M E M O R A N D U M

TO: File

FROM: Edwin Akujobi, ES Supervisor,
Remediation Services Division Group 1

SUBJECT: DEQ's Confirmatory Sampling and Sample Results
Than Harcros **AI # 1275**
(aka: Thompson Hayward site; 7700 Earhart Boulevard Facility)
7700 Earhart Boulevard, New Orleans, LA, Orleans Parish

DATE: **October 11, 2007**

On June 21, 2007, the LDEQ/RSD mobilized at the former Thompson Hayward site to sample the facility. The purpose of the sampling event was to evaluate remedial activities that occurred in 1989 and 2007. LDEQ's sampling team included Edwin Akujobi, Todd Thibodeaux and Erin Folse. In addition to the sampling team, LDEQ's coring contractor JESCO Environmental & Geotechnical Services was present. JESCO helped with soil boring activities and provided a professional geologist to catalogue and classify the geology of the site. SHAW Environmental, representing T H Agriculture, was also onsite to observe the sampling event and was ready to collect split samples if needed.

A total of eleven soil samples were collected from ten (10) soil borings. The borings, which were installed by utilizing the direct push technology (DPT), penetrated the fill material in both the 1989 and 2007 excavation areas and retrieved soil samples from native soil. Samples were collected for pesticides, herbicides, metals and Volatile organic Contaminants (VOCs). All samples were collected in accordance with RECAP investigation requirements. In addition, the volatile organic samples were collected as specified by the EPA SW-846 Method 5035. The herbicide and pesticide samples were submitted to Southern Petroleum Labs, Inc. (SPL) for analysis and the metal and VOC samples were submitted to DEQ Lab Services for analysis.

The analytical results obtained from the sampling event were sent to TLI Solutions in Golden Colorado for validation. The validated results were evaluated and reduced in the form presented in the tables below. Table 4 shows the remaining levels of contamination at the site and their corresponding Remedial Action Standards (RALs) or calculated RECAP standards. As shown in

Table 4, the confirmatory sampling results show that all detected constituents are below their corresponding remedial standards.

TABLE 1

FORMER THOMPSON HAYWARD SITE
CONFIRMATORY SAMPLING CONDUCTED JUNE 21, 2007

Sample # 26506210701	Environmental Sample/Grab (SB-1)
Date/Time:	06-21-2007/6:02 p.m.
Matrix/Type:	Soil
Location/Rationale:	The sample was collected from the former Perchloroethylene (Tetrachloroethene) spill and herbicides formulation area. This area is located just northeast of the intersection of Pine and Colapissa Streets. It was collected from a depth interval of 10' to 12' bgs. Sample was collected to determine the effectiveness of the 2007 remediation activity in the section of site designated as Area II.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210702	Environmental Sample/Grab (SB-2)
Date/Time:	06-21-2007/11:21 a.m.
Matrix:	Soil
Location/Rationale:	Sample was collected along the former drain line located south of the former warehouse. It was collected from a depth of 4 to 6 feet. Sample collected to assess the effectiveness of the 2007 remediation activity in Area III.
Parameter:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210703	Environmental Sample/Grab (SB-3)
Date/Time:	06-21-2007/11:51 a.m.
Matrix:	Soil
Location/Rationale:	Sample collected west of soil Boring #2, between the former warehouse and Colapissa Street. The sample was collected from a depth of 7 to 9 feet and to evaluate the effectiveness of the original 1989/1990 remediation activity.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210704	Environmental Sample/Grab (SB-4)
Date/Time:	06-21-2007/1:12 p.m.
Matrix:	Soil
Location/Rationale:	Sample was collected from the southern portion of Area I. This area is located west of the former warehouse, just north of the intersection of Colapissa and Lowerline Streets. Sample was collected from a depth of 8 to 10 feet and to evaluate the effectiveness of the 2007 remediation activity in Area I.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210705	Environmental Sample/Grab (SB-5)
Date/Time:	06-21-2007/1:45 p.m.
Matrix:	Soil
Location/Rationale:	This sample was collected from a section of the facility located northeast of the intersection of Colapissa and Burdette Streets. This was the general location of the former pesticide mixing area. It was collected from a depth of 8-12 feet to assess the effectiveness of the 1989/1990 remediation activity.
Parameter:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.

