GW - 32

REPORTS

YEAR(S):

1994 - RFI

SAMPLING



Route 3, Box 7 Gallup, New Mexico 87301

505 722-3833

October 1, 1994

Nancy Morlock

Region VI

RECEIVED

OCT 0 7 1994 OIL CONSERVATION DIV. SANTA FE

Re: Report on the Additional RFI Sampling Giant Refinery - Ciniza NMD000333211

Hazardous Waste Management Division U.S. Environmental Protection Agency

1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Dear Ms. Morlock:

Giant Refining Company - Ciniza submits the "Report on the Additional RFI Sampling" as required by the January 7, 1994 letter from Allyn M. Davis.

As indicated in the September 30, 1994 Quarterly Progress Report, Giant will be sampling three additional corings on October 24 or 25. Data from that sampling and analysis event will be submitted as an addendum to this report on or before December 1, 1994.

If you have any questions about this report or require additional information, please do not hesitate to contact me at (505) 722-0227.

Sincerely,

Lynn Shelton Senior Environmental Coordinator Giant Refining Company

TLS:sp

cc: Kim Bullerdick, Corporate Counsel, Giant Industries Arizona, Inc. Kathleen Sisneros, NMED Roger Anderson, OCD Gallup Public Library

RECEIVED

REPORT ON THE

ADDITIONAL RFI SAMPLING

OCT 0 7 1994 OIL CONSERVATION DIV. SANTA FE

GIANT REFINING COMPANY

OCTOBER 1, 1994

PREPARED BY:

LYNN SHELTON SENIOR ENVIRONMENTAL COORDINATOR

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1

1.0 INTRODUCTION

1.1 Additional RFI Sampling

This report documents the additional sampling and analysis of solid waste management units (SWMUs) that required additional characterization of the potential presence of hazardous constituents. This sampling and analysis event is an extension of the sampling and analysis performed to satisfy requirements of the Resource Conservation and Recovery Act (RCRA) Feasibility Investigation (RFI) conducted at Giant Refining Company's (Giant) Ciniza Refinery, located near Gallup, New Mexico. The SWMUs investigated during the additional RFI sampling and analysis event include SWMU No. 4, 5, 6, 7, 10, and 11.

Field activities for the additional RFI sampling and analysis were conducted from July 26 to July 29, 1994 and August 8 to August 11, 1994. A drilling rig was used to continuously core the sample point and samples were collected by Giant personnel from those cores. The soil samples were then shipped by Federal Express to Westech Laboratories in El Paso, Texas for analysis. All sampling and decontamination procedures and laboratory analysis were conducted according to Giant's approved Generic Sampling Plan.

The remainder of this section includes a discussion of the sample number system and Giant's certification of this document. Section 2.0 contains correspondence concerning the RFI project. Section 3.0 contains the statistical analysis of metals in SWMUS No. 4, 5, and 10. Section 4.0 contains the summary of analytical results, including recommendations. Sample collection data, data management forms, tabulated analytical data and drawings of the SWMUs are included in the appendices.

1.2 Sample Numbering System

Giant had created a unique numbering system for identifying sample locations and depth. This numbering system, when compared with maps of boring locations (Figures 1 - 13), assure the ability to pinpoint the exact location of each sample.

As originally developed in 1990 for Phase I of the RFI and using the approved RFI Work Plan as a guide, the numbering system is described below:

Note #		1	2	3	4	5		
Sample #		RFI	04	06	v	6.OD		
Note #1	-	Samp	ling	Event	: Tit	le		
Note #2	-	SWMU	Numb	ber				
Note #3	-	Spec	ific	Borin	ng Nu	mber in	Each SWMU	
Note #4	-	Type V = A =	of S Verti Angle	Sample .cal	ອ້			
Note #5	-	Begi D = E = If n	nning Dupli Equir o suf	Depi .cate ment fix.	ch of Rins then	Sample e this is	Interval	sample.

It was noted in the letter received by Giant from Region VI, USEPA (January 7, 1994) that a discrepancy existed in the SWMU numbers between the RFI Work Plan, the HSWA Permit, and the letter from USEPA. The differences are:

RFI <u>Work Plan</u>	HSWA <u>Permit</u>	EPA <u>Letter</u>	SWMU
1	1	1	Aeration Basin
2	2	2	Evaporation Ponds
3	5	5	Empty Container Storage
4	8	8	Burn Pit
5	7	7	Four Landfills
6	3	6	Tank Farm
7	4	4	Fire Training Area
8	6	8	Railroad Rack Lagoon
9	10 & 13	-	Inactive Land Treatment
10	9	9	Two Sludge Pits
11	11	11	Secondary Oil Skimmer
12	14	13	Wastewater Collection
13	14	13	Drainage Ditch

In that the previous RFI reports have used the numbering sequence from the approved RFI Work Plan, Giant has chosen to continue with that numbering system to minimize confusion.

1.3 <u>Certification</u>

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of by knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

David C. Parlich Health, Safety, Environmental Manager

<u>10/4/94</u> Date



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REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

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CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. John J. Stokes, Manager Giant Refining Company Route 3, Box 7 Gallup, New Mexico 87301

RE: RFI Phase I and Phase II Supplemental Reports and Voluntary Corrective Action Plan Giant Refining Co. <u>NMD000333211</u>

Dear Mr. Stokes:

The Environmental Protection Agency (EPA) hereby approves your RCRA Facility Investigation (RFI) Phase I Supplemental Report, dated October 21, 1991, with the enclosed list of modifications. Your Corrective Action Plans (CAPs) for the Sludge Pits and the Railroad Rack Lagoon, submitted in November and December, 1992, respectfully, are also approved with the enclosed list of modifications.

The EPA is requiring that additional monitoring be completed at several sites. An annual report detailing the monitoring results shall be submitted to the EPA by December 31, 1994, and each year thereafter. The EPA is also requiring that additional soil sampling be completed at the Sludge Pits and the Tank Farm. Sampling results shall be submitted to the EPA by October 1, 1994. Further information concerning the additional monitoring and sampling requirements may be found in the attached list of modifications.

If you have any further questions or need additional information, please contact Nancy Morlock at (214) 655-6650 or Richard Mayer at (214) 655-7442.

Sincerely yours,

allyn m Dans

Allyn M. Davis, Director Hazardous Waste Management Division (6H)

Enclosure

cc: Kathleen Sisneros, NMED

APPROVAL WITH MODIFICATIONS RFI PHASE I SUPPLEMENTARY REPORT RFI PHASE II REPORT AND THE VOLUNTARY CORRECTIVE ACTION PLANS

The Environmental Protection Agency (EPA) has completed a technical review of Giant Refining's RCRA Facility Investigation (RFI) Phase I Supplementary Report; RFI Phase II Report; and voluntary Corrective Action Plan (CAP) for the Sludge Pits and Railroad Rack Lagoon. The subject reports are hereby approved with the following comments and modifications.

GENERAL COMMENTS

SWMU 1, The Aeration Basin; SWMU 2, The Evaporation Pond; and SWMU 13, The Drainage Ditch

The EPA agrees with the finding of no further action for Solid Waste Management Units (SWMUs) 1, 2 and 13. The EPA is, however, requiring periodic monitoring of these SWMUs (see below under Modifications). However, this approval is contingent upon the completion of a survey plat for these SWMUs. The survey plats shall be completed in accordance with the requirements set forth in 40 CFR 264.116. Giant shall submit copies of the completed survey plats to the EPA for review and approval. Upon approval, Giant may submit a Class III permit modification to terminate the RFI/Corrective Measures Study (CMS) process for these SWMUs.

SWMU 6, The Tank Farm

The EPA disagrees with Giant on their recommendation of no further action. Sampling results indicate that 9 of the 13 samples taken at the 11 foot interval (the deepest interval sampled) contained elevated levels of BTEX constituents. One sample at the 16 foot interval also contained elevated BTEX levels. The EPA is therefore requiring deeper sampling at specified points (see below under Modifications).

SWMU 8, The Railroad Rack Lagoon, Overflow Ditch and Fan Out Area The EPA agrees with the finding of no further action for this SWMU. The EPA understands that Giant has elected to perform voluntary corrective measures at this unit which will include bioremediation of the wastes with periodic soil and waste monitoring. Giant's voluntary bioremediation should reduce the volume and toxicity of the wastes while continuing to periodically monitor the SWMU. The EPA will, however, require that additional monitoring be completed (see below under Modifications). The EPA is also requiring that a survey plat be completed for this SWMU. The survey plat shall be completed in accordance with the requirements set forth in 40 CFR 264.116. Giant shall submit a copy of the completed survey plat to the EPA for review and approval. Upon approval, Giant may submit a Class III permit modification to terminate the RFI/Corrective Measures Study (CMS) process for this SWMU.

SWMU 9, The Sludge Pits

The EPA is unable to approve Giant's finding of no further action for this SWMU. Two (2) soil samples collected at the 15 foot interval (the deepest interval sampled) contained semivolatile contaminants. The EPA is therefore requiring deeper sampling at specified points (see below under Modifications). Giant may begin the voluntary bioremediation (see SWMU #8 voluntary corrective action) under the CAP after the deeper soil samples have been completed.

MODIFICATIONS

SWMU 1, The Aeration Basin

Giant shall take soil samples around the Aeration Basin every two (2) years beginning in calendar year 1994. Sampling requirements shall be identical to those performed during the previous RFI, except that all soil borings shall be angled and an additional sample shall be collected at the 20-21 foot interval. Results shall be included in the appropriate Annual Monitoring Report (1994, 1996, etc.).

SWMU 6, The Tank Farm

Giant shall complete additional soil borings as close as possible to the following sample points (numbers correspond to previous RFI sampling points completed in May, 1991): 21, 22, 23, 25, 26, 27, 30, and 31. The sampling interval shall be at 16 feet, with the exception of sample point 31 which shall be sampled at 20 feet. Samples shall be analyzed for BTEX constituents. Sampling must extend vertically until no subsequent increase in contamination levels is likely to occur. A minimum of two (2) "clean" samples are required to verify delineation. The results of this sampling event shall be submitted to EPA by October 1, 1994.

SWMU 2, Evaporation Ponds

Giant shall monitor the seven (7) groundwater wells around the evaporation ponds biannually for the same constituents monitored for in the original RFI. Results shall be included in the Annual Monitoring Report.

SWMU 13, Drainage Ditch between APIs Evaporation Ponds and <u>Neutralization Tank Evaporation Ponds</u>

Giant shall conduct soil sampling around the Drainage Ditch every two (2) years, with sampling beginning in calendar year 1994. Sampling procedures and analytical constituents shall be identical to those required in the RFI, except that all soil borings shall be angled and an additional interval shall be sampled at from 6.0-6.5 feet. Results shall be included in the appropriate Annual Monitoring Report (1994, 1996, etc.).

Approval with Modifications, 1/5/94 Giant's CAP and RFI Phase I & II Reports

SWMU 6, The Railroad Rack Lagoon 87

Giant shall take 5 soil borings within the lagoon after it has . ceased receiving wastes. Three (3) of the five (5) borings must be sampled at the 0-1 foot interval. All borings must be sampled at the 5-6 foot interval, the 10-11 foot interval, and the 14-15 foot interval. Sampling procedures and analytical constituents shall be identical to those required in the previous RFI. Sampling results shall be included in the 1994 Annual Monitoring Report.

Additionally, all six (6) borings required under the CAP closure (Section 5.0) must be sampled at the 5-6, 10-11, and 14-15 foot interval. Sampling procedures and analytical constituents shall be identical to those required in the previous RFI. Sampling results shall be included in the appropriate Annual Monitoring Report.

Monitoring requirements under the voluntary CAP shall be submitted to EPA in the appropriate quarterly progress report. Giant shall notify the EPA when final closure of the Railroad Rack Lagoon has been initiated.

Continuation of SWMU 6, The Overflow Ditch 87

Giant shall complete three (3) soil borings in the Overflow-Ditch after closing the Railroad Rack Lagoon. Sampling procedures and analytical constituents shall be identical to those required in the previous RFI. Soil samples shall be collected at the 3.0 - 4.0 and 6.5 - 7.0 foot interval. All results shall be included in the 1994 Annual Monitoring Report.

Continuation of SWMU 6, The Fan Out Area 87

Giant shall complete four (4) soil borings in the Fan Out Area after closure of the Railroad Rack Lagoon has been completed. Sampling procedures and analytical constituents shall be identical to those required in the previous RFI. Soil samples shall be collected at the 3.0 - 4.0 and 6.5 - 7.0 foot interval. Results shall be included in the 1994 Annual Monitoring Report.

<u>SWMU #12, Contact Waste Water Collection System (CWWCS)</u>

Giant shall perform an inspection of the CWWCS every five years beginning in calendar year 1996. The inspection shall be identical to the one performed in the previous RFI. If better technological equipment is developed, Giant may request that an alternative method be used. Results shall be included in the appropriate Annual Monitoring Report.

SWMU 9, The Sludge Pits

Giant shall complete soil borings as close as possible to sampling points 6 and 7 (numbers correspond to previous RFI sampling points, completed in May, 1991). Sampling intervals shall be at 18.0 -19.0 foot and 24.0 - 25.0 foot. Sampling procedures and analytical constituents shall be identical to those required in the previous

Approval with Modifications, 1/5/94 Giant's CAP and RFI Phase I & II Reports RFI. Sampling must extend vertically until no subsequent increase in contamination levels is likely to occur. A minimum of two (2) "clean" samples are required to verify delineation. The results of this sampling event shall be submitted to the EPA by October 1, 1994.

