



City of Phoenix

AVIATION DEPARTMENT

June 16, 1998

Theresa Hoff
Maricopa County Flood Control District
Property Planning Management
2801 West Durango Street
Phoenix AZ 85009

RE: Bullard Wash Project, Phoenix Goodyear Airport

Ms. Hoff:

The City's characterization report for Phoenix Goodyear Airport's southern debris fill is sent with this letter. The City's characterization was not different from the County's study showing construction debris, with the exception of the locating of a few metal containers (hot water heaters or empty steel tanks) which were removed and were not located in the County's proposed construction area.

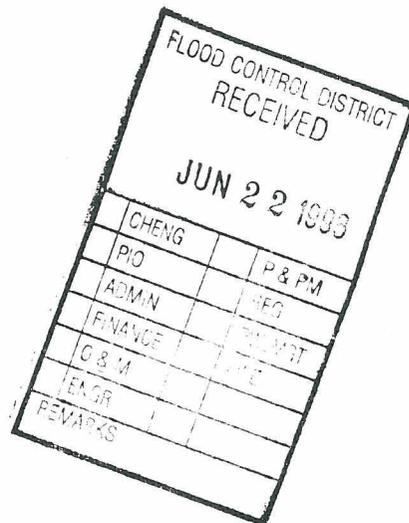
I have sent you a copy of the City's disclaimer of conditions at Phoenix Goodyear Airport, dated March 1998, attached again for your reference.

I believe that our only unfinished item is to develop a land exchange document incorporating the conditions of the exchange.

Please call me at 273-2730 if I can further assist.

Sincerely,

Cynthia Parker
Environmental Coordinator



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WORKER PROTECTION

- a. Contractor understands and acknowledges that the Phoenix Goodyear Airport, at which the Contractor is to perform a portion of the work, is listed on the National Priorities List pursuant to Section 105 of the Comprehensive Environmental Compensation and Liability Act, 42 U.S.C. 9605, because of the presence of regulated substances at the facility. For this work, the contractor will be in an area that has been studied, and has been found not to have soils concentrations for trichloroethylene above the EPA cleanup standards (by VLEACH Modeling).

Regulated Substances means those substances (including petroleum), included within the definitions of hazardous substance, hazardous chemical, hazardous material, regulated or toxic substance, or hazardous, solid or special waste under federal, state, and local laws presently in effect or that may be enacted, promulgated or adopted in the future or may be amended from time to time, including but not limited to the following:

Resource Conservation and Recovery Act of 1976, 42 U.S.C. 6901, et seq., as amended (RCRA); Toxic Substances Control Act, 15 U.S.C. 2601 et seq., as amended; Occupational Safety and Health Act of 1970, as amended, and Arizona Occupational Safety and Health Act, A.R.S. 23-401, et seq., as amended (OSHA); Comprehensive Environmental Response, Compensation and Liability Act, as amended by the Superfund Amendments and Reauthorization Act, 42 U.S.C. 9601 et seq., as amended. Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. 13, et seq., as amended; The Arizona Environmental Quality Act, A.R.S. § 49-101, as amended.

- b. Contractor further understands and acknowledges that the work could expose its employees and subcontractors to Regulated Substances. Therefore, it shall be the responsibility of the Contractor to conduct reasonable inquiry of the County to ascertain whether the work will affect or disturb any regulated substances, or may result in any potential employee exposure that is known to be present at the job site where the Work is to be performed.
- c. The County informs the Contractor that an old U.S. Navy Dump may reside in the work area. Exact boundaries are not known, but it is believed that the fill is predominately construction debris that could possibly include asbestos, considering the dates of use. No direct evidence supports this belief.
- d. If during the performance of the work, any unforeseen Regulated Substances are encountered, Contractor shall immediately notify the County of the encounter and shall not recommence work until implementation of the Contractor's Health and Safety Plan and upon direction of the County. Depending on the nature of the Regulated Substances encountered, the County may (i) direct the Contractor

to complete the original scope of work after employee safety concerns have been resolved (ii), agree with the Contractor to modify the scope or (iii) terminate the contract and pay Contractor for work performed.

