in 1997 EIR		**Master Plan, as amended in 2003 for Atlantic Aviation Expansion Project**		**Master Plan, as amended in 2010 to Reflect Updated Forecasts**	
Category	**Weekday PM Peak-Hour Trip Rate**	**Activity Level**	**# of Weekday PM Peak-Hour Trips**	**Activity Level**	**# of Weekday PM Peak-Hour Trips**	**Activity Level**	**# of Weekday PM Peak-Hour Trips**
Airlines	0.33/1,000 passengers	17,600,000 annual passengers	5,822	17,600,000 annual passengers	5,822	17,600,000 annual passengers	5,822
Air Cargo	2.51/1,000 tons	315,300 annual tons	792	315,300 annual tons	792	189,700 annual tons	477
General Aviation	0.69/based aircraft	320 based aircraft	222	360 based aircraft	249	209 based aircraft	145
Misc			113		113		113
Totals			6,949		6,976		6,557
% Change from Volume Disclosed in 1997 EIR					**+ 0.39%**		**- 5.64%**

Notes:

- Trip rates are rounded to the nearest hundredth.
- For this analysis, PM peak-hour trips are used because the 1997 EIR determined that SJC generates more trips in the PM peak-hour than the AM peak-hour and, therefore, is a more conservative analysis.

Sources:

- Appendix 3.3.A of the 1997 Master Plan EIR
- 2nd Addendum to 1997 Master Plan EIR
- 8th Addendum to 1997 Master Plan EIR

For the Master Plan as a whole, the 1997 EIR disclosed that all of the traffic to be generated at the Airport would result in significant impacts at various intersections and on various freeways located in the surrounding area. Mitigation measures were incorporated into the Master Plan for these impacts. All of the mitigation measures for traffic impacts from Airport-related projects on the west side of the Airport (which includes this Project) have already been implemented. Specifically, for the following locations where significant impacts were disclosed that are in the vicinity of the Project on the westerly side of the Airport (measures related to the easterly side of the Airport are too remote to be affected by the Project), the required mitigation has already been implemented:

- I-880 Ramps at Coleman Avenue [EIR Intersection #27]: Interchange has been reconstructed and Coleman Avenue has been widened.
- Airport Boulevard at Coleman Avenue [EIR Intersection #28]: Intersection reconfigured as part of the I-880/Coleman Avenue Interchange Reconstruction Project.
- Coleman Avenue at Brokaw Road [EIR Intersection #29]: Mitigation consisting of the restriping of the westbound approach on Brokaw Road to include an exclusive left-turn lane and one shared left/through/right-turn lane has been implemented.
- De La Cruz Boulevard at Martin Avenue [EIR Intersection #31]: Mitigation consisting of no left-turns was needed only on an interim basis while west side long-term and employee parking lots were operational; these lots have since been relocated to the eastside of the Airport.
- De La Cruz Boulevard at Central Expressway [EIR Intersection #32]: Mitigation consisting of the addition of a third left-turn lane from eastbound Central to northbound De La Cruz has been implemented.

Finally, as required mitigation, the Airport operates a comprehensive Transportation System Management (TSM) Program that has the effect of reducing the number of peak-hour trips made in single-occupancy vehicles. Elements of the TSM Program include flexible work hours, bicycle parking, free transit passes to employees, and operation of a free shuttle bus to/from the Airport and the Santa Clara Caltrain and Metro/Airport Light Rail Stations. These elements have been, and continue to be, implemented by the Airport. In addition, all capital improvement projects at SJC, which will include the Project, implement traffic management plans during construction, which specify procedures to be followed for temporary lane or roadway closures.

4.4.1.2 *Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended*

Vehicles Trips to be Generated by the Project

As described above in Section 4.1, the Project could accommodate up to approximately eight aircraft. In turn, these aircraft would generate approximately six PM peak-hour trips per the trip generation rate of 0.69 per based aircraft in Table 5. This is a conservatively high number because the Institute of Transportation Engineers Trip Generation Manual (9th Edition) lists the average weekday PM peak-hour trip rate per based aircraft as 0.52, with the range of rates being 0.33 to 0.67.

To put six trips into context, projects that generate fewer than 100 peak-hour trips are not required by the Santa Clara County Congestion Management Program to prepare a traffic impact analysis because

that volume is deemed too low to cause potential traffic impacts.[11] The six PM peak-hour trips to be generated by the Project are well below this threshold.

To validate that there are no changed conditions that would imply that the vehicle traffic associated with the Project would cause general aviation traffic to exceed that accounted for in the EIR, such traffic was assessed in relation to current conditions at SJC. As shown in Table 6, if traffic associated with the Project is added to existing traffic, the total of 101 PM peak-hour trips would be well below the level of traffic analyzed in both the 1997 EIR and the 8th EIR Addendum.

TABLE 6

Weekday Pm Peak-Hour General Aviation Traffic Volumes

Scenario	# PM Peak-Hour Trips
Existing (2017): 133 based aircraft @ 0.69 trips/based aircraft	92
Project: 8 based aircraft @ 0.69 trips/based aircraft	6
Existing + Project	98
Analyzed in 1997 Master Plan EIR	222
Analyzed in 8th EIR Addendum for Amended Master Plan	145

Project Access and Circulation

Access to the Project will be via a driveway located along Martin Avenue. Martin Avenue is a 2-lane roadway with on-street parking that serves commercial, industrial, and Airport-related land uses. It connects to Brokaw Road and Coleman Avenue on the south and De La Cruz Boulevard on the north, which are major arterials. De La Cruz Boulevard connects to U.S. 101 approximately 4,000 feet from its intersection with Martin Avenue, providing nearby freeway access to the Project site.

4.4.2 Air Transportation

4.4.2.1 *Background*

The projected level of air traffic at SJC is calculated from the aviation demand forecasts that are prepared in accordance with industry standards and FAA-approved methodologies. Once the demand for air passenger, air cargo, and general aviation services is calculated, the next step involves the determination of the types of aircraft, as well as the number of operations (i.e., takeoffs and landings) by such aircraft that will serve the demand. Determining aircraft types and the volume of aircraft operations is critical in airport planning because it allows airport operators to design and construct adequately-sized facilities to accommodate the demand. It is also important because it allows for operators to calculate and disclose the environmental effects (e.g., noise, air quality) of those aircraft operations.

[11] Transportation Impact Analysis Guidelines, Santa Clara Valley Transportation Authority, March 2009; City of San Jose Traffic Impact Analysis Handbook, Volume 1, Methods and requirements.

The volume of aircraft operations contained in the 1997 Master Plan EIR was based on the demand forecasts prepared in 1994, as summarized in Table 7. The data in Table 7 also show the change in aircraft operations resulting from two Master Plan amendments that occurred subsequent to the completion of the 1997 Master Plan EIR:

TABLE 7

Comparison of SJC Master Plan Annual Aircraft Operations
[Expressed as Total Annual Takeoffs & Landings]

	Existing (2017)	1997 Master Plan, as Disclosed in 1997 EIR	Master Plan, as amended in 2003 for Atlantic Aviation Expansion Project*	Master Plan, as amended in 2010 to Reflect Updated Forecasts
Air Passenger	119,574	243,100	186,400	183,660
Air Cargo	1,606	13,300	13,100	6,830
General Aviation	34,518	115,300	129,700	73,200
Military	216	800	800	100
Totals[1]	155,900	372,500	330,000	263,800
% Change from Volume Disclosed in 1997 EIR	**- 58%**	------	**- 11%**	**- 29%**

*As compared to the 1997 EIR, these numbers reflected changes in the projected fleet mix at SJC based on industry practices and trends. These numbers did not change in 2006 when the City amended the Master Plan to extend the Master Plan horizon year from 2010 to 2017. For a discussion of the downturn in the economy and changes to the aviation industry that led to this extension, see Section 3.1 of the 6th Addendum to the 1997 Master Plan EIR.

[1]Totals rounded to the nearest 100.

Sources:

- Table 2.3.1 of the 1997 Master Plan EIR
- 2nd Addendum to 1997 Master Plan EIR
- 6th Addendum to 1997 Master Plan EIR
- 8th Addendum to 1997 Master Plan EIR
- Summary of Aviation Demand Forecasts (Ricondo & Associates, 2009)
- Annual Status Report on the Airport Master Plan for 2016

- A 2003 amendment to increase the number of based general aviation aircraft from 320 to 360 to accommodate an expansion of general aviation facilities by Atlantic Aviation. During that amendment, the demand forecasts were not changed, but an updated aircraft fleet mix was used to reflect the latest data on aircraft purchases and phase-outs and industry trends.

- A 2010 amendment to reflect updated forecasts prepared in 2009, which translated into a further decrease in the projected number of annual aircraft operations because of changes to the general aviation industry.

As shown in Table 7, total aircraft operations at SJC under the amended Master Plan are projected to be 29% lower than the levels disclosed in, and utilized throughout, the 1997 EIR.

Table 8 presents the data contained in Table 7 in terms of average daily operations by aircraft type. The purpose of Table 8 is to show how the Airport has tracked and analyzed the changes in the aircraft fleet mix since the 1990s and to compare those changes to that disclosed in the 1997 Master Plan EIR.

All of this information regarding the number and types of aircraft operations were input into the EIR's environmental analyses related to the effects of the operations, namely noise and air quality. See Sections 4.5 and 4.6 of this Addendum for discussions of air quality and noise, respectively.

4.4.2.2 *Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended*

As described in Section 4.1, the Project could accommodate approximately eight based aircraft. From Table 7, each based general aviation aircraft is projected to result in approximately 350 operations per year (i.e., 73,200 total annual general aviation operations ÷ 209 based aircraft = 350 annual operations per based aircraft). Applying this assumption to the number of annual general aviation operations shown in Table 7, the Project would result in 2,800 additional operations at SJC each year, which is equivalent to an average of eight operations each day. This volume equates to 0.8% of the aircraft operations assumed (and accounted for) in the 1997 Master Plan EIR and 1.1% of the aircraft operations projected in the amended Master Plan.

The calculated 2,800 annual Project-generated aircraft operations used in the analyses in this Addendum is conservative when compared to the estimated 20-30 annual operations anticipated by Signature. See Section 3, *Project Description*, for more information on Signature's estimate.

To validate that there are no changed conditions that would imply that the aircraft operations associated with the Project would cause general aviation operations to exceed that accounted for in the EIR, such operations were assessed in relation to current conditions at SJC. The actual number of general aviation operations in 2017 was 34,518. As shown in Table 9, if operations associated with the Project are added to existing operations, the total of 37,318 would be well below the level of operations analyzed in both the 1997 EIR and the 8th EIR Addendum.

TABLE 8

Aircraft Operations at SJC by Aircraft Type

	Average Daily Aircraft Operations		
Aircraft Type	**1997 Master Plan, as Disclosed in 1997 EIR**	**Master Plan, as amended in 2003 for Atlantic Aviation Expansion Project[1]**	**Master Plan, as amended in 2010 to Reflect Updated Forecasts**
Business Corporate Jets	57.25	135.80	134.70
Single Engine Piston	162.22	158.40	46.00
Twin Engine Piston	34.99	30.30	6.10
Twin Engine Turboprop	34.99	37.00	10.10
Helicopter	28.63	10.00	4.10
Airbus 318/319/320	12.05	40.00	94.30
Airbus 300/310 (air cargo)	3.28	3.00	8.40
Boeing 727-100/200	0.36	4.40	0
Boeing 737-100/200	0	5.00	0
Boeing 737-300/400/500/700/800/900	253.97	257.60	296.60
Boeing 757	61.56	51.00	7.90
Boeing 767	13.32	12.00	19.80
Boeing 777 and 787	8.33	14.00	1.80
DC-8/9	0.36	0.60	0
DC-10/MD-11	9.93	2.00	2.10
MD-80/81/82/83/87/88/90	130.50	81.00	2.00
Regional Jets	30.12	56.00	83.30
Regional Turboprops	178.69	6.00	5.30
Air Cargo Turboprops	0	0	0.20
Total Average Daily Operations	1,020.55	904.1	722.70
Total Annual Operations[2]	372,500	330,000	263,800
% Change from Volume Disclosed in 1997 EIR		**-11%**	**-29%**

[1]As compared to the 1997 EIR, these numbers reflected changes in the projected fleet mix at SJC based on industry practices and trends. These numbers did not change in 2006 when the City amended the Master Plan to extend the Master Plan horizon year from 2010 to 2017. For a discussion of the downturn in the economy and changes to the aviation industry that led to this extension, see Section 3.1 of the 6th Addendum to the 1997 Master Plan EIR.

[2]Rounded to the nearest 100.

Sources:

- Appendix 3.5.A of the 1997 Master Plan EIR
- Summary of Aviation Demand Forecasts (Ricondo & Associates, 2009)

In addition, there are currently 133 based general aviation aircraft at SJC, and under the projected 350 annual operations per based aircraft, there would be 133 x 350 = 46,550 annual operations. Were the current 133 based aircraft to increase their operations to this projected level, and adding in the annual 2,800 operations from the Project, the total of 49,350 annual operations would still be below the total operations analyzed in the 1997 Master Plan EIR and the Eighth EIR Addendum.

TABLE 9

Annual General Aviation Aircraft Operations

Scenario	# of Annual Operations
Existing (2017)	34,518
Project	2,800
Existing + Project	37,318
Analyzed in 1997 Master Plan EIR	115,300
Analyzed in 8th EIR Addendum for Amended Master Plan	73,200

Aircraft Types to be accommodated by the Project

As described in Section 3 of this Addendum, and consistent with the Airport Master Plan, the Project will focus on serving the business/corporate jet sector of the general aviation demand. Based on information provided to the City by Signature, the aircraft that are anticipated to be served by the Project will include many of the corporate general aviation aircraft types that are in widespread use in the United States. Examples include aircraft manufactured by Gulfstream, Cessna, Learjet, Bombardier, Dassault, Embraer, Hawker Beechcraft, Fairchild, Canadair, Piper, and Boeing. Aircraft sizes vary from small (e.g., four passengers) to large (e.g., Boeing 757 and 767).

The aircraft types that would be served by the Project currently operate at SJC, either as a based aircraft (i.e., the airplane's home is SJC) or as a transient aircraft (i.e., the plane flies into and out of SJC but is based elsewhere). This is also true for large aircraft such as the Boeing 717/727/737/747/757/767 and/or the Airbus 319/320/330, which are used by the passenger airlines, but some of which are configured as corporate planes. These larger corporate aircraft currently operate as transient general aviation aircraft at SJC, with servicing provided by existing FBOs at the Airport.

Most important, all of the aircraft types that would be served by the Project were accounted for in the EIR as shown in Table 8 and were evaluated in the various analyses (e.g., air quality and noise) undertaken for the Master Plan EIR, as supplemented and addended. This is discussed below in Section 4.5, *Air Quality*, and Section 4.6, *Noise*.

4.4.3 Conclusion

The Project will result in the construction of facilities in an area already identified for construction in the Master Plan and accompanying EIR. As discussed above, the Project will not result in 1) an

increase in activity levels at the Airport beyond that identified in the approved Master Plan, or 2) an increase in the capacity of the Airport beyond that identified in the approved Master Plan.

The Project will not result in any new significant transportation impacts and/or transportation impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant transportation impacts than were previously analyzed.

4.5 AIR QUALITY

4.5.1 Background

Section 3.4 of the 1997 Master Plan EIR quantified the emissions of air pollutants that would result from the implementation of the Master Plan. The analysis accounted for all aspects of activity at the Airport including aircraft operations, motor vehicle trips, the use of ground support equipment, fueling, building heating and cooling, and construction activities. For aircraft operations and motor vehicle trips, the quantification of emissions was based on the projected volumes of those activities, as described above in Section 4.4, *Transportation and Circulation*.

The 1997 EIR concluded that the implementation of the Master Plan would result in a significant increase in emissions of reactive organic gases (ROGs), oxides of nitrogen (NO_X) and particulate matter (PM_{10}). The EIR also concluded that concentration of NO_x due aircraft operations could exceed the State 1-hour standard in commercial areas north and south of the Airport (near the runways). As mitigation, the City adopted the following measures[12] to be used, as applicable, during the construction phase of all on-Airport capital improvement projects:

- Water all active construction areas at least twice daily;
- Cover all trucks hauling soil, sand, and other loose materials or require trucks to maintain at least two feet of freeboard;
- Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads, parking areas and staging areas at construction sites;
- Sweep daily all paved access roads, parking areas, and staging sites using wet power vacuum sweepers;
- Sweep streets daily, using wet power vacuum sweepers, if visible soil material is carried onto public streets;
- Hydroseed or apply soil stabilizers to inactive construction areas;
- Enclose, cover, water twice daily, or apply soil stabilizers to exposed stockpiles;
- Limit traffic speeds on unpaved roads to 15 mph;
- Install sandbags or other erosion control measures to prevent silt runoff to public roadways;
- Replant vegetation in disturbed areas as quickly as possible;

[12] These measures are listed in Section 3.4.3.1 of the 1997 EIR.

- Suspend excavation and grading activities when wind gusts exceed 25 mph;
- Provide rideshare and transit incentives or construction personnel;
- Install wheel washers for trucks or wash off the tires of trucks and equipment leaving the construction site;
- Install wind breaks, where feasible, at windward side(s) of construction areas;
- Designate a person or persons to oversee the implementation of the dust control program;
- Maintain and operate equipment so as to minimize particulates from exhaust emissions; and
- Prohibit trucks and equipment to idle without purpose for long periods.

As listed in Section 3.4.3.1 of the EIR, the City also agreed, as mitigation for air quality impacts, to the following:

- Encourage operators of vans, shuttles, rental cars, and cargo trucks to convert their vehicles to alternative fuels (e.g., electric or compressed natural gas [CNG]);
- Adopt a TSM Program to reduce trips made by single-occupant vehicles;
- Construct new/modified stationary sources (i.e., buildings and fueling facilities) to comply with latest rules and regulations of the Bay Area Air Quality Management District (BAAQMD); and
- Support the use of single- or reduced-engine taxiing by air carriers.

All of the above-listed measures have been, and continue to be, implemented and will be implemented by the Project since the Project will be required to comply with all mitigation measures in the Master Plan EIR and Addenda. In addition, beyond the above measures that were required mitigation from the 1997 EIR, the City has implemented a substantial number of additional measures and programs that have significantly reduced Airport-related emissions. These additional emission reduction measures are listed in Table 10 and, where applicable, will be implemented by the Project as described below in Section 4.5.2.

4.5.1.1 Motor Vehicle Emissions at SJC: Amended Master Plan versus 1997 Master Plan

As shown in Table 5 in Section 4.4, based on updated forecasts prepared in 2009, the volume of motor vehicle trips from all Airport-related activities is now projected to be 5.6% lower than that disclosed in the 1997 EIR. Since such emissions are directly tied to the number of vehicle trips, it can be inferred that motor vehicle-related emissions will be proportionately lower than that shown in the 1997 EIR. In addition, other changes that have occurred since 1997, such as the conversion of the entire Airport Shuttle Bus System from diesel-powered to CNG-powered buses, has further reduced ground transportation emissions from that originally projected.

4.5.1.2 Aircraft Emissions at SJC: Amended Master Plan versus 1997 Master Plan

As shown in Table 7 in Section 4.4, based on updated forecasts prepared in 2009, the number of aircraft operations under the approved Master Plan is now projected to be 29% lower than that disclosed in the 1997 EIR. Specifically, there will be 108,710 fewer aircraft takeoffs and landings at SJC each year, as compared to the assumptions contained in the EIR. Since such emissions are directly tied to the number

TABLE 10
SJC Air Pollutant & GHG Emissions Reduction Measures

Measure	Description and Benefits	Status
Free Shuttle Bus connecting SJC with VTA LRT Station and Santa Clara Caltrain Station	Encourages transit use - buses running every 10-15 minutes from 5:30 a.m. to midnight daily	Commenced in 1998 and is ongoing
Free Bus/Rail Passes: allows unlimited use of VTA bus & light rail transit (LRT) systems	Encourages transit use by all 3,500+ employees at SJC, including City, airline, rental car company, passenger terminal concessionaire, and other Airport tenant employees.	Commenced in 1998 and is ongoing
Reduced/Single-Engine Taxiing by Aircraft	All airlines encouraged to perform single or reduced engine taxiing to the extent determined safe and efficient, thus lowering emissions.	Commenced in 1998 and is ongoing
Airport Operations & Maintenance Vehicle Fleet: purchase only alternate-fuel vehicles	The Airport's current service fleet includes 10 CNG-powered and 15 electric-powered vehicles, which avoids gasoline & diesel emissions	Commenced in 2000 and is ongoing
Second Air Carrier Runway: extend Runway 12L/30R from 4,400 feet to 11,000 feet	Reduces delays, idling, queuing.	Completed in 2001
Electric Vehicle Public Charging Stations	Provided in Terminal A Garage.	Completed in 2001
On-Airport CNG Fueling Station	Services CNG shuttle buses, commercial vehicles, and is open for public use.	Completed in 2003
Alternative Fuels Program: Requires at least 25% of all taxi/van trips to/from SJC to be by low- or zero-emission vehicles; program facilitated by SJC and VTA grants.	Currently, out of 300 taxis permitted at SJC, 119 are CNG-powered and 3 are hybrids.	Commenced in 2005 and is ongoing
Cell Phone Waiting Lot	Designated free parking area to discourage drivers picking up passengers from circling around the Airport	Completed in 2007
Replace all Airport Diesel Shuttle Buses with 34 New CNG Buses	Substantially reduces the Airport's total diesel and other pollutant emissions.[13]	Completed in 2008
New Fuel Storage & Fuel Dispensing Facilities	Reduces emissions associated with fuel storage & handling equipment, as well as fuel truck movement on Airport roadways	Completed in 2009
Relocation/Consolidation of Rental Car Operations in new facility constructed adjacent to Terminal B.	Significantly reduces rental car vehicle movements and shuttle bus service to/from existing facility	Completed in 2010

[13] According to the U.S. Department of Energy's Energy Efficiency & Renewable Energy website, CNG-powered buses produce significantly less CO_2 emissions than diesel-powered buses. See www.afdc.energy.gov.

TABLE 10 (continued)		
Measure	**Description and Benefits**	**Status**
Photovoltaic System	1.12 megawatt photovoltaic solar electric system on roof of rental car garage.[14]	Completed in 2010
Upgrade on-Airport Roadways and Access: includes new I-880/Coleman interchange, new SR-87/Skyport interchange, Airport Blvd. improvements at Coleman, Skyport Dr., & Airport Pkwy entrances, and elimination of traffic signals	Substantially improve access, roadway capacity, and intersection levels of service	Completed in 2010
Ground Power, Battery Recharge Facilities, and Preconditioned Air at all Terminal Gates	Promotes airline conversion of GSE to electric power & phase-out of diesel APUs/GPUs	Completed in 2010
Construct New and Upgraded Terminal Buildings to achieve Leadership in Energy and Environmental Design (LEED) standards	Reduces emissions from building heating & cooling, hot water heating, etc.; lower electricity use will reduce offsite emissions	Completed in 2010 for Terminal B
Recycled Water System	South Bay Water Recycling system extended to passenger terminal area with dual plumbing in new terminal.	Underway
Commercial Vehicle Trip Fee: a fee is charged for each trip to the Airport	Reduces unnecessary vehicle trips	Ongoing
Taxi Dispatch System: requires taxis to park in designated areas until dispatched	Reduces engine idling	Ongoing
Public Transit Information: provided on Airport website and in Airport terminals	Encourages transit use	Ongoing
Construction Project Pollutant Emissions Abatement Program	Requires measures be included in all construction plans/specs to minimize emissions from construction vehicles and equipment	Ongoing
Lighting Replacement	Replace indoor & outdoor lights with energy-efficient bulbs & fixtures	Ongoing
Automated People Mover: will connect SJC to nearby LRT, Caltrain and future BART Systems	Would encourage additional transit usage	Future. Project design and funding to be determined.

CNG = compressed natural gas
GSE = ground service equipment
APU = auxiliary power unit
LRT = light rail transit
GPU = ground power unit

[14] According to the project's fact sheet, the annual production of the system is projected to be 1.7 million kilowatt hours of electricity, which will avoid 1,284 tons of CO_2 annually.

TABLE 11

Criteria Pollutant Emissions from Projected General Aviation Aircraft Operations
[Expressed in Average Pounds per Day]

	Aircraft Type					Total	% Change from Volume Disclosed in 1997 EIR
	Single-Engine Piston	Multi-Engine Piston	Turbo-props	Turbo-jets	Heli-copters		
1997 Master Plan, as disclosed in the 1997 EIR	[162.22 avg. daily operations]	[34.99 avg. daily operations]	[34.99 avg. daily operations]	[57.25 avg. daily operations]	[28.63 avg. daily operations]		
Carbon Monoxide	1,248	613	162	159	106	2,287	----
Hydrocarbons	14	20	136	51	48	269	----
Nitrogen Oxides (NO_x)	2	2	9	29	40	84	----
Sulfur Oxides (SO_x)	1,150	664	2,281	4,445	5,940	14,480	----
Master Plan, as amended in 2003 for Atlantic Aviation Expansion	[158.40 avg. daily operations]	[30.30 avg. daily operations]	[37.00 avg. daily operations]	[135.80 avg. daily operations]	[10.00 avg. daily operations]		
Carbon Monoxide	1,218	531	171	376	37	2,333	+ 2%
Hydrocarbons	13	17	144	121	17	312	+ 16%
Nitrogen Oxides (NO_x)	2	2	9	70	14	98	+ 17%
Sulfur Oxides (SO_x)	1,123	575	2,412	10,544	2,075	16,728	+16 %
Master Plan, as amended in 2010 to Reflect Updated Forecasts for Year 2027*	[46.00 avg. daily operations]	[6.10 avg. daily operations]	[10.10 avg. daily operations]	[134.70 avg. daily operations]	[4.10 avg. daily operations]		
Carbon Monoxide	354	107	47	373	15	896	- 61%
Hydrocarbons	4	4	39	120	7	173	- 35%
Nitrogen Oxides (NO_x)	1	0	3	69	6	79	- 6%
Sulfur Oxides (SO_x)	326	116	658	10,458	851	12,409	- 14%

Notes:

- Emissions calculated using aircraft emission factors per landing-takeoff (LTO) cycle, as contained in Appendix 3.4.A of the 1997 EIR, such factors published by the U.S. EPA.
- Numbers in [ ] are the average daily operations by each aircraft type under a given scenario.
- Daily emissions data are rounded to the nearest pound.
- Numbers may not total due to rounding.

* Emissions from the Project are accounted for in these data.

Sources:

- Appendix 3.5.A of the 1997 Master Plan EIR
- Summary of Aviation Demand Forecasts (Ricondo & Associates, 2009)

of aircraft operations, it can be inferred that aircraft-related emissions will be proportionately lower than that shown in the 1997 EIR, all other factors being equal.

The above paragraph notwithstanding, it is recognized that the current and projected composition of the general aviation fleet is different from that analyzed in the 1997 EIR. Specifically, there is a substantially higher percentage of larger corporate jets and a substantially lower percentage of small piston-powered aircraft than originally analyzed. Therefore, to verify the conclusion of the previous paragraph, the emissions from the updated general aviation aircraft fleet mix and level of operations were calculated and compared what was assumed in the 1997 EIR. The results of these calculations are shown in Table 11.

The data in Table 11 show that general aviation aircraft emissions will in fact be lower under the amended Master Plan, which accounts for the emissions from the Project, for all criteria pollutants, as compared to the emissions disclosed in Section 3.4 of the 1997 EIR.

Similarly, toxic air contaminant (TAC) emissions from the updated SJC aircraft fleet mix and level of operations were calculated and compared to what was assumed in the 1997 EIR. The results of this comparison are shown in Table 12. The data show that TAC emissions will be lower under the amended Master Plan, which accounts for the emissions from the Project, as compared to the TAC emissions disclosed in Section 3.4 of the 1997 EIR.

TABLE 12

Toxic Air Contaminant Emissions from Projected Aircraft Operations
[Expressed in Pounds per Year]

Contaminant	1997 Master Plan, As Disclosed in 1997 EIR	Master Plan, as Amended in 2010 to Reflect Updated Forecasts*	% Change from Impact Disclosed in the 1997 EIR
Acetaldehyde	220	56	- 75 %
Acrolein	0	0	0
Benzene	2,290	1,719	- 25 %
1, 3 Butadiene	0	0	0
Chlorobenzene	0	0	0
Formaldehyde	330	84	- 75 %
PAH	0	0	0
Propylene	998	254	- 75 %
Toluene	1,312	334	- 75 %
Xylenes	41,831	35,898	- 14 %

* Emissions from the Project are accounted for in these data.

Sources:

- Appendix 3.5.A of the 1997 Master Plan EIR
- Summary of Aviation Demand Forecasts (Ricondo & Associates, 2009)

4.5.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

4.5.2.1 *Emissions during Construction*

The Project site is located on the westerly side of the Airport. Surrounding land uses are industrial and commercial. The closest residences are more than one-half mile from the site.

The construction phase of the Project will involve the clearing of the site, which will consist of the removal of the existing asphalt surface parking lot formerly used for employee and public parking. After the site is cleared and graded, construction of the improvements (i.e., building, parking, landscaping, aircraft apron, etc.) will commence. Similar to all construction projects, these activities will generate air pollutants in the form of dust, emissions from construction equipment, emissions from vehicles driven by construction workers, emissions from solvents, etc.

These emissions were disclosed and accounted for in the 1997 EIR. The Project site itself was assumed in the EIR to be developed for air cargo facilities, the construction of which would be the same as those proposed by the Project with respect to construction-generated emissions. As with the construction of all capital improvement projects at the Airport, the Project will implement all mitigation measures listed in the 1997 EIR that will reduce emissions, all of which are described above in Section 4.5.1.

4.5.2.2 *Emissions from Stationary Sources*

The Project is being designed to be certified as a "LEED Silver" facility. The Leadership in Energy and Environmental Design (LEED) Program was established by the U.S. Green Building Council to support the development of environmentally responsible and resource-efficient projects. Projects that received LEED certification are typically more energy-efficient and have fewer environmental effects (e.g., emissions) than those projects that simply meet the minimum standards of most building codes. LEED-related measures to be included in the Project will include the following:

- development density and community connectivity;
- public transportation access;
- bicycle storage and changing rooms;
- low-emitting and fuel efficient vehicles;
- water efficient landscaping; water use reduction;
- optimizing energy performance;
- green power;
- construction waste management;
- indoor environmental quality measures; and
- exemplary construction waste diversion and green power.

For example, a LEED-certified building will use a combination of building orientation, design, materials, and efficient heating/cooling systems to reduce energy costs. Low-flow plumbing fixtures will be installed, as will energy-efficient lighting fixtures and bulbs. Each energy-conserving feature

incorporated into the Project earns points under the LEED rating system, with the point system taking into account the degree to which a measure saves energy and/or implements specified environmental goals and objectives.

LEED certification was not assumed in the 1997 EIR. Therefore, emissions associated with the stationary sources to be constructed by the Project will be less than that disclosed and accounted for in the EIR.

4.5.2.3 *Emissions from Motor Vehicles*

As described above in Section 4.4, the Project will generate traffic trips in an amount less than considered in the 1997 EIR and Eighth EIR Addendum. The emissions associated with all Airport-generated traffic (both baseline and projected) were quantified and disclosed in the 1997 EIR. The 1997 EIR found that there would be no carbon monoxide "hot spot" caused by development of the Master Plan and the Project's traffic is less than analyzed in the 1997 EIR.