Before final closure of the West Pit under the CAP, all soil borings shall be sampled at the 18.0 - 19.0 and 24.0 - 25.0 foot intervals. Sampling procedures and analytical constituents shall be identical to those required in the previous RFI. Four (4) soil borings shall also be completed (before closure) in the East Pit using the same requirements specified for the West Pit borings. Results shall be included in the appropriate Annual Monitoring Report.

Monitoring requirements under the voluntary CAP shall be submitted to EPA in the appropriate quarterly progress report. Giant shall notify the EPA when final closure of the Sludge Pits has been initiated.

Soil Boring Logs: The EPA has included an example of a soil boring log to be used for all future borings.

Approval with Modificatioms, 1/5/94 Giant's CAP and RFI Phase I & II Reports



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

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CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. John J. Stokes, Manager Giant Refining Company Route 3, Box 7 Gallup, New Mexico 87301

RE: RCRA Facility Investigation (RFI) Phase III Report and Voluntary Corrective Action Plan Giant Refining Co. <u>NMD000333211</u>

Dear Mr. Stokes:

The Environmental Protection Agency (EPA) hereby approves your RCRA Facility Investigation Phase III Report dated November 3, 1992, with the enclosed modifications. The EPA is requiring that additional soil sampling be completed at several sites, including the Landfill Areas, the Old Burn Pit, the Secondary Skimmer, and the Fire Training Area. A supplementary report detailing the results of these sampling activities shall be submitted to the EPA by December 31, 1994.

Additionally, the EPA is approving the voluntary Corrective Action Plan for the Landfill Areas, submitted in March, 1993.

If you have any further questions or need additional information, please contact Nancy Morlock at (214) 655-6650 or Richard Mayer at (214) 655-7442.

Sincerely yours,

Allyn M. Davis, DirectorHazardous Waste Management Division (6H)

Enclosure

cc: Kathleen Sisneros, NMED

APPROVAL WITH MODIFICATIONS GIANT REFINING COMPANY RCRA FACILITY INVESTIGATION PHASE III REPORT AND THE CORRECTIVE ACTION PLAN FOR THE LANDFILL AREAS

CORRECTIVE ACTION PLAN FOR THE LANDFILL AREAS

The Environmental Protection Agency (EPA) has completed a technical review of your RCRA Facility Investigation (RFI) Phase III Report, dated October, 1992, and your voluntary Corrective Action Plan for the Landfill Area, dated February, 1993. The subject reports are hereby approved with the following comments and modifications.

GENERAL COMMENTS

SWMU 5, The Empty Container Storage Area

The EPA hereby approves the finding of No Further Action (NFA) for Solid Waste Management Unit (SWMU) number three (3), the Empty Container Storage Area. However, this approval is contingent upon the completion of a survey plat for the unit. The survey plat shall be completed in accordance with the procedures outlined in 40 CFR 264.116. Giant shall submit a copy of the survey plat to the EPA for review and approval. Upon approval, Giant may submit a Class III permit modification to terminate the RFI/Corrective Measures Study (CMS) process for the Empty Container Storage Area.

SWMU 8, The Old Burn Pit

Due to the presence of elevated levels of volatile and semivolatile contaminants in soil samples from this unit, the EPA is unable to approve Giant's finding of No Further Action. All three (3) soil samples taken at the 4.5 foot interval (the deepest interval sampled) contained elevated levels of heavy molecular weight semivolatiles. Additionally, one of the three (3) samples at the 4.5 foot interval also contained elevated BTEX levels. The EPA is therefore requiring deeper sampling at specified points (see below under Modifications).

SWMU 11, The Secondary Oil Skimmer

Due to the presence of elevated levels of volatile and semivolatile contaminants in soil samples from this unit, the EPA is unable to approve Giant's finding of No Further Action. One of the two (2) samples taken at the 3.0 foot interval (the deepest interval sampled) contained volatile and semivolatile contaminants. The EPA is therefore requiring deeper sampling at specified points (see below under Modifications).

SWMU 4, The Fire Training Area

Due to the presence of elevated levels of oil and grease in soil samples from this unit, the EPA is unable to approve Giant's finding of No Further Action. Two (2) of the four (4) samples

Approval with Modifications, 1/5/93 Giant's RFI Phase III & CAP Reports taken at the 4.5 foot interval (the deepest interval sampled) contained oil and grease above 2,000 ppm. The EPA is therefore requiring deeper sampling at specified points (see below under Modifications).

SWMU 7, The Landfill Areas

Because soil borings completed in this unit indicate the presence of waste and metal contamination at depths up to 9.5 feet, the EPA is requiring that additional soil borings be completed at greater depths. These additional soil borings will be installed in order to:

- 1) Verify that saturated zones found in three (3) of the 12 deepest soil boring intervals are isolated and are not connected to the groundwater;
- 2) Ensure that the vertical extent of waste emplacement has been defined;
- 3) Confirm that the vertical extent of metal contamination has been delineated.

Following the completion of the additional soil borings in the Landfill Areas, Giant may proceed with the capping of the landfills as per their voluntary Corrective Action Plan.

MODIFICATIONS

Note: All referenced sampling points correspond to the previous RFI sampling points completed in May, 1992. Soil boring logs included in future report submittals shall follow the attached example.

SWMU #8, The Old Burn Pit

Giant shall complete soil borings as close as possible to sample points one (1), two (2) and three (3). Sampling intervals shall be at six (6) and (10) feet and must extend vertically until no subsequent increase in contaminant levels is likely to occur. A minimum of two (2) "clean" samples are required to verify delineation. Sampling procedures and analytical requirements are identical to those required in the previous RFI. The results of this sampling event shall be submitted to the EPA by December 31, 1994.

SWMU #11, The Secondary Oil Skimmer

Giant shall complete two (2) soil borings within the area occupied by the former Skimmer. All borings must be sampled at the 5-6 foot and 9-10 foot interval. Sampling shall extend vertically until no subsequent increase in contaminant levels is likely to occur. A minimum of two (2) "clean" samples are required to delineate contamination. Sampling procedures and analytical requirements are identical to those required in the previous RFI. The results of this sampling event shall be due to EPA by December 31, 1994.

Approval with Modifications, 1/5/94 Giant's RFI Phase III & CAP Reports

SWMU #4, The Fire Training Area

Giant shall complete <u>angled</u> soil borings as close as possible to sample points one (1) and two (2). Sampling intervals shall be at 7 and 11 feet. Sampling must extend vertically until no subsequent increase in contaminant levels is likely to occur. A minimum of two (2) "clean" samples are required to delineate contamination. Sampling procedures shall be identical to those required in the previous RFI. Analytical constituents shall include the Skinner constituents. The results of this sampling event shall be submitted to the EPA by December 31, 1994.

SWMU #7, The Landfill Areas

Giant shall take soil borings as close as possible to sample points two (2) through seven (7), and nine (9). Sampling intervals shall be at 11 feet, 16 feet and 20 feet. Sampling must extend vertically until no subsequent increase in contaminant levels is likely to occur. A minimum of two (2) "clean" samples are required to delineate contamination. Sampling procedures shall be identical to those required in the previous RFI. Giant shall analyze all samples for metals. If volatile or semivolatile contamination is encountered when sampling, then those constituents shall be analyzed also. The results of this sampling event shall be due to EPA by December 31, 1994. UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



REGION 6 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733

Augüst 24, 1994



Mr. Lynn Shelton Senior Environmental Coordinator Giant Refining Company Route 3, Box 7 Gallup, NM 87301

Dear Mr. Shelton:

The Environmental Protection Agency (EPA) has reviewed your letter dated August 2, 1994, concerning additional RFI sampling requirements at solid waste management unit (SWMU) #1, the Aeration Basin; #2, the Evaporation Pond; and #13, the Drainage In your letter, you propose to conduct soil and Ditch. groundwater sampling every five years as opposed to the biennial sampling requirement detailed in the EPA's January 7, 1994 letter.

The EPA has reassessed your Phase II RFI Report and hereby approves your request to sample SWMUs 1, 2, and 13 every five years. Sampling shall begin in 1995 and reports shall be submitted to the EPA by December 31 of each sample year. As a reminder, a survey plat must be completed for SWMUs 1, 2, and 13 and submitted to the EPA for review and approval. Giant shall also initiate a Class 3 permit modification to terminate the RFI/Corrective Measures Study process for these SWMUs within three months of receipt of this letter.

Please contact Nancy R. Morlock of my staff at (214) 665-6650 if you have any questions or require additional information.

Sincerely yours,

William K. Honker, P.E., Chief RCRA Permits Branch

Ms. Kathleen Sisneros, Director cc: Water and Waste Management Division New Mexico Environment Department



Route 3, Box 7 Gallup, New Mexico 87301

505 722-3833

August 2, 1994

Allyn M. Davis United States Environmental Protection Agency Region VI 1445 Ross Avenue Suite 1200 Dallas, Texas 75202-2733

Re: Additional RFI Sampling

Dear Mr. Davis:

In the letter from you dated January 7, 1994 (copy enclosed), Giant Refining Company - Ciniza (Giant) received EPA's approval of Giant's recommendation of "No Further Action" on SWMU #1, the Aeration Basin; SWMU #2, the Evaporation Pond; and SWMU #13, the Drainage Ditch. The agency's approval of the "No Further Action" recommendations was accompanied with several additional requirements.

The additional requirements were to repeat the sampling protocol set forth in the approved RFI Sampling Plan (May, 1990) biennially. This additional sampling is intended to monitor potential migration of hazardous constituents from these SWMUs during the duration of their active service.

Giant understands the logic of continued sampling to document potential migration but has some reservations about the frequency of sampling and the true potential for migration of hazardous constituents.

It was determined in the RFI sampling (1990-1992) that migration of hazardous constituents had not occurred in any of the previously mentioned SWMUs and that water saturation had not occurred below five feet. This observation, coupled with the fact that hazardous constituents are not released to the three SWMUs, indicates that future contamination due to migration of hazardous constituents is virtually impossible.

Based on this knowledge, Giant proposes to sample SWMUs #1, #2, and #13, using the protocol set forth in the approved RFI Sampling Plan, every five years, beginning in 1995, with annual reports due on December 31 of the sample year. This sampling will adequately demonstrate migration, if any, of hazardous constituents. Giant appreciates your prompt attention to this proposal, as this will expedite completion of any responsibilities of Giant to fully characterize and monitor SWMUs #1, #2, and #13.

If you require additional information, please contact me at (505) 722-0227.

Sincerely,

Lynn Shelton Senior Environmental Coordinator Giant Refining Company

TLS:sp

cc w/attachment:

David C. Pavlich, Giant Kim Bullerdick, Giant Rich Mayer, USEPA Kathleen Cisneros, NMED

TLS\ADEPA894



Route 3, Box 7 Gallup, New Mexico 87301

505 722-3833

September 30, 1994

Nancy Morlock Hazardous Waste Management Division U.S. Environmental Protection Agency Region VI 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Re: Quarterly Progress Report

Dear Ms. Morlock:

Pursuant to the requirements of the HSWA Permit, Condition C.4., Page 11 and the May 31, 1990 RFI Work Plan Approval, Giant Refining Company - Ciniza (Giant) submits the Quarterly Progress Report for the third quarter of 1994.

Giant has completed the additional sampling requirements as directed by the January 7, 1994 letter from the Hazardous Waste Management Division of Region VI, USEPA, with the notable exception of three sample points. At Tank 451, the drilling rig was too large to maneuver into the limited space around the tank, particularly in a safe manner. A portable pneumatic rig will be employed on October 24 or 25 to complete that boring. The photoionization detector (PID) that was used for this RFI event malfunctioned and we were unable to take readings around the leaded gasoline tanks. Consequently, Giant did not drill deep enough to "clean" samples. get two Giant has contracted Precision Engineering, Inc. to drill two additional borings to depths as needed to produce clean samples. This will occur on October 24 or 25.

Results of the sampling and analysis of those three sites will be submitted to USEPA on or before December 1, 1994.

Giant proceeded with all additional sampling and analysis needed to fulfill the requirements of closure of SWMU No. 10 - <u>The Sludge</u> <u>Pits</u> as set forth in the January 7, 1994 letter from your office.

Giant has, essentially, completed the "Report on Additional FRI Sampling" and will submit it on October 1, 1994.

During the fourth quarter of 1994, Giant will continue dirt work and sampling on SWMU No. 8 as closure of that SWMU continues. Giant will also be developing correction action plans for SWMUs as indicated in the "Report on Additional RFI Sampling".

Surveys of several SWMUs were made by registered surveyors in the third quarter of 1994. Copies of those survey plats will be submitted in the fourth quarter of 1994.

If you require additional information, please contact Lynn Shelton, of my staff, at (505) 722-0227.

"I certify under penalty of law that this document and all attachments were prepared under my direction to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely,

John Stokes Refinery Manager Giant Refining Company

JJS/TLS:sp

cc: Kim Bullerdick, Corporate Counsel Giant Industries Arizona, Inc.