- e. Contractor shall furnish its Subcontractors with a copy of this section of the Contract and shall ensure that its subcontractors comply with the requirements of this section. The Subcontractor will acknowledge its understanding of appropriate health and safety plans by signing and dating the plans.

SCS ENGINEERS

June 4, 1998
File No. 10.97018.08

Ms. Cynthia Parker
City of Phoenix
Aviation Department
3400 Sky Harbor Boulevard
Phoenix, AZ 85034-4420

Subject: Characterization of Solid Waste Disposal Area
Southwest Portion of Phoenix-Goodyear Airport
Goodyear, Arizona

Dear Cynthia:

Pursuant to your request, SCS Engineers (SCS) is pleased to provide this letter report describing the methodology and findings of our characterization of the solid waste disposal area which exists at the southwest end of the runway at the Phoenix-Goodyear Airport in Goodyear, Arizona.

If you have any questions, please contact either of the undersigned at (602) 840-2596.

Sincerely,



Stephen B. Smith, P.E.
Project Director



Bradley F. Johnston, P.G.
Vice President
SCS ENGINEERS

Attachments

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**SUBSURFACE INVESTIGATION OF SOLID WASTE DISPOSAL AREA
SOUTHWEST PORTION OF PHOENIX-GOODYEAR AIRPORT**

**JUNE 4, 1998
FILE NO. 10.97018.08**

BACKGROUND

A solid waste disposal area was identified at the southwest end of the Phoenix-Goodyear Airport (PGA). Based on a review of historical aerial photographs dated 1958, 1964, 1970, 1977, 1980, 1986, 1992, and 1994, dumping and/or excavation in the area appears to have begun between 1964 and 1970, and ceased between 1992 and 1994. Verbal reports indicate that the disposal area was active in 1968, and was covered with soil in 1994.

The Maricopa County Flood Control District (MCFCD) is planning to disturb a portion of the disposal area in order to construct a drainage canal which will pass through the area. At the present time, it is anticipated that approximately one-third of the disposal area would be located within the planned MCFCD channel.

SCS was retained to perform a characterization of the disposal area in order to evaluate the nature and extent of disposed materials. The characterization included the following:

- Preparation of a site-specific health and safety plan;
- A preliminary site visit with PGA operations personnel;
- Clearance for underground utilities by Arizona Blue Stake;
- Excavation of 12 backhoe test pits to visually identify the nature and extent of buried waste;



- Surveying of test pit locations; and
- Preparation of an AutoCAD map of the disposal area and this report.

Since visual observations did not identify the presence of apparent contamination, no soil samples were collected for laboratory analysis.

METHODOLOGY

A CAT 320 track excavator was used to excavate the test pits. Due to concerns regarding generation of dust near the end of the runway, a water truck was used to wet the excavation area and stockpiled soil during excavation activities. This item was not included in the original proposal, but SCS notified Cynthia Parker of COP Aviation via facsimile regarding this change in scope. Following excavation of the test pits, the track excavator and a front end loader were used to backfill the excavations to original grade. The front end loader was not included in the original proposal, but SCS notified Mr. Bill Bown of COP Aviation regarding this change in scope. There was significantly more lineal feet of trench opened during the excavation than anticipated, and the addition of the front end loader for backfilling reduced total field time by at least one day.

In general, the test pits were started outside the apparent limits of the burial area, and were extended into the suspected burial area. Depth of the test pits ranged from approximately eight to 21 feet below ground surface, penetrating at least four feet into native soil beneath visible waste materials. Waste materials removed from the test pits were visually characterized to evaluate the types of waste in the disposal area. Information regarding each test pit, including test pit depth and location, nature of waste, and depth of waste is included in Table 1.

Following excavation of test pits, the test pit locations were surveyed for mapping onto the site map. After test pits were logged and surveyed, they were backfilled. With the exception of a waste oil tank, oil bowser, and three smaller tanks or pressure vessels, any debris that had been excavated was placed back into the excavation, followed by at least two feet of soil to preserve the cover over buried materials. The waste oil tank



and bowser were not replaced into the excavated area, and have reportedly been emptied and disposed of under the supervision of COP Aviation. The smaller tanks or pressure vessels were also disposed of under the supervision of COP Aviation.

