BIO RESEARCH LABORATORIES, INC.
2897 152nd Avenue N.E. / Redmond, WA 98052-5514
(425) 869-4224 / FAX: (425) 869-4231
Web Site: www.bioresearch.com / E-mail: info@bioresearch.com

March 20, 2006

Jennifer B. Garner
URS Corporation
1501 4th Avenue, Suite 1400
Seattle, WA 98101-1616

Dear Ms. Garner:

Enclosed is one original and one copy of the completed study per your request .

BRL #	Client Code
60125	B-6-S
60126	B-7-M
60127	B-7-D
60128	B-16-M

The bioassay on the above referenced samples was completed in accordance with WAC 173-303, and DOE 80-12, revised May, 1999. This study also meets the requirements for the Products Safety Commission for an Acute Toxicity.

Bio-Research Laboratories performs sample studies by using the EPA Good Laboratory Practices set forth in the 40 CFR (163.80-1). Our laboratory is recognized as an *Accredited Laboratory* by the State of Washington Department of Ecology. We are also licensed by the United States Department of Agriculture (registration 91 R 043).

Bio-Research is committed to providing you with excellent laboratory services. Please call if you have any questions regarding your test results. We thank you for the opportunity to have been of service to you.

Sincerely,

John J. Majnarich

John J. Majnarich, Ph.D.
President & Scientific Director

JJM:src
Enclosure

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LABORATORY REPORT

ACUTE ORAL RAT TOXICITY TEST

FOR

URS Corporation

Performed by:

BIO RESEARCH LABORATORIES, INC.

Laboratory Ref. Number: 60125-60128
Client Sample Code: B-6-S, B-7-M, B-7-D, B-16-M

Study Director _____ 3-20-06
Warren Ladiges, DVM Date

Laboratory Manager _____ 3-20-06
John J. Majnarich, Ph.D. Date

March 20, 2006

TABLE OF CONTENTS

I. INTRODUCTION

Bio Research Laboratories, Inc. (BRL) conducted an acute oral rat toxicity test on the samples presented by URS Corporation on February 17, 2006. The purpose of this test was to determine the relative biological risk of potentially hazardous waste to humans and animals.

According to the "Washington State Hazardous Waste Regulation" (WAC 173-303), hazardous waste is classified as dangerous waste or extremely hazardous waste. The Department of Ecology of Washington State uses acute oral rat toxicity tests whenever a generator has not or cannot adequately characterize the toxicity of waste. The toxicity test results determine whether a waste is classified as dangerous waste or extremely hazardous waste.

According to the established safety rules of BRL every sample is suspected to be a hazardous waste; therefore, handled with extreme care.

II. METHOD AND MATERIALS

BRL performed an acute oral rat toxicity test by following the procedures and methods explained in Biological Testing Methods DOE 80-12.

A. Apparatus:

BRL's facilities include an area for holding rats. During testing the rats were shielded from any disturbances, and the facility was well ventilated and free of fumes. There was a 12-hour light and 12-hour dark photoperiod. The rat room temperature was maintained at 23°C ± 1°C and recorded daily.

B. Test organisms:

Twenty five male and twenty five female albino rats weighing 200-290 grams were used. The rats were placed in five groups of ten. The rats were then tagged and housed inside individual stainless steel cages (7"x7"x15"). The rats were held in quarantine for seven days before starting the test. The rats were observed for signs of illness during the quarantine period in accordance with the "Animal Illness Evaluation" standard operating procedures (SOP). Rats were purchased from Simonsen Laboratories Inc., in Gilroy, CA.

Food was withheld from the rats the night prior to sample material dosing; otherwise, the rats were fed and watered ad libitum.

C. **Dosing:**

"Dose" is defined as the amount of test substances administered. This is expressed as weight of the test substance in grams or milligrams per unit weight of the test animal. Forty rats were dosed by gavage with 5,000 mg of the sample material per 1000 grams of body weight. Also, a group of ten rats were dosed with DI water by gavage as the control group. All of the animals received the appropriate concentration and approximate volume of the dosing solution. The volume did not exceed 5 mL per rat.

D. **Test Duration:**

The test began on March 1, 2006 and ended on March 15, 2005. The rats were observed for 14 days for mortality and clinical pharmacological or toxicological signs.

E. **Sample Test Substance:**

An evaluation of the integrity of the test samples was made upon receipt as to packaging deficiency, proper weight of sample for testing, possible mishandling during shipping, or any other visible defects. Any deficiencies were noted and used in the final interpretation of the data.

Date of Delivery: February 17, 2006
Physical & Chemical Characteristics: Dk. gray granular powder
Client Reference Code: B-6-S, B-7-M, B-7-D, B-16-M
Vehicle: The test substance was administered in a single dose by gavage. Water was given to the control group.