> David Pavlich, Health, Safety, and Environmental Manager Giant Refining Company

TLS\USEPA930

June 28, 1994

Rich Mayer U.S. Environmental Protection Agency Region VI 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Re: Quarterly Progress Report

Dear Mr. Mayer:

Pursuant to requirements of the HSWA Permit, Condition C.4., Page 11 and the May 31, 1990 RFI Workplan approval, Giant Refining Company - Ciniza (Giant) submits the <u>Quarterly Progress Report</u> for the second quarter of 1994.

REFINING CO.

Route 3, Box 7 Gallup, New Mexico

87301 505 722-3833

Giant has completed piping modifications to the "Railroad Rack Lagoon" (SWMU #8) system and is presently evacuating the remaining water from the lagoon and disposing of it in the process wastewater system. As soon as it is feasible, Giant will sample the SWMU as required and begin bioremediation activities.

Giant is soliciting proposals for the survey requirement of SWMUs #1, 3, 8, 9 and 13.

Giant is also developing a scope and estimate of expense to further characterize SWMUs #4, 5, 6, 7, 10, and 11 and expects to complete that sampling during the third quarter of 1994.

If you require additional information, please contact Lynn Shelton, of my staff, at (505) 722-0227.

"I certify under penalty of law that this document and all attachments were prepared under my direction to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely, John Stokes

Refinery Manager

JJS/TLS:sp

cc: Kim Bullerdick, Corporate Counsel Giant Industries Arizona, Inc.

> David Pavlich, Health/Safety and Environmental Manger Giant Refining Company



Route 3, Box 7 Gallup, New Mexico 87301

505 722-3833

March 24, 1994

Rich Mayer U.S. Environmental Protection Agency Region VI 1445 Ross Avenue, Suite 1200 Dallas, Texas 75202-2733

Re: Quarterly Progress Report

Dear Mr. Mayer:

Giant Refining Company - Ciniza (Giant) is submitting this Quarterly Progress Report as required by the May 31, 1990 RFI Workplan approval and HSWA Permit Condition C.4., Page 11.

Giant has reviewed the "Additional Requirements" of the Phase I, II, and III approval letters and will be scheduling a meeting with EPA in the near future to discuss those requirements.

Implementation of the Corrective Action Plan (CAP) for the "Railroad Rack Lagoon" (SMMU #8) can proceed now that weather conditions will support bioremediation activities.

If you require additional information, please contact Lynn Shelton, of my staff, at (505) 722-0227.

"I certify under penalty of law that this document and all attachments were prepared under my direction to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sincerely, John Stokes **Refinery Manager**

JJS/TLS:sp

cc:

Kim Bullerdick, Corporate Counsel, Giant Industries Arizona, Inc. David Pavlich, Health/Safety Environmental Manager, Giant Refining

3.0 STATISTICAL ANALYSIS

3.1 <u>Statistical Analysis</u>

The statistical analysis is concerned with the problem of comparing observations of the concentrations of metals from <u>compliance</u> data with observations of concentrations from <u>background</u> data in order to determine if the concentrations of metals from the compliance data exceed, in a statistically significant fashion, the concentrations from the background data. The primary method used is that of the construction of a tolerance interval and the use of the resulting upper tolerance limit. The analysis was carried out in the following way:

- 1. The background data consisted, for each of the nine metals analyzed, of from two to twelve values at each of two depths.
- 2. For each metal, the (one-sided) tolerance interval was constructed using the following technique:
- a) Calculate the mean, X, and the standard deviation, SD, from the background data. (If a measurement was listed as non-detectable (ND), then the value used was one-half of the detection limit.)
- b) Construct the one-sided upper tolerance as TL = X + KS where K is the one-sided normal tolerance factor.
- c) The tolerance interval is the interval {0,TL}. This interval will contain, with 95% confidence, 95% of random observations from the same distribution as the background data.
- 3. The observations forming the compliance data (for the same metal at the same depth) are now compared, one by one, with the upper tolerance limit, TL, found above. If an observation exceeds the TL, this is interpreted as statistically significant evidence that the observation is from a distribution with a higher concentration of the metal and that, therefore, contamination has probably occurred.

3.2 Notes on the Statistical Analysis

In order to construct the upper tolerance limit, the background data is assumed to be normally distributed. This assumption was checked by calculating the coefficient of variation (CV) for each of the background data sets. If this value exceeds 1, then that fact indicates non-normality. In none of the data sets analyzed did the coefficient of variation exceed 1. It was therefore assumed that the values observed in the background samples were normally distributed. No other tests of normality were performed.

If the standard deviation of the background data is zero (i.e., all values are the same), then the tolerance interval is not particularly useful. In that case the upper tolerance limit is identical to the common value of the background data values and <u>any</u> observation coming from compliance samples which exceeds that upper tolerance limit must be taken as evidence of contamination. This was the situation for the following metals (and depths):

- a). Cadmium (> 5.0 feet) Six measurements, all of which were 0.3 mg/kg.
- b) Mercury (> 5.0 feet) Six measurements, all of which were non-detectable.

For these metals and depths an analysis of variance would ordinarily be used in place of the tolerance interval method for the data being reported. However, none of the metals listed above were present in detectable amounts in the compliance samples. This demonstrates that no contamination has occurred and additional statistical tests were not performed.

The analytical results reported under the sample column in the tolerance interval test are in mg/kg.

<u>Background Data - Tolerance Interval</u>

Arsenic, greater than five feet Data: 6.2, 5.8, 7.6, 2.8, 7.2, 0.6, 0.3, 0.3, 0.6, 1.1, 0.3 Mean: 3.18 SD: 2.97 Upper Tolerance Limit: 11.54 Coefficient of Variance: 0.93 Barium, greater than five feet 180, 280, 250, 170, 320, 280, 270, 330, 270, 260, Data: 220, 270 258.33 Mean: SD: 48.40 Upper Tolerance Limit: 390.75 Coefficient of Variation: 0.18 Beryllium, greater than five feet 1.3, 1.2, 1.3, 1.0, 0.8, 1.3, 1.1, 1.2, 1.2, 1.3, Data: 1.2, 0.8 Mean: 1.14 SD: 0.18 Upper Tolerance Limit: 1.63 Coefficient of Variation: 0.15 Cadmium, greater than five feet 0.3, 0.3, 0.3, 0.3, 0.3, 0.3 Data: " Mean: 0.30 SD: 0.00 **Upper Tolerance Limit:** 0.30 Coefficient of Variation: 0.00 Chromium, greater than five feet 7, 4, 7, 3, 3, 5, 4, 5, 4, 4, 3, 4 Data: Mean: 4.42 1.38 SD: **Upper Tolerance Limit:** 8.20 Coefficient of Variation: 0.30 Lead, greater than five feet Data: 12, 11, 12, 9, 9, 10 Mean: 10.5 SD: 1.38 **Upper Tolerance Limit:** 15.62 Coefficient of Variation: 0.12 Mercury, greater than five feet ND, ND, ND, ND, ND, ND Data: Mean: SD: 0.00 **Upper Tolerance Limit:**

Coefficient of Variation: 0.00

Nickel, greater than five feet Data: 10, 7, 10, 5, 7, 9, 7, 9, 8, 8, 7, 6 Mean: 7.75 SD: 1.54 Upper Tolerance Limit: 11.96 Coefficient of Variation: 0.19

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Vanadium, greater than five feet Data: 16, 13, 15, 11, 8.7, 13, 13, 12, 11, 11, 10, 9 Mean: 12.06 SD: 2.25 Upper Tolerance Limit: 18.22 Coefficient of Variation: 0.18 Ł

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RFI COMPLIANCE DATA GIANT REFINING COMPANY – CINIZA

AMPLE NUMBER	METAL	SAMPLE DATA	NOTE
F10404V6.0	Arsenic	nd	Within the tolerance limit.
	Barium	130.0	Within the tolerance limit.
	Bervilium	nd	Within the tolerance limit.
	Chromium	11.0	Exceeds the tolerance limit by 36.99%.
	Lead	15.0	Within the tolerance limit.
	Nickel	16.0	Exceeds the tolerance limit by 35.59%.
	Vanadium	5.4	Within the tolerance limit.
FI0404V10.0	Arsenic	nd	Within the tolerance limit.
	Barium	240.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	7.7	Within the tolerance limit.
	Lead	11.0	Within the tolerance limit.
	Nickel	10.0	Within the tolerance limit.
	Vanadium	3.7	Within the tolerance limit.
FI0404V10.0D	Arsenic Barium Beryllium Chromium Lead Nickel Vanadium	nd 260.0 nd 7.3 12.0 11.0 4.7	Within the tolerance limit. Within the tolerance limit.
FI0405V6.0	Arsenic Barium Beryllium	nd 170.0 nd	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit.

18.0

6.5

Exceeds the tolerance limit by 52.54%.

Within the tolerance limit.

Nickel

Vanadium

GIANT REFINING COMPANY - CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA
RFI0405V10.0	Arsenic	nd
	Barium	230.0
	Beryllium	nd
	Chromium	5.2
	Lead	12.0
	Nickel	9.2
	Vanadium	4.0

NOTE

Within the tolerance limit.	
Within the tolerance limit.	

RFI0406V6.0

Arsenic	nd
Barium	150.0
Beryllium	nd
Chromium	10.0
Lead	15.0
Nickel	18.0
Vanadium	6.4

Within the tolerance limit.	
Within the tolerance limit.	
Within the tolerance limit.	
Exceeds the tolerance limit by 24.53%.	
Within the tolerance limit.	
Exceeds the tolerance limit by 52.54%.	
Within the tolerance limit.	

RFI0406V10.0

Arsenic	nd
Barium	220.0
Beryllium	nd
Chromium	9.9
Lead	13.0
Nickel	9.5
Vanadium	4.6

Within the tolerance limit.	
Within the tolerance limit.	
Within the tolerance limit.	
Exceeds the tolerance limit by 23.29%.	
Within the tolerance limit.	
Within the tolerance limit.	
Within the tolerance limit.	

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GIANT REFINING COMPANY – CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
RFI0513V11.0	Arsenic	nd	Within the tolerance limit.
	Barium	140.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	7.5	Within the tolerance limit.
	Lead	11.0	Within the tolerance limit.
	Nickel	10.0	Within the tolerance limit.
	Vanadium	4.0	Within the tolerance limit.

RFI0513V16.0	Arsenic	nd	Within the tolerance limit.
	Barium	360.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	10.0	Exceeds the tolerance limit by 21.95%.
	Lead	14.0	Within the tolerance limit.
	Nickel	11.0	Within the tolerance limit.
	Vanadium	11.0	Within the tolerance limit.

RFI0513V20.0

Arsenic	nd
Barium	310.0
Beryllium	nd
Chromium	9.1
Lead	12.0
Nickel	12.0
Vanadium	6.2

Vithin the tolerance limit.
Vithin the tolerance limit.
Vithin the tolerance limit.
Exceeds the tolerance limit by 10.98%
Vithin the tolerance limit.
Exceeds the tolerance limit by .33%.
Vithin the tolerance limit.

RFI0514V11.0

·	
Arsenic	nd
Barium	190.0
Beryllium	nd
Chromium	9.7
Lead	13.0
Nickel	12.0
Vanadium	5.0

Within	the tolerance limit.
Within	the tolerance limit.
Within	the tolerance limit.
Excee	ds the tolerance limit by 10.29%
Within	the tolerance limit.
Excee	ds the tolerance limit by .33%.
Within	the tolerance limit.

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GIANT REFINING COMPANY - CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
RFI0514V16.0	Arsenic	nd	Within the tolerance limit.
· · · · · · · · · · · · · · · · · · ·	Barium	510.0	Exceeds the tolerance limit by 30.52%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	5.1	Within the tolerance limit.
	Lead	11.0	Within the tolerance limit.
	Nickel	7.9	Within the tolerance limit.
	Vanadium	7.0	Within the tolerance limit.

RFI0514V20.0	Arsenic	nd	Within the tolerance limit.
	Barium	320.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	14.0	Exceeds the tolerance limit by 70.73%.
	Lead	15.0	Within the tolerance limit.
	Nickel	16.0	Exceeds the tolerance limit by 33.78%.
· ·	Vanadium	8.2	Within the tolerance limit.

RFI0515V11.0

Arsenic	nd
Barium	140.0
Beryllium	nd
Chromium	18.0
Lead	14.0
Nickel	13.0
Vanadium	6.7

Within	the tolerance limit.
Within	the tolerance limit.
Within	the tolerance limit.
Excee	ds the tolerance limit by 119.51%.
Within	the tolerance limit.
Excee	ds the tolerance limit by 8.70%.
Within	the tolerance limit.

RFI0515V16.0

Arsenic	nd
Barium	140.0
Beryllium	nd
Chromium	11.0
Lead	15.0
Nickel	14.0
Vanadium	5.4

Within the tolerance	limit.
Within the tolerance	limit.
Within the tolerance	limit.
Exceeds the tolerand	ce limit by 34.15%.
Within the tolerance	limit.
Exceeds the tolerand	ce limit by 17.06%.
Within the tolerance	limit.