FINDINGS

Nature Of Waste Materials

As shown in Table 1, waste materials observed in the test pits included the following:

- Concrete
- Asphaltic concrete
- Rocks
- Soil
- Plastic sheeting
- Wood
- Shingles
- A propane tank
- A metal waste oil tank
- Empty metal drums
- Cable, pipe, and other scrap metal
- A concrete oil "bowser"
- Apparent boiler tanks
- Fiberglass insulation
- Tires
- Brick and clay pipe
- Vegetative debris

One piece of transite (asbestos-containing concrete) piping was observed on the sideslope of the disposal area.



Field indications (odors or visible staining) of contamination were not observed in the test pits.

Extent Of Waste Materials

Buried waste materials were generally not observed outside the suspected disposal area, which is visible in the field as a topographically elevated area west of the underground gas pipeline, bounded by slopes ranging up to 15 feet high. One test pit was excavated on the east (runway) side of the gas pipeline, but the only materials observed were inert materials including rocks, concrete, and asphalt.

Distribution of waste materials was not consistent in terms of depth or lateral extent. Based on this investigation, it appears that waste materials were disposed of by dumping over the edge of former embankments, resulting in discontinuous lenses of waste materials. The maximum depth of buried materials observed in the test pits was approximately eight to nine feet below ground surface, and in most cases waste was covered by at least two feet of soil at the surface. In some cases, waste was visible in the sideslopes of the disposal area.

Waste material observed in the test pits appeared in discontinuous lenses of waste mixed with soil, with soil comprising from 30 to 70 percent of the waste deposits. There was no apparent trend in orientation of these lenses, although the largest concentration of waste materials appeared to be in the western end of the disposal area, in the vicinity of test pit TP3.

CONCLUSIONS

Based on the findings of this investigation, buried waste materials are not limited to inert materials as defined by Arizona Revised Statutes 49-701.16. Although soil or groundwater contamination is not suspected based on visible observation of the test pits, there is the potential that containers of regulated materials (such as the waste oil tank and bowser, which were removed) may be buried in the area.



The distribution of waste materials is not consistent and the waste deposits generally include a significant portion of soil. However, it appears that the largest concentration of waste materials is in the western end of the disposal area.



TABLE

Table 1. Test Pit Locations and Depths, Depth of Waste and Nature of Waste

TEST PIT NUMBER	TEST PIT LOCATION	DEPTH INTERVAL OF WASTE/DEBRIS	NATURE OF WASTE/DEBRIS	COMMENTS
TP1	Starting northwest of suspected area, extending southeast to approximate center of suspected area.	Maximum thickness between 2-6 feet bgs, at 160 feet south of the edge of slope near center of test pit. Minor amount at edge of slope.	Asphalt, concrete, palm fronds, plastic sheeting	Maximum depth of test pit 21 feet
TP2	Starting south of suspected area, extending north into suspected area.	Maximum thickness between 2-4 feet bgs, at approximate edge of slope, thinning toward center of suspected area.	Concrete, metal cable, rocks	Maximum depth of test pit 12 feet
TP3	Starting south of suspected area, extending north into suspected area.	Maximum thickness between 2.5-7 feet bgs, at approximate center of test pit.	Metal pipe, wood, fiberglass insulation, 2 tires, propane tank, 2 empty 55-gallon drums labeled silicone sealant, plastic sheeting, waste oil tank, oil bowser	Maximum depth of test pit 18 feet
TP4	Starting northwest of suspected area, extending southeast into suspected area.	Maximum thickness between 1-3 feet bgs, at approximate edge of slope.	Wood, plastic sheeting	Maximum depth of test pit 7 feet
TP5	Starting northwest of suspected area, extending southeast into suspected area.	Limited amount, maximum thickness between 2-4 feet bgs, at approximate edge of slope.	Wood, plastic sheeting	Maximum depth of test pit 8 feet
TP6	Starting and ending in northwest portion of suspected area.	No waste or debris encountered	No waste or debris encountered	Maximum depth of test pit 14 feet
TP7	Starting south of suspected	Maximum thickness between 3-8 feet	Concrete, rebar, scrap	Maximum