TABLE 1 – Contd.

FORMER THOMPSON HAYWARD SITE
CONFIRMATORY SAMPLING CONDUCTED JUNE 21, 2007

Sample # 26506210706	Environmental Sample/Grab (SB-5)
Date/Time:	06-21-2007/1:39 p.m.
Matrix/Type:	Soil
Location/Rationale:	The sample is a duplicate of Sample # 26506210705.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210707	Environmental Sample/Grab (SB-6)
Date/Time:	06-21-2007/5:07 p.m.
Matrix:	Soil
Location/Rationale:	Sample was collected from Area IV, which is a strip land located east of Burdette Street. It was collected from a depth of 6 to 8 feet. It was collected to assess the effectiveness of the 2007 remediation activity in Area IV.
Parameter:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210708	Environmental Sample/Grab (SB-7)
Date/Time:	06-21-2007/5:24 p.m.
Matrix:	Soil
Location/Rationale:	Sample collected in the northern portion of Area I, in the general area of the buried USTs and sumps. The sample was collected from a depth of 6 to 8 feet to evaluate the effectiveness of the 2007 remediation activity in Area I.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210709 & 10	Environmental Samples/Grabs (SB-8) & (SB-9)
Date/Time:	06-21-2007/2:56 p.m. & 3:20 p.m.
Matrix:	Soil
Location/Rationale:	These two samples were collected west (10'-12' bgs) and north (4'-8') of the former warehouse, respectively. Both samples weres collected from to evaluate the effectiveness of the original 1989/1990 remediation activity.
Parameters:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.
Sample # 26506210711	Environmental Sample/Grab (SB-10)
Date/Time:	06-21-2007/4:10 p.m.
Matrix:	Soil
Location/Rationale:	This sample was collected from under the foundation of the former warehouse and was used to determine whether site activities impacted the soil located beneath the former warehouse. It was collected from a depth of 4 to 8 feet below ground surface (bgs).
Parameter:	TCL-VOC, Pesticides, Herbicides, Arsenic, Beryllium and Chromium.

See the accompanying aerial photograph/chart for actual locations of soil borings

TABLE 2

CONFIRMATORY SAMPLES FOR THE THOMPSON HAYWARD SITE
7700 EARHART BLVD. NEW ORLEANS, LOUISIANA
JUNE 21, 2007

A SELECTION OF DETECTED CONSTITUENTS IN THE SUBSURFACE SOIL SAMPLES

PESTICIDES (Units: PPM)