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GIANT REFINING COMPANY – CINIZA

SAMPLE NUMBÉR	METAL	SAMPLE DATA	NOTE
RFI0515V20.0	Arsenic	nd	Within the tolerance limit.
	Barium	380.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	13.0	Exceeds the tolerance limit by 59.54%
	Lead	14.0	Within the tolerance limit.
	Nickel	16.0	Exceeds the tolerance limit by 33.789
	Vanadium	8.1	Within the tolerance limit.
FI0516V11.0	Arsenic	nd	Within the tolerance limit.
	Barium	370.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	9.7	Exceeds the tolerance limit by 18.299
	Lead	16.0	Exceeds the tolerance limit by 2.43%
	Nickel	13.0	Exceeds the tolerance limit by 8.70%
`	Vanadium	5.8	Within the tolerance limit.
RFI0516V16.0	Arsenic	nd	Within the tolerance limit.
	Barium	240.0	Within the tolerance limit.
.*			Within the tolerance limit
.*	Beryllium	nu	
	Beryllium Chromium	5.2	Within the tolerance limit.
	Beryllium Chromium Lead	5.2 12.0	Within the tolerance limit. Within the tolerance limit.
	Beryllium Chromium Lead Nickel	5.2 12.0 9.7	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit.

RFI0516V20.0

Arsenic	nd
Barium	160.0
Beryllium	nd
Chromium	7.0
Lead	14.0
Nickel	11.0
Vanadium	3.5

Within the tolerance limit.	
Within the tolerance limit.	

GIANT REFINING COMPANY – CINIZA

	·		
SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
RFI0517V11.0	Arsenic	nd	Within the tolerance limit.
	Barium	490.0	Exceeds the tolerance limit by 25.40%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	5.9	Within the tolerance limit.
	Lead	11.0	Within the tolerance limit.
	Nickel	9.2	Within the tolerance limit.
	Vanadium	3.8	Within the tolerance limit.
RFI0517V16.0	Arsenic	nd	Within the tolerance limit.
	Barium	200.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	3.6	Within the tolerance limit.
	Lead	9.7	Within the tolerance limit.
	Nickel	7.5	Within the tolerance limit.
	Vanadium	2.8	Within the tolerance limit.
RFI0517V20.0	Arsenic	nd	Within the tolerance limit.
	Barium	270.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	9.3	Exceeds the tolerance limit by 13.41%.
	Lead	15.0	Within the tolerance limit.
	Nickel	14.0	Exceeds the tolerance limit.
	Vanadium	4.8	Within the tolerance limit.

RFI0518V11.0

Arsenic	nd
Barium	210.0
Beryllium	nd
Chromium	8.8
Lead	13.0
Nickel	13.0
Vanadium	3.8

Within the	tolerance limit.
Within the	tolerance limit.
Within the	tolerance limit.
Exceeds th	e tolerance limit by 7.32%.
Within the	tolerance limit.
Exceeds th	he tolerance limit by 8.70%.
Within the	tolerance limit.

GIANT REFINING COMPANY - CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
		[]	
RF10318V10.0	Arsenic	na	within the tolerance limit.
	Barium	100.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	4.8	Within the tolerance limit.
	Lead	9.6	Within the tolerance limit.
	Nickel	7.9	Within the tolerance limit.
	Vanadium	3.7	Within the tolerance limit.
	Vanadium	3.7	Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic	3.7	Within the tolerance limit. Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic Barium	3.7 nd 110.0	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic Barium Beryllium	3.7 nd 110.0 nd	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit. Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic Barium Beryllium Chromium	3.7 nd 110.0 nd 5.3 11.0	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit. Within the tolerance limit. Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic Barium Beryllium Chromium Lead	3.7 nd 110.0 nd 5.3 11.0	Within the tolerance limit. Within the tolerance limit.
RF10518V16.0D	Vanadium Arsenic Barium Beryllium Chromium Lead Nickel	3.7 nd 110.0 nd 5.3 11.0 7.6	Within the tolerance limit. Within the tolerance limit.

RFI0518V20.0

•••

Barium
Berylliun
Chromiu
Lead
Nickel
Vanadiu

Arconio	nd
Alsenic	110
Barium	200.0
Beryllium	nd
Chromium	7.7
Lead	12.0
Nickel	9.4
Vanadium	4.2

Within the tolerance limit.	
Within the tolerance limit.	

RF	1051	9V1	1.0	

Arsenic	nd
Barium	300.0
Beryllium	nd
Chromium	9.9
Lead	15.0
Nickel	14.0
Vanadium	nd
Vanadium	nd

Within the tolerance limit.
Within the tolerance limit.
Within the tolerance limit.
Exceeds the tolerance limit by 20.73%.
Within the tolerance limit.
Exceeds the tolerance limit by 17.06%.
Within the tolerance limit.
RFI COMPLIANCE DATA

GIANT REFINING COMPANY – CINIZA

Exceeds the tolerance limit by 2.43%.

Within the tolerance limit.

Exceeds the tolerance limit by 33.78%.

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
RFI0519V16.0	Arsenic	nd	Within the tolerance limit.
	Barium	300.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	7.9	Within the tolerance limit.
	Lead	18.0	Exceeds the tolerance limit by 15.24.
	Nickel	15.0	Exceeds the tolerance limit by 25.42%.
	Vanadium	nd	Within the tolerance limit.
		[]	
HF10519V20.0	Arsenic	na	within the tolerance limit.
	Barium	390.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	16.0	Exceeds the tolerance limit by 95.12%.

16.0 16.0

2.8

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Lead

Nickel Vanadium

GIANT REFINING COMPANY – CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
 RF11014V19.0	Arsenic Barium Beryllium Chromium Lead Nickel Vanadium	nd 370.0 nd 8.2 15.0 17.0 4.1	Within the tolerance limit.Within the tolerance limit.Within the tolerance limit.Equals the tolerance limit.Within the tolerance limit.Exceeds the tolerance limit by 42.14%.Within the tolerance limit.
RFI1014V25.0	Arsenic Barium Beryllium Chromium Lead Nickel Vanadium	nd 1100.0 nd 9.1 11.0 18.0 5.3	Within the tolerance limit. Exceeds the tolerance limit by 181.51%. Within the tolerance limit. Exceeds the tolerance limit by 10.98%. Within the tolerance limit. Exceeds the tolerance limit. Exceeds the tolerance limit by 50.5%. Within the tolerance limit.
RFI1015V19.0	Arsenic Barium Beryllium Chromium Lead Nickel Vanadium	nd 360.0 nd 14.0 17.0 18.0 5.2	Within the tolerance limit. Within the tolerance limit. Within the tolerance limit. Exceeds the tolerance limit by 70.73%. Exceeds the tolerance limit by 8.83%. Exceeds the tolerance limit by 50.5%. Within the tolerance limit.
RFI1015V25.0	Arsenic Barium	nd 190.0	Within the tolerance limit. Within the tolerance limit.

nd

8.0 14.0

18.0

4.8

Within the tolerance limit. Within the tolerance limit.

Within the tolerance limit.

Within the tolerance limit.

Exceeds the tolerance limit by 50.5%.

Beryllium

Chromium

Vanadium

Lead

Nickel

GIANT REFINING COMPANY – CINIZA

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SAMPLE NUMBER	METAL	SAMPLE	NOTE
		DATA	
<u></u>			
RFI1016V19.0	Arsenic	nd	Within the tolerance limit.
	Barium	310.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	10.0	Exceeds the tolerance limit by 21.95%.
	Lead	19.0	Exceeds the tolerance limit by 21.64%.
	Nickel	19.0	Exceeds the tolerance limit by 58.86%.
	Vanadium	nd	Within the tolerance limit.
	·		
RFI1016V25.0	Arsenic	nd	Within the tolerance limit.
	Barium	340.0	Within the tolerance limit.
	Beryllium	nd	Within the tolerance limit.
	Chromium	14.0	Exceeds the tolerance limit by 70.73%.
	Lead	16.0	Exceeds the tolerance limit by 2.43%.
	Nickel	20.0	Exceeds the tolerance limit by 67.22%.
	Vanadium	4.6	Within the tolerance limit.

RFI1017V19.0

Arsenic	nd
Barium	420.0
Beryllium	nd
Chromium	8.2
Lead	17.0
Nickel	19.0
Vanadium	3.4

Within the tolerance limit.	
Exceeds the tolerance limit by 7.49%.	
Within the tolerance limit.	
Equals the tolerance limit.	
Exceeds the tolerance limit by 8.83%.	
Exceeds the tolerance limit by 58.86%.	
Within the tolerance limit.	

RFI1017V25.0

Arsenic	nd
Barium	610.0
Beryllium	nd
Chromium	12.0
Lead	15.0
Nickel	18.0
Vanadium	9.5

Within the tolerance limit.	
Exceeds the tolerance limit by 56.11%.	
Within the tolerance limit.	
Exceeds the tolerance limit by 46.34%.	
Within the tolerance limit.	
Exceeds the tolerance limit by 50.50%.	
Within the tolerance limit.	

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GIANT REFINING COMPANY – CINIZA

Exceeds the tolerance limit by 3.66%.

Exceeds the tolerance limit by 8.83%.

Exceeds the tolerance limit by 8.70%.

Within the tolerance limit.

ţ.

	METAL	SAMPLE DATA	NOTE
RFI1018V19.0	Arsenic	nd	Within the tolerance limit.
	Barium	410.0	Exceeds the tolerance limit by 4.93%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	7.6	Within the tolerance limit.
	Lead	14.0	Within the tolerance limit.
	Nickel	17.0	Exceeds the tolerance limit by 42.14%.
	Vanadium	4.4	Within the tolerance limit.
RFI1018V25.0	Arsenic Barium Beryllium Chromium Lead Nickel Vanadium	nd 690.0 nd 8.4 17.0 15.0 4.0	Within the tolerance limit. Exceeds the tolerance limit by 76.58%. Within the tolerance limit. Exceeds the tolerance limit by 2.44%. Exceeds the tolerance limit by 8.83%. Exceeds the tolerance limit by 25.42%. Within the tolerance limit.
RFI1019V19.0	Arsenic Barium Beryllium Chromium	nd 400.0 nd 12.0	Within the tolerance limit. Exceeds the tolerance limit by 2.37%. Within the tolerance limit. Exceeds the tolerance limit by 46.34%.
RFI1019V19.0	Arsenic Barium Beryllium Chromium Lead	nd 400.0 nd 12.0 9.0	Within the tolerance limit. Exceeds the tolerance limit by 2.37%. Within the tolerance limit. Exceeds the tolerance limit by 46.34%. Within the tolerance limit.

8.5 17.0

13.0

nd

TLS 9/94

Chromium

Vanadium

Lead

Nickel

GIANT REFINING COMPANY – CINIZA

Exceeds the tolerance limit by 58.54%.

Exceeds the tolerance limit by 21.64%.

Exceeds the tolerance limit by 33.78%.

Within the tolerance limit.

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SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
	[]		
RFI1019V25.0	Arsenic	nd	Within the tolerance limit.
	Barium	630.0	Exceeds the tolerance limit by 61.23%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	8.9	Exceeds the tolerance limit by 8.54%.
	Lead	20.0	Exceeds the tolerance limit by 28.04%.
	Nickel	17.0	Exceeds the tolerance limit by 42.14%.
	Vanadium	3.3	Within the tolerance limit.
RFI1020V19.0	Arsenic	na	Within the tolerance limit.
	Barium	400.0	Exceeds the tolerance limit by 2.37%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	11.0	Exceeds the tolerance limit by 2.12%.
	Leao	16.0	Exceeds the tolerance limit by 2.43%.
	NICKEI	16.0	Exceeds the tolerance limit by 33.78%.
BFI1020V25.0	Arsenic	nd	Within the tolerance limit
	Barium	369.0	Within the tolerance limit.
	Bervllium	nd	Within the tolerance limit.
	Chromium	14.0	Exceeds the tolerance limit by 70.73%.
	Lead	20.0	Exceeds the tolerance limit by 28.04%.
	Nickel	19.0	Exceeds the tolerance limit by 58.86%.
	Vanadium	5.0	Within the tolerance limit.
HFI1021V19.0	Arsenic	nd	within the tolerance limit.
	Barium	520.0	Exceeds the tolerance limit by 33.08%.
	IBeryllium	i nd i	within the tolerance limit.

13.0

19.0

16.0

6.8

Chromium Lead

Nickel Vanadium

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GIANT REFINING COMPANY – CINIZA

SAMPLE NUMBER	METAL	SAMPLE DATA	NOTE
RFI1021V25.0	Arsenic	nd	Within the tolerance limit.
	Barium	680.0	Exceeds the tolerance limit by 74.02%.
	Beryllium	nd	Within the tolerance limit.
	Chromium	9.4	Exceeds the tolerance limit by 14.63%.
	Lead	20.0	Exceeds the tolerance limit by 28.04%.
	Nickel	17.0	Exceeds the tolerance limit by 42.14%.
	Vanadium	4.7	Within the tolerance limit.

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4.0 SUMMARY AND DISCUSSION OF SWMUs

This section summarizes the methods used to investigate each of the SWMUs and presents a summary of the field observations and analytical results. Recommendations are also made for future corrective actions.

4.1 SWMU No. 4 - Old Burn Pit

SWMU No. 4 consists of the old burn pit located just north and slightly west of the tank farm (Figure 4). The old burn pit was used to burn acid-soluble oils (ASO) which are a high molecular weight, asphalt-type cross polymerized hydrocarbon. The pit has been inactive since the early 1980s.