F. **Observation of Animals:**

Observations were made for any toxicity effect immediately after dosing at one and four hours and daily thereafter for a period of 14 days. From cageside the rats were carefully observed daily for the following:

1. The skin and fur.
2. Eyes and mucous membranes.
3. Respiratory system.
4. Circulatory system.
5. Autonomic and central nervous system.
6. Somatomotor activity and behavior pattern.
7. Tumor, convulsions, salivation, diarrhea, lethargy, and coma.

The individual weight of the animals was determined immediately before the test substance was administered, weekly, and at death. At termination of the test all of the surviving rats were weighed and sacrificed.

G. **Gross Necropsy:**

Gross necropsy was performed on the rats at the end of the study. The gross necropsy included examinations of:

1. The external surface of the body.
2. The thoracic and abdominal cavities and their contents.

III. RESULTS

A. **Body Weight:**

The mean weekly body weight for the rats dosed 0 mg/kg (control), and 5,000mg/kg are shown in the following table:

Table I: *Mean Weekly Body Weight*

Sample/Dosage	Mean Body Wt. (grams)			
	day 0 (3/01/06)	day 7 (3/08/06)	day 14 (3/15/06)	14 Day Wt. Gain (g/rat)
Control, male (5) 0 mg/kg	257.4	295.6	329.4	72
Control, female (5) 0 mg/kg	203.8	214.4	230.6	26.8
Sample #60125, male (5) 5,000mg/kg	276.2	308	342.2	66
Sample #60125, female (4) 5,000mg/kg	193.2	198.2	209.5	16.3
Sample #60126, male (5) 5,000mg/kg	268.4	302.8	336	67.6
Sample #60126, female (5) 5,000mg/kg	204.8	215.6	226.8	22
Sample #60127, male (5) 5,000mg/kg	262.4	287.8	317.2	54.8
Sample #60127, female (5) 5,000mg/kg	195.6	208.4	220.6	25
Sample #60128, male (5) 5,000mg/kg	247.8	300	328.2	80.4
Sample #60128, female (5) 5,000mg/kg	195	211.4	223.4	28.4

Number in parentheses ( ) is the number of animals results are based on.

III. RESULTS (Cont.)

B. **Cageside Observation:**
All of the rats appeared healthy and ate normally. No abnormal behavior was observed.

C. **Mortality:**
There were no mortalities.

D. **Gross Necropsy:**
Specifically the organs examined macroscopically were the liver, spleen, kidneys, adrenals, bladder, ovaries (females), testes (males), heart, lungs, and thymus gland. None of the organs showed any signs of toxicity.

Table 2. Raw Data Sheet - Sample #60125-60128 Controls (0 mg/kg)

DATA SHEET FOR ACUTE ORAL RAT TOXICITY TEST

Toxicant: DI Water Bio Research Laboratories Sample# 60125-28

Industry: URS Corporation Analyst: JJM, WL, LP

Collector: BRL Beginning Time/Date: 9:00am, 3/01/06

Date Sample Collected: 2/20/06 Ending Time/Date: 9:00am 3/15/06

Test Organism: Sprague Dawley rats Dosage Level: 0mg/kg

RAT #	Weight (gm)			Dose	OBSERVATIONS AND DATES														COMMENTS
	0	7	14		4hr	3/2	3/3	3/4	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14	3/15	Gross Necropsy
41M	279	317	351	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
42M	264	297	320	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
43M	255	286	316	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
44M	274	309	338	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
45M	215	269	322	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
46Fe	206	216	232	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
47Fe	198	206	221	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
48Fe	203	218	241	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
49Fe	207	209	226	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
50Fe	205	223	233	0mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
Initials	JJM, LP	LP	LP	JJM, WL	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	JJM, WL

* √ = no abnormal behavior

Table 3. Raw Data Sheet - Sample #60125 B-6-S (5000mg/kg)

DATA SHEET FOR ACUTE ORAL RAT TOXICITY TEST

Toxicant: B-6-S Bio Research Laboratories Sample# 60125

Industry: URS Corporation Analyst: JJM, WL, LP

Collector: URS Corporation Beginning Time/Date: 9:00am, 3/01/06

Date Sample Collected: August 2005 Ending Time/Date: 9:00am 3/15/06

Test Organism: Sprague Dawley rats Dosage Level: 5000mg/kg

RAT #	Weight (gm)			Dose	OBSERVATIONS AND DATES															COMMENTS
	0	7	14		4hr	3/2	3/3	3/4	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14	3/15	Gross Necropsy
1M	287	310	350	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
2M	275	309	345	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
3M	273	305	333	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
4M	270	308	341	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
5M	276	308	342	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
6Fe	186	193	198	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
7Fe	218			5000mg/kg	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	Normal Organs
8Fe	177	180	188	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
9Fe	213	227	241	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
10Fe	197	193	210	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
Initials	JJM, LP	LP	LP	JJM, WL	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	JJM, WL