Contaminant	SB-1 (10-12')	SB-2 (4-6')	SB-3 (7-9')	SB-4 (8-10')	SB-5A (8-12')	SB-5B (8-12')	SB-6 (6-8')	SB-7 (6-8')	SB-8 (10-12')	SB-9 (4-8')	SB-10 (4-8')
4,4'-DDD	0.072	<0.0017	0.0092	<0.0085	0.028	<0.0017	<0.0017	16.0	4.3	0.031	<0.0017
4,4'-DDT	0.074	<0.0017	<0.0017	<0.0085	<0.0017	0.0095	0.021	<0.170	<0.170	0.014	<0.0017
Aldrin	<0.0085	<0.0017	<0.0017	<0.0085	<0.0017	<0.0017	<0.0017	1.5	<0.170	0.013	<0.0017
Alpha-BHC	<0.0085	<0.0017	<0.0017	<0.0085	<0.0017	<0.0017	<0.0017	<0.170	<0.170	0.0031	<0.0017
Chlordane	<0.033	<0.0067	<0.0067	<0.033	<0.0067	<0.0067	<0.0067	<0.670	<0.670	<0.0067	<0.0067
Dieldrin	<0.0085	<0.0017	0.015	0.023	0.006	0.0051	<0.0017	1.5	0.390	0.0085	<0.0017
Endrin	<0.0085	<0.0017	0.025	<0.0085	<0.0017	<0.0017	<0.0017	1.3	<0.170	0.0052	<0.0017
Gamma-BHC	<0.0085	<0.0017	<0.0017	<0.0085	<0.0017	<0.0017	<0.0017	<0.170	<0.170	0.0022	<0.0017
Heptachlor	<0.0085	<0.0017	<0.0017	<0.0085	<0.0017	<0.0017	<0.0017	<0.170	<0.170	<0.0017	<0.0017
Toxaphene	<0.850	<0.170	<0.170	<0.850	<0.170	<0.170	<0.170	<17.0	<17.0	<0.170	<0.170
4,4'-DDE	0.160	<0.0017	0.0073	0.040	0.0033	0.0041	0.0054	1.1	0.500	0.019	<0.0017
Heptachlor Epoxide	<0.0085	<0.0017	0.0032	<0.0085	<0.0017	<0.0017	0.0043	0.210	<0.170	<0.0017	<0.0017
Alpha-Chlordane	<0.0085	<0.0017	0.0056		<0.0017	<0.0017	<0.0017	0.790	<0.170	<0.0017	<0.0017
Beta-BHC	<0.0085	0.0078	0.0046	0.0150	<0.0017	<0.0017	0.0120	1.2	<0.170	0.013	<0.0017
Delta-BHC	<0.0085	<0.0017	<0.0017		<0.0017	<0.0017	<0.0017	1.6	<0.170	<0.0017	<0.0017
Endosulfan II	0.044	<0.0017	<0.0017	0.013	<0.0017	<0.0017	<0.0017	<0.170	<0.170	0.0046	<0.0017
Endosulfan sulfate	<0.0085	<0.0017	<0.0017		<0.0017	<0.0017	<0.0017	0.290	<0.170	<0.0017	<0.0017
Endrin Aldehyde	0.047	0.0046	<0.0017	0.044	<0.0017	<0.0017	<0.0017	1.2	0.530	<0.0017	<0.0017
Endrin Ketone	<0.0085	<0.0017	0.0070	0.012	<0.0017	<0.0017	<0.0017	<0.170	<0.170	<0.0017	<0.0017
Gamma-Chlordane	0.130	<0.0017	0.0085	0.055	0.013	0.010	0.0095	1.5	1.1	0.021	<0.0017
Chlorinated Herbicides (2,4,5-T; 2,4,5-TP; 2,4-D; Dicamba; 2,4-DB; Dichloroprop & Dinoseb)	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL	BDL

* **Subsurface MO-1 RECAP Standard (Soil Protective of Groundwater)**

Shaded values represent sample concentrations that exceed their respective RAL/RECAP screening levels.

TABLE 3

CONFIRMATORY SAMPLES FOR THE THOMPSON HAYWARD SITE
7700 EARHART BLVD. NEW ORLEANS, LOUISIANA
JUNE 21, 2007

A SELECTION OF DETECTED CONSTITUENTS IN THE SUBSURFACE SOIL SAMPLES

METALS & VOLATILE ORGANIC CONTAMINANTS (Units: PPM)

