



P.O. Box 515429
Dallas, Texas 75075
Ph: (972) 669-3390
Fax: (469) 241-0896
Email: oseicorp@msn.com
Web: <http://www.osei.us>

SUMMARY

BIOREMEDIATION OF CHLORINATED HYDROCARBONS

Key Bank in Anchorage, Alaska was in possession of a contaminated property which contained dichloralbenze, low levels of BETX and a total TPH of 7,500. This test verified what had previously been hypothesized about OSEI. OSEI Corporation had predicted OSEI would bioremediate chlorinated hydrocarbons, as well as PCBS and various other toxic wastes.

The chlorinated hydrocarbons were reduced to undetectable levels and the TPH was reduced from 7,500 to 1,890 in less than 30 days. However, the lab ran out of test material, but the testing performed definitely shows the extent to which OSEI can biodegrade chlorinated hydrocarbons.

Steven Pedigo
Chairman



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

February 12, 1991

Mr. Steve Karcz
P.O. Box 190151
Anchorage, AK 99519

Dear Mr. Karcz:

This letter is to report the results of the test that was performed by Northern Testing Laboratories, Inc. on Sky Blue Chems Oil Eater II.

A sample of contaminated soil was provided to NTL on January 3, 1991. 100 grams of soil was measured to be approximately 62.5 mls in volume. On January 4 the soil was spiked with a 1ppm, 1,2 Dichlorobenzene spike. A dilution of 1:100 OSE II was made with the provided well water and OSE concentrate. This solution was then applied to the soil sample at a rate of 22 gallons per yard of soil and mixed well with the soil sample. A sample of soil was then extracted for an EPA 418.1 (TPH) and an EPA 8020 and a percent solid.

The 8020 was analyzed on day one and the 418.1 on day three. Because the 418.1 was not analyzed on day one, a second portion of the original provided sample (without a spike) was extracted and treated with the OSE II at above rate and analyzed for 418.1 only to provide an approximated day one baseline to compare with the next seventh day reading.

The sample was then covered with foil and held with a rubber band and left at room temperature (approx. 20 deg C.) to incubate.

The moisture content was visually determined and an amount of well water added to the soil at seven day intervals. The amount of well water to be added was determined by visually estimating the moisture content of the soil; water was added to increase the visible moisture but without leaving standing water.

Additional portions of the sample were extracted for 8020's and 418.1's on the following days: January 11:Day 8, January 18:Day 15, January 25:Day 22 and February 4:Day 32. For the second sample used to determine the 418.1 baseline a second portion of the sample was extracted and analyzed on January 11:Day 7.

SKYBLUE.DOC



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

February 12, 1991

The following results were found after analysis:

<u>Day</u>	<u>NTL ID#</u>	<u>418.1 ppm</u>	<u>8020 ppm</u> 1,2 DCB	1,3 DCB	1,4 DCB	Xyl.	Tol.
1	A107826	----	0.7	0.3	0.2	2.5	<0.1
3	A107826	7500	----	----	----	---	----
8	A107829	7310	2.1	<.02	<.1	2.2	<.05
15	A108082	6320	----	----	----	---	----
15	A108348	----	<0.2	<0.2	<0.2	1.3	<0.1
22	A108175	4035	<0.2	<0.2	<0.2	1.5	<0.1
32	A108299	1890	----	----	----	---	----

(For second 418.1 baseline sample)

1	A108042	11900	----
8	A108054	11600	----

The elevated level of 1,2 DCB on Day 8 was apparently due to an inability to homogeneously mix the concentrated spike throughout the sample. However all the other parameters evidenced a steady decrease in concentration.

The experiment procedure was terminated because of lack of remaining spike-treated soil. If further soil had been available the procedure would have continued until no amount of parameters for the TPH or 8020 remained.

Sincerely,

Donna Sherwood
Environmental Analyst

SKYBLUE.DOC



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems
P.O. Box 190151
Anchorage, AK 99519

Report Date: 01/23/91

Date Arrived: 01/03/91

Date Sampled : 01/03/91

Time Sampled: -

Collected By: SK

Attn: Steve Karcz

Flag Definitions

U = Below Detection Limit

DL Stated in Result

B = Below Regulatory Min.

H = Above Regulatory Max.