4.1.1 <u>Methods</u>

Three soil borings were drilled within the perimeter of the old burn pit using a CME drilling rig with a $2\frac{1}{2}$ " hollow-stem carbon steel auger to a depth of 10.0 feet. Samples were collected at the 6.0 and 10.0 foot intervals. A description of the soil types encountered during drilling was recorded on the lithologic log (Appendix C). Attempts were made to take field headspace measurements with the photo ionization detector (PID), but, part way through the sampling schedule, the PID pump ceased functioning.

The soil samples were collected in a clean stainless steel pan and were then placed into laboratory supplied containers, labeled, and placed into a cooler chilled to approximately 4°C for shipment to Westech Laboratories in El Paso, Texas under chain of custody (COC). Samples were collected, labeled, and shipped as required by Sections 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All auger flights, split spoons, and sampling equipment were decontaminated by steam cleaning and/or washing as outlined in section 5.0 of the Generic Sampling Plan.

Westech Laboratories analyzed each of the soil samples collected for: VOCs using EPA Method 8240/8260 (Skinner List); semi-volatile organic compounds (SVOCs) using EPA Method 8270 (Skinner List); and Total Metals. Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.1.2 <u>Results</u>

Only one VOC (Methyl Ethyl Ketone [MEK]) and no SVOCs were observed in the analytical data. MEK was observed in RFI 0406V6.0 at a concentration of 1.2 mg/kg.

Chromium and nickel were observed in concentrations that exceeded background levels for soil at the Ciniza refinery area. Chromium exceedances were observed in 4 of 7 samples, ranging from 23 to 49% above background levels. Nickel exceedances were observed in 3 of 7 samples, ranging from 35 to 53% above background levels. Cadmium, lead, mercury, arsenic, barium, beryllium, and vanadium concentrations were within background levels in all of the samples examined.

4.1.3 <u>Recommendations</u>

Soil analyzed from the old burn pit contained only one elevated concentration of VOCs and some elevated levels of nickel and chromium. The VOC, methyl ethyl ketone, was detected at 1.2 mg/kg.

Remediation of this site should be limited to tilling the soil to a depth of 4.5 feet to aerate the deeper soil to promote natural attenuation. The metals can be isolated from human contact and surface receptors by applying a cap of native soil. This would also prevent infiltration of surface water and thereby limit downward migration of constituents.

A corrective action plan will be prepared for SWMU No. 4 and submitted for EPA approval.

4.2 <u>SWMU No. 5 - Landfill Areas</u>

SWMU No. 5 consists of landfill areas midway between the tank farm and the air strip (Figure 6). The landfills were used to dispose of non-regulated, non-hazardous materials from the refinery. The landfills have been inactive since the early 1980s.

4.2.1 <u>Methods</u>

Seven soil borings were drilled, as extensions of previous RFI borings, with a CME drilling rig using

a $2\frac{1}{2}$ " hollow stem carbon steel auger to a depth of 20 feet (Figure 7). Samples were collected at 11.0, 16.0, and 20.0 feet. A description of the soil types encountered during drilling was recorded on the lithologic log (Appendix C). Field headspace measurements of volatile organic concentrations in each soil sample were made with a PID meter and recorded on the data management forms.

The soil samples were collected in a clean stainless steel pan and were then placed into laboratory supplied containers, labeled, and placed in a cooler chilled to approximately 4°C for shipment to the lab under COC. Samples were collected, labeled, and shipped as required by Sections 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All auger flights, split spoons, and sampling equipment were decontaminated by steam cleaning and/or washing as outlined in Section 5.0 of the Generic Sampling Plan.

Westech Laboratories analyzed each of the soil samples collected for: VOC using EPA Method 8240/8260 (Skinner List); SVOCs using EPA Method 8270 (Skinner List); and Total Metals. Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.2.2 <u>Results</u>

VOCs were not detected in any of the soil samples collected. Field headspace measurements of volatile organic compounds made with a PID were all non-detect.

One SVOC was detected in three samples from three bore holes. Di-n-Butyl phthalate was detected in RFI 0515V20.0 at 13 mg/kg; in RFI 0516V16.0 at 7.5 mg/kg; and in RFI 0516V20.0 at 13.0 mg/kg.

Barium, chromium, lead, and nickel were detected concentrations exceeding background levels in the refinery area. Chromium was detected in 12 of 22 samples in concentrations from 7 to 120% above background levels. Barium was detected in 2 of 22 samples in concentrations from 25 to 31% above background levels. Lead was detected in 3 of 22 samples in concentrations from 2 to 15% above background levels; and nickel was detected in 12 of 22 samples in concentrations of 33 to 34% above background levels.

4.2.3 <u>Recommendations</u>

Elevated concentrations of chromium, barium, lead, and nickel were detected in the landfill area. Capping with a native soil cap, sloped to allow drainage away from the SWMU, will isolate the metals from surface receptors and will limit infiltration of surface water and downward migration of contaminants. Giant proposes to proceed with the corrective action plan submitted in February, 1993 to USEPA Region VI.

4.3 SWMU No. 6 - Tank Farm

SWMU No. 6 consists of seven hydrocarbon storage tanks, (ranging in size from 1,000 to 24,800 barrels) that have contained leaded gasoline (that is, gasoline blended with the compound tetraethyl lead). The tank farm is located immediately north of the operating units (Figure 2).

4.3.1 <u>Methods</u>

Seven borings were made, as extension of previous RFI borings, with a CME drilling rig using a $2\frac{1}{2}$ " hollow stem carbon steel auger. Samples were collected at 16.0 feet in all borings except RFI 0642V20.0 which was collected at 20.0 feet per USEPA request. Additional depths were sampled as necessary. A description of the soil types encountered during drilling was recorded on the lithologic logs (Appendix C). Field headspace measurement of volatile organic concentrations in each soil sample was attempted with a PID, but the meter was found to be defective.

The soil samples were collected in a clean stainless steel pan and were then placed into laboratory supplied containers, labeled, and placed into a cooler chilled to approximately 4°C for shipment to the lab under COC. Samples were collected, labeled, and shipped as required by Section 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All auger flights, split spoons, and sampling equipment were decontaminated by steam

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cleaning and/or washing as outlined by Section 5.0 of the Generic Sampling Plan.

Westech Laboratories analyzed each of the soil samples collected for: 8020 BTEX with the exception of samples RFI 0610V16.0 and RFI 0641V19.0 which were accidentally marked on the COC for VOCs by 8240/8260 Skinner List. Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.3.2 <u>Results</u>

Elevated levels of VOCs were detected in most samples. Two tanks in particular showed high concentrations of BTEX, with results for total BTEX of 601,000 ug/kg in sample RFI 0639V16.0 (Tank 569) and 318,600 ug/kg in sample RFI 0640V16.0 (Tank 570). Concentrations in both of these borings showed marked reductions from the 16.0 foot to the 20.0 foot levels: 82% and 41% respectively. Other samples ranged from 52 ug/kg to 190,300 ug/kg for total BTEX. It is important to note that the highest benzene concentration in any sample was 4,600 ug/kg. It is also important to note that none of the deeper samples exceeded the New Mexico Environment Improvement Board water quality control regulatory action limits, which are:

Benzene	-	10,000 ug/kg
BTEX	-	500,000 ug/kg

In the event that obvious contamination is observed in a boring, standard practice is to continue drilling until two "clean" samples are obtained. As previously mentioned, the PID meter malfunctioned part way through the sampling program and, due to the fact that the Ciniza refinery is so isolated, a replacement PID meter could not be found in a timely manner. Sampling and drilling personnel were thus forced to rely on their olfactory senses in determining whether or not the samples collected appeared to be "clean".

4.3.3 <u>Recommendations</u>

Although the deepest samples contained BTEX in concentrations lower than WQCC standards, Giant has contracted to drill additional corings at Tank 569 and 570 to more adequately characterize BTEX concentrations. This drilling will occur on October 24, 1994.

Giant was unable to drill a coring at tank 451 due to limited operating space. A hand auger was used, but sampling personnel were unable to penetrate a gravel interval at approximately 14.0 feet. A portable pneumatic sampling spoon will be used on October 24 or 25 to obtain the samples at RFI 0635V16.0 (Tank 451). Results of both additional sampling activities will be submitted by December 1, 1994.

Elevated BTEX levels at the leaded tanks will need to be addressed. Giant will submit a corrective action plan to EPA to address those problems.

4.4 <u>SWMU No. 7 - Fire Training Area</u>

SWMU No. 7 consists of an open top tank, approximately 1,000 bbl, cut to one-third of its original height. This tank has been used once or twice per year for fire training for the Ciniza fire fighting team.

4.4.1 <u>Methods</u>

Two borings were made, at two points that had been previously sampled, at an angle under the tank. Samples were collected at 7.0 and 11.0 feet in both borings. A description of the soil types encountered during drilling was recorded on the lithologic logs (Appendix C). Field headspace measurement of volatile organic concentrations in each soil sample was attempted, but the PID meter was found to be defective.

The soil samples were collected in a clean stainless steel pan and were then placed into laboratory supplied containers, labeled, and placed into a cooler chilled to approximately 4°C for shipment to the lab under COC. Samples were collected, labeled, and shipped as required by Sections 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All auger flights, split spoons, and sampling equipment were decontaminated by steam cleaning and/or washing as outlined by Section 5.0 of the Generic Sampling Plan.

Westech Laboratories analyzed each of the soil samples collected for: VOCs using EPA Method 8240/8260 (Skinner List); SVOCs using EPA Method 8270 (Skinner List); Total Petroleum Hydrocarbon and Oil & Grease. Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.4.2 <u>Results</u>

No VOCs were detected in SWMU No. 7. An SVOC (di-n-butyl phthalate) was detected in two samples (RFI 0705All.OD and RFI 0706A7.0). No concentrations of Total Petroleum Hydrocarbon or Oil & Grease were detected in this SWMU.

4.4.3 <u>Recommendations</u>

Additional sampling has demonstrated that Oil & Grease and TPH contamination is limited to a total depth of approximately 4.5 feet. Tilling and additions of nutrients will reduce the Oil & Grease concentrations. Upon approval by EPA, Giant will implement the corrective action plan submitted in February, 1993.

4.5 <u>SWMU No. 10 - Sludge Pits</u>

SWMU No. 10 consists of two connected pits that received API separator sludge (K051) and slop oil emulsion solids (K049) in the past. Contents of the pits were vacuumed out in 1980 and clean, dry soil was used to backfill the pits. The sludge pits were sampled in 1990 and again in 1991. A corrective action plan was submitted in 1993 and Giant has been given the authorization to proceed with bioremediation activities, with requirements (see EPA letter of January 7, 1994, in the Correspondence Section).

4.5.1 <u>Methods</u>

Eight borings were made to a depth of 25.0 feet, two being required by EPA to fully characterize the extent of potentially hazardous constituents, and the other six to satisfy requirements of closure of SWMU #10. All borings were made with a CME drilling rig using a $2\frac{1}{2}$ " hollow stem carbon steel auger. A visual description of the soil types encountered while drilling was recorded in the lithologic log (Appendix C). Field headspace measurement of volatile organic concentrations in each soil sample were made with a PID meter and

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these data were recorded on the data management forms.

The soil samples were collected into a stainless steel pan and were then placed into laboratory supplied containers, labeled, and placed into a cooler chilled to approximately 4°C for shipment to the lab under COC. Samples were collected, labeled, and shipped as required by Sections 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All augers, split spoons, and sampling equipment were decontaminated prior to each use by steam cleaning and/or washing as outlined in Section 5.0 of the Generic Sampling Plan.

Westech Laboratory analyzed each of the soil samples collected for: VOCs using EPA Method 8240/8260 (Skinner List); SVOCs using EPA Method 8270 (Skinner List); and Total Metals. Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.5.2 <u>Results</u>

No VOCs were detected in SWMU No. 10. An SVOC (di-n-butyl phthalate) was detected in four samples: RFI 1018V19.0 at 13 mg/kg; RFI 1019V25.0 at 11 mg/kg; RFI 1021V19.0 at 11 mg/kg; and RFI 1021V25.0 at 11 mg/kg. Giant believes these results may be due to outside contamination. Barium, chromium, lead, and nickel showed significant statistical exceedances above background soil samples from the refinery area. Barium exceedances were observed in 10 of 17 samples, ranging from 2 to 182 % above background. Chromium exceedances were observed in 13 of 17 samples, ranging from 2 to 95%. Lead was observed in 11 of 17 samples, ranging from 2 to 28%. Nickel was observed in 17 of 17 samples, ranging from 9 to 67% above background. The detection of metals showed even distribution throughout the SWMU.

4.5.3 <u>Recommendations</u>

Due to the absence of hazardous hydrocarbon constituents at the deeper levels, Giant proposes to implement the corrective action plan submitted to EPA in February, 1993.

4.6 <u>SWMU No. 11 - Secondary Skimmer</u>

SWMU No. 11 consists of the area where the old secondary skimmer was situated, in a drainage ditch south of evaporation Lagoon #4. The secondary skimmer has not been used since the late 1970s and was removed in 1991 to expedite sampling.

