### CHRONOLOGICAL ENTRY FORM FOR FOLDERS HOWCO Environmental Services FLD 152 764 767 92465-H006-001/H052 -330139 Permit Application Correspondence Page 2 Vol (3-b)

NO	DATED	RECVD	ТО	FROM	REFERENCE
42/99	7-22-99	7-23-99	S, TAM	L.LOCKETT	REVISED PARES TO PERMIT APPLICATION
43/99	10-27-99		C. Mebuike	A KERHART	FREP COMMENTS ON HOWCO ANALYTICAL DATA SUBMITTAL
44/99	10-27-99		R. CLARKE	A GERHART	FREP SWD COMMENTS ON HOWCO ANALNTICAL DATTA SUBMITTAL
					PERMIT APPLICATION COBRESPONDENCE
					CONTINUED IN FILE 3-C

### CHRONOLOGICAL ENTRY FORM FOR FOLDERS Howco Environmental Services: FLD 152 764 767 HO52-308139: Permit Correspondence Page 1 Vol (3-b)

NO	DATED	RECVD	ТО	FROM	REFERENCE
1/97	6-19-97		DE P	T. Hagan	Request for Department to review previously submitted
					document (SPCC and Contingency Plan) to meet the
					requirements of the new Used Oil Processor Permit
2/97	6-19-97	6-23-97	DEP	T. Hagan	Check (\$2,000) for Used Oil application \$ rocessing fee
3/97	7-22-97		T. Hagan	W. Crawford	First Notice of Deficiency (1ST NOD)
4/97	8-8-97		File	W. Crawprd	Meeting attendees - Discussion of 1st NOD
5/97	9-4-97	9-4-97	W. Crawlord	T. Hagun	Request for extension of time to respond to ISTNUD
6/97		9-25-97	W. Grawford	T. Hagan	Re-submittal of a new application
7/97	10-24-97		T. Hagan	W. Crawford	Second Notice of Deficiency (2ND NOD)
8/97	12-10-97		File	W. Crawford	Meeting attendees - Review potential response to ZNONOD
9198	1-27-98		File	W. Crawpid	Meeting atkndees - " " "
10/98	1-27-98		L. LeMaskis	S. Pelz	Solid Waste inspection report
11/98	•	4-29-98	R. Evans	T. Hagan	Re-submittal of a new application
12/98	5-13-98	5-15-98	R. Evans	T. Hagan	Request to withdraw last submittal dated 4-29-98.
13/98	5-28-98	5-28-98	R. Evans	T. Hagan	Request for extension of time
i4/98	6-29-98	7-1-98	R. Evans	L LeMasters	Response to 2ND NOD - modified permit application
15/98	7-28-98		T. Hagan	R. Evans	Third Notice of Deficiency (300 NOD)
16/98	9-10-98		R. Evans	L. LeMasters	Request for extension of time until 9-30-98
17/98	9-10-98		R. Evans	L. Le Maskis	Tentative meeting on 9-25-98 and extrasion request until 10-9-98
18/98	9-14-98		R. Evans	L. LeMastus	Confirming meeting date to discuss 3RD NOD
19/98	9-21-98		File	R. Evans	Meeting atkinders - Discussion of 3RD NOD
<sup>20</sup> /98	10-7-98	10-9-98	R Evans	L. Le Masters	Response to 320 NOD
21/98	11-12 98		T. Hagan	R. Evans	Fourth Notice of Deficiency (4TH NOD) - faxed to House
22/98	11-18-98		T. Hagan	R. Evans	Telephone conversation record - Request for
					cancelation of meeting and an extension of time to
					respond to Department's submittal of 11-12-98.
<sup>23</sup> /98	11-20-98		T. Hagan	R. Evans	Modified 4TH Notice of Deficiency - faxed to Howco
24/98	12-14-98	12-18-98	R. Evans	T. Rudolph	Comments on existing analytical for on-spec determinations
25/99	12-31-98	1-4-99	R. Evans	T. Rudolph	Response to 4TH NOD - modified application pages
26/99	2-2-99	2-4-99	R. Evans	T. Rudolph	Response to 4TH NOD - draft identifying changes in text
27/99	2-19-99	2-22-49	R. Evans	T. Rudolph	Revised pages to the application - Item 9.6
<sup>28</sup> /99	3-1-99		T. Hagan	R. Evans	Fifth Notice of Deficiency (5TH NOD)
<sup>29</sup> /99	3-25-99		File	R. Evans	Meeting atkindees - Discussion of 5th NOD
<sup>30</sup> /99	4-5-99	4-8-99	R. Evans	T. Rudoph	Request for 30-day extension to respond to letker of March 1, 1999
31/99	4-28-99		R. Evans	T. Rudolph	Teleconference minutes from 4-19-99 (faxed to the Dept)
<sup>32</sup> /99	4-30-99		T. Rudolph	A. Gepnart	Comments on minutes (faxed to T. Rudolph)
<sup>33</sup> /99	4-30-99	5-3-99	R Evans	T. Rudolph	Partial response to 5th NOD
34/99	5-7-99	5-11-99	R. Evans	T. Rudolph	Response to 5TH NOD (Statistical Analysis)
<sup>35</sup> /99	5-19-99	5-21-99	D. Rochm	D. Bush	Solid wests permit required by Pinellos County
36/99	5-20-99		R. Evans	S. Pelz	Comments on permit application - Attachment 5
371 <sub>G9</sub>	6-3-49		D. Roenm	S. Pelz	Solid Waste compliance inspection report
30/99 39/99	6-10-49		K Garrity T Hagan	R. Garrity	Warning Letter & 6th NOD
40/99	6-10-99		S. Tam	L. Lockett	Conversation record (faxed to the Dept)
41/99	1-20-99		R. Evans	B. Gorka	Industrial wastewater permit required for discharge of stormwater

from facility.

TLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION PERMITTING APPLICATION PROJECT EVENT SUMMARY REPORT

Site Name:	HOWCO ENVIRONMENTAL S	SERVICES, INC		
County:	PINELLAS			
		PROJECT		SITE # 42465
Permit Office:	SWD (DISTRICT)	CRA R	eference #:	
Project #:	10745		Agency Action: Pending	
Project name	: HOWCO ENVIRONMENTAL	SERVICES Desc: UO	processor	
Type/Sub/Rec	: HO/06 / New Permit	Application		
Received	: 23-JUN-1997 Is	sued:	Expires:	
Fee: \$2000.	00 Realized:	Dele:	Override: NONE	

PROJECT EVENTS

Event	Begin Date	Prd Due Date	Rmn Status	End Date
••••••				
Receive Request	23-JUN-1997	1 24-JUN-1997	000 Done	23-JUN-1997
Fee Verification	23-JUN-1997	2 25-JUN-1997	000 Sufficient Fee	23-JUN-1997
Completeness Review	23-JUN-1997	30 23-JUL-1997	000 Incomplete	22-JUL-1997
Awaiting Additional Information	22-JUL-1997	65 25-SEP-1997	000 Received	25-SEP-1997
Completeness Review	25-SEP-1997	30 25-OCT-1997	000 Incomplete	24-OCT-1997
Awaiting Additional Information	24-OCT-1997	276 27-JUL-1998	000 Received	01-JUL-1998
Completeness Review	01-JUL-1998	30 31-JUL-1998	000 Incomplete	28-JUL-1998
RESET CLOCK	28-JUL-1998	1 29-JUL-1998	000 Done	28-JUL-1998
Awaiting Additional Information	28-JUL-1998	73 09-OCT-1998	000 Received	09-OCT-1998
Completeness Review	09-OCT-1998	34 12-NOV-1998	000 Incomplete	12-NOV-1998
RESET CLOCK	12-NOV-1998	1 13-NOV-1998	000 Done	12-NOV-1998
Awaiting Additional Information	12-NOV-1998	53 04-JAN-1999	000 Received	04-FEB-1999
Completeness Review	04-FEB-1999	30 06-MAR-1999	000 Incomplete	01-MAR-1999
RESET CLOCK	01-MAR-1999	1 02-MAR-1999	000 Done	01-MAR-1999
Awaiting Additional Information	01-MAR-1999	30 31-MAR-1999	000 Received	11-MAY-1999
Completeness Review	11-MAY-1999	30 10-JUN-1999	000 Incomplete	10-JUN-1999
RESET CLOCK	10-JUN-1999	1 11-JUN-1999	000 Done	10-JUN-1999
Awaiting Additional Information	10-JUN-1999	34 14-JUL-1999	-007 Pending	
RESET CLOCK	24-0CT-1997	1 25-OCT-1997	000 Done	24-0CT-1997
RESET CLOCK	22-JUL-1997	1 23-JUL-1997	000 Done	22-JUL-1997

# **DO NOT ADD ANY ADDITIONAL**

an unite

MATERIAL TO THIS FILE.

### Memorandum

# Florida Dertment of Environmental Protection

TO:	Raoul Clarke, Environmental Administrator Hazardous Waste Management Section, Tallahassee; M.S. # 329B					
THROUGH:	Stanley Tam, PE II Hazardous Waste Section, Tampa					
FROM:	Al Gephart, Engineer III Hazardous Waste Section, Tampa					
DATE:	October 27, 1999					
SUBJECT:	HOWCO Environmental Services, EPA ID. # FLD 152 764-767 Pinellas County	Processed Used Oil Data Permit No.: 92465-HO06-001				

Attached are the Southwest District (SWD) DRAFT comments on the analytical data submitted by HOWCO Environmental Services. SWD does not believe that the data submittal is sufficient to demonstrate generator knowledge for determining that all out-bound shipments of used oil fuel meet the on-specification criteria.

This issue was discussed with Chris McGuire, OGC, on October 6, 1999. We are sending to you, as well as Chris, our DRAFT analysis and evaluation of the data HOWCO submitted to demonstrate "generator knowledge". Please have someone in your Section review the data as well as the analysis that we have presented. We welcome any recommendations that you or the reviewer(s) may have to offer. HOWCO's analytical data is provided as Attachments A and B.

Should you have any questions, please contact any of the SWD permitting staff at (813) 744-6100. Extensions: Al Gephart, X-372; Roger Evans, X-388; and Stanley Tam, X-390.

### Memorandum

# Florida Dertment of Environmental Protection

TO:	Chris McGuire, Senior Attorney Office of General Counsel; Douglas	Building; M.S. # 35
THROUGH:	Stanley Tam, PE II Hazardous Waste Section, Tampa	
FROM:	Al Gephart, Engineer III Hazardous Waste Section, Tampa	
DATE:	October 27, 1999	
SUBJECT:	HOWCO Environmental Services, EPA ID. # FLD 152 764-767 Pinellas County	Processed Used Oil Data Permit No.: 92465-HO06-001

Enclosed are the DRAFT comments on the analytical data submitted by HOWCO Environmental Services. As previously stated, the Southwest District (SWD) does not believe that the data submittal is sufficient to demonstrate generator knowledge for determining that all out-bound shipments of used oil fuel are on-spec.

As discussed in our October 6, 1999, teleconference, we are sending to you our DRAFT analysis and evaluation of the data HOWCO submitted to demonstrate "generator knowledge". Please have someone qualified in this area review the data as well as the analysis that we have presented. We welcome any recommendations that you or the reviewer(s) may have to offer. HOWCO's analytical data is provided as Attachments A and B.

Should you have any questions, please contact any of the SWD permitting staff at (813) 744-6100. Extensions: Al Gephart, X-372; Roger Evans, X-388; and Stanley Tam, X-390.

# DRAFT

### HOWCO ENVIRONMENTAL SERVICES

### STATISTICAL ANALYSIS TO DEMONSTRATE ON-SPEC USED OIL FUEL

#### **BACKGROUND:**

An October, 1996 compliance inspection report states that the Certificates of Analysis issued by HOWCO were not based on a discrete analysis of every batch. The report states that, "If HOWCO does not wish to analyse a representative sample of each batch, then they should propose a sampling plan with statistical data to support reporting the lead concentration as <X ppm, with a specified percentage certainty."

HOWCO <u>elected</u> to provide analytical data of its processed oil as the information to make its onspecification used oil fuel determination (40 CFR 279.72). Based on the many sources of used oil accepted at the HOWCO facility, the Department believes that sampling and analytical data is appropriate to demonstrate generator knowledge. However, HOWCO must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of 40 CFR 279.55(b)(2).

In numerous meetings and teleconferences, HOWCO representatives were told to submit a Sampling and Analysis Plan to the Department. The HOWCO Sampling & Analysis Plan has been deficient in demonstrating generator knowledge as far back as the September 25, 1997, application submittal. HOWCO has done nothing to correct this deficiency. On May 7, 1999, HOWCO submitted its Sampling & Analysis Plan. The submittal was not a sampling and analysis plan but merely a report of historical data in tabular form. The submittal contained only twenty (20) laboratory analytical reports and no chain of custody forms for any of the processed oil data provided. The submittal was also deficient of any supporting documentation on a sampling plan or quality assurance plan (e.g. replicate analyses, matrix spikes, analytical methods used, detection limits, etc.). At a minimum, the Plan must specify the sampling method used to obtain representative samples to be analyzed, the frequency of sampling, the laboratory performing the analyses, the methods used and the type of information used to make the on-specification used oil determination.

The Department does not accept the historic data submittals as meeting the requirements to demonstrate on-spec used oil fuel based on "generator knowledge". Before the Department can accept a statistical analysis demonstrating Howco's processed oil is on-spec, all data forming the bases for the study must be provided for review and validation. Analytical data generated by a scientifically defective sampling plan has limited utility. HOWCO has the burden of responsibility to develop a technically sound sampling plan.





#### **DEFICIENCIES:**

The qualitative and quantitative requirements that data must achieve to be acceptable for use in demonstrating product knowledge to the Department were not provided. 62-160 F.A.C. applies to all programs, projects, studies or activities which involve submission of environmental data or reports to the Department. The requirements pertain to the quality of the data in terms of precision, accuracy, completeness, representativeness and comparability, as well as non-measurable qualifiers, such as legally defensible data.

Under Category 1A (no oversight is provided by any State or Federal agency) records shall be maintained pursuant to section 62-160.600 F.A.C. The records required include laboratory and matrix spikes, replicate sample analyses, quality control samples and standards, calibration standards and method detection limits. As stated in 62-160 F.A.C. Part III, the requirements for sampling and analysis activities shall apply to used oil as defined in Chapter 62-710 F.A.C.

In the first data submittal [HOWCO Environmental Services, Statistical data analysis of Processed Oil (dated 06/02/98)], the Department noted these additional deficiencies:

- There were approximately 134 batches in 1996 of which only 9 were sampled;
- In 1997, out of approximately 107 batches, only 8 were sampled for Arsenic;
- In the 1996, 1997 data submittal, 27 batches were not on the data sheet.
- Quality assurance documentation was not provided to the Department.

FDEP concluded that the first data submittal was deficient in documenting both sampling and analytical protocols.

Similarly, despite the Department's request for a Sampling & Analysis Plan, the "Statistical Analysis" dated May 7, 1999, submitted by HOWCO does not describe How/What/When the sampling or analyses were performed. The historical data submitted on May 7, 1999, consisted of 79 discrete samples from processed oil batches (tanks) representing facility operations from 10/21/98 to 4/15/99. Upon review of the submittal, the Department noted these additional deficiencies:

- There were no data for batch #1198 (01/27/99) and no explanation was given;
- Data from batch #1155 was not considered because it was a composite sample;
- Three sets of data from analyzing the Feed tank (Tank-137) were not considered because this oil is not shipped off-site;
- Metals analyses of batches #1151, 1152, 1153, 1154, 1156, 1161, 1162, and 1166 were not considered because they were stated as "less than values" an order of magnitude higher than typical detection limits;

DRAFT

- Sampling occurred on only 49 days out of the 177 day period (28%);
- Samples were analyzed for Lead on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Chromium on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Cadmium on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Arsenic on only 21 of the 49 days (43%) or 12% of the 177 days;
- Samples were analyzed for PCB on only 23 of the 50 days (46%) or 13% of the 177 days;
- Of the 79 batches (tanks) only
- 30% were analyzed for Pb (Values stated as
  <100 ppm were not considered in this percentage);</li>
  30% were analyzed for Cr (Values stated as <5 were not considered in this percentage);</li>
  30% were analyzed for Cd; 28% were analyzed for As,
  28% were analyzed for PCBs, and 29% were analyzed for Flash Point (Values stated as >100 or >140 were not considered in this percentage);
- No explanation was given as to why chrome and cadmium were detected in the three (3) fuel (Feed) samples from tank #137 and also in the batches that appear were put in feed tank #137 (batches #1158A, #1157 and #1159) but chrome and cadmium were not detected in any other of the batches analyzed;
- No procedure was provided for determining which batches were submitted to outside laboratories for analyses;
- HOWCO did not provide analytical sheets or logs of its "in-house" analytical results;
- In general, HOWCO does not provide the date the sample was taken in the sample identification. Documentation was not provided as to when the samples were actually taken;
- It appears that the FEED sample of 3/3/99 was comprised of batches 1216 and 1217. However, Precision Petroleum Laboratories arsenic analyses of batches 1216 and 1217 were both below detection (0.1 ppm). The result of the US Biosystems arsenic analysis was 2.3 ppm. This appears to be inconsistent. In addition, the US Biosystems chain of custody form (log #3436) could not be read to verify the samples delivered;
- The data sheet lists batch #1155, tank 128, but does not indicate that this is a <u>monthly</u> <u>composite</u> sample that was analyzed for PCBs, the data sheet is for processed oil analyses yet the analytical report indicates that it is a weekly water sample and the data sheet leads you to believe Sanders Labs performed all of the analyses when in fact they analyzed for only PCBs;
- Batch #1172, dated 12/04/98 in the table of data submitted, was received by Precision Petroleum Labs, Inc. on 12-1-98. How could the lab receive the sample 3 days prior to the sampling event ?

DRAFT

- Batch #1174, dated 12/02/98 in the table submitted states the lead concentration as 13.41 ppm. The analytical sheet from the lab states 19.41 ppm;
- It appears that the FEED sample of 1/20/99 was comprised of batches 1189 and 1190. However, there are no metals analyses of batch 1190 to indicate why the metals concentrations in the feed sample are higher than those noted in batch 1189;
- The tabular data submitted states that batch #1203 was sampled on 2/4/99 and leads you to believe it is a discrete sample. The analytical sheet from the lab indicates that this was a weekly sample (2/8 2/12). How was the sample taken 4-8 days before the week of 2/8 2/12 ?
- The tabular data submitted states that batch #1207 was sampled on 2/11/99 and leads you to believe it is a discreet sample. The analytical sheet from the lab indicates that this is a weekly sample (2/15 2/19).
   How was the sample taken 4-8 days before the week of 2/15 2/19? Also, the halogen concentration was given as 621.8 ppm by the lab but it was stated in the tabular data as 621.5 ppm;
- The sample identification on the lab sheet for batch #1212 provides no information on when the sample was taken;
- For batch #1216, the halogen concentration was given as 865.9 ppm by the lab but it was stated in the tabular data as 865.1 ppm.

FDEP concluded that the second data submittal was deficient in documenting both sampling and analytical protocols.

### **CONCLUSION:**

Ì

HOWCO has not provided sufficient information to change the Department's position that every batch (tank) is to be analyzed to determine if it is on-spec used oil fuel. This position is consistent with the other FDEP Districts in the State.

# ATTACHMENT A

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HOWCO DATA SUBMITTAL

MAY 7, 1999

# HOWCO Environmental Services TECA

3701 Central Avenue St. Petersburg, FL 33713

MAY 1 1 1999

Department or Environ BY SOUTHWEST CLEAN

# USED OIL PROCESSING FACILITY PERMIT STASTICAL ANALYSIS

.

Prepared By:

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

7 MAY 1999

<HES-26>





SOU THEVEST DISTRICT

MAY 1 1 1999

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Reference: HOWCO Environmental Services Used Oil Permit Application H052-308139 FDEP Letter dated March 1, 1999.

Dear Roger:

The enclosed statistical analysis summary sheets and raw data are provided for the HOWCO Environmental Services used oil on specification waste stream determination. The used oil processed by the Company was determined to be on specification used oil at the 95 percent confidence level.

The sample period and the number of samples were adequate to determine that the used oil was on specification at the 95 percent confidence level. The selected sample period was from October 15, 1998 through April 15, 1999. The Company shipped out 3,374,459 gallon of used oil in 1998. The typical processed used oil tank hold 20,000 gallons. The total number of tanks that would be filled in six months would be calculated to be 84. The number of tanks filled during the sample period was 83. The parameters had as few as 24 and as many as 83 data points. The confidence limits were adjusted to account for the number of quantified sampling events verses the total number of tanks filled with processed used oil (83). The measurements, which were below the method detection limit, were calculated at one half the detection limit. The values on the right hand column of the tables are the numbers used in the spreadsheet calculations.

The average plus or minus the 95 percent confidence level for the total halogen level was determined to be  $759.4 \pm 24.7$  ppm. This is significantly below the regulatory limit of 1000 ppm.

The total lead concentration average plus or minus the 95 percent confidence level was determined to be  $22.3 \pm 2.1$  ppm. This is significantly below the regulatory limit of 100 ppm.

The total chromium concentration average plus or minus the 95 percent confidence level was determined to be  $0.4 \pm 0.3$  ppm. This is significantly below the regulatory limit of 10 ppm.

The total cadmium concentration average plus or minus the 95 percent confidence level was determined to be  $0.1 \pm 0.031$  ppm. This is significantly below the regulatory limit 2 ppm.

The total arsenic concentration average plus or minus the 95 percent confidence level was determined to be  $0.1 \pm 0.17$  ppm. This is significantly below the regulatory limit of 5 ppm.

The flash point average plus or minus the 95 percent confidence level was determined to be  $190.8 \pm 8.7$  °F. The on specification regulatory limit for flashpoint is that it must be greater than or equal to 100 °F.

a (\* 12.) 1. a. (\* 14.)

The total PCB concentration average plus or minus the 95 percent confidence level was determined to be  $0.233 \pm 0.016$  ppm. The valve for the PCB 95 percent confidence range is based on half the detection limit of the analyses completed. No PCB's were determined to be present in the used oil above the reported method detection limits. The PCB's are required to below 2 ppm.

Based upon the review of the enclosed data and statistical analysis, the future sampling of one used oil tank per month will provide sufficient documentation to substantiate the on specification used oil waste determination. Six samples from a estimated six month 84 tank sample population will provide a sufficient number of samples to maintain a 95 percent confidence level that the used oil will meet on specification based upon the historical analysis of this processed used oil waste stream.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

W. Kudoph

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 <HES-22.DOC.TWR>

cc: Mr. Tim Hagan, HOWCO Environmental Services President/CEO

5/7/94

# VCO ENVIRONMENTAL SE<u>PV</u>ICES

TOTAL HALOGEN CONCENTRATION

Processed Oil from October 1998 - April 1999

an a	DATE	TANK #	BATCH	Halogens	DATE	TANK #	BATCH	Halogens
an an an the second graph and the second second	10/21/98	128	1151	633	01/27/99		1198*	
	10/22/98	126	1152	656	01/27/99	126	1199	737
	10/27/98	127	1153	900	01/27/99	127	1200	744
	10/27/98	125	1154	750	02/02/99	125	1201	770
	10/30/98	128	1155	952	02/03/99	128	1202	807
	10/30/98	129	1156	750	02/04/99	129	1203	798.1
	10/30/98	126	1157	744	02/08/99	126	1204	884
	10/20/08	137	1158	740	02/08/99	127	1205	773
	11/04/08	137	11584	663	02/11/99	125	1206	719
	11/04/98	407	1460	746	02/11/99	128	1207	621.5
	11/04/90	127	1155	726	02/12/99	126	1208	832
	44/11/90	120	1160	842	02/15/99	127	1209	780
	11/11/98	120	4462	762	02/18/99	128	1210	890
	11/11/98	129	4462	-675	02/10/99	126	1210	906
	11/13/98	12/	4464	752	02/10/00	129	1212	781.6
	11/10/98	120	1104	027 0	02/0/09	125	1213	888
	11/1//98	120	1100	976	03/01/09	127	1214	810
	11/20/98	129	1100	600	03/02/00	120	4945	909
	11/24/98	128	1167	669	03/02/99	120	1215	865.1
	11/24/98	127	1168	798	03/02/99	120	EEED	463
	11/25/98	125	1169	/28.5	03/08/99	407	4047	793 4
	11/25/98	129	1170	742	03/08/99	12/	4049	061
	12/02/98	127	1171	658	03/17/99	121	1210	479.2
	12/04/98	129	1172	651.8	03/17/99	128	1219	178.3
	12/05/98	125	1173	746	03/22/99	123	1220	932.0
	12/02/98	128	1174	833.6	03/22/99	124	1221	894
	12/08/98	126	1175	595	03/24/99	121	1222	709
	12/08/98	127	1176	648	03/24/99	122	1223	802
	12/15/98	128	1177	821.6	03/29/99	123	1224	764.7
	12/15/98	125	1178	637	03/29/99	124	1225	759
	12/15/98	129	1179	651	04/05/99	124	1226	781.9
	12/16/98	126	1180	655	04/07/99	121	1227	962
	12/28/98	128	1181	685.6	04/12/99	122	1228	690
ć	12/28/98	127	1182	687	04/12/99	124	1229	744.1
	12/29/98	126	1183	730.1	04/13/99	121	1230	766
	12/30/98	125	1184	677	04/15/99	123	1231	847
	12/30/98	129	1185	867				
	01/06/99	128	1186	733	SUM			63031.5
	01/05/99	129	1187	851.5	AVERAGE			759.4
	01/08/99	126	1188	817	STANDARD	DEVIATION		114.6
	01/08/99	127	1189	812.1	95% CONFIL	DENCE INTER	RVAL	24.7
	01/20/99	137	FEED	640	MAXIMUM			962
	01/14/99	125	1190	707	MINIMUM			178.3
	01/14/99	128	1191	702.3	COUNT			83
	01/14/99	129	1192	707		-		
	01/21/99	126	1193	896				
	01/21/99	127	1194	775				
	01/22/99	125	1195	730	4			
	01/22/99	128	1196	819.1				
	0.12000	400	1407		*			

PREPARED BY EN/IRONEERING, INC.