The Project will comply with the above-described TSM Program, a mitigation measure included in the EIR for the purpose of reducing trips (and therefore emissions). Further, all employees of the Project will be provided with free transit passes (known as VTA ECO Passes). In addition, the Project will be LEED Silver certified and will further reduce mobile emissions due to low-emission and fuel-efficient vehicles, including ground service equipment, to be used at the FBO.

4.5.2.4 *Emissions from Aircraft*

As described above in Section 4.4, the Project will result in additional aircraft operations in an amount equivalent to 0.8% of the operations assumed (and accounted for) in the 1997 Master Plan. The emissions associated with all aircraft emissions (both baseline and projected) were quantified and disclosed in the 1997 EIR. Further, although the general aviation aircraft fleet mix has evolved since the 1997 EIR to where there is now a substantially higher percentage of corporate jets versus piston aircraft, the data in Table 11 show that emissions of criteria air pollutants would still be within the total shown in the EIR. Similarly, the date in Table 12 show that TAC emissions from all aircraft operations at SJC would still be within the total shown in the EIR. Therefore, aircraft operations emissions from the Project will be consistent with the 1997 EIR.

To validate that there are no changed conditions, see Table 9, which shows that existing (calendar year 2016) general aviation operations, in combination with the additional operations that will result from the Project, will be less than half that assumed and analyzed in the 1997 EIR.

4.5.3 **Conclusion**

The Project will result in the construction of facilities in an area already identified for construction in the Master Plan and accompanying EIR. As discussed above, the Project will not result in 1) an increase in emissions levels at the Airport beyond that identified in the approved Master Plan, or 2) an increase in the capacity of the Airport beyond that identified in the approved Master Plan.

The Project will not result in any new significant air quality impacts and/or air quality impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant air quality impacts than were previously analyzed.

4.6 NOISE

4.6.1 Background

Section 3.5 of the 1997 EIR presented an extensive analysis of the noise impacts of the Master Plan, with a focus on the noise impacts to the community from aircraft operations. The noise analysis was based on the projected number of takeoffs and landings at build-out of the Master Plan (see list in Table 8 of this Addendum), which at the time was projected to occur by year 2010. The analysis was undertaken per FAA guidelines and methodology and included the use of FAA's Integrated Noise Model (INM). The analysis accounted for aircraft types, flight patterns, aircraft destinations, and time of day. Per FAA methodology, each aircraft operation occurring between 7 pm and 10 pm was counted as three operations, and each aircraft operation occurring between 10 pm and 7 am was counted as ten operations. This weighting accounts for the fact that noise occurring during evening and nighttime hours has a greater potential for disturbance than that occurring during daytime hours.

The 1997 EIR concluded that aircraft noise due to implementation of the Master Plan would result in significant noise impacts. Exterior noise impacts were determined to be unavoidable. Interior noise impacts were mitigated through the implementation of the Airport's Noise Control Program. The Noise Control Program includes:

- Airport Curfew: Restricts takeoffs and landings between 11:30 pm and 6:30 am to aircraft with FAA-certified composite noise levels of 89 decibels or less.[15]

- Acoustical Treatment Program: This program, which was completed in 2009, provided soundproofing to 2,675 residences and four schools in the Airport vicinity.

- Jet Aircraft Training: Jet aircraft training is prohibited at SJC.

- Engine Run-Ups: High power testing of jet engines (known as run-ups) during curfew hours is restricted.

[15] Curfew originally restricted operations based on the weight of an aircraft, which assumed that the larger the aircraft, the more noise it produces. With current technology, the correlation between size and noise level is no longer accurate. Therefore, in 2003, with FAA approval, the City revised the curfew criteria from one that was weight-based to one that is noise-based. The 89.0-decibel level was chosen because it duplicated the weight-based criterion as closely as possible. Details are contained in the Third EIR Addendum (October 2003).

In 2003, the City completed a Supplemental EIR for the Master Plan because it was determined, based on data collected subsequent to 1997, that noise impacts would be substantially greater than that disclosed in the 1997 EIR. The 2003 Supplemental EIR reached the same conclusions and included the same mitigation as the 1997 EIR; the difference between the two documents was that the "noise footprint" of the Airport on the community was substantially larger in 2003 (see Table 13). A minor update to the 2003 Supplemental EIR noise analysis also took place in 2003 to account for a 6-acre expansion of general aviation facilities by Atlantic Aviation.

In 2010, the City amended the Master Plan to reflect the revised aviation forecasts, as summarized in Section 4.4 of this Addendum. Prior to approving the amendment the City prepared the Eighth EIR Addendum, which included a revised noise analysis. The noise analysis was updated because the revised forecasts revealed substantial changes in both the aircraft fleet mix and the projected number of operations by each aircraft type; these changes are shown in Table 7 of this Addendum. As shown in Table 13, the revised noise analysis in the Eighth EIR Addendum calculated a substantial decrease in the size of the Airport's noise footprint, as compared to that shown in the 2003 Supplemental EIR, as amended. This decrease was due to the combination of 1) fewer total operations and 2) the greater use of newer/quieter aircraft.

TABLE 13

Comparison of Airport's Noise Footprint
[Expressed in Acres]

	1997 Master Plan, as Disclosed in 1997 EIR	**2003 Supplemental EIR, as amended for Atlantic Aviation Expansion Project**	**Master Plan, as amended in 2010 to Reflect Updated Forecasts**	**% Change from Impact Disclosed in 2003 Supplemental EIR, as amended**
Area within 65 dB Noise Contour	2,409	3,632	2,615	**- 28%**
Area within 60 dB Noise Contour	5,653	9,422	6,428	**- 32%**

Sources:
- Section 3.5 of the 1997 Master Plan EIR
- Section 2.2 of 2003 Master Plan Supplemental EIR
- Section 4.5 of 2nd Addendum to 1997 Master Plan EIR
- Section 4.5 of 8th Addendum to 1997 Master Plan EIR

In addition to aircraft noise, the 1997 Master Plan EIR evaluated noise impacts associated with the projected increase in motor vehicle traffic. The evaluation concluded that such impacts would not be significant because increase in traffic noise would not exceed 0.1 decibels. Therefore, no mitigation for traffic-generated noise was proposed or required.

The 1997 Master Plan EIR also evaluated the impacts of construction noise. The analysis concluded that construction noise would not be significant because of the distance between any location on the Airport and the closest residences would be a minimum of 800 feet.[16] Therefore, no mitigation for construction-generated noise was proposed or required.

4.6.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

4.6.2.1 *Noise during Construction*

The Project site is located on the westerly side of the Airport. Surrounding land uses are industrial and commercial, as well as the airfield. The closest residences are more than one-half mile west of the site. In addition, there are numerous intervening buildings and other structures between the Project site and the closest residences, which would further reduce noise. Therefore, noise impacts during the construction phase of the Project would not be significant.

4.6.2.2 *Noise from Stationary Sources and Ground Operations*

The Project will generate noise associated with the taxiing, servicing, fueling, and maintenance of aircraft. Noise will also be emitted from equipment used to heat and cool the buildings and hangars. This noise would be compatible with the adjacent commercial and industrial uses, as well as the airfield itself. Such noise would have the potential to create impacts if there were nearby noise-sensitive land uses such as residences. As noted above, however, there are no such uses nearby; the closest residences are more than one-half mile to the west of the Project site, with numerous intervening buildings and structures.

It is also important to note that the Project site was originally designated in the Master Plan for air cargo facilities. The noise from air cargo facilities would be comparable to that associated with the Project because the air cargo operations would involve the taxiing, servicing, and fueling of large commercial jet aircraft, as well as the loading, unloading, and transport of cargo.

Therefore, noise from the Project's stationary sources and ground operations would not be significant and would be consistent with that disclosed in the 1997 EIR.

4.6.2.3 *Noise from Motor Vehicles*

As described above in Section 4.4, the Project will generate additional traffic in an amount the same as projected in the 1997 EIR. Since the 1997 EIR concluded that all Airport-generated traffic combined would not result in a significant noise increase, the Project's noise increase from traffic would result in an impact consistent with the prior environmental review.

[16] The closest neighborhood is Rosemary Gardens, which is located on the far side of the Guadalupe River and the SR 87 freeway from the easterly boundary of the Airport.

4.6.2.4 *Noise from Aircraft*

As described above in Section 4.4, the Project will result in additional aircraft operations in an amount equivalent to 0.8% of the operations assumed and accounted for in the 1997 Master Plan EIR and 1.1% of the aircraft operations assumed and accounted for in the amended Master Plan/Eighth EIR Addendum. The noise impacts associated with all aircraft operations (both baseline and projected) were quantified and disclosed in the 2003 Supplemental EIR, as amended. Pursuant to FAA procedures for the analysis of noise at airports, all of the noise analyses in the Master Plan EIR, 2003 Supplemental EIR, and the EIR Addenda employ nighttime weighting factors.

With regard to aircraft types that would be based at, and serviced by, the facilities to be constructed by the Project, most will be business corporate jets, which is consistent with the Master Plan forecasts (see Section 2.2.1.5). Signature Flight Support, the Project applicant, has indicated that the aircraft that are anticipated to be served by the Project will include many of the corporate aircraft types that are in widespread use in the United States. Signature has designed the proposed facility to cater to this segment of the market. Examples of aircraft to be served by the Project include those manufactured by Gulfstream, Cessna, Learjet, Bombardier, Dassault, Embraer, Hawker Beechcraft, Fairchild, Canadair, Piper, and Boeing.

The aircraft types that would be served by the Project currently operate at SJC, either as a based aircraft (i.e., the airplane's home is SJC) or as a transient aircraft (i.e., the plane flies into and out of SJC but is based elsewhere). This is also true for large aircraft such as the Boeing 717/727/737/747/757/767/787 and/or the Airbus 319/320/330, which are used by the airlines, but some of which are configured as corporate planes. These larger corporate aircraft currently operate at SJC as general aviation aircraft, with servicing provided by existing FBOs at the Airport.

The fact that most of the aircraft associated with the Project would be corporate jets is consistent with the latest fleet mix forecasts for general aviation, which were reflected in the updated noise analysis contained in the Eighth EIR Addendum (2010). This greater percentage of corporate aircraft in the latest forecasts is reflected in the data in Tables 4 and 8, as well as in the latest numbers of based aircraft at SJC.

Most important, all of the aircraft types that would be served by the Project were accounted for in the noise analyses undertaken for the Master Plan EIR, as supplemented and addended.[17]

Aircraft Operations during the Curfew

The City adopted a Noise Control Program for SJC in 1984, a key component of which are time-of-day restrictions on certain aircraft operations, commonly referred to as the "curfew."[18] The Project

[17] Source: Brown-Buntin Associates letter to David Powers & Associates, October 15, 2013, a copy of which is contained in Appendix C of the Tenth Addendum.

[18] For an extensive background discussion on the curfew, including a 2003 revision to the criteria under which certain aircraft are permitted to operate during the curfew, please see Section 3 of the Third Addendum to the Master Plan EIR (October 2003).

does not propose to modify the curfew. It is important to note, however, that some of the corporate jets that currently operate at SJC, which would also be served by the Project, are permitted to operate during SJC's curfew hours (11:30 pm to 6:30 am) because their FAA-certified composite noise level is 89 dB or less (see Section 4.5.1, above, for details).[19] Such operations are accounted for in all of the noise analyses undertaken for the EIR, Supplemental EIR and EIR Addenda. Specifically, curfew operations are input to the noise model as a "night operation," wherein each operation is counted/weighted as 10 operations. Such weighting is in accordance with FAA procedures and accounts for the increased sensitivity of noise occurring during such time periods.

From Table 8, the data indicate that the average number of daily operations by corporate jets at SJC in 2027 is projected to be 134.7. Of this total, the projected breakdown by time-of-day is as follows:

- 80% daytime (7 am to 7 pm)
- 10% evening (7 pm to 10 pm) - each operated counted/weighted as three operations
- 10% night (10 pm to 7 am) - each operated counted/weighted as ten operations

As noted above, these assumptions were input into the noise analysis (Brown-Buntin Associates, 2010).

Consistent with existing requirements, all aircraft operators and pilots associated with the Project will be mandated to comply with the provisions of the Airport's curfew. The Project's lease does not include an eviction remedy for curfew violations and consequently other FBOs at the Airport will also no longer have an eviction remedy. The City has never used the eviction provision and instead have imposed a $2,500 fine to successfully deter repeat non-compliance. The curfew remains a completely enforceable provision under the City's Municipal Code. The City will still enforce its curfew through fines as well as other litigation remedies which it has used in the past. The noise analysis assumed compliance with the noise ordinance and compliance is still assumed as the noise ordinance will contain the same restrictions and will be enforced. Therefore, the nighttime levels of noise caused by the Project are the same as previously analyzed.

To summarize, some aircraft that will likely be based at the Project's facilities, or will likely be served by the Project's facilities, may operate during the curfew because they meet the 89-decibel noise criterion. Such aircraft do so under existing conditions at SJC, but the frequency of such operations will likely increase under the Project by virtue of the fact that the Project is intended to serve more of the general aviation demand. These aircraft operations and the associated noise impacts are accounted for in the noise analyses undertaken in the 1997 EIR, 2003 Supplemental EIR, and various EIR Addenda.

[19] The list of such aircraft is published on the Airport's website. The list is also available via publications and notices provided to all pilots and aircraft operators as part of standard flight planning procedures.

4.6.3 Conclusion

The Project will result in the construction of facilities in an area already identified for construction in the Master Plan and accompanying EIR. As discussed above, the Project will not result in 1) an increase in noise levels at the Airport beyond that identified in the approved Master Plan, or 2) an increase in the capacity of the Airport beyond that identified in the approved Master Plan.

The Project will not result in any new significant noise impacts and/or noise impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant noise impacts than were previously analyzed.

4.7 HYDROLOGY AND WATER QUALITY

4.7.1 Background

Section 3.6 of the 1997 Master Plan EIR disclosed that portions of the Airport were within a 100-year floodplain and, therefore, construction within such areas could result in flooding impacts until such time as a planned flood control project along the Guadalupe River was constructed. The flood control project was subsequently completed by the Santa Clara Valley Water District and U.S. Army Corps of Engineers.

The 1997 EIR also disclosed that the capital improvement projects to be constructed under the Master Plan, which included the temporary paved parking lot on the Project site, would increase the acreage of paved surfaces at SJC. The additional paved areas would result in an increase in the volume of stormwater runoff, which in turn could result in localized flooding. In addition, the increased stormwater runoff would likely contain pollutants that would degrade the water quality of the Guadalupe River since the City's storm drainage system discharges into the river. Mitigation was identified for these impacts, consisting of increasing the capacity of on-Airport stormwater storage areas (i.e., open areas between the runways and taxiways) and the continued implementation of the Airport's Stormwater Pollution Prevention Plan (SWPPP) in accordance with the City's National Pollution Discharge Elimination System (NPDES) permit issued by the Regional Water Quality Control Board (RWQCB).

The 1997 EIR noted that during the construction phase of capital improvement projects at the Airport, there was a potential for sediment and other pollutants to enter storm drains, which could degrade water quality. The EIR noted that projects would, however, be required by City's NPDES permit to utilize best management practices (BMPs) during construction. The BMPs would serve to minimize the potential for pollutants to enter storm drainage systems.

Subsequent to the completion of the 1997 EIR, the regulations pertaining to the control of both the volume and content of stormwater runoff have become substantially more stringent in an effort to

improve water quality in California streams and bodies of water. The latest NPDES permit issued by the RWQCB requires San Jose and other municipalities to reduce stormwater pollution through source control measures and stormwater treatment measures. City Policy 6-29 mandates compliance with the NPDES permit for all projects meeting certain criteria. Currently, projects that create or replace 10,000 square feet or more of impervious surface, which includes the Project, are required to use site design and source control measures and numerically-sized low impact development (LID) stormwater treatment measures.

To summarize, the current stormwater pollution control requirements constitute mitigation beyond that identified in the 1997 EIR, so the net effect is that stormwater runoff from new projects is now having less impact than projects that would have complied with the mitigation required in 1997. As described in the following section, the Project will implement the current (and more stringent) stormwater pollution control measures that are part of the latest NPDES permit.

4.7.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project will construct general aviation facilities, including a hanger, an aircraft parking apron, and vehicle parking on a 3.72-acre site. The site is currently paved as a surface parking lot.[20] When the parking lot was constructed, the provisions of the NPDES permit in effect at the time were implemented. The Project will also relocate an existing service road adjacent to the site.

The Project site is not located within a 100-year floodplain.

During both the construction and operational phases, the Project will implement the Airport's SWPPP, which includes BMPs that are designed to prevent sediment and other pollutants from entering storm drainage systems. This is the water quality mitigation identified in the 1997 EIR, as summarized above in Section 4.7.1.

Table 14 compares existing and post-Project impervious and pervious surfaces on the Project site. The data in Table 14 show that the overall percentage of impervious surfaces on the site will decrease due to the Project.

Per the current NPDES requirements described above, and as described in the Project's Site Development Permit application, the Project will treat stormwater runoff as follows:

- The landside portion of the Project (i.e., the open public areas such as the parking lot, driveways, and pedestrian areas) will drain to bioswales located on the southern side of the proposed hangar and on the southern side of the proposed parking lot adjacent to Martin Avenue. The bioswales will connect to the Airport's existing underground storm drainage system. The bioswales will be sized and designed to provide treatment of the drainage from the entire landside portion of the Project.

[20] There is a narrow unpaved strip adjacent to the sidewalk along Martin Avenue, which equates to 9% of the Project site. The remainder of the site is paved.

TABLE 14

Pervious and Impervious Surfaces on the Project Site

Site Surface	Existing/Pre-Construction (sf)	%	Project/Post-Construction (sf)	%	Difference (sf)	%
Impervious Surfaces						
Buildings	0	0	34,000	19.1	+ 34,000	+ 19.1
Hardscape	159,078	89.3	102,730	57.7	- 56,348	- 31.6
Subtotal	159,078	89.3	136,730	76.8	- 22,348	- 12.5
Pervious Surfaces						
Landscaping or Other Pervious	19,087	10.7	41,435	23.2	+ 22,348	+ 12.5
Totals:	178,165	100.0	178,165	100.0		

Notes:
Percentages in this table are rounded to the nearest tenth.
The total area analyzed in this table includes areas outside of the 3.72-acre project site boundary where ground disturbing activities will occur, such as the proposed service road and the landscape strip adjacent to Martin Avenue.

- The airside portion of the Project (i.e., aircraft apron) will drain toward a bioswale located between the proposed apron and the proposed realigned service road. This bioswale will connect to the Airport's existing underground storm drainage system and will be sized and designed to provide treatment of the drainage from the entire airside portion of the Project.

To summarize, as described above, the Project will comply with current stormwater pollution treatment requirements. Such requirements are more stringent than the stormwater treatment mitigation measures contained in the 1997 Master Plan EIR. Therefore, the stormwater runoff impacts of the Project will be less than that described in the 1997 EIR.

4.7.3 Conclusion

The Project will result in the construction of facilities at a location already constructed as a parking lot under the Master Plan and accompanying EIR. The Project will not result in any new significant hydrologic or water quality impacts and/or hydrologic or water quality impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. In fact, current requirements pertaining to the treatment of stormwater that will be implemented by the Project will exceed the stormwater mitigation measures contained in the Master Plan EIR. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant hydrologic or water quality impacts than were previously analyzed.

4.8 GEOLOGY AND SEISMICITY

4.8.1 Background

Section 3.7 of the 1997 Master Plan EIR disclosed that 1) there are weak and/or expansive soils at SJC, and 2) the entire area is subject to strong groundshaking in the event of a major earthquake on one of the region's active faults. The EIR concluded that these conditions represent hazards that could lead to substantial property damage and/or harm to humans if buildings and other facilities (e.g., fuel storage) were not designed to account for these hazards. Mitigation listed in the EIR stated that all facilities will adhere to applicable building codes, consistent with standard engineering practice to achieve an acceptable level of risk. For fuel storage facilities, the mitigation states that their design will comply with the Above-Ground Petroleum Storage Act, National Fire Protection Association standards, the California Pipeline Safety Act, and other applicable statutes.

4.8.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

According to a geotechnical hazards map prepared for the City of San Jose, the Project site contains soils with "high" expansive properties (Cooper-Clark Associates, 1974). In addition, the Project site, similar to the entire region, will be subject to strong groundshaking in the event of a major earthquake on an active fault. Thus, the geologic and seismic conditions at the Project site are as described in the 1997 Master Plan EIR.

As required by the mitigation listed in the EIR, the building that will be constructed by the Project will comply with current building and seismic safety codes. Consistent with the 1997 EIR's findings, these mitigation measures will reduce the impact to less-than-significant.

4.8.3 Conclusion

The Project will result in the construction of facilities at a location already identified for construction in the Master Plan and accompanying EIR. The Project will not result in any new significant geologic or seismic impacts and/or geologic or seismic impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant geologic or seismic impacts than were previously analyzed.

4.9 BIOLOGICAL RESOURCES

4.9.1 Background

Section 3.8 of the 1997 EIR disclosed the impacts of the Master Plan on biological resources. The analysis found two key areas where significant impacts would occur:

- Impacts to the biological habitat along the Guadalupe River due to construction of a new bridge over the river and due to the proximity of a new fuel storage facility adjacent to the river.
- Impacts to the burrowing owl (a California species of special concern) and its habitat due to construction of capital improvement projects at the Airport.

With regard to the first area, the Guadalupe River is located on the opposite side of the Airport from the Project site and will not be affected by the Project. Therefore, the remainder of this discussion will focus on the burrowing owl as it is germane to the Project site.

Since the construction of the capital improvement projects identified in the Master Plan would result in the net loss of approximately 38 acres of potential owl nesting habitat at the Airport, the 1997 EIR concluded this impact would be significant. As mitigation identified in the EIR, the City developed and adopted a comprehensive Burrowing Owl Management Plan (BOMP), which avoids harm to individual owls by moving them out of construction impact zones and by keeping them out of runway safety areas. The BOMP includes areas set aside at the Airport for the owls to nest and forage, which are designated as burrowing owl management areas. The BOMP also includes measures for monitoring and the replacement of natural burrows with artificial burrows at the Airport.

All of the required actions listed in the BOMP have been implemented on an ongoing basis since 1997 under the direction of a qualified biologist. This includes preconstruction surveys, owl relocations, artificial burrow construction, habitat enhancement, banding, monitoring, and reporting. The Airport currently employs a full-time biologist to oversee the BOMP and to undertake other duties related to wildlife.

4.9.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project will be constructed on a site that is almost entirely paved. The exception is a narrow unpaved strip along the westerly edge of the site, adjacent to the curb of Martin Avenue, that is devoid of trees and shrubs. Additionally, between the Project site and existing Taxiway V there is an unpaved area approximately 1.3 acres in size that could potentially be used by burrowing owls for shelter and nesting. A portion of this area (roughly 2,200 ft^2) will be paved to accommodate a slight shifting of the alignment of the existing service road to the east. The portion to be paved will no longer function as potential burrowing owl habitat. This loss of habitat was anticipated and accounted for in the 1997 EIR because this site was originally planned for development with air cargo facilities.

Construction activities associated with the Project could harm individual owls if they are present within the impact area. Accordingly, the Project will implement the mitigation identified in the EIR to protect owls, as contained in the BOMP. Specifically, the areas to be disturbed will be surveyed by a biologist prior to the commencement of construction. Any natural burrows located within the construction impact zone will be identified and closed. One-way doors will be installed for at least 48 hours prior to the closing of any natural burrows so as to avoid trapping any owls. To avoid impacts during the nesting season, the burrows will be closed prior to February 15th of the year in which ground disturbance is scheduled to take place.

4.9.3 Conclusion

The Project will result in the construction of facilities at a location already identified for construction in the Master Plan and accompanying EIR. The Project will not result in any new significant biological resources impacts and/or biological resources impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant biological resources impacts than were previously analyzed.

4.10 ENERGY SUPPLY AND NATURAL RESOURCES

4.10.1 Background

Section 3.9 of the 1997 EIR evaluated the effects of the Master Plan with regard to energy consumption and the use of non-renewable resources. The analysis concluded that the use of energy and natural resources would not be "wasteful" and therefore the impact would not be significant. This conclusion took into account the fact that all new and renovated buildings at the Airport would comply with the energy efficiency standards contained in Title 24 of the *California Code of Regulations*. Based on this conclusion, no mitigation was identified.

4.10.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project will construct a building consisting of a 30,000 ft^2 aircraft hangar and 4,000 ft^2 of office space. There will also be parking areas for both motor vehicles and aircraft, which will include nighttime lighting. These facilities will utilize energy in various forms for heating, cooling, lighting, equipment operation, aircraft servicing, etc. The facilities will comply with the energy efficiency standards of Title 24, consistent with the assumption used in the 1997 EIR.

In addition, the Project is being designed to be certified as a "LEED Silver" facility. The Leadership in Energy and Environmental Design (LEED) Program was established by the U.S. Green Building Council to support the development of environmentally responsible and resource-efficient projects. Projects that received LEED certification are typically more energy-efficient than those projects that simply meet the minimum standards contained in Title 24. Section 4.5.2.2 of this Addendum lists the LEED-related, energy-reducing, measures that are part of the Project.

LEED certification was not assumed in the 1997 EIR. Therefore, energy usage associated with the facilities to be constructed by the Project will be less than that disclosed and accounted for in the EIR As discussed in Section 4.4, *Transportation and Circulation*, the Project will not result in an increase in ground traffic and/or air traffic beyond that identified in the 1997 Master Plan EIR, nor will the Project increase the capacity of SJC beyond that identified in the 1997 EIR. Therefore, energy consumption associated with these activities will not exceed the levels disclosed in the 1997 EIR.

4.10.3 Conclusion

The Project will not result in any new significant energy impacts and/or energy impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant energy impacts than were previously analyzed.

4.11 AESTHETICS

4.11.1 Background

Section 3.10 of the 1997 EIR analyzed the visual and aesthetic impacts of the projects to be constructed as part of the Master Plan. The EIR assessed the effects of a variety of new structures including terminals, hangars, 8-story parking garages, jet blast fences at the ends of the runways, lighting, and an above-ground fuel storage facility. The purpose of the analysis was to determine if the masses and heights of these facilities would block scenic views, substantially alter the visual character of the area, and/or be incompatible with the surrounding land uses. This analysis took into account the fact that the land uses adjacent to SJC are commercial and industrial, as well as the presence of three major freeways (U.S. 101, SR 87, and I-880).

With regard to the Project site on the west side of the Airport, the 1997 EIR assumed it would be developed with new air cargo facilities. The air cargo facilities would have included buildings with heights of approximately 80-90 feet in order to service the wide-body jet aircraft commonly used by the Airport's all-cargo carriers (e.g., Fedex and UPS). These wide-body cargo aircraft include the Airbus A-300, the McDonnell-Douglas DC-10 and MD-11, and Boeing 767.

The analysis in the Master Plan EIR concluded that only the above-ground fuel storage facility, consisting of eight 500,000-gallon above-ground tanks, would result in a significant aesthetic effect. This conclusion was based on the fact that the tanks would be located next to (and easily visible from) U.S. 101, a designated scenic highway. Mitigation in the form of screening between the tanks and the freeway was identified.

4.11.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project site is located on the west side of SJC and is currently an unused surface parking lot. The site is bordered by the airfield, the FAA air traffic control tower (height = 109 feet), four FAA communication towers (height = 90 feet), an existing FBO, and commercial uses. The closest residences are more than one-half mile from the site. The site is devoid of vegetation. The existing visual/aesthetic character is typical of a developed, urban environment. See Figure 3 (aerial photo) and Photos 1 and 2.

Photo 1: View of Project site looking to the north from the southerly border with the existing FBO hangars in the background.

Photo 2: View of Project site from Martin Avenue, looking to the northeast.

4.12.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

As discussed in Section 4.4, *Transportation and Circulation*, the Project will not result in an increase in aviation activity beyond that identified in the 1997 Master Plan EIR, nor will the Project increase the capacity of SJC beyond that identified in the 1997 EIR. Therefore, the demand for public services and utilities associated with these activities will not exceed the levels disclosed in the 1997 EIR.

The Project site is served by existing utility systems, including electric, natural gas, cable, phone, storm drain, and sanitary sewer. The existing systems are located along Martin Avenue and on the Airport. The on-site utilities to be constructed by the Project would connect to these existing systems. The Project would not require the extension or expansion of utility systems to serve the expanded FBO.

The Project proposes to demolish the existing parking lot and replace it with a FBO to serve general aviation aircraft. The FBO will include one 46-foot tall aircraft hangar. Elevations are shown on Figure 5.

The building to be constructed would be compatible with the adjacent commercial and aviation uses, which includes six hangars of the same height and size as well as one hangar 86 feet in height and 60,000 ft^2 in size. The building would be substantially lower than the adjacent FAA air traffic control tower (height = 109 feet) and the four adjacent communication towers (height = 90 feet). The proposed building is not adjacent to a designated scenic highway and there would be no substantial adverse effect on any scenic vistas. While the Project site would be transformed from a surface parking lot to a site with a building, the existing character of the area would remain as it is today, which is a developed, urban environment.

Finally, as noted above, the Project site was originally designated for air cargo facilities and was analyzed as such in the Master Plan EIR. The size and heights of the buildings that would have been constructed for air cargo aircraft (i.e., 80-90 feet) would be substantially taller than the proposed 46-foot tall building.

To summarize, the Project would not result in any significant visual/aesthetic impacts. In addition, the visual/aesthetic effects of the Project would be similar to those described in the 1997 EIR.

4.11.3 Conclusion

The Project will result in the construction of facilities at a location already identified for construction in the Master Plan and accompanying EIR. The Project will not result in any new significant aesthetic/visual impacts and/or aesthetic/visual impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant aesthetic/visual impacts than were previously analyzed.

4.12 PUBLIC SERVICES AND UTILITIES

4.12.1 Background

Section 3.11 of the 1997 EIR analyzed the effects of the Master Plan on the demand for public services (e.g., police and fire) and utilities (e.g., gas, electricity, water, wastewaster, etc.). The EIR concluded that while the capital improvement projects and increased aviation activity associated with the Master Plan would increase the demand for services and utilities, such demand would be accommodated by existing services and utility infrastructure. No mitigation was required.

4.12.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

As discussed in Section 4.4, *Transportation and Circulation*, the Project will not result in an increase in aviation activity beyond that identified in the 1997 Master Plan EIR, nor will the Project increase the capacity of SJC beyond that identified in the 1997 EIR. Therefore, the demand for public services and utilities associated with these activities will not exceed the levels disclosed in the 1997 EIR.

The Project site is served by existing utility systems, including electric, natural gas, cable, phone, storm drain, and sanitary sewer. The existing systems are located along Martin Avenue and on the Airport. The on-site utilities to be constructed by the Project would connect to these existing systems. The Project would not require the extension or expansion of utility systems to serve the expanded FBO.

Police, fire, and emergency services are provided to the Airport, including the Project site by the City of San Jose Police and Fire Departments. The San Jose Police Department includes an Airport Division, which is based on-site. Station 20 of the San Jose Fire Department, which is located on the east side of the Airport, is dedicated for Airport fire protection and other emergency services. Station 20 includes multiple aircraft rescue and firefighting vehicles, as required at air carrier airports per Part 139 of the Federal Aviation Regulations. The San Jose Police and Fire Departments serve the existing Signature FBO and they would also serve the expansion.

4.12.3 Conclusion

The Project will not result in any new significant utility/services impacts and/or utility/services impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant utility/services impacts than were previously analyzed.