4.6.1 <u>Methods</u>

Two borings were made , to a depth of 10.0 feet, within the area occupied by the secondary skimmer with a CME drilling rig using a $2\frac{1}{2}$ " hollow stem carbon steel auger. A visual description of the soil types encountered while drilling was recorded in the lithologic logs (Appendix C). Field headspace measurement of volatile organic concentrations were made with a PID meter and recorded on the data management forms.

The soil samples were collected in a stainless steel pan and were then place in laboratory supplied containers, labeled, and placed into a cooler chilled to approximately 4°C for shipment to the lab under COC. Samples were collected, labeled, and shipped as required by Sections 3.4, 4.0, and 6.0 of the Generic Sampling Plan. All augers, split spoons, and sampling equipment were decontaminated prior to each used by steam cleaning and/or washing as outlined by Section 5.0 to the Generic Sampling Plan.

Westech Laboratory analyzed each of the soil samples collected for: VOCs using EPA Method 8240/8260 (Skinner List) and SVOCs using EPA Method 8270 (Skinner List). Analytical results are summarized below and are also presented in tabulated form in the appendices.

4.6.2 <u>Results</u>

Two VOCs (ethylbenzene and xylenes) were detected in two borings: RFI 1104V6.0 and RFI 1104V10.0. No SVOCs were detected.

4.6.3 <u>Recommendations</u>

The extremely low levels of volatile organic compounds present no threat to human health or the environment. Giant believes that natural attenuation will remove the remaining trace VOCs. As such, Giant proposes no further action.

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FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling



Sample location:	SWMU#5	,	Sample Date: 07/28/94
Sample Type:	SOIL		
Team Leader:	[ynnShelton]		
Sample Personnel:	D.Gearheart A.F	Irnold / L. Begay	
Sampling Method:	Coring		
Sample Number:	REI 0513V.11.0	Sample Time/Description: (Include PID Reading)	9:15 PID=0 Clay $5:14y$
Sample Number:	REI 0513 V.160	Sample Time/Description: (Include PID Reading)	9:25 PID=230 Clay/Sand
Sample Number:	REIDSIZ V200	Sample Time/Description: (Include PID Reading)	9:38 PID=0 Clay/sand
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	-	Sample Time/Description: (Include PID Reading)	
Surface Terrain:		·····]
Weather Conditions:	Clear, Eastwi	nds Smph, Terr	1p 80° F
Field Observations:	miscellaneous	5 Oldris (2.8-5.0	') (metal, wood, glkss) PID 500.750

Sample location:	SWM45		Sample Date:	07/28/94
Sample Type:	SOIL			:
Team Leader:	Lynn Shelton			
Sample Personnel:	D.Gearheart A.	Arnold / L. Begai	y/m.sim	psin
Sampling Method:	[Coring]			
Sample Number:	REI 0514 VII.0	Sample Time/Description: (Include PID Reading)	10:15 PI Clay/3	D=0 ilty
Sample Number:	REI OSI4 VIGO	Sample Time/Description: (Include PID Reading)	10:30 P Clay J:	ID=0 Silty
Sample Number:	RFI05141200	Sample Time/Description: (Include PID Reading)	10:40 PI	p=0 sand,
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)		
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:			;;	
Weather Conditions:	Clear, West Wir	uSmph, Partly	Cloudy, Te	mp 95°E
Field Observations:	Miscellaneous rwood, rwbbe	Debris(0 2.5 ur, plastic)	5) PID=	Φ

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Sample location:	Swmu#5	· · · · ·	Sample Date: 07/28/94
Sample Type:	SOIL		. :
Team Leader:	Lynn Shelton		
Sample Personnel:	J.Gearheart/L.Beg	ay A. Arnold	[M. Simpsun]
Sampling Method:	Coring		/
Sample Number:	REI 05/5 VII.Ø Samp (Inclu	le Time/Description: ude PID Reading)	Clay Sand
Sample Number:	<u>KFI 0515 V 160</u> Samp (Inclu	le Time/Description: ude PID Reading)	11:50 PID=0 Clay/sand
Sample Number:	RFI 0515 V20 8 Samp (Inclu	le Time/Description: ude PID Reading)	12:00 PID=0 Clay
Sample Number:	Samp (Inclu	le Time/Description: ude PID Reading)	
Sample Number:	Samp (Inclu	le Time/Description: ude PID Reading)	
Sample Number:	Samp (Inclu	le Time/Description: ude PID Reading)	
Surface Terrain:	[·]
Weather Conditions:	Clear, West Winds	5 5mph, Part	lyClaudy, Temps 7°F
Field Observations:	Oubris 6.0'		

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Sample location:	EWMU#5		Sample Date: Ø7 5794
Sample Type:	5DIL		: :
Team Leader:	[ynnShelton]		
Sample Personnel:	D.Gearheart /	Begay / MiSim	psin
Sampling Method:	Coring		
Sample Number:	RFI05/10111.0	Sample Time/Description: (Include PID Reading)	1445 PID=0 Clay Sand
Sample Number:	RFI.05/61/16.0	Sample Time/Description: (Include PID Reading)	1455 PID=0 Clay/Sand
Sample Number:	RFIOSIGVZOD	Sample Time/Description: (Include PID Reading)	1500 PID=0 Clay/Sana
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)	
Sample Number:	-	Sample Time/Description: (Include PID Reading)	
Surface Terrain:	[·····	
Weather Conditions:	Cloudy, East	Winds 5mph,	75°F
Field Observations:			

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Sample location:	BWMU #S		Sample Date: 07/28/94
Sample Type:	SOIL		:
Team Leader:	[ynnShelton]		
Sample Personnel:	J.Gearheart JL	Begay / M.Sin	npsm
Sampling Method:	Coring		
Sample Number:	2FIQSITVII.Q	Sample Time/Description: (Include PID Reading)	1535 PIDEO Clay Jana
Sample Number:	REI OSITVIGO	Sample Time/Description: (Include PID Reading)	1545 PID=0 Clay Sand
Sample Number:	RFI 0517 V200	Sample Time/Description: (Include PID Reading)	1555 PID=0 Clay
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Surface Terrain:	·	· · · · · · · · · · · · · · · · · · ·	
Weather Conditions:	Cloudy, nort	heast wind 5r	nph, 85°F
Field Observations:			

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FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling


Sample location: SWMU #S	Sample Date: 07/29/94
Sample Type:	
Team Leader: LynnShelton	
Sample Personnel: J.Gearneart/L. Begay/M.Sin	npson /A. Arnold
Sampling Method: Coring	
Sample Number: RFI0518V11.0 Sample Time/Description: (Include PID Reading)	Clay/sand
Sample Number: RFI0518V.16.0 Sample Time/Description: (Include PID Reading)	0857 PID=0 Sand Clay
Sample Number: RFI0518V200 Sample Time/Description: (Include PID Reading)	0904 PID-Q Clay/Sana
Sample Number: $A RFI0518 V 10.00$ Sample Time/Description: (Include PID Reading)	0857
Sample Number: A RFI 0518V.[], OF Sample Time/Description: (Include PID Reading)	0847
Sample Number: Sample Time/Description: (Include PID Reading)	
Surface Terrain:	
Weather Conditions: Clear, East Wind Smph, 750	F
Field Observations:	

Sample location:	SWMU #5		Sample Date:	Ø7/29/94
Sample Type:	SOIL			:
Team Leader:	[LynnShelton]			
Sample Personnel:	D. Gearheart / L	Begay Misimps	on/A.Arn	old
Sampling Method:	Coring			
Sample Number:	RFI 0519 V11.0	Sample Time/Description: (Include PID Reading)	Clay	PID=0 JShale
Sample Number:	RFI 0519 V160	Sample Time/Description: (Include PID Reading)	[000 P Clau	ID=0 Shale
Sample Number:	RFI0519 V200	Sample Time/Description: (Include PID Reading)	1005 Clay	PID=0 IShale
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	·]
Weather Conditions:	Clear, Eastw	ind 5mph, 78°1	=	
Field Observations:	wind has ch	anged 5.10mp	h Wester	y,1000

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Sample location:	Sumu # 4	、 、	Sample Date: 07/29/9
Sample Type:	50IL		
Team Leader:	Lynn Sheltn		
Sample Personnel:	U.Gearheart/L	Begay/M.Simp	son A. Arnold
Sampling Method:	Coring		,
Sample Number:	RFI0404V60	Sample Time/Description: (Include PID Reading)	1330 PIDEO Clayfsand
Sample Number:	RFI. 0404 V10.0	Sample Time/Description: (Include PID Reading)	1340 PID=0 Clay/Sand
Sample Number:	REI QUUY VIO.OC	Sample Time/Description: (Include PID Reading)	1340 PED=0 ClaysAnd
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Surface Terrain:	Elat, Bare		
Weather Conditions:	Clear, Easti	whal Smph, 8	D°F
Field Observations:	1.3-1.7 as	phaltre	

Sample location:	Swm v # 4		Sample Date: 07/29/94
Sample Type:	SOIL		
Team Leader:	[LynnShelkn]		
Sample Personnel:	N. Luchetti /M.	Simpson/W. Toome	r/L. Begay
Sampling Method:	Coring	·	, 00
Sample Number:	RFI QUOSVUD	Sample Time/Description: (Include PID Reading)	1415 PID=0 Clay/Sand
Sample Number:	RET Q405VID.0	Sample Time/Description: (Include PID Reading)	1420 PID=0 Clay/Sand
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	-	Sample Time/Description: (Include PID Reading)	
Surface Terrain:	Flat		
Weather Conditions:	Clear, East 4	Jina Smph, 80	o F
Field Observations:			

Sample location:	BWMU#4		Sample Date:	67/29/94
Sample Type:	SOIL			
Team Leader:	LynnShelton	,	,	
Sample Personnel:	M. Simpson/W.	Tumer N. Luche	Hi A. Aci	nold
Sampling Method:	Coring	,	•	
Sample Number:	RFJ0406VIO.0	Sample Time/Description: (Include PID Reading)	[450] Clay	PID=0
Sample Number:	REI OHOLO VIOLO	Sample Time/Description: (Include PID Reading)	1520 Sar	PID=0
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	-	Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Ĺ		· · · · · · · · · · · · · · · · · · ·	
Weather Conditions:	Clear, Easti	uina, 80°F		
Field Observations:		· · · · · · · · · · · · · · · · · · ·		

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Sample location:	SWMU #10		Sample Date:	07/24/94
Sample Type:	SOIL			:
Team Leader:	Lynn Sheltzn			
Sample Personnel:	W. Toomer J. J. Ge	earheart/M.Sim	npsan	
Sampling Method:	Coring			
Sample Number:	QET 0513V11.0	Sample Time/Description: (Include PID Reading)	10:55AM moist	PID=0 Clay
Sample Number:	0513 VILe.0	Sample Time/Description: (Include PID Reading)	11:05AM	PID-0
Sample Number:	0513 V20.0	Sample Time/Description: (Include PID Reading)	11:15Am OrgClay	PID=0 Sand
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	·	Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Flat Alldirt,	Brush		
Weather Conditions:	Clear, Calm,	85°F		
Field Observations:				
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Sample location:	SWMU #10		Sample Date: 07/26/94
Sample Type:	SOIL		
Team Leader:	Lynn Shelten		
Sample Personnel:	WTormer / J.G.	earhead M.Simp.	
Sampling Method:	Coring		
Sample Number:	1014 V P.O	Sample Time/Description: (Include PID Reading)	12:05pm PID=0 Clay/Sand
Sample Number:	RFZ 1014 Vasa	Sample Time/Description: (Include PID Reading)	12:15pm PID=0 Clay/Sand
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	[]	Sample Time/Description: (Include PID Reading)	
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)	
Surface Terrain:	· · · · · · · · · · · · · · · · · · ·		
Weather Conditions:	Clear, Calm,	85°F	
Field Observations:	6-8ft 200-9	00 PPM W/PID	

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Sample location:	6WMU #10		Sample Date:	67/26/94
Sample Type:	SOIL			:
Team Leader:	[LynnShelton]			
Sample Personnel:	W. Toomer J.	Gearheart / L. Be	gay]
Sampling Method:	Coring			
Sample Number:	REI 1015 V 19.0	Sample Time/Description: (Include PID Reading)	1455 Shaley	PID=0 /Clay
Sample Number:	RET. 1015 V25.0	Sample Time/Description: (Include PID Reading)	1506, Shale	PIDER y clay
Sample Number:	·	Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	}	Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Flat w/ Bru	.sh		
Weather Conditions:	Passing Story	n.S		
Field Observations:	Enciuntered PID = 250 PP	layer of Black 50 M	il at 5-10)'

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Sample location:	Swmu #10		Sample Date:	07/26/94
Sample Type:	SOIL			• :
Team Leader:	Lynn Shelton			
Sample Personnel:	W. Toomer / L.	Begay J. J. Gearh	eart A.A	rnold
Sampling Method:	Coring		V .	
Sample Number:	RELIDIGVI90	Sample Time/Description: (Include PID Reading)	1610 Cla	PID=0 Y/SANd
Sample Number:	RFI 1016 V250	Sample Time/Description: (Include PID Reading)	1630 Clayf	PID=0 Sand
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	· ·	Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Flat Brush			
Weather Conditions:	Passing Storm	is west what s	5-10 mpt)
Field Observations:	Encountered 1 PID=120.2	Black Soil at dep 200 PPM	th 3.3-c	7.1
· · · · · · · · · · · · · · · · · · ·		· · · · · · · · · · · · · · · · · · ·		