# HOWCO ENVIRONMENTAL SERVICES

### TOTAL LEAD CONCENTRATION

Processed Oil from October 1998 - April 1999

د . وی اختیار از اوران				
n i	DATE	BATCH	LEAD	LEAD
	10/21/98	1151	<100	
	10/22/98	1152	<100	
	10/27/98	1153	<100	
	10/27/98	1154	<100	
	10/30/98	1155	<100	
	10/30/98	1156	<100	
	10/30/98	1157	31	31
	10/30/98	1158	33	33
	11/04/98	1158A	29	29
	11/04/98	1159	26	26
	11/11/98	1160		
	11/11/98	1161	<100	
	11/11/98	1162	<100	
	11/13/98	1163		
	11/16/98	1164		·····
	11/17/98	1165	17.33	17.33
	11/20/98	1166	<100	
	11/20/98	1167		
	11/24/98	1168		
	11/24/90	1160	18 17	18 17
	11/25/98	1170	10.17	
	17/02/08	1170	· · · · · · · · · · · · · · · · · · ·	
	12/02/98	1171	20.12	20.12
	12/04/98	1172	20.12	
	12/03/98	1173	13.41	13 41
	12/02/90	1174	10.41	
	12/08/98	1175		
	12/08/98	4477	19.12	18 12
	12/15/98	4479	10.12	10.12
	12/15/98	11/0		
	12/15/98	11/9		
	12/16/98	1100	10.15	10 15
	12/28/98	4492	19.15	13.13
	12/28/98	1102	46.09	16.08
	12/29/98	1183	10.90	10.90
	12/30/98	1184		
	12/30/98	1185		·····
	01/06/99	1180	25.49	25.19
	01/05/99	1187	25.16	23.10
	01/08/99	1188	47 55	17 55
	01/08/99	1189	17.55	25
	01/20/99	FEED	25	2J
	01/14/99	1190	40 47	40 17
	01/14/99	1191	10.12	10.12
	01/14/99	1192		
	01/21/99	1193		-
	01/21/99	1194		<b></b>
	01/22/99	1195		
	01/22/99	1196	21.94	21.94
	01/22/99	1197		

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DATE         BATCH         LEAD         LEAD           1/27/99         1198*	IE         BATCH         LEAU         LEAU           7/99         1198*
1/27/99       1198"         1/27/99       1199         1/27/99       1200         2/02/99       1201         2/03/99       1202         2/04/99       1203       19.15         2/08/99       1205         2/11/99       1206         2/11/99       1206         2/11/99       1207         28.36       28.36         2/11/99       1207         2/11/99       1207         2/13/99       1210         2/11/99       1207         28.36       28.36         2/11/99       1207         28.36       28.36         2/11/99       1207         2/13/99       1210         2/13/99       1211         2/19/99       1214         3/02/99       1215         3/02/99       1216         3/02/99       1217         18.02       18.02         13/17/99       1219         13/2/99       1220         20.18       20.18         20/2/99       1222         03/2/99       1224         18.96       18.96         13/2/99	7/99       1198"         7/99       1199         7/99       1200         2/99       1201         3/99       1202         4/99       1203       19.15         19/99       1204         8/99       1205         1/99       1206         1/99       1207       28.36         2/99       1208         5/99       1209         8/99       1210         19/99       1212         17.11       17.11         19/99       1212         17.11       17.11         19/99       1214         19/99       1214         19/99       1215         12/99       1216       25.87         25.99       1217       18.02         18/99       FEED       17         17/99       1218       17.98         17/99       1219       17.98         12/99       1220       20.18         22/99       1221       24/99         24/99       1223       29/99         29/99       1224       18.96
1/27/99       1199         1/27/99       1200         2/02/99       1201         2/03/99       1202         2/04/99       1203       19.15         2/08/99       1205         2/11/99       1206         2/11/99       1207       28.36         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/11/99       1209       2/11/99       1210         2/11/99       1210       2/11/99       1211         2/11/99       1212       17.11       17.11         3/01/99       1214       3/02/99       1215         3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87         3/02/99       1217       18.02       18.02         3/02/99       1219       17.98       17.98         3/22/99       1220       20.18       20.18         3/22/99       1221	7/99       1199         7/99       1200         2/99       1201         3/99       1202         4/99       1203       19.15         8/99       1204         98/99       1205         1/99       1206         1/99       1207       28.36         2/99       1208         5/99       1209         8/99       1210         9/99       1211         19/99       1212         17.11       17.11         19/99       1212         17.11       17.11         19/99       1214         19/99       1215         10/99       1216         25.87       25.87         17/99       1218         17/99       1219       17.98         17/99       1219       17.98         17/99       1219       17.98         12/99       1220       20.18         22/99       1221       24/99         24/99       1223       29/99         29/99       1224       18.96
1/27/99       1200         2/02/99       1201         2/03/99       1202         2/04/99       1203       19.15         2/08/99       1204         2/08/99       1205         2/11/99       1206         2/11/99       1207         28.36       28.36         2/11/99       1207         28.36       28.36         2/11/99       1207         28.36       28.36         2/11/99       1207         28.36       28.36         2/11/99       1209         2/11/99       1210         2/11/99       1210         2/11/99       1211         2/11/99       1212         17.11       17.11         3/01/99       1214         3/02/99       1215         3/02/99       1216         25.87       25.87         3/02/99       1217         18.02       18.02         3/17/99       1219         17.98       17.98         3/22/99       1220         03/22/99       1221         03/24/99       1225         04/05/99	7/99       1200         2/99       1201         3/99       1202         4/99       1203       19.15         8/99       1204         8/99       1205         1/99       1206         1/99       1207       28.36         2/99       1208         5/99       1209         8/99       1210         19/99       1211         19/99       1212         19/99       1212         19/99       1212         19/99       1214         19/99       1214         19/99       1215         10/99       1215         10/99       1217         18.02       18.02         17/99       1218         17/99       1219       17.98         17/99       1219       17.98         12/99       1220       20.18       20.18         22/99       1221       22/99         24/99       1223       22/99         22/99       1224       18.96
2/02/99       1201         2/03/99       1202         2/04/99       1203       19.15       19.15         2/08/99       1205       2         2/11/99       1206       2         2/11/99       1206       2         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/11/99       1209       2       2         2/11/99       1209       2       2         2/11/99       1210       2       2         2/11/99       1210       2       2         2/19/99       1211       2       2         2/19/99       1212       17.11       17.11         3/01/99       1214       3       3         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         13/22/99       1220       20.18       20.18         13/22/99       1222       2       2         13/22/99       1224       18.96       18.96         13/22/99       1225       2 <td>2/99       1201         3/99       1202         4/99       1203       19.15       19.15         18/99       1204       19.15       19.15         18/99       1204       19.15       19.15         18/99       1205       11.99       1206       11.99         1/99       1207       28.36       28.36         2/99       1208       11.0       11.0         5/99       1209       12.0       12.0         8/99       1210       12.0       12.0         19/99       1212       17.11       17.11         19/99       1212       17.11       17.11         19/99       1214       11.0       11.0         19/99       1214       11.0       11.0         19/99       1214       11.0       11.0         19/99       1216       25.87       25.87         18/99       FEED       17       17         17/99       1218       11.0       11.0         17/99       1219       17.98       17.98         22/99       1220       20.18       20.18         22/99       1222       12.0       12.0&lt;</td>	2/99       1201         3/99       1202         4/99       1203       19.15       19.15         18/99       1204       19.15       19.15         18/99       1204       19.15       19.15         18/99       1205       11.99       1206       11.99         1/99       1207       28.36       28.36         2/99       1208       11.0       11.0         5/99       1209       12.0       12.0         8/99       1210       12.0       12.0         19/99       1212       17.11       17.11         19/99       1212       17.11       17.11         19/99       1214       11.0       11.0         19/99       1214       11.0       11.0         19/99       1214       11.0       11.0         19/99       1216       25.87       25.87         18/99       FEED       17       17         17/99       1218       11.0       11.0         17/99       1219       17.98       17.98         22/99       1220       20.18       20.18         22/99       1222       12.0       12.0<
2/03/99       1202         2/04/99       1203       19.15       19.15         2/08/99       1205       2/11/99       1206         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/11/99       1209       2/11/99       1209         2/11/99       1210       2/11/99       1210         2/19/99       1211       17.11       17.11         3/01/99       1214       3/02/99       1215         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1221       03/24/99       1222         03/24/99       1225       04/05/99       1226         04/105/99       1226       45.72       45.72         04/12/99       1229       23.38       23.38         04/13/99       1230       04/13/99       1230<	3/99       1202         4/99       1203       19.15       19.15         18/99       1204
2/04/99         1203         19.15         19.15           2/08/99         1205	14/99       1203       19.15       19.15         18/99       1204
2/08/99       1204         2/08/99       1205         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/15/99       1209       2/15/99       1209         2/18/99       1210       2/11/1       17.11         2/19/99       1212       17.11       17.11         3/01/99       1214       3/01/99       1215         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1222       20.18       20.18         13/22/99       1224       18.96       18.96         13/22/99       1224       18.96       18.96         13/29/99       1225       20.45.72       45.72         13/29/99       1226       45.72       45.72         13/29/99       1228       20.4/12/99       1231         104/12/99       1230       20.4/13/99       1230         10	88/99       1204         18/99       1205         1/99       1206         1/99       1207       28.36         2/99       1208         5/99       1209         8/99       1210         9/99       1210         19/99       1212         19/99       1212         19/99       1212         19/99       1212         19/99       1213         19/99       1214         19/99       1215         12/99       1216         12/99       1217         18.02       18.02         17/99       1219         17/99       1219         17/99       1220         20/18       20.18         22/99       1221         24/99       1222         24/99       1223         29/99       1224       18.96
2/08/99       1205         2/11/99       1207       28.36       28.36         2/11/99       1207       28.36       28.36         2/15/99       1209       2/15/99       1209         2/18/99       1210       2/19/99       1211         2/19/99       1212       17.11       17.11         3/01/99       1213       3/01/99       1214         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       FEED       17       17         3/08/99       1219       17.98       17.98         3/17/99       1219       17.98       17.98         3/2/2/99       1220       20.18       20.18         13/22/99       1222       20.18       20.18         13/22/99       1222       20.18       20.18         13/22/99       1222       20.18       20.18         13/22/99       1224       18.96       18.96         13/29/99       1225       20.4/12/99       22.3         10/29       1228       20.4/12/99       23.38       23.38         10/1/2/99       1230       21.3	18/99       1205         1/99       1206         1/99       1207       28.36       28.36         2/99       1208
2/11/99       1206         2/11/99       1207       28.36       28.36         2/12/99       1209       2/15/99       1209         2/18/99       1210       2/19/99       1211         2/19/99       1212       17.11       17.11         3/01/99       1212       17.11       17.11         3/01/99       1214       3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87       3.87         3/08/99       FEED       17       17         3/08/99       1219       17.98       17.98         3/17/99       1219       17.98       17.98         13/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1222	1/99       1206         1/99       1207       28.36       28.36         2/99       1208
2/11/99       1207       28.36       28.36         2/12/99       1208         2/15/99       1209       2/18/99       1210         2/18/99       1210       2/19/99       1211         2/19/99       1212       17.11       17.11         3/01/99       1212       17.11       17.11         3/01/99       1214       3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87       3.87         3/08/99       FEED       17       17       17         3/08/99       1217       18.02       18.02         3/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1221	1/99       1207       28.36       28.36         2/99       1208
2/12/99       1208         2/15/99       1209         2/18/99       1210         2/19/99       1211         2/19/99       1212         17.11       17.11         3/01/99       1214         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1217         18.02       18.02         3/01/99       1219         17       17         3/08/99       FEED         17/199       1218         3/17/99       1219         17.98       17.98         13/22/99       1220         20.18       20.18         13/22/99       1221         03/24/99       1222         03/29/99       1224         18.96       18.96         03/29/99       1226         04/05/99       1228         04/07/99       1229         04/12/99       1230         04/12/99       1231         IM       601.8 </td <td>2/99       1208         5/99       1209         18/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1215         12/99       1216         12/99       1217         18/99       1218         17/99       1218         17/99       1219         17/99       1218         17/99       1219         17.99       1218         22/99       1220         20.18       20.18         22/99       1221         24/99       1223         29/99       1224       18.96</td>	2/99       1208         5/99       1209         18/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1215         12/99       1216         12/99       1217         18/99       1218         17/99       1218         17/99       1219         17/99       1218         17/99       1219         17.99       1218         22/99       1220         20.18       20.18         22/99       1221         24/99       1223         29/99       1224       18.96
2/15/99       1209         2/18/99       1210         2/19/99       1211         2/19/99       1212         17.11       17.11         3/01/99       1212         3/01/99       1214         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1217         18.02       18.02         3/01/99       1217         18.02       18.02         13/17/99       1219         17.98       17.98         13/17/99       1219         17.98       17.98         13/22/99       1220         20.18       20.18         13/22/99       1222         03/24/99       1223         03/24/99       1225         04/05/99       1226         04/07/99       1227         04/07/99       1228         04/12/99       1230         04/12/99       1230         04/13/99       1231         IM       601.8         ERAGE       22.3         ANDARD DEVIATION <td< td=""><td>1209       1209         18/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1213         12/99       1214         12/99       1215         12/99       1216         12/99       1216         17/99       1217         18.02       18.02         17/99       1219         17/99       1219         17/99       1220         20.18       20.18         22/99       1222         24/99       1223         29/99       1224       18.96</td></td<>	1209       1209         18/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1213         12/99       1214         12/99       1215         12/99       1216         12/99       1216         17/99       1217         18.02       18.02         17/99       1219         17/99       1219         17/99       1220         20.18       20.18         22/99       1222         24/99       1223         29/99       1224       18.96
2/18/99       1210         2/19/99       1211         2/19/99       1212         17.11       17.11         3/01/99       1213         3/02/99       1215         3/02/99       1216         25.87       25.87         3/02/99       1216         3/02/99       1216         3/02/99       1216         3/02/99       1217         18.02       18.02         3/01/99       1217         18.02       18.02         3/17/99       1219         17.98       17.98         17/179       1219         17/199       1219         17/199       1220         20.18       20.18         13/22/99       1222         13/22/99       1222         13/22/99       1224         18.96       18.96         13/29/99       1225         124/199       1229         123/29/99       1227         124/12/99       1229         1231       1231         14/12/99       1230         124/12/99       1231         125       13 </td <td>8/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1213         17/99       1214         12/99       1215         12/99       1216         17       17         17/99       1217         18.02       18.02         17/99       1219         17/99       1219         17.98       17.98         22/99       1220         20.18       20.18         22/99       1222         24/99       1223         29/99       1224       18.96</td>	8/99       1210         19/99       1211         19/99       1212         17.11       17.11         17/99       1213         17/99       1214         12/99       1215         12/99       1216         17       17         17/99       1217         18.02       18.02         17/99       1219         17/99       1219         17.98       17.98         22/99       1220         20.18       20.18         22/99       1222         24/99       1223         29/99       1224       18.96
2/19/99       1211         2/19/99       1212       17.11       17.11         3/01/99       1213       3/01/99       1214         3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1219       17.98       17.98         3/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1222	19/99       1211         19/99       1212       17.11       17.11         19/99       1213       17.11       17.11         11/99       1213       1       17.11         11/99       1213       1       1         12/99       1214       1       1         12/99       1216       25.87       25.87         12/99       1216       25.87       25.87         18/99       FEED       17       17         18/99       1217       18.02       18.02         17/99       1218       1       17.98         22/99       1220       20.18       20.18         22/99       1221       24/99       1223         24/99       1223       18.96       18.96
2/19/99       1212       17.11       17.11         3/01/99       1213	19/99       1212       17.11       17.11         01/99       1213
3/01/99       1213         3/01/99       1214         3/02/99       1215         3/02/99       1216       25.87         3/08/99       FEED       17         3/08/99       FEED       17         3/08/99       1217       18.02         3/17/99       1219       17.98         17/179       1219       17.98         13/17/99       1219       17.98         13/22/99       1220       20.18         13/22/99       1221	01/99         1213           01/99         1214           02/99         1215           02/99         1215           02/99         1216           02/99         1216           02/99         1216           02/99         1216           02/99         1216           02/99         1217           18.02         18.02           17/99         1219           17/99         1219           17.98         17.98           22/99         1220           20.18         20.18           22/99         1222           24/99         1223           29/99         1224         18.96
3/01/99       1214         3/02/99       1215         3/02/99       1216       25.87         3/08/99       FEED       17       17         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         13/17/99       1218	D1/99         1214           D2/99         1215           D2/99         1215           D2/99         1216           D2/99         1216           D2/99         1216           D2/99         1216           D2/99         1216           D2/99         1216           D2/99         1217           D8/99         1217           D1/99         1217           D1/99         1218           D1/99         1219           D17.98         17.98           D2/99         1220           D0.18         20.18           D2/99         1221           D2/99         1222           D2/99         1223           D2/99         1224           D2/99         1224
3/02/99       1215         3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1219       17.98       17.98         3/17/99       1219       17.98       17.98         3/17/99       1219       17.98       17.98         3/22/99       1220       20.18       20.18         3/22/99       1221	D2/99         1215           D2/99         1216         25.87         25.87           D8/99         FEED         17         17           D8/99         1217         18.02         18.02           17/99         1218         17.98         17.98           17/99         1219         17.98         17.98           22/99         1220         20.18         20.18           22/99         1221         24/99         1222           24/99         1223         29/99         1224         18.96         18.96
3/02/99       1216       25.87       25.87         3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1218	D2/99         1216         25.87         25.87           D8/99         FEED         17         17           D8/99         1217         18.02         18.02           17/99         1218         17.98         17.98           17/99         1219         17.98         17.98           22/99         1220         20.18         20.18           22/99         1221         24/99         1222           24/99         1223         29/99         1224
3/08/99       FEED       17       17         3/08/99       1217       18.02       18.02         3/17/99       1218	D8/99         FEED         17         17           D8/99         1217         18.02         18.02           17/99         1218         17.98         17.98           17/99         1219         17.98         17.98           22/99         1220         20.18         20.18           22/99         1221         24/99         1222           24/99         1223         29/99         1224
3/08/99       1217       18.02       18.02         3/17/99       1218	D8/99         1217         18.02         18.02           17/99         1218
33/17/99       1218         33/17/99       1219       17.98         13/17/99       1219       17.98         13/22/99       1220       20.18       20.18         13/22/99       1221	17/99       1218         17/99       1219       17.98         17/99       1219       17.98         22/99       1220       20.18       20.18         22/99       1221       24/99       1222         24/99       1223       29/99       1224         29/99       1224       18.96       18.96
13/17/99       1219       17.98       17.98         13/22/99       1220       20.18       20.18         13/22/99       1221       20.18       20.18         13/24/99       1223       3/24/99       1223         13/29/99       1224       18.96       18.96         13/29/99       1225       3/29/99       1225         12/0/05/99       1226       45.72       45.72         12/1/99       1229       23.38       23.38         12/1/2/99       1229       23.38       23.38         12/1/2/99       1230       3/2       3/2         14/13/99       1230       3/2       3/2         14/13/99       1230       3/2       3/2         14/13/99       1231       601.8       3/2         1/2/99       1229       2.3       3/2         1/1/2/99       1231       5/2       3/2         1/1/2/99       1231       601.8       3/2         1/2/1/2/9       1231       5/2       3/2         1/2/1/2/9       1231       5/2       3/2         1/2/1/2/9       1231       5/2       3/2         1/2/1/2/2/2/2/2/2/2/2/2/2/2/2/2       3/2	17/99         1219         17.98         17.98           22/99         1220         20.18         20.18           22/99         1221         24/99         1222           24/99         1223         29/99         1224           29/99         1223         18.96         18.96
33/22/99       1220       20.18       20.18         33/22/99       1221	22/99         1220         20.18         20.18           22/99         1221
13/22/99       1221         13/22/99       1222         13/24/99       1223         13/29/99       1224         18.96       18.96         13/29/99       1225         12/20/99       1225         12/20/99       1226         12/20/99       1227         12/10/99       1229         12/10/99       1229         12/10/99       1229         12/11/99       1230         12/11/99       1231         12/11/10/99       1231         12/11/10/10/10/10/10/10/10/10/10/10/10/10/	22/99         1221           24/99         1222           24/99         1223           29/99         1224         18.96
13/24/99       1222         13/24/99       1223         13/29/99       1224       18.96       18.96         13/29/99       1225	24/99 <b>1222</b> 24/99 <b>1223</b> 29/99 <b>1224 18.96 18.96</b>
No.2         No.2 <th< td=""><td>24/99 <b>1223</b> 29/99 <b>1224 18.96 18.96</b></td></th<>	24/99 <b>1223</b> 29/99 <b>1224 18.96 18.96</b>
NAL 100         1224         18.96         18.96           03/29/99         1225         18.96         18.96           03/29/99         1225         125         126           04/05/99         1226         45.72         45.72           04/12/99         1229         23.38         23.38           04/12/99         1229         23.38         23.38           04/13/99         1230         1230         1231           IM         601.8         601.8           ERAGE         22.3         22.3           ANDARD DEVIATION         6.8           % CONFIDENCE INTERVAL         2.1           XIMUM         13.41           DUNT         27	29/99 <b>1224</b> 18.96 18.96
N223/35         1224         1030           03/29/99         1225           04/05/99         1226         45.72         45.72           04/107/99         1227         04/12/99         1228           04/12/99         1229         23.38         23.38           04/13/99         1230         04/15/99         1231           IM         601.8         601.8           YERAGE         22.3         22.3           ANDARD DEVIATION         6.8           % CONFIDENCE INTERVAL         2.1           XXIMUM         45.72           NIMUM         13.41           DUNT         27	
NL20         NL20           04/05/99         1226         45.72         45.72           04/07/99         1227         1227         1229         1233	29/99 1225
Arrosiss         Izzo         Ioniz         Ioniz <thioniz< th="">         Ioniz         Ioniz         <t< td=""><td>n5/99 <b>1226 45 72 45 72</b></td></t<></thioniz<>	n5/99 <b>1226 45 72 45 72</b>
Alloriss     1221       04/12/99     1228       04/12/99     1229       04/13/99     1230       04/15/99     1231       IM     601.8       ERAGE     22.3       ANDARD DEVIATION     6.8       % CONFIDENCE INTERVAL     2.1       AXIMUM     45.72       NIMUM     13.41       DUNT     27	07/99 <b>1227</b>
Arr 12:55     1225       04/12/99     1229     23.38       04/13/99     1230       04/15/99     1231	12/00 1228
12195     1225     2330     2330       04/13/99     1230       04/15/99     1231       IM     601.8       VERAGE     22.3       ANDARD DEVIATION     6.8       % CONFIDENCE INTERVAL     2.1       AXIMUM     45.72       NIMUM     13.41       DUNT     27	12/00 1220 23 28 23 28
Ar 10:09     1230       04/15/99     1231       IM     601.8       PERAGE     22.3       ANDARD DEVIATION     6.8       % CONFIDENCE INTERVAL     2.1       AXIMUM     45.72       NIMUM     13.41       DUNT     27	12/00 1230
M         601.8           IERAGE         22.3           ANDARD DEVIATION         6.8           % CONFIDENCE INTERVAL         2.1           AXIMUM         45.72           NIMUM         13.41           DUNT         27	15/55 1230
IM         601.8           YERAGE         22.3           ANDARD DEVIATION         6.8           % CONFIDENCE INTERVAL         2.1           AXIMUM         45.72           NIMUM         13.41           DUNT         27	15/99 1231
Im         001.0           YERAGE         22.3           ANDARD DEVIATION         6.8           % CONFIDENCE INTERVAL         2.1           AXIMUM         45.72           NIMUM         13.41           DUNT         27	601.8
ERAGE22.3ANDARD DEVIATION6.8% CONFIDENCE INTERVAL2.1AXIMUM45.72NIMUM13.41DUNT27	
ANDARD DEVIATION         6.5           % CONFIDENCE INTERVAL         2.1           AXIMUM         45.72           NIMUM         13.41           DUNT         27	
% CONFIDENCE INTERVAL         2.1           AXIMUM         45.72           NIMUM         13.41           DUNT         27	
AXIMUM         45.72           NIMUM         13.41           DUNT         27	LUNFIDENCE INTERVAL 2.1
NIMUM 13.41 DUNT 27	MUM 45.72
27 DUNT 27	NUM 13.41
	NT 21

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Processed	Oil from	October	1998	- April	1999
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	DATE	BATCH	CHROMIUM	CHROMIUM	DATE	BATCH	CHROMIUM	CHROMIUM
	10/21/98	1151	<5		01/27/99	1198*		
	10/22/98	1152	<5		01/27/99	1199		
	10/27/98	1153	<5		01/27/99	1200	!	1
	10/27/98	1154	<5		02/02/99	1201		
	10/30/98	1155	<5		02/03/99	1202		
	10/30/98	1156	<5		02/04/99	1203	<0.1	0.05
	10/30/98	1157	1.3	1.3	02/08/99	1204		
	10/30/98	1158	1.8	1.8	02/08/99	1205		
	11/04/98	1158A	1.4	1.4	02/11/99	1206		
	11/04/98	1159	1.4	1.4	02/11/99	1207	<0.1	0.05
	11/11/98	1160			02/12/99	1208		
	11/11/98	1161	<5		02/15/99	1209		
	11/11/98	1162	<5		02/18/99	1210		
	11/13/98	1163			02/19/99	1211		
	11/16/98	1164			02/19/99	1212	<0.1	0.05
	11/17/98	1165	<0.1	0.05	03/01/99	1213		
1	11/20/98	1166	<5	<5	03/01/99	1214		
	11/24/98	1167			03/02/99	1215		
	11/24/98	1168			03/02/99	1216	<0.1	0.05
	11/25/98	1169	<0.1	0.05	03/08/99	FEED	3.8	3.8
	11/25/98	1170			03/08/99	1217	<0.1	0.05
	12/02/98	1171			03/17/99	1218		
	12/04/98	1172	<0.1	0.05	03/17/99	1219	<0.1	0.05
	12/05/98	1173			03/22/99	1220	<0.1	0.05
	12/02/98	1174	<0.1	0.05	03/22/99	1221		
	12/08/98	1175			03/24/99	1222		
	12/08/98	1176			03/24/99	1223		
	12/15/98	1177	<0.1	0.05	03/29/99	1224	<0.1	0.05
	12/15/98	1178			03/29/99	1225		
	12/15/98	1179			04/05/99	1226	<0.1	0.05
	12/16/98	1180			04/07/99	1227		
	12/28/98	1181	<0.1	0.05	04/12/99	1228	i 	
	12/28/98	1182			04/12/99	1229	<0.1	0.05
	12/29/98	1183	<0.1	0.05	04/13/99	1230		
	12/30/98	1184			04/15/99	1231		
	12/30/98	1185						
	01/06/99	1186	1		SUM			12.1
	01/05/99	1187	<0.1	0.05	AVERAGE			0.4
	01/08/99	1188			STANDARD	DEVIATION		0.9
	01/08/99	1189	<0.1	0.05	95% CONFIL	DENCE INTE	RVAL	0.3
	01/20/99	FEED	1.3	1.3	MAXIMUM			3.8
	01/14/99	1190	: 		MINIMUM			0.05
	01/14/99	1191	<0.1	0.05	COUNT			27
	01/14/99	1192						
	01/21/99	1193		-				
	01/21/99	1194						
	01/22/99	1195						
	01/22/99	1196	<0.1	0.05				
	01/22/99	1197						