Contaminant	SB-1 (10-12')	SB-2 (4-6')	SB-3 (7-9')	SB-4 (8-10')	SB-5A (8-12')	SB-5B (8-12')	SB-6 (6-8')	SB-7 (6-8')	SB-8 (10-12')	SB-9 (4-8')	SB-10 (4-8')
Arsenic	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Beryllium	<1.0	1.0	1.2	<1.0	1.1	1.1	<1.0	1.0	1.5	<1.0	1.3
Chromium	17.6	24.0	26.5	18.1	26.7	25.7	20.7	24.0	28.4	24.0	28.9
1,1-Dichloroethane	<0.200	<0.010	<0.010	<0.025	<0.010	<0.020	<0.00898	<0.200	0.311	<0.010	<0.010
1,2,4-Trichlorobenzene	<0.200	<0.010	<0.010	<0.025	<0.010	<0.020	<0.00898	0.205	0.255	<0.010	<0.010
1,2,4-Trimethylbenzene	<0.200	<0.010	<0.010	0.031	<0.010	0.684	<0.00898	21.70	1.590	<0.010	<0.010
1,2-Dichlorobenzene	<0.200	<0.010	<0.010	<0.025	<0.010	0.0232	0.0102	<0.200	0.661	<0.010	<0.010
1,3,5-Trimethylbenzene	<0.200	<0.010	<0.010	<0.025	<0.010	0.0676	<0.00898	6.60	0.476	<0.010	<0.010
1,3-Dichlorobenzene	<0.200	<0.010	<0.010	0.039	<0.010	0.0665	<0.00898	0.324	0.050	<0.010	<0.010
1,4-Dichlorobenzene	<0.200	<0.010	<0.010	0.0383	<0.010	0.0645	0.034	0.315	0.949	<0.010	<0.010
Benzene	<0.200	<0.010	<0.010	0.069	0.0113	0.0699	<0.00898	<0.200	0.294	<0.010	<0.010
Chlorobenzene	<0.200	<0.010	<0.010	0.242	0.0802	0.389	0.0441	0.380	2.040	<0.010	<0.010
Cis-1,2-Dichloroethene	51.0	0.0276	<0.010	<0.025	<0.010	<0.020	<0.00898	<0.200	<0.050	<0.010	<0.010
Ethylbenzene	0.294	<0.010	<0.010	<0.025	0.040	1.070	<0.00898	2.980	0.696	<0.010	<0.010
Isopropylbenzene	<0.200	<0.010	<0.010	0.0669	0.028	0.649	<0.00898	1.020	0.113	<0.010	<0.010
Naphthalene	<0.200	<0.010	<0.010	<0.025	<0.010	2.260	<0.00898	21.40	1.360	<0.010	<0.010
Xylene (mixed)	1.949	<0.010	<0.010	<0.025	<0.010	0.0538	<0.00898	31.20	5.4	<0.010	<0.010
p-Isopropyltoluene	<0.200	<0.010	<0.010	<0.025	<0.010	0.032	<0.00898	0.550	0.142	<0.010	<0.010
Propylbenzene	<0.200	<0.010	<0.010	0.159	0.050	1.360	<0.00898	2.030	0.159	<0.010	<0.010
Toluene	<0.200	<0.010	<0.010	<0.025	<0.010	<0.020	<0.00898	<0.200	0.0559	<0.010	<0.010
Tetrachloroethene (PCE)	151.0	0.050	<0.010	0.052	<0.010	<0.020	<0.00898	<0.200	<0.050	<0.010	<0.010
Trichloroethylene (TCE)	0.564	<0.010	<0.010	<0.025	<0.010	<0.020	<0.00898	<0.200	<0.050	<0.010	<0.010

* **Subsurface MO-1 RECAP Standard (Soilsat/Soil Protective of Groundwater – nearest down-gradient water body is the Washington Street Canal)**
Shaded values represent sample concentrations that exceed their respective RAL/RECAP screening levels.

CHART SHOWING SAMPLE BORING LOCATIONS

LDEQ's Confirmatory Sampling Locations – June 2007

Date: 9/25/2007
Number: 200701722
Projection: UTM Zone 15, NAD 83
Source: 2007 Teleatlas Streets and Water; USGS High-Res Aerial Photography (2002)

N W E S

0 50 100 200 Feet

DEQ GIS CENTER

Sample Location

LDEQ Disclaimer:
The Louisiana Department of Environmental Quality (LDEQ) has made every reasonable effort to ensure quality and accuracy in producing this map or data set. Nevertheless, the user should be aware that the information on which it is based may have come from any of a variety of sources, which are of varying degrees of map accuracy. Therefore, LDEQ cannot guarantee the accuracy of this map or data set, and does not accept any responsibility for the consequences of its use.