E = Below Detection Limit

Estimated Value

Our Lab #: A107826
Location/Project: -
Your Sample ID: Rogers & Babler (before)1
Sample Matrix: Soil
Comments: Revised Transmittal.

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids	%	86.9	01/14/91
EPA 418.1	Total Petroleum Hydrocarbons	mg/dry kg	7500	01/07/91
EPA 8020	Benzene	mg/dry kg	0.10 U	01/11/91
	Chlorobenzene	mg/dry kg	0.10 U	
	1,2-Dichlorobenzene	mg/dry kg	0.70	
	1,3-Dichlorobenzene	mg/dry kg	0.30	
	1,4-Dichlorobenzene	mg/dry kg	0.20 U	
	Ethylbenzene	mg/dry kg	0.10 U	
	Toluene	mg/dry kg	0.10 U	
	Xylenes	mg/dry kg	2.50	

Reported By: William E. Buchan
Anchorage Operations Manager



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems
P.O. Box 190151
Anchorage, AK 99519

Report Date: 01/23/91

Date Arrived: 01/03/91

Date Sampled: 01/03/91

Time Sampled: -

Collected By: SK

Attn: Steve Karcz

Flag Definitions

U = Below Detection Limit

DL Stated in Result

B = Below Regulatory Min.

H = Above Regulatory Max.

E = Below Detection Limit

Estimated Value

Our Lab #: A107829
Location/Project: -
Your Sample ID: Rogers & Babler (after)
Sample Matrix: Soil
Comments: Revised Transmittal.

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids	%	86.9	01/21/91
EPA 418.1	Total Petroleum Hydrocarbons	mg/dry kg	7310	01/12/91
EPA 8020	Benzene	mg/dry kg	0.05 U	01/18/91
	Chlorobenzene	mg/dry kg	0.05 U	
	1,2-Dichlorobenzene	mg/dry kg	2.10	
	1,3-Dichlorobenzene	mg/dry kg	0.02 U	
	1,4-Dichlorobenzene	mg/dry kg	0.10 U	
	Ethylbenzene	mg/dry kg	0.05 U	
	Toluene	mg/dry kg	0.05 U	
	Xylenes	mg/dry kg	2.20	

Reported By: William E. Buchan
Anchorage Operations Manager



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems

Report Date: 02/08/91

Date Arrived: 02/07/91

Date Sampled: 01/18/91

Time Sampled: -

Collected By: DS

Attn: Steve Karcz

Flag Definitions

U = Below Detection Limit

DL Stated in Result

B = Below Regulatory Min.

H = Above Regulatory Max.

E = Below Detection Limit

Estimated Value

Our Lab #: A108348
Location/Project: -
Your Sample ID: 14 Days/A108082
Sample Matrix: Soil
Comments:

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids	%	86.9	01/18/91
EPA 8020	Benzene	mg/dry kg	0.10 U	02/07/91
	Chlorobenzene	mg/dry kg	0.10 U	
	1,2-Dichlorobenzene	mg/dry kg	0.20 U	
	1,3-Dichlorobenzene	mg/dry kg	0.20 U	
	1,4-Dichlorobenzene	mg/dry kg	0.20 U	
	Ethylbenzene	mg/dry kg	0.10 U	
	Toluene	mg/dry kg	0.10 U	
	Xylenes	mg/dry kg	1.30	

Reported By: William E. Buchan
Anchorage Operations Manager



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems
13355 Noel Road, 5th Floor
1 Galleria Tower 503-5999
Dallas, TX 75240

Attn: -

Report Date: 02/01/91

Date Arrived: 01/18/91

Date Sampled: 01/18/91

Time Sampled: -

Collected By: DS

Our Lab #: A108082
Location/Project: -
Your Sample ID: 14 days
Sample Matrix: Soil
Comments:

Flag Definitions
U = Below Detection Limit
DL Stated in Result
B = Below Regulatory Min.
H = Above Regulatory Max.
E = Below Detection Limit
Estimated Value

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids	%	86.9	01/18/91
EPA 418.1	Total Petroleum Hydrocarbons	mg/dry kg	6320	01/18/91

Reported By: William E. Buchan
Anchorage Operations Manager



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems
13355 Noel Road, 5th Floor
1 Galleria Tower 503-5999
Dallas, TX 75240