# HOWCO ENVIRONMENTAL SERVICES

Processed Oil from October 1998 - April 1999

	DATE	BATCH	CADMIUM	CADMIUM
	10/21/98	1151	<2	
	10/22/98	1152	<2	
	10/27/98	1153	<2	
	10/27/98	1154	<2	
	10/30/98	1155	<2	
	10/30/98	1156	<2	
	10/30/98	1157	0.4	0.4
	10/30/98	1158	0.3	0.3
	11/04/98	1158A	0.4	0.4
	11/04/98	1159	0.3	0.3
	11/11/98	1160		
	11/11/98	1161	<2	
	11/11/98	1162	<2	1
	11/13/98	1163		
	11/16/98	1164		
	11/17/98	1165	<0.1	0.05
1 A.	11/20/98	1166	<2	
	11/24/98	1167		
	11/24/98	1168	1 1	
	11/25/98	1169	<0.1	0.05
	11/25/98	1170	 	
	12/02/98	1171		<u> </u>
	12/04/98	1172	<0.1	0.05
	12/05/98	1173		
	12/02/98	1174	<0.1	0.05
	12/08/98	1175		:
	12/08/98	1176		
	12/15/98	1177	<0.1	0.05
	12/15/98	1178		<u> </u>
	12/15/98	1179		
	12/16/98	1180		
	12/28/98	1181	<0.1	0.05
	12/28/98	1182	_	
	12/29/98	1183	<0.1	0.05
	12/30/98	1184		
	12/30/98	1185		·····
	01/06/99	1186		
	01/05/99	1187	<0.1	0.05
	01/08/99	1188		
	01/08/99	1189	<0.1	0.05
	01/20/99	FEED	0.2	0.2
	01/14/99	1190		
	01/14/99	1191	<0.1	0.05
	01/14/99	1192		
	01/21/99	1193		
	01/21/99	1194		- • · · · · · · · · ·
	01/22/99	1195		
	01/22/99	1196	<0.1	0.05
	01/22/99	1197		

DATE	BATCH	CÄDMIUM	CADMIUM
01/27/99	1198*		
01/27/99	1199		
01/27/99	1200		
02/02/99	1201		
02/03/99	1202		
02/04/99	1203	<0.1	0.05
02/08/99	1204		
02/08/99	1205		
02/11/99	1206		
02/11/99	1207	<0.1	0.05
02/12/99	1208		
02/15/99	1209		
02/18/99	1210		
02/19/99	1211		
02/19/99	1212	<0.1	0.05
03/01/99	1213		
03/01/99	1214		
03/02/99	1215		
03/02/99	1216	<0.1	0.05
03/08/99	FEED	<0.1	0.05
03/08/99	1217	<0.1	0.05
03/17/99	1218		
03/17/99	1219	<0.1	0.05
03/22/99	1220	<0.1	0.05
03/22/99	1221		
03/24/99	1222		
03/24/99	1223		
03/29/99	1224	<0.1	0.05
03/29/99	1225		
04/05/99	1226	<0.1	0.05
04/07/99	1227		
04/12/99	1228		
04/12/99	1229	<0.1	0.05
04/13/99	1230		
04/15/99	1231		
SUM			2.7
AVERAGE			0.1
STANDARD	DEVIATION		0.1
95% CONFI	DENCE INTE	RVAL	0.031
MAXIMUM			0.4
MINIMUM			0.05
COUNT			27

VCO ENVIRONMENTAL SERVICES TOTAL ARSENIC CONCENTRATIO

Processed Oil from October 1998 - April 1999

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DATE	BATCH	ARSENIC	ARSENIC
10/21/98	1151		
10/22/98	1152		
10/27/98	1153		
10/27/98	1154		
10/30/98	1155	<0.22	0.11
10/30/98	1156	<1	
10/30/98	1157	<1	· · · · · · · · · · · · · · · · · · ·
10/30/98	1158	<1	
11/04/98	1158A	<1	
11/04/98	1159		
11/11/98	1160		
11/11/98	1161		
11/11/98	1162		!
11/13/98	1163		
11/16/98	1164	1	•
11/17/98	1165	<0.1	0.05
11/20/98	1166		
11/24/98	1167		1
11/24/98	1168		
11/25/98	1169	<0.1	0.05
11/25/98	1170		
12/02/98	1171	1	
12/04/98	1172	<0.1	0.05
12/05/98	1173	:	
12/02/98	1174	<0.1	0.05
12/08/98	1175		1
12/08/98	1176		1
12/15/98	1177	<0.1	0.05
12/15/98	1178		1
12/15/98	1179		
12/16/98	1180		
12/28/98	1181	<0.1	0.05
12/28/98	1182		
12/29/98	1183	<0.1	0.05
12/30/98	1184	1	
12/30/98	1185		
01/06/99	1186		
01/05/99	1187	<0.1	0.05
01/08/99	1188		
01/08/99	1189	<0.1	0.05
01/20/99	FEED	<0.1	0.05
01/14/99	1190		
01/14/99	1191	<0.1	0.05
01/14/99	1192	• • ••••••••••••••••••••••••••••••••••	
01/21/99	1193		
01/21/99	1194		
01/22/99	1195		
01/22/99	1196	<0.1	0.05
01/22/99	1197		

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DATE	BATCH	ARSENIC	ARSENIC
01/27/99	1198*		
01/27/99	1199		
01/27/99	1200		
02/02/99	1201		
02/03/99	1202		
02/04/99	1203	<0.1	0.05
02/08/99	1204		
02/08/99	1205		
02/11/99	1206		
02/11/99	1207	<0.1	0.05
02/12/99	1208		
02/15/99	1209		
02/18/99	1210		
02/19/99	1211		
02/19/99	1212	<0.1	0.05
03/01/99	1213		
03/01/99	1214		
03/02/99	1215		
03/02/99	1216	<0.1	0.05
03/08/99	FEED	2.3	2.3
03/08/99	1217	<0.1	0.05
03/17/99	1218		
03/17/99	1219	<0.1	0.05
03/22/99	1220	<0.1	0.05
03/22/99	1221		:
03/24/99	1222		
03/24/99	1223		
03/29/99	1224	<0.1	0.05
03/29/99	1225		
04/05/99	1226	<0.1	0.05
04/07/99	1227		
04/12/99	1228	1	
04/12/99	1229	<0.1	0.05
04/13/99	1230	1	·
04/15/99	1231		
	. <u>.</u>		
SUM			3.5
AVERAGE			0.1
STANDARD	DEVIATION		0.5
95% CONFI	DENCE INTE	RVAL	0.170
MAXIMUM		:	2.3
MINIMUM			0.05
COUNT			24

<1998-9 PROCESSED OIL-2>

PREPARED BY ENVIRONEERING, INC.

# HOWCO ENVIRONMENTAL SERVICES

FLASH POINT

Processed Oil from October 1998 - April 1999

DATE	BATCH	FLASH PT.	FLASH PT.
10/21/98	1151	>140	
10/22/98	1152	>140	
10/27/98	1153	>140	
10/27/98	1154	>140	
10/30/98	1155	130	130
10/30/98	1156	>140	
10/30/98	1157	>140	
10/30/98	1158	>140	
11/04/98	11584	>140	1
11/04/98	1159	>140	
11/11/98	1160	>140	
11/11/08	1161	>140	
11/11/08	1162	>140	
11/17/08	1163	>140	
11/13/90	1164	>140	
11/10/90	4466	102	198
11/1//98	4466	130	130
11/20/98	1100	>140	
11/24/90	1107	>140	
11/24/90	4460	179	178
11/25/98	4470	425	125
11/25/98	4474		155
12/02/98	11/1	>140	493
12/04/98	11/2	182	162
12/05/98	1173	>140	400
12/02/98	1174	192	192
12/08/98	1175	>140	
12/08/98	1176	115	115
12/15/98	1177	198	198
12/15/98	1178	>140	:
12/15/98	1179	>140	
12/16/98	1180	>140	
12/28/98	1181	205	205
12/28/98	1182	>140	
12/29/98	1183	200	200
12/30/98	1184	>140	
12/30/98	1185	>140	
01/06/99	1186	>140	
01/05/99	1187	205	205
01/08/99	1188	>140	
01/08/99	1189	205	205
01/20/99	FEED	>100	
01/14/99	1190	>100	
01/14/99	1191	205	205
01/14/99	1192	>100	<u></u> .
01/21/99	1193	>100	
01/21/99	1194	>100	
01/22/99	1195	>100	
01/22/99	1196	205	205
01/22/99	1197	>100	

DATE	BATCH	FLASH PT.	FLASH PT.
01/27/99	1198*		1
01/27/99	1199	>100	
01/27/99	1200	>100	
02/02/99	1201	>100	
02/03/99	1202	>100	
02/04/99	1203	205	205
02/08/99	1204	>100	
02/08/99	1205	>100	
02/11/99	1206	>100	
02/11/99	1207	205	205
02/12/99	1208	>100	
02/15/99	1209	>100	>100
02/18/99	1210	>100	
02/19/99	1211	>100	
02/19/99	1212	205	205
03/01/99	1213	>100	
03/01/99	1214	>100	•
03/02/99	1215	>100	
03/02/99	1216	205	205
03/08/99	FEED	>100	
03/08/99	1217	205	205
03/17/99	1218	>100	
03/17/99	1219	205	205
03/22/99	1220	205	205
03/22/99	1221	>100	· · · · · · · · · · · · · · · · · · ·
03/24/99	1222	>100	
03/24/99	1223	>100	:
03/29/99	1224	200	200
03/29/99	1225	>100	
04/05/99	1226	205	205
04/07/99	1227	>100	
04/12/99	1228	>100	·
04/12/99	1229	186	186
04/13/99	1230	>100	
04/15/99	1231	>100	
<u></u>			4579 0
AVEDACE			190.8
STANDAPD			26.1
95% CONEN		RVAL	8.706
MAXIMIIM			205
MINIMUM			115
COLINT			24
11			

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# HOWCO ENVIRONMENTAL SERVICES

POLYCHLORINATED BIPHENOL

Processed Oil from October 1998 - April 1999

DATE	BATCH	PCB's	PCB's	DATE
10/21/98	1151			01/27/9
10/22/98	1152			01/27/9
10/27/98	1153			01/27/9
10/27/98	1154			02/02/9
10/30/98	1155	<0.005	<0.005	02/03/9
10/30/98	1156	<0.2	0.1	02/04/9
10/30/98	1157	<0.2	0.1	02/08/9
10/30/98	1158	<0.2	0.1	02/08/9
11/04/98	1158A			02/11/9
11/04/98	1159			02/11/9
11/11/98	1160			02/12/9
11/11/98	1161			02/15/9
11/11/98	1162			02/18/9
11/13/98	1163			02/19/9
11/16/98	1164	1		02/19/
11/17/98	1165	<0.5	0.25	03/01/
11/20/98	1166			03/01/
11/24/98	1167			03/02/
11/24/98	1168			03/02/
11/25/98	1169	<0.5	0.25	03/08/
11/25/98	1170			03/08/
12/02/98	1171			03/17/
12/04/98	1172	<0.5	0.25	03/17/
12/05/98	1173		<u> </u>	03/22/
12/02/98	1174	<0.5	0.25	03/22/
12/08/98	1175			03/24/
12/08/98	1176			03/24/
12/15/98	1177	<0.5	0.25	03/29/
12/15/98	1178			03/29/
12/15/98	1179			04/05/
12/16/98	1180			04/07/
12/28/98	1181	<0.5	0.25	04/12/
12/28/98	1182	1		04/12/
12/29/98	1183	<0.5	0.25	04/13/
12/30/98	1184	1		04/15/
12/30/98	1185			
01/06/99	1186			SUM
01/05/99	1187	<0.5	0.25	AVERA
01/08/99	1188			STAND
01/08/99	1189	<0.5	0.25	95% CC
01/20/99	FEED	<0.5	0.25	MAXIM
01/14/99	1190			MINIMU
01/14/99	1191	<0.5	0.25	COUNT
01/14/99	1192			
01/21/99	1193			
01/21/99	1194	· •••• · · · · · · · · · · · · · · · ·	- · ·	
01/22/99	1195			-
01/22/99	1196	<0.5	0.25	
	4407			

DATE	BATCH	PCB's	PCB's	
01/27/99	1198*			and the second
01/27/99	1199			
01/27/99	1200			
02/02/99	1201			
02/03/99	1202	· · · · · · · · · · · · · · · · · · ·		
02/04/99	1203	<0.5	0.25	
02/08/99	1204			
02/08/99	1205			
02/11/99	1206	1		
02/11/99	1207	<0.5	0.25	
02/12/99	1208			
02/15/99	1209			
02/18/99	1210			
02/19/99	1211			
02/19/99	1212	<0.5	0.25	
03/01/99	1213			
03/01/99	1214			
03/02/99	1215			
03/02/99	1216	<0.5	0.25	
03/08/99	FEED	<0.5	0.25	
03/08/99	1217	<0.5	0.25	
03/17/99	1218			
03/17/99	1219	<0.5	0.25	
03/22/99	1220	<0.5	0.25	-
03/22/99	1221			_
03/24/99	1222			
03/24/99	1223			
03/29/99	1224	<0.5	0.25	-
03/29/99	1225			-
04/05/99	1226	<0.5	0.25	
04/07/99	1227			_
04/12/99	1228	· · · · · · · · · · · · · · · · · · ·		
04/12/99	1229	<0.5	0.25	_
04/13/99	1230			_
04/15/99	1231		1	-
SUM			6.1	-1
AVERAGE			0.233	
STANDARD	DEVIATION		0.049	-
95% CONFI	DENCE INTE	RVAL	0.016	
MAXIMUM			0.25	
MINIMUM			0.1	
COUNT			26	
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		INTAKE #: 5183	571
Sanders			· .
oborotories	Project Name:	HOWCO/Weekly Water	
	<b>Project Location:</b>	Oct. comp. (1.0299g)	
Environmental Testing Services	Job ID:		
	Sample Supply:	Oil	
Date: 24-Nov-98	Collector:	Client	
HOWCO Environmental Services	Sample Received Date/Time:	11/4/98 11:00	
3701 Central Ave.			

Lab ID Sample ID Type Sample Date/Time

St. Petersburg, FL 33713-

Analysis	Method	Result	D. L.	Unit	Analysis Date/Time	LabID:
N987512 Oct. Comp. COMP 11/4/98						
Arsenic	EPA 206.2	<0.22	0.22	mg/kg	11/5/98	E84380
Aroclor-1016	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1221	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1232	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1242	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1248	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1254	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1260	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1262	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079
Aroclor-1268	EPA 8082	<5.0	5.0	ug/kg	11/12/98	E83079

Approved by:

Debra Sanders Laboratory Director

B- 1155 J-128

Comments:

1998

### IIRS Certification#'s 84352 and E84380(Nokomis) 85449 and E85457(Ft. Myers)

Rpt form #7; Rev 1/1/96



### **CERTIFICATE OF ANALYSIS**

Sec. Car

**INVOICE** No.: 12460 19403 P.O. No.: 9811-380 LAB REFERENCE No.: PROCESSE ON SPEC OIL TK # 126 **PRODUCT ID.:** DATE RECEIVED: 11-20-98 AUTHORIZED BY: RICHARD McDONNIE

Flash point, S	.W. 1010, °F	1	198
Total Haloger	n, PPM D-808		927.8
PCB's, PPM	S.W.8080		ND

#### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	17.33

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### **DETECTION LIMITS, PPM**

PCB's: 0.5 Metals: 0.10 Halogen: 1.0

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**ND = NONE DETECTED** 

T-176 B. 1165

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

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## PRECISION PETROLEUM LABS, INC.

### **CERTIFICATE OF ANALYSIS**

 INVOICE No.:
 12478

 P.O. No.:
 19403

 LAB REFERENCE No.:
 9811-488

 PRODUCT ID.:
 ON SPEC # 5 BURNER FUEL TK # 125

 DATE RECEIVED:
 11-30-98

 AUTHORIZED BY:
 RICHARD McDONNIE

Flash point, S.W. 1010, °F	 178
Total Halogen, PPM D-808	728.5
PCB's, PPM S.W.8080	ND

### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	NĎ
Lead S.W. 7420	18.17

### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

ND = NONE DETECTED

PRECISION PETROLFUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS. OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

# PRECISION PETROLEUM LABS, INC.

### **CERTIFICATE OF ANALYSIS**

INVOICE No.: P.O. No.: LAB REFERENCE No.: PRODUCT ID.: DATE RECEIVED: AUTHORIZED BY:

12478 19403 9812-015 ON SPEC # 5 BURNER FUEL TK # 129 12-1-98 RICHARD McDONNIE

Flash point, S.W. 1010, °F	 182
Total Halogen, PPM D-808	651.8
PCB's, PPM S.W.8080	ND

#### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	20.12

#### DETECTION LIMITS, PPM

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

T-129 13.1172

PRECISION PETROLLUM LABS, INC 'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

# PRECISION PETROLEUM LABS, INC.

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### **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12510
P.O. No.:	
LAB REFERENCE No.:	9812-171
PRODUCT ID.:	ON SPEC # 5 FUEL TANK # 128
DATE RECEIVED:	12-9-98
AUTHORIZED BY:	TIM HAGAN

Flash point, S.W. 1010, °F	 192
Total Halogen, PPM D-808	833.6
PCB's, PPM S.W.8080	ND
TOTAL HEAVY METALS, PPM	
Arsenic S.W. 7061	ND

rsenic S.W. 7061	ND
admium S.W. 7131	ND
hromium S.W. 7190	ND
ead S.W. 7420	19.41
admium S.W. 7131 Chromium S.W. 7190 Lead S.W. 7420	NI NI 19

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

T-1280 B 1174

ND = NONE DETECTED

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT ··· • • ···

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### PRECISION PETROLEUM LABS, INC.

### **CERTIFICATE OF ANALYSIS**

INVOICE No .:	12543
P.O. No.:	
LAB REFERENCE No.:	9812-290
PRODUCT ID.:	TK 128 ON SPEC # 5 BURNER FUEL
DATE RECEIVED:	12-17-98
AUTHORIZED BY:	ΤΙΜ ΗΑGAN

Flash point, S.W. 1010, °F		198
Total Hulogen, PPM D-808		821.6
PCB's, PPM S.W.8080	100 million -	ND

#### TOTAL HEAVY METALS, PPM

ND
ND
ND
18.12

#### DETECTION LIMITS, PPM

PCB's : 0.5 Metals: 0.10 Halogen: 1.0

ND = NONE DETECTED

T-128 B-1177

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PRECISION PETROLEUM LABS, INC 'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

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### **PRECISION PETROLEUM LABS, INC.**

### **CERTIFICATE OF ANALYSIS**

INVOICE No.:	
P.O. No.:	
LAB REFERENCE No.:	
PRODUCT ID.:	
DATE RECEIVED:	
AUTHORIZED BY:	

**..**.

12583 19403 9812-468 TANK 128 IN SPEC # 5 BURNER FUEL 12-30-98 TIN HAGAN

Flash point, S.W. 1010, °F	205
Total Halogen, PPM D-808	685.2
PCB's, PPM S.W.8080	ND
TOTAL HEAVY METALS, PPM	·
Arsenic S.W. 7061	NĎ
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	19.15

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

ND = NONE DETECTED

1,128 1181. ~. 1181.

PRECISION PETROLEUM LABS, INC 'S RESPONSIBILITY FOR THE ABOVE ANALYSIS. OPINIONS OK INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT

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## PRECISION PETROLEUM LABS, INC.

### **CERTIFICATE OF ANALYSIS**

INVOICE No.: P.O. No.: LAB REFERENCE No.: PRODUCT ID.: DATE RECEIVED: AUTHORIZED BY: 12583 19403 9812-467 TANK 126 IN SPEC # 5 BURNER FUEL 12-30-98 TIN HAGAN

Flash point, S.W. 1010, °F	200
Total Halogen, PPM D-808	730.1
PCB's, PPM S.W.8080	ND
TOTAL HEAVY METALS, PPM	•
Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	16.98

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

7-126 1123 B. 1123

PRECISION PETROLEUM LABS, INC 'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

# PRECISION PETROLEUM LABS, INC.

### CERTIFICATE OF ANALYSIS

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INVOICE No .:	12602
P.O. No.:	
LAB REFERENCE No.:	9901-030
PRODUCT ID.:	TANK 129 ON SPEC # 5
DATE RECEIVED:	1-5-99
AUTHORIZED BY:	TIM HAGAN

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Flash point, S.W. 1010, °F		205
Total Halogen, PPM D-808		851.5
PCB's, PPM S.W.8080	and a second	ND

### TOTAL HEAVY METALS, PPM

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Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	25.18

### **DETECTION LIMITS, PPM**

PCB's: 0.5 Metals : 0.10 Halogen: 1.0

ND = NONE DETECTED

B 1187 T-129



PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

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# PRECISION PETROLEUM ABS, INC.

## CERTIFICATE OF ANALYSIS

INVOICE No.:	12621
P.O. No.:	019403
LAB REFERENCE No.:	9901-150
PRODUCT ID.:	HOWCO # 127
DATE RECEIVED:	1-12-99
AUTHORIZED BY:	MICHAEL PHAM

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Flash point, S.W. 1010, °F	205
Total Halogen, PPM D-808	 812.1
PCB's, PPM S.W.8080	ND

#### TOTAL HEAVY METALS, PPM

ND
ND
ND
17.55

### DETECTION LIMITS, PPM

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

#### ND = NONE DETECTED

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.



Page: Page 1 of 1 Client #: TAM-97-100315 Date: 02/02/99 HOWCO Environmental Services Address: Log #: L33617-1 3701 Central Avenue St. Petersburg, FL 33713 Attn: Michael Ty Pham

Label: Tank 137 Sample Description: Date Sampled: 01/20/99 Time Sampled: 08:00 Date Received: 01/21/99 Tank 137 Burner Feed Collected By: Client

Parameter	Results	Units	Method	Reportable Limit	Extr. Date	Analysis Date	Analyst
Metals Arsenic	BDL	mg/kg (ww)	Parr/6010	1.0	02/01	02/01	PVP
Polychlorinated Sithenyls							
PCB 1016	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
PCB 1221	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
DCB 1232	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
PCB 1747	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
PCB 1748	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
PCD 1240	BDL	mg/kg	3550/8080	1.0	01/26	01/26	DM
	BDI.	mg/kg	3550/8080	1.0	01/26	01/26	DM
Dilution Factor	1.0	···· • • • • •	3550/8080		01/26	01/25	DM

BDL - Below Reporting Limita

· Compounds are Screened Only, with an estimated detection limit. All analyses were performed using EPA, ASTM, USGS, or Standard Methods. All analyses were performed within EPA holding times unless otherwise noted. Analyses are reported in dry weight unless otherwise indicated by units.

QA24 900376	KRS# E95240.35356	NC CERT# 444
SUB HRS# 86122.86109.886048	ADEM ID# 40850	RI CERT# 191
SC CERT# 96031001	TN CERT# C2985	CT CERT# PH-0122
ELPAT# 13901	GA CERT# 917	MA CERT# M-FL449
VA CERT# CC395	USDA Soil Permit# S-3	5240

Respectfu

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66.11

: 2 17.17

Steve Walton Client Mechnical Svcs. Manager B# (see

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US Biosystems 3231 NW 7th Avenue Boca Raton, FL 33431 (888)862-5327 FEED 1189/190

1°6 - 25, Cr= 1.3

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15 NO NIA	AND ON ALL VILLING	Intersection of the states of	Matrix Codes',	FF Effluent Water SL Studge FF Effluent SO Soil Sediment FFW Asalyte Free H,O AQ Aqueous	WW Matter Mer Prefrokeum VI Diuking Watter D Other U Surface Watter O Other Fraueryiofri	A. None G. Na25203 B. HN03 H. NaH504 C. H2804 I. ICe	D. NaOH J. MCAA E. HCL O. Other F. MeOH DEAAARKS										c States Cétuln atta tas equireul	3231 N.W. 7th Avenue	Boca Raton, FL 33431	962-LABS	888-456-4846 Fax 561-447-6136 Fax	_ <b>c.o.c.</b> # 500469
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# **PHOCISION PETROLEUM**LABS, INC.

### CERTIFICATE OF ANALYSIS

		A 14 1	14 A A A A A A A A A A A A A A A A A A A	 
INVOICE No.:	124643			s
P.O. No.:				
LAB REFERENCE No.:	9901-246			
PRODUCT ID.:	PROCESS OIL # 128	,		
DATE RECEIVED:	1-19-99	-		
AUTHORIZED BY:	MICHAEL PHAM			

Flash point, S.W. 1010, °F	 205
Total Halogen, PPM D-808	702.3
PCB's, PPM S.W.8080	ND

### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	18.12

### DETECTION LIMITS, PPM

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

#### **ND = NONE DETECTED**

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

BNI

### **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12668
P.O. No.:	
LAB REFERENCE No.:	9901-356
PRODUCT ID.:	PROCESS OIL
DATE RECEIVED:	1-26-99
AUTHORIZED BY:	MICHAEL PHAM

205
42.66
819.1
ND

#### **TOTAL HEAVY METALS, PPM**

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	21.94

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

#### **ND = NONE DETECTED**

8 # 119 -T- 128

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PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT

196

# PRECISION PETROLEUM LABS, INC.

### **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12721	
P.O. No.:		
LAB REFERENCE No.:	9902-124	
PRODUCT ID.:	WEEKLY PROCESS OIL (2/8-2/12)	T-129
DATE RECEIVED:	2-8-99	
AUTHORIZED BY:	MICHAEL PHAM	

- ...

Flash point, S.W. 1010, °F	205
Total Halogen, PPM D-808	798.1
PCB's, PPM S.W.8080	ND
TOTAL HEAVY METALS, PPM	•
Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	19.15

### DETECTION LIMITS, PPM

PCB's: 0.5 Metals: 0.10 Haiogen: 1.0

ND - NONE DETECTED

PRECISION PETROLEUM LARS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

101703
# **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12748	
P.O. No.:		
LAB REFERENCE No.:	9902-201	
PRODUCT ID.:	PROCESS OIL (2/15-2/19)	T-128
DATE RECEIVED:	2-12-99	
AUTHORIZED BY:	MICHAEL PHAM	

 Flash point, S.W. 1010, °F
 205

 Total Halogen, PPM D-808
 621.8

 PCB's, PPM S.W.8080
 ND

#### TOTAL HEAVY METALS, PPM

ND
ND
ND
28.36

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

3500 EAST T.C. JESTER, SUITE E HOUSTON, TX. 77018 PH. 713-680-9425 FAX: 713-680-9564

# **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12774
P.O. No.:	
LAB REFERENCE No.:	9902-341
PRODUCT ID.:	# 5 BURNING OIL T-129
DATE RECEIVED:	2-22-99
AUTHORIZED BY:	MICHAEL PHAM

Flash point, S.W. 1010, °F	205
Total Halogen, PPM D-808	781.6
PCB's, PPM S.W.8080	ND
<u>TOTAL HEAVY METALS, PPM</u>	
Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	17.11

## **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.  $\beta_1 \neq 0$ 

# **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12810
P.O. No.:	
LAB REFERENCE No.:	9903-033
PRODUCT ID.:	# 5 BURN
DATE RECEIVED:	3-2-99
AUTHORIZED BY:	MICHAEI

9903-033 # 5 BURNER FUEL T-126 3-2-99 MICHAEL PHAM

Flash point, S.W. 1010, °F Total Halogen, PPM D-808 PCB's, PPM S.W.8080	205 865.9 ND
TOTAL HEAVY METALS, PPM	
Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	25.87

**DETECTION LIMITS, PPM** 

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

13/12



Page: Page 1 of 1 Client #: TAM-97-100315 Date: 03/17/99 HOWCO Environmental Services Address: Log #: L34537-1 3701 Central Avenue St. Petersburg, FL 33713 Attn: Michael Ty Pham

Label: Burner Feed Sample Description: Date Sampled: 03/03/99 Time Sampled: 00:00 Date Received: 03/12/99 L34360-1 Collected By: Client Reportable Extr. Analysis Date Analys Limit Date Mathad . . . .