TABLE 4
COMPARISON OF 95%UCL/MAXIMUM REMAINING CONCENTRATION TO REMEDIAL ACTION STANDARDS/RECAP STANDARDS

Contaminant	Results	Sample Location	RECAP/Clean-up Standard	Standard Based on
4,4'-DDD	16	SB-7	1872.95	RAL
4,4'-DDT	0.074	SB-1	1872.95	RAL
Aldrin	1.5	SB-7	87.74	RAL
Alpha-BHC	0.0031	SB-9	324.96	RAL
Chlordane	<0.67	SB-7	1800	RAL
Dieldrin	1.5	SB-7	127.95	RAL
Endrin	1.3	SB-7	877.4	RAL
Gamma-BHC	0.022	SB-9	877.4	RAL
Heptachlor	<0.17	SB-7	454.95	RAL
Toxaphene	<0.85	SB-4	1861.16	RAL
4,4 DDE	1.1	SB-7	3	SOILGW2ndw*DF 2
Heptachlor Epoxide	0.21	SB-7	880	SOILGW3ndw*DF3
Alpha-Chlordane	0.79	SB-7	1800	chlordane as surrogate
Beta-BHC	0.6	SB-7	0.75	SOILGW3ndw*DF3
Delta-BHC	1.6	SB-7	877	gamma-BHC as surrogate
Endosulfan II	0.044	SB-1	59	endosulfan as surrogate
Endosulfan Sulfate	0.29	SB-7	59	endosulfan as surrogate
Endrin Aldehyde	1.2	SB-7	880	endrin as surrogate
Endrin Keytone	0.012	SB-4	880	endrin as surrogate
Gamma-Chlordane	1.5	SB-7	1800	chlordane as surrogate
Arsenic	<5.0	all boring locations	100	SOILGW3ndw (leachability)
Beryllium	1.5	SB-8	124.68	RAL
Chromium	28.9	SB-10	11599.58	RAL
1,1-Dichloroethane	0.311	SB-8	2300	Soilsat
1,2,4-Trichlorobenzene	0.255	SB-8	17000	SOILGW3ndw*DF3
1,2,4-Trimethylbenzene	21.7	SB-7	660	SOILGW3ndw*DF3
1,2-Dichlorobenzene	0.661	SB-8	380	Soilsat
1,3,5-Trimethylbenzene	6.6	SB-7	440	SOILGW3ndw*DF3
1,3-Dichlorobenzene	0.324	SB-7	1300	Soilsat
1,4-Dichlorobenzene	0.949	SB-8	2500	SOILGW3ndw*DF3
Benzene	0.294	SB-8	57	SOILGW3ndw*DF3
Chlorobenzene	2	SB-8	700	Soilsat
Cis-1,2-Dichloroethene	51	SB-1	1200	Soilsat
Ethylbenzene	2.98	SB-7	230	Soilsat
Isopropylbenzene	1.02	SB-7	310	Soilsat

Naphthalene	**21.4**	**SB-7**	**14000**	**SOILGW3ndw*DF3**
Xylene	**31**	**SB-7**	**150**	**Soilsat**
p-Isopropyltoluene	**0.55**	**SB-7**	**310**	**Soilsat**
Propylbenzene	**2**	**SB-7**	**146**	**Soilsat**
Toluene	**0.056**	**SB-8**	**520**	**Soilsat**
Tetrachloroethene (PCE)	**151**	**SB-1**	**29200**	**RAL**
Trichloroethylene (TCE)	**0.564**	**SB-1**	**132**	**SOILGW3ndw*DF3**

All units are mg/kg
All AOIC are max detected concentrations unless noted with "<", indicating max detection limit, except Beta-BHC, which is based on the 95% UCL calculated using ProUCL
DF2 = 1.5 based on Sd <5 feet and distance to POE 1-50 ft
DF3 = 440 based on Sd <5 feet and distance to POE >2000 ft