4.13 HAZARDOUS MATERIALS

4.13.1 Background

Section 3.12 of the 1997 EIR assessed the impacts of the Master Plan with regard to hazardous materials. The analysis addressed the use, storage, and transport of hazardous materials, as well as potential environmental effects associated with sites known to be contaminated with hazardous materials. The EIR noted that there are a number of on-Airport locations where contamination had occurred as a result of fuels leaking from storage tanks. Per Tables 3.12.A.8 and 3.12.A.9 of Appendix 3.12.A of the EIR, all of these locations are on the east side of the Airport. None of these locations are on or immediately adjacent to the Project site.

The EIR concluded that hazardous materials impacts would be significant with regard to the following:

- An accidental release at the proposed fuel storage facility (8 tanks of 500,000 gallons each) adjacent to U.S. 101 and the Guadalupe River could expose the public to hazardous materials and could result in harm to the ecology of the Guadalupe River. Mitigation in the EIR consisted of a requirement to design, construct, and maintain the fuel storage facility in compliance with all applicable regulations, including on-site containment and a 100-foot setback from the River.

- Construction at sites with contaminated soils and/or work on buildings containing asbestos could expose construction workers to hazardous materials. Mitigation in the EIR requires the Airport to investigate potentially contaminated sites before construction and, based on the results of the investigation, to implement the appropriate measures identified to protect workers.

4.13.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

4.13.2.1 *Impacts of Existing Conditions on the Project*

As was the case for the existing Signature FBO, the proposed expansion site was historically used for farming until 1995. The site was converted to an interim surface parking lot while construction of new parking and passenger terminal facilities occurred on the east side of the Airport. According to the 1997 EIR, there were no above-ground or underground fuel storage tanks located on the site.

In 2012, given the historic use of the west side of the Airport for farming, a Phase I and Limited Phase II Environmental Site Assessment (ESA) were prepared for the original Signature FBO Project site, as required by the EIR, to determine if pesticides were likely to be any hazardous materials present or any conditions that would indicate potential contamination from such materials (URS, 2012). The ESA included a review of environmental records and databases, review of historic and current aerials, a surface reconnaissance, interviews with Airport staff, and soil/groundwater sampling and analysis. The findings of the ESA are as follows:

- None of the properties with contamination within one mile cross- or up-gradient of the Project site were identified as having the potential to impact the site. There were no identified open soil or groundwater contaminated facilities. Therefore, there are no off-site properties that represent a hazard or constraint for the Project.
- Pesticides were probably used at and in the vicinity of the original Signature FBO site, a conclusion that was subsequently verified by analysis of soil samples taken on-site. Specifically, the 2012 ESA determined that concentrations of chromium, dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyltrichloroethane (DDT), and other pesticides were present in the soil but at levels not considered hazardous.

Signature entered into the County of Santa Clara Department of Environmental Health's ("County") Voluntary Cleanup Program (VCP) in January 2015. The County approved a Soil Management Plan (SMP) in April 2015 and approved an As-Built Soil Reuse Report in February 2017. The County issued a No Further Action Letter in February 2017 and is evaluating the site for case closure.[21]

A soil characterization study was undertaken on the proposed expansion site in 2017 (Woodard & Curran, 2017). The study, which is attached as Appendix B, consisted of on-site soil sampling and the laboratory testing of those samples. The findings of the study are that various pesticides are present in the soil with some concentrations exceeding Environmental Screening Levels (ESLs) and Total Threshold Limit Concentration (TTLC) levels established by regulatory agencies. None of the pesticides in soil exceed the construction worker ESL. In one sample, the pesticide dieldrin is present at 0.18 mg/kg, which slightly exceeds the commercial ESL of 0.17 mg/kg. Arsenic was also present in one sample at a concentration of 21.5 mg/kg that exceeded the regional estimate of background concentrations in the San Francisco Bay Region of 11 mg/kg.

The Project will comply the mitigation measure listed in Section 3.12 of the EIR that requires preparation of a SMP that will be submitted to the County for approval to protect the health and safety of site construction workers, and occupants of the project. The SMP shall be in a form similar to the one approved by the County for the adjacent Signature FBO, and shall include procedures used to determine the handling, use, re-use, and disposal of impacted soil. The SMP shall also delineate soil that exceeds commercial screening levels that may be acceptable for re-use on-site if direct contact is limited through the use of barriers such as asphalt pavement or building foundations. Excess soil would be hauled for off-site disposal at a Class I, II, or III landfill, the selection of which would depend on the concentration of pesticides within the soil.[22] The SMP will be used by the City and the Project's contractor to ensure that construction workers and future users/employees of the Project are not exposed to unacceptable concentrations of hazardous substances. Preparation of the SMP is consistent with the mitigation measure listed in Section 3.12 of the EIR, which reduces impacts related to contaminated soil to a less-than-significant level.

4.13.2.2 *Impacts of the Project*

The Project, similar to the other FBOs, passenger airlines, and cargo carriers at SJC, will use hazardous materials in the course of normal operations. Such materials will consist of those typically associated with vehicle and equipment operation and servicing, including fuels, paints, solvents, oils and ethylene glycol (deicer). The use and storage of these materials at the Airport is regulated under a variety of

[21] Source: https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006435

[22] Class I landfills are landfill facilities that are authorized to accept hazardous waste. Class II landfills are landfill facilities that are not authorized to accept hazardous waste. Class III landfills are municipal landfills that are not authorized to accept hazardous waste.

federal, state, and local statutes, with inspections undertaken by the Santa Clara County Hazardous Materials Compliance Division and the City of San Jose Fire Department. The Project's use, storage, and disposal of these substances will comply with these regulations and, therefore, there would be no significant hazardous materials impact. The Project will be consistent with the mitigation identified in the 1997 EIR, which requires compliance with all applicable regulations, and those regulations have become more stringent since 1997.

4.13.3 Conclusion

The Project will not result in any new significant hazardous materials impacts and/or hazardous materials impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant hazardous materials impacts than were previously analyzed.

4.14 AIR SAFETY

4.14.1 Background

Section 3.13 of the 1997 EIR examined the air safety impacts of the Master Plan in terms of 1) airport design issues, and 2) the correlation between aviation activity levels and air safety. The EIR concluded that the implementation of the Master Plan would not result in an increase in air safety risks. This conclusion was based on the fact that all capital improvement projects – including taxiway and runway improvements – would comply with FAA design standards. The EIR noted that any waiver from a design standard would not be approved by FAA without a site-specific analysis that determines that the waiver would not compromise safety. The EIR also determined that there is no meaningful relationship between aviation activity and accident rates. No mitigation was identified or warranted.

4.14.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

The Project would construct a new hanger at an existing FBO facility for general aviation on the west side of SJC. As discussed in Section 4.2, *Land Use*:

- The project would be located on a site designated for general aviation in the approved Airport Master Plan and on the FAA-approved Airport Layout Plan.

- The FAA has determined that the proposed Project will not constitute a hazard to air navigation and would not interfere with the adjacent communication facility.

The increase in aircraft operations resulting from the Project would not increase air safety risks. This is based on the analysis in the Master Plan EIR that determined that there is no meaningful relationship between aviation activity and accident rates.

4.14.3 Conclusion

The Project will result in the construction of facilities at a location already identified for construction in the Master Plan and accompanying EIR. The Project will not result in any new significant air safety impacts and/or air safety impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant air safety impacts than were previously analyzed.

4.15 GREENHOUSE GASES

4.15.1 Background

A number of gases emitted from both natural sources and human activities are known to affect global climate, a phenomenon commonly referred to as the "greenhouse effect" or "global warming." Such gases, known as greenhouse gases (GHGs), include carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The burning of fossil fuels, including for transportation, is a major source of anthropogenic GHGs. At SJC, sources of GHG emissions include ground vehicles, aircraft, and energy used for airport buildings and facilities. For a detailed discussion of GHGs, including causes and effects, sources, regulations, etc., please see Section 4.1 of the Ninth Addendum to the Master Plan EIR (2011).

Although the issues associated with the effects of emissions of GHGs on climate change were known in the 1990s, there was no requirement to analyze such impacts under CEQA until 2010.[23] Therefore, at the time the 1997 Master Plan EIR was prepared, this topic was not included. The lack of discussion of greenhouse gas does not preclude use of an addendum for the Project. *Citizens for Responsible Equitable Environmental Development v. City of San Diego* (2011) 196 Cal.App.4th 515, 532 (upholding a local agency's determination that "new information" about GHG emissions did not require supplemental environmental review under Pub. Res. Code § 21166 because information regarding the effect of GHG emissions on climate was known long before the lead agency approved the EIR in 1994); see also *Concerned Dublin Citizens v. City of Dublin* (2013) 214 Cal. App.4th 1301, 1319-1320.

The above paragraph notwithstanding, to be conservative, the City prepared the Ninth Addendum to the Master Plan EIR in 2011 to determine if the buildout of the remaining unconstructed projects identified in the Master Plan would result in an adverse impact with regard to global climate change. The Ninth Addendum evaluated the GHG emissions that would occur at SJC if the remaining Master Plan projects were constructed and compared that to a "no project scenario" whereby no further projects would be constructed at SJC. With regard to general aviation activity levels, the analysis found that a lack of facilities to base a general aviation aircraft at SJC would not result in fewer or shorter flights because owners will choose to base their aircraft at alternate airports under one of the following scenarios:

[23] Section 15064.4 of the CEQA Guidelines now requires a Lead Agency to analyze the GHG emissions of projects. The Guidelines state that the Lead Agency has the discretion to determine, in the context of a particular project, whether to undertake a quantitative or qualitative analysis.

- If the aircraft is based at an airport within reasonable driving distance of the San Jose area, the number of aircraft flights would be the same as if the aircraft were based at SJC. It can also be assumed that flight durations would be approximately the same as if the aircraft were based at SJC since the alternate airport would not be far from SJC. There would, however, be increased automobile emissions associated with the greater driving distances between the San Jose area and the alternate airport. Thus, under this scenario, while GHG emissions at SJC itself would be lower, overall GHG emissions would be higher, or

- If the aircraft is based at an airport beyond a reasonable driving distance from the San Jose area, aircraft operations would double and aircraft emissions of GHGs would increase accordingly.

Therefore, for general aviation, the best-case scenario in terms of minimizing GHG emissions would be to accommodate the local demand at the closest local airport, namely SJC. This conclusion is consistent with many aspects of land use planning whereby it is preferable from energy conservation and emissions reduction perspectives to locate services in proximity to those land uses that generate the demand for such services. As an example, it is desirable to locate supermarkets and other retail stores in proximity to residential areas in order to achieve reductions in emissions, energy use, and travel times associated with driving between these land uses.

In summary, the Ninth Addendum analyzed whether development of SJC would cumulatively contribute to regional GHG emissions and found that regional GHG emissions would be less if SJC was developed consistent with the Master Plan as it would limit ferrying of aircraft in from other airports to pick up passengers and it would limit driving distances to other airports.

Although the Ninth Addendum concluded that the construction of the remaining Master Plan projects would not result in a significant effect related to global climate change, the Addendum noted that the Airport had already implemented, and continues to implement, numerous measures that have the effect of reducing GHG emissions. Such measures, which also reduce emissions of criteria air pollutants, are listed in Table 10 of this document. These measures are consistent with, and in furtherance of, plans, policies, and regulations adopted for the purpose of reducing GHG emissions.

4.15.2 Project Impacts in Relation to Master Plan EIR, as Supplemented & Addended

This 12th Addendum specifically analyzes the construction of an expanded FBO facility. As discussed above, the Project will construct an additional general aviation facility at SJC pursuant to the approved Airport Master Plan. The new facility will, in turn, result in additional aircraft operations in an amount equivalent to 0.8 % of the operations assumed (and accounted for) in the 1997 Master Plan (see Section 4.4, *Transportation & Circulation*, of this Addendum for details). The Project will not increase the capacity of SJC beyond that identified in the 1997 EIR. As such, the Project will not generate new GHG emissions beyond those analyzed and considered in the 1997 EIR and Ninth Addendum. This is confirmed in the discussion of traffic and air quality impacts which show that the Project's contribution to vehicular and aircraft emissions is less than analyzed in the prior environmental review, and therefore the Project's GHG emissions are likewise less than the emissions from the Airport that were previously analyzed.

Each of these aircraft operations will emit GHGs. However, for the reasons described above in Section 4.15.1, not building the Project, and therefore not accommodating the demand for general aviation services at SJC, will not avoid these emissions because the aircraft operations will still occur.

Specifically, the unmet demand at SJC will be met at other airports and the result will be higher overall GHG emissions, as compared to accommodating the demand at SJC.

4.15.3 Conclusion

The Project will not result in any new significant GHG impacts and/or GHG impacts that are substantially different from those described in the Master Plan EIR or subsequent environmental documents. No new mitigation is required. There is no new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence. Finally, there are no changes to the circumstances under which the Project is undertaken that would result in more significant GHG impacts than were previously analyzed.

SECTION 5. CONCLUSION

The City has evaluated the environmental effects of the Project in this Addendum. Based upon the factual information contained in the above analyses, the City has reached the following conclusion:

Approval of the Project described in Section 3 will not have any significant environmental impacts not previously disclosed in the SJC Master Plan EIR, nor changes with respect to the circumstances under which the Project is undertaken, that would indicate that the Project's impacts will be any greater than those previously analyzed. No new mitigation is required. Therefore, no subsequent or supplemental EIR is warranted or required.

SECTION 6. REFERENCES

Brown-Buntin Associates, **Review of Corporate Aircraft Fleet Mix at Proposed Signature Flight Support FBO at San Jose International Airport**, October 2013.

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Santa Clara Valley Transportation Authority, **Transportation Impact Analysis Guidelines**, March 2009.

URS, **Updated Phase I and Limited Phase II Environmental Site Assessment, Mineta San José International Airport – West Side Parking Lot,** June 2012.

Woodard & Curran, **Soil Characterization Results, Hangar A, San Jose International Airport**, November 2017

SECTION 7. REPORT PREPARERS

A D D E N D U M A U T H O R

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Jedd Steinglass, Project Manager

APPENDIX A

No Hazard Determinations
(Federal Aviation Administration)

Federal Aviation Administration

January 30, 2018

TO:
Mineta San Jose International Airport
Attn: Mike Miramontes, Planning and Development Division
1701 Airport Blvd
Suite B-1130
San Jose, CA 32801-2986
MMiramontes@SJC.org

CC:
CITY OF SAN JOSE
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CC:
American Infrastructure Development, Inc.
Attn: Mohsen Mohammadi
3810 Northdale Blvd., Suite 170
Tampa, FL 33624
mohsen@aidinc.us

RE: *(See attached Table 1 for referenced case(s))*
FINAL DETERMINATION

Table 1 - Letter Referenced Case(s)

ASN	Prior ASN	Location	Latitude (NAD83)	Longitude (NAD83)	AGL (Feet)	AMSL (Feet)
2017-AWP-3182-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-36.74N	121-56-01.22W	46	93
2017-AWP-3183-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-34.88N	121-55-59.18W	46	94
2017-AWP-3184-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-35.96N	121-56-02.34W	46	94
2017-AWP-3185-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-34.10N	121-56-00.30W	46	94
2017-AWP-3186-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-34.25N	121-56-00.97W	46	61
2017-AWP-3187-NRA	2016-AWP-586-NRA	SAN JOSE, CA	37-21-35.04N	121-56-01.83W	46	61

Description: Corners of Hangar A and Two Points on Lower Offices. Metal siding throughout building. Concerned about airspace, but particularly concerned about RTR antennas directly south of the proposed building.

We do not object with conditions to the construction described in this proposal provided:

You comply with the requirements set forth in FAA Advisory Circular 150/5370-2, "Operational Safety on Airports During Construction."

The proponent is required to coordinate all associated activities with the Airport Manager/Airport Traffic Control Tower (ATCT) 5 business days prior to the beginning of the project.

This determination is subject to review if disruption to FAA Operations should occur.

The new development must be coordinated with the airport sponsor and included in the next update to the Airport Layout Plan

A separate notice to the FAA is required for any construction equipment, such as temporary cranes, whose working limits would exceed the height and lateral dimensions of your proposal.

This determination does not constitute FAA approval or disapproval of the physical development involved in the proposal. It is a determination with respect to the safe and efficient use of navigable airspace by aircraft and with respect to the safety of persons and property on the ground.

In making this determination, the FAA has considered matters such as the effects the proposal would have on existing or planned traffic patterns of neighboring airports, the effects it would have on the existing airspace structure and projected programs of the FAA, the effects it would have on the safety of persons and property on the ground, and the effects that existing or proposed manmade objects (on file with the FAA), and known natural objects within the affected area would have on the airport proposal.

This determination expires on July 30, 2019 unless:
(a) extended, revised or terminated by the issuing office.
(b) the construction is subject to the licensing authority of the Federal Communications Commission (FCC) and an application for a construction permit has been filed, as required by the FCC, within 6 months of the date of this determination. In such case, the determination expires on the date prescribed by the FCC for the completion of construction, or the date the FCC denies the application.

NOTE: Request for extension of the effective period of this determination must be obtained at least 15 days prior to expiration date specified in this letter.

If you have any questions concerning this determination contact Lloyd E. Lewis (310) 725-3650 lloyd.e.lewis@faa.gov.

Lloyd E. Lewis
DivUser

APPENDIX B

Soil Characterization Report
(Woodard & Curran)

COMMITMENT & INTEGRITY
DRIVE RESULTS

41 Hutchins Drive
Portland, Maine 04102
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Via Electronic Mail

November 10, 2017

James Rutherford
MVHS 95 LLC
405 El Camino Real, #109
Menlo Park, CA 94025

Re: Soil Characterization Results
Hangar A, San Jose International Airport

Dear Jim:

Woodard & Curran has completed a soil sampling program to characterize material that may be encountered and/or generated as waste during a proposed construction project at Hangar A (the Site), which is located at the San Jose International Airport (SJC).

The following letter report summarizes the project background, soil sampling field program, laboratory analytical results, and our findings relative to those results.

Background

The Site is located in the western portion of SJC along Martin Avenue in the City of San José, Santa Clara County, California. The area of the leasehold where Hangar A is proposed is approximately 3.67 acres in size and is surrounded by SJC to the northwest, northeast, and southeast, and a mix of light industrial and commercial businesses to the south and west. The location of the Site is presented in **Figure 1**.

Consistent with the findings of a June 28, 2012, Updated Phase I Environmental Site Assessment (ESA) and Limited Phase II ESA prepared by URS for the adjacent Signature Flight Support leasehold, the area of the Site has a history of agricultural land use. As such, URS concluded that pesticides were probably used at and in the vicinity of the Site.

This conclusion was verified during a previous hangar construction effort at the adjacent Signature Flight Support leasehold. During this work, concentrations of chromium, dichlorodiphenyldichloroethylene (DDE), dichlorodiphenyltrichloroethane (DDT), and other pesticides were found to be present in soil at this facility. Therefore, as the history of the Site is similar to the adjacent Signature Flight Support leasehold, similar environmental conditions may be reasonably expected.

The previous hangar construction effort at the Signature Flight Support leasehold employed a program of soil characterization, classification of soil into certain categories based on sample data, and specific management and handling requirements for each soil category. This approach was proposed to the Santa Clara County Voluntary Cleanup Program (VCP) and documented in Woodard & Curran's March 15, 2017, Soil Management Plan (Revision 1).

As the currently proposed construction project at the Site is similar in nature to the previous work at the Signature Flight Support leasehold, a soil sampling plan that followed the general rationale and methodology used during the previous project was developed by Woodard & Curran. This sampling approach was documented in a September 14, 2017, Proposed Soil Investigation Plan: Hangar A, Signature Flight Support FBO Leasehold (Revision 1), which was reviewed and approved by Scott Riddle

of SJC. The intent of the sampling effort described in the Proposed Soil Investigation Plan was to assist in planning for the proposed construction effort at the Site, and to inform an appropriate soil management approach that will be developed and then implemented during construction. The following section describes the completed sampling program.

Soil Characterization Activities

Prior to the initiation of the field investigation, Woodard & Curran prepared a site-specific health and safety plan, obtained an underground utility clearance ticket from Underground Service Alert (USA), and coordinated private utility clearance at each proposed sample location by Subdynamic Locating of San Jose, CA.

Woodard & Curran then contracted Gregg Drilling & Testing, Inc. to install the soil sampling points on October 11, 2017. Weather conditions on this day included partly sunny skies and temperatures in the 60s Fahrenheit. Soil sampling activities were documented on-Site by George Valenzuela of Woodard & Curran.

Following the removal of overlaying asphalt, Gregg Drilling & Testing, Inc. utilized manual methods (i.e., hand augers) to collect the required soil samples. Sampling equipment was decontaminated in between each boring and each sample interval using Alconox and deionized water.

Soil sample locations were distributed throughout the proposed area of construction, breaking the Site into four distinct areas to be evaluated during the characterization effort. One soil boring was completed in each area and identified as WCB-1, WCB-2, WCB-3, and WCB-4. Each soil boring within these areas was then broken down into three depth intervals to support the appropriate segregation and management of soil during construction. Soil sample locations are referenced on **Figure 2**.

Considering the environmental history of the area of the Site, the rationale for the selection of sample depth intervals is summarized below:

- 0 to 6 inches below grade surface (bgs) - surficial: accessible soil that may have been impacted by pesticide application or other surficial releases. Asphalt pavement and base materials were excluded when possible from the collected surficial sample;
- 12 to 18 inches bgs - shallow: potentially accessible soil and possible fill materials; and
- 30 to 36 inches bgs - subsurface: soil that is likely native material and/or near the maximum extent of excavation.

Consistent with previous environmental sample data and considering the depositional history of contaminants of concern at the Site, discrete samples from each boring and interval were analyzed for pesticides, and composite samples representing each boring were analyzed for typical soil disposal parameters including:

- Volatile Organic Compounds (VOCs) by EPA Method 8260;
- Total Petroleum Hydrocarbons as Diesel (TPH-DRO) by EPA Method 8015;
- Polychlorinated Biphenyls (PCBs) by EPA Method 8082;
- CA Title 22 (CAM-17) Metals by EPA Method 6010B/7471A; and

- Polynuclear Aromatic Hydrocarbons (PAH) by EPA Method 8270C.

Composite samples were simply identified by boring number (WCB-1 through WCB-4) and discrete samples were identified by boring number and sample interval in inches bgs (e.g., WCB-1 (0-6)). The collected samples were stored on ice and then transported by Woodard & Curran to Test America, an independent CA-certified analytical laboratory located in Pleasantville, CA for analysis.

Following the completion of each boring, the sample location was backfilled with a combination of cuttings and bentonite chips. The surface of each location was then restored with asphalt patch to match existing conditions.

Summary of Site Conditions

The laboratory analytical results of samples collected during Site Characterization activities indicate that soil at the Site contains detectible concentrations of TPH, pesticides, and metals. In addition, concentrations of PCBs were identified at sample locations WCB-1 and WCB-2; however, the results were below the laboratory reporting limit and these results are therefore qualified as estimated. Finally, the VOC analytes acetone and/or methylene chloride were identified at each boring location, though these compounds are common laboratory contaminants and are unlikely to be representative of Site conditions.

In general, higher pesticide concentrations were detected in soil sample points WCB-3 and WCB-4. This distribution correlates with historical agricultural activities where additional pesticides may have been applied in the area of the former crop fields, with less intense applications near Martin Avenue. Metals concentrations were generally evenly distributed both aerially and throughout the sample depth intervals. As such, most detected metals, and in particular arsenic, are likely related to background or naturally occurring conditions and not Site activities or releases. However, the concentrations of arsenic, nickel, and cobalt at sample point WCB-4 were higher than the concentrations quantified at the other boring locations. In addition, the arsenic concentration at WCB-4 was above the regional estimate of background arsenic concentrations in the San Francisco Bay Region of 11 mg/kg. Therefore, it is possible that the metals concentrations at WCB-4 are related to historical Site activities, or may be the result of elevated but otherwise naturally occurring geologic conditions.

Data tables that summarize the detected analyte concentrations and reference them relative to the several different environmental screening levels and waste classification limits are included with this letter report at **Attachment A**. The screening levels selected for comparison and the rationale behind their selection are presented below.

Please note that soil characterized by arsenic concentrations that were below the regional estimate of background concentrations in the San Francisco Bay Region of 11 mg/kg was assumed to be consistent with natural conditions. Therefore, concentrations of arsenic that did not exceed 11 mg/kg were not considered further with respect to human health risk or soil management options. In addition, though some laboratory reporting limits were above the action levels presented in Tables 1 through 4, analytes that could not be practically quantified using the available laboratory analytical methods were considered to be non-detect and below the applicable action levels.

Attachment A, Table 1: San Francisco Bay Regional Water Quality Control Board February 2016 Tier 1 Default Environmental Screening Levels (ESLs). *Soil results that indicate analyte concentrations below these values would likely be unrestricted for on-site or off-site reuse.*

Attachment A, Table 2: San Francisco Bay Regional Water Quality Control Board February 2016 ESLs Table S-1: Soil Direct Exposure Human Health Screening Levels for the Commercial/Industrial Land Use Scenario. *Soil results that indicate analyte concentrations below these values would likely be acceptable for on-site reuse or off-site disposal at a Class I, II, or III landfill*[1]*. Soil that is represented by results that exceed these levels may still be acceptable for reuse on-site if direct contact is limited through the use of barriers such as asphalt pavement or building foundations, or would likely be acceptable for off-site disposal at a Class I, II, or III landfill.*

Attachment A, Table 3: Current California Code of Regulations Total Threshold Limit Concentration (TTLC) levels. *Soil that is represented by results that exceed these levels may by acceptable for reuse on-site if direct contact is limited through the use of barriers such as asphalt pavement or building foundations, or would likely be acceptable for off-site disposal at a Class I landfill.*

Attachment A, Table 4: San Francisco Bay Regional Water Quality Control Board February 2016 ESLs Table S-1: Soil Direct Exposure Human Health Screening Levels for the Construction Worker Scenario. *Results are presented for worker training and risk communication considerations during construction.*

Please note that the assumptions relative to likely reuse and disposal scenarios will need to be verified once the final development design is complete and a Soil Management Plan (SMP) is developed. Additional verification of the soil management approach may also be gained through participation in the VCP as discussed in the Recommendations section of this report.

A copy of the complete laboratory analytical results is included as **Attachment B**.

Findings

Based on the results of the Site Characterization and comparison to the screening levels and thresholds described above, a summary of pertinent Site conditions that may be reasonably anticipated during future construction and redevelopment activities, as well as during the future use of the Site, is presented below.

- Though development plans are not finalized, it is anticipated that approximately 3,000 cubic yards of excess soil may be generated during construction. Based on known concentrations of pesticides and/or metals, this material will require proper management during construction. Pending final grading and development design, it is likely that some or all of this material will be acceptable for reuse on-Site or at the SJC property, or (pending soil volume constraints relative to the final design) will require off-site transport for reuse or disposal at an appropriate receiving facility. Appropriate management and reuse/disposal options for this excess material may be identified in a SMP.

- The pesticide dieldrin and arsenic were quantified at concentrations that exceeded the ESLs for the Commercial/Industrial exposure scenario in certain samples. Therefore, if soil represented

[1] Class I landfills are landfill facilities that are authorized to accept hazardous waste. Class II landfills are landfill facilities that are not authorized to accept hazardous waste. Class III landfills are municipal landfills that are not authorized to accept hazardous waste. In general, the unit cost for disposal is highest at Class I landfills and lowest at Class III landfills.

by these samples is to be reused on-Site, it is likely that measures to reduce the potential for direct contact, such as burial below asphalt pavement, would be warranted to manage future human health risk and regulatory liability. Appropriate management, reuse, and disposal options for soil that exceeds the ESLs for the Commercial/Industrial exposure scenario may be identified in a SMP.

- Concentrations of the pesticides DDE and/or endrin detected in two soil samples exceed the current California Code of Regulations TTLC levels. As a result, applicable soil that is generated as excess material (i.e., waste) would be classified as a State-regulated non-resource compensation and recovery act (RCRA) hazardous waste if removed from the Site or SJC property, and would require disposal at a Class I landfill. Appropriate management, reuse, and disposal options for soil that exceeds the TTLC levels may be identified in a SMP.

- Concentrations of arsenic, nickel, and cobalt in soil at the Site exceed the San Francisco Bay Regional Water Quality Control Board February 2016 ESLs Table S-1: Soil Direct Exposure Human Health Screening Levels for the Construction Worker exposure scenario. Therefore, potential direct contact human health risk may exist for workers during construction. It is likely that these conditions may be addressed in the training and hazard communications sections of a SMP that may be prepared for the Site.

Though the appropriate soil management and reuse/disposal options will be evaluated as part of the next phase of work at the Site (i.e., the development of a SMP), the following preliminary summary of likely reuse and disposal options, and volume ratios are presented to assist with project planning. Volume ratios are based on the volume of soil represented by each soil boring and each depth interval as a percentage of the total soil volume that may be disturbed during redevelopment. The total volume disturbed assumes an excavation depth of 4 feet bgs throughout the leasehold.

Please note that these details are preliminary and must be re-evaluated following final design and the development of the SMP.

Likely Soil Reuse or Disposal Option	Approximate Expected Percentage of Total Volume
Unrestricted (may be used on or off-site under any scenario)	10%
Reuse on-site or disposal at a Class I, II, or III landfill	60%
Reuse on-site under barrier or disposal at a Class I, II, or III landfill	15%
Reuse onsite under barrier or disposal at a Class I landfill only	15%

Recommendations

Consistent with the findings of this Soil Characterization, Woodard & Curran recommends that a SMP be developed to assist and facilitate the proper handling, storage, transport, reuse, and/or off-site disposal of excess soil generated during construction. Once finalized, the SMP may be included in contract documents and may also be used to support participation in the VCP. Participation in the VCP is at the discretion of MVHS 95 LLC. Though the methodology used in this Soil Characterization and the approaches that may be developed in the SMP have been applicable to projects in the past, there may

be value in participation in the VCP to manage environmental liability associated with the development of the Site.

If there are any questions concerning the findings or recommendations presented in this letter report, please contact the undersigned at 207-558-3737 or at jsteinglass@woodardcurran.com.