TEST PIT NUMBER	TEST PIT LOCATION	DEPTH INTERVAL OF WASTE/DEBRIS	NATURE OF WASTE/DEBRIS	COMMENTS
	area, extending north to north portion of suspected area.	bgs, at 10 feet north of the edge of slope.	metal, drums, metal pipe, asphalt, palm fronds, 3 boiler tanks	depth of test pit 14 feet
TP8	Starting south of suspected area, extending north into center of eastern portion of suspected area.	Maximum thickness between 4-8 feet bgs, from break in slope to approximately 35 feet north of slope, thinning to north.	Concrete, asphalt, shingles, metal pipe	Maximum depth of test pit 12 feet
TP9	Starting south of suspected area, extending north into center of eastern portion of suspected area.	Maximum thickness between 2-9 feet bgs, at approximately 30 feet north of slope.	Concrete, scrap metal, burned material, metal pipe	Maximum depth of test pit 12 feet
TP10	Starting at northeast edge of slope (near gas line), extending southwest north into center of eastern portion of suspected area.	Maximum thickness between 4-8 feet bgs, thinning to south.	Asphalt, brick, clay pipe	Maximum depth of test pit 13.5 feet
TP11	Starting at northeast edge of slope (near gas line), extending southwest north into center of eastern portion of suspected area.	Maximum thickness between 4-8 feet bgs, at south end of test pit. Asphalt present at northern end of test pit.	Asphalt, concrete, cable, metal pipe	Maximum depth of test pit 14.5 feet
TP12	East side of gas line, extending toward runway	Maximum thickness from ground surface to 6 feet bgs, thinning rapidly to east	Asphalt, concrete, rocks	Maximum depth of test pit 10 feet

EXPLORATION TRENCH LOCATION MAP

N 79000

N 78000

E 57000

N 77000

E 56000



CK BY		DESCRIPTION
REV.	DATE	
▲	▲	
▲	▲	
▲	▲	
▲	▲	
SHEET TITLE EXPLORATION TRENCH LOCATION		
PROJECT TITLE CITY OF PHOENIX, ARIZONA PHOENIX GOODYEAR AIRPORT		
CLIENT CITY OF PHOENIX AVIATION DEPARTMENT PLANNING AND DEVELOPMENT		
		
CADD FILE: 970108A DATE: 06/04/98 SCALE: AS SHOWN DRAWING NO. 1 of 1		
SCS ENGINEERS STEARNS, CONRAD AND SCHMIDT CONSULTING ENGINEERS 2702 N 44TH ST SUITE 1058 PHOENIX, AZ 85008 PH. (602) 840-2596 FAX (602) 224-0572 <small>OWNER: CITY OF PHOENIX PROJECT: PHOENIX GOODYEAR AIRPORT DRAWN BY: JCB CHECKED BY: SCS DATE: 05/20/98</small>		

2 Foot Contour Interval

LEGEND

	TREE		RUNWAY END INDICATOR LIGHT
	PALM		UTILITY POLE W/SIGHT LIGHT
	SIGN		GUIDANCE SIGN
	HORIZ. & VERT. CONTROL		UTILITY POLE
	STORM DRAIN MANHOLE		WALL MOUNTED LIGHT
	CATCH BASIN		VISUAL APPROACH SLOPE INDICATOR
	CATCH BASIN W/APRON		UTILITY TRANSFORMER
	SEWER MANHOLE		PARKING LOT LIGHT
	CLEANOUT		TELEPHONE HANDHOLE
	SAND-OIL TRAP		TELEPHONE BOOTH
	FLOOR DRAIN		TELEPHONE PEDESTAL
	TRENCH DRAIN		UNDER GROUND FUEL STORAGE TANK
	FIRE HYDRANT		ABOVE GROUND FUEL STORAGE TANK
	WATER VALVE		COMPRESSED AIR & FUEL PIT
	WATER METER		GAS VALVE
	ELECTRIC HANDHOLE		EXTRACTION WELL
	FAA LIGHT		INJECTION WELL
	RUNWAY LIGHT		MONITORING WELL
	TAXIWAY LIGHT		OBSERVATION WELL
	INSET TAXIWAY LIGHT		VALVE VAULT
	DIRT ROAD		BURIED CABLE MARKER