* √ = no abnormal behavior, D=deceased

Table 4. Raw Data Sheet - Sample #60126 B-7-M (5000mg/kg

DATA SHEET FOR ACUTE ORAL RAT TOXICITY TEST

Toxicant: B-7-M Bio Research Laboratories Sample# 60126

Industry: URS Corporation Analyst: JJM, WL, LP

Collector: URS Corporation Beginning Time/Date: 9:00am, 3/01/06

Date Sample Collected: August 2005 Ending Time/Date: 9:00am 3/15/06

Test Organism: Sprague Dawley rats Dosage Level: 5000mg/kg

RAT #	Weight (gm)			Dose	OBSERVATIONS AND DATES														COMMENTS
	0	7	14		4hr	3/2	3/3	3/4	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14	3/15	Gross Necropsy
11M	264	303	337	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
12M	271	308	340	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
13M	272	314	352	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
14M	250	272	296	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
15M	285	317	355	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
16Fe	214	227	224	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
17Fe	198	204	238	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
18Fe	202	213	215	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
19Fe	212	225	237	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
20Fe	198	209	220	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
Initials	JJM, LP	LP	LP	JJM, WL	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	JJM, WL

* √ = no abnormal behavior

Table 5. Raw Data Sheet - Sample #60127 B-7-D (5000mg/kg)

DATA SHEET FOR ACUTE ORAL RAT TOXICITY TEST

Toxicant: B-7-D Bio Research Laboratories Sample# 60127

Industry: URS Corporation Analyst: JJM, WL, LP

Collector: URS Corporation Beginning Time/Date: 9:00am, 3/01/06

Date Sample Collected: August 2005 Ending Time/Date: 9:00am 3/15/06

Test Organism: Sprague Dawley rats Dosage Level: 5000mg/kg

RAT #	Weight (gm)			Dose	OBSERVATIONS AND DATES															COMMENTS
	0	7	14		4hr	3/2	3/3	3/4	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14	3/15	Gross Necropsy
21M	271	308	339	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
22M	261	289	308	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
23M	257	281	307	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
24M	264	297	325	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
25M	259	264	307	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
26Fe	192	202	213	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
27Fe	205	213	221	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
28Fe	196	205	217	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
29Fe	186	206	228	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
30Fe	199	216	224	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
Initials	JJM, LP	LP	LP	JJM, WL	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	JJM, WL

* √ = no abnormal behavior

Table 6. Raw Data Sheet - Sample #60128 B-16-M (5000mg/kg)

DATA SHEET FOR ACUTE ORAL RAT TOXICITY TEST

Toxicant: B-16-M Bio Research Laboratories Sample# 60128

Industry: URS Corporation Analyst: JJM, WL, LP

Collector: URS Corporation Beginning Time/Date: 9:00am, 3/01/06

Date Sample Collected: August 2005 Ending Time/Date: 9:00am 3/15/06

Test Organism: Sprague Dawley rats Dosage Level: 5000mg/kg

RAT #	Weight (gm)			Dose	OBSERVATIONS AND DATES															COMMENTS
	0	7	14		4hr	3/2	3/3	3/4	3/5	3/6	3/7	3/8	3/9	3/10	3/11	3/12	3/13	3/14	3/15	Gross Necropsy
31M	264	302	333	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
32M	278	323	349	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
33M	253	296	320	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
34M	220	288	314	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
35M	224	291	325	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
36Fe	180	226	243	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
37Fe	211	225	228	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
38Fe	198	203	213	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
39Fe	192	199	215	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
40Fe	194	204	218	5000mg/kg	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	Normal Organs
Initials	JJM, LP	LP	LP	JJM, WL	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	LP	JJM, WL

* √ = no abnormal behavior

IV. DISCUSSION AND CONCLUSIONS

The purpose of this acute oral toxicity test was to provide information on rat health hazards likely to arise from a single oral exposure. Data from an acute study serves as a basis for classification, labeling, and packaging. Also, data is evaluated to determine whether the median lethal dose (LD_{50}) was below or above the administered dose.

"LD_{50} oral (median lethal dose)" is a statistically derived single dose of a substance that can be expected to cause death in 50 percent of the animals when administered by the oral route. The LD_{50} value is expressed in terms of weight of the test substance (g, mg) per unit weight of the test animal (e.g., mg/kg).

BRL Sample #60125, B-6-S
In conclusion, with no mortalities associated with toxicity at the 5,000 mg/kg dose, this sample is not considered to be a dangerous compound. The average weight gain over the two week period was 72g for the control males versus 66g for the test males per rat. The control females gained a total of 26.8g versus the test females which gained a total of 16.3g per rat over the same two week period. The weight gain of the treated rats were comparable to the control animals treated with water vehicle only. At necropsy, gross observation of the organs was normal in all animals.