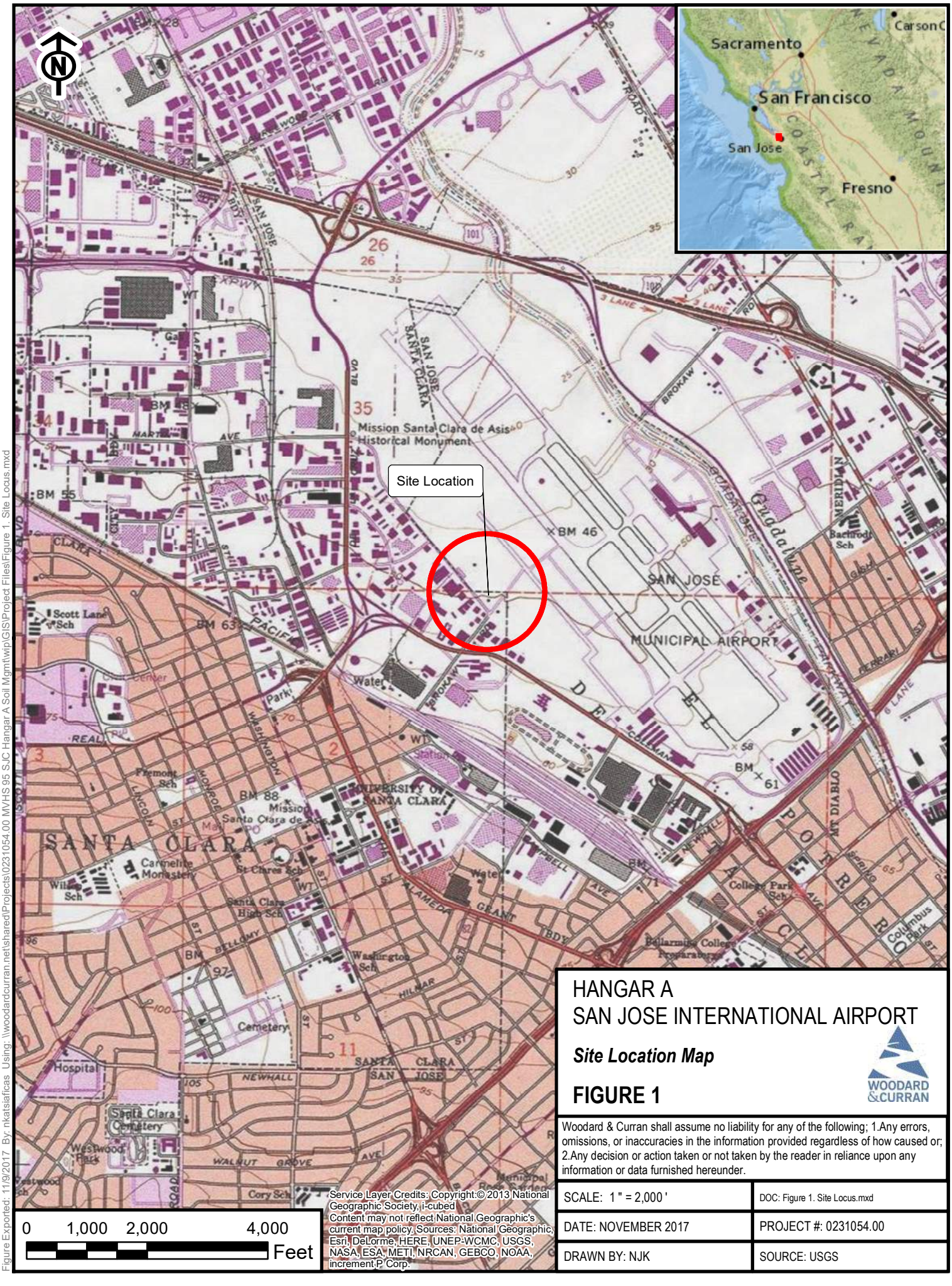
Sincerely,

WOODARD & CURRAN

Jedd Steinglass, LSP
Project Manager

Enclosure(s) Figure 1 – Site Location Map
Figure 2 – Soil Sample Locations
Attachment A – Data Summary Tables
Attachment B – Laboratory Data Report

PN: 231054.00



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HANGAR A
SAN JOSE INTERNATIONAL AIRPORT

Site Location Map

FIGURE 1

WOODARD &CURRAN

SCALE: 1 " = 2,000 '	DOC: Figure 1. Site Locus.mxd
DATE: NOVEMBER 2017	PROJECT #: 0231054.00
DRAWN BY: NJK	SOURCE: USGS

Figure Exported: 11/9/2017 By: nkatsiaficas Using: \\woodardcurran.net\shared\Projects\0231054.00 MVHS 95 SJC Hangar A Soil Mgmt\wip\GIS\Project Files\Figure 1. Site Locus.mxd

Soil Classification Polygon	Area (ft^2)
1	50,192
2	32,454
3	35,689
4	41,565

Legend

- October 11, 2017 Soil Boring Location
- Soil Classification Polygon
- Approximate Limits of Leasehold

HANGAR A
SAN JOSE INTERNATIONAL AIRPORT

Soil Sample Locations

FIGURE 2

SCALE: 1 " = 100 '	DOC: Figure 1 Sample Locations.mxd
DATE: NOVEMBER 2017	PROJECT #: 0231054.00
DRAWN BY: NJK	SOURCE: NAIP

Table 1 - Tier 1 Default ESL Data Summary
San Jose International Airport Hangar A

Concentrations are presented for detected analytes only in mg/kg.	Boring Identification	WCB-1	WCB-1	WCB-1	WCB-1	WCB-2	WCB-2	WCB-2	WCB-2	WCB-3	WCB-3	WCB-3	WCB-3	WCB-4	WCB-4	WCB-4	WCB-4
	Depth Interval (inches bgs)	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36
	Sample Date	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017
Analysis and Detected Analyte	**Tier 1 ESL[1]**																
Volatile Organic Compounds																	
Acetone	0.50	ND (<0.047)	NA	NA	NA	0.16	NA	NA	NA	0.13	NA	NA	NA	ND (<0.047)	NA	NA	NA
Methylene chloride	0.08	0.0039	NA	NA	NA	0.0086	NA	NA	NA	0.011	NA	NA	NA	0.0055	NA	NA	NA
Pesticides																	
Aldrin	0.04	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	0.0039	0.0042	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.013)	ND (<0.012)	ND (<0.0026)
Chlordane (alpha)	0.48	NA	0.0018	0.014	0.0055	NA	ND (<0.0053)	0.034	0.0062	NA	0.0047	0.03	0.15	NA	0.029	0.032	0.0015
Chlordane (gamma)	0.48	NA	0.0023	0.016	0.004	NA	ND (<0.0053)	0.048	0.012	NA	0.0059	0.038	0.11	NA	0.026	0.037	ND (<0.0026)
Chlordane (technical)	0.48	NA	0.041	0.14	0.035	NA	ND (<0.11)	0.16	0.051	NA	0.085	0.22	**0.61**	NA	0.17	0.22	0.021
Dichlorodiphenyldichloroethane (DDD)	2.67	NA	ND (<0.0024)	0.11	0.047	NA	ND (<0.0053)	0.29	0.17	NA	0.025	0.1	0.49	NA	0.053	0.1	0.0035
Dichlorodiphenyldichloroethene (DDE)	1.89	NA	ND (<0.0024)	0.39	0.12	NA	0.0046	0.24	0.031	NA	0.09	0.19	**2.6**	NA	0.57	1.1	0.037
Dichlorodiphenyltrichloroethane (DDT)	1.89	NA	ND (<0.0024)	0.02	0.0015	NA	ND (<0.0053)	0.012	0.27	NA	ND (<0.012)	ND (<0.014)	0.09	NA	0.24	0.35	0.0031
Dieldrin	0.00017	NA	ND (<0.0024)	**0.023**	**0.012**	NA	ND (<0.0053)	**0.15**	**0.022**	NA	**0.0037**	**0.022**	**0.18**	NA	**0.038**	**0.067**	**0.0024**
Endrin	0.00065	NA	ND (<0.0024)	**0.015**	**0.0023**	NA	ND (<0.0053)	**0.0061**	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	**0.042**	NA	**0.093**	**0.22**	**0.0022**
Endrin ketone	No Standard	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	ND (<0.0025)	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.13)	0.0054	ND (<0.0026)
Toxaphene	0.00042	NA	ND (<0.047)	ND (<0.059)	ND (<0.054)	NA	ND (<0.11)	ND (<0.049)	ND (<0.059)	NA	ND (<0.23)	**0.55**	**0.75**	NA	**0.35**	**1.5**	**0.0092**
CAM 17 Metals																	
Antimony	31.29	1.8	NA	NA	NA	2.1	NA	NA	NA	0.61	NA	NA	NA	1.1	NA	NA	NA
Arsenic	0.07	**3.4**	NA	NA	NA	**5.3**	NA	NA	NA	**4.8**	NA	NA	NA	**21.5**	NA	NA	NA
Barium	3019.10	242	NA	NA	NA	277	NA	NA	NA	365	NA	NA	NA	1090	NA	NA	NA
Beryllium	41.56	0.22	NA	NA	NA	0.15	NA	NA	NA	0.42	NA	NA	NA	1.1	NA	NA	NA
Cadmium (soil)	39.00	0.15	NA	NA	NA	0.26	NA	NA	NA	0.25	NA	NA	NA	ND (<0.56)	NA	NA	NA
Chromium III*	117321.43	59.5	NA	NA	NA	85.9	NA	NA	NA	51.2	NA	NA	NA	80.5	NA	NA	NA
Cobalt	23.40	10.4	NA	NA	NA	11.5	NA	NA	NA	8.6	NA	NA	NA	**29.1**	NA	NA	NA
Copper	3128.57	41.2	NA	NA	NA	49.6	NA	NA	NA	37.9	NA	NA	NA	31.4	NA	NA	NA
Lead	80.00	12.3	NA	NA	NA	30.2	NA	NA	NA	18.3	NA	NA	NA	12.2	NA	NA	NA
Mercury (elemental)	12.51	0.065	NA	NA	NA	0.18	NA	NA	NA	0.074	NA	NA	NA	0.12	NA	NA	NA
Molybdenum	391.07	0.39	NA	NA	NA	1.1	NA	NA	NA	0.71	NA	NA	NA	8.2	NA	NA	NA
Nickel	86.34	54.2	NA	NA	NA	**105**	NA	NA	NA	56.4	NA	NA	NA	**143**	NA	NA	NA
Silver	391.07	ND (<1.2)	NA	NA	NA	ND (<0.77)	NA	NA	NA	ND (<0.86)	NA	NA	NA	0.27	NA	NA	NA
Thallium	0.78	0.77	NA	NA	NA	0.61	NA	NA	NA	0.5	NA	NA	NA	ND (<5.6)	NA	NA	NA
Vanadium	393.11	53.7	NA	NA	NA	56.4	NA	NA	NA	42.9	NA	NA	NA	86.2	NA	NA	NA
Zinc	23464.29	55.6	NA	NA	NA	89.7	NA	NA	NA	75.3	NA	NA	NA	59.8	NA	NA	NA
PCBs																	
Polychlorinated biphenyls (PCBs)	0.25	0.04	NA	NA	NA	0.051	NA	NA	NA	ND (<0.056)	NA	NA	NA	ND (<0.067)	NA	NA	NA
TPH																	
TPH diesel	225.67	22	NA	NA	NA	120	NA	NA	NA	170	NA	NA	NA	65	NA	NA	NA

NA = Not Analyzed

ND = Not Detected above laboratory reporting limit, which is presented in parenthesis

* Total reported chromium values assumed to be tivalent chromium based on representative speciation data from adjacent property

1. Based on February 2016 San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Levels (ESLs). Exposure scenarios used for Tier 1 (default) include:
Land Use: Residential
Depth of Contaminated Soil: Shallow
Groundwater Use: Drinking Water Resource
Drinking Water: MCL Priority
Soil Type: Sand

Exceeds ESL

Table 1 - Tier 1 Default ESL Data Summary
San Jose International Airport Hangar A

Concentrations are presented for detected analytes only in mg/kg.	Boring Identification	WCB-1	WCB-1	WCB-1	WCB-1	WCB-2	WCB-2	WCB-2	WCB-2	WCB-3	WCB-3	WCB-3	WCB-3	WCB-4	WCB-4	WCB-4	WCB-4
	Depth Interval (inches bgs)	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36
	Sample Date	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017
Analysis and Detected Analyte	**Commercial/Industrial Direct Contact ESL[1]**																
Volatile Organic Compounds																	
Acetone	628841.26	ND (<0.047)	NA	NA	NA	0.16	NA	NA	NA	0.13	NA	NA	NA	ND (<0.047)	NA	NA	NA
Methylene chloride	24.87	0.0039	NA	NA	NA	0.0086	NA	NA	NA	0.011	NA	NA	NA	0.0055	NA	NA	NA
Pesticides																	
Aldrin	0.16	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	0.0039	0.0042	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.013)	ND (<0.012)	ND (<0.0026)
Chlordane (alpha)	2.15	NA	0.0018	0.014	0.0055	NA	ND (<0.0053)	0.034	0.0062	NA	0.0047	0.03	0.15	NA	0.029	0.032	0.0015
Chlordane (gamma)	16.35	NA	0.0023	0.016	0.004	NA	ND (<0.0053)	0.048	0.012	NA	0.0059	0.038	0.11	NA	0.026	0.037	ND (<0.0026)
Chlordane (technical)	53349.22	NA	0.041	0.14	0.035	NA	ND (<0.11)	0.16	0.051	NA	0.085	0.22	0.61	NA	0.17	0.22	0.021
Dichlorodiphenyldichloroethane (DDD)	12.09	NA	ND (<0.0024)	0.11	0.047	NA	ND (<0.0053)	0.29	0.17	NA	0.025	0.1	0.49	NA	0.053	0.1	0.0035
Dichlorodiphenyldichloroethene (DDE)	8.53	NA	ND (<0.0024)	0.39	0.12	NA	0.0046	0.24	0.031	NA	0.09	0.19	2.6	NA	0.57	1.1	0.037
Dichlorodiphenyltrichloroethane (DDT)	8.53	NA	ND (<0.0024)	0.02	0.0015	NA	ND (<0.0053)	0.012	0.27	NA	ND (<0.012)	ND (<0.014)	0.09	NA	0.24	0.35	0.0031
Dieldrin	0.17	NA	ND (<0.0024)	0.023	0.012	NA	ND (<0.0053)	0.15	0.022	NA	0.0037	0.022	**0.18**	NA	0.038	0.067	0.0024
Endrin	289.20	NA	ND (<0.0024)	0.015	0.0023	NA	ND (<0.0053)	0.0061	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	0.042	NA	0.093	0.22	0.0022
Endrin ketone	No Standard	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	ND (<0.0025)	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.13)	0.0054	ND (<0.0026)
Toxaphene	2.25	NA	ND (<0.047)	ND (<0.059)	ND (<0.054)	NA	ND (<0.11)	ND (<0.049)	ND (<0.059)	NA	ND (<0.23)	0.55	0.75	NA	0.35	1.5	0.0092
CAM 17 Metals																	
Antimony	467.20	1.8	NA	NA	NA	2.1	NA	NA	NA	0.61	NA	NA	NA	1.1	NA	NA	NA
Arsenic	0.31	**3.4**	NA	NA	NA	**5.3**	NA	NA	NA	**4.8**	NA	NA	NA	**21.5**	NA	NA	NA
Barium	216610.91	242	NA	NA	NA	277	NA	NA	NA	365	NA	NA	NA	1090	NA	NA	NA
Beryllium	2212.07	0.22	NA	NA	NA	0.15	NA	NA	NA	0.42	NA	NA	NA	1.1	NA	NA	NA
Cadmium (soil)	578.27	0.15	NA	NA	NA	0.26	NA	NA	NA	0.25	NA	NA	NA	ND (<0.56)	NA	NA	NA
Chromium III*	1752000.00	59.5	NA	NA	NA	85.9	NA	NA	NA	51.2	NA	NA	NA	80.5	NA	NA	NA
Cobalt	347.00	10.4	NA	NA	NA	11.5	NA	NA	NA	8.6	NA	NA	NA	29.1	NA	NA	NA
Copper	46720.00	41.2	NA	NA	NA	49.6	NA	NA	NA	37.9	NA	NA	NA	31.4	NA	NA	NA
Lead	320.00	12.3	NA	NA	NA	30.2	NA	NA	NA	18.3	NA	NA	NA	12.2	NA	NA	NA
Mercury (elemental)	186.68	0.065	NA	NA	NA	0.18	NA	NA	NA	0.074	NA	NA	NA	0.12	NA	NA	NA
Molybdenum	5840.00	0.39	NA	NA	NA	1.1	NA	NA	NA	0.71	NA	NA	NA	8.2	NA	NA	NA
Nickel	11132.85	54.2	NA	NA	NA	105	NA	NA	NA	56.4	NA	NA	NA	143	NA	NA	NA
Silver	5840.00	ND (<1.2)	NA	NA	NA	ND (<0.77)	NA	NA	NA	ND (<0.86)	NA	NA	NA	0.27	NA	NA	NA
Thallium	11.68	0.77	NA	NA	NA	0.61	NA	NA	NA	0.5	NA	NA	NA	ND (<5.6)	NA	NA	NA
Vanadium	5829.11	53.7	NA	NA	NA	56.4	NA	NA	NA	42.9	NA	NA	NA	86.2	NA	NA	NA
Zinc	350400.00	55.6	NA	NA	NA	89.7	NA	NA	NA	75.3	NA	NA	NA	59.8	NA	NA	NA
PCBs																	
Polychlorinated biphenyls (PCBs)	1.03	0.04	NA	NA	NA	0.051	NA	NA	NA	ND (<0.056)	NA	NA	NA	ND (<0.067)	NA	NA	NA
TPH																	
TPH diesel	1077.99	22	NA	NA	NA	120	NA	NA	NA	170	NA	NA	NA	65	NA	NA	NA

NA = Not Analyzed

ND = Not Detected above laboratory reporting limit, which is presented in parenthesis

* Total reported chromium values assumed to be tivalent chromium based on representative speciation data from adjacent property

1. Based on San Francisco Bay Regional Water Quality Control Board February 2016 ESLs Table S-1: Soil Direct Exposure Human Health Screening Levels for the Commercial/Industrial Scenario.

Exceeds ESL

Table 1 - Tier 1 Default ESL Data Summary
San Jose International Airport Hangar A

Concentrations are presented for detected analytes only in mg/kg.	Boring Identification	WCB-1	WCB-1	WCB-1	WCB-1	WCB-2	WCB-2	WCB-2	WCB-2	WCB-3	WCB-3	WCB-3	WCB-3	WCB-4	WCB-4	WCB-4	WCB-4
	Depth Interval (inches bgs)	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36
	Sample Date	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017
Analysis and Detected Analyte	**TTLC Level[1]**																
Volatile Organic Compounds																	
Acetone	No Standard	ND (<0.047)	NA	NA	NA	0.16	NA	NA	NA	0.13	NA	NA	NA	ND (<0.047)	NA	NA	NA
Methylene chloride	No Standard	0.0039	NA	NA	NA	0.0086	NA	NA	NA	0.011	NA	NA	NA	0.0055	NA	NA	NA
Pesticides																	
Aldrin	1.40	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	0.0039	0.0042	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.013)	ND (<0.012)	ND (<0.0026)
Chlordane (alpha)	No Standard	NA	0.0018	0.014	0.0055	NA	ND (<0.0053)	0.034	0.0062	NA	0.0047	0.03	0.15	NA	0.029	0.032	0.0015
Chlordane (gamma)	No Standard	NA	0.0023	0.016	0.004	NA	ND (<0.0053)	0.048	0.012	NA	0.0059	0.038	0.11	NA	0.026	0.037	ND (<0.0026)
Chlordane (technical)	No Standard	NA	0.041	0.14	0.035	NA	ND (<0.11)	0.16	0.051	NA	0.085	0.22	0.61	NA	0.17	0.22	0.021
Dichlorodiphenyldichloroethane (DDD)	1	NA	ND (<0.0024)	0.11	0.047	NA	ND (<0.0053)	0.29	0.17	NA	0.025	0.1	0.49	NA	0.053	0.1	0.0035
Dichlorodiphenyldichloroethene (DDE)	1	NA	ND (<0.0024)	0.39	0.12	NA	0.0046	0.24	0.031	NA	0.09	0.19	**2.6**	NA	0.57	**1.1**	0.037
Dichlorodiphenyltrichloroethane (DDT)	1	NA	ND (<0.0024)	0.02	0.0015	NA	ND (<0.0053)	0.012	0.27	NA	ND (<0.012)	ND (<0.014)	0.09	NA	0.24	0.35	0.0031
DDT Sum	1	NA	ND (<0.0024)	0.52	0.1685	NA	0.0046	0.542	0.471	NA	0.115	0.29	**3.18**	NA	0.863	**1.55**	0.0436
Dieldrin	8.00	NA	ND (<0.0024)	0.023	0.012	NA	ND (<0.0053)	0.15	0.022	NA	0.0037	0.022	0.18	NA	0.038	0.067	0.0024
Endrin	0.20	NA	ND (<0.0024)	0.015	0.0023	NA	ND (<0.0053)	0.0061	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	0.042	NA	0.093	**0.22**	0.0022
Endrin ketone	No Standard	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	ND (<0.0025)	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.13)	0.0054	ND (<0.0026)
Toxaphene	5.00	NA	ND (<0.047)	ND (<0.059)	ND (<0.054)	NA	ND (<0.11)	ND (<0.049)	ND (<0.059)	NA	ND (<0.23)	0.55	0.75	NA	0.35	1.5	0.0092
CAM 17 Metals																	
Antimony	500.00	1.8	NA	NA	NA	2.1	NA	NA	NA	0.61	NA	NA	NA	1.1	NA	NA	NA
Arsenic	500.00	3.4	NA	NA	NA	5.3	NA	NA	NA	4.8	NA	NA	NA	21.5	NA	NA	NA
Barium	10000.00	242	NA	NA	NA	277	NA	NA	NA	365	NA	NA	NA	1090	NA	NA	NA
Beryllium	75.00	0.22	NA	NA	NA	0.15	NA	NA	NA	0.42	NA	NA	NA	1.1	NA	NA	NA
Cadmium (soil)	No Standard	0.15	NA	NA	NA	0.26	NA	NA	NA	0.25	NA	NA	NA	ND (<0.56)	NA	NA	NA
Chromium III*	500.00	59.5	NA	NA	NA	85.9	NA	NA	NA	51.2	NA	NA	NA	80.5	NA	NA	NA
Cobalt	8000.00	10.4	NA	NA	NA	11.5	NA	NA	NA	8.6	NA	NA	NA	29.1	NA	NA	NA
Copper	2500.00	41.2	NA	NA	NA	49.6	NA	NA	NA	37.9	NA	NA	NA	31.4	NA	NA	NA
Lead	1000.00	12.3	NA	NA	NA	30.2	NA	NA	NA	18.3	NA	NA	NA	12.2	NA	NA	NA
Mercury (elemental)	No Standard	0.065	NA	NA	NA	0.18	NA	NA	NA	0.074	NA	NA	NA	0.12	NA	NA	NA
Molybdenum	3500.00	0.39	NA	NA	NA	1.1	NA	NA	NA	0.71	NA	NA	NA	8.2	NA	NA	NA
Nickel	2000.00	54.2	NA	NA	NA	105	NA	NA	NA	56.4	NA	NA	NA	143	NA	NA	NA
Silver	500.00	ND (<1.2)	NA	NA	NA	ND (<0.77)	NA	NA	NA	ND (<0.86)	NA	NA	NA	0.27	NA	NA	NA
Thallium	700.00	0.77	NA	NA	NA	0.61	NA	NA	NA	0.5	NA	NA	NA	ND (<5.6)	NA	NA	NA
Vanadium	2400.00	53.7	NA	NA	NA	56.4	NA	NA	NA	42.9	NA	NA	NA	86.2	NA	NA	NA
Zinc	5000.00	55.6	NA	NA	NA	89.7	NA	NA	NA	75.3	NA	NA	NA	59.8	NA	NA	NA
PCBs																	
Polychlorinated biphenyls (PCBs)	50.00	0.04	NA	NA	NA	0.051	NA	NA	NA	ND (<0.056)	NA	NA	NA	ND (<0.067)	NA	NA	NA
TPH																	
TPH diesel	No Standard	22	NA	NA	NA	120	NA	NA	NA	170	NA	NA	NA	65	NA	NA	NA

NA = Not Analyzed

ND = Not Detected above laboratory reporting limit, which is presented in parenthesis

* Total reported chromium values assumed to be tivalent chromium based on representative speciation data from adjacent property

1. Based on 22 CCR § 66261.24 current through 10/20/17.

Exceeds TTLC Level

Table 1 - Tier 1 Default ESL Data Summary
San Jose International Airport Hangar A

Concentrations are presented for detected analytes only in mg/kg.	Boring Identification	WCB-1	WCB-1	WCB-1	WCB-1	WCB-2	WCB-2	WCB-2	WCB-2	WCB-3	WCB-3	WCB-3	WCB-3	WCB-4	WCB-4	WCB-4	WCB-4
	Depth Interval (inches bgs)	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36	Composite (0-36)	0-6	12-18	30-36
	Sample Date	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017	10/11/2017
Analysis and Detected Analyte	**Construction Worker Direct Contact ESL[1]**																
Volatile Organic Compounds																	
Acetone	264318.73	ND (<0.047)	NA	NA	NA	0.16	NA	NA	NA	0.13	NA	NA	NA	ND (<0.047)	NA	NA	NA
Methylene chloride	498.82	0.0039	NA	NA	NA	0.0086	NA	NA	NA	0.011	NA	NA	NA	0.0055	NA	NA	NA
Pesticides																	
Aldrin	1.01	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	0.0039	0.0042	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.013)	ND (<0.012)	ND (<0.0026)
Chlordane (alpha)	14.05	NA	0.0018	0.014	0.0055	NA	ND (<0.0053)	0.034	0.0062	NA	0.0047	0.03	0.15	NA	0.029	0.032	0.0015
Chlordane (gamma)	14.05	NA	0.0023	0.016	0.004	NA	ND (<0.0053)	0.048	0.012	NA	0.0059	0.038	0.11	NA	0.026	0.037	ND (<0.0026)
Chlordane (technical)	14.05	NA	0.041	0.14	0.035	NA	ND (<0.11)	0.16	0.051	NA	0.085	0.22	0.61	NA	0.17	0.22	0.021
Dichlorodiphenyldichloroethane (DDD)	81.12	NA	ND (<0.0024)	0.11	0.047	NA	ND (<0.0053)	0.29	0.17	NA	0.025	0.1	0.49	NA	0.053	0.1	0.0035
Dichlorodiphenyldichloroethene (DDE)	57.26	NA	ND (<0.0024)	0.39	0.12	NA	0.0046	0.24	0.031	NA	0.09	0.19	2.6	NA	0.57	1.1	0.037
Dichlorodiphenyltrichloroethane (DDT)	57.26	NA	ND (<0.0024)	0.02	0.0015	NA	ND (<0.0053)	0.012	0.27	NA	ND (<0.012)	ND (<0.014)	0.09	NA	0.24	0.35	0.0031
Dieldrin	1.07	NA	ND (<0.0024)	0.023	0.012	NA	ND (<0.0053)	0.15	0.022	NA	0.0037	0.022	0.18	NA	0.038	0.067	0.0024
Endrin	74.38	NA	ND (<0.0024)	0.015	0.0023	NA	ND (<0.0053)	0.0061	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	0.042	NA	0.093	0.22	0.0022
Endrin ketone	No Standard	NA	ND (<0.0024)	ND (<0.003)	ND (<0.0027)	NA	ND (<0.0053)	ND (<0.0025)	ND (<0.0029)	NA	ND (<0.012)	ND (<0.014)	ND (<0.028)	NA	ND (<0.13)	0.0054	ND (<0.0026)
Toxaphene	14.30	NA	ND (<0.047)	ND (<0.059)	ND (<0.054)	NA	ND (<0.11)	ND (<0.049)	ND (<0.059)	NA	ND (<0.23)	0.55	0.75	NA	0.35	1.5	0.0092
CAM 17 Metals																	
Antimony	141.58	1.8	NA	NA	NA	2.1	NA	NA	NA	0.61	NA	NA	NA	1.1	NA	NA	NA
Arsenic	0.98	**3.4**	NA	NA	NA	**5.3**	NA	NA	NA	**4.8**	NA	NA	NA	**21.5**	NA	NA	NA
Barium	3019.10	242	NA	NA	NA	277	NA	NA	NA	365	NA	NA	NA	1090	NA	NA	NA
Beryllium	41.56	0.22	NA	NA	NA	0.15	NA	NA	NA	0.42	NA	NA	NA	1.1	NA	NA	NA
Cadmium (soil)	42.67	0.15	NA	NA	NA	0.26	NA	NA	NA	0.25	NA	NA	NA	ND (<0.56)	NA	NA	NA
Chromium III*	530909.09	59.5	NA	NA	NA	85.9	NA	NA	NA	51.2	NA	NA	NA	80.5	NA	NA	NA
Cobalt	27.90	10.4	NA	NA	NA	11.5	NA	NA	NA	8.6	NA	NA	NA	**29.1**	NA	NA	NA
Copper	14157.58	41.2	NA	NA	NA	49.6	NA	NA	NA	37.9	NA	NA	NA	31.4	NA	NA	NA
Lead	160.00	12.3	NA	NA	NA	30.2	NA	NA	NA	18.3	NA	NA	NA	12.2	NA	NA	NA
Mercury (elemental)	43.59	0.065	NA	NA	NA	0.18	NA	NA	NA	0.074	NA	NA	NA	0.12	NA	NA	NA
Molybdenum	1769.70	0.39	NA	NA	NA	1.1	NA	NA	NA	0.71	NA	NA	NA	8.2	NA	NA	NA
Nickel	86.34	54.2	NA	NA	NA	**105**	NA	NA	NA	56.4	NA	NA	NA	**143**	NA	NA	NA
Silver	1769.70	ND (<1.2)	NA	NA	NA	ND (<0.77)	NA	NA	NA	ND (<0.86)	NA	NA	NA	0.27	NA	NA	NA
Thallium	3.54	0.77	NA	NA	NA	0.61	NA	NA	NA	0.5	NA	NA	NA	ND (<5.6)	NA	NA	NA
Vanadium	465.97	53.7	NA	NA	NA	56.4	NA	NA	NA	42.9	NA	NA	NA	86.2	NA	NA	NA
Zinc	106181.82	55.6	NA	NA	NA	89.7	NA	NA	NA	75.3	NA	NA	NA	59.8	NA	NA	NA
PCBs																	
Polychlorinated biphenyls (PCBs)	5.60	0.04	NA	NA	NA	0.051	NA	NA	NA	ND (<0.056)	NA	NA	NA	ND (<0.067)	NA	NA	NA
TPH																	
TPH diesel	884.96	22	NA	NA	NA	120	NA	NA	NA	170	NA	NA	NA	65	NA	NA	NA

NA = Not Analyzed

ND = Not Detected above laboratory reporting limit, which is presented in parenthesis

* Total reported chromium values assumed to be tivalent chromium based on representative speciation data from adjacent property

1. Based on San Francisco Bay Regional Water Quality Control Board February 2016 ESLs Table S-1: Soil Direct Exposure Human Health Screening Levels for the Construction Worker Scenario.

Exceeds ESL

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-82612-1
Client Project/Site: SJC Hanger A

For:
Woodard & Curran, Inc.
41 Hutchens Drive
Portland, Maine 04102

Attn: Jedd Steinglass

Denise L Giglia

Authorized for release by:
10/27/2017 12:45:36 PM
Denise Giglia, Project Management Assistant II
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Designee for

Becky Mason, Project Manager II
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Table of Contents

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

GC Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
p	The %RPD between the primary and confirmation column/detector is >40%. The lower value has been reported.
F1	MS and/or MSD Recovery is outside acceptance limits.
D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution may be flagged with a D.
X	Surrogate is outside control limits

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-82612-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-82612-1

Receipt
The samples were received on 10/17/2017 10:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7º C.

GC/MS VOA
Method 8260B: The samples were analyzed in SVOA prior to the Volatiles department, sample hits for Methylene Chloride and Acetone may be due to lab contamination for the following samples: WCB-1 (720-82612-1), WCB-2 (720-82612-2), WCB-3 (720-82612-3) and WCB-4 (720-82612-4).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C: Surrogate recovery for the following sample was outside control limits: WCB-3 (720-82612-3). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method 8270C: The following samples was diluted due to the abundance of non-target analytes: WCB-1 (720-82612-1), WCB-2 (720-82612-2), WCB-3 (720-82612-3), WCB-4 (720-82612-4) and (720-82516-B-5-Q). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
Method 8081A: The following sample was diluted due to color: WCB-2 (0-6) (720-82612-8). Elevated reporting limits (RL) are provided.