Parameter	Results	UNICE	, Me Luou	2 t	2000		-
Netala			Barr/6010	0 80	03/16	03/16	PVP
Arsenic	2.3	mg/kg (ww)	Partyburu	0.00	••,=-		

BDL - Below Reporting Limits

\* Compounds are Screened Only, with an estimated detection limit.

All analyses were performed using EPA, ASIM, USGS, or Standard Methods.

All analyses were performed within EPA holding times unless otherwise noted.

Analyses are reported in dry weight unless otherwise indicated by units.

CAP# 900376	HRS# E86240,86356	NC CERT# 444
SUB HRS# 86122,86109,E86048	ADEM 10# 40850	RI CERT# 191
SC CERT# 96031001	TN CERT# 02985	CT CERT# PH-0122
ELPAT# 13801	GA CERT# 917	MA CERT# M-FL449
VA CERT# 00395	USDA Soil Permit# S-3	5240

Respectfully submitted,

M. Simons

Laboratory Director

I this SAMPLE The SAMPLE The SAME THEN IS 10/1217 PETROLEUM UTBANANT SES US Biosystems 3231 NW 7th Avenue Boca Raton, F. FEED 1216/1217

	•	د ر	2 114	L	5	i C U	Y NK	いい	R				Sample	ss INTACT upon arrival?	AN NU NA
	#20	い	1360			ŋQu	ote#		:				Receive PROPE	ad ON WET (CE? Tump) IL PRESERVATIVES indicated? 	
	6)	5		مبرم الشع								3		XDY SEALS INTACT? FILLS rev'd W/OUT HEADSPAC OMTABLEDS wood?	
Equinonmenta	Od	8	WNDE		P.C									Matrix Co	des*
Itcal AVE				B	20								es	Solid Waste Ol Crownd Water SL	Oli Sludge
Nate FL 219 33	713											NJ.	223	Effluent N Analyte Free H,O AC V Wasle Water NJ	Soll Sediment Aqueous Nonaqueous
1	CF "xe		3FF-82		2875			-					83 8	/ Drinking Water PE Surface Water 0	Petroloum Other Meake specify
ccchil	Prc	#	137		192							pha	A	Pres/Cod	Les Nazszoj
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	Nav.	±J		99.8	121	<u> </u>					~ ~	21	9	561-447-61	46 Fax 36 Fax
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**USBIOSYSTEMS** 



# **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12841
P.O. No.:	
LAB REFERENCE No.:	9903-181
PRODUCT ID.:	# 5 BURNING OIL T-125
DATE RECEIVED:	3-10-99
AUTHORIZED BY:	MICHAEL PHAM
	QUART GLASS

Flash point, S.W. 1010, °F	205
Total Halogen, PPM D-808	783.4
PCB's, PPM S.W.8080	ND

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#### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	. ND
Lead S.W. 7420	18.02

# **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

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**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.



B#1217 T-125

# **CERTIFICATE OF ANALYSIS**

INVOICE No.:	12846
P.O. No.:	
LAB REFERENCE No.:	9903-186
PRODUCT ID.:	OIL SAMPLE 608,615 Tank 128
DATE RECEIVED:	3-11-99
AUTHORIZED BY:	MICHAEL PHAM

Flash point, S.W. 1010, °F		205
Total Halogen, PPM D-808		178.3
PCB's, PPM S.W.8080	•	ND

# TOTAL HEAVY METALS, PPM

Arsenic S.W 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	17.98

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 



PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.



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# **CERTIFICATE OF ANALYSIS**

ND

ND

ND

20.18

INVOICE No.:	12881
P.O. No.:	
LAB REFERENCE No.:	9903-367
PRODUCT ID.:	# 5 BURNING OIL T-123
DATE RECEIVED:	3-23-99
AUTHORIZED BY:	MICHAEL PHAM

Flash point, S.W. 1010, °F		205
Total Halogen, PPM D-808		932.8
PCB's, PPM S.W.8080	,	ND

# TOTAL HEAVY METALS, PPM Arsenic S.W. 7061 Cadmium S.W. 7131

Chromium S.W. 7190 Lead S.W. 7420

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

ND = NONE DETECTED

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

# **CERTIFICATE OF ANALYSIS**

 INVOICE No.:
 12905

 P.O. No.:
 18813

 LAB REFERENCE No.:
 9903-487

 PRODUCT ID.:
 # 5 BURNING OIL T-123

 DATE RECEIVED:
 3-30-99

 AUTHORIZED BY:
 MICHAEL PHAM

Flash point, S.W. 1010, °F200Total Halogen, PPM D-808764.7PCB's, PPM S.W.8080ND

#### TOTAL HEAVY METALS, PPM

 Arsenic S.W. 7061
 ND

 Cadmium S.W. 7131
 ND

 Chromium S.W. 7190
 ND

 Lead S.W. 7420
 18.96

#### **DETECTION LIMITS, PPM**

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

3500 EAST T.C. JESTER, SUITE E HOUSTON, TX. 77018 PH. 713-680-9425 FAX: 713-680-9564

# **CERTIFICATE OF ANALYSIS**

12934
18812
9904-070
TANK # 124 BURNING FUEL (OIL)
4-6-99
MICHAEL PHAM

	*	* · · · · · · ·
Flash point, S.W. 1010, °F		205
Total Halogen, PPM D-808		781.9
PCB's, PPM S.W.8080		ND

#### TOTAL HEAVY METALS, PPM

Arsenic S.W. 7061	ND
Cadmium S.W. 7131	ND
Chromium S.W. 7190	ND
Lead S.W. 7420	45.72

#### DETECTION LIMITS, PPM

PCB's : 0.5 Metals : 0.10 Halogen : 1.0

**ND = NONE DETECTED** 

PRECISION PETROLEUM LABS, INC.'S RESPONSIBILITY FOR THE ABOVE ANALYSIS, OPINIONS OR INTERPRETATIONS IS LIMITED TO THE INVOICE AMOUNT.

B1226

1500 EAST T.C. JL STER, SUITE E

HOUSTON, TX. 77013

PH. 713-680-9425 FAX: 713-680-9564

# ATTACHMENT B

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HOWCO DATA SUBMITTAL

**SUBMITTED 10/9/98** 



Page 4-7 October 9, 1998 Revision 0

# TABLE 4-4

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# STATISTICAL DATA FOR PROCESSED OIL ANALYSIS

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Processed
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HOWCO Financental Services

An	alvte/Property		Arsenic	Cedmium		Lead	I DI		11.112								1 0 1.1
-			In ppm	in ppm	mqq n	in ppm	in ppm	ц. Е	In % (w/w)	in ppm	index	in kg/L	In kBTU/Gal	(V) % UI	(VV) % U	IN SEC.	WM R LI
e # Da	te	atch no.															
	12/01/93	120101								<0.05 <							
2	12/01/93	120102								< 0.05							
	12/16/93	121601								< 0.05							
	12/16/93	121602								< 0.05						220	
	11/30/94 M	11194	0.47	0.78	2.02	34.5	650	169	0.32	<2 <2	27.2	0.8972	139	4	7.0	2/2	
	01/27/95 M	1195	< 5	<2	< 2.5	28.4	648	188	0.28	< 0.02	28.3	0.8850	134		5.02	8	
	02/27/95 M	1295	× 1.00	<ul><li>1.00</li></ul>	< 2.00	< 0.5	591	140	0.36	< 6.0	27.4	0.8903	138	23	0.1		
-	M 26/06/20	1395	×1.8	<1.00	< 2.00	50.20	623	140	0.56	< 6.0	26.9	0.8930	<del>1</del> 64	1.7	0.1		
	05/30/95 M	595	×18	1.43	< 2.00	35.00	711	140	0.12	< 6.0	27.9	0.8910	135	0.2	0.2		
-	07/07/95 M	1695	×18	×18	< 200	33.00	712	140	0.07	< 6.0	28.8	0.8827	135	2.0	0.3		
	08/17/95 M	1795	× 1 00	133	< 2.00	39.80	344	140	0.05	< 6.0	27.9	0.8872	135	0.3	0.2		
	M 36/60/60	1895	×	×18	< 2 00	42.00	532	140	0.08	< 6.0	27.8	0.8896	136	0.2	0.2		
B	0100060	R11A	v 1 80	×18	< 2.00	56,50	488	140	0.07	< 6.0	27.8	0.8895	132	0.9	0.0		
) h	01/16/06	K137	8	×100	< 2 00	44.00	366	140	0.04	< 6.0	27.9	0.8775	134	0.5	0.0		
	mine los	K127	< 1 00	4.0	< 200	26.50	488	140	0.05	< 6.0	27.7	0.8895	135	0.0	0.2		
-		1305	38	38	2 W	56.00	545	140	0.15	< 6.0	28.0	0.8913	136	1.4	0.2		
ן 		100	3	2		3	2002	140			27.6	0.8947	-	1.4	0.2		
		100					600	4			26.5	0.8956		0.0	0.4		
		200					600	140			27.1	0.8921		0.8	0.2		
		<b>GAG</b>					002	140			26.9	0.8933		0.4	0.4		
	000000	Ca7					200	140			27.1	0.8927		2.0	0.8		
	USUSCIED -	69					002	140			27.8	0.8956		4.0	0.6		
	U2D5/08	689					006	140			26.3	0.8967		4.0	0.6		
	047706	697					800	140			26.7	0.8944		3.2	0.4		
	03728/96	693					800	140			26.8	0.8942		1.2	0.8		
	96/62/20	694					800	140			26.9	0.8933		1.0	<b>c</b> :0		
	04/04/96	701					650	140	0.43		27.3	0.8910		0.6	40		
	04/04/96	702					750	140	0.41		27.3	0.8910		0.0	0,1		
6	04/08/96	705					069	140	0.40		26.5	0.8956		0.5	0,0		
	04/16/96	710					711	4	0.38		27.1	0.8921		0.0	0.0 0		
5	04/24/96	712					752	140	0.33		27.8	0.8885		8.0	1.0		
	04/25/96	713					932	140	0.35		27.0	0.8927		0:1	7.0		
2	05/02/96 N	1596	< + <	<1	5	51				Ş					00		
-	05/14/96						913	140	0.41		27.6	0.8893			0.9		
	05/22/96	727					848	140	0.41		27.8	0.8882			2.0		
ļ 	05/24/96	621					889	140	0.40		27.7	0.6888			4 0		
<u> </u>	05/24/96	730					ğ	140	0.41		27.6	0.8893			4 7		
	05/29/96	732					511	140	0.41		21.0	0.0344		2.0	00		
	05/29/96	167				, , ,	448	140	8.0 	~	71.0	+hco.0		5	;		
ч,	06/04/96 N	M696	•	~	7	8	186	140	0 40	/ / 	28.8	0.8827		0.5	0.1		
	06/11/00	744					000	140	0.43		28.3	0.8855		0.6	0.1		
	06/11/00	1972					332	140	0.43		27.2	0.8916		1.4	0.1		
	96/1/90	747					389	140	0.43		28.0	0.6871		0.7	0.1		
	06/17/96	748					300	140	0.41		27.5	0.8899		1.6	0.2		
9	06/26/96	753					450	140	0.41		27.3	0.8910		4	0.0		
6	06/26/96						183	40	0.43		27.7	0.8868			20		
6	06/1/96	751					338	40			21.4	0.0300		00			
<b>9</b>	06/21/96	752									273	0,8910		1.6	0.1		
	06/02/00	1705	V	•	6	73	33	2		~ ~							
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06/02/98

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# Statistical data analysis of Processed Oil

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HOWCO Environmental Services

		1	مامديم	Cadmb m	Chromburn	l ead	Tot Hatooens	Flash Point	Sulfur	PCB's A	PI @ 60F	3.G. @ 60F H	eat of Comb.	Vater	Sediment	Viscosity @100F	Ash i- er / I.i.
	AnalyterProperty		in ppm	in ppm	In ppm	In ppm	mqq ni	'nΕ	In % (w/w)	mqq n	Index	h kg/	In kBTU/Gal	(V) % U	(V) % LI	III Sec	MIM OF LI
mple #	Date	Bacth no.									375	0 RROO		0.5	0.4		
521-3	07/03/96	755					450	140	14.0		6.12	0.8910		12	0.2		
(-126	07/02/96	756					3	041	C#:D		27.5	D BROG		15	0.1		
<-127	07/02/96	757					8	041	1.20	ł	0.12	C BARO		06	0.2		
<-121	96/60/20	759					827	140	10.0		6 L C	0.0016		16	0.2		
<-129	96/60/20	760					066	140	200		215	0.000		1.0	0.4		
<-127	07/12/96	761					562	140	70.0		0.12			20	10		
(-121	07/15/96	762					653	9	10.0		21.5	2000		22	0.8		
<-129	07/15/96	763					719	140	75.0		• •			20	10		
K-121	07/17/96	764					622	4	10.0		1.12			24	05		
K-121	07/18/96						902	140	10.0		0 17			24	0.8		
K-127	02/119/96	766					88 8	140	200		27.5			8 4	0.8		
K-121	07/23/96	769					678	140	10.0		5.12	2000		2 4	0.8		
(127	96/2/10	770					564	140	0.52		4.12	0.000		2	1 2		
K. 33	07/26/96	771					684	140	0.49		0.12	0.0000		a	1.0		
	07/00/20	C11					849	130	0.50		6.12	1/9970		0.0			
	9017010	777				_	879	140	0.51		27.6	0.8893					
		770					980	140	0.50		27.4	0.8905			20		
N-12/		775					849	140	0.50		26.2	0.8973		8.	0.0		
K-121	06/00/00	044					494	140	0.51		27.5	0.6899		0.1	2.0		
K-122		776					951	140	0.52		26.9	0.8950		•	2.2		
K-122	ocronon Social	011					618	140	0.54		27.8	0.8882		0.8			
N-121		784	_				631	120	0.51		28.3	0.8800		0.0			
		287					747	140	0.53		27.0	0.8927		7.6	77		
212	901200	786					656	140	0.51		27.7	0.8888		0.0			
-1×1-V		787					474	140	0.52		27.6	0.8893		7.1	2		
171-V	10/12/30	MODE /UI	50 A	Ŧ	< 4	53.2				<5				1	2		
0.82				•			969	120	0.52		28.4	0.8849		0.0			
K-121	06/07/60						826	125	0.56		27.2	0.8916		0.8	0.2		
K 12	06/07/60						757	130	0.53		27.9	0.8877		0.8	1.4		
K 124	09/24/96						579	140	0.51		27.4	0.8905		1.4	1.2		
K-12	96//1/60						602	140	0.50		27.7	0.8888		0.2	2.0		
K-122	96/72/60	66/					202	071	0.51		27.9	0.8877		1.0	0.4		
K-124	96/02/60	85/					707	140	0.54		27.9	0.8877		0.5	1.1		
K-121	08/18/36	/R/					101	140	0.54		27.2	0.8916		1.0	1.2		
K-121	09/15/96	6					640	140	0.51		27.1	0.8921		1.8	1.2		
K-129	0677.1/60	5.5					531	140	0.53		27.7	0.8888		0.8	1.2		
K 129		2.2					513	140	0.52		28.1	0.8866		0.8	1.2		
K-121							551	140	0.54		28.4	0.8849		00			
- 127 54 - 127	SOLE LION	102					461	140	0.54		27.6	0.8893					
I N-1 2/	96/EU/60	785					534	<b>4</b>	0.53		6.12	//89.0					
TV 127	967LUGU	785					472	140	50		21.8	0.000			80		
TK.124	10/30/96	826					200	140	0.48		0.0	0.0000		4	20		
5	10/28/96	825					526	115	8.0		4.07	0000		0	0.6		
TK-124	10/25/96	822					794	8	0.0		1.07	0.0000		020	0.5		
TK-124	10/27/96	823	1				557	140			20.0	0.6930		0.8	0.6		
rk-122	10/27/96	924				-	108				4 90	0 BAGG		10	10		
rk-124	10/24/98	821					882	2 2 2			27.6	0 8693		4.1	2.0		
rK-124	10/24/26	816				-+	412				712	0.8888		4.4	0.8		
TK-122	10/24/96	820		-			40/		120		217	0.8868		1.4	2.2		
rK-124	10/24/96	819					20/		690		26.3	0.8973		1.8	1.8		
rK-124	10/20/96	5T 817					010	2	47.2								
										_							

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1 And	Ma/Property	<u>V</u>	Vraenic	Cadmium	Chromlum	Leed	Tot.Halogens	Flash Point	Sulfur	PCB'	API @ 60F	S.G. @ 60F F	leat of Comb. Wa		Sediment	Viscosity @ 1UUF	ABN H & / why
			in ppm	mqq ni	n ppm	in ppm	n ppm	<u>ъ</u> F	in % (w/w)	in ppm	ndex	In kg/L	In kBTU/Gal In	(X)) <b>4</b>			
Dat	e	acth no.									0.00	0000		16	16		
:	10/18/96	815					562	40	0.52		8.12	700070			2		
) 	10/16/96	814					599	9	0.53		1.12	0.0000		24			
1	10/15/96	810					82/	140	0.42		0.17	91080		38	12		
	10/14/96	<b>6</b> 8					648	140	0.48		7.17	0.0010		<u>7</u> 8	12		
	10/11/96	808 808					810	040	2.0		211	0.8021		24	4.1		
	10/09/96	807					000		200		26.7	0.8944		1.8	1.0		
	10/07/96	806					000	041	0.62		27.4	0.8905		20	2.0		
	10/04/96	£							0.65		26.2	0.8973		1.8	0.7		
	10/03/96	P C					142	2	0.67		27.4	0.8905		0.4	1.4		
	10/01/96	803					11	140	070		28.5	0.8844		0.6	0.8		
	11/26/96	846					170				27.8	0 8882		12	1.8		
	11/25/96	845					422	140	2.0		28.6	0 BR3R		0	0.5		
	11/22/96	844					60 60 60 60 60 60 60 60 60 60 60 60 60 6		4.0		27.6	0.8803		60	0.5		
	11/21/96	843					490				77.5	0 BROG		12	1.1		
	11/20/96	842					482		200		299	0.8950		1.0	2.0		
	11/19/96	841					514	24			27.5	0,8800		28	1.0		
	11/18/96	840					410	440			274	0 8905		0.6	0.8		
	11/06/96	831					403				271	0.8921		3.0	1.0		
	11/18/96	659					A69		0.63		27.6	0.8893		0.6	0.6		
		0.00					437	140	0.51		28.3	0.8855		6	••		
		100					402	140	0.51		27.8	0.8882		0.1	0.8		
	111100	100					406	140	0.50		28.2	0.8860		0.5	1.0		
	11/17/06	R <sup>24</sup>					466	140	0.48		27.4	0.8905		0.E	8.0		
!	11/07/06	CER R32					399	125	0.48		27.9	0.8877		3.0	0.0		
	11/05/96	630					540	130	0.49		27.9	0.8877		4.0	0.0		
-	11/04/96	829					470	140	0:50		28.2	0.8860		0.0	4		
	11/01/96	828					842	110	0.52		28.5	0.8844			•		
	11/01/96	827					422	140	0.49		28.2	0.8960		0.0	4.0		
	9600001	858					999	110	0.45	-	28.7	0.0635					
	12/18/06	R57					672	130	0.48	_	29.2	0.8805		20	7.0		
	12mmag	P47					590	135	0.50		28.2	0.8860			0.0		
	Solution 1	R4B					461	140	0.45		28.2	0.8860		0	0.1		
 	1202000	V1196	< 0.4	1.12	9.44	34.8	480	140	0.49	< 5 <	27.8	0.8882		4.1	9.0		
 	12/17/06	856					743	140	0.49		28.3	0.8855			0.1		
	12/16/96						663	140	0.50		28.2	0.8860		200	2.1		
	12/13/06	A55					88	140	0:50		28.1	0.8866		4	0.0		
	12/12/96	854					745	140	0.45		27.4	0.8005		20			
•	12/10/96	852					967	ŝ	1.0		12	0,8055			01		
	12/11/96	853					/40 EAE	04	0.40		28.2	0.8860		0.0	22		
	12/10/96	ទ		-+			220		0.48		28.7	0.8833		0.6	0.6		
-	12/0//96	000					347	140	0.49		27.5	0.6899		1.0	2.0		
+	200071	640					745	135	0.46		28.4	0.8849		0.1	1.8		
	1010/10	178					725	115	0.45		28.7	0.8833		0.0	4.1		
+	1000110	228					942	110	0.49		28.8	0.8827		90			
+	16/12/10	870					794	120	0.44		28.8	0.8827					
	10/23/07	969					759	115	0.45		0.02	0.0871		90	01		
	16/22/10	998			¥.	16	102	5	0.46	v	0.02	- 10012					
9	1/6/60/10	M1296	< 0.4	0	<u>.</u>	5	24		0.42		27.8	0.8882		2.0	1.2		
-	15/07/10	100					R6A	105	0.46		28.3	0.8855		1.2	1.8		
	INGENIO	F SA					20	3	2								

# Statistical data analysis of Processed Oil

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HOWCO Environmental Services

	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$			1	Areado	Cadmin	Chromium	Lead	T of Halogens	Flash Point	Sulfur	PCB's	PI @ 60F	S.G. @ 60F	Heat of Comb.	Water	Sediment	Viscosity @100F	Ash In % ( w/w)
				-	in ppm	mqq n	mod n	in ppm	in ppm	'nF	in % (w/w)	mdd ul	ndex	In kg/L	In KBI U/Gat	(MA) & L1	(A)A) & 10		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	mple #	Date	Bacth no.					074	110	17.0		37.8	0 8882		3.0	1.0		
		-121	10/13/97	965							<b>;</b> ;		2 B C	0 ARGG		2.0	1.8		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	123	01/15/97	998					793	011	0.47		1.07	0.0016		20	28		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	13	01/09/97	. 863					588	140	0.48		1.12	200		06	01		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	15	01/06/07	, R59					624	140	02.0		21.12	1/00/0			8		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	121	101/06/97	860					754	125	0.49		27.8	0.8862		0.0	90		
			70/010	B61					855	115	0.47		27.6	0.8693					
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	12	LOW HEU	1001	<0.05	60	•	31	680	135	0.47	< 0.6	28.5	0.8844		0.0	9.1		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	JRYN C	16/41/20	720 JC7W	2.2.	25			760	130	0.43		28.7	0.8833		0.0	0,0		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	171-		10.14					710	120	0.41		28.7	0.8833		20	0.1		
	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	212	12/04/20						609	140	0.46		28.5	0.8844		0.1	2.4		
$ \left( \begin{array}{cccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-122	16/60/20	0/0		-			684	140	0.49		27.1	0.8921		2.2	0.6		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-124	02/06/97						AFC	201	0.44		27.6	0.8893		2.5	5.5		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-137	02/06/97	878					099	140	0.47		27.9	0.8877		1.4	1.6		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-122	16/12/20	886					aos	2 6	0.47		28.5	0.8844		0.4	1.0		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-123	02/25/97	684		   		2		135	0.48		28.2	0.8860		0.8	1.4		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-121	02/20/97	983		5	0.1	₽,	555	4 1 2 4	0.46		28.7	0.8833		0.8	1.0		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-122	02/18/97	7 882					000 047	200	0.44	v	28.5	0.8844		0.1	1.4		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	0-0197	19/2/13/97	7 M197	× 0.4	•	4.	87	646	140	0.47		28.4	0.8849	-	1.0	1.0		
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-123	19/13/97	7 880							0.48		28.0	0.6871	137	1.0	5		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-122	10/19/07	7 808		0.5		38	272		94-0		28.0	0.8871	139	1.5	1.5		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-123	03/20/97	609		0.5		24	1.93		140		28.4	0.6849	140	0.6	1.8		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-121	03/25/97	7		0.6	0.2	Q 2	8		AA O		28.5	0.6844	138	0.8	1.2		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-124	03/24/97	2006		6	0.9	Q ;	200		840		27.7	0.6888	140	1.4	2.0		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-121	03/18/97	7 897		0.9	5	5	40/		840		28.3	0.8865	138	2.0	1.2		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-123	00/14/97	268			× (	5 F	979	140	0.49		28.4	0.8849	140	1.0	1.8		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-123	16790750			2.0	~	3 8	243	061	0.47		28.2	0.8860	140	0.4	1.2		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-124	03/05/9/	7 892			7 9 2	100	854	140	0.47		28.0	0.8871	139	1.2	4		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(-122	16/10/20	1 683		0.0	2	5	591	140	0.46		28.0	0.8871		1.4	1.8		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	<-121 	16420420					-	548	130	0.48		29.5	0.8789		0.6	1.0		
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	2	16/90/20	1 068					2			< 0.6							
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	1660-0	04/15/9/	7 M397	< 0.24		c	66	630	140	0.48		28.1	0.8866	139	1.4	1.6	506	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	K-121	04/24/91	7 913				38	665		0.48		28.2	0.8860	138	0.8	1.0	20	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	(117) $(04/18)/(13/1)$ $910$ $0.6$ $2.1$ $34$ $140$ $0.41$ $27.7$ $0.887$ $140$ $15$ $(127)$ $(04/13/1)/(13/1)$ $911$ $0.6$ $2.6$ $32$ $729$ $140$ $0.6$ $15$ $15$ $(121)$ $(04/15)/(13/1)$ $912$ $0.6$ $2.6$ $32$ $729$ $140$ $0.6$ $15$ $15$ $(121)$ $(04/15)/(37)$ $300$ $0.7$ $1$ $25$ $592$ $140$ $0.47$ $28.6$ $0.865$ $140$ $0.6$ $137$ $1.1$ $(121)$ $0.06$ $1.4$ $23$ $640$ $140$ $0.47$ $28.6$ $0.867$ $140$ $0.6$ $137$ $1.1$ $0.4$ $(121)$ $0.06$ $1.3$ $0.660$ $140$ $0.47$ $28.6$ $0.867$ $141$ $0.4$ $(122)$ $0.066$ $1.40$ $0.46$ $28.6$ $0.867$ $141$	K-123	04/25/91	7 914		6.0 -		20	504	140	0.48								
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	K-137	04/18/9					377	RAA	140	0.41		27.9	0.8877	140	1.5	1.7	247	
$(k_1)(0)$ $(0)$ $(1)$ $(0)$ $(1)$ $(0)$ $(1)$ $(0)$ $(1)$	Kr.106         OM2101         912         0.0 $1$ 20         592         140         0.47         285         0.8844         141         0.6           Kr.121         OM1597         901         0.7         1         25         719         140         0.47         283         0.8855         140         0.6           Kr.121         OM11677         908         0.7         1         25         56         140         0.46         280         0.8871         137         1.4         0.6           Kr.122         OM1677         906         0.5         1.2         27         660         140         0.46         286         0.8871         137         1.4         0.4           Kr.123         OM01677         903         0.5         1.2         27         686         140         0.47         286         0.8834         141         0.4         0.4           Kr.123         OM01677         903         0.66         1.40         0.47         2.0         2.65         0.8844         141         0.4         0.4           Kr.123         OM01677         903         0.67         1.40         0.65         2.86         0.8834	¥13	04/21/9	116 1			17	5 8	00.4		0.46		27.7	0.6668	137	1.5	2.3		
(12) $(20)$ $1$ $25$ $719$ $140$ $0.47$ $12$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $250$ $120$ $255$ $250$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $255$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $120$ $250$ $250$ $250$ $250$ $120$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ $250$ <th< td=""><td><math display="block"> \begin{array}{ c c c c c c c c c c c c c c c c c c c</math></td><td>¥-136</td><td>04/21/9</td><td>17 912</td><td>~</td><td>9 r 0 0</td><td>0.7</td><td>8</td><td>60</td><td>140</td><td>0.47</td><td></td><td>28.5</td><td>0.8844</td><td>141</td><td>0.6</td><td>0.8</td><td>8</td><td></td></th<>	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	¥-136	04/21/9	17 912	~	9 r 0 0	0.7	8	60	140	0.47		28.5	0.8844	141	0.6	0.8	8	
K-124         Out(1):01         906 $0.6$ $1.5$ $3.6$ $64.0$ $140$ $0.46$ $280$ $08071$ $137$ $1.6$ $230$ $1.6$ $230$ $1.6$ $230$ $1.6$ $230$ $1.6$ $230$ $1.6$ $1.2$ $20$ $1.6$ $1.4$ $2.7$ $696$ $140$ $0.6$ $1.8$ $1.0$ $1.6$ $1.2$ $20$ $1.6$ $2.0$ $1.1$ $2.0$ $1.6$ $2.0$ $1.6$ $2.0$ $1.6$ $2.0$ $1.6$ $2.0$	K         124         OM/159/1         906 $0.6$ $1.5$ $3.6$ $640$ $140$ $0.46$ $280$ $0.8971$ $137$ $1.0$ K         122 $0.0$ $0.6$ $1.4$ $2.7$ $696$ $140$ $0.46$ $286$ $0.8971$ $137$ $1.0$ K $0.00091$ $0.05$ $1.2$ $270$ $6966$ $140$ $0.46$ $286$ $0.8971$ $137$ $1.0$ K $0.00910$ $0.05$ $1.2$ $270$ $6865$ $140$ $0.47$ $286$ $0.8871$ $137$ $1.0$ K $0.052097$ $0.05$ $1.3$ $35$ $7.34$ $140$ $0.47$ $285$ $0.8844$ $141$ $0.4$ K $0.20097$ $0.57097$ $0.56$ $0.8644$ $139$ $0.6$ K $0.2057097$ $0.57097$ $0.56$ $0.8646$ $140$ $0.47$ $2.65$ $0.8044$ $139$ $0.6$	K-121	04/15/9	106		<u></u>		53 75	719	140	0.42		28.3	0.8865	140	0.8	1.2	255	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	K         123         0400907         504 $0.6$ $1.4$ $2.7$ $696$ $1.40$ $0.46$ $2.81$ $0.8071$ $137$ $1.0$ K $0.2$ $0.6$ $1.2$ $20$ $670$ $1.40$ $0.45$ $2.86$ $0.8071$ $137$ $1.0$ K $0.2$ $0.5$ $1.2$ $20$ $670$ $1.40$ $0.45$ $2.86$ $0.8071$ $137$ $1.0$ K $0.400907$ $902$ $0.5$ $5.5$ $27$ $696$ $1.40$ $0.47$ $2.86$ $0.8071$ $137$ $1.0$ K $122$ $0.5$ $33$ $734$ $140$ $0.47$ $2.85$ $0.8044$ $131$ $0.4$ K $122$ $0.66$ $1.37$ $1.40$ $0.47$ $2.85$ $0.8044$ $131$ $0.4$ K $123$ $0.67$ $1.40$ $0.47$ $2.85$ $0.8044$ $131$ $0.6$ $0.622$ $0.60$	K-124	04/15/9					3.8	640	140	0.46		28.0	0.8871	138	2.0	1.6	96Z	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	K-123			0.1			27	696	140	0.46		28.0	0.8871	137	0 	2.0		
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Statistical data analysis of Processed Oil