Sample location:	SWM W#10		Sample Date:	07/26/94
Sample Type:	SOIL			:
Team Leader:	[Lynn Shelton]			
Sample Personnel:	W. Toomer A	Arnola]
Sampling Method:	Coring			
Sample Number:	RFI1017V9.0	Sample Time/Description: (Include PID Reading)	1737 Clay	PID=0 Isand
Sample Number:	REI1017V250	Sample Time/Description: (Include PID Reading)	1745 Clay	PID=0 Sand
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	-	Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Level Brush	<u>n</u>	· · · · · · · · · · · · · · · · · · ·	
Weather Conditions:	PartlyCloud	yznowind., 90	°F	
Field Observations:	Black soil at again at 4-4	2.5' PID=60 6 200ppm 11.1-	-220 ppm -12.8'22	o ppm

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FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling



Sample location:	SWMU #10		Sample Date:	07/27/94
Sample Type:	SOIL			:
Team Leader:	LynnShelton			
Sample Personnel:	W. Toomer L.	Begay J. Gear hee	it M.Sim	Pson
Sampling Method:	Coring			. •
Sample Number:	RFI 1018 V 19.0	Sample Time/Description: (Include PID Reading)	TOTO	PID=0 Isand
Sample Number:	RET 1018 V250	Sample Time/Description: (Include PID Reading)	Clay !!	PID=0 Sand
Sample Number:	RET. 1018 V.25.00	Sample Time/Description: (Include PID Reading)	1100 Auger Riv	santSample
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Flat with gi	~ass		
Weather Conditions:	Clear, Sunne	1,85°F,5-10m	phwinds	5W
Field Observations:	Black Soil Cnc 7.1-7.6 9.1-	ountered at 2.5 9.7' Sand lens	-3' PID, w/strong	=220PPM Odorpid=0

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	Sample location:	SWMU #10		Sample Date:	07/27/94
	Sample Type:	SOIL			:
	Team Leader:	Lynn Shelton			
	Sample Personnel:	W. Toomer /L. F	Begay J. Gearhea	rt/M.Simp	son
	Sampling Method:	Coning			
	Sample Number:	RFI 1019V190	Sample Time/Description: (Include PID Reading)	Clay	PID=0 Shale
ſ	Sample Number:	RFI1019 V25.0	Sample Time/Description: (Include PID Reading)	Clay	PID=0 Shale
	Sample Number:	RET 1019 V19.00	Sample Time/Description: (Include PID Reading)	1145 Clau	PID=0 1/Shale
	Sample Number:		Sample Time/Description: (Include PID Reading)		·
	Sample Number:		Sample Time/Description: (Include PID Reading)		
	Sample Number:	-	Sample Time/Description: (Include PID Reading)	-	
	Surface Terrain:	Flat, Dry]
	Weather Conditions:	Clear, Sunny	Y		
	Field Observations:	PID= 34 PPM	at 7FT		
			· · · ·		,

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Sample location:	SWMU #10		Sample Date: 67/27/94
Sample Type:	SOIL		· · ·
Team Leader:	LynnShelton		
Sample Personnel:	W. Toomer 1. 1:	Begay D. Gearhea	ct M. Simpson
Sampling Method:	Corng	•	ι
Sample Number:	RFI1020VA.0	Sample Time/Description: (Include PID Reading)	1420 PID=0 Clay/Shale
Sample Number:	RFI 1020 425.0	Sample Time/Description: (Include PID Reading)	1425 PID=0 Clay/Sand
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	-	Sample Time/Description: (Include PID Reading)	
Surface Terrain:	Flat, ary		
Weather Conditions:	Cloudy, wind	LSW 10 mph, 90)°F
Field Observations:			

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Sample Type: SOTL Team Leader: Lynn Shelton Sample Personnel: [W. Toomer /L. Begay PiGear heart / M. Sith pson /A. Arnott Sampling Method: [Coring] Sample Number: [IZFI 10 2) V19:0 Sample Number: [Izz] Sample Time	Sample location:	SWMU #10		Sample Date:	67/27/94
Team Leader: Lynn Sheltan Sample Personnel: W. Toomer /L. Begey D.Gearheart/M.Simpson/A.Arnott Sampling Method: (Oring) Sample Number: [ZFI 10 21 V19.0] Sample Number: [ZFI 10 21 V19.0] Sample Number: [ZEI 10.21 V.3S.0] Sample Number: [ZEI 10.21 V.3S.0] Sample Number: [ZEI 10.21 V.3S.0] Sample Number: [Sample Time/Description: (Include PID Reading) Sample Number: [Plat, Dry] Weather Conditions:	Sample Type:	SOIL			
Sample Personnel: IW. Tromer /L. Begay D.Gearheart/M.Simpson/A.Arnott Sampling Method: [Cmhg] Sample Number: [ZEI 1021 V25:0] Sample Number: [Sample Time/Description: (Include PID Reading)] Surface Terrain: [f/at , Ary] Weather Conditions: [Cloudy , 90°F_SW Winds 10 - 15 Mph] [Field Observations: [Cloudy , 90°F_SW Winds 10 - 15 Mph]	Team Leader:	Lynn Shelton			1
Sampling Method: (Dring) Sample Number: [ZFI 10 2) V190 Sample Time/Description: [S30 PID=0 Shale Clay Sample Number: [ZEI 102/V250] Sample Time/Description: [S30 PID=0 Shale Clay Sample Number: [Include PID Reading] [Sample Time/Description: (Include PID Reading) Sample Number: Sample Time/Description: (Include PID Reading) [Include PID Reading] Sample Number: Sample Time/Description: (Include PID Reading) [Include PID Reading] Sample Number: Sample Time/Description: (Include PID Reading) [Include PID Reading] Sample Number: [Sample Time/Description: (Include PID Reading) [Include PID Reading] Surface Terrain: [Plat , Dry [Plat , Dry [Weather Conditions: [Plaudy , 90° F Stu) Winds 10 - 15 Mph [Field Observations: [Plaudy , 90° F Stu) Winds 10 - 15 Mph	Sample Personnel:	W. Tromer /L.B.	egay pigearheart	M.Simpson	A.Arnold
Sample Number: Image: Imag	Sampling Method:	Coning	, O,		
Sample Number: $\mathbb{Z}EI$ $IDOLVascollas$	Sample Number:	RFI 1021 4190	Sample Time/Description: (Include PID Reading)	1520 Shale	PID=0 Clay
Sample Number: Sample Time/Description: (Include PID Reading) Surface Terrain: Flat, Dry Weather Conditions: Cloudy, 90°F_SU Winds 10-15 mph Field Observations: Field Observations:	Sample Number:	REI 1021 Vas.0	Sample Time/Description: (Include PID Reading)	Shale	Clay_
Sample Number: Sample Time/Description: (Include PID Reading) Sample Number: Sample Time/Description: (Include PID Reading) Sample Number: Sample Time/Description: (Include PID Reading) Surface Terrain: Plat, Dry Weather Conditions: Cloudy, 90°F_SW Winds 10-15 mph Field Observations: Field Observations:	Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number: Sample Time/Description: (Include PID Reading) Sample Number: Sample Time/Description: (Include PID Reading) Surface Terrain: Flat, Dry Weather Conditions: Cloudy, 90° F. SW Winds 10-15 mph Field Observations: Field Observations:	Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number: Sample Time/Description: (Include PID Reading) Surface Terrain: Flat, Dry Weather Conditions: Cloudy, 90°F SW Winds 10-15 Field Observations: Field Observations:	Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain: Flat, Dry Weather Conditions: Cloudy, 90°F SW Winds 10-15 Mph Field Observations:	Sample Number:	-	Sample Time/Description: (Include PID Reading)		
Weather Conditions: Cloudy, 90°F SW Winds 10-15 mph Field Observations:	Surface Terrain:	Plat, Dry			
Field Observations:	Weather Conditions:	Cloudy, 90°F	E SW Winds 10	-15 mpl	n
	Field Observations:				

FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling



Sample location:	SWMU #6		Sample Date:	08/09/94
Sample Type:	SOIL			2
Team Leader:	[LynnShelton]			
Sample Personnel:	W. Toomer / A. A	could / M.Simps	n/D.PAUL	ich
Sampling Method:	Coring			
Sample Number:	REIQGHOVIGO	Sample Time/Description: (Include PID Reading)	iaco Sand	Iclay_
Sample Number:	RFF0640V24.0	Sample Time/Description: (Include PID Reading)	iais Clay	Isand
Sample Number:		Sample Time/Description: (Include PID Reading)		,
Sample Number:	· · · · · · · · · · · · · · · · · · ·	Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Jank farm.	level]
Weather Conditions:	Cloudy ,75°	F, NO Wind		
Field Observations:	6'-11': Blacks 11.9-14.9: Blac	buil PID220PPA KSOI	1W/Bag	

Sample location:	SWMU # [o]	Sample Date:	08/09/94
Sample Type:	SOIL		
Team Leader:	Lynn Shelton		
Sample Personnel:	W.TCOMER A. Acnold / M. SIMPS	ion N. Luci	heHi
Sampling Method:	Conng		
Sample Number:	$\frac{\mathbb{RFT} \mathcal{O} \cup \mathcal{A} \mathcal{O} \mathcal{O} \mathcal{O}}{\mathcal{O} \mathcal{O} \mathcal{O} \mathcal{O} $	3:40pm Clais	Sand
Sample Number:	Sample Time/Description: (Include PID Reading)		
Sample Number:	Sample Time/Description: (Include PID Reading)		
Sample Number:	Sample Time/Description: (Include PID Reading)		
Sample Number:	Sample Time/Description: (Include PID Reading)		
Sample Number:	Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Level Tank Farm		
Weather Conditions:	avercast, Mowind, 78°F		
Field Observations:	4-5ft. Oder of reformator 5-7' mild oder of reforma	ormal culo to,	У

Sample location:	Swmu HG		Sample Date:	08/09/94
Sample Type:	SOIL			: :
Team Leader:	[LynnShelten]			·
Sample Personnel:	W. Toomer A. Ar	aola M. Simpson	N. Luche	etti
Sampling Method:	Coring		· .	
Sample Number:	RFI 01239 V16.0	Sample Time/Description: (Include PID Reading)	5:25pm Clay	Isana
Sämple Number:	REI0639V25.0	Sample Time/Description: (Include PID Reading)	5:35 рм Слад/Sa	endfrad
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Level Sand - T	ank Farm]
Weather Conditions:	Overcast, 75°	° F		
Field Observations:	Discolored Clau trace of Biomi	y Isand 3-41	light odc	r
L				
		Ŧ		

Sample location:	Swmu#6		Sample Date:	08/09/94
Sample Type:	SOIL			•
Team Leader:	Lynn Shelton			
Sample Personnel:	W. Toomer A	Acnold M. Simps	en/N. Luci	heffi
Sampling Method:	Coring			
Sample Number:	RFI0638V160	Sample Time/Description: (Include PID Reading)	4:35 pm Clar	1/Sand
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Tank farm			
Weather Conditions:	Overcast, 75	٥E		
Field Observations:	5! Sana no	oder trace of	Birmass.	
l				
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FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling

W. Date: 08/10/94 Technician: comer ITEM **PID Meter** Site Specific SWMU Workplan Generic Sampling Plan Site Map with Sample Locations Sample Bottles Ice Chests Trip Blanks Propanol **Deionized Water** Squeeze Bottles Personal Protective Equipment Chain of Custody **Plastic Bags Disposable Gloves** Paper Towels **Packing Tape** Waterproof Pens . Blue Ice Zip-Lock Bags, 1 gallon Stainless Steel Pan Stainless Steel Spatula

Sample location:	Swmu+1		Sample Date: 08/10/94
Sample Type:	SOIL		• :
Team Leader:	[LynnShelton]		_
Sample Personnel:	W. Toomer/M	1. Simpson/A. Aro	old/LiShelten
Sampling Method:	Coring		
Sample Number:	REI 110416.0	Sample Time/Description: (Include PID Reading)	9:20 Am Sand Clay/rock
Sample Number:	REI 1104V10.0	Sample Time/Description: (Include PID Reading)	9:30 Agu Band/Clay/rock
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:	-	Sample Time/Description: (Include PID Reading)	
Surface Terrain:	Level Sand		
Weather Conditions:	Partly cloude	4.,80°F	
Field Observations:	First Sft. fillo	dirt 6ft. discolor	red Clay/Sand/rock
		۲	

	a -			
Sample location:	SWMU#11		Sample Date:	08/10/94
Sample Type:	SOLL			
Team Leader:	Lynn Shelton		1	
Sample Personnel:	W. Toomer M.	Simpson / A. Arno	a/L.Shel	ton.
Sampling Method:	Curing		•	
Sample Number:	RFI1103V10.0	Sample Time/Description: (Include PID Reading)	10:00 Am Clay	
Sample Number:	RET. 1103110.0	Sample Time/Description: (Include PID Reading)	10:10 am Clai	4
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:	-	Sample Time/Description: (Include PID Reading)		
Surface Terrain:	[eve]			
Weather Conditions:	Party Clau	dy, 820F		
Field Observations:	First S! Black	c fillsand		
L				

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Sample location:	$Swmu \neq 6$	Sample Date: 08/10/94
Sample Type:	SOIL	
Team Leader:	LynnShelton	
Sample Personnel:	W. Tomer J.A. Arnold / M. Simp	~80m
Sampling Method:	[Coring_]	
Sample Number:	$\frac{RFT}{20037} \frac{1}{6.0}$ Sample Time/Description: (Include PID Reading)	: 12:00pm Clay/sand
Sample Number:	$\mathbb{CFL} (0.037) / (0.00)$ Sample Time/Description (Include PID Reading)	: 12:00 Clayfsand
Sample Number:	$\begin{array}{c} \hline \hline$: 12:0 pm Shale
Sample Number:	Sample Time/Description (Include PID Reading)	
Sample Number:	Sample Time/Description (Include PID Reading)	:
Sample Number:	Sample Time/Description (Include PID Reading)	
Surface Terrain:	Jevel]
Weather Conditions:	Parthy cloudy, 850F	
Field Observations:	First 5. discolored sand,	NO oder.