Method 8081A: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 720-232563 and analytical batch 720-232637 were outside control limits. Sample matrix interference and non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8081A: The pattern present in the following samples does not exactly match the laboratory's analytical reference standard for Toxaphene: WCB-3 (12-18) (720-82612-12), WCB-3 (30-36) (720-82612-13), WCB-4 (0-6) (720-82612-14), WCB-4 (12-18) (720-82612-15) and WCB-4 (30-36) (720-82612-16). The individual representative peaks present have been quantitated and reported as Toxaphene.

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for alpha-Chlordane for the following samples: WCB-1 (0-6) (720-82612-5), WCB-2 (30-36) (720-82612-10), WCB-3 (0-6) (720-82612-11) and WCB-3 (12-18) (720-82612-12). The lower value(s) has been reported and qualified in accordance with the laboratory's SOP.

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for alpha-Chlordane & gamma-Chlordane for the following sample: WCB-1 (12-18) (720-82612-6). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for 4,4'-DDT & alpha-Chlordane for the following sample: WCB-1 (30-36) (720-82612-7). The lower values have been reported and qualified in accordance with the laboratory's SOP.

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for 4,4'-DDT & Endrin for the following sample: WCB-2 (12-18) (720-82612-9). The lower values have been reported and qualified in accordance with the laboratory's SOP.

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for Endrin for the following sample: WCB-4 (30-36) (720-82612-16). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Method 8081A: The %RPD between the primary and confirmation column / detector exceeded 40% for gamma-Chlordane for the following sample: WCB-3 (30-36) (720-82612-13). The lower value has been reported and qualified in accordance with the laboratory's SOP.

Job ID: 720-82612-1 (Continued)

Laboratory: TestAmerica Pleasanton (Continued)

Method 8081A: The %RPD between the primary and confirmation column exceeded 40% for alpha-Chlordane & gamma-Chlordane for the following sample: WCB-4 (12-18) (720-82612-15). The lower values have been reported and qualified in accordance with the laboratory's SOP.

Method 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: WCB-3 (720-82612-3), (720-82612-A-3-I MS) and (720-82612-A-3-J MSD).

Method 8082: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 720-232564 and analytical batch 720-232559 were outside control limits. Sample matrix interference and non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 8082: The following samples required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: WCB-1 (720-82612-1), WCB-4 (720-82612-4), (LCS 720-232564/2-A) and (MB 720-232564/1-A).

Method 8082: The following sample required a tetrabutylammonium sulfite (TBA) clean-up to reduce matrix interferences caused by sulfur: WCB-2 (720-82612-2).

Method 8015B: The following sample required a dilution due to the nature of the sample matrix: WCB-3 (720-82612-3). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Metals

Method 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 720-232501 and analytical batch 720-232603 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 6010B: The post digestion spike % recovery for Ba, Be, Cr associated with batch 720-232603 was outside of control limits.

Method 6010B: The serial dilution performed for the following sample associated with batch 720-232603 was outside control limits: (720-82646-A-2-E SD)

Method 6010B: The following samples was diluted due to the abundance of non-target analytes Ca and/or Fe: WCB-1 (720-82612-1), WCB-2 (720-82612-2), WCB-3 (720-82612-3) and WCB-4 (720-82612-4). Elevated reporting limits (RLs) are provided.

Method 6010B: The following sample was diluted due to the abundance of non-target analyte Mn: WCB-4 (720-82612-4). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep

Method 3546: A deviation from the Standard Operating Procedure (SOP) occurred. Details are as follows: limited sample due to re-extraction so an LCSD was used in place of an MS/MSD

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-1 — Lab Sample ID: 720-82612-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	3.9	J	9.5	3.8	ug/Kg	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	22		1.3	0.98	mg/Kg	1	☼	8015B	Silica Gel Cleanup
PCB-1260	0.040	J	0.065	0.0069	mg/Kg	1	☼	8082	Total/NA
Antimony	1.8	J	2.3	0.38	mg/Kg	4	☼	6010B	Total/NA
Arsenic	3.4	J	4.6	0.39	mg/Kg	4	☼	6010B	Total/NA
Barium	242		2.3	0.33	mg/Kg	4	☼	6010B	Total/NA
Beryllium	0.22	J	0.46	0.15	mg/Kg	4	☼	6010B	Total/NA
Cadmium	0.15	J	0.58	0.057	mg/Kg	4	☼	6010B	Total/NA
Chromium	59.5	B	2.3	0.25	mg/Kg	4	☼	6010B	Total/NA
Cobalt	10.4		0.93	0.093	mg/Kg	4	☼	6010B	Total/NA
Copper	41.2		7.0	3.3	mg/Kg	4	☼	6010B	Total/NA
Lead	12.3		2.3	0.49	mg/Kg	4	☼	6010B	Total/NA
Molybdenum	0.39	J	2.3	0.30	mg/Kg	4	☼	6010B	Total/NA
Nickel	54.2		2.3	0.24	mg/Kg	4	☼	6010B	Total/NA
Thallium	0.77	J	2.3	0.67	mg/Kg	4	☼	6010B	Total/NA
Vanadium	53.7		2.3	0.32	mg/Kg	4	☼	6010B	Total/NA
Zinc	55.6		7.0	2.9	mg/Kg	4	☼	6010B	Total/NA
Mercury	0.065		0.019	0.0028	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: WCB-2 — Lab Sample ID: 720-82612-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	160		48	37	ug/Kg	1		8260B	Total/NA
Methylene Chloride	8.6	J	9.6	3.8	ug/Kg	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	120		2.5	1.8	mg/Kg	2	☼	8015B	Silica Gel Cleanup
PCB-1260	0.051	J	0.060	0.0063	mg/Kg	1	☼	8082	Total/NA
Antimony	2.1		1.5	0.26	mg/Kg	4	☼	6010B	Total/NA
Arsenic	5.3		3.1	0.26	mg/Kg	4	☼	6010B	Total/NA
Barium	277		1.5	0.22	mg/Kg	4	☼	6010B	Total/NA
Beryllium	0.15	J	0.31	0.10	mg/Kg	4	☼	6010B	Total/NA
Cadmium	0.26	J	0.38	0.038	mg/Kg	4	☼	6010B	Total/NA
Chromium	85.9	B	1.5	0.16	mg/Kg	4	☼	6010B	Total/NA
Cobalt	11.5		0.62	0.062	mg/Kg	4	☼	6010B	Total/NA
Copper	49.6		4.6	2.2	mg/Kg	4	☼	6010B	Total/NA
Lead	30.2		1.5	0.32	mg/Kg	4	☼	6010B	Total/NA
Molybdenum	1.1	J	1.5	0.20	mg/Kg	4	☼	6010B	Total/NA
Nickel	105		1.5	0.16	mg/Kg	4	☼	6010B	Total/NA
Thallium	0.61	J	1.5	0.45	mg/Kg	4	☼	6010B	Total/NA
Vanadium	56.4		1.5	0.21	mg/Kg	4	☼	6010B	Total/NA
Zinc	89.7		4.6	2.0	mg/Kg	4	☼	6010B	Total/NA
Mercury	0.18		0.021	0.0030	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: WCB-3 — Lab Sample ID: 720-82612-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	130		48	36	ug/Kg	1		8260B	Total/NA
Methylene Chloride	11		9.6	3.8	ug/Kg	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	170		11	8.6	mg/Kg	10	☼	8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB-3 (Continued) — Lab Sample ID: 720-82612-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Antimony	0.61	J	1.7	0.29	mg/Kg	4	☼	6010B	Total/NA
Arsenic	4.8		3.5	0.29	mg/Kg	4	☼	6010B	Total/NA
Barium	365		1.7	0.25	mg/Kg	4	☼	6010B	Total/NA
Beryllium	0.42		0.35	0.11	mg/Kg	4	☼	6010B	Total/NA
Cadmium	0.25	J	0.43	0.043	mg/Kg	4	☼	6010B	Total/NA
Chromium	51.2	B	1.7	0.18	mg/Kg	4	☼	6010B	Total/NA
Cobalt	8.6		0.69	0.069	mg/Kg	4	☼	6010B	Total/NA
Copper	37.9		5.2	2.5	mg/Kg	4	☼	6010B	Total/NA
Lead	18.3		1.7	0.36	mg/Kg	4	☼	6010B	Total/NA
Molybdenum	0.71	J	1.7	0.22	mg/Kg	4	☼	6010B	Total/NA
Nickel	56.4		1.7	0.18	mg/Kg	4	☼	6010B	Total/NA
Thallium	0.50	J	1.7	0.50	mg/Kg	4	☼	6010B	Total/NA
Vanadium	42.9		1.7	0.24	mg/Kg	4	☼	6010B	Total/NA
Zinc	75.3		5.2	2.2	mg/Kg	4	☼	6010B	Total/NA
Mercury	0.074		0.018	0.0027	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: WCB-4 — Lab Sample ID: 720-82612-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	5.5	J	9.4	3.8	ug/Kg	1		8260B	Total/NA
Diesel Range Organics [C10-C28]	65		4.1	3.1	mg/Kg	3	☼	8015B	Silica Gel Cleanup
Antimony	1.1	J	2.2	0.37	mg/Kg	4	☼	6010B	Total/NA
Arsenic	21.5		4.5	0.38	mg/Kg	4	☼	6010B	Total/NA
Barium	1090		2.2	0.32	mg/Kg	4	☼	6010B	Total/NA
Beryllium	1.1		0.45	0.14	mg/Kg	4	☼	6010B	Total/NA
Chromium	80.5	B	2.2	0.24	mg/Kg	4	☼	6010B	Total/NA
Cobalt	29.1		0.89	0.089	mg/Kg	4	☼	6010B	Total/NA
Copper	31.4		6.7	3.2	mg/Kg	4	☼	6010B	Total/NA
Lead	12.2		5.6	1.2	mg/Kg	10	☼	6010B	Total/NA
Molybdenum	8.2		2.2	0.29	mg/Kg	4	☼	6010B	Total/NA
Nickel	143		2.2	0.23	mg/Kg	4	☼	6010B	Total/NA
Silver	0.27	J	1.1	0.23	mg/Kg	4	☼	6010B	Total/NA
Vanadium	86.2		2.2	0.30	mg/Kg	4	☼	6010B	Total/NA
Zinc	59.8		6.7	2.8	mg/Kg	4	☼	6010B	Total/NA
Mercury	0.12		0.021	0.0031	mg/Kg	1	☼	7471A	Total/NA

Client Sample ID: WCB-1 (0-6) — Lab Sample ID: 720-82612-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlordane (technical)	0.041	J	0.047	0.0034	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.0018	J p	0.0024	0.00097	mg/Kg	1	☼	8081A	Total/NA
gamma-Chlordane	0.0023	J	0.0024	0.00097	mg/Kg	1	☼	8081A	Total/NA

Client Sample ID: WCB-1 (12-18) — Lab Sample ID: 720-82612-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.023		0.0030	0.00055	mg/Kg	1	☼	8081A	Total/NA
Endrin	0.015		0.0030	0.00099	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDT	0.020		0.0030	0.00074	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDE	0.39		0.0030	0.0012	mg/Kg	1	☼	8081A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB-1 (12-18) (Continued) — Lab Sample ID: 720-82612-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDD	0.11		0.0030	0.00090	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.14		0.059	0.0043	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.014	p	0.0030	0.0012	mg/Kg	1	☼	8081A	Total/NA
gamma-Chlordane	0.016	p	0.0030	0.0012	mg/Kg	1	☼	8081A	Total/NA

Client Sample ID: WCB-1 (30-36) — Lab Sample ID: 720-82612-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.012		0.0027	0.00050	mg/Kg	1	☼	8081A	Total/NA
Endrin	0.0023	J	0.0027	0.00090	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDT	0.0015	J p	0.0027	0.00067	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDE	0.12		0.0027	0.0011	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDD	0.047		0.0027	0.00082	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.035	J	0.054	0.0039	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.0055		0.0027	0.0011	mg/Kg	1	☼	8081A	Total/NA
gamma-Chlordane	0.0040	p	0.0027	0.0011	mg/Kg	1	☼	8081A	Total/NA

Client Sample ID: WCB-2 (0-6) — Lab Sample ID: 720-82612-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDE	0.0046	J	0.0053	0.0022	mg/Kg	2	☼	8081A	Total/NA

Client Sample ID: WCB-2 (12-18) — Lab Sample ID: 720-82612-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aldrin	0.0039		0.0025	0.00082	mg/Kg	1	☼	8081A	Total/NA
Dieldrin	0.15		0.0025	0.00045	mg/Kg	1	☼	8081A	Total/NA
Endrin	0.0061	p	0.0025	0.00082	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDT	0.012	p	0.0025	0.00061	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDE	0.24		0.0025	0.0010	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDD	0.29		0.0025	0.00075	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.16		0.049	0.0036	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.034		0.0025	0.0010	mg/Kg	1	☼	8081A	Total/NA
gamma-Chlordane	0.048		0.0025	0.0010	mg/Kg	1	☼	8081A	Total/NA

Client Sample ID: WCB-2 (30-36) — Lab Sample ID: 720-82612-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Aldrin	0.0042		0.0029	0.00099	mg/Kg	1	☼	8081A	Total/NA
Dieldrin	0.022		0.0029	0.00055	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDT	0.27		0.0029	0.00074	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDE	0.031		0.0029	0.0012	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDD	0.17		0.0029	0.00090	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.051	J	0.059	0.0043	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.0062	p	0.0029	0.0012	mg/Kg	1	☼	8081A	Total/NA
gamma-Chlordane	0.012		0.0029	0.0012	mg/Kg	1	☼	8081A	Total/NA

Client Sample ID: WCB-3 (0-6) — Lab Sample ID: 720-82612-11

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB-3 (0-6) (Continued) — Lab Sample ID: 720-82612-11

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.0037	J	0.012	0.0021	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDE	0.090		0.012	0.0047	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDD	0.025		0.012	0.0035	mg/Kg	5	☼	8081A	Total/NA
Chlordane (technical)	0.085	J	0.23	0.017	mg/Kg	5	☼	8081A	Total/NA
alpha-Chlordane	0.0047	J p	0.012	0.0047	mg/Kg	5	☼	8081A	Total/NA
gamma-Chlordane	0.0059	J	0.012	0.0047	mg/Kg	5	☼	8081A	Total/NA

Client Sample ID: WCB-3 (12-18) — Lab Sample ID: 720-82612-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.022		0.014	0.0025	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDE	0.19		0.014	0.0056	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDD	0.10		0.014	0.0042	mg/Kg	5	☼	8081A	Total/NA
Toxaphene	0.55		0.27	0.047	mg/Kg	5	☼	8081A	Total/NA
Chlordane (technical)	0.22	J	0.27	0.020	mg/Kg	5	☼	8081A	Total/NA
alpha-Chlordane	0.030	p	0.014	0.0056	mg/Kg	5	☼	8081A	Total/NA
gamma-Chlordane	0.038		0.014	0.0056	mg/Kg	5	☼	8081A	Total/NA

Client Sample ID: WCB-3 (30-36) — Lab Sample ID: 720-82612-13

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.18		0.028	0.0051	mg/Kg	10	☼	8081A	Total/NA
Endrin	0.042		0.028	0.0093	mg/Kg	10	☼	8081A	Total/NA
4,4'-DDT	0.090		0.028	0.0069	mg/Kg	10	☼	8081A	Total/NA
4,4'-DDE	2.6		0.028	0.011	mg/Kg	10	☼	8081A	Total/NA
4,4'-DDD	0.49		0.028	0.0084	mg/Kg	10	☼	8081A	Total/NA
Toxaphene	0.75		0.055	0.0094	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.61		0.55	0.040	mg/Kg	10	☼	8081A	Total/NA
alpha-Chlordane	0.15		0.028	0.011	mg/Kg	10	☼	8081A	Total/NA
gamma-Chlordane	0.11	p	0.028	0.011	mg/Kg	10	☼	8081A	Total/NA

Client Sample ID: WCB-4 (0-6) — Lab Sample ID: 720-82612-14

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.038		0.013	0.0023	mg/Kg	5	☼	8081A	Total/NA
Endrin	0.093		0.013	0.0042	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDT	0.24		0.013	0.0031	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDE	0.57		0.013	0.0051	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDD	0.053		0.013	0.0038	mg/Kg	5	☼	8081A	Total/NA
Toxaphene	0.35		0.050	0.0085	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.17	J	0.25	0.018	mg/Kg	5	☼	8081A	Total/NA
alpha-Chlordane	0.029		0.013	0.0051	mg/Kg	5	☼	8081A	Total/NA
gamma-Chlordane	0.026		0.013	0.0051	mg/Kg	5	☼	8081A	Total/NA

Client Sample ID: WCB-4 (12-18) — Lab Sample ID: 720-82612-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.067		0.012	0.0023	mg/Kg	5	☼	8081A	Total/NA
Endrin	0.22		0.012	0.0041	mg/Kg	5	☼	8081A	Total/NA
Endrin ketone	0.0054	J p	0.012	0.0024	mg/Kg	5	☼	8081A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB-4 (12-18) (Continued) — Lab Sample ID: 720-82612-15

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
4,4'-DDT	0.35		0.012	0.0030	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDE	1.1		0.012	0.0050	mg/Kg	5	☼	8081A	Total/NA
4,4'-DDD	0.10		0.012	0.0037	mg/Kg	5	☼	8081A	Total/NA
Toxaphene	1.5		0.049	0.0083	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.22	J	0.24	0.018	mg/Kg	5	☼	8081A	Total/NA
alpha-Chlordane	0.032	p	0.012	0.0050	mg/Kg	5	☼	8081A	Total/NA
gamma-Chlordane	0.037		0.012	0.0050	mg/Kg	5	☼	8081A	Total/NA

Client Sample ID: WCB-4 (30-36) — Lab Sample ID: 720-82612-16

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.0024	J	0.0026	0.00047	mg/Kg	1	☼	8081A	Total/NA
Endrin	0.0022	J p	0.0026	0.00086	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDT	0.0031		0.0026	0.00064	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDE	0.037		0.0026	0.0011	mg/Kg	1	☼	8081A	Total/NA
4,4'-DDD	0.0035		0.0026	0.00078	mg/Kg	1	☼	8081A	Total/NA
Toxaphene	0.0092	J	0.051	0.0087	mg/Kg	1	☼	8081A	Total/NA
Chlordane (technical)	0.021	J	0.051	0.0037	mg/Kg	1	☼	8081A	Total/NA
alpha-Chlordane	0.0015	J	0.0026	0.0011	mg/Kg	1	☼	8081A	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: WCB-1
Date Collected: 10/11/17 09:57
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7	1.1	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Acetone	ND		47	36	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Benzene	ND		4.7	0.62	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Dichlorobromomethane	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Bromobenzene	ND		4.7	0.75	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chlorobromomethane	ND		19	0.68	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Bromoform	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Bromomethane	ND		9.5	0.75	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
2-Butanone (MEK)	ND		47	20	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
n-Butylbenzene	ND		4.7	0.95	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
sec-Butylbenzene	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
tert-Butylbenzene	ND		4.7	0.69	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Carbon disulfide	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Carbon tetrachloride	ND		4.7	0.59	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chlorobenzene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chloroethane	ND		9.5	0.53	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chloroform	ND		4.7	0.63	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chloromethane	ND		9.5	0.68	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
2-Chlorotoluene	ND		4.7	0.62	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
4-Chlorotoluene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Chlorodibromomethane	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2-Dichlorobenzene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,3-Dichlorobenzene	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,4-Dichlorobenzene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,3-Dichloropropane	ND		4.7	0.69	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1-Dichloropropene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2-Dibromo-3-Chloropropane	ND		9.5	1.6	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Ethylene Dibromide	ND		4.7	1.4	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Dibromomethane	ND		9.5	0.82	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Dichlorodifluoromethane	ND		9.5	0.75	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1-Dichloroethane	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2-Dichloroethane	ND		4.7	0.72	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1-Dichloroethene	ND		4.7	0.59	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
cis-1,2-Dichloroethene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
trans-1,2-Dichloroethene	ND		4.7	0.71	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2-Dichloropropane	ND		4.7	0.60	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
cis-1,3-Dichloropropene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
trans-1,3-Dichloropropene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Ethylbenzene	ND		4.7	0.71	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Hexachlorobutadiene	ND		4.7	0.85	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
2-Hexanone	ND		47	9.5	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Isopropylbenzene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
4-Isopropyltoluene	ND		4.7	2.4	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Methylene Chloride	**3.9**	**J**	9.5	3.8	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
4-Methyl-2-pentanone (MIBK)	ND		47	9.5	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Naphthalene	ND		9.5	1.4	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
N-Propylbenzene	ND		4.7	0.63	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Styrene	ND		4.7	0.60	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1,1,2-Tetrachloroethane	ND		4.7	0.72	ug/Kg		10/24/17 10:39	10/24/17 12:49	1

Client Sample ID: WCB-1
Date Collected: 10/11/17 09:57
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-1
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.7	0.71	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Tetrachloroethene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Toluene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2,3-Trichlorobenzene	ND		4.7	0.70	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2,4-Trichlorobenzene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1,1-Trichloroethane	ND		4.7	0.58	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1,2-Trichloroethane	ND		4.7	0.66	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Trichloroethene	ND		4.7	0.60	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Trichlorofluoromethane	ND		4.7	0.53	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2,3-Trichloropropane	ND		4.7	0.73	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7	2.0	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,2,4-Trimethylbenzene	ND		4.7	1.6	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
1,3,5-Trimethylbenzene	ND		4.7	0.62	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Vinyl acetate	ND		19	4.7	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Vinyl chloride	ND		4.7	0.69	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
Xylenes, Total	ND		9.5	1.2	ug/Kg		10/24/17 10:39	10/24/17 12:49	1
2,2-Dichloropropane	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 12:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*99*		*45 - 131*	*10/24/17 10:39*	*10/24/17 12:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*105*		*60 - 140*	*10/24/17 10:39*	*10/24/17 12:49*	*1*
Toluene-d8 (Surr)	*106*		*58 - 140*	*10/24/17 10:39*	*10/24/17 12:49*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Acenaphthylene	ND		0.66	0.056	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Acenaphthene	ND		0.66	0.038	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Fluorene	ND		0.66	0.040	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Phenanthrene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Anthracene	ND		0.66	0.043	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Fluoranthene	ND		0.66	0.072	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Pyrene	ND		0.66	0.038	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Benzo[a]anthracene	ND		3.3	0.18	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Chrysene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Benzo[b]fluoranthene	ND		0.66	0.094	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Benzo[a]pyrene	ND		0.66	0.065	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Benzo[k]fluoranthene	ND		0.66	0.14	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Indeno[1,2,3-cd]pyrene	ND		0.66	0.13	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Benzo[g,h,i]perylene	ND		0.66	0.20	mg/Kg		10/23/17 09:04	10/23/17 22:05	2
Dibenz(a,h)anthracene	ND		0.66	0.15	mg/Kg		10/23/17 09:04	10/23/17 22:05	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*58*		*21 - 98*	*10/23/17 09:04*	*10/23/17 22:05*	*2*
2-Fluorobiphenyl	*71*		*30 - 112*	*10/23/17 09:04*	*10/23/17 22:05*	*2*
Terphenyl-d14	*82*		*59 - 134*	*10/23/17 09:04*	*10/23/17 22:05*	*2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**23.6**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-1
Date Collected: 10/11/17 09:57
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-1
Matrix: Solid
Percent Solids: 76.4

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**22**		1.3	0.98	mg/Kg	☼	10/25/17 11:08	10/26/17 01:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.06*		*0 - 1*	*10/25/17 11:08*	*10/26/17 01:25*	*1*
p-Terphenyl	*73*		*38 - 148*	*10/25/17 11:08*	*10/26/17 01:25*	*1*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1221	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1232	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1242	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1248	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1254	ND		0.065	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1
PCB-1260	**0.040**	**J**	0.065	0.0069	mg/Kg	☼	10/23/17 09:12	10/23/17 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*79*		*45 - 132*	*10/23/17 09:12*	*10/23/17 21:18*	*1*
DCB Decachlorobiphenyl	*92*		*42 - 146*	*10/23/17 09:12*	*10/23/17 21:18*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**1.8**	**J**	2.3	0.38	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Arsenic	**3.4**	**J**	4.6	0.39	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Barium	**242**		2.3	0.33	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Beryllium	**0.22**	**J**	0.46	0.15	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Cadmium	**0.15**	**J**	0.58	0.057	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Chromium	**59.5**	**B**	2.3	0.25	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Cobalt	**10.4**		0.93	0.093	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Copper	**41.2**		7.0	3.3	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Lead	**12.3**		2.3	0.49	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Molybdenum	**0.39**	**J**	2.3	0.30	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Nickel	**54.2**		2.3	0.24	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Selenium	ND		4.6	0.70	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Silver	ND		1.2	0.23	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Thallium	**0.77**	**J**	2.3	0.67	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Vanadium	**53.7**		2.3	0.32	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4
Zinc	**55.6**		7.0	2.9	mg/Kg	☼	10/20/17 15:24	10/23/17 12:54	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.065**		0.019	0.0028	mg/Kg	☼	10/19/17 10:05	10/19/17 14:04	1

Client Sample ID: WCB-2
Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8	1.2	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Acetone	**160**		48	37	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Benzene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Dichlorobromomethane	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Bromobenzene	ND		4.8	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chlorobromomethane	ND		19	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Bromoform	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Bromomethane	ND		9.6	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
2-Butanone (MEK)	ND		48	20	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
n-Butylbenzene	ND		4.8	0.96	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
sec-Butylbenzene	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
tert-Butylbenzene	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Carbon disulfide	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Carbon tetrachloride	ND		4.8	0.60	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chlorobenzene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chloroethane	ND		9.6	0.54	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chloroform	ND		4.8	0.63	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chloromethane	ND		9.6	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
2-Chlorotoluene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
4-Chlorotoluene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Chlorodibromomethane	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2-Dichlorobenzene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,3-Dichlorobenzene	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,4-Dichlorobenzene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,3-Dichloropropane	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1-Dichloropropene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2-Dibromo-3-Chloropropane	ND		9.6	1.6	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Ethylene Dibromide	ND		4.8	1.4	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Dibromomethane	ND		9.6	0.83	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Dichlorodifluoromethane	ND		9.6	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1-Dichloroethane	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2-Dichloroethane	ND		4.8	0.73	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1-Dichloroethene	ND		4.8	0.60	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
cis-1,2-Dichloroethene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
trans-1,2-Dichloroethene	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2-Dichloropropane	ND		4.8	0.61	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
cis-1,3-Dichloropropene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
trans-1,3-Dichloropropene	ND		4.8	0.64	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Ethylbenzene	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Hexachlorobutadiene	ND		4.8	0.87	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
2-Hexanone	ND		48	9.6	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Isopropylbenzene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
4-Isopropyltoluene	ND		4.8	2.4	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Methylene Chloride	**8.6**	**J**	9.6	3.8	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
4-Methyl-2-pentanone (MIBK)	ND		48	9.6	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Naphthalene	ND		9.6	1.4	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
N-Propylbenzene	ND		4.8	0.63	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Styrene	ND		4.8	0.61	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1,1,2-Tetrachloroethane	ND		4.8	0.73	ug/Kg		10/24/17 10:39	10/24/17 13:17	1

Client Sample ID: WCB-2
Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Tetrachloroethene	ND		4.8	0.64	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Toluene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2,3-Trichlorobenzene	ND		4.8	0.71	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2,4-Trichlorobenzene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1,1-Trichloroethane	ND		4.8	0.59	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1,2-Trichloroethane	ND		4.8	0.67	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Trichloroethene	ND		4.8	0.61	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Trichlorofluoromethane	ND		4.8	0.54	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2,3-Trichloropropane	ND		4.8	0.74	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8	2.0	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,2,4-Trimethylbenzene	ND		4.8	1.6	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
1,3,5-Trimethylbenzene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Vinyl acetate	ND		19	4.8	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Vinyl chloride	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
Xylenes, Total	ND		9.6	1.2	ug/Kg		10/24/17 10:39	10/24/17 13:17	1
2,2-Dichloropropane	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*45 - 131*	*10/24/17 10:39*	*10/24/17 13:17*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*60 - 140*	*10/24/17 10:39*	*10/24/17 13:17*	*1*
Toluene-d8 (Surr)	*101*		*58 - 140*	*10/24/17 10:39*	*10/24/17 13:17*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Acenaphthylene	ND		0.66	0.055	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Acenaphthene	ND		0.66	0.037	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Fluorene	ND		0.66	0.039	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Phenanthrene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Anthracene	ND		0.66	0.042	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Fluoranthene	ND		0.66	0.072	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Pyrene	ND		0.66	0.037	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Benzo[a]anthracene	ND		3.3	0.18	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Chrysene	ND		0.66	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Benzo[b]fluoranthene	ND		0.66	0.094	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Benzo[a]pyrene	ND		0.66	0.065	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Benzo[k]fluoranthene	ND		0.66	0.14	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Indeno[1,2,3-cd]pyrene	ND		0.66	0.13	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Benzo[g,h,i]perylene	ND		0.66	0.20	mg/Kg		10/23/17 09:04	10/23/17 22:31	2
Dibenz(a,h)anthracene	ND		0.66	0.15	mg/Kg		10/23/17 09:04	10/23/17 22:31	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*28*		*21 - 98*	*10/23/17 09:04*	*10/23/17 22:31*	*2*
2-Fluorobiphenyl	*59*		*30 - 112*	*10/23/17 09:04*	*10/23/17 22:31*	*2*
Terphenyl-d14	*59*		*59 - 134*	*10/23/17 09:04*	*10/23/17 22:31*	*2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**18.7**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-2

Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2

Matrix: Solid
Percent Solids: 81.3

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**120**		2.5	1.8	mg/Kg	☼	10/25/17 11:08	10/26/17 01:49	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.08*		*0 - 1*	*10/25/17 11:08*	*10/26/17 01:49*	*2*
p-Terphenyl	*56*		*38 - 148*	*10/25/17 11:08*	*10/26/17 01:49*	*2*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1221	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1232	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1242	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1248	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1254	ND		0.060	0.0021	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1
PCB-1260	**0.051**	**J**	0.060	0.0063	mg/Kg	☼	10/23/17 09:12	10/23/17 21:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*45 - 132*	*10/23/17 09:12*	*10/23/17 21:01*	*1*
DCB Decachlorobiphenyl	*98*		*42 - 146*	*10/23/17 09:12*	*10/23/17 21:01*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**2.1**		1.5	0.26	mg/Kg	☼	10/20/17 15:24	10/24/17 16:50	4
Arsenic	**5.3**		3.1	0.26	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Barium	**277**		1.5	0.22	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Beryllium	**0.15**	**J**	0.31	0.10	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Cadmium	**0.26**	**J**	0.38	0.038	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Chromium	**85.9**	**B**	1.5	0.16	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Cobalt	**11.5**		0.62	0.062	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Copper	**49.6**		4.6	2.2	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Lead	**30.2**		1.5	0.32	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Molybdenum	**1.1**	**J**	1.5	0.20	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Nickel	**105**		1.5	0.16	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Selenium	ND		3.1	0.46	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Silver	ND		0.77	0.16	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Thallium	**0.61**	**J**	1.5	0.45	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Vanadium	**56.4**		1.5	0.21	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4
Zinc	**89.7**		4.6	2.0	mg/Kg	☼	10/20/17 15:24	10/23/17 12:59	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	**0.18**		0.021	0.0030	mg/Kg	☼	10/19/17 10:05	10/19/17 14:11	1