#OWCO Environmental Services

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Viscosity @100F Ash in sec in % ( w/w) 0.49 0.68 0.67 0.53 0.45 0.45 0.45 0.45 0.49 0.62 0.47 3322388<u>88</u>8323288832328283838333233888 ន្លន្ល៍ឆ្ 522 Sediment in % (v/v) 1.0 1.8 0.8 1.8 1.9 0.8 26 100 - 8.0 0 20 1.4.6 20 API @ 60F S.G. @ 60F Heat of Comb. Water index in kg/L in kBTU/Gal in % (v/v) 0 <del>0</del> 0 0 (<u>6</u>) 12 1.8 - 0 0 <del>-</del> 0 7 0 0 0.6 1.2 0.6 40 00 2 0.B <u>o</u> 0.0 0.6 2.40 140 94 149 96 14 140 00 140 137 39 <del>138 4</del> Ş 8 \$ 88 8944 4 Ξ 4 4 0.8966 0.8822 0.8877 0.8877 0.8960 0.8855 0.8882 0.8877 0.8905 0.8921 0.8921 0.8949 0.8849 0.8877 0.8849 0.8875 0.8849 0.8855 0.8849 0.8960 0.8944 0.8838 0.8871 0.8871 0.8849 0.8805 0.6830 0.8827 0.8828 0.8638 0.8858 0.8827 0.8833 0.8833 0.8844 0.8882 0.8855 0.8849 0.8877 0.8855 0.8871 28.7 28.7 28.5 28.3 28.4 27.9 PCB's In ppm < 0.2 10.0410.04 In % (w/w) 0.49 0.49 0.49 0.49 0.49 0.44 0.48 0.48 0.50 Suffur Tot Helogens Flash Point in ppm in F 115 115 115 115 115 115 <del>4</del> <del>4</del> <del>4</del> <del>4</del>4 <del>5</del> <del>5</del> <del>5</del> 3 5 804 524 524 673 832 847 847 722 615 630 807 965 Lead In ppm 888 **55 35 35** 48 53 42 928 44 ē Chromlum n ppm 2.1 6. 6. 233 2.1 1.5 6.1 1.6 1 1.7 23 1.2 **3**29 329 32 3.1 4.8 4 8 18 4.6 2.5 2.4 2 in ppm Cadmium 900 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.6 9.0 4 0050000 00500 4.0 0.6 0.6 0.6 0.0 0.6 0.6 0.6 0.4 Arsenic in ppm < 0.5 < 2 2 Bacth mo. 922 917 918 919 915 916 M497 M697 06/26/97 06/14/97 06/14/97 06/14/97 06/14/97 06/16/97 06/16/97 06/16/97 06/16/97 07/17 07/17 06/15/97 05/02/97 05/05/97 05/13/97 05/13/97 04/28/97 05/01/97 07/10/97 06/19/97 Analyte/Property Sample 1 15.128 15.1 06/02/98

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Statistical data analysis of Processed Oil



Statistical data analysis of Processed Oil



Statistical data analysis of Processed Oil

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Statistical data analysis of Processed Oil



Statistical data analysis of Processed Oil

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Statistical data analysis of Processed Oil



# Statistical data analysis of Processed Oil



# Memorandum

# Florida Deartment of Environmental Protection

TO:	Chris McGuire, Senior Attorney	
	Office of General Counsel; Douglas	Building; M.S. # 35
THROUGH:	Stanley Tam, PE II Hazardous Waste Section, Tampa	
FROM:	Al Gephart, Engineer III Hazardous Waste Section, Tampa	
DATE:	October 27, 1999	
SUBJECT:	HOWCO Environmental Services, EPA ID. # FLD 152 764-767 Pinellas County	Processed Used Oil Data Permit No.: 92465-HO06-001

Enclosed are the DRAFT comments on the analytical data submitted by HOWCO Environmental Services. As previously stated, the Southwest District (SWD) does not believe that the data submittal is sufficient to demonstrate generator knowledge for determining that all out-bound shipments of used oil fuel are on-spec.

As discussed in our October 6, 1999, teleconference, we are sending to you our DRAFT analysis and evaluation of the data HOWCO submitted to demonstrate "generator knowledge". Please have someone qualified in this area review the data as well as the analysis that we have presented. We welcome any recommendations that you or the reviewer(s) may have to offer. HOWCO's analytical data is provided as Attachments A and B.

Should you have any questions, please contact any of the SWD permitting staff at (813) 744-6100. Extensions: Al Gephart, X-372; Roger Evans, X-388; and Stanley Tam, X-390.

# DRAFT

# HOWCO ENVIRONMENTAL SERVICES

## STATISTICAL ANALYSIS TO DEMONSTRATE ON-SPEC USED OIL FUEL

#### **BACKGROUND:**

An October, 1996 compliance inspection report states that the Certificates of Analysis issued by HOWCO were not based on a discrete analysis of every batch. The report states that, "If HOWCO does not wish to analyse a representative sample of each batch, then they should propose a sampling plan with statistical data to support reporting the lead concentration as <X ppm, with a specified percentage certainty."

HOWCO <u>elected</u> to provide analytical data of its processed oil as the information to make its onspecification used oil fuel determination (40 CFR 279.72). Based on the many sources of used oil accepted at the HOWCO facility, the Department believes that sampling and analytical data is appropriate to demonstrate generator knowledge. However, HOWCO must develop and follow a written analysis plan describing the procedures that will be used to comply with the analysis requirements of 40 CFR 279.55(b)(2).

In numerous meetings and teleconferences, HOWCO representatives were told to submit a Sampling and Analysis Plan to the Department. The HOWCO Sampling & Analysis Plan has been deficient in demonstrating generator knowledge as far back as the September 25, 1997, application submittal. HOWCO has done nothing to correct this deficiency. On May 7, 1999, HOWCO submitted its Sampling & Analysis Plan. The submittal was not a sampling and analysis plan but merely a report of historical data in tabular form. The submittal contained only twenty (20) laboratory analytical reports and no chain of custody forms for any of the processed oil data provided. The submittal was also deficient of any supporting documentation on a sampling plan or quality assurance plan (e.g. replicate analyses, matrix spikes, analytical methods used, detection limits, etc.). At a minimum, the Plan must specify the sampling method used to obtain representative samples to be analyzed, the frequency of sampling, the laboratory performing the analyses, the methods used and the type of information used to make the on-specification used oil determination.

The Department does not accept the historic data submittals as meeting the requirements to demonstrate on-spec used oil fuel based on "generator knowledge". Before the Department can accept a statistical analysis demonstrating Howco's processed oil is on-spec, all data forming the bases for the study must be provided for review and validation. Analytical data generated by a scientifically defective sampling plan has limited utility. HOWCO has the burden of responsibility to develop a technically sound sampling plan.



#### **DEFICIENCIES:**

The qualitative and quantitative requirements that data must achieve to be acceptable for use in demonstrating product knowledge to the Department were not provided. 62-160 F.A.C. applies to all programs, projects, studies or activities which involve submission of environmental data or reports to the Department. The requirements pertain to the quality of the data in terms of precision, accuracy, completeness, representativeness and comparability, as well as non-measurable qualifiers, such as legally defensible data.

Under Category 1A (no oversight is provided by any State or Federal agency) records shall be maintained pursuant to section 62-160.600 F.A.C. The records required include laboratory and matrix spikes, replicate sample analyses, quality control samples and standards, calibration standards and method detection limits. As stated in 62-160 F.A.C. Part III, the requirements for sampling and analysis activities shall apply to used oil as defined in Chapter 62-710 F.A.C.

In the first data submittal [HOWCO Environmental Services, Statistical data analysis of Processed Oil (dated 06/02/98)], the Department noted these additional deficiencies:

- There were approximately 134 batches in 1996 of which only 9 were sampled;
- In 1997, out of approximately 107 batches, only 8 were sampled for Arsenic;
- In the 1996, 1997 data submittal, 27 batches were not on the data sheet.
- Quality assurance documentation was not provided to the Department.

FDEP concluded that the first data submittal was deficient in documenting both sampling and analytical protocols.

Similarly, despite the Department's request for a Sampling & Analysis Plan, the "Statistical Analysis" dated May 7, 1999, submitted by HOWCO does not describe How/What/When the sampling or analyses were performed. The historical data submitted on May 7, 1999, consisted of 79 discrete samples from processed oil batches (tanks) representing facility operations from 10/21/98 to 4/15/99. Upon review of the submittal, the Department noted these additional deficiencies:

- There were no data for batch #1198 (01/27/99) and no explanation was given;
- Data from batch #1155 was not considered because it was a composite sample;
- Three sets of data from analyzing the Feed tank (Tank-137) were not considered because this oil is not shipped off-site;
- Metals analyses of batches #1151, 1152, 1153, 1154, 1156, 1161, 1162, and 1166 were not considered because they were stated as "less than values" an order of magnitude higher than typical detection limits;

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- Sampling occurred on only 49 days out of the 177 day period (28%);
- Samples were analyzed for Lead on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Chromium on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Cadmium on only 24 of the 49 days (49%) or 14% of the 177 days;
- Samples were analyzed for Arsenic on only 21 of the 49 days (43%) or 12% of the 177 days;
- Samples were analyzed for PCB on only 23 of the 50 days (46%) or 13% of the 177 days;
- Of the 79 batches (tanks) only

30% were analyzed for Pb (Values stated as <100 ppm were not considered in this percentage); 30% were analyzed for Cr (Values stated as <5 were not considered in this percentage); 30% were analyzed for Cd; 28% were analyzed for As, 28% were analyzed for PCBs, and 29% were analyzed for Flash Point (Values stated as >100 or >140 were not considered in this percentage);

- No explanation was given as to why chrome and cadmium were detected in the three (3) fuel (Feed) samples from tank #137 and also in the batches that appear were put in feed tank #137 (batches #1158A, #1157 and #1159) but chrome and cadmium were not detected in any other of the batches analyzed;
- No procedure was provided for determining which batches were submitted to outside laboratories for analyses;
- HOWCO did not provide analytical sheets or logs of its "in-house" analytical results;
- In general, HOWCO does not provide the date the sample was taken in the sample identification. Documentation was not provided as to when the samples were actually taken;
- It appears that the FEED sample of 3/3/99 was comprised of batches 1216 and 1217. However, Precision Petroleum Laboratories arsenic analyses of batches 1216 and 1217 were both below detection (0.1 ppm). The result of the US Biosystems arsenic analysis was 2.3 ppm. This appears to be inconsistent. In addition, the US Biosystems chain of custody form (log #3436) could not be read to verify the samples delivered;
- The data sheet lists batch #1155, tank 128, but does not indicate that this is a <u>monthly</u> <u>composite</u> sample that was analyzed for PCBs, the data sheet is for processed oil analyses yet the analytical report indicates that it is a weekly water sample and the data sheet leads you to believe Sanders Labs performed all of the analyses when in fact they analyzed for only PCBs;
- Batch #1172, dated 12/04/98 in the table of data submitted, was received by Precision Petroleum Labs, Inc. on 12-1-98. How could the lab receive the sample 3 days prior to the sampling event ?

# DRAFT

- Batch #1174, dated 12/02/98 in the table submitted states the lead concentration as 13.41 ppm. The analytical sheet from the lab states 19.41 ppm;
- It appears that the FEED sample of 1/20/99 was comprised of batches 1189 and 1190. However, there are no metals analyses of batch 1190 to indicate why the metals concentrations in the feed sample are higher than those noted in batch 1189;
- The tabular data submitted states that batch #1203 was sampled on 2/4/99 and leads you to believe it is a discrete sample. The analytical sheet from the lab indicates that this was a weekly sample (2/8 2/12). How was the sample taken 4-8 days before the week of 2/8 2/12 ?
- The tabular data submitted states that batch #1207 was sampled on 2/11/99 and leads you to believe it is a discreet sample. The analytical sheet from the lab indicates that this is a weekly sample (2/15 2/19). ). How was the sample taken 4-8 days before the week of 2/15 2/19? Also, the halogen concentration was given as 621.8 ppm by the lab but it was stated in the tabular data as 621.5 ppm;
- The sample identification on the lab sheet for batch #1212 provides no information on when the sample was taken;
- For batch #1216, the halogen concentration was given as 865.9 ppm by the lab but it was stated in the tabular data as 865.1 ppm.

FDEP concluded that the second data submittal was deficient in documenting both sampling and analytical protocols.

#### **CONCLUSION:**

HOWCO has not provided sufficient information to change the Department's position that every batch (tank) is to be analyzed to determine if it is on-spec used oil fuel. This position is consistent with the other FDEP Districts in the State.



ONE HARBOUR PLACE 777 S. Harbour Island Boulevard Tampa, Florida 33602-5799 MAILING ADDRESS: P.O. BOX 3239, TAMPA, FL 33601-3239 TEL (813) 223-7000 FAX (813) 229-4133

July 22, 1999

Mr. Stanley Tam Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, FL 33619-6100

Re: Howco Environmental Services Used Oil Permit

Dear Stanley:

Thank you to you and your staff for taking the time to meet with us yesterday to discuss Howco's Used Oil Permit. Attached are "redline" copies of Sections 3.13, 4.2.1, 5.3, 5.4, and 5.6 which incorporate the changes agreed to by the parties during our meeting yesterday. Following those blank pages, I have included another complete redline version bearing a revision date of 7/21/99, which shows the cumulative changes (including yesterday's) from the prior draft that had been delivered to the Department. This was provided since we assumed you would not have had an opportunity to review the redline delivered to you yesterday and that you would want to see the cumulative changes, including those matters agreed to at yesterday's meeting. For your convenience, I have enclosed a total five (5) sets to be delivered to staff.

I understand that you and Rick Neves will be speaking with Glen Paragon and others to resolve the open issue (from your standpoint) relating to anti-freeze testing, and that you will review the opinion and detailed submission regarding the on-spec sampling plan, as well. If you have any questions regarding the opinion of Dr. Wludyka, we agreed that we would make him available for a conference call and that you would contact me to set that up if necessary. You agreed that you would get back to us by next Friday regarding the status of these matters.

With respect to the non-oily waste "solid waste" issues, the text was revised in accordance with our discussion to remove certain petroleum contaminated waste streams which the Department asked be deleted from the Permit Application. Based on information provided by Rick Neves regarding the approach which is being taken by the Southeast District, we agreed that the District would append special conditions to the Used Oil Permit to authorize the

TPA#1566457.0 CARLTON, FIELDS, WARD, EMMANUEL, SMITH & CUTLER, P.A. TAMPA ORLANDO PENSACOLA TALLAHASSEE WEST PALM BEACH ST. PETERSBURG

ΜΙΑΜΙ

Mr. Stanley Tam July 22, 1999 Page 2

management of the remaining petroleum contaminated items in accordance with the general approach that is being taken elsewhere. We discussed the need for financial assurance to be posted and that the Solid Waste Financial Assurance provisions would need to be followed. We agreed that we would prepare an estimate as is required, and would contact Fred Wick on alternatives.

If you have any questions regarding these materials, please do not hesitate to contact me. Otherwise, we will look forward to hearing from you before next Friday.

Yours sincerely, Laurel Lockett

LL:bl Enclosures

cc: Mr. Tim Hagan Mr. Tim Rudolph Mr. Rick Neves (FDEP-Tallahassee)



Sensitivity: COMPANY CONFIDENTIAL

Date:	20-Jul-1999 04:42pm
From:	Brett Gocka TPA
	GOCKA_B
Dept:	Southwest District Office
Tel No:	813/744-6100 ext. 394

Subject: Howco

Roger, myself and Mohammed performed an inspection of the above referenced facility on the 19th of this month. Pursuant to that inspection and meeting with Tim Hagan of Howco the industrial wastewater section has determined an industrial wastewater permit will be required for the discharge of stormwater from this facility.

Additionally, Mr. Hagan indicated he would be bring some documentation to your meeting on the 21 of this month for our review. This information would include the names of similar facilities that we would inspect for compliance with our rules and regulations.

If you have any questions, just give me a call or drop by my office.

Brett



Sensitivity: COMPANY CONFIDENTIAL

Date: 03-Jun-1999 02:15pm From: Brett Gocka TPA Dept: Southwest District Office Tel No: 813/744-6100 ext. 394

To: Roger Evans TPA

Subject: Re: Howco -stormwater management

Roger, I spoke to Moe about the facility in great detail. He would like to go and visit it before we make a decision. I will try to get him out there tomorrow or Monday. Brett



Date: 02-Jun-1999 03:41pm From: Roger Evans TPA Dept: Southwest District Office Tel No: 813/744-6100

To: Brett Gocka TPA CC: Stanley Tam TPA CC: Albert Gephart TPA

CC: Jeff Hilton TPA

Subject: Howco -stormwater management

Hi Brett,

Since our last discussion at the end of April 1999, after you had visited the facility and determined that Howco may possibly need a permit to discharge their stormwater from the property I have not seen any correspondence from the Industrial Waste Section. Can you please update me on the progress of your letter to Howco.

This information is needed to finalise their Used Oil application. They are presently under the assumption that everything is OK as previously conveyed to me by Jeff Hilton.

Thanks,

Roger



Date: 29-Apr-1999 02:30pm From: Roger Evans TPA Dept: Southwest District Office Tel No: 813/744-6100

To: Stanley Tam TPA To: Albert Gephart TPA

Subject: Update: Review of Howco's stormwater management by IW section

I spoke with Brett Gocka (Industrial Waste Section) this morning and gave him a 1)a copy of Howco's discussion of their stormwater management at the site and 2)a copy of our request to the Department's IW Section to make a determination if Howco's management practices needs a permit or not. Brett said he will review the paperwork and get back with me

# CARLTON FIELDS

#### ATTORNEYS AT LAW

ONE HARBOUR PLACE 777 S. HARBOUR ISLAND BOULEVARD TAMPA, FLORIDA 33602-5799 MAILING ADDRESS P.O. BOX 3239, TAMPA, FL 33601-3239 TEL (813) 223-7000 FAX (813) 229-4133

FAX COVER SHEET

Date:	June 10, 1999	Phone Number	Fax Number
To:	Stanley Tam	(813) 744-6100 , X 404	(813) 744-8198
cc:	Tim Hagan	(727) 327-8467 x226	(727) 323-2249
	Randall Strauss	(813) 744-6100 x387	(813) 744-6125 🔶
From:	Laurel Lockett	(813) 223-7000	(813) 229-4133

Client/Matter No.: 31028/59598

Total Number of Pages Being Transmitted, Including Cover Sheet: 2

Message: Re: Howco Used Qil Permit/Consent Order	
Please see attached letter.	

🗆 Original to follow Via Regular Mail 🗹 Original will Not be Sent 🔲 Original will follow Via Federal Express

The information contained in this factimile message is attorney privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copy of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone (if long distance, please call collect) and return the original message to us at the above address via the U.S. Postal Service. Thank you.

IF THERE ARE ANY PROBLEMS OR COMPLICATIONS, PLEASE NOTIFY US IMMEDIATELY AT: (813) 223-7000

TELECOPIER OPERATOR:

Juna 14, 2554

CARLTON, FIELDS, WARD, EMMANUEL, SMITH & CUTLER, P.A.

TAMPA ORLANDO PENSACOLA TALLAHASSEE WEST PALM BEACH ST. PETERSBURG

File 3-b

MIAMI
SENT BY: CFWESC-FAXROOM

🛓 6-10-99 ; 4:33PM ;CARLTON,FIELDS-TAMPA+

# CARLTON FIELDS

ATTORNEYS AT LAW

ONE HARBOUR PLACE 777 S. HARBOUR ISLAND BOULEVARD TAMPA, FLORIDA 33602-5799

MAILING ADDRESS: P.O. BOX 3239, TAMPA, FL 33601-3239 TEL (813) 223-7000, FAX (813) 229-4133

June 10, 1999

Mr. Stanley Tam Florida Department of Environmental Protection Southwest District 2804 Coconut Palm Drive Tampa, FL 33619-8318

VIA FACSIMILE

Re: Howco Used Oil Permit/Consent Order

Dear Mr. Tamm:

Confirming our discussion this morning, I understand that the Consent Order which has been presented to Mr. Hagan for signature incorporates all of the physical facility improvements which will be required in order to issue the facility's Used Oil Permit. You have advised that we

will be receiving a sixth (6<sup>th</sup>) Notice of Deficiency with additional questions from the Department, but that matters addressed in the NOD will not require facility modifications beyond those required to be done in accordance with the Consent Order. Based on the foregoing, I have arranged to have the executed Consent Order forwarded to the attention Randy Strauss later this afternoon. Please call me if you have any questions.

Yours since I aure

LL:bl

cc: Mr. Tim Hagan (Via Facsimile) Mr. Randall Strauss (Via Facsimile)



# Department of Environmental Protection

Jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

David B. Struhs Secretary

File 3-b

<sup>39</sup>/99

June 10, 1999

Mr. Tim Hagan, President HOWCO Environmental Services 3701 Central Avenue St. Petersburg, FL 33713

> RE: HOWCO Environmental Services, Inc., FLD 152 764 767 Permit Application 92465-HO06-001 (f.k.a. HO52-308139) Sixth Notice of Deficiency Warning Letter #225256

Dear Mr. Hagan:

The purpose of this letter is to advise you of possible violations of law for which you may be responsible and to seek your cooperation in resolving this matter. The Department has completed its review of the above referenced application and determined that the information submitted on May 3 and May 11, 1999, in response to the Fifth Notice of Deficiency is not complete. The information needed to complete the application is itemized in Attachment I, the Sixth Notice of Deficiency.

Failure to submit a complete application constitutes a violation of 62-710.800(1), Florida Administrative Code (FAC). You are requested to contact Roger Evans at (813)744-6100, extension 388, within fifteen (15) days of receipt of this Warning Letter to arrange a meeting to discuss this matter. The Department is interested in reviewing any facts you may have that will assist in determining whether any violations have occurred. You may bring anyone with you to the meeting that you feel could help resolve this matter.