For sample #60125, one of the female rats died immediately after gavage. On necropsy some of the test material was found in the lungs. This caused the death of this animal.

BRL Sample #60126, B-7-M
In conclusion, with no mortalities associated with toxicity at the 5,000 mg/kg dose, this sample is not considered to be a dangerous compound. The average weight gain over the two week period was 72g for the control males versus 67.6g for the test males per rat. The control females gained a total of 26.8g versus the test females which gained a total of 22g per rat over the same two week period. The weight gain of the treated rats were comparable to the control animals treated with water vehicle only. At necropsy, gross observation of the organs was normal in all animals.

BRL Sample #60127, B-7-D
In conclusion, with no mortalities associated with toxicity at the 5,000 mg/kg dose, this sample is not considered to be a dangerous compound. The average weight gain over the two week period was 72g for the control males versus 54.8g for the test males per rat. The control females gained a total of 26.8g versus the test females which gained a total of 25g per rat over the same two week period. The weight gain of the treated rats were comparable to the control animals treated with water vehicle only. At necropsy, gross observation of the organs was normal in all animals.

IV. DISCUSSION AND CONCLUSIONS (Continued)

BRL Sample #60128, B-16-M

In conclusion, with no mortalities associated with toxicity at the 5,000 mg/kg dose, this sample is not considered to be a dangerous compound. The average weight gain over the two week period was 72g for the control males versus 80.4g for the test males per rat. The control females gained a total of 26.8g versus the test females which gained a total of 28.4g per rat over the same two week period. The weight gain of the treated rats were comparable to the control animals treated with water vehicle only. At necropsy, gross observation of the organs was normal in all animals.

In conclusion, with no mortalities at the 5000 mg/kg body weight, BRL Samples #60125, 60126, 60127, and 60128 are considered not to be toxic. These four samples have all passed the Washington State DOE 80-12 Part B, bioassay test for the designation of hazardous waste.

The rats were observed daily after administration of the test material at 5000 mg/kg body weight. There was only one mortality immediately after administration of the test material. This was due to the test material being aspirated into the lungs. There were no other mortalities. All of the rats gained weight during the two week observation period. None of the rats exhibited any abnormal signs of behavior. The appearance of the eyes and fur were normal.

On necropsy all of the animals had normal organs. The liver, spleen, adrenals, bladder, kidneys, heart, thymus, and lungs all were normal in appearance. The bladder and ovaries in the females were normal.

V. PROFESSIONAL STAFF

John J. Majnarich, Ph.D., President & Scientific Director

Warren C. Ladiges, DVM; Director of Veterinary Services

Lisa A. Pedigo, B.S., Laboratory Manager

URS Chain of Custody

URS Corporation
1501 4th Avenue, Suite 1400
Seattle, WA 98101-1616
206.438.2700

Contact: Jennifer B. Garner

Phone No.: (206) 438-2063

Installation ID: Maraloa Restoration Project

Job No.: 33757742

Site ID:

Zone ID:

Sampling Co.: URS

Airbill Co./Number: URS PM - Jim Flynn

Shipping Date: 2-20-06

Sample Number	Sample Collection Date (mm/dd/yy)	Sample Collection Time (24 Hr.)	Matrix Type	Sample Type	Number of Bottles per Analytical Method: Single-dose Rat Bioassay	Number of Bottles per Analytical Method: EQ Method 80-12	BRL #	Remarks
B-16-S	10-20-05	~~18:10~~ 10:35	SL	ES	X		60125	
B-7-M		9:30			X		60126	
B-7-D		10:00			X		60127	
B-16-M	10-21-05	10:10			X		60128	

Indicate Any Condition That Would Affect Sample Analysis

Indicate Samples Containing Quantities for MS/MSD Analysis

Preservation: A = HCL to pH < 2; B = HNO_3 to pH < 2; C = H_2SO_4 to pH < 2; D = NaOH to pH < 12; E = Other (specify)

	Date	Time		
Relinquished by Sampler: (Signature) Jennifer B Garner	2-20-06	9:20	Received by: (Signature) Sylvia R. Cooper	Laboratory Name: Bio Research Labs, Inc.
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Laboratory Contract No.:
Relinquished by: (Signature)	Date	Time	Received by Lab: (Signature)	Samples Disposed by: / Date / Time

Matrix Types: A - Air; PR - Product; SD - Sediment; SL - Soil; TI - Tissue WR - Water

Distribution: White = Accompanies Shipment; Canary = Lab Copy; Pink = Field Copy; Goldenrod = URS Sample Control Copy

Sample Types Types: ER - Equipment Rinsate; ES - Environmental Sample; FB - Field Blank; TB - Trip Blank

2-27-02