Client Sample ID: WCB-3
Date Collected: 10/11/17 12:12
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-3
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.8	1.1	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Acetone	**130**		48	36	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Benzene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Dichlorobromomethane	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Bromobenzene	ND		4.8	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chlorobromomethane	ND		19	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Bromoform	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Bromomethane	ND		9.6	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
2-Butanone (MEK)	ND		48	20	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
n-Butylbenzene	ND		4.8	0.96	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
sec-Butylbenzene	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
tert-Butylbenzene	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Carbon disulfide	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Carbon tetrachloride	ND		4.8	0.59	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chlorobenzene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chloroethane	ND		9.6	0.54	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chloroform	ND		4.8	0.63	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chloromethane	ND		9.6	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
2-Chlorotoluene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
4-Chlorotoluene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Chlorodibromomethane	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2-Dichlorobenzene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,3-Dichlorobenzene	ND		4.8	0.69	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,4-Dichlorobenzene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,3-Dichloropropane	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1-Dichloropropene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2-Dibromo-3-Chloropropane	ND		9.6	1.6	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Ethylene Dibromide	ND		4.8	1.4	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Dibromomethane	ND		9.6	0.82	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Dichlorodifluoromethane	ND		9.6	0.76	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1-Dichloroethane	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2-Dichloroethane	ND		4.8	0.73	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1-Dichloroethene	ND		4.8	0.59	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
cis-1,2-Dichloroethene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
trans-1,2-Dichloroethene	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2-Dichloropropane	ND		4.8	0.60	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
cis-1,3-Dichloropropene	ND		4.8	0.66	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
trans-1,3-Dichloropropene	ND		4.8	0.64	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Ethylbenzene	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Hexachlorobutadiene	ND		4.8	0.86	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
2-Hexanone	ND		48	9.6	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Isopropylbenzene	ND		4.8	0.65	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
4-Isopropyltoluene	ND		4.8	2.4	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Methylene Chloride	**11**		9.6	3.8	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
4-Methyl-2-pentanone (MIBK)	ND		48	9.6	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Naphthalene	ND		9.6	1.4	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
N-Propylbenzene	ND		4.8	0.63	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Styrene	ND		4.8	0.60	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1,1,2-Tetrachloroethane	ND		4.8	0.73	ug/Kg		10/24/17 10:39	10/24/17 13:45	1

Client Sample ID: WCB-3
Date Collected: 10/11/17 12:12
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-3
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.8	0.72	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Tetrachloroethene	ND		4.8	0.64	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Toluene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2,3-Trichlorobenzene	ND		4.8	0.71	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2,4-Trichlorobenzene	ND		4.8	0.68	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1,1-Trichloroethane	ND		4.8	0.58	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1,2-Trichloroethane	ND		4.8	0.67	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Trichloroethene	ND		4.8	0.60	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Trichlorofluoromethane	ND		4.8	0.54	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2,3-Trichloropropane	ND		4.8	0.74	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.8	2.0	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,2,4-Trimethylbenzene	ND		4.8	1.6	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
1,3,5-Trimethylbenzene	ND		4.8	0.62	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Vinyl acetate	ND		19	4.8	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Vinyl chloride	ND		4.8	0.70	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
Xylenes, Total	ND		9.6	1.2	ug/Kg		10/24/17 10:39	10/24/17 13:45	1
2,2-Dichloropropane	ND		4.8	1.9	ug/Kg		10/24/17 10:39	10/24/17 13:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*88*		*45 - 131*	*10/24/17 10:39*	*10/24/17 13:45*	*1*
1,2-Dichloroethane-d4 (Surr)	*111*		*60 - 140*	*10/24/17 10:39*	*10/24/17 13:45*	*1*
Toluene-d8 (Surr)	*99*		*58 - 140*	*10/24/17 10:39*	*10/24/17 13:45*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Acenaphthylene	ND		0.67	0.056	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Acenaphthene	ND		0.67	0.038	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Fluorene	ND		0.67	0.040	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Phenanthrene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Anthracene	ND		0.67	0.043	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Fluoranthene	ND		0.67	0.073	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Pyrene	ND		0.67	0.038	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Benzo[a]anthracene	ND		3.3	0.18	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Chrysene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Benzo[b]fluoranthene	ND		0.67	0.095	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Benzo[a]pyrene	ND		0.67	0.066	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Benzo[k]fluoranthene	ND		0.67	0.14	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Indeno[1,2,3-cd]pyrene	ND		0.67	0.13	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Benzo[g,h,i]perylene	ND		0.67	0.20	mg/Kg		10/23/17 09:04	10/23/17 22:57	2
Dibenz(a,h)anthracene	ND		0.67	0.15	mg/Kg		10/23/17 09:04	10/23/17 22:57	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*23*		*21 - 98*	*10/23/17 09:04*	*10/23/17 22:57*	*2*
2-Fluorobiphenyl	*30*		*30 - 112*	*10/23/17 09:04*	*10/23/17 22:57*	*2*
Terphenyl-d14	*31*	*X*	*59 - 134*	*10/23/17 09:04*	*10/23/17 22:57*	*2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**13.0**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-3
Date Collected: 10/11/17 12:12
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-3
Matrix: Solid
Percent Solids: 87.0

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	170		11	8.6	mg/Kg	☼	10/25/17 11:08	10/26/17 02:13	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 1*	*10/25/17 11:08*	*10/26/17 02:13*	*10*
p-Terphenyl	*0*	*X D*	*38 - 148*	*10/25/17 11:08*	*10/26/17 02:13*	*10*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND	F1	0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1221	ND		0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1232	ND		0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1242	ND		0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1248	ND		0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1254	ND		0.056	0.0020	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1
PCB-1260	ND	F1	0.056	0.0059	mg/Kg	☼	10/23/17 09:12	10/23/17 19:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*99*		*45 - 132*	*10/23/17 09:12*	*10/23/17 19:38*	*1*
DCB Decachlorobiphenyl	*61*		*42 - 146*	*10/23/17 09:12*	*10/23/17 19:38*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	0.61	J	1.7	0.29	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Arsenic	4.8		3.5	0.29	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Barium	365		1.7	0.25	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Beryllium	0.42		0.35	0.11	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Cadmium	0.25	J	0.43	0.043	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Chromium	51.2	B	1.7	0.18	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Cobalt	8.6		0.69	0.069	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Copper	37.9		5.2	2.5	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Lead	18.3		1.7	0.36	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Molybdenum	0.71	J	1.7	0.22	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Nickel	56.4		1.7	0.18	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Selenium	ND		3.5	0.52	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Silver	ND		0.86	0.17	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Thallium	0.50	J	1.7	0.50	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Vanadium	42.9		1.7	0.24	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4
Zinc	75.3		5.2	2.2	mg/Kg	☼	10/20/17 15:24	10/23/17 13:05	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.074		0.018	0.0027	mg/Kg	☼	10/19/17 10:05	10/19/17 14:13	1

Client Sample ID: WCB-4
Date Collected: 10/11/17 11:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-4
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		4.7	1.1	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Acetone	ND		47	36	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Benzene	ND		4.7	0.61	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Dichlorobromomethane	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Bromobenzene	ND		4.7	0.74	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chlorobromomethane	ND		19	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Bromoform	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Bromomethane	ND		9.4	0.74	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
2-Butanone (MEK)	ND		47	20	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
n-Butylbenzene	ND		4.7	0.94	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
sec-Butylbenzene	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
tert-Butylbenzene	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Carbon disulfide	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Carbon tetrachloride	ND		4.7	0.58	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chlorobenzene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chloroethane	ND		9.4	0.53	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chloroform	ND		4.7	0.62	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chloromethane	ND		9.4	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
2-Chlorotoluene	ND		4.7	0.61	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
4-Chlorotoluene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Chlorodibromomethane	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2-Dichlorobenzene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,3-Dichlorobenzene	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,4-Dichlorobenzene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,3-Dichloropropane	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1-Dichloropropene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2-Dibromo-3-Chloropropane	ND		9.4	1.6	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Ethylene Dibromide	ND		4.7	1.3	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Dibromomethane	ND		9.4	0.81	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Dichlorodifluoromethane	ND		9.4	0.74	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1-Dichloroethane	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2-Dichloroethane	ND		4.7	0.71	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1-Dichloroethene	ND		4.7	0.58	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
cis-1,2-Dichloroethene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
trans-1,2-Dichloroethene	ND		4.7	0.70	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2-Dichloropropane	ND		4.7	0.59	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
cis-1,3-Dichloropropene	ND		4.7	0.65	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
trans-1,3-Dichloropropene	ND		4.7	0.63	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Ethylbenzene	ND		4.7	0.70	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Hexachlorobutadiene	ND		4.7	0.84	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
2-Hexanone	ND		47	9.4	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Isopropylbenzene	ND		4.7	0.64	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
4-Isopropyltoluene	ND		4.7	2.3	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Methylene Chloride	**5.5**	**J**	9.4	3.8	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
4-Methyl-2-pentanone (MIBK)	ND		47	9.4	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Naphthalene	ND		9.4	1.4	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
N-Propylbenzene	ND		4.7	0.62	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Styrene	ND		4.7	0.59	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1,1,2-Tetrachloroethane	ND		4.7	0.71	ug/Kg		10/24/17 10:39	10/24/17 14:13	1

Client Sample ID: WCB-4
Date Collected: 10/11/17 11:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-4
Matrix: Solid

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		4.7	0.70	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Tetrachloroethene	ND		4.7	0.63	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Toluene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2,3-Trichlorobenzene	ND		4.7	0.69	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2,4-Trichlorobenzene	ND		4.7	0.67	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1,1-Trichloroethane	ND		4.7	0.57	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1,2-Trichloroethane	ND		4.7	0.66	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Trichloroethene	ND		4.7	0.59	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Trichlorofluoromethane	ND		4.7	0.53	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2,3-Trichloropropane	ND		4.7	0.72	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		4.7	2.0	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,2,4-Trimethylbenzene	ND		4.7	1.5	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
1,3,5-Trimethylbenzene	ND		4.7	0.61	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Vinyl acetate	ND		19	4.7	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Vinyl chloride	ND		4.7	0.68	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
Xylenes, Total	ND		9.4	1.1	ug/Kg		10/24/17 10:39	10/24/17 14:13	1
2,2-Dichloropropane	ND		4.7	1.9	ug/Kg		10/24/17 10:39	10/24/17 14:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*108*		*45 - 131*	*10/24/17 10:39*	*10/24/17 14:13*	*1*
1,2-Dichloroethane-d4 (Surr)	*109*		*60 - 140*	*10/24/17 10:39*	*10/24/17 14:13*	*1*
Toluene-d8 (Surr)	*101*		*58 - 140*	*10/24/17 10:39*	*10/24/17 14:13*	*1*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Acenaphthylene	ND		0.67	0.056	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Acenaphthene	ND		0.67	0.038	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Fluorene	ND		0.67	0.040	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Phenanthrene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Anthracene	ND		0.67	0.043	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Fluoranthene	ND		0.67	0.073	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Pyrene	ND		0.67	0.038	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Benzo[a]anthracene	ND		3.3	0.18	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Chrysene	ND		0.67	0.33	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Benzo[b]fluoranthene	ND		0.67	0.094	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Benzo[a]pyrene	ND		0.67	0.066	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Benzo[k]fluoranthene	ND		0.67	0.14	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Indeno[1,2,3-cd]pyrene	ND		0.67	0.13	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Benzo[g,h,i]perylene	ND		0.67	0.20	mg/Kg		10/23/17 09:04	10/23/17 23:22	2
Dibenz(a,h)anthracene	ND		0.67	0.15	mg/Kg		10/23/17 09:04	10/23/17 23:22	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*49*		*21 - 98*	*10/23/17 09:04*	*10/23/17 23:22*	*2*
2-Fluorobiphenyl	*65*		*30 - 112*	*10/23/17 09:04*	*10/23/17 23:22*	*2*
Terphenyl-d14	*67*		*59 - 134*	*10/23/17 09:04*	*10/23/17 23:22*	*2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**27.7**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-4
Date Collected: 10/11/17 11:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-4
Matrix: Solid
Percent Solids: 72.3

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	65		4.1	3.1	mg/Kg	☼	10/25/17 11:08	10/26/17 02:38	3

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 1*	*10/25/17 11:08*	*10/26/17 02:38*	*3*
p-Terphenyl	*90*		*38 - 148*	*10/25/17 11:08*	*10/26/17 02:38*	*3*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1221	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1232	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1242	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1248	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1254	ND		0.067	0.0024	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1
PCB-1260	ND		0.067	0.0071	mg/Kg	☼	10/23/17 09:12	10/23/17 20:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*81*		*45 - 132*	*10/23/17 09:12*	*10/23/17 20:11*	*1*
DCB Decachlorobiphenyl	*81*		*42 - 146*	*10/23/17 09:12*	*10/23/17 20:11*	*1*

Method: 6010B - Metals (ICP)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	1.1	J	2.2	0.37	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Arsenic	21.5		4.5	0.38	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Barium	1090		2.2	0.32	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Beryllium	1.1		0.45	0.14	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Cadmium	ND		0.56	0.055	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Chromium	80.5	B	2.2	0.24	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Cobalt	29.1		0.89	0.089	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Copper	31.4		6.7	3.2	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Lead	12.2		5.6	1.2	mg/Kg	☼	10/20/17 15:24	10/23/17 17:07	10
Molybdenum	8.2		2.2	0.29	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Nickel	143		2.2	0.23	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Selenium	ND		11.2	1.7	mg/Kg	☼	10/20/17 15:24	10/23/17 17:07	10
Silver	0.27	J	1.1	0.23	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Thallium	ND		5.6	1.6	mg/Kg	☼	10/20/17 15:24	10/24/17 15:28	10
Vanadium	86.2		2.2	0.30	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4
Zinc	59.8		6.7	2.8	mg/Kg	☼	10/20/17 15:24	10/23/17 13:10	4

Method: 7471A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.12		0.021	0.0031	mg/Kg	☼	10/19/17 10:05	10/19/17 14:15	1

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-1 (0-6)
Date Collected: 10/11/17 09:33
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-5
Matrix: Solid
Percent Solids: 82.9

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0024	0.00079	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Dieldrin	ND		0.0024	0.00044	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endrin aldehyde	ND		0.0024	0.00079	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endrin	ND		0.0024	0.00079	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endrin ketone	ND		0.0024	0.00047	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Heptachlor	ND		0.0024	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Heptachlor epoxide	ND		0.0024	0.00048	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
4,4'-DDT	ND		0.0024	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
4,4'-DDE	ND		0.0024	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
4,4'-DDD	ND		0.0024	0.00072	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endosulfan I	ND		0.0024	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endosulfan II	ND		0.0024	0.00098	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
alpha-BHC	ND		0.0024	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
beta-BHC	ND		0.0024	0.00098	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
gamma-BHC (Lindane)	ND		0.0024	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
delta-BHC	ND		0.0024	0.00072	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Endosulfan sulfate	ND		0.0024	0.00045	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Methoxychlor	ND		0.0024	0.00054	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Toxaphene	ND		0.047	0.0081	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
Chlordane (technical)	**0.041**	**J**	0.047	0.0034	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
alpha-Chlordane	**0.0018**	**J p**	0.0024	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1
gamma-Chlordane	**0.0023**	**J**	0.0024	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 05:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*105*		*21 - 145*	*10/23/17 09:08*	*10/24/17 05:33*	*1*
DCB Decachlorobiphenyl	*76*		*21 - 136*	*10/23/17 09:08*	*10/24/17 05:33*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**17.1**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-1 (12-18)
Date Collected: 10/11/17 09:41
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-6
Matrix: Solid
Percent Solids: 67.5

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0030	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Dieldrin	**0.023**		0.0030	0.00055	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endrin aldehyde	ND		0.0030	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endrin	**0.015**		0.0030	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endrin ketone	ND		0.0030	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Heptachlor	ND		0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Heptachlor epoxide	ND		0.0030	0.00061	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
4,4'-DDT	**0.020**		0.0030	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
4,4'-DDE	**0.39**		0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
4,4'-DDD	**0.11**		0.0030	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endosulfan I	ND		0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endosulfan II	ND		0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
alpha-BHC	ND		0.0030	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
beta-BHC	ND		0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
gamma-BHC (Lindane)	ND		0.0030	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
delta-BHC	ND		0.0030	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Endosulfan sulfate	ND		0.0030	0.00056	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Methoxychlor	ND		0.0030	0.00068	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Toxaphene	ND		0.059	0.010	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
Chlordane (technical)	**0.14**		0.059	0.0043	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
alpha-Chlordane	**0.014**	**p**	0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1
gamma-Chlordane	**0.016**	**p**	0.0030	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 05:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*106*	*p*	*21 - 145*	*10/23/17 09:08*	*10/24/17 05:49*	*1*
DCB Decachlorobiphenyl	*70*		*21 - 136*	*10/23/17 09:08*	*10/24/17 05:49*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**32.5**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-1 (30-36)

Date Collected: 10/11/17 09:52
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-7

Matrix: Solid
Percent Solids: 72.4

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0027	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Dieldrin	**0.012**		0.0027	0.00050	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endrin aldehyde	ND		0.0027	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endrin	**0.0023**	**J**	0.0027	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endrin ketone	ND		0.0027	0.00054	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Heptachlor	ND		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Heptachlor epoxide	ND		0.0027	0.00055	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
4,4'-DDT	**0.0015**	**J p**	0.0027	0.00067	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
4,4'-DDE	**0.12**		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
4,4'-DDD	**0.047**		0.0027	0.00082	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endosulfan I	ND		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endosulfan II	ND		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
alpha-BHC	ND		0.0027	0.00067	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
beta-BHC	ND		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
gamma-BHC (Lindane)	ND		0.0027	0.00067	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
delta-BHC	ND		0.0027	0.00082	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Endosulfan sulfate	ND		0.0027	0.00051	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Methoxychlor	ND		0.0027	0.00062	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Toxaphene	ND		0.054	0.0092	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
Chlordane (technical)	**0.035**	**J**	0.054	0.0039	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
alpha-Chlordane	**0.0055**		0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1
gamma-Chlordane	**0.0040**	**p**	0.0027	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*101*		*21 - 145*	*10/23/17 09:08*	*10/24/17 06:06*	*1*
DCB Decachlorobiphenyl	*78*		*21 - 136*	*10/23/17 09:08*	*10/24/17 06:06*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**27.6**		0.1	0.05	%			10/18/17 11:53	1

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-2 (0-6)
Date Collected: 10/11/17 10:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-8
Matrix: Solid
Percent Solids: 75.5

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0053	0.0018	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Dieldrin	ND		0.0053	0.00097	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endrin aldehyde	ND		0.0053	0.0018	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endrin	ND		0.0053	0.0018	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endrin ketone	ND		0.0053	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Heptachlor	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Heptachlor epoxide	ND		0.0053	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
4,4'-DDT	ND		0.0053	0.0013	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
4,4'-DDE	**0.0046**	**J**	0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
4,4'-DDD	ND		0.0053	0.0016	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endosulfan I	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endosulfan II	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
alpha-BHC	ND		0.0053	0.0013	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
beta-BHC	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
gamma-BHC (Lindane)	ND		0.0053	0.0013	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
delta-BHC	ND		0.0053	0.0016	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Endosulfan sulfate	ND		0.0053	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Methoxychlor	ND		0.0053	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Toxaphene	ND		0.11	0.018	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
Chlordane (technical)	ND		0.11	0.0076	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
alpha-Chlordane	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2
gamma-Chlordane	ND		0.0053	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 06:23	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*97*		*21 - 145*	*10/23/17 09:08*	*10/24/17 06:23*	*2*
DCB Decachlorobiphenyl	*56*	*p*	*21 - 136*	*10/23/17 09:08*	*10/24/17 06:23*	*2*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**24.5**		0.1	0.05	%			10/18/17 11:53	1

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-2 (12-18)
Date Collected: 10/11/17 10:27
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-9
Matrix: Solid
Percent Solids: 79.4

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	**0.0039**		0.0025	0.00082	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Dieldrin	**0.15**		0.0025	0.00045	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endrin aldehyde	ND		0.0025	0.00082	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endrin	**0.0061**	**p**	0.0025	0.00082	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endrin ketone	ND		0.0025	0.00049	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Heptachlor	ND		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Heptachlor epoxide	ND		0.0025	0.00050	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
4,4'-DDT	**0.012**	**p**	0.0025	0.00061	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
4,4'-DDE	**0.24**		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
4,4'-DDD	**0.29**		0.0025	0.00075	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endosulfan I	ND		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endosulfan II	ND		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
alpha-BHC	ND		0.0025	0.00061	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
beta-BHC	ND		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
gamma-BHC (Lindane)	ND		0.0025	0.00061	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
delta-BHC	ND		0.0025	0.00075	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Endosulfan sulfate	ND		0.0025	0.00047	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Methoxychlor	ND		0.0025	0.00057	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Toxaphene	ND		0.049	0.0084	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
Chlordane (technical)	**0.16**		0.049	0.0036	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
alpha-Chlordane	**0.034**		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1
gamma-Chlordane	**0.048**		0.0025	0.0010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*95*		*21 - 145*	*10/23/17 09:08*	*10/24/17 06:40*	*1*
DCB Decachlorobiphenyl	*62*		*21 - 136*	*10/23/17 09:08*	*10/24/17 06:40*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**20.6**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-2 (30-36)
Date Collected: 10/11/17 10:32
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-10
Matrix: Solid
Percent Solids: 66.7

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	**0.0042**		0.0029	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Dieldrin	**0.022**		0.0029	0.00055	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endrin aldehyde	ND		0.0029	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endrin	ND		0.0029	0.00099	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endrin ketone	ND		0.0029	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Heptachlor	ND		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Heptachlor epoxide	ND		0.0029	0.00060	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
4,4'-DDT	**0.27**		0.0029	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
4,4'-DDE	**0.031**		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
4,4'-DDD	**0.17**		0.0029	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endosulfan I	ND		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endosulfan II	ND		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
alpha-BHC	ND		0.0029	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
beta-BHC	ND		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
gamma-BHC (Lindane)	ND		0.0029	0.00074	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
delta-BHC	ND		0.0029	0.00090	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Endosulfan sulfate	ND		0.0029	0.00056	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Methoxychlor	ND		0.0029	0.00068	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Toxaphene	ND		0.059	0.010	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
Chlordane (technical)	**0.051**	**J**	0.059	0.0043	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
alpha-Chlordane	**0.0062**	**p**	0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1
gamma-Chlordane	**0.012**		0.0029	0.0012	mg/Kg	☼	10/23/17 09:08	10/24/17 06:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*74*		*21 - 145*	*10/23/17 09:08*	*10/24/17 06:56*	*1*
DCB Decachlorobiphenyl	*64*		*21 - 136*	*10/23/17 09:08*	*10/24/17 06:56*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**33.3**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-3 (0-6)
Date Collected: 10/11/17 10:54
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-11
Matrix: Solid
Percent Solids: 84.1

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.012	0.0039	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Dieldrin	**0.0037**	**J**	0.012	0.0021	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endrin aldehyde	ND		0.012	0.0039	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endrin	ND		0.012	0.0039	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endrin ketone	ND		0.012	0.0023	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Heptachlor	ND		0.012	0.0047	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Heptachlor epoxide	ND		0.012	0.0024	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
4,4'-DDT	ND		0.012	0.0029	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
4,4'-DDE	**0.090**		0.012	0.0047	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
4,4'-DDD	**0.025**		0.012	0.0035	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endosulfan I	ND		0.012	0.0047	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endosulfan II	ND		0.012	0.0048	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
alpha-BHC	ND		0.012	0.0029	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
beta-BHC	ND		0.012	0.0048	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
gamma-BHC (Lindane)	ND		0.012	0.0029	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
delta-BHC	ND		0.012	0.0035	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Endosulfan sulfate	ND		0.012	0.0022	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Methoxychlor	ND		0.012	0.0027	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Toxaphene	ND		0.23	0.039	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
Chlordane (technical)	**0.085**	**J**	0.23	0.017	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
alpha-Chlordane	**0.0047**	**J p**	0.012	0.0047	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5
gamma-Chlordane	**0.0059**	**J**	0.012	0.0047	mg/Kg	☼	10/23/17 09:08	10/24/17 09:11	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*103*		*21 - 145*	*10/23/17 09:08*	*10/24/17 09:11*	*5*
DCB Decachlorobiphenyl	*54*	*p*	*21 - 136*	*10/23/17 09:08*	*10/24/17 09:11*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**15.9**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-3 (12-18)
Date Collected: 10/11/17 12:08
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-12
Matrix: Solid
Percent Solids: 71.4

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.014	0.0046	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Dieldrin	**0.022**		0.014	0.0025	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endrin aldehyde	ND		0.014	0.0046	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endrin	ND		0.014	0.0046	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endrin ketone	ND		0.014	0.0027	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Heptachlor	ND		0.014	0.0056	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Heptachlor epoxide	ND		0.014	0.0028	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
4,4'-DDT	ND		0.014	0.0034	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
4,4'-DDE	**0.19**		0.014	0.0056	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
4,4'-DDD	**0.10**		0.014	0.0042	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endosulfan I	ND		0.014	0.0056	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endosulfan II	ND		0.014	0.0057	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
alpha-BHC	ND		0.014	0.0034	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
beta-BHC	ND		0.014	0.0057	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
gamma-BHC (Lindane)	ND		0.014	0.0034	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
delta-BHC	ND		0.014	0.0042	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Endosulfan sulfate	ND		0.014	0.0026	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Methoxychlor	ND		0.014	0.0031	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Toxaphene	**0.55**		0.27	0.047	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
Chlordane (technical)	**0.22**	**J**	0.27	0.020	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
alpha-Chlordane	**0.030**	**p**	0.014	0.0056	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5
gamma-Chlordane	**0.038**		0.014	0.0056	mg/Kg	☼	10/23/17 09:08	10/24/17 07:13	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*89*		*21 - 145*	*10/23/17 09:08*	*10/24/17 07:13*	*5*
DCB Decachlorobiphenyl	*79*		*21 - 136*	*10/23/17 09:08*	*10/24/17 07:13*	*5*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**28.6**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-3 (30-36)

Date Collected: 10/11/17 12:13
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-13

Matrix: Solid
Percent Solids: 71.7

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.028	0.0093	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Dieldrin	**0.18**		0.028	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endrin aldehyde	ND		0.028	0.0093	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endrin	**0.042**		0.028	0.0093	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endrin ketone	ND		0.028	0.0055	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Heptachlor	ND		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Heptachlor epoxide	ND		0.028	0.0057	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
4,4'-DDT	**0.090**		0.028	0.0069	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
4,4'-DDE	**2.6**		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
4,4'-DDD	**0.49**		0.028	0.0084	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endosulfan I	ND		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endosulfan II	ND		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
alpha-BHC	ND		0.028	0.0069	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
beta-BHC	ND		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
gamma-BHC (Lindane)	ND		0.028	0.0069	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
delta-BHC	ND		0.028	0.0084	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Endosulfan sulfate	ND		0.028	0.0052	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Methoxychlor	ND		0.028	0.0064	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
Toxaphene	**0.75**		0.055	0.0094	mg/Kg	☼	10/23/17 09:08	10/24/17 07:30	1
Chlordane (technical)	**0.61**		0.55	0.040	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
alpha-Chlordane	**0.15**		0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10
gamma-Chlordane	**0.11**	**p**	0.028	0.011	mg/Kg	☼	10/23/17 09:08	10/24/17 10:22	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*73*		*21 - 145*	*10/23/17 09:08*	*10/24/17 07:30*	*1*
DCB Decachlorobiphenyl	*59*		*21 - 136*	*10/23/17 09:08*	*10/24/17 07:30*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**28.3**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-4 (0-6)

Date Collected: 10/11/17 11:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-14

Matrix: Solid
Percent Solids: 79.0

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.013	0.0042	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Dieldrin	**0.038**		0.013	0.0023	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endrin aldehyde	ND		0.013	0.0042	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endrin	**0.093**		0.013	0.0042	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endrin ketone	ND		0.013	0.0025	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Heptachlor	ND		0.013	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Heptachlor epoxide	ND		0.013	0.0026	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
4,4'-DDT	**0.24**		0.013	0.0031	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
4,4'-DDE	**0.57**		0.013	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
4,4'-DDD	**0.053**		0.013	0.0038	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endosulfan I	ND		0.013	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endosulfan II	ND		0.013	0.0052	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
alpha-BHC	ND		0.013	0.0031	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
beta-BHC	ND		0.013	0.0052	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
gamma-BHC (Lindane)	ND		0.013	0.0031	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
delta-BHC	ND		0.013	0.0038	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Endosulfan sulfate	ND		0.013	0.0024	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Methoxychlor	ND		0.013	0.0029	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
Toxaphene	**0.35**		0.050	0.0085	mg/Kg	☼	10/23/17 09:08	10/24/17 07:47	1
Chlordane (technical)	**0.17**	**J**	0.25	0.018	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
alpha-Chlordane	**0.029**		0.013	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5
gamma-Chlordane	**0.026**		0.013	0.0051	mg/Kg	☼	10/23/17 09:08	10/24/17 10:39	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*72*		*21 - 145*	*10/23/17 09:08*	*10/24/17 07:47*	*1*
DCB Decachlorobiphenyl	*62*	*p*	*21 - 136*	*10/23/17 09:08*	*10/24/17 07:47*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**21.0**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-4 (12-18)
Date Collected: 10/11/17 11:26
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-15
Matrix: Solid
Percent Solids: 80.5

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.012	0.0041	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Dieldrin	**0.067**		0.012	0.0023	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endrin aldehyde	ND		0.012	0.0041	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endrin	**0.22**		0.012	0.0041	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endrin ketone	**0.0054**	**J p**	0.012	0.0024	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Heptachlor	ND		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Heptachlor epoxide	ND		0.012	0.0025	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
4,4'-DDT	**0.35**		0.012	0.0030	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
4,4'-DDE	**1.1**		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
4,4'-DDD	**0.10**		0.012	0.0037	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endosulfan I	ND		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endosulfan II	ND		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
alpha-BHC	ND		0.012	0.0030	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
beta-BHC	ND		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
gamma-BHC (Lindane)	ND		0.012	0.0030	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
delta-BHC	ND		0.012	0.0037	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Endosulfan sulfate	ND		0.012	0.0023	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Methoxychlor	ND		0.012	0.0028	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
Toxaphene	**1.5**		0.049	0.0083	mg/Kg	☼	10/23/17 09:08	10/24/17 08:03	1
Chlordane (technical)	**0.22**	**J**	0.24	0.018	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
alpha-Chlordane	**0.032**	**p**	0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5
gamma-Chlordane	**0.037**		0.012	0.0050	mg/Kg	☼	10/23/17 09:08	10/24/17 10:57	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*84*		*21 - 145*	*10/23/17 09:08*	*10/24/17 08:03*	*1*
DCB Decachlorobiphenyl	*78*		*21 - 136*	*10/23/17 09:08*	*10/24/17 08:03*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**19.5**		0.1	0.05	%			10/18/17 11:53	1

Client Sample ID: WCB-4 (30-36)

Date Collected: 10/11/17 11:32
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-16