In addition, when a permit application is incomplete, all processing of the application is suspended. You are hereby advised to provide the Department with two (2) copies of the necessary additional information within thirty (30) days of receipt of this letter, pursuant to 62-710.800, FAC and 403.0876, Florida Statutes (FS). In preparing a complete response to these comments, the Department recommends that the response be addressed in two sections. The first section should identify each comment and follow with the answer and discussion by the applicant. The next section should contain the revised pages of the application.

Please be advised that this Warning Letter is part of an agency investigation, preliminary to agency action in accordance with 120.57(4), FS. If after further investigation the Department's preliminary findings are verified, this matter may be resolved through the entry of a Consent Order which will include a compliance schedule, an appropriate penalty, and reimbursement of the Department's costs and

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HOWCO Environmental Servi

Sixth Notice of Deficiency, Warning Letter #225256 Page 2

expenses. In accordance with the United States Environmental Protection Agency's (EPA) RCRA Civil Penalty Policy of 1990, the penalties that have been assessed in this case are \$4,599 as shown in Attachment II. Costs and expenses in this case will be a minimum of \$100. If this matter cannot be resolved expeditiously, the Department will issue a Notice of Violation, begin the formal process to deny the permit pursuant to 120.60, FS, or take other appropriate actions. We look forward to your cooperation in the resolution of this matter.

Very Truly Yours

Richard D. Garrity, Ph.D. Director of District Management Southwest District

RDG/sct

Attachments

cc: Narindar Kumar, EPA Region IV Satish Kastury, FDEP – Tallahassee Compliance File HOWCO Environmental Services 6th Notice of Deficiency Page 1

## ATTACHMENT I

## HOWCO Environmental Services Used Oil Processing Permit Application

#### Summary Of Issues:

#### Attachment 1. List of Drawings

Prior to the Department accepting the application, all drawings must be signed and sealed by a professional engineer licensed in the State of Florida. These may be construction or as-built drawings.

Your response to the 5th Notice of Deficiency (NOD) indicated that the title of drawing D-8-1 was consistent with the title in the Table of Contents. This is not the case. Please revise the titles to be consistent.

Your response to the 5th NOD indicated that you would provide a the full 16" x 16" FIRM Flood Insurance Rate Map (City of St. Petersburg, Florida; Pinellas County; Panel 21 of 28; Community Panel Number 125148-0021-B) with the plant site locator. To date, this has not been received by the Department. Please include this map with your response.

#### **Attachment 3. Detailed Process Description**

Item 3.12 As stated in the 5th NOD, the Department will <u>not</u> accept your response to this issue. The Department can require a waste determination on antifreeze (see the 3rd paragraph in, "Florida Fact Sheet On The Management Of Waste Antifreeze"). The Department policy does not require testing if the antifreeze is **recycled**. From past discussions with HOWCO, we understand that HOWCO puts the antifreeze in its industrial wastewater pretreatment plant or sends it off-site for disposal. The frequency of the waste determination of the antifreeze shall be once, initially, and each time there is a process change. Please revise the text accordingly.

#### Attachment 4. Sampling & Analysis Plan

Item 4.2 The Department does not accept the premise that the processed oil generated at HOWCO meets the on-specification criteria based on generator's knowledge.

It was the Department's understanding at the March 25, 1999, meeting that HOWCO would submit a Sampling and Analysis Plan addressing the on-spec determination of processed used oil. Your May 7, 1999, submittal contains no such Plan. The data provided does not demonstrate that the sampling frequency of batches of processed used oil should be once/month as stated in your May 7 letter.

HOWCO may either (1) agree to sampling every batch prior to shipment off-site, or (2), provide a Sampling and Analysis Plan that the Department can approve. The Plan shall include at a minimum the requirements listed below:

- Frequency of sampling: A procedure that randomly selects, each week, a batch (tank) for sampling. Repeating the random selection, if necessary, until a full tank (one that is tagged-out for shipment) is selected;

Howco Environmental Services 6th Notice of Deficiency Page 2

## Attachment 4. Sampling & Analysis Plan (Continued)

- Identify the name of the laboratory performing each analyses, the analytical methods used and the detection limits;
- Record date, time, batch number and tank number for each sample taken;
- Submit a Quality Assurance Plan using USEPA SW-846, <u>Test Methods For Evaluating</u> <u>Solid Waste</u> and 62-160.600 F.A.C., <u>Quality Assurance</u>, as guidelines;
- All batches (tanks) sampled are to be analyzed for all of the constituents in 40 CFR 279.11, Table 1 and PCB;
- Provide a procedure for re-processing processed oil that has been sampled and found to be off-spec used oil.
- Item 4.2.1 The Department has noted your responses to the first three comments of Item 4.2.1, however, your response to the comment, "In the first paragraph, is one of the ten processed oil tanks the same as the process oil tank sampled for off-site shipment?", is confusing. First you indicate that yes, the used oil in the ten processed oil tanks is sampled for off-site shipment. However, in discussions with the Department, HOWCO has stated that not all tanks are sampled prior to off-site shipment. The text should be revised.

In your response explaining what is meant by "Periodic grab sampling and analysis is performed on one of the ten processed oil tanks once per week", you specify the sampling frequency. Therefore, the sentence, "Periodic grab sampling .....". should be deleted from the text.

In addition, the Department does not concur with the change of the sampling frequency from once/week to once/month. This issue is discussed in Item 4.2, above.

#### Attachment 5. Solid Waste Handling.

Please refer to the attached memo to Roger Evans from Susan Pelz, Solid Waste Section, dated May 20, 1999, for details on the following comments.

- Item 5.1 Pre-qualification of generator's shipments must include a Waste Profile sheet and analytical data or MSDS (for virgin materials). See attached memo; comment #1.
- Item 5.2.1 Please identify what "new" sentence was added to the 12/29/98 submittal to address this comment.

In the 4/30/99 submittal, a revision was added stating that, "The solidification agent may be soil, fly ash or spent absorbent material that is brought to the facility specifically for solidification purposes or generated onsite from used oil processing". Please remove the word "spent" and re-word to state, "The solidification agent may be clean soil, fly ash or absorbent material that is purchased specifically for solidification purposes. See attached memo; comment #2.

Item 5.2.2 In the last sentence, the word variance is not an appropriate term. Please revise to read, "FDEP-approved alternate procedure". See attached memo; comment #3. 4

- Item 5.2.2.3 More clarification is needed on which solids will be sampled annually. See attached memo; comment #4.
- Item 5.3 The total spectrum of petroleum hydrocarbons does not fall under the Used Oil rules. Please revise the descriptive terms "petroleum contaminated" and "petroleum hydrocarbon" solids, materials or wastes to "used oil contamination" or "oily" solids, materials or wastes. See attached memo; comment #5.

There shall be no incoming solid waste placed on the ground or pavement at the facility. See attached memo; #6.

Please provide further clarification on how materials are handled. See attached memo; comment #7.

The Department could not locate your revision to the text indicating that containers of processed waste are to be marked to distinguish them from containers of unprocessed waste. See attached memo; comment #8.

- Item 5.4 Please be consistent in using the terms, "liquid/solids separator decanting tank", "oily solids batch treatment tank", and "cone separator tank". See attached memo; comment #9.
- Item 5.5.1 Please be more descriptive on how and where oily solids are mixed prior to shipping off-site. See attached memo; comment #10.
- Item 5.5.2 Please clarify the difference, if any, between "hydraulic press", "oil filter crusher" and the "drum crusher". See attached memo; comment #11.
- Item 5.6 The Department did not agree that solids producing a sheen in water constitutes recoverable amounts of petroleum hydrocarbon. See attached memo; comment #13.

It does not seem reasonable that the sludge will dry in the sludge drying bed. Please describe the effectiveness of this process. See attached memo; comment #14.

Additional sentences were requested to explain the transfer of material from tanks 110 and 111 to roll-off boxes. HOWCO's response stating that material **may** be placed in a roll-off box is not acceptable. Solids are to be containerized and are to be processed, not disposed. See attached memo; comment #15.

Please clarify which storage location the solid waste is to be transferred to from the sludge drying bed or storage container. See attached memo; comment #16.

#### Attachment 8. Contingency Plan.

- Item 8.1 Drawing D-8-1 is not titled "Process and Storage Plan" as identified in the text.
- Item 8.5 The last paragraph, "Primary and alternate personnel qualified to act as Incident Coordinator are listed in Table 8-2", is missing from the 4/30/99 revision. Please insert this paragraph into the text.
- Item 8.8 In items (a) through (e), item (b), "The plan fails in an emergency", is missing from the 4/30/99 revision. Please insert item (b) into the text.

Howco Environmental Services 6th Notice of Deficiency Page 4

:1

## Attachment 9. Unit Management Description.

Table 9-1The table provided in the April 30, 1999, submittal is not the same table that the Department<br/>approved in HOWCO's December 28, 1998, submittal. Please provide two copies of the<br/>12/28/98 version of Table 9-1.

# Florida Department of Environmental Protection

# TO:Roger Evans, Engineer IV, Hazardous Waste SectionFROM:Susan Pelz, P.E. Solid Waste SectionDATE:May 20, 1999SUBJECT:HOWCO submittal dated April 30, 1999, Attachment 5 and Enclosure (3)cc:Robert Butera, P.E., Solid Waste Manager<br/>Stanley Tam, P.E, Hazardous Waste Manager<br/>Al Gephart, Engineer III, Hazardous Waste

I have reviewed the above-referenced submittal and have the following comments:

## Item 5.1, Pre-approval of Oily Solid Wastes

Memorandum

1. The information states, "Generators are required to pre-qualify their shipments utilizing <u>one of the following methods</u>...." [emphasis added] Since it is stated that only one of the listed methods is required, it is not clear if submission of a Waste Material Profile Sheet <u>only</u> would be sufficient for acceptance of the material. The Solid Waste Section does not believe that submission of a Waste Profile Sheet <u>without</u> analytical data or MSDS (for virgin materials) is acceptable.

## Item 5.2.1, Solids Removed by the Vibrating Mesh Screen.

2. The information states, "The solidification agent may be soil, fly ash or spent absorbent material that is brought to the facility specifically for solidification purposes or generated onsite from used oil processing." In order to clarify this, the following changes should be made: "The solidification agent may be <u>clean</u> soil, fly ash or <del>spent</del> absorbent material that is <del>brought to the facility purchased</del> specifically for solidification purposes <del>or generated onsite from used oil processing</del>."

## Item 5.2.2, Oily Solids Removed from Storage Tanks

3. The information states, "The thermal treatment facility will have the proper <u>variance</u> to treat the oily solids waste stream in accordance with F.A.C. 62-775." [emphasis added] Since "variance" is not technically the correct terminology, please change this to "The thermal treatment facility will have the proper **FDEP-approved alternate procedure** to treat the oily solids waste stream in accordance with F.A.C. 62-775."

## Item 5.2.3, Sampling Plan for Solids

4. More clarification is needed on which solids will be sampled annually. Is it the processed (outgoing) solids, the incoming solids or solids which may be at some stage in the process (e.g. filter press solids, cone tank solids, etc.)?

## Item 5.3, Incoming Oil Solids Acceptance Criteria

5. "<u>Petroleum</u> solids, <u>petroleum</u> impacted soils and <u>used absorbent materials</u>" are not included in the definition of used oil or oily wastes. For example, gasoline or diesel contaminated soil or sorbents would be "petroleum impacted" but are not authorized for management at the used oil processing facility. Wastes which are not used oil or oily wastes from which recoverable oil cannot be obtained shall not be managed at the site unless a solid waste permit is obtained. This section should be revised to clarify that "Oily waste contaminated solids, soils and used absorbent materials are processed for used oil recovery." Alternatively, "Solids, soils and used absorbent materials which are contaminated with used oil are processed for used oil recovery" is acceptable.

6. This section must clearly indicate that the solids (assumed to be received in containers) are removed from the containers and placed directly into the oily solids batch treatment tank or the cone separation tank. Residual solids resulting from processing in the oily solids batch treatment tank and/or cone tank must be discharged directly into a roll-off or other container for off-site disposal. <u>No material</u> is to be dumped on the ground or concrete slab in the solids processing area.

7. This section should include a description of how the materials are handled. For example, solids received in vac trucks are discharged directly into the processing/treatment tanks (see Enclosure (3), page 7, paragraph 5). How are solids received in drums are dumped in to the tanks? This information must be included in the application.

8. As discussed (see Enclosure (3), page 7, paragraph 4), the incoming and outgoing materials must be clearly distinguished. Procedures for this must be included in the application.

## Item 5.4, Unloading of Oily Solid Wastes

9. It is not clear if the "liquid/solids separator decanting tank" is the same as the "oily solids batch treatment tank" or the "cone separator tank." This part should be changed to be consistent with other portions of the Operations Plan.

## Item 5.5.1, Petroleum Solids (see also Comment #5 above)

10. The information states, "The remaining oily solids are then mixed with a solidification agent and allowed to dry.... Upon completion of the drying the solids are loaded into trucks and transported to a permitted landfill facility or thermal remediation facility for disposal." Where does this occur? Is this mixing conducted in a roll-off? How are the materials "mixed?" How are the materials "loaded into a truck?" See Comment #2 concerning solidification agents. Dumping the materials onto a concrete pad for mixing and solidification is <u>unacceptable</u>. Since the solids processing area is not covered (i.e. roof) it does not seem likely that the solids will effectively "dry out," especially during the rainy season.

Memorandum to Roger Evans May 20, 1999

## Item 5.5.2, Booms and Pads

11. It does not seem reasonable to expect that used oil will be recovered from contaminated booms and pads through processing with a hydraulic press. It is not clear if the "hydraulic press" is the same as the "oil filter crusher" and/or the "drum crusher." Information on each of these units should be provided. Since the hydraulic press was "made by the Company [HOWCO]", the Department has no assurance that this unit was designed and manufactured with the purpose of processing contaminated booms and pads. The information in Enclosure (3), page 7, paragraph 1 indicates that the booms and pads may also be crushed in the <u>used oil filter crusher</u> or drum crusher. If these units were purchased from an equipment manufacturer (as opposed to fabricated by HOWCO), documentation from the manufacturer indicating that the used oil filter crusher or drum crusher is suitable for extracting used oil from contaminated booms and pads should be provided. The processing of other used oil contaminated sorbents should be discussed.

## Item 5.6, Petroleum Contaminated Solid Waste

12. See Comment #5 above concerning "petroleum" contaminated solids.

13. The information states, "petroleum contaminated solid waste includes sludges, oil dry, absorbent material, soil, debris, wood, clay, concrete, spent blast media and other petroleum residuals which are classified as a non-hazardous waste. The petroleum contaminated solid waste may be generated on or off site.... Solid waste that produces a sheen when placed in water will be deemed to contain a recoverable amount of petroleum." It is not my recollection that the Department agreed to this definition, although Enclosure (3), page 7, paragraph 3 indicates that the Department agreed to this proposal. It does not seem reasonable that "debris, wood, clay, concrete, and spent blast media" would be sufficiently contaminated to be able to recover used oil. Unless the applicant conclusively demonstrates that used oil can be recovered from these materials, the management of these materials will require a separate solid waste permit.

14. Where is the sludge drying bed located? Is it covered? If it is not covered, it does not seem reasonable to expect that the sludge will dry effectively. See Comments #6 and #10 above concerning placement of contaminated materials on the ground or concrete pad.

15. The information states, "The solids from the decanting separation <u>may</u> be placed in a rolloff box for shipment off site. The petroleum contaminated solid waste from the decanting separation that has recoverable petroleum will be processed in either the Oily Solids Batch Treatment Tank Number 111 or the Cone-Bottom Tank Number 110." This should be revised to, "The solids... <u>will</u> be placed in a roll off box for shipment off site, or in the Oily Solids Batch Treatment Tank or Cone-Bottom Tank." The Department understands this section to mean that <u>all</u> oily solids will first have free liquids decanted. They may then be further processed in the Oily Solids Batch Treatment or Cone-Bottom Tanks. It would be helpful if a flowchart was provided which shows each incoming waste stream (oily solids, oily sludges, used oil contaminated booms and pads, used oil contaminated sorbents), processing steps, testing steps, mixing, drying, etc., and final disposition. Memorandum to Roger Evans May 20, 1999

16. The information states, "The solid waste will be transferred from the sludge drying bed or storage container by using a solids handling vacuum truck. The truck will be used to vacuum the <u>petroleum contaminated</u> solid waste from the storage location into the truck tank." To which "storage location" does this refer? See Comment #5 above concerning "petroleum" contaminated solids.

sjp



# ATTACHMENT II

## PENALTY COMPUTATION WORKSHEET

Facility Name: HOWCO Environmental Services

Facility Address: 3701 Central Avenue, St. Petersburg, FL 33713

Penalty Computed By: Stanley Tam

Date: June 4, 1999

## PART I - Class A Penalty Determination

	Violation	Potential	Extent of	Matrix	Multi-	Adjustment	Total
ĺ	Туре	for Harm	Deviation	Amount	Day		
	62-710.800(1), FAC						
1		moderate	major	\$4599			\$4599
2							
3							

Total Penalties for All Violations: \$4,599

(Attach Part II for each violation for which an adjustment on multi-day penalty is determined)

Me	mo	rand	um	

# Environmental Protection

то:	ENFORCEMENT/COMPLIANCE Richard Garrity, Ph.D., Director of William Kutash, Environmental Ad Office of General Counsel, ATTN:	COVER MEMO District Manage Iministrator	D ement		
FROM/THROUGH:	William Kutash, Environmental Admir Stanley Tam, Professional Engineer II Roger Evans, Engineer IV RE.	nistrator SCT			
DATE:	June 8, 1999				
FILE NAME: HOWC	O Environmental Services	PROJECT #:	225256		
PROGRAM: Hazard	lous Waste	COUNTY:	Pinellas		
TYPE OF DOCUMEN	T:				
Draft orFinalNOVConsent OrderFinal OrderCase ReportPenalty AuthorizationWarning LetterOther: also 6 <sup>th</sup> Notice of Deficiency					
DESCRIPTION OF VIOLATIONS: Facility originally submitted used oil processor permit application in 6/97 and has not been able to submit a complete application; this letter is the 6 <sup>th</sup> NOD. Violation is for the failure to submit a complete permit application by the deadline stated in the regulations.					
SUMMARY OF CORRECTIVE ACTIONS: The facility must submit additional/adequate information to complete its application and pay the penalty.					
PENALTY SUMMARY:					

Potential for Harm: MODERATE	Extent of Deviation: MAJOR
Modifiers:	
Penalty Amount: \$4599	Expenses: \$100

TOTAL PENALTY AMOUNT: \$4699

APPROVAL REQUIRED



• Department of • Environmental Protection

Jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

David B. Struhs Secretary

# SITE INSPECTION REPORT

**INSPECTION** 

OWNER/OPERATOR: MAILING ADDRESS: Mr. David J. Roehm (HOWCO) 3701 Central Ave. St. Petersburg, Fl. 33713

NAME OF SITE:	HOWCO Used Oil Processing Facility	<b>DATE:</b> June 3, 1999
SITE ADDRESS: CITY:	same as above St. Petersburg, Fl.	PERMIT NO: pending

## **REASON FOR VISIT:**

- COMPLIANCE INSPECTION X
- PERMITTING INSPECTION X.
- COMPLAINT INVESTIGATION \_

PERSONS PRESENT: Susan Pelz, Al Gephart (FDEP), David Roehm, Tim Hagan (HOWCO)

**SUMMARY REPORT**: The purpose of this site visit was to assess the activities at the site with respect to the applicability of solid waste permitting.

Mr. Roehm and Mr. Hagan accompanied us throughout the site inspection. (See Site Inspection Report dated January 9, 1998 for general description of the site.)

We observed the ongoing modifications to the used oil processing facility. Several tanks were being elevated to allow for better housekeeping, and a secondary containment structure was being built around the tanks.

We proceeded to the south part of the facility where we observed the filter crushing operation, and the drum crusher. Mr. Hagan indicated that the drum crusher would be used to crush oily wastes such as booms and pads. After additional discussion, it was concluded that the only "absorbent materials" which are proposed to be crushed in the drum crusher are booms and pads (i.e. not granular absorbents). I indicated that this information needs to be clarified in the Solid Waste Processing portion (Section 5) of the used oil processing facility permit application, and that the Department would probably want to see a demonstration of this proposed activity prior to authorizing it in the permit.

We then went to the southwest corner of the site. We observed several drums, a roll-off with one side cut out, the cone separator tank, the "oily waste batch treatment tank," and one other (vertical) tank. Upon inspection, the majority of the drums were labeled "used oil" or "oil filters." However, one drum was labeled "sludge" and "trash." I opened this drum and it contained a bag of trash, several oil containers and what appeared to be an oily sludge. We discussed the operation of the "oily solids batch treatment tank" (OSBTT) with respect to the materials found in this drum.

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File 3-b

37/<sub>99</sub>

## HOWCO/Tim's Oil Recovery Used Oil Processing Facility-solid waste issues



Page 2

The OSBTT has a 4-6 inch infeed pipe which will be fed by a vac truck suction line. The materials are "blown" into the tank which is an inclined horizontal tank. The incline reportedly will allow the oily liquids to rise to the top and be removed for processing in or at the used oil processing facility, while the solids accumulated at the bottom are discharged by "rapping" the tank, through a 12-inch pipe into a roll-off for offsite disposal. It did not appear that this system could physically accommodate the bag of trash and oil containers (which were greater than 4-6 inch diameter) which were discovered in the drum. We discussed this at great length, and it was concluded that bags of "trash" and other large debris would not be placed in the OSBTT, but would be removed from the drums before processing in the OSBTT. At the conclusion of the site visit we discussed this issue again, and I indicated that "trash" or other materials which cannot (or will not) be processed trough the used oil processing facility shall not be accepted at the facility. The Department recognizes that small quantities of incidental solid wastes may be received, but the facility shall not accept materials which are clearly "trash" or other solid wastes without a solid waste permit. Another issue concerning the OSBTT was that the discharge pipe extends beyond the secondary containment wall. Al indicated that he would discuss this with Randy Strauss of our office.

Mr. Hagan then inquired about the possibility of processing used absorbents in a screened hopper. He proposed to place the used absorbents in the hopper and add water to release the oil for processing, and then combine the remaining solids with the other solids produced from the used oil processing. I indicated that as long as the materials are processed in the used oil processing facility (i.e. used oil is recovered from them) and are therefore covered under the used oil permit, a solid waste permit would not be required. However, I did express my skepticism about the feasibility of adding water to absorbents (such as "kitty litter") to release an insignificant quantity of oil, and then having to "dry" these materials out again to allow for landfill acceptance. I indicated that the Department would probably want to see a demonstration of this proposed activity prior to authorizing it in the permit.

We concluded our inspection in the office at the site. We again discussed the activities which would require a solid waste permit. Although Mr. Hagan proposed to manage "petroleum contaminated" wastes at the site. Al pointed out that only used oil contaminated wastes are allowed to be managed in the used oil processing facility. The management of wastes which are contaminated with petroleum products other than used oil will not be authorized by the used oil processing facility permit, and will require a solid waste permit. Additionally, the management of used oil contaminated materials which cannot or will not be processed to remove the used oil will not be authorized by the used oil processing facility permit, and will require a separate solid waste permit.

With the exception of the one drum with "trash" and sludge, the facility did not **RECOMMENDATIONS:** appear to have unauthorized solid wastes at the time of our visit. The facility operator should continue to accept only used oil, oil filters and used oil contaminated materials from which used oil can or will be recovered. Management of any other material is not authorized, at this time.

# **FDEP REPRESENTATIVE:**

Susan J. Pelz, P.E. Solid Waste Section

Date Mailed to Facility

Deb Bush, Pinellas County, 3095 - 114th Ave. N., St. Petersburg, Fl. 33716 cc: Al-Gephart/Roger Evans, RCRA- FDEP Tampa Randy Strauss, RCRA- FDEP Tampa Robert Butera, P.E., Solid Waste- FDEP Tampa

# Florida Department of Environmental Protection

TO:	Roger Evans, Engineer IV, Hazardous Waste Section
FROM:	Susan Pelz, P.E. Solid Waste Section
DATE:	May 20, 1999
SUBJECT:	HOWCO submittal dated April 30, 1999, Attachment 5 and Enclosure (3)
cc:	Robert Butera, P.E., Solid Waste Manager Stanley Tam, P.E, Hazardous Waste Manager Al Gephart, Engineer III, Hazardous Waste

I have reviewed the above-referenced submittal and have the following comments:

## Item 5.1, Pre-approval of Oily Solid Wastes

Memorandum

1. The information states, "Generators are required to pre-qualify their shipments utilizing <u>one of the following methods</u>...." [emphasis added] Since it is stated that only one of the listed methods is required, it is not clear if submission of a Waste Material Profile Sheet <u>only</u> would be sufficient for acceptance of the material. The Solid Waste Section does not believe that submission of a Waste Profile Sheet <u>without</u> analytical data or MSDS (for virgin materials) is acceptable.

# Item 5.2.1, Solids Removed by the Vibrating Mesh Screen.

2. The information states, "The solidification agent may be soil, fly ash or spent absorbent material that is brought to the facility specifically for solidification purposes or generated onsite from used oil processing." In order to clarify this, the following changes should be made: "The solidification agent may be <u>clean</u> soil, fly ash or <u>spent</u> absorbent material that is <u>brought to the facility purchased</u> specifically for solidification purposes or generated onsite from used oil processing."

# Item 5.2.2, Oily Solids Removed from Storage Tanks

3. The information states, "The thermal treatment facility will have the proper <u>variance</u> to treat the oily solids waste stream in accordance with F.A.C. 62-775." [emphasis added] Since "variance" is not technically the correct terminology, please change this to "The thermal treatment facility will have the proper **FDEP-approved alternate procedure** to treat the oily solids waste stream in accordance with F.A.C. 62-775."

# Item 5.2.3, Sampling Plan for Solids

4. More clarification is needed on which solids will be sampled annually. Is it the processed (outgoing) solids, the incoming solids or solids which may be at some stage in the process (e.g. filter press solids, cone tank solids, etc.)?

File 3-b

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# HOWCO Used Oil Processing Facility Page 2

# Item 5.3, Incoming Oil Solids Acceptance Criteria

5. "<u>Petroleum</u> solids, <u>petroleum</u> impacted soils and <u>used absorbent materials</u>" are not included in the definition of used oil or oily wastes. For example, gasoline or diesel contaminated soil or sorbents would be "petroleum impacted" but are not authorized for management at the used oil processing facility. Wastes which are not used oil or oily wastes from which recoverable oil cannot be obtained shall not be managed at the site unless a solid waste permit is obtained. This section should be revised to clarify that "Oily waste contaminated solids, soils and used absorbent materials are processed for used oil recovery." Alternatively, "Solids, soils and used absorbent materials which are contaminated with used oil are processed for used oil recovery" is acceptable.

6. This section must clearly indicate that the solids (assumed to be received in containers) are removed from the containers and placed directly into the oily solids batch treatment tank or the cone separation tank. Residual solids resulting from processing in the oily solids batch treatment tank and/or cone tank must be discharged directly into a roll-off or other container for off-site disposal. <u>No material</u> is to be dumped on the ground or concrete slab in the solids processing area.