Attn: Steve Karcz

Report Date: 02/12/91

Date Arrived: 01/25/91

Date Sampled: 01/25/91

Time Sampled: -

Collected By: SK

Our Lab #: A108175
Location/Project: -
Your Sample ID: 28 Days 4th Sample
Sample Matrix: Soil
Comments:

Flag Definitions
U = Below Detection Limit
DL Stated in Result
B = Below Regulatory Min.
H = Above Regulatory Max.
E = Below Detection Limit
Estimated Value

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids	%	86.9	01/25/91
EPA 418.1	Total Petroleum Hydrocarbons	mg/dry kg	4035	01/25/91
EPA 8020	Benzene	mg/dry kg	0.10 U	02/08/91
	Chlorobenzene	mg/dry kg	0.10 U	
	1,2-Dichlorobenzene	mg/dry kg	0.20 U	
	1,3-Dichlorobenzene	mg/dry kg	0.20 U	
	1,4-Dichlorobenzene	mg/dry kg	0.20 U	
	Ethylbenzene	mg/dry kg	0.10 U	
	Toluene	mg/dry kg	0.10 U	
	Xylenes	mg/dry kg	1.50	

Reported By: William E. Buchan
Anchorage Operations Manager



NORTHERN TESTING LABORATORIES, INC.

3330 INDUSTRIAL WAY
2505 FAIRBANKS STREET

ANCHORAGE, ALASKA 99701
FAIRBANKS, ALASKA 99503

907-456-3116 • FAX 456-3425
907-277-8378 • FAX 274-9645

Sky Blue Chems.

Report Date: 02/06/91

Date Arrived: 02/04/91

Date Sampled: 02/04/91

Time Sampled: -

Collected By: SK

Attn: Steve Karcz

Flag Definitions

U = Below Detection Limit

DL Stated in Result

B = Below Regulatory Min.

H = Above Regulatory Max.

E = Below Detection Limit

Estimated Value

Our Lab #: A108299

Location/Project: -

Your Sample ID: -

Sample Matrix: Soil

Comments:

Method	Parameter	Units	Result Flag	Date Analyzed
EPA 160.3	Solids		86.9	02/04/91
EPA 418.1	Total Petroleum Hydrocarbons	mg/dry kg	1890	02/04/91

Reported By: William E. Buchan
Anchorage Operations Manager



DEPARTMENT OF THE AIR FORCE
AIR FORCE BASE CONVERSION AGENCY

11 Sep 96

FROM: AFBCA/OL-H
6550 White Settlement Rd.
Ft. Worth, TX 76114

TO: Mr. George Lively
Oil Spill Eater International Corp. current address as of 10/96
5545 Harvest Hill, #1116 13127 Chandler Drive
Dallas, TX 75230 Dallas, TX 75243

Dear Mr. Lively

This letter gives you some background information on our circumstances and reports the results of our clean up pertaining to the petroleum hydrocarbon stained concrete floor.

During the transfer of the PCB Storage Facility to the Navy, a Texas Natural Resource Conservation Commission (TNRCC) representative found a petroleum hydrocarbon stain on the concrete floor. The stain was 4 ft x 6 ft, and hidden under a larger transformer. The TNRCC representative required a swipe testing be conducted to determine the levels of PCB contamination. The results of the swipe test detected high levels of PCB contamination that required mitigation before transfer.

We received bioremediation proposals of \$5,000.00 and higher from local environmental companies. However, we made an in-house effort to mitigate this stain to save funds. We used a denatured alcohol to mitigate the stain and then had it tested a second time. The test results came back and the PCB levels were almost three times higher at 120 ug/ft².

A member of the Navy gave us a half gallon of your product, Oil Spill Eater II, to try. We mixed the half gallon of Oil Spill Eater II with a gallon of water. I placed the application on the stain and kept it moist for two weeks. After two weeks, we tested the stain again for a third time. The levels of PCB contamination went from 120 ug/ft² to only 8.2 ug/ft². These levels are far below the limits set forth in CFR 40 Part 761.125(3)(b)(i) and in TNRCC's Chapter 335.551, Subchapter S.

We saved the tax payers over \$5,000.00. I will personally recommend your product to everyone I meet in the environmental field. All lab reports are attached.

Sincerely,

A handwritten signature in cursive script that reads "Elliot Smith".

Elliot Smith
Engineering Technician