Matrix: Solid
Percent Solids: 77.4

Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0026	0.00086	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Dieldrin	**0.0024**	**J**	0.0026	0.00047	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endrin aldehyde	ND		0.0026	0.00086	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endrin	**0.0022**	**J p**	0.0026	0.00086	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endrin ketone	ND		0.0026	0.00051	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Heptachlor	ND		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Heptachlor epoxide	ND		0.0026	0.00053	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
4,4'-DDT	**0.0031**		0.0026	0.00064	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
4,4'-DDE	**0.037**		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
4,4'-DDD	**0.0035**		0.0026	0.00078	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endosulfan I	ND		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endosulfan II	ND		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
alpha-BHC	ND		0.0026	0.00064	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
beta-BHC	ND		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
gamma-BHC (Lindane)	ND		0.0026	0.00064	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
delta-BHC	ND		0.0026	0.00078	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Endosulfan sulfate	ND		0.0026	0.00049	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Methoxychlor	ND		0.0026	0.00059	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Toxaphene	**0.0092**	**J**	0.051	0.0087	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
Chlordane (technical)	**0.021**	**J**	0.051	0.0037	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
alpha-Chlordane	**0.0015**	**J**	0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1
gamma-Chlordane	ND		0.0026	0.0011	mg/Kg	☼	10/23/17 09:08	10/24/17 08:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*87*		*21 - 145*	*10/23/17 09:08*	*10/24/17 08:20*	*1*
DCB Decachlorobiphenyl	*72*		*21 - 136*	*10/23/17 09:08*	*10/24/17 08:20*	*1*

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	**22.6**		0.1	0.05	%			10/18/17 11:53	1

Surrogate Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(45-131)	(60-140)	(58-140)
720-82612-1	WCB-1	99	105	106
720-82612-2	WCB-2	96	109	101
720-82612-3	WCB-3	88	111	99
720-82612-4	WCB-4	108	109	101
LCS 720-232644/5	Lab Control Sample	103	107	106
LCSD 720-232644/6	Lab Control Sample Dup	88	106	106
MB 720-232644/4	Method Blank	82	106	104

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		NBZ	FBP	TPH
Lab Sample ID	Client Sample ID	(21-98)	(30-112)	(59-134)
720-82612-1	WCB-1	58	71	82
720-82612-2	WCB-2	28	59	59
720-82612-3	WCB-3	23	30	31 X
720-82612-4	WCB-4	49	65	67
LCS 720-232562/2-A	Lab Control Sample	61	72	84
MB 720-232562/1-A	Method Blank	60	70	77

Surrogate Legend

NBZ = Nitrobenzene-d5
FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Solid **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-1)	(38-148)
720-82612-1	WCB-1	0.06	73
720-82612-2	WCB-2	0.08	56
720-82612-3	WCB-3	0	0 X D
720-82612-4	WCB-4	0.1	90
LCS 720-232769/2-A	Lab Control Sample		83
LCSD 720-232769/3-A	Lab Control Sample Dup		90
MB 720-232769/1-A	Method Blank	0.001	88

Surrogate Legend

NDA = Capric Acid (Surr)
PTP = p-Terphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB2
Lab Sample ID	Client Sample ID	(21-145)	(21-136)
720-82612-10	WCB-2 (30-36)	74	64
720-82612-12	WCB-3 (12-18)	89	79
LCS 720-232563/2-A	Lab Control Sample	92	104
MB 720-232563/1-A	Method Blank	86	97

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX2	DCB1
Lab Sample ID	Client Sample ID	(21-145)	(21-136)
720-82612-9	WCB-2 (12-18)	95	62
720-82612-11	WCB-3 (0-6)	103	54 p
720-82612-13	WCB-3 (30-36)	73	59
720-82612-14	WCB-4 (0-6)	72	62 p

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8081A - Organochlorine Pesticides (GC)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCB1
Lab Sample ID	Client Sample ID	(21-145)	(21-136)
720-82612-5	WCB-1 (0-6)	105	76
720-82612-6	WCB-1 (12-18)	106 p	70
720-82612-7	WCB-1 (30-36)	101	78
720-82612-8	WCB-2 (0-6)	97	56 p
720-82612-15	WCB-4 (12-18)	84	78
720-82612-16	WCB-4 (30-36)	87	72

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		TCX1	DCB1
Lab Sample ID	Client Sample ID	(45-132)	(42-146)
720-82612-1	WCB-1	79	92
720-82612-2	WCB-2	84	98
720-82612-3	WCB-3	99	61

Surrogate Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography (Continued)

Matrix: Solid **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)									
Lab Sample ID	Client Sample ID	TCX1 (45-132)	DCB1 (42-146)								
720-82612-3 MS	WCB-3	97	47								
720-82612-3 MSD	WCB-3	90	43								
720-82612-4	WCB-4	81	81								
LCS 720-232564/2-A	Lab Control Sample	79	91								
MB 720-232564/1-A	Method Blank	85	97								

Surrogate Legend

TCX = Tetrachloro-m-xylene

DCB = DCB Decachlorobiphenyl

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 720-232644/4
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		5.0	1.2	ug/Kg			10/24/17 11:54	1
Acetone	ND		50	38	ug/Kg			10/24/17 11:54	1
Benzene	ND		5.0	0.65	ug/Kg			10/24/17 11:54	1
Dichlorobromomethane	ND		5.0	0.72	ug/Kg			10/24/17 11:54	1
Bromobenzene	ND		5.0	0.79	ug/Kg			10/24/17 11:54	1
Chlorobromomethane	ND		20	0.72	ug/Kg			10/24/17 11:54	1
Bromoform	ND		5.0	2.0	ug/Kg			10/24/17 11:54	1
Bromomethane	ND		10	0.79	ug/Kg			10/24/17 11:54	1
2-Butanone (MEK)	ND		50	21	ug/Kg			10/24/17 11:54	1
n-Butylbenzene	ND		5.0	1.0	ug/Kg			10/24/17 11:54	1
sec-Butylbenzene	ND		5.0	0.72	ug/Kg			10/24/17 11:54	1
tert-Butylbenzene	ND		5.0	0.73	ug/Kg			10/24/17 11:54	1
Carbon disulfide	ND		5.0	2.0	ug/Kg			10/24/17 11:54	1
Carbon tetrachloride	ND		5.0	0.62	ug/Kg			10/24/17 11:54	1
Chlorobenzene	ND		5.0	0.69	ug/Kg			10/24/17 11:54	1
Chloroethane	ND		10	0.56	ug/Kg			10/24/17 11:54	1
Chloroform	ND		5.0	0.66	ug/Kg			10/24/17 11:54	1
Chloromethane	ND		10	0.72	ug/Kg			10/24/17 11:54	1
2-Chlorotoluene	ND		5.0	0.65	ug/Kg			10/24/17 11:54	1
4-Chlorotoluene	ND		5.0	0.68	ug/Kg			10/24/17 11:54	1
Chlorodibromomethane	ND		5.0	0.71	ug/Kg			10/24/17 11:54	1
1,2-Dichlorobenzene	ND		5.0	0.68	ug/Kg			10/24/17 11:54	1
1,3-Dichlorobenzene	ND		5.0	0.72	ug/Kg			10/24/17 11:54	1
1,4-Dichlorobenzene	ND		5.0	0.71	ug/Kg			10/24/17 11:54	1
1,3-Dichloropropane	ND		5.0	0.73	ug/Kg			10/24/17 11:54	1
1,1-Dichloropropene	ND		5.0	0.69	ug/Kg			10/24/17 11:54	1
1,2-Dibromo-3-Chloropropane	ND		10	1.7	ug/Kg			10/24/17 11:54	1
Ethylene Dibromide	ND		5.0	1.4	ug/Kg			10/24/17 11:54	1
Dibromomethane	ND		10	0.86	ug/Kg			10/24/17 11:54	1
Dichlorodifluoromethane	ND		10	0.79	ug/Kg			10/24/17 11:54	1
1,1-Dichloroethane	ND		5.0	0.68	ug/Kg			10/24/17 11:54	1
1,2-Dichloroethane	ND		5.0	0.76	ug/Kg			10/24/17 11:54	1
1,1-Dichloroethene	ND		5.0	0.62	ug/Kg			10/24/17 11:54	1
cis-1,2-Dichloroethene	ND		5.0	0.68	ug/Kg			10/24/17 11:54	1
trans-1,2-Dichloroethene	ND		5.0	0.75	ug/Kg			10/24/17 11:54	1
1,2-Dichloropropane	ND		5.0	0.63	ug/Kg			10/24/17 11:54	1
cis-1,3-Dichloropropene	ND		5.0	0.69	ug/Kg			10/24/17 11:54	1
trans-1,3-Dichloropropene	ND		5.0	0.67	ug/Kg			10/24/17 11:54	1
Ethylbenzene	ND		5.0	0.75	ug/Kg			10/24/17 11:54	1
Hexachlorobutadiene	ND		5.0	0.90	ug/Kg			10/24/17 11:54	1
2-Hexanone	ND		50	10	ug/Kg			10/24/17 11:54	1
Isopropylbenzene	ND		5.0	0.68	ug/Kg			10/24/17 11:54	1
4-Isopropyltoluene	ND		5.0	2.5	ug/Kg			10/24/17 11:54	1
Methylene Chloride	ND		10	4.0	ug/Kg			10/24/17 11:54	1
4-Methyl-2-pentanone (MIBK)	ND		50	10	ug/Kg			10/24/17 11:54	1
Naphthalene	ND		10	1.5	ug/Kg			10/24/17 11:54	1
N-Propylbenzene	ND		5.0	0.66	ug/Kg			10/24/17 11:54	1
Styrene	ND		5.0	0.63	ug/Kg			10/24/17 11:54	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 720-232644/4
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0	0.76	ug/Kg			10/24/17 11:54	1
1,1,2,2-Tetrachloroethane	ND		5.0	0.75	ug/Kg			10/24/17 11:54	1
Tetrachloroethene	ND		5.0	0.67	ug/Kg			10/24/17 11:54	1
Toluene	ND		5.0	0.71	ug/Kg			10/24/17 11:54	1
1,2,3-Trichlorobenzene	ND		5.0	0.74	ug/Kg			10/24/17 11:54	1
1,2,4-Trichlorobenzene	ND		5.0	0.71	ug/Kg			10/24/17 11:54	1
1,1,1-Trichloroethane	ND		5.0	0.61	ug/Kg			10/24/17 11:54	1
1,1,2-Trichloroethane	ND		5.0	0.70	ug/Kg			10/24/17 11:54	1
Trichloroethene	ND		5.0	0.63	ug/Kg			10/24/17 11:54	1
Trichlorofluoromethane	ND		5.0	0.56	ug/Kg			10/24/17 11:54	1
1,2,3-Trichloropropane	ND		5.0	0.77	ug/Kg			10/24/17 11:54	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	2.1	ug/Kg			10/24/17 11:54	1
1,2,4-Trimethylbenzene	ND		5.0	1.6	ug/Kg			10/24/17 11:54	1
1,3,5-Trimethylbenzene	ND		5.0	0.65	ug/Kg			10/24/17 11:54	1
Vinyl acetate	ND		20	5.0	ug/Kg			10/24/17 11:54	1
Vinyl chloride	ND		5.0	0.73	ug/Kg			10/24/17 11:54	1
Xylenes, Total	ND		10	1.2	ug/Kg			10/24/17 11:54	1
2,2-Dichloropropane	ND		5.0	2.0	ug/Kg			10/24/17 11:54	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*82*		*45 - 131*		*10/24/17 11:54*	*1*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*		*10/24/17 11:54*	*1*
Toluene-d8 (Surr)	*104*		*58 - 140*		*10/24/17 11:54*	*1*

Lab Sample ID: LCS 720-232644/5
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Methyl tert-butyl ether	50.0	55.5		ug/Kg		111	70 - 144
Acetone	250	271		ug/Kg		108	30 - 162
Benzene	50.0	50.6		ug/Kg		101	70 - 130
Dichlorobromomethane	50.0	55.8		ug/Kg		112	70 - 140
Bromobenzene	50.0	52.0		ug/Kg		104	70 - 130
Chlorobromomethane	50.0	55.6		ug/Kg		111	70 - 130
Bromoform	50.0	55.6		ug/Kg		111	59 - 158
Bromomethane	50.0	52.8		ug/Kg		106	59 - 132
2-Butanone (MEK)	250	261		ug/Kg		105	59 - 159
n-Butylbenzene	50.0	51.0		ug/Kg		102	70 - 142
sec-Butylbenzene	50.0	50.7		ug/Kg		101	70 - 136
tert-Butylbenzene	50.0	50.9		ug/Kg		102	70 - 130
Carbon disulfide	50.0	49.7		ug/Kg		99	60 - 140
Carbon tetrachloride	50.0	55.1		ug/Kg		110	70 - 142
Chlorobenzene	50.0	51.4		ug/Kg		103	70 - 130
Chloroethane	50.0	50.1		ug/Kg		100	65 - 130
Chloroform	50.0	53.1		ug/Kg		106	77 - 127
Chloromethane	50.0	48.4		ug/Kg		97	55 - 140
2-Chlorotoluene	50.0	49.9		ug/Kg		100	70 - 138

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-232644/5
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Chlorotoluene	50.0	50.8		ug/Kg		102	70 - 136
Chlorodibromomethane	50.0	60.2		ug/Kg		120	70 - 146
1,2-Dichlorobenzene	50.0	51.7		ug/Kg		103	70 - 130
1,3-Dichlorobenzene	50.0	51.9		ug/Kg		104	70 - 131
1,4-Dichlorobenzene	50.0	51.3		ug/Kg		103	70 - 130
1,3-Dichloropropane	50.0	54.2		ug/Kg		108	70 - 140
1,1-Dichloropropene	50.0	52.7		ug/Kg		105	70 - 130
1,2-Dibromo-3-Chloropropane	50.0	53.6		ug/Kg		107	60 - 145
Ethylene Dibromide	50.0	57.5		ug/Kg		115	70 - 140
Dibromomethane	50.0	56.8		ug/Kg		114	70 - 139
Dichlorodifluoromethane	50.0	50.8		ug/Kg		102	37 - 158
1,1-Dichloroethane	50.0	51.2		ug/Kg		102	70 - 130
1,2-Dichloroethane	50.0	54.9		ug/Kg		110	70 - 130
1,1-Dichloroethene	50.0	51.6		ug/Kg		103	74 - 122
cis-1,2-Dichloroethene	50.0	52.4		ug/Kg		105	70 - 138
trans-1,2-Dichloroethene	50.0	51.4		ug/Kg		103	67 - 130
1,2-Dichloropropane	50.0	52.8		ug/Kg		106	73 - 127
cis-1,3-Dichloropropene	50.0	55.0		ug/Kg		110	68 - 147
trans-1,3-Dichloropropene	50.0	56.6		ug/Kg		113	70 - 155
Ethylbenzene	50.0	50.7		ug/Kg		101	80 - 137
Hexachlorobutadiene	50.0	53.2		ug/Kg		106	70 - 132
2-Hexanone	250	278		ug/Kg		111	62 - 158
Isopropylbenzene	50.0	53.1		ug/Kg		106	70 - 130
4-Isopropyltoluene	50.0	50.8		ug/Kg		102	70 - 133
Methylene Chloride	50.0	51.2		ug/Kg		102	70 - 134
4-Methyl-2-pentanone (MIBK)	250	278		ug/Kg		111	60 - 160
Naphthalene	50.0	54.8		ug/Kg		110	60 - 147
N-Propylbenzene	50.0	50.4		ug/Kg		101	70 - 130
Styrene	50.0	54.2		ug/Kg		108	70 - 130
1,1,1,2-Tetrachloroethane	50.0	53.9		ug/Kg		108	70 - 130
1,1,2,2-Tetrachloroethane	50.0	52.8		ug/Kg		106	70 - 146
Tetrachloroethene	50.0	55.3		ug/Kg		111	70 - 132
Toluene	50.0	50.2		ug/Kg		100	75 - 120
1,2,3-Trichlorobenzene	50.0	55.1		ug/Kg		110	60 - 140
1,2,4-Trichlorobenzene	50.0	55.2		ug/Kg		110	60 - 140
1,1,1-Trichloroethane	50.0	53.1		ug/Kg		106	70 - 130
1,1,2-Trichloroethane	50.0	54.8		ug/Kg		110	70 - 130
Trichloroethene	50.0	53.5		ug/Kg		107	70 - 133
Trichlorofluoromethane	50.0	55.0		ug/Kg		110	60 - 140
1,2,3-Trichloropropane	50.0	54.8		ug/Kg		110	70 - 146
1,1,2-Trichloro-1,2,2-trifluoroethane	50.0	54.0		ug/Kg		108	60 - 140
1,2,4-Trimethylbenzene	50.0	49.1		ug/Kg		98	70 - 130
1,3,5-Trimethylbenzene	50.0	50.0		ug/Kg		100	70 - 131
Vinyl acetate	50.0	54.2		ug/Kg		108	38 - 176
Vinyl chloride	50.0	50.4		ug/Kg		101	58 - 125
m-Xylene & p-Xylene	50.0	51.1		ug/Kg		102	70 - 146
o-Xylene	50.0	50.8		ug/Kg		102	70 - 140

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 720-232644/5
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
2,2-Dichloropropane			50.0	51.7		ug/Kg		103	70 - 162		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*103*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*107*		*60 - 140*
Toluene-d8 (Surr)	*106*		*58 - 140*

Lab Sample ID: LCSD 720-232644/6
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl tert-butyl ether			50.0	53.1		ug/Kg		106	70 - 144	4	20
Acetone			250	266		ug/Kg		106	30 - 162	2	30
Benzene			50.0	51.0		ug/Kg		102	70 - 130	1	20
Dichlorobromomethane			50.0	57.0		ug/Kg		114	70 - 140	2	20
Bromobenzene			50.0	52.5		ug/Kg		105	70 - 130	1	20
Chlorobromomethane			50.0	54.3		ug/Kg		109	70 - 130	2	20
Bromoform			50.0	54.1		ug/Kg		108	59 - 158	3	20
Bromomethane			50.0	52.9		ug/Kg		106	59 - 132	0	20
2-Butanone (MEK)			250	259		ug/Kg		103	59 - 159	1	20
n-Butylbenzene			50.0	50.4		ug/Kg		101	70 - 142	1	20
sec-Butylbenzene			50.0	51.0		ug/Kg		102	70 - 136	1	20
tert-Butylbenzene			50.0	51.6		ug/Kg		103	70 - 130	1	20
Carbon disulfide			50.0	45.8		ug/Kg		92	60 - 140	8	20
Carbon tetrachloride			50.0	55.9		ug/Kg		112	70 - 142	1	20
Chlorobenzene			50.0	51.6		ug/Kg		103	70 - 130	0	20
Chloroethane			50.0	50.4		ug/Kg		101	65 - 130	1	20
Chloroform			50.0	51.5		ug/Kg		103	77 - 127	3	20
Chloromethane			50.0	50.5		ug/Kg		101	55 - 140	4	20
2-Chlorotoluene			50.0	49.9		ug/Kg		100	70 - 138	0	20
4-Chlorotoluene			50.0	50.7		ug/Kg		101	70 - 136	0	20
Chlorodibromomethane			50.0	60.5		ug/Kg		121	70 - 146	1	20
1,2-Dichlorobenzene			50.0	51.8		ug/Kg		104	70 - 130	0	20
1,3-Dichlorobenzene			50.0	52.6		ug/Kg		105	70 - 131	1	20
1,4-Dichlorobenzene			50.0	52.2		ug/Kg		104	70 - 130	2	20
1,3-Dichloropropane			50.0	54.4		ug/Kg		109	70 - 140	0	20
1,1-Dichloropropene			50.0	53.1		ug/Kg		106	70 - 130	1	20
1,2-Dibromo-3-Chloropropane			50.0	55.5		ug/Kg		111	60 - 145	3	20
Ethylene Dibromide			50.0	58.5		ug/Kg		117	70 - 140	2	20
Dibromomethane			50.0	56.1		ug/Kg		112	70 - 139	1	20
Dichlorodifluoromethane			50.0	51.2		ug/Kg		102	37 - 158	1	20
1,1-Dichloroethane			50.0	48.6		ug/Kg		97	70 - 130	5	20
1,2-Dichloroethane			50.0	54.8		ug/Kg		110	70 - 130	0	20
1,1-Dichloroethene			50.0	50.2		ug/Kg		100	74 - 122	3	20
cis-1,2-Dichloroethene			50.0	49.9		ug/Kg		100	70 - 138	5	20
trans-1,2-Dichloroethene			50.0	48.7		ug/Kg		97	67 - 130	5	20
1,2-Dichloropropane			50.0	52.4		ug/Kg		105	73 - 127	1	20

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 720-232644/6
Matrix: Solid
Analysis Batch: 232644

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
cis-1,3-Dichloropropene			50.0	55.0		ug/Kg		110	68 - 147	0	20
trans-1,3-Dichloropropene			50.0	56.6		ug/Kg		113	70 - 155	0	20
Ethylbenzene			50.0	49.9		ug/Kg		100	80 - 137	2	20
Hexachlorobutadiene			50.0	53.6		ug/Kg		107	70 - 132	1	20
2-Hexanone			250	283		ug/Kg		113	62 - 158	2	20
Isopropylbenzene			50.0	45.8		ug/Kg		92	70 - 130	15	20
4-Isopropyltoluene			50.0	51.6		ug/Kg		103	70 - 133	2	20
Methylene Chloride			50.0	48.3		ug/Kg		97	70 - 134	6	20
4-Methyl-2-pentanone (MIBK)			250	279		ug/Kg		112	60 - 160	0	20
Naphthalene			50.0	54.8		ug/Kg		110	60 - 147	0	20
N-Propylbenzene			50.0	50.2		ug/Kg		100	70 - 130	0	20
Styrene			50.0	46.3		ug/Kg		93	70 - 130	16	20
1,1,1,2-Tetrachloroethane			50.0	54.1		ug/Kg		108	70 - 130	0	20
1,1,2,2-Tetrachloroethane			50.0	51.9		ug/Kg		104	70 - 146	2	20
Tetrachloroethene			50.0	55.8		ug/Kg		112	70 - 132	1	20
Toluene			50.0	52.3		ug/Kg		105	75 - 120	4	20
1,2,3-Trichlorobenzene			50.0	55.6		ug/Kg		111	60 - 140	1	20
1,2,4-Trichlorobenzene			50.0	54.4		ug/Kg		109	60 - 140	1	20
1,1,1-Trichloroethane			50.0	54.4		ug/Kg		109	70 - 130	2	20
1,1,2-Trichloroethane			50.0	55.5		ug/Kg		111	70 - 130	1	20
Trichloroethene			50.0	53.7		ug/Kg		107	70 - 133	0	20
Trichlorofluoromethane			50.0	55.1		ug/Kg		110	60 - 140	0	20
1,2,3-Trichloropropane			50.0	55.4		ug/Kg		111	70 - 146	1	20
1,1,2-Trichloro-1,2,2-trifluoroethane			50.0	52.5		ug/Kg		105	60 - 140	3	20
1,2,4-Trimethylbenzene			50.0	49.2		ug/Kg		98	70 - 130	0	20
1,3,5-Trimethylbenzene			50.0	50.7		ug/Kg		101	70 - 131	1	20
Vinyl acetate			50.0	50.6		ug/Kg		101	38 - 176	7	20
Vinyl chloride			50.0	51.8		ug/Kg		104	58 - 125	3	20
m-Xylene & p-Xylene			50.0	49.9		ug/Kg		100	70 - 146	2	20
o-Xylene			50.0	43.5		ug/Kg		87	70 - 140	15	20
2,2-Dichloropropane			50.0	53.6		ug/Kg		107	70 - 162	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*45 - 131*
1,2-Dichloroethane-d4 (Surr)	*106*		*60 - 140*
Toluene-d8 (Surr)	*106*		*58 - 140*

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)

Lab Sample ID: MB 720-232562/1-A
Matrix: Solid
Analysis Batch: 232632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.067	0.033	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Acenaphthylene	ND		0.067	0.0056	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Acenaphthene	ND		0.067	0.0038	mg/Kg		10/23/17 09:04	10/23/17 21:39	1

Method: 8270C - Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS) (Continued)

Lab Sample ID: MB 720-232562/1-A
Matrix: Solid
Analysis Batch: 232632

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232562

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND		0.067	0.0040	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Phenanthrene	ND		0.067	0.033	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Anthracene	ND		0.067	0.0043	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Fluoranthene	ND		0.067	0.0073	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Pyrene	ND		0.067	0.0038	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Benzo[a]anthracene	ND		0.33	0.018	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Chrysene	ND		0.067	0.033	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Benzo[b]fluoranthene	ND		0.067	0.0095	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Benzo[a]pyrene	ND		0.067	0.0066	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Benzo[k]fluoranthene	ND		0.067	0.014	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Indeno[1,2,3-cd]pyrene	ND		0.067	0.013	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Benzo[g,h,i]perylene	ND		0.067	0.020	mg/Kg		10/23/17 09:04	10/23/17 21:39	1
Dibenz(a,h)anthracene	ND		0.067	0.015	mg/Kg		10/23/17 09:04	10/23/17 21:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Nitrobenzene-d5	*60*		*21 - 98*	*10/23/17 09:04*	*10/23/17 21:39*	*1*
2-Fluorobiphenyl	*70*		*30 - 112*	*10/23/17 09:04*	*10/23/17 21:39*	*1*
Terphenyl-d14	*77*		*59 - 134*	*10/23/17 09:04*	*10/23/17 21:39*	*1*

Lab Sample ID: LCS 720-232562/2-A
Matrix: Solid
Analysis Batch: 232632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232562

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	1.33	0.952		mg/Kg		71	44 - 110
Acenaphthylene	1.33	1.02		mg/Kg		77	53 - 102
Acenaphthene	1.33	1.02		mg/Kg		77	53 - 103
Fluorene	1.33	1.07		mg/Kg		80	54 - 103
Phenanthrene	1.33	1.09		mg/Kg		82	57 - 106
Anthracene	1.33	1.09		mg/Kg		81	55 - 105
Fluoranthene	1.33	1.07		mg/Kg		80	56 - 104
Pyrene	1.33	1.15		mg/Kg		86	52 - 115
Benzo[a]anthracene	1.33	1.07		mg/Kg		81	55 - 103
Chrysene	1.33	1.10		mg/Kg		82	58 - 103
Benzo[b]fluoranthene	1.33	1.15		mg/Kg		86	57 - 109
Benzo[a]pyrene	1.33	1.10		mg/Kg		83	57 - 106
Benzo[k]fluoranthene	1.33	1.12		mg/Kg		84	55 - 110
Indeno[1,2,3-cd]pyrene	1.33	1.02		mg/Kg		77	56 - 108
Benzo[g,h,i]perylene	1.33	1.03		mg/Kg		77	56 - 115
Dibenz(a,h)anthracene	1.33	1.02		mg/Kg		76	57 - 106

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Nitrobenzene-d5	*61*		*21 - 98*
2-Fluorobiphenyl	*72*		*30 - 112*
Terphenyl-d14	*84*		*59 - 134*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-232769/1-A
Matrix: Solid
Analysis Batch: 232753

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 232769

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		1.0	0.75	mg/Kg		10/25/17 11:08	10/26/17 00:40	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.001*		*0 - 1*	*10/25/17 11:08*	*10/26/17 00:40*	*1*
p-Terphenyl	*88*		*38 - 148*	*10/25/17 11:08*	*10/26/17 00:40*	*1*

Lab Sample ID: LCS 720-232769/2-A
Matrix: Solid
Analysis Batch: 232753

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 232769

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Diesel Range Organics [C10-C28]			83.3	65.1		mg/Kg		78	36 - 112		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*83*		*38 - 148*

Lab Sample ID: LCSD 720-232769/3-A
Matrix: Solid
Analysis Batch: 232753

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 232769

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]			83.3	69.7		mg/Kg		84	36 - 112	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*90*		*38 - 148*

Method: 8081A - Organochlorine Pesticides (GC)

Lab Sample ID: MB 720-232563/1-A
Matrix: Solid
Analysis Batch: 232637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232563

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	ND		0.0020	0.00067	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Dieldrin	ND		0.0020	0.00037	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endrin aldehyde	ND		0.0020	0.00067	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endrin	ND		0.0020	0.00067	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endrin ketone	ND		0.0020	0.00040	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Heptachlor	ND		0.0020	0.00082	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Heptachlor epoxide	ND		0.0020	0.00041	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
4,4'-DDT	ND		0.0020	0.00050	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
4,4'-DDE	ND		0.0020	0.00082	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
4,4'-DDD	ND		0.0020	0.00061	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endosulfan I	ND		0.0020	0.00082	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endosulfan II	ND		0.0020	0.00083	mg/Kg		10/23/17 09:08	10/24/17 04:09	1

Method: 8081A - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: MB 720-232563/1-A
Matrix: Solid
Analysis Batch: 232637

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232563

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
alpha-BHC	ND		0.0020	0.00050	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
beta-BHC	ND		0.0020	0.00083	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
gamma-BHC (Lindane)	ND		0.0020	0.00050	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
delta-BHC	ND		0.0020	0.00061	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Endosulfan sulfate	ND		0.0020	0.00038	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Methoxychlor	ND		0.0020	0.00046	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Toxaphene	ND		0.040	0.0068	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
Chlordane (technical)	ND		0.040	0.0029	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
alpha-Chlordane	ND		0.0020	0.00082	mg/Kg		10/23/17 09:08	10/24/17 04:09	1
gamma-Chlordane	ND		0.0020	0.00082	mg/Kg		10/23/17 09:08	10/24/17 04:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*86*		*21 - 145*	*10/23/17 09:08*	*10/24/17 04:09*	*1*
DCB Decachlorobiphenyl	*97*		*21 - 136*	*10/23/17 09:08*	*10/24/17 04:09*	*1*

Lab Sample ID: LCS 720-232563/2-A
Matrix: Solid
Analysis Batch: 232637

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232563

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.0167	0.0153		mg/Kg		92	65 - 120
Dieldrin	0.0167	0.0169		mg/Kg		101	72 - 120
Endrin aldehyde	0.0167	0.0179		mg/Kg		107	68 - 120
Endrin	0.0167	0.0176		mg/Kg		105	68 - 120
Endrin ketone	0.0167	0.0180		mg/Kg		108	75 - 136
Heptachlor	0.0167	0.0160		mg/Kg		96	69 - 120
Heptachlor epoxide	0.0167	0.0170		mg/Kg		102	68 - 120
4,4'-DDT	0.0167	0.0175		mg/Kg		105	63 - 127
4,4'-DDE	0.0167	0.0187		mg/Kg		112	76 - 126
4,4'-DDD	0.0167	0.0198		mg/Kg		119	75 - 128
Endosulfan I	0.0167	0.0167		mg/Kg		100	62 - 120
Endosulfan II	0.0167	0.0172		mg/Kg		103	65 - 120
alpha-BHC	0.0167	0.0144		mg/Kg		86	46 - 122
beta-BHC	0.0167	0.0173		mg/Kg		104	78 - 136
gamma-BHC (Lindane)	0.0167	0.0160		mg/Kg		96	72 - 120
delta-BHC	0.0167	0.0138		mg/Kg		83	43 - 125
Endosulfan sulfate	0.0167	0.0171		mg/Kg		102	72 - 121
Methoxychlor	0.0167	0.0166		mg/Kg		99	71 - 132
alpha-Chlordane	0.0167	0.0169		mg/Kg		101	70 - 120
gamma-Chlordane	0.0167	0.0169		mg/Kg		101	68 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*92*		*21 - 145*
DCB Decachlorobiphenyl	*104*		*21 - 136*

Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Lab Sample ID: MB 720-232564/1-A
Matrix: Solid
Analysis Batch: 232558