7. This section should include a description of how the materials are handled. For example, solids received in vac trucks are discharged directly into the processing/treatment tanks (see Enclosure (3), page 7, paragraph 5). How are solids received in drums are dumped in to the tanks? This information must be included in the application.

8. As discussed (see Enclosure (3), page 7, paragraph 4), the incoming and outgoing materials must be clearly distinguished. Procedures for this must be included in the application.

# Item 5.4, Unloading of Oily Solid Wastes

9. It is not clear if the "liquid/solids separator decanting tank" is the same as the "oily solids batch treatment tank" or the "cone separator tank." This part should be changed to be consistent with other portions of the Operations Plan.

# Item 5.5.1, Petroleum Solids (see also Comment #5 above)

10. The information states, "The remaining oily solids are then mixed with a solidification agent and allowed to dry.... Upon completion of the drying the solids are loaded into trucks and transported to a permitted landfill facility or thermal remediation facility for disposal." Where does this occur? Is this mixing conducted in a roll-off? How are the materials "mixed?" How are the materials "loaded into a truck?" See Comment #2 concerning solidification agents. Dumping the materials onto a concrete pad for mixing and solidification is <u>unacceptable</u>. Since the solids processing area is not covered (i.e. roof) it does not seem likely that the solids will effectively "dry out," especially during the rainy season.

## Item 5.5.2, Booms and Pads

11. It does not seem reasonable to expect that used oil will be recovered from contaminated booms and pads through processing with a hydraulic press. It is not clear if the "hydraulic press" is the same as the "oil filter crusher" and/or the "drum crusher." Information on each of these units should be provided. Since the hydraulic press was "made by the Company [HOWCO]", the Department has no assurance that this unit was designed and manufactured with the purpose of processing contaminated booms and pads. The information in Enclosure (3), page 7, paragraph 1 indicates that the booms and pads may also be crushed in the <u>used oil filter crusher</u> or drum crusher. If these units were purchased from an equipment manufacturer (as opposed to fabricated by HOWCO), documentation from the manufacturer indicating that the used oil filter crusher or drum crusher is suitable for extracting used oil from contaminated booms and pads should be provided. The processing of other used oil contaminated sorbents should be discussed.

## Item 5.6, Petroleum Contaminated Solid Waste

12. See Comment #5 above concerning "petroleum" contaminated solids.

13. The information states, "petroleum contaminated solid waste includes sludges, oil dry, absorbent material, soil, debris, wood, clay, concrete, spent blast media and other petroleum residuals which are classified as a non-hazardous waste. The petroleum contaminated solid waste may be generated on or off site.... Solid waste that produces a sheen when placed in water will be deemed to contain a recoverable amount of petroleum." It is not my recollection that the Department agreed to this definition, although Enclosure (3), page 7, paragraph 3 indicates that the Department agreed to this proposal. It does not seem reasonable that "debris, wood, clay, concrete, and spent blast media" would be sufficiently contaminated to be able to recover used oil. Unless the applicant conclusively demonstrates that used oil can be recovered from these materials, the management of these materials will require a separate solid waste permit.

14. Where is the sludge drying bed located? Is it covered? If it is not covered, it does not seem reasonable to expect that the sludge will dry effectively. See Comments #6 and #10 above concerning placement of contaminated materials on the ground or concrete pad.

15. The information states, "The solids from the decanting separation <u>may</u> be placed in a rolloff box for shipment off site. The petroleum contaminated solid waste from the decanting separation that has recoverable petroleum will be processed in either the Oily Solids Batch Treatment Tank Number 111 or the Cone-Bottom Tank Number 110." This should be revised to, "The solids... <u>will</u> be placed in a roll off box for shipment off site, or in the Oily Solids Batch Treatment Tank or Cone-Bottom Tank." The Department understands this section to mean that <u>all</u> oily solids will first have free liquids decanted. They may then be further processed in the Oily Solids Batch Treatment or Cone-Bottom Tanks. It would be helpful if a flowchart was provided which shows each incoming waste stream (oily solids, oily sludges, used oil contaminated booms and pads, used oil contaminated sorbents), processing steps, testing steps, mixing, drying, etc., and final disposition. Memorandum to Roger Evans May 20, 1999

16. The information states, "The solid waste will be transferred from the sludge drying bed or storage container by using a solids handling vacuum truck. The truck will be used to vacuum the <u>petroleum contaminated</u> solid waste from the storage location into the truck tank." To which "storage location" does this refer? See Comment #5 above concerning "petroleum" contaminated solids.

sjp

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BOARD OF COUNTY COMMISSIONERS

**PINELLAS COUNTY, FLORIDA** 

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May 19, 1999

David J. Roehm Howco Environmental Services 3701 Central Avenue St. Petersburg, FL 33713

Dear Mr. Roehm:

D.E.P.

MAY 2 1 1999 Southwest District Tampa PINELLAS COUNTY UTILITIES SOLID WASTE OPERATIONS

3095 - 114" AVENUE NORTH ST. PETERSBURG, FLORIDA 33716 PHONE: (727) 464-7565 FAX: (727) 464-7713

KE AG RR

Pinellas County Code Chapter 106, Section 156, establishes the permitting process for the operation, modification, and maintenance of Solid Waste Facilities. A Solid Waste Facility or facility as defined in Section 131 of the Code is any solid waste disposal area, volume reduction plant, transfer station or other facility, the purpose of which is the resource recovery or disposal, recycling, processing or storage of solid waste. Such term does not include facilities which use or ship recovered materials unless such facilities are generating solid waste as part of the recovery process.

After the site visit to your facility on 5/18/99 and after discussion with you and Mr. Hogan, it has been determined that your facility will need to obtain a permit in order to comply with the above referenced ordinance.

At the time of the site visit, I left you with a copy of Code, a permit application and a fee schedule. Following submittal of the permit application, you will be notified in writing when the application is deemed complete. After review and evaluation by the County, the application will be presented to the County Administrator for administration issuance of the permit.

Please be advised that you have (60) sixty days to comply with these requirements or request an extension in writing. Failure to do so may result in fines up to (\$500.00) five hundred dollars per day and/or (6) months in jail.

If you have any questions about the permitting process, feel free to contact me at (727) 464-7565.

Sincerely. Websrah & Bush

Deborah B. Bush Solid Waste Specialist

 CC: Warren Smith, Director, Pinellas County Department of Solid Waste Bob Mortoro, Enforcement Division Administrator, Department of Environmental Management Tom Funk, Department of Environmental Management
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"Pinellas County is an Equal Opportunity Employer" • Member-Pinellas Partnership for a Drug Free Workplace "We are working to be the standard for public service in America" MAY 1 1 1999

\* SOUTHWEST DISTRICT TAMPA May 7, 1999

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Reference: HOWCO Environmental Services Used Oil Permit Application H052-308139 FDEP Letter dated March 1, 1999.

Dear Roger:

The enclosed statistical analysis summary sheets and raw data are provided for the HOWCO Environmental Services used oil on specification waste stream determination. The used oil processed by the Company was determined to be on specification used oil at the 95 percent confidence level.

The sample period and the number of samples were adequate to determine that the used oil was on specification at the 95 percent confidence level. The selected sample period was from October 15, 1998 through April 15, 1999. The Company shipped out 3,374,459 gallon of used oil in 1998. The typical processed used oil tank hold 20,000 gallons. The total number of tanks that would be filled in six months would be calculated to be 84. The number of tanks filled during the sample period was 83. The parameters had as few as 24 and as many as 83 data points. The confidence limits were adjusted to account for the number of quantified sampling events verses the total number of tanks filled with processed used oil (83). The measurements, which were below the method detection limit, were calculated at one half the detection limit. The values on the right hand column of the tables are the numbers used in the spreadsheet calculations.

The average plus or minus the 95 percent confidence level for the total halogen level was determined to be  $759.4 \pm 24.7$  ppm. This is significantly below the regulatory limit of 1000 ppm.

The total lead concentration average plus or minus the 95 percent confidence level was determined to be  $22.3 \pm 2.1$  ppm. This is significantly below the regulatory limit of 100 ppm.

The total chromium concentration average plus or minus the 95 percent confidence level was determined to be  $0.4 \pm 0.3$  ppm. This is significantly below the regulatory limit of 10 ppm.

The total cadmium concentration average plus or minus the 95 percent confidence level was determined to be  $0.1 \pm 0.031$  ppm. This is significantly below the regulatory limit 2 ppm.

Refer to: - USED OIL PROCESSING FACILITY (Submitted document) PERMIT STATISTICAL ANALYSIS

File 3-6

The total arsenic concentration average plus or minus the 95 percent confidence level was determined to be  $0.1 \pm 0.17$  ppm. This is significantly below the regulatory limit of 5 ppm.

The flash point average plus or minus the 95 percent confidence level was determined to be  $190.8 \pm 8.7$  °F. The on specification regulatory limit for flashpoint is that it must be greater than or equal to 100 °F.

The total PCB concentration average plus or minus the 95 percent confidence level was determined to be  $0.233 \pm 0.016$  ppm. The valve for the PCB 95 percent confidence range is based on half the detection limit of the analyses completed. No PCB's were determined to be present in the used oil above the reported method detection limits. The PCB's are required to below 2 ppm.

Based upon the review of the enclosed data and statistical analysis, the future sampling of one used oil tank per month will provide sufficient documentation to substantiate the on specification used oil waste determination. Six samples from a estimated six month 84 tank sample population will provide a sufficient number of samples to maintain a 95 percent confidence level that the used oil will meet on specification based upon the historical analysis of this processed used oil waste stream.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

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Sincerely,

W. Kudoph

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 <HES-22.DOC.TWR>

cc: Mr. Tim Hagan, HOWCO Environmental Services President/CEO

5/7/94

April 30, 1999

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

ENVIRONIDA DEPARTI

Reference: HOWCO Environmental Services Used Oil Permit Application H052-308139 FDEP Letter dated March 1, 1999.

Dear Roger:

The enclosure (1) changes have been underlined to show the changes to original text and expedite the review process. Enclosure (2) is a copy of the same information with out the underlines. Please replace these pages in the permit application and remove Table 4-4. Enclosure (3) provides a summary response of the requested changes to the referenced application. The revised drawings are provided as enclosure (5). The drawings for the contingency plan are provided as enclosure (6). Enclosure (7) provides the letter from the manufacture of the drum crusher stating that it will process spent pads and sorbents to recover used oil and petroleum products.

The flood insurance map that was requested has been ordered but not received to date. The map will forwarded when received.

The used oil sample plan comments have not been addressed by this submittal. The analytical data will be evaluated and a submitted will be provided on 7 May 1999.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

thy W. Kudoph

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 <HES-20.DOC.TWR>

cc: Mr. Tim Hagan, President/CEO

File 3-b

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## HOWCO Environmental Services Used Oil Processing Permit Application [Comments in brackets have been added as responses]

## Summary Of Issues [and Responses]:

## Table of Contents

\* ..

Titles and page numbers identified in the 'Table of Contents' and 'List of Tables and Forms' do not match the pages in the application. For example:

Items 3.9, 3.10 and 3.11 should be designated as being on page 3-7. [Deleted Page Break.] Item 3.12 should be designated as being on page 3-8. [Deleted Page Break.] Item 5.2.1 should be designated as being on page 5-1. [Changed.] Item 5.3 has a different title in the text than what appears in the table of contents. [Changed to "Incoming Oil Solids Acceptance Criteria".] Table 3-1 should have the word "processing" in the title. [Added "processing".] Table 3-2 should have a new title. [Changed to "Industrial Wastewater Treatment Plant Tanks".] Table 9-1 should be designated as being on page 9-3. [Changed.]

## Attachment 1. List of Drawings

D-6-2 On page 1-1, the title of drawing D-6-2 should be Emergency Containment No. 1, 2 and 3 not Emergency Containment No. 2. [Changed.]

D-8-1 How does the title "Process & Storage Equipment Plan" relate to drawing D-8-1? [Title changed to "Process & Equipment Storage Plan" because this drawing shows the location of process equipment and the equipment storage locations at the facility.]

Attachment 1 also has drawing D-8-1 labeled as "Emergency Containment No 1". How are these two titles related? [Deleted "Emergency Containment No 1" as these words were left over from a prior edit.]

20782-6TF-024 Please change the title from "St. Petersburg, Fl - Map" to "Site Location Map". [ The words "Site Location Map" added to Page 1-1. Drawing changed.]

Please indicate if the drawings provided are "as built" drawings. All drawings shall be signed and sealed by a professional engineer licensed in the State of Florida. [The drawings provided are not "as built" drawings. The drawings can not be signed and seal by a professional engineer in accordance with Florida Statues based the information discussed in the teleconference between FDEP and the Company on 25 March 1999.]

125148-00210-B Please place the plant site locator on the full 16" x 16" FIRM Flood Insurance Rate Map (City of St. Petersburg, Florida; Pinellas County; Panel 21 of 28; Community Panel Number 125148-0021-B.) [This map has been ordered but has not arrived to date. The map will be forwarded to FDEP when it arrives.]

Drawing D-4-2 Tanks A and B should be labeled with a corresponding number to tanks listed in

PAGE 1 OF 7.

PREPARED BY: ENVIRONEERING, INC. (904) 665-0100 4/30/99

ENCLOSURE (3)

Howco Environmental Service 5<sup>th</sup> Request for Information Page 2

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Table 3-2. All drawings should be revised to indicate the numerical designations of these two tanks. [Drawings have been revised to indicate the tank numbers 191 and 192.]

## Attachment 2. Brief Description Of Facility Operation.

- Item 2.2 As written, the Department understands that the solids generated from the wastewater treatment filter press will **not** be managed with any other waste stream prior to shipment off site. Please be more specific in re-wording the text to insure that this is true. [The solids generated from the wastewater treatment filter press are a solid waste that is generated on site. The facility can mix all of the solid wastes generated on site prior to shipment off site. The Company can mix or choose not to mix the solids generated from the wastewater treatment filter press with other solid waste generated at the facility.]
- Item 2.3 In the last paragraph, what are dump trainers? [Word changed to "trailers"]

## Attachment 3. Detailed Process Description.

- Item 3.12 If the Generator does not perform the TCLP test, will Howco pick up the used antifreeze? [The waste antifreeze will only be picked up if a waste determination has been made and certified by the generator in accordance with 40 CFR 262.11. The TCLP test is not required for every waste determination in accordance with the enclosed "FLORIDA DACT SHEET ON THE MANAGEMENT OF WASTE ANTIFREEZE" dated 4/20/95.] If so, is it tested? [No additional testing will be conducted on the waste antifreeze.] Please discuss this scenario within the text. [Changes have been made to this section.]
- Item 3.12.1 How does a Freon leak detector determine if the used antifreeze is acceptable or unacceptable? [This item has been deleted.]
- Table 3-3
   Are the tanks identified in Containment area 5 proposed or existing?
   The tanks are a combination of existing and under construction.

## Attachment 4. Sampling & Analysis Plan.

Item 4.2 The Department does not accept the premise that the processed oil generated at Howco meets the on-specification criteria based on generator's knowledge. Before the Department can accept a statistical analysis demonstrating Howco's processed oil is on-spec, all data forming the bases for the study must be provided for review and validation. The information describing the statistical analysis provided in the application is too vague and convoluted to be accepted at face value. Such statements as "various parameters that are measured <u>qualitatively</u> are averaged and the <u>standard deviation</u> is determined to provide the statistical analysis of data" and "the average value plus or minus the standard deviation is used as the <u>acceptable</u> range for a given parameter being <u>normal</u>" cannot be accepted at face value. The values must be clarified and supported in the context of the statistical analysis. Until it can be statistically proven that Howco's processed used oil is on-spec, **each tank of processed oil must sampled** and tested to verify the quality of the oil. [This section has been revised. The word "qualitatively" has been changed to "quantitatively". The analytical data will be submitted under a separate cover letter.]

Item 4.2.1 In the first paragraph, is "one of the ten processed oil tanks" the same as "the process

Howco Environmental Service 5<sup>th</sup> Request for Information Page 3

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oil tank sampled for off-site shipment"? [Yes. The used oil in the ten processed oil tanks is sampled for off site shipment. The two statements, 1. "one of the ten processed oil tanks" and 2. "the process oil tank sampled for off-site shipment", refer to the same tank.]

In the first paragraph, how do the last two sentences "fit in" with the previous three sentences? [These five sentences discuss used oil sampling. The last two sentences describe how the tank will be managed after the sample is obtained. The three prior sentences describe what is being done with the used oil sample and the analytical results.]

Please explain what is meant by "Periodic grab sampling and analysis is performed on one of the ten processed oil tanks once per week". [This sentence means that "One of the ten used oil tanks will be sampled one time per week. Please note that this has been changed to one sampling event per month in the current version based upon the 25 March 1999 teleconference.]

In the third paragraph, how many "tagged-out" tanks does 5-10 loads represent? [Approximately two tanks will provide 5-10 loads of processed used oil.]

How long is the tank agitated using compressed air before the tank is sampled? [The processed oil tank is agitated using compressed air for approximately a minimum of five minutes, a average of ten minutes or a maximum of 15 minutes. The aeration time will not be recorded.] What effect does the air injection have on the total halogen concentration in the processed oil? [The effect on the air mixing has on the total halogen concentration in the processed oil will be negligible. The air bubbles used for the mixing are of large diameter having a low surface area for effective mass transfer. The processed used oil at the Company has a well-documented history of being below the regulatory level of 1000 ppm of total halogens. The processed oil has been treated through a high temperature batch treatment process prior to this sampling activity. A very small quantity of organics will be removed during the mixing process.]

Please explain why samples are held for 30 days. [Samples are held for 30 days for quality control purposes. It is necessary to have evidence of the waste received from generators for reconciling invoice disputes.] Holding times of US EPA approved methods for halogenated volatile organics is 14 days and for PCBs, 7/40 days. Any testing of samples held for longer periods than those stated would be invalid. [Samples are analyzed before the holding times expire. The word "analyzed" has been added pursuant to the teleconference of 19 April 1999.]

Item 4.3.2 There is no reference to Table 4-2 in the text. Please consider deleting the Item 4.3.2 and rewording Item 4.3.1 to read "Incoming industrial wastewater is sampled using the bailer and analyzed for the following constituents/properties identified in Table 4-2. [Revision made.]

## Attachment 5. Solid Waste Handling.

- Item 5.1 In the third bullet, the page number for Table 5-1 is incorrect. [Revision made.]
- Item 5.2 Please indicate on the facility site plan the location of the vibratory screen. In addition, revise the text to include a more detailed operating description of the vibratory screen. [Revision made.]
- Item 5.2.1 In the first paragraph, please re-word the text to make it explicit that only "virgin" materials are to be used for solidification, stabilization or absorption. [The Company is awaiting input from Ms. Suzan Pelz on the correct terminology to use to describe solidification, stabilization or absorption agents that are not solid waste. This was discussed during the 25 March 1999 and

Howco Environmental Servic 5<sup>th</sup> Request for Information Page 4

> 19 April 1999 teleconferences and a facsimile requesting the input promised was sent to Ms. Suzan Pelz requesting her input on 29 April 1999.]

In the 11th sentence, the activities are only acceptable if virgin materials are used or the wastes are generated on-site from used oil processing. [Sentence added.]

- Item 5.2.2 In the third paragraph, the waste cannot be accepted by a soil thermal treatment facility. [Revision has been made pursuant to the teleconference of 19 April 1999 to use a facility with the correct variance to receive this waste stream.]
- Item 5.3 The processing activities described in this paragraph requires a solid waste permit. [Revision made.]
- Item 5.5.1 Howco is required to perform a waste determination on the petroleum contaminated solids and "other" solids coming into the facility. Please include language which will satisfy this requirement. [The generator of the waste stream is required to make a waste determination in accordance with 40 CFR Part 262.11. A revision has been made.]

Howco has failed to provide the Department with reasonable assurance that solid waste will not be accepted. The Used Oil Processing Permit does not authorize the acceptance or management of solid waste. If Howco anticipates acceptance of solid waste, a separate solid waste permit is required. Please refer back to the Department's 'Third Notice of Deficiency' letter, Attachment 5. [The Company will only accept waste to be processed in accordance with the used oil permit. The Company will not accept solid waste that requires the facility to have a solid waste permit.]

# Attachment 7. Preparedness And Prevention Plan.

- Item 7.2 Equipment which "may be" available for use in a spill control is not acceptable language to the Department. The equipment is either available or not available in times of emergency. Please revise the text to be consistent with the title. [Change made to text.]
- Item 7.5 This paragraph identifies that preventative maintenance will be completed on an annual basis but does not establish the frequency emergency equipment will be tested. Please revise the text to include this information. [The frequency emergency equipment will be tested is on an annual basis.]
- Table 7-5
   Delete the word "may". [No change made. Equipment that will be available is listed in Item

   7.2.]

## Attachment 8. Contingency Plan.

The Contingency Plan should be designed to be a 'stand alone' document, and hence all references such as drawings, etc. are to be contained within the plan. Please modify the plan to include all outside referenced documents. [An extra set of drawings has been provided.]

Item 8.1 Drawing D-8-1 is not titled "General Arrangement Plan" as identified in the text. [Title has been changed.] What is a "General Arrangement Plan"? [Typographical error.]

In Item 8.1 and 8.3, the text mentions chemical usage and storage areas but these locations are not indicated on the referenced drawings D-6-1 and D-8-1. Please revise the drawings to indicate the locations of the liquid chemical handling and storage areas. [The references to these areas has been edited. Drawing D-8-3 was created to address the chemicals in the Industrial Wastewater Pretreatment Facility.] Howco Environmental Service 5<sup>th</sup> Request for Information Page 5



- Item 8.4 In paragraph 1, the last sentence, please re-word the sentence to clarify that monthly inspections are to be performed independent of any intensive storm water event. [Changed.]
- Item 8.8 In the second paragraph, please add an evacuation route posting at the Filter Press/Crusher area. [Change made.]
- Item 8.11 Please revise drawing D-4-1 to show the locations of emergency response and control equipment. [Revision made.]

## Attachment 9. Unit Management Description.

Item 9.1 A review of Tables 3-1, 3-2 and 3-3 shows that there are 51 tanks total but the text states that there are 48 tanks. Please correct this discrepancy. The last sentence in Item 9.1 should also include a reference to Table 3-3. [Revisions made.]

In the third paragraph, the text states ten tanks, then nine. Please clarify this inconsistency. [Revision made.]

In the third paragraph, why are the capacities in "brackets"? [Brackets deleted.]

In the fourth paragraph, the capacity of Dike No. 3 does not agree with the capacity stated in Table 3-2. Please revise the text to be consistent. [Revision made  $422,100 \Rightarrow 422810$ .]

In the fifth paragraph, correct the "typo" 46,0010 gallons. [Revision made  $46,0010 \Rightarrow 46,000$ .]

- Table 9-1
   Please revise the note on Table 9-1 to indicate inspections must be conducted at least every 30 days, not 31 days. [Changed to 30 days.]
- Item 9.6 The Department has received your letter dated February 19, 1999, which submitted changes concerning the discharge of stormwater and the use of the existing stormwater oil water separator. This review has been forwarded to the Industrial Waste Section for their review and comments. [No changes made to the application. Discharge of storm water without a sheen to grade is allowed in accordance with the SPCC regulations in 40 CFR Part 112.]

## Attachment 10. Closure.

Item 10.4 Since a closure permit is not required to close a used oil processing facility, the Closure Permit time frame should not be included in the schedule for closure. [Revision made.]

Please add a line item indicating the time to submit the certification of complete closure. [Revision made.]

# **Re:** USED OIL PERMIT RESPONSE INPUT FROM FDEP ON 4/19/99

The FDEP representatives Roger Evans and AI Gephart called me to discuss the last submittal on the HOWCO Used Oil Permit dated 5 April 1999. The following items were discussed for changes to the permit application. Final changes are subject to review and approval by Mr. Tim Hagan. The conversation lasted from 10:00 AM until 12:05 PM.

Howco Environmental Servic 5<sup>th</sup> Request for Information Page 6

Roger requested that the title for Drawing D-8-1 be changed from "Process and Storage Equipment Plan". I suggested that the title be changed to "Process and Equipment Storage Plan". [Revision made.]

The chemicals used at the facility were discussed next. I told Roger that the only chemical used for processing used oil at the facility was the deemulsifier, which had been added to the drawings. Roger requested that the industrial wastewater chemical storage locations be shown on drawing D-8-1. [Revision has been made. The Industrial Wastewater Pretreatment Facility chemicals are shown on drawing D-8-3.]

Roger requested that a new drawing be provided for drawing D-4-2 that replaced tanks A and B with their correct tank numbers of 190 and 191. I told Roger that the requested change would be made. [Revision made.]

Roger stated that the changes to section 3.12 were not what he wanted. Roger stated that waste antifreeze that is recycled would not require a TCLP analysis. Waste antifreeze that is sent to the Industrial Wastewater Plant must be tested for TCLP benzene, tetrachloroethylene, trichloroethylene and lead. I stated that waste antifreeze was allowed to have a waste determination made based upon generator knowledge or TCLP testing. A written response will need to be provided. [A copy of the FDEP guidance information on this subject has been provided as enclosure (4). The waste antifreeze will only be picked up if a waste determination has been made and certified by the generator in accordance with 40 CFR 262.11. The TCLP test is not required for every waste determination in accordance with the enclosed "FLORIDA DACT SHEET ON THE MANAGEMENT OF WASTE ANTIFREEZE" dated 4/20/95.]

Section 4.2.1 was discussed next. Roger and AI would like to have the minimum, average and maximum times for aerated mixing of the tanks defined with a written response for the air stripping issue. I stated that a response would be provided. It was requested that the word analyzed be added to the seventh sentence of the first paragraph of this section to clarify that the sample was placed into storage after being analyzed. I concurred with the request. [Revision made.]

The changes to items 5.2.1 and 5.2 will need to double-checked. [Revisions made.]

Ms. Suzan Pelz joined the discussion for the solid waste issues. Susan stated that she would provide alternate words to the FDEP requested "Virgin Material" for solidification agents used at the company. [The company is awaiting input from Ms. Suzan Pelz on this item.]

Suzan requested that Clark Environmental Services, Inc. be added to the thermal treatment facility statement in section 5.2.2 because it is the only local facility with the proper variance to receive the waste stream. I concurred with the change. [A generic revision has been made.]

## Howco Environmental Servic 5<sup>th</sup> Request for Information Page 7

19 - **1**9 -

Suzan asked how the boom and pads were to be crushed. I stated that they would be crushed either in the used oil filter crusher or the drum crusher. (Pursuant to a discussion with Mr. Tim Hagan the booms and pads are crushed in the drum crusher) Suzan stated that she wanted a letter, from the manufacturer of the unit these items were crushed in, that stated the equipment was designed to remove oil from booms and pads. [The Company made the drum crusher. A letter has been provided as enclosure (7).]