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232564

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
PCB-1016	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1221	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1232	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1242	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1248	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1254	ND		0.050	0.0018	mg/Kg		10/23/17 09:12	10/23/17 19:38	1
PCB-1260	ND		0.050	0.0053	mg/Kg		10/23/17 09:12	10/23/17 19:38	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Tetrachloro-m-xylene	*85*		*45 - 132*	*10/23/17 09:12*	*10/23/17 19:38*	*1*
DCB Decachlorobiphenyl	*97*		*42 - 146*	*10/23/17 09:12*	*10/23/17 19:38*	*1*

Lab Sample ID: LCS 720-232564/2-A
Matrix: Solid
Analysis Batch: 232558

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232564

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016			0.133	0.117		mg/Kg		87	65 - 121		
PCB-1260			0.133	0.118		mg/Kg		89	68 - 127		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Tetrachloro-m-xylene	*79*		*45 - 132*
DCB Decachlorobiphenyl	*91*		*42 - 146*

Lab Sample ID: 720-82612-3 MS
Matrix: Solid
Analysis Batch: 232559

Client Sample ID: WCB-3
Prep Type: Total/NA
Prep Batch: 232564

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
PCB-1016	ND	F1	0.149	0.220	F1	mg/Kg	☼	148	69 - 120		
PCB-1260	ND	F1	0.149	0.124		mg/Kg	☼	84	73 - 114		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Tetrachloro-m-xylene	*97*		*45 - 132*
DCB Decachlorobiphenyl	*47*		*42 - 146*

Lab Sample ID: 720-82612-3 MSD
Matrix: Solid
Analysis Batch: 232559

Client Sample ID: WCB-3
Prep Type: Total/NA
Prep Batch: 232564

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
PCB-1016	ND	F1	0.149	0.197	F1	mg/Kg	☼	133	69 - 120	11	20
PCB-1260	ND	F1	0.149	0.107	F1	mg/Kg	☼	72	73 - 114	14	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Tetrachloro-m-xylene	*90*		*45 - 132*
DCB Decachlorobiphenyl	*43*		*42 - 146*

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 720-232501/1-A
Matrix: Solid
Analysis Batch: 232603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232501

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	ND		0.50	0.083	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Arsenic	ND		1.0	0.085	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Barium	ND		0.50	0.071	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Beryllium	ND		0.10	0.033	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Cadmium	ND		0.13	0.012	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Chromium	0.0764	J	0.50	0.053	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Cobalt	ND		0.20	0.020	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Copper	ND		1.5	0.71	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Lead	ND		0.50	0.11	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Molybdenum	ND		0.50	0.064	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Nickel	ND		0.50	0.051	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Selenium	ND		1.0	0.15	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Silver	ND		0.25	0.051	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Thallium	ND		0.50	0.15	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Vanadium	ND		0.50	0.068	mg/Kg		10/20/17 15:24	10/23/17 10:52	1
Zinc	ND		1.5	0.64	mg/Kg		10/20/17 15:24	10/23/17 10:52	1

Lab Sample ID: LCS 720-232501/2-A
Matrix: Solid
Analysis Batch: 232603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232501

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	50.0	46.65		mg/Kg		93	80 - 120
Arsenic	50.0	48.01		mg/Kg		96	80 - 120
Barium	50.0	48.64		mg/Kg		97	80 - 120
Beryllium	50.0	49.20		mg/Kg		98	80 - 120
Cadmium	50.0	49.54		mg/Kg		99	80 - 120
Chromium	50.0	49.36		mg/Kg		99	80 - 120
Cobalt	50.0	48.95		mg/Kg		98	80 - 120
Copper	50.0	47.75		mg/Kg		96	80 - 120
Lead	50.0	49.33		mg/Kg		99	80 - 120
Molybdenum	50.0	52.16		mg/Kg		104	80 - 120
Nickel	50.0	50.11		mg/Kg		100	80 - 120
Selenium	50.0	46.87		mg/Kg		94	80 - 120
Silver	25.0	24.63		mg/Kg		99	80 - 120
Thallium	50.0	51.88		mg/Kg		104	80 - 120
Vanadium	50.0	47.52		mg/Kg		95	80 - 120
Zinc	50.0	48.26		mg/Kg		97	80 - 120

Method: 7471A - Mercury (CVAA)

Lab Sample ID: MB 720-232410/1-A
Matrix: Solid
Analysis Batch: 232438

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 232410

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.017	0.0025	mg/Kg		10/19/17 10:05	10/19/17 13:16	1

Method: 7471A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 720-232410/2-A
Matrix: Solid
Analysis Batch: 232438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 232410

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Mercury	0.833	0.801		mg/Kg		96	80 - 120

Method: Moisture - Percent Moisture

Lab Sample ID: 720-82612-1 DU
Matrix: Solid
Analysis Batch: 232337

Client Sample ID: WCB-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Percent Moisture	23.6		23.8		%		0.5	20

GC/MS VOA

Analysis Batch: 232644

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	8260B	232666
720-82612-2	WCB-2	Total/NA	Solid	8260B	232666
720-82612-3	WCB-3	Total/NA	Solid	8260B	232666
720-82612-4	WCB-4	Total/NA	Solid	8260B	232666
MB 720-232644/4	Method Blank	Total/NA	Solid	8260B	
LCS 720-232644/5	Lab Control Sample	Total/NA	Solid	8260B	
LCSD 720-232644/6	Lab Control Sample Dup	Total/NA	Solid	8260B	

Prep Batch: 232666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	5030B	
720-82612-2	WCB-2	Total/NA	Solid	5030B	
720-82612-3	WCB-3	Total/NA	Solid	5030B	
720-82612-4	WCB-4	Total/NA	Solid	5030B	

GC/MS Semi VOA

Prep Batch: 232562

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	3546	
720-82612-2	WCB-2	Total/NA	Solid	3546	
720-82612-3	WCB-3	Total/NA	Solid	3546	
720-82612-4	WCB-4	Total/NA	Solid	3546	
MB 720-232562/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-232562/2-A	Lab Control Sample	Total/NA	Solid	3546	

Analysis Batch: 232632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	8270C	232562
720-82612-2	WCB-2	Total/NA	Solid	8270C	232562
720-82612-3	WCB-3	Total/NA	Solid	8270C	232562
720-82612-4	WCB-4	Total/NA	Solid	8270C	232562
MB 720-232562/1-A	Method Blank	Total/NA	Solid	8270C	232562
LCS 720-232562/2-A	Lab Control Sample	Total/NA	Solid	8270C	232562

GC Semi VOA

Analysis Batch: 232558

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	8082	232564
720-82612-2	WCB-2	Total/NA	Solid	8082	232564
720-82612-4	WCB-4	Total/NA	Solid	8082	232564
MB 720-232564/1-A	Method Blank	Total/NA	Solid	8082	232564
LCS 720-232564/2-A	Lab Control Sample	Total/NA	Solid	8082	232564

Analysis Batch: 232559

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-3	WCB-3	Total/NA	Solid	8082	232564
720-82612-3 MS	WCB-3	Total/NA	Solid	8082	232564
720-82612-3 MSD	WCB-3	Total/NA	Solid	8082	232564

GC Semi VOA (Continued)

Prep Batch: 232563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-5	WCB-1 (0-6)	Total/NA	Solid	3546	
720-82612-6	WCB-1 (12-18)	Total/NA	Solid	3546	
720-82612-7	WCB-1 (30-36)	Total/NA	Solid	3546	
720-82612-8	WCB-2 (0-6)	Total/NA	Solid	3546	
720-82612-9	WCB-2 (12-18)	Total/NA	Solid	3546	
720-82612-10	WCB-2 (30-36)	Total/NA	Solid	3546	
720-82612-11	WCB-3 (0-6)	Total/NA	Solid	3546	
720-82612-12	WCB-3 (12-18)	Total/NA	Solid	3546	
720-82612-13	WCB-3 (30-36)	Total/NA	Solid	3546	
720-82612-14	WCB-4 (0-6)	Total/NA	Solid	3546	
720-82612-15	WCB-4 (12-18)	Total/NA	Solid	3546	
720-82612-16	WCB-4 (30-36)	Total/NA	Solid	3546	
MB 720-232563/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-232563/2-A	Lab Control Sample	Total/NA	Solid	3546	

Prep Batch: 232564

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	3546	
720-82612-2	WCB-2	Total/NA	Solid	3546	
720-82612-3	WCB-3	Total/NA	Solid	3546	
720-82612-4	WCB-4	Total/NA	Solid	3546	
MB 720-232564/1-A	Method Blank	Total/NA	Solid	3546	
LCS 720-232564/2-A	Lab Control Sample	Total/NA	Solid	3546	
720-82612-3 MS	WCB-3	Total/NA	Solid	3546	
720-82612-3 MSD	WCB-3	Total/NA	Solid	3546	

Analysis Batch: 232637

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-5	WCB-1 (0-6)	Total/NA	Solid	8081A	232563
720-82612-6	WCB-1 (12-18)	Total/NA	Solid	8081A	232563
720-82612-7	WCB-1 (30-36)	Total/NA	Solid	8081A	232563
720-82612-8	WCB-2 (0-6)	Total/NA	Solid	8081A	232563
720-82612-9	WCB-2 (12-18)	Total/NA	Solid	8081A	232563
720-82612-10	WCB-2 (30-36)	Total/NA	Solid	8081A	232563
720-82612-11	WCB-3 (0-6)	Total/NA	Solid	8081A	232563
720-82612-12	WCB-3 (12-18)	Total/NA	Solid	8081A	232563
720-82612-13	WCB-3 (30-36)	Total/NA	Solid	8081A	232563
720-82612-14	WCB-4 (0-6)	Total/NA	Solid	8081A	232563
720-82612-15	WCB-4 (12-18)	Total/NA	Solid	8081A	232563
720-82612-16	WCB-4 (30-36)	Total/NA	Solid	8081A	232563
MB 720-232563/1-A	Method Blank	Total/NA	Solid	8081A	232563
LCS 720-232563/2-A	Lab Control Sample	Total/NA	Solid	8081A	232563

Analysis Batch: 232638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-13	WCB-3 (30-36)	Total/NA	Solid	8081A	232563
720-82612-14	WCB-4 (0-6)	Total/NA	Solid	8081A	232563
720-82612-15	WCB-4 (12-18)	Total/NA	Solid	8081A	232563

GC Semi VOA (Continued)

Analysis Batch: 232753

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 720-232769/1-A	Method Blank	Silica Gel Cleanup	Solid	8015B	232769
LCS 720-232769/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	8015B	232769
LCSD 720-232769/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	8015B	232769

Analysis Batch: 232757

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Silica Gel Cleanup	Solid	8015B	232769
720-82612-2	WCB-2	Silica Gel Cleanup	Solid	8015B	232769
720-82612-3	WCB-3	Silica Gel Cleanup	Solid	8015B	232769
720-82612-4	WCB-4	Silica Gel Cleanup	Solid	8015B	232769

Prep Batch: 232769

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Silica Gel Cleanup	Solid	3546	
720-82612-2	WCB-2	Silica Gel Cleanup	Solid	3546	
720-82612-3	WCB-3	Silica Gel Cleanup	Solid	3546	
720-82612-4	WCB-4	Silica Gel Cleanup	Solid	3546	
MB 720-232769/1-A	Method Blank	Silica Gel Cleanup	Solid	3546	
LCS 720-232769/2-A	Lab Control Sample	Silica Gel Cleanup	Solid	3546	
LCSD 720-232769/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Solid	3546	

Metals

Prep Batch: 232410

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	7471A	
720-82612-2	WCB-2	Total/NA	Solid	7471A	
720-82612-3	WCB-3	Total/NA	Solid	7471A	
720-82612-4	WCB-4	Total/NA	Solid	7471A	
MB 720-232410/1-A	Method Blank	Total/NA	Solid	7471A	
LCS 720-232410/2-A	Lab Control Sample	Total/NA	Solid	7471A	

Analysis Batch: 232438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	7471A	232410
720-82612-2	WCB-2	Total/NA	Solid	7471A	232410
720-82612-3	WCB-3	Total/NA	Solid	7471A	232410
720-82612-4	WCB-4	Total/NA	Solid	7471A	232410
MB 720-232410/1-A	Method Blank	Total/NA	Solid	7471A	232410
LCS 720-232410/2-A	Lab Control Sample	Total/NA	Solid	7471A	232410

Prep Batch: 232501

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	3050B	
720-82612-2	WCB-2	Total/NA	Solid	3050B	
720-82612-3	WCB-3	Total/NA	Solid	3050B	
720-82612-4	WCB-4	Total/NA	Solid	3050B	
MB 720-232501/1-A	Method Blank	Total/NA	Solid	3050B	
LCS 720-232501/2-A	Lab Control Sample	Total/NA	Solid	3050B	

Metals (Continued)

Analysis Batch: 232603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	6010B	232501
720-82612-2	WCB-2	Total/NA	Solid	6010B	232501
720-82612-3	WCB-3	Total/NA	Solid	6010B	232501
720-82612-4	WCB-4	Total/NA	Solid	6010B	232501
MB 720-232501/1-A	Method Blank	Total/NA	Solid	6010B	232501
LCS 720-232501/2-A	Lab Control Sample	Total/NA	Solid	6010B	232501

Analysis Batch: 232633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-4	WCB-4	Total/NA	Solid	6010B	232501

Analysis Batch: 232703

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-4	WCB-4	Total/NA	Solid	6010B	232501

Analysis Batch: 232716

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-2	WCB-2	Total/NA	Solid	6010B	232501

General Chemistry

Analysis Batch: 232337

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-82612-1	WCB-1	Total/NA	Solid	Moisture	
720-82612-2	WCB-2	Total/NA	Solid	Moisture	
720-82612-3	WCB-3	Total/NA	Solid	Moisture	
720-82612-4	WCB-4	Total/NA	Solid	Moisture	
720-82612-5	WCB-1 (0-6)	Total/NA	Solid	Moisture	
720-82612-6	WCB-1 (12-18)	Total/NA	Solid	Moisture	
720-82612-7	WCB-1 (30-36)	Total/NA	Solid	Moisture	
720-82612-8	WCB-2 (0-6)	Total/NA	Solid	Moisture	
720-82612-9	WCB-2 (12-18)	Total/NA	Solid	Moisture	
720-82612-10	WCB-2 (30-36)	Total/NA	Solid	Moisture	
720-82612-11	WCB-3 (0-6)	Total/NA	Solid	Moisture	
720-82612-12	WCB-3 (12-18)	Total/NA	Solid	Moisture	
720-82612-13	WCB-3 (30-36)	Total/NA	Solid	Moisture	
720-82612-14	WCB-4 (0-6)	Total/NA	Solid	Moisture	
720-82612-15	WCB-4 (12-18)	Total/NA	Solid	Moisture	
720-82612-16	WCB-4 (30-36)	Total/NA	Solid	Moisture	
720-82612-1 DU	WCB-1	Total/NA	Solid	Moisture	

Client Sample ID: WCB-1
Date Collected: 10/11/17 09:57
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-1
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232666	10/24/17 10:39	AMC	TAL PLS
Total/NA	Analysis	8260B		1	232644	10/24/17 12:49	JRM	TAL PLS
Total/NA	Prep	3546			232562	10/23/17 09:04	CAL	TAL PLS
Total/NA	Analysis	8270C		2	232632	10/23/17 22:05	MQL	TAL PLS
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-1
Date Collected: 10/11/17 09:57
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-1
Matrix: Solid
Percent Solids: 76.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			232769	10/25/17 11:08	CAL	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	232757	10/26/17 01:25	JZT	TAL PLS
Total/NA	Prep	3546			232564	10/23/17 09:12	CAL	TAL PLS
Total/NA	Analysis	8082		1	232558	10/23/17 21:18	JZT	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		4	232603	10/23/17 12:54	BKR	TAL PLS
Total/NA	Prep	7471A			232410	10/19/17 10:05	AJS	TAL PLS
Total/NA	Analysis	7471A		1	232438	10/19/17 14:04	ASB	TAL PLS

Client Sample ID: WCB-2
Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232666	10/24/17 10:39	AMC	TAL PLS
Total/NA	Analysis	8260B		1	232644	10/24/17 13:17	JRM	TAL PLS
Total/NA	Prep	3546			232562	10/23/17 09:04	CAL	TAL PLS
Total/NA	Analysis	8270C		2	232632	10/23/17 22:31	MQL	TAL PLS
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-2
Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2
Matrix: Solid
Percent Solids: 81.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			232769	10/25/17 11:08	CAL	TAL PLS
Silica Gel Cleanup	Analysis	8015B		2	232757	10/26/17 01:49	JZT	TAL PLS
Total/NA	Prep	3546			232564	10/23/17 09:12	CAL	TAL PLS
Total/NA	Analysis	8082		1	232558	10/23/17 21:01	JZT	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		4	232603	10/23/17 12:59	BKR	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS

Client Sample ID: WCB-2
Date Collected: 10/11/17 10:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-2
Matrix: Solid
Percent Solids: 81.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6010B		4	232716	10/24/17 16:50	CAM	TAL PLS
Total/NA	Prep	7471A			232410	10/19/17 10:05	AJS	TAL PLS
Total/NA	Analysis	7471A		1	232438	10/19/17 14:11	ASB	TAL PLS

Client Sample ID: WCB-3
Date Collected: 10/11/17 12:12
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-3
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232666	10/24/17 10:39	AMC	TAL PLS
Total/NA	Analysis	8260B		1	232644	10/24/17 13:45	JRM	TAL PLS
Total/NA	Prep	3546			232562	10/23/17 09:04	CAL	TAL PLS
Total/NA	Analysis	8270C		2	232632	10/23/17 22:57	MQL	TAL PLS
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-3
Date Collected: 10/11/17 12:12
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-3
Matrix: Solid
Percent Solids: 87.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			232769	10/25/17 11:08	CAL	TAL PLS
Silica Gel Cleanup	Analysis	8015B		10	232757	10/26/17 02:13	JZT	TAL PLS
Total/NA	Prep	3546			232564	10/23/17 09:12	CAL	TAL PLS
Total/NA	Analysis	8082		1	232559	10/23/17 19:38	JZT	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		4	232603	10/23/17 13:05	BKR	TAL PLS
Total/NA	Prep	7471A			232410	10/19/17 10:05	AJS	TAL PLS
Total/NA	Analysis	7471A		1	232438	10/19/17 14:13	ASB	TAL PLS

Client Sample ID: WCB-4
Date Collected: 10/11/17 11:34
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-4
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	5030B			232666	10/24/17 10:39	AMC	TAL PLS
Total/NA	Analysis	8260B		1	232644	10/24/17 14:13	JRM	TAL PLS
Total/NA	Prep	3546			232562	10/23/17 09:04	CAL	TAL PLS
Total/NA	Analysis	8270C		2	232632	10/23/17 23:22	MQL	TAL PLS
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-4
Lab Sample ID: 720-82612-4
Date Collected: 10/11/17 11:34
Matrix: Solid
Date Received: 10/17/17 10:10
Percent Solids: 72.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Silica Gel Cleanup	Prep	3546			232769	10/25/17 11:08	CAL	TAL PLS
Silica Gel Cleanup	Analysis	8015B		3	232757	10/26/17 02:38	JZT	TAL PLS
Total/NA	Prep	3546			232564	10/23/17 09:12	CAL	TAL PLS
Total/NA	Analysis	8082		1	232558	10/23/17 20:11	JZT	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		4	232603	10/23/17 13:10	BKR	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		10	232633	10/23/17 17:07	CAM	TAL PLS
Total/NA	Prep	3050B			232501	10/20/17 15:24	AAP	TAL PLS
Total/NA	Analysis	6010B		10	232703	10/24/17 15:28	BKR	TAL PLS
Total/NA	Prep	7471A			232410	10/19/17 10:05	AJS	TAL PLS
Total/NA	Analysis	7471A		1	232438	10/19/17 14:15	ASB	TAL PLS

Client Sample ID: WCB-1 (0-6)
Lab Sample ID: 720-82612-5
Date Collected: 10/11/17 09:33
Matrix: Solid
Date Received: 10/17/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-1 (0-6)
Lab Sample ID: 720-82612-5
Date Collected: 10/11/17 09:33
Matrix: Solid
Date Received: 10/17/17 10:10
Percent Solids: 82.9

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 05:33	JZT	TAL PLS

Client Sample ID: WCB-1 (12-18)
Lab Sample ID: 720-82612-6
Date Collected: 10/11/17 09:41
Matrix: Solid
Date Received: 10/17/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-1 (12-18)
Lab Sample ID: 720-82612-6
Date Collected: 10/11/17 09:41
Matrix: Solid
Date Received: 10/17/17 10:10
Percent Solids: 67.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 05:49	JZT	TAL PLS

Client Sample ID: WCB-1 (30-36)
Date Collected: 10/11/17 09:52
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-7
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-1 (30-36)
Date Collected: 10/11/17 09:52
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-7
Matrix: Solid
Percent Solids: 72.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 06:06	JZT	TAL PLS

Client Sample ID: WCB-2 (0-6)
Date Collected: 10/11/17 10:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-8
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-2 (0-6)
Date Collected: 10/11/17 10:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-8
Matrix: Solid
Percent Solids: 75.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		2	232637	10/24/17 06:23	JZT	TAL PLS

Client Sample ID: WCB-2 (12-18)
Date Collected: 10/11/17 10:27
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-9
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-2 (12-18)
Date Collected: 10/11/17 10:27
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-9
Matrix: Solid
Percent Solids: 79.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 06:40	JZT	TAL PLS

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-2 (30-36)
Date Collected: 10/11/17 10:32
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-10
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-2 (30-36)
Date Collected: 10/11/17 10:32
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-10
Matrix: Solid
Percent Solids: 66.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 06:56	JZT	TAL PLS

Client Sample ID: WCB-3 (0-6)
Date Collected: 10/11/17 10:54
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-11
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-3 (0-6)
Date Collected: 10/11/17 10:54
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-11
Matrix: Solid
Percent Solids: 84.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		5	232637	10/24/17 09:11	JZT	TAL PLS

Client Sample ID: WCB-3 (12-18)
Date Collected: 10/11/17 12:08
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-12
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-3 (12-18)
Date Collected: 10/11/17 12:08
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-12
Matrix: Solid
Percent Solids: 71.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		5	232637	10/24/17 07:13	JZT	TAL PLS

Client Sample ID: WCB-3 (30-36)
Date Collected: 10/11/17 12:13
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-13
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-3 (30-36)
Date Collected: 10/11/17 12:13
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-13
Matrix: Solid
Percent Solids: 71.7

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 07:30	JZT	TAL PLS
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		10	232638	10/24/17 10:22	JZT	TAL PLS

Client Sample ID: WCB-4 (0-6)
Date Collected: 10/11/17 11:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-14
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-4 (0-6)
Date Collected: 10/11/17 11:18
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-14
Matrix: Solid
Percent Solids: 79.0

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 07:47	JZT	TAL PLS
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		5	232638	10/24/17 10:39	JZT	TAL PLS

Client Sample ID: WCB-4 (12-18)
Date Collected: 10/11/17 11:26
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-15
Matrix: Solid

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-4 (12-18)
Date Collected: 10/11/17 11:26
Date Received: 10/17/17 10:10

Lab Sample ID: 720-82612-15
Matrix: Solid
Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS

Lab Chronicle

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Client Sample ID: WCB-4 (12-18)

Lab Sample ID: 720-82612-15
Date Collected: 10/11/17 11:26
Matrix: Solid
Date Received: 10/17/17 10:10
Percent Solids: 80.5

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8081A		1	232637	10/24/17 08:03	JZT	TAL PLS
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		5	232638	10/24/17 10:57	JZT	TAL PLS

Client Sample ID: WCB-4 (30-36)

Lab Sample ID: 720-82612-16
Date Collected: 10/11/17 11:32
Matrix: Solid
Date Received: 10/17/17 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	Moisture		1	232337	10/18/17 11:53	TNL	TAL PLS

Client Sample ID: WCB-4 (30-36)

Lab Sample ID: 720-82612-16
Date Collected: 10/11/17 11:32
Matrix: Solid
Date Received: 10/17/17 10:10
Percent Solids: 77.4

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3546			232563	10/23/17 09:08	CAL	TAL PLS
Total/NA	Analysis	8081A		1	232637	10/24/17 08:20	JZT	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Accreditation/Certification Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Laboratory: TestAmerica Pleasanton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2496	01-31-18

Laboratory: TestAmerica Buffalo

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
New Hampshire	NELAP	1	2973	09-11-18

Method Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL PLS
8270C	Semivolatile Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS
8081A	Organochlorine Pesticides (GC)	SW846	TAL PLS
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL PLS
6010B	Metals (ICP)	SW846	TAL PLS
7471A	Mercury (CVAA)	SW846	TAL PLS
Moisture	Percent Moisture	EPA	TAL PLS

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: Woodard & Curran, Inc.
Project/Site: SJC Hanger A

TestAmerica Job ID: 720-82612-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-82612-1	WCB-1	Solid	10/11/17 09:57	10/17/17 10:10
720-82612-2	WCB-2	Solid	10/11/17 10:34	10/17/17 10:10
720-82612-3	WCB-3	Solid	10/11/17 12:12	10/17/17 10:10
720-82612-4	WCB-4	Solid	10/11/17 11:34	10/17/17 10:10
720-82612-5	WCB-1 (0-6)	Solid	10/11/17 09:33	10/17/17 10:10
720-82612-6	WCB-1 (12-18)	Solid	10/11/17 09:41	10/17/17 10:10
720-82612-7	WCB-1 (30-36)	Solid	10/11/17 09:52	10/17/17 10:10
720-82612-8	WCB-2 (0-6)	Solid	10/11/17 10:18	10/17/17 10:10
720-82612-9	WCB-2 (12-18)	Solid	10/11/17 10:27	10/17/17 10:10
720-82612-10	WCB-2 (30-36)	Solid	10/11/17 10:32	10/17/17 10:10
720-82612-11	WCB-3 (0-6)	Solid	10/11/17 10:54	10/17/17 10:10
720-82612-12	WCB-3 (12-18)	Solid	10/11/17 12:08	10/17/17 10:10
720-82612-13	WCB-3 (30-36)	Solid	10/11/17 12:13	10/17/17 10:10
720-82612-14	WCB-4 (0-6)	Solid	10/11/17 11:18	10/17/17 10:10
720-82612-15	WCB-4 (12-18)	Solid	10/11/17 11:26	10/17/17 10:10
720-82612-16	WCB-4 (30-36)	Solid	10/11/17 11:32	10/17/17 10:10

179045

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record 720-82612

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

10/27/2017

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Jedd Steinglass	George Valenzuela	Phone	E-Mail	480-103376-24505 1
Company: Woodard & Curran, Inc				Page: Page 1 of 2
Address: 41 Hutchins Drive	Due Date Requested			Job #
City: Portland	TAT Requested (days): Standard 5-Day			
State, Zip: ME, 04101				
Phone: 207-756-2319	PO #			
Email: jsteinglass@woodardcurran.com	WO #			
Project Name: SJC Hangar A	Project #: 231054			
Site	SSOW#			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2O3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4-5, Z - other (specify)
Other

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs Standard List + GRO 8260	TPH DRO with Silica Cleanup 8015B	PCBs 8082	CA CAM 17 Total Metals 6010B / 7471A	SVOC ABN 8270	Organochlorine Pesticides - Standard List 8081A			Total Number of containers	Special Instructions/Note:
			Preservation Code:														
1	WCB-1	10/11/17	9:57am	C	Solid	N	N	X	X	X	X	X				2	
2	WCB-2	10/11/17	10:34am	C	Solid	N	N	X	X	X	X	X				2	
3	WCB-3	10/11/17	12:12pm	C	Solid	N	N	X	X	X	X	X				2	
4	WCB-4	10/11/17	11:34am	C	Solid	N	N	X	X	X	X	X				2	
5	WCB-1 (0-6)	10/11/17	9:33am	G	Solid	N	N						X			1	
6	WCB-1 (12-18)	10/11/17	9:41am	G	Solid	N	N						X			1	
7	WCB-1 (30-36)	10/11/17	9:52am	G	Solid	N	N						X			1	
8	WCB-2 (0-6)	10/11/17	10:15am	G	Solid	N	N						X			1	
9	WCB-2 (12-18)	10/11/17	10:27am	G	Solid	N	N						X			1	
10	WCB-2 (30-36)	10/11/17	10:32am	G	Solid	N	N						X			1	
11	WCB-3 (0-6)	10/11/17	11:57am	G	Solid	N	N						X			1	

720-82612 Chain of Custody

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested I, II, III, IV, Other (specify): II

Special Instructions/QC Requirements: Extract and RUN TCLP for any single metal that exceeds 20X rule

Empty Kit Relinquished by	Date	Time	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	10/12/17 7:01 pm		[signature]	10/12/17 1901	
2	[signature]	10/13/17 1515		[signature]	10/14/17 0910	
3	[signature]	10/16/17 1351		[signature]	10-17-17 1010	

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: TAP = 14.3°C 3.9°C 2.8 #1

TestAmerica Buffalo
10 Hazelwood Drive
Amherst, NY 14228-2298
Phone (716) 691-2600 Fax (716) 691-7991

Chain of Custody Record 720-92612

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

10/27/2017

Client Information	Sampler	Lab PM	Carrier Tracking No(s)	COC No
Client Contact: Jedd Steinglass	George Valenzuela			480-103376-24505 1
Company: Woodard & Curran, Inc	Phone	E-Mail		Page: Page 2 of 2
Address: 41 Hutchins Drive	Due Date Requested			Job #
City: Portland	TAT Requested (days): Standard 5-Day			
State, Zip: ME, 04101				
Phone: 207-756-2319	PO #			
Email: jsteinglass@woodardcurran.com	WO #			
Project Name: SJC Hangar A	Project #: 231054			
Site	SSOW#			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other

	Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	VOCs Standard List + GRO 8260	TPH DRO with Silica Cleanup 8015B	PCBs 8082	CA CAM 17 Total Metals 6010B / 7471A	SVOC ABN 8270	Organochlorine Pesticides - Standard List 8081A	Total Number of containers	Special Instructions/Note:
				Preservation Code:											
12	WCB-3 (12-18)	10/11/17	12:08pm	G	Solid	N	N						X	1	
13	WCB-3 (30-36)	10/11/17	12:13pm	G	Solid	N	N						X	1	
14	WCB-4 (0-6)	10/11/17	11:18am	G	Solid	N	N						X	1	
15	WCB-4 (12-18)	10/11/17	11:26am	G	Solid	N	N						X	1	
16	WCB-4 (30-36)	10/11/17	11:32am	G	Solid	N	N						X	1	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For ____ Months

Deliverable Requested: I, II, III, IV, Other (specify) II

Special Instructions/QC Requirements: Extract and RUN TCLP for any single metal that exceeds 20X rule

Empty Kit Relinquished by	Date	Time	Method of Shipment

	Relinquished by	Date/Time	Company	Received by	Date/Time	Company
1	[signature]	10/12/17 / 7:01pm		[signature]	10/12/17 1901	FAP
2	[signature]	10/13/17 1515	FAP	[signature]	10/14/17 0911	[illegible]
3	[signature]	10/16/17 1800	CAS	[signature]	10-17-17 1010	Pace 3.7C

Custody Seals Intact: ∆ Yes ∆ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 2.6 #1

Login Sample Receipt Checklist

Client: Woodard & Curran, Inc.

Job Number: 720-82612-1

Login Number: 82612
List Number: 1
Creator: Alcantara, Michael A

List Source: TestAmerica Pleasanton

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	