Suzan requested that additional sentences be provided for roll off storage and the transfer of solids from tanks 110 and 111 to the roll off boxes. [Revision made.]

The next discussion was on what constituted a recoverable amount of petroleum hydrocarbons. I stated that under the state and federal Coast Guard Regulations that a sheen on the water surface was considered a recoverable amount of petroleum hydrocarbon. Oily solids that produced a sheen when placed into water would be deemed to have a recoverable amount of petroleum hydrocarbon. Suzan, Roger and Al agreed with this definition. [Revision made.]

Susan requested that the containers of processed waste be marked in a way to distinguish them from the unprocessed waste for inspection purposes. I concurred. [Revision made.]

Suzan requested that a paragraph be added on the transfer of solids from the pad to tanks 110 and 111. I stated that current method of transfer was by vacuum truck. [Revision made.]

The storm water management at the facility was discussed next. The drum storage area and solids processing area drains into a center collection area that runs through an oil water separator before discharge. The tank farm area drains into a collection sump. The water is pumped into a gravity oil water separator before discharge. [No change made.]

The hazardous waste consent order was mentioned briefly by Roger without discussion of any details. [No change made or action required.]

Suzan requested that item 5.6 be changed in the following ways. The words "may or may not" be changed to "will" in the fourth sentence. The fifth sentence should be deleted. I concurred. [Revision made.]

Suzan stated that she would do the review from the solid waste viewpoint when the next submittal had been completed. Suzan departed the meeting.

Roger would like new drawings submitted with the contingency plan (Attachment 8). [Drawing enclosed.]

Roger requested that Attachment 10 reference to 40 CFR 265.310 be deleted. I concurred. [Revision made.]

Roger stated that he wanted a written response to every item in the last FDEP letter and this telephone conversation. I told him that it would be done. [Done.]



April 30, 1999

Mr. Roger C. Evans Florida Department of Environmental Protection Southwest District 3804 Coconut Palm Drive Tampa, FL 33619

Reference: Teleconference on 19 April, 1999 with ENVIRONEERING, Incorporated

Dear Roger:

The drum crusher at the HOWCO Environmental Services facility was constructed by the Company. The drum crusher will adequately crush spent pads and sorbents to remove used oil and petroleum hydrocarbons. This unit has been used many times to successfully recover used oil from spent pads and sorbents.

Please do not hesitate to call me if you have any questions on the HOWCO drum crusher.

Respectfully submitted,

Tim Hagan, President/CEO HOWCO ENVIRONMENTAL SERVICES

<b># *</b>		-		
<b>FA</b>	(		Date 04	4/30/99
			Number of page	es including cover sheet 1
то:	TIM RUDOLPH		FROM:	AL GEPHART
	ENVIRONEERING, INC.			FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION
				3804 COCONUT PALM DRIVE
Phone				TAMPA, FL 33619-8318
Findine Fax Phone	(904) 665-0101			
	· · · · · · · · ·	_	Phone	(813) 744-6100, EXT. 372
CC:		]	Fax Phone	(813) 744-6125
<b>REMARKS</b> On April 30 has found s Department recoverable	Urgent For your For your For your , 1999, the Department conduct several items on which we disated t's agreement on accepting the e amounts of petroleum hydrocome a mounts of petroleum hydrocome of the several items of the several	our review cted a curso gree. Spec Coast Gua arbon.	Reply AS ry review of yo ifically, Section rd definition us	Dur 4/28.1999 facsimile and ns 3.12 and reference to the sed to determine
		Al Ge	phart	

Transmit Confirmation Report

No.	:	007
Receiver	:	818504140414
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Date	:	Apr 30 99 11:55
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ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Reach, Fl. 32082 (904) 665-0100 (904) 665-0101 FAX

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FAX TRANSMISSION COVER SHEET
Date: <u>4/28/99</u> # of Pages: <u>4</u> (Including Cover Sheet)
TO: ROGER EVANS
Company: FOEP Fax # (813) 744 - 6125
From: Tim Rudoppn
Message: PLEASE REVIEW AND COMMENT
ON TELCON MINUTES.
THAN KS
TIM RUDOLPH

Please call (904) 273-4238 if there are any questions regarding this facsimile.

Warning: The information in this facsimile message may be privileged and confidential information intended only for the use of the individual or entity named above. If the reader of this message is not the intended recipient, you are hereby notified that any dissemination, distribution or copy of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone and return the original message to us at the above address via the U.S. Postal Service. Thank you!

TMR Transmitted by:
## ENVIRONEERING, INCORPORATED

# <u>Memorandum</u>

By Tim Rudolph, President, ENVIRONEERING, INC.

CC: Tim Hagan, President, HOWCO Environmental Services, Inc.

Date: 4/2899

Re: USED OIL PERMIT RESPONSE INPUT FROM FDEP ON 4/19/99

#### **USED OIL RESPONSE**

The FDEP representatives Roger Evans and Al Gephart called me to discuss the last submittal on the HOWCO Used Oil Permit dated 5 April 1999. The following items were discussed for changes to the permit application. Final changes are subject to review and approval by Mr. Tim Hagan. The conversation lasted from 10:00 am until 12:05 PM.

Roger requested that the title for Drawing D-8-1 be changed from "Process and Storage Equipment Plan". I suggested that the title be changed to "Process and Equipment Storage Plan".

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Roger stated that the changes to section 3.12 were not what he wanted. Roger stated that waste antifreeze that is recycled would not require a TCLP analysis. Waste antifreeze that is sent to the Industrial Wastewater Plant must be tested for TCLP benzene, tetrachloroethylene, trichloroethylene and lead. I stated that waste antifreeze was allowed to have a waste determination made based upon generator knowledge or TCLP testing. A written response will need to be provided.

Roger stated that all antifrage not for recycle needs TCLP test Howco or benerator has to do it.

Page 1

Section 4.2.1 was discussed next. Roger and Al would like to have the minimum, average and maximum times for aerated mixing of the tanks defined with a written response for the air stripping issue. I stated that a response would be provided. It was requested that the word analyzed be added to the seventh sentence of the first paragraph of this section to clarify that the sample was placed into storage after being analyzed. I concurred with the request.

The changes to items 5.2.1 and 5.2 will need to double-checked.

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Suzan requested that Clark Environmental Services, Inc. be added to the thermal treatment facility statement in section 5.2.2 because it is the only local facility with the proper variance to receive the waste stream. I concur with the change.

Suzan asked how the boom and pads were to be crushed. I stated that they would be crushed either in the used oil filter crusher or the drum crusher. (Pursuant to a discussion with Mr. Tim Hagan the booms and pads are crushed in the drum crusher) Suzan stated that she wanted a letter, from the manufacturer of the unit these items were crushed in, that stated the equipment was designed to remove oil from booms and pads.

Suzan requested that additional sentences be provided for roll off storage and the transfer of solids from tanks 110 and 111 to the roll off boxes.

The next discussion was on what constituted a recoverable amount of petroleum hydrocarbons. I stated that under the state and federal Coast Guard Regulations that a sheen on the water surface was considered a recoverable amount of petroleum hydrocarbon. Oily solids that produced a sheen when placed into water would be deemed to have a recoverable amount of petroleum hydrocarbon. Suzan, Roger and Al agreed with this definition.

Reconce Abreeing To The His Definition

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Susan requested that the containers of processed waste be marked in a way to distinguish them from the unprocessed waste for inspection purposes. I concurred.

Suzan requested that a paragraph be added on the transfer of solids from the pad to tanks 110 and 111. I stated that current method of transfer was by vacuum truck.

The storm water management at the facility was discussed next. The drum storage area and solids processing area drains into a center collection area that runs through an oil water separator before discharge. The tank farm area drains into a collection sump. The water is pumped into a gravity oil water separator before discharge.

The hazardous waste consent order was mentioned briefly by Roger without discussion of any details.

Page 2

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Suzan stated that she would do the review from the solid waste viewpoint when the next submittal had been completed. Suzan departed the meeting.

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Roger requested that Attachment 10 reference to 40 CFR 265.310 be deleted. 1 concurred.

Roger stated that he wanted a written response to every item in the last FDEP letter and this telephone conversation. I told him that it would be done.

TIMOTHY W. RUDOLPH, P.E. PRESIDENT ENVIRONEERING, INC. 4459-25.000>

cc: Roger Evans

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APR - 8 1999

April 5, 1999

SOUTHWEST DISTRICT TAMPA ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Reference: HOWCO Environmental Services Used Oil Permit Application H052-308139 FDEP Letter dated March 1, 1999.

Dear Roger:

A 30-day extension to response to your letter dated March 1, 1999 is requested pursuant our recent telephone meeting with Mr. Tim Hagan and others on March 25, 1999 from 08:30 to 12:00. During this meeting a verbal request for the 30 day extension was made. This letter documents the request for a 30-day extension made on March 25, 1999.

The enclosed changes are in draft form and are provided for your review and comment prior to the final submittal, which will be made by close of business on April 30, 1999. The enclosed changes have been highlighted to show the changes to original text and expedite the review process.

The used oil sample plan comments have not been addressed by this submittal. A statistically valid sampling plan will be submitted on or before April 30, 1999.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

mothy W. Kuloph

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 <HES-20.DOC.TWR>

cc: Mr. Tim Hagan, President/CEO

FLORIDA	Department of Environmental Protection	on
Lawton Chiles Governor DATE: <u>3</u>	Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619 - 25 - 99	Virginia B. Wetherell Secretary

ATTENDEES

Howco - Discussion on Used Oil Application (5th NOD)

Name

8:30 AM

TIME:

SUBJECT:

#### Affiliation

Telephone

File 3-b

29/99

(813)ETHART 744-6100 FDEP ext 377 Tam anlei 4 x - 390 11 £1 Evans x 388 Environ. Serv hapi ower 727 328-7403 ham (347 RICHARD REPRESENTING LLEM HOWCO 941-488-8103 727-327-8467 4226 HAGAN ( ` ۰ ( lim FDEP ling Dreque (\$13) 744-6100 ×410 Tim Rudolph Environeering, Inc Conf. call

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"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled honer



Department of Environmental Protection

Jeb Bush Governor Southwest District 3804 Coconut Palm Drive Tampa, Florida 33619

David B. Struhs Secretary

File 3-b

28 /99

March 1, 1999

Mr. Tim Hagan, President Howco Environmental Services 3701 Central Avenue St. Petersburg, FL 33713

> RE: Howco Environmental Services, FLD 152 764 767 Used Oil Permit Application HO52-308139 Fifth Notice of Deficiency

Dear Mr. Hagan:

The Department has completed its review of the referenced application received on January 4, 1999, and February 4, 1999, and has determined that the information submitted is incomplete. These issues that are in need of resolution are outlined in the attached summary.

The deficiencies noted in the summary constitute a violation of Department rules. Failure to correct these deficiencies within the allotted time frame given below will subject Howco Environmental Services to formal enforcement action, which may include the imposition of a monetary penalty.

In preparing a complete response to these comments, the Department recommends that the response be addressed in two sections. The first section should identify each comment and followed with the answer and discussion by the applicant. The next section should contain the revised pages of the application.

Please provide two (2) copies of your written response within thirty (30) days. Should you have any questions, please contact AI Gephart at 813-744-6100, extension 372 or myself at extension 388.

Sincerely,

Evans.

Roger C. Evans Permitting Engineer Hazardous Waste Section

cc: Tim Rudolph, Environeering, Inc.

ag-inbox/howco/letters/3-1-99.doc

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

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Howco Environmental Service. 5<sup>th</sup> Notice of Deficiency Page 2

#### HOWCO Environmental Services Used Oil Processing Permit Application

#### **Summary Of Issues:**

#### **Table of Contents**

Titles and page numbers identified in the 'Table of Contents' and 'List of Tables and Forms' do not match the pages in the application. For example:

- Items 3.9, 3.10 and 3.11 should be designated as being on page 3-7
- Item 3.12 should be designated as being on page 3-8.
- Item 5.2.1 should be designated as being on page 5-1.
- Item 5.3 has a different title in the text than what appears in the table of contents.
- Table 3-1 should have the word "processing" in the title.
- Table 3-2 should have a new title.
- Table 9-1 should be designated as being on page 9-3

#### Attachment 1. List of Drawings

On	D-6-2	On page 1-1, the title of drawing D-6-2 should be Emergency Containment No. 1, 2 and 3 not Emergency Containment No. 2.
How does the title relate to the draw	D-8-1	How does the title "Process & Storage Equipment Plan" relate to drawing D-8-1?
	OK	Attachment 1 also has drawing D-8-1 labeled as "Emergency Containment No 1". How are these two titles related?
OL	20782-	6TF-024 Please change the title from "St. Petersburg, Fl - Map" to "Site Location Map".
	Please a profe	indicate if the drawings provided are "as built" drawings. All drawings shall be signed and sealed b ssional engineer licensed in the State of Florida.
	125148	-00210-B Please place the plant site locator on the full 16" x 16" FIRM Flood Insurance Rate Map (City of St. Petersburg, Florida; Pinellas County; Panel 21 of 28; Community Panel Number 125148-0021-B.)
	Drawin	g D-4-2 Tanks A and B should be labeled with a corresponding number to tanks listed in Table 3-2. All drawings should be revised to indicate the numerical designations of these two tanks.
Atta	chment 2.	Brief Description Of Facility Operation.

- Item 2.2 As written, the Department understands that the solids generated from the wastewater treatment filter press will **not** be managed with any other waste stream prior to shipment off site. Please be more specific in re-wording the text to insure that this is true.
- ou Item 2.3 In the last paragraph, what are dump trainers?

Howco Environmental Services 5<sup>th</sup> Notice of Deficiency Page 3

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was not included in ter-

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#### Attachment 3. Detailed Process Description.

Surstion not Item 3.12 If the Generator does not perform the TCLP test, will Howco pick up the used antifreeze? answered . If so, is it tested? Please discuss this scenario within the text.

Item 3.12.1 How does a Freon leak detector determine if the used antifreeze is acceptable or unacceptable? ok

Table 3-3 Are the tanks identified in Containment area 5 proposed or existing?

#### Attachment 4. Sampling & Analysis Plan.

	Item 4.2	The Department does not accept the premise that the processed oil generated at Howco meets the on-specification criteria based on generator's knowledge. Before the Department can accept a statistical analysis demonstrating Howco's processed oil is on-spec, all data forming the bases for the study must be provided for review and validation. The information describing the statistical analysis provided in the application is too vague and convoluted to be accepted at face value. Such statements as "various parameters that are measured <u>qualitatively</u> are averaged and the <u>standard deviation</u> is determined to provide the statistical analysis of data" and "the average value plus or minus the standard deviation is used as the <u>acceptable</u> range for a given parameter being <u>normal</u> " cannot be accepted at face value. The values must be clarified and supported in the context of the statistical analysis. Until it can be statistically proven that Howco's processed used oil is on-spec, <b>each tank of processed oil must be sampled</b> and tested to verify the quality of the oil.
Item 4.2.1		In the first paragraph, is "one of the ten processed oil tanks" the same as "the process oil tank sampled for off-site shipment"?
		In the first paragraph, how do the last two sentences "fit in" with the previous three sentences?
		Please explain what is meant by "Periodic grab sampling and analysis is performed on one of the ten processed oil tanks once per week".
		In the third paragraph, how many "tagged-out" tanks does 5-10 loads represent?
What is the ave and max time tank is agitated		How long is the tank agitated using compressed air before the tank is sampled? What effect does the air injection have on the total halogen concentration in the processed oil?
Further clarification -		Please explain why samples are held for 30 days. Holding times of US EPA approved
Bodays .	held for	of samples held for longer periods than those stated would be invalid.
J 2	Item 4.3.2	There is no reference to Table 4-2 in the text. Please consider deleting the Item 4.3.2 and re-wording Item 4.3.1 to read "Incoming industrial wastewater is sampled using the bailer and analyzed for the following constituents/properties identified in Table 4-2.
Attach	ment 5. Soli	id Waste Handling.
OK	Item 5.1	In the third bullet, the page number for Table 5-1 is incorrect.
Locoted scien on diagram but kscription	Item 5.2	Please indicate on the facility site plan the location of the vibratory screen. In addition, revise the text to include a more detailed operating description of the vibratory screen.

Howco Environmental Services<sup>5th</sup> Notice of Deficiency Page 4

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Comment not addressed	Item 5.2.1	In the first paragraph, please re-word the text to make it explicit that only "virgin" materials are to be used for solidification, stabilization or absorption.
		In the 11th sentence, the activities are only acceptable if virgin materials are used or the wastes are generated on-site from used oil processing.
Enapsispirately Worded !! (See Sini	Item 5.2.2	In the third paragraph, the waste cannot be accepted by a soil thermal treatment facility.
Issue for Susan.	Item 5.3	The processing activities described in this paragraph requires a solid waste permit.
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	Howco has accepted. ' solid waste Please refe	a failed to provide the Department with reasonable assurance that solid waste will not be <b>The Used Oil Processing Permit does not authorize the acceptance or management of</b> e. If Howco anticipates acceptance of solid waste, a separate solid waste permit is required. r back to the Department's 'Third Notice of Deficiency' letter, Attachment 5.
Attachn	nent 7. Pre	paredness And Prevention Plan.
Ou	Item 7.2	Equipment which "may be" available for use in a spill control is not acceptable language to the Department. The equipment is either available or not available in times of emergency. Please revise the text to be consistent with the title.
OK	Item 7.5	This paragraph identifies that preventative maintenance will be completed on an annual basis but does not establish the frequency emergency equipment will be tested. Please revise the text to include this information.
OK	Table 7-5	Delete the word "may".
Attachn	nent 8. Co	ntingency Plan.
Need Copie & Cop All Jegures & Callacherizada	The Contir drawings, o documents	ngency Plan should be designed to be a 'stand alone' document, and hence all references such as etc. are to be contained within the plan. Please modify the plan to include all outside referenced
Drawing is fitled Process & Storage Equip.	Item 8.1	Drawing D-8-1 is not titled "General Arrangement Plan" as identified in the text. What is a "General Arrangement Plan"?
Added sheds to drawings language in text to iden agains are located in the	but no Hify Sheda	In Item 8.1 and 8.3, the text mentions chemical usage and storage areas but these locations are not indicated on the referenced drawings D-6-1 and D-8-1. Please revise the drawings to indicate the locations of the liquid chemical handling and storage areas.
OK	Item 8.4	In paragraph 1, the last sentence, please re-word the sentence to clarify that monthly inspections are to be performed independent of any intensive storm water event.
Ole	Item 8.8	In the second paragraph, please add an evacuation route posting at the Filter Press/Crusher area.
OK	Item 8.11	Please revise drawing D-4-1 to show the locations of emergency response and control equipment.

Howco Environmental Services 5<sup>th</sup> Notice of Deficiency Page 5

## Attachment 9. Unit Management Description.

ć	IL.	Item 9.1	A review of Tables 3-1, 3-2 and 3-3 shows that there are 51 tanks total but the text states that there are 48 tanks. Please correct this discrepancy. The last sentence in Item 9.1 should also include a reference to Table 3-3.
	OK		In the third paragraph, the text states ten tanks, then nine. Please clarify this inconsistency.
	ok		In the third paragraph, why are the capacities in "brackets"?
	ou		In the fourth paragraph, the capacity of Dike No. 3 does not agree with the capacity stated in Table 3-2. Please revise the text to be consistent.
	ou		In the fifth paragraph, correct the "typo" 46,0010 gallons.
C	ju	Table 9-1	Please revise the note on Table 9-1 to indicate inspections must be conducted at least every <b>30 days</b> , not 31 days.
		Item 9.6	The Department has received your letter dated February 19, 1999, which submitted changes concerning the discharge of stormwater and the use of the existing stormwater oil water separator. This review has been forwarded to the Industrial Waste Section for their review and comments.
	Attachi	<u>ment 10. C</u>	<u>losure.</u>
he rule	references	Item 10.4	Since a closure permit is not required to close a used oil processing facility, the Closure Permit time frame should not be included in the schedule for closure.

from faile

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Please add a line item indicating the time to submit the certification of complete closure.

February 19, 1999



Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Department of Environmental Protection SOUTHWEST DISTRICT

Reference: HOWCO Environmental Services Used Oil Permit Application

Dear Roger:

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Pursuant to a recent telephone conversation with Mr. Tim Hagan, changes to Item 9.6 of the subject permit application have been made. These changes are provided on the two enclosed pages. Please trade these pages out for the ones currently in your copy of the Used Oil Permit Application. The changes were made concerning the discharge of stormwater and the use of the existing stormwater oil water separator.

I look forward to having this used oil permit approved in the near future and working with you during the process.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 Licensed Asbestos Consultant EA 0000074 <HES-19.DOC.TWR>

cc: Mr. Tim Hagan, President/CEO w/o enclosure



- CONDENSER The condenser is the heat exchanger which is used to condense evaporated water from the flash tower by exchanging the heat with the stream of water pumped through the heat exchanger through this condenser from the cooling tower.
- COOLING TOWER The cooling tower cools the water, which is being used to absorb heat from the steam generated in the flash tower through the condenser.
- WATER COOLING FAN The water cooling fan is used to cool the stream of water returning from the condenser into the cooling tower.
- COOLING WATER TOWER PUMP The cooling tower water pump is used to pump the cooled water through the condenser back into the cooling tower.
- WATER STORAGE TANK The water storage tank is used to collect the condensed water separated from oil in the flash tower and condensed through the condenser. This tank may also contain light products, which may have a lower condensation point.

Above ground oil storage tanks have been purchased as second-hand equipment and erected in the secondary containment structures between 1980 and 1984. Therefore, it is not possible to certify that they meet the requirements of Rules 62-762.510 (Performance Standards for Existing Shop-fabricated Storage Tank Systems) and 762-520 (Performance Standards for Existing Field Erected Storage Tank Systems).

Storage tanks, process tanks and process equipment are periodically inspected in accordance with Rule 62-762.600. Inspection records are kept and corrective actions recommended. Inspection report forms are included. Tanks are properly labeled according to the contents.

## ITEM 9.6 REMOVAL OF OIL/WATER FROM CONTAINMENT

The following standard operating procedure has been implemented for removing oil/water accumulated within secondary containment areas.

- 1. Accumulated water is inspected for the presence of a sheen or petroleum odor.
- 2. If a sheen or petroleum odor is present, the water is considered to be contaminated with petroleum. The water will be transferred to a used oil storage tank.
- 3. The water is not considered to be contaminated and may be disposed in the industrial wastewater pretreatment facility if a sheen or petroleum odor is not present. The discharge must also meet the current Company Industrial Wastewater Discharge Permit requirements. This stormwater may also be discharged to grade if sheen is not visible. The discharge to grade will be conducted in accordance with the facility Spill Prevention, Control and Countermeasures (SPCC) Plan under 40 CFR Part 112.

Records consisting of the date, time, estimated quantity of accumulation, presence or absence of sheen or petroleum odor, and person removing accumulation are maintained for each discharge event.



The facility has a stormwater oil water separator that is used to prevent used oil from being discharged with the stormwater. The stormwater collects in a sump which has a level actuated pump. The stormwater is pumped into the top of the oil water separator when the stormwater level trips the float switch. The water from the oil water separator is removed from the bottom section of the tank. The discharge pipe goes from the bottom of the tank up to the top section of the tank and back down. The oil water separator operates on a gravity basis with an equal amount of water discharged for an equal input amount.

## ITEM 9.7 TANK CLOSURE PLAN

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Aboveground used oil storage tanks will be closed in accordance with Aboveground Storage Tank Systems Closure Requirements F.A.C. 62-761.800.

February 2, 1998

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

D.E.P.

FEB 0 4 1000 Southwest District Tampa

Reference: HOWCO Environmental Services Used Oil Permit- Application Draft Version

Dear Roger:

The enclosure (1) Draft Version of the HOWCO Environmental Services Used Oil Permit Application is provided pursuant to your request and approval by Mr. Tim Hagan. This draft contains most of the changes that were made. The changes not included in the draft were made on the last pass edit just before final printing occurred. This draft is dated 15 December 1998 with the file name HES-6-1-1.doc. The bold, highlighted and italicized text has been edited. Text that has been removed or deleted is not shown.

The enclosure (2) pages are to be traded out in the permit application to remove small typographic errors.

I look forward to having this used oil permit approved in the near future and working with you during the process.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

mothy W. Luce

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 Licensed Asbestos Consultant EA 0000074 HES-18.DOC.TWR>

cc: Mr. Tim Hagan, President/CEO w/o enclosure (1) w/ enclosure (2)

File 3-b



December 31, 1998

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Reference: HOWCO Environmental Services Used Oil Permit- Application

Dear Roger:

ENVIRONEERING, INC. has revised the referenced used oil permit application for HOWCO Environmental Services pursuant to our resent discussions. The text revisions have been completed taking into account your comments. The drawings have been placed on AUTOCADD Version 14. The completed package is submitted to your office for review and approval on January 4, 1999 as agreed to in my letter dated December 14, 1998.

I look forward to having this used oil permit approved in the near future and working with you during the process.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions or need additional information.

Sincerely,

Timothy W. Rudolph, P.E., L.A.C. President Environmental Engineer 39617 Licensed Asbestos Consultant EA 0000074 ENVIRONEERING, Inc. <HES-15.DOC.TWR>

D.E.P. JAN 0 4 1999 Southwest District Tampa

cc: Mr. Tim Hagan, President/CEO



December 14, 1998

ENVIRONEERING, INC. 109 Azalea Point Drive South Ponte Vedra Beach, FL 32082

Mr. Roger Evans Florida Department of Environmental Protection Southwest District Hazardous Waste Section 3804 Coconut Palm Drive Tampa, FL 33619

Reference: HOWCO Environmental Services Used Oil Permit- Application

Dear Roger:

The referenced used oil permit application is in the process of being revised by ENVIRONEERING, Inc. for HOWCO Environmental Services. The text revisions have been mostly completed at this point. The drawings are being placed on AUTOCADD Version 14 at the present time. The completed package will be submitted to your office for review and approval on or before January 4, 1999.

I spoke with Mr. Tim Hagan, President of HOWCO Environmental Services, about the used oil tank sampling on December 11, 1998. He stated that Mr. Bill Crawford (formerly with FDEP hazardous waste section) had concurred with the sampling of one used oil tank per week based upon the existing historical analytical information and statistical analysis consisting of average and standard deviation determinations for on specification parameters. Mr. Tim Hagan indicated that he had meeting minutes from the discussion that would be forwarded to your office in the near future.

I look forward to completing this used oil permit in the near future and working with you to have the permit issued.

I can be reached at (904) 665-0100 or mobile (904) 612-1456 if you should have any questions.

Sincerely, ottun N.

Timothy W. Rudolph, P.E., L.A.C., President Environmental Engineer 39617 / Licensed Asbestos Consultant EA 0000074 ENVIRONEERING, Inc. <hr/><hr/><hr/><hr/><hr/>

cc: Mr. Tim Hagan, President/CEO

File 3-b