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Sample location:	SWMV#4		Sample Date: X.10.9
Sample Type:	SOIL		
Team Leader:	LYNN SHELTON	,	
Sample Personnel:	W. Toomer A	Arnold M.Si	mpson
Sampling Method:			
Sample Number:	REI 063/01/16.0	Sample Time/Description: (Include PID Reading)	1450 SAND
Sample Number:	RFE 0636VZD	Sample Time/Description: (Include PID Reading)	15000 LLAY
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Sample Number:		Sample Time/Description: (Include PID Reading)	
Surface Terrain:	LEVEL SAND	TANK FARM	· · · · · · · · · · · · · · · · · · ·
Weather Conditions:	Sunny SMA	LL BREEZE 8	52°F
Field Observations:	Here Kon	G GAS ODOR	

FIELD EQUIPMENT CHECKLIST Soil and Sludge Sampling



Sample location:	SWMU #(0	Sample Date: 08/11/94
Sample Type:	SOIL	
Team Leader:	Lynn Shelten	
Sample Personnel:	[W. Turmer] A. Arnold M. Si	mpsin
Sampling Method:	Coring	
Sample Number:	$\frac{\mathbb{R}_{FI} \mathbb{O} \mathbb{O} \mathbb{O} \mathbb{O} \mathbb{O} \mathbb{O} \mathbb{O} O$	ion: 9:30 Am Sand/Chef
Sample Number:	$\mathbb{RFL} \mathcal{D} \mathcal{O} \mathcal{U} \mathcal{U} \mathcal{P}_{1} \mathcal{O} \mathcal{O} $ Sample Time/Descript (Include PID Reading	ion: 9:40 Am Sat. Sand Clark
Sample Number:	Sample Time/Descript (Include PID Reading	ion:
Sample Number:	Sample Time/Descript (Include PID Reading	ion:)
Sample Number:	Sample Time/Descript (Include PID Reading	ion:)
Sample Number:	Sample Time/Descript (Include PID Reading	ion:)
Surface Terrain:	Cirregular, bare (Next to t.	ank
Weather Conditions:	Over cast, 109°F Breeze, y	MOIST
Field Observations:		
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Sample location:	SWMU #7		Sample Date:	ØS/11/94
Sample Type:	BOIL			•
Team Leader:	[ynn Shelten]			
Sample Personnel:	W. Toomer M	. Simpson /AcArn	obt/L.Sh	elten
Sampling Method:	Caring	ľ		
Sample Number:	REIDIOSA7.0	Sample Time/Description: (Include PID Reading)	11:10 An Clay	sand
Sample Number:	RFI 0705 A11.0	Sample Time/Description: (Include PID Reading)	11:20 AM Class	[sand]
Sample Number:	REI 0705All.D	Sample Time/Description: (Include PID Reading)	1 Dup	licate
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Sample Number:		Sample Time/Description: (Include PID Reading)		
Surface Terrain:	Bare, Slope	at 2°		
Weather Conditions:	Over Cast, Br	eeze, 78°F, N	10137	
Field Observations:	Band of st	rained soil at	1.0ft(22'	·)
L				
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Sample location:	SWMU #7		Sample Date:	08/11/94
Sample Type:	SOIL			- -
Team Leader:	[Lynn Shelton]			
Sample Personnel:	W. Tormer M.Sim	pson A. Arn	old / C. She	lton
Sampling Method:	Conng			
Sample Number:	EFI070(1A7.0 Sample (Incluc	Time/Description: le PID Reading)	ID: 35 Clay	18and
Sample Number:	RFL0706All Q Sample (Includ	Time/Description: le PID Reading)	10:45 Clay	Isand
Sample Number:	RFI 070LAIIDE Sample (Incluc	e Time/Description: le PID Reading)	Equipmer Rinse-Sp	it plitspan
Sample Number:	Sample (Incluc	e Time/Description: le PID Reading)		
Sample Number:	Sample (Inclue	e Time/Description: le PID Reading)		
Sample Number:	Sample (Includ	e Time/Description: le PID Reading)		
Surface Terrain:	Bare Slope at 3	0		
Weather Conditions:	Overcast, Breeze	,750F, MO	St	
Field Observations:	Small Band LI"	of Staine	d soil at	4.194.
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RFI COMPLIANCE DATA GIANT REFINING COMPANY – CINIZA

ANALYTICAL DATA

REPORTING LEVELS

8240/8260 SKINNER LIST	mg/Kg
8270 SKINNER LIST	mg/Kg
TOTAL METALS	mg/Kg
8020 BTEX	ug/Kg
OIL & GREASE	mg/Kg
TOTAL PETROLEUM HYDROCARBONS	mg/Kg

GIANT REFINING COMPANY

CINIZA

SWMU #4

TOTAL METALS

	DETECTION	CORI	NG NUMBER	1	
PARAMETER	LIMIT	04V6.0	04V10.0	04V10.0D	05V6.0
Cadmium	2.5	<2.5	<2.5	<2.5	<2.5
Chromium	2.5	11	7.7	7.3	12
Lead	5.0	15	11	12	15
Mercury	0.25	<0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5	<2.5
Barium	5.0	130	240	260	170
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5
Nickel	2.5	16	10	11	18
Vanadium	2.5	5.4	3.7	4.7	6.5

05V10.0	06V6.0	06V10.0

Cadmium	2.5	<2.5	<2.5	<2.5
Chromium	2.5	5.2	10	9.9
Lead	5.0	12	15	13
Mercury	0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5
Barium	5.0	230	150	220
Beryllium	2.5	<2.5	<2.5	<2.5
Nickel	2.5	9.2	18	9.5
Vanadium	2.5	4.0	6.4	4.6

TLS 9/94

GIANT REFINING COMPANY

CINIZA

SWMU #4

8240/8260 SKINNER LIST

	DETECTION	CORING NUMBER			
PARAMETER	LIMIT	04V6.0	04V10.0	04V10.0D	05V6.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl Ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2–Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2–Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl Ethyl Ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5

05V10.0 06V6.0 06V10.0

Benzene	0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5
Chloroethylvinyl Ether	1.0	<1.0	<1.0	<1.0
1,2–Dibromoethane	0.5	<0.5	<0.5	< 0.5
1,2-Dichloroethane	5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5
Methyl Ethyl Ketone	1.0	<1.0	1.2	<1.0
Styrene	0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5

GIANT REFINING COMPANY CINIZA

SWMU #4 8270 SKINNER LIST

	DETECTION	CORING NUMBER			
PARAMETER	LIMIT	04V6.0	04V10.0	04V10.0D	05V6.0
Pression					
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl Benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-btyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.0	<25.0	<25.0	<25.0
Di-n-octyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4–Nitrophenol	25.0	<25.0	<25.0	<25.0	<25.0
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyroline	10.0	<10.0	<10.0	<10.0	<10.0
Quinoline	25.0	<25.0	<25.0	<25.0	<25.0

GIANT REFINING COMPANY

CINIZA

SWMU #4

8270 SKINNER LIST, cont.

	DETECTION		· · · · · · · · · · · · · · · · · · ·	
PARAMETER	LIMIT	05V10.0	06V6.0	06V10.0
Anthracene	5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)				
phthalate	5.0	<5.0	<5.0	<5.0
Butyl Benzyl phthalate	5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0
Di-n-btyl phthalate	5.0	<5.0	<5.0	<5.0
1,2–Dichlorobenzene	5.0	<5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)				
anthracene	5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.0	<25.0	<25.0
Di-n-octyl phthalate	5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0
4Nitrophenol	25.0	<25.0	<25.0	<25.0
Phenanthrene	5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0
Pyroline	10.0	<10.0	<10.0	<10.0
Quinoline	25.0	<25.0	<25.0	<25.0

GIANT REFINING COMPANY - CINIZA

RFI COMPLIANCE DATA

SWMU #5

TOTAL METALS

	DETECTION	CORING NUMBER						
PARAMETER	LIMIT	0513V11.0	0513V16.0	0513V20.0	0514V11.0	0514V16.0	0514V20.0	
Cadmium	2.5	<2.5	<2,5	<2.5	<2.5	<2.5	<2.5	
Chromium	2.5	7.5	10	9.1	9.7	5.1	14	
Lead	5.0	11	14	12	13	11	15	
Mercury	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	
Arsenic	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
Barium	5.0	140	360	310	190	510	320	
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
Nickel	2.5	10	11	12	12	7.9	16	
Vanadium	2.5	4	11	6.2	5	7	8.2	

0515V11.0 0515V16.0 0515V20.0 0516V11.0 0516V16.0 0516V20.0

Cadmium	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Chromium	2.5	18	11	13	9.7	5.2	7
Lead	5.0	14	15	14	16	12	14
Mercury	0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Barium	5.0	140	140	380	370	240	160
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
Nickel	2.5	13	14	16	13	9.7	11
Vanadium	2.5	6.7	5.4	8.1	5.8	3.4	3.5

0517V11.0 0517V16.0 0517V20.0 0518V11.0 0518V16.0 0518V16.0D

ר ך	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
٦ ٢	5.9	3.6	9.3	8.8	4.8	5.3
7 [11	9.7	15	13	9.6	11
7 Г	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
7 [<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
7 Г	490	200	270	210	100	110
1	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
7	9.2	7.5	14	13	7.9	7.6
-1 F	3.8	2.8	4.8	3.8	3.7	3.4

Cadmium	2.5
Chromium	2.5
Lead	5.0
Mercury	0.25
Arsenic	2.5
Barium	5.0
Beryllium	2.5
Nickel	2.5
Vanadium	2.5

RFI COMPLIANCE DATA GIANT REFINING COMPANY - CINIZA

SWMU #5

TOTAL METALS, cont.

	DETECTION	CORING NUMBER			
PARAMETER	LIMIT	0518V20.0	0519V11.0	0519V16.0	0519V20.0
Cadmium	2.5	<2.5	<2.5	<2.5	<2.5
Chromium	2.5	7.7	9.9	7.9	16
Lead	5.0	12	15	18	16
Mercury	0.25	<0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5	2.9
Barium	5.0	200	300	300	390
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5
Nickel	2.5	9.4	14	15	16
Vanadium	2.5	4.2	<2.5	<2.5	2.8
SWMU #5

8240/8260 SKINNER LIST

	DETECTION	CORIN	G NUMBER		
PARAMETER	LIMIT	0513V11.0	0513V16.0	0513V20.0	0514V11.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,4–Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	0.6	<0.5	<0.5
		054 0140 0	054 (1/00 0	0545144.0	0545140.0
		U514V16.0	0514V20.0	0515V11.0	0515716.0

Benzene	C
Carbon Disulfide	C
Chlorobenzene	0
Chloroethylvinyl ether	1
1,2–Dibromoethane	(
1,4–Dichloroethane	Ę
1,4–Dioxane	5
Ethylbenzene	(
Methyl ethyl ketone	
Styrene	(
Toluene	(
Xylenes	(

0.5
0.5
0.5
1.0
0.5
5.0
50.0
0.5
1.0
0.5
0.5
0.5

<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<1.0	<1.0	<1.0	<1.0
<0.5	<0.5	<0.5	<0.5
<5.0	<5.0	<5.0	<5.0
<50.0	<50.0	<50.0	<50.0
<0.5	<0.5	0.5	<0.5
<0.5 <1.0	<0.5 <1.0	0.5 <1.0	<0.5 <1.0
<0.5 <1.0 <0.5	<0.5 <1.0 <0.5	0.5 <1.0 <0.5	<0.5 <1.0 <0.5
<0.5 <1.0 <0.5 <0.5	<0.5 <1.0 <0.5 <0.5	0.5 <1.0 <0.5 <0.5	<0.5 <1.0 <0.5 <0.5
<0.5 <1.0 <0.5 <0.5 <0.5	<0.5 <1.0 <0.5 <0.5 <0.5	0.5 <1.0 <0.5 <0.5 2.0	<0.5 <1.0 <0.5 <0.5 <0.5

0515V20.0 0516V11.0 0516V16.0 0516V20.0

Benzene	0.5	<0.5	<0.5	<10.0	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<10.0	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<10.0 ⁻	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<20.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<10.0	<0.5
1,4–Dichloroethane	5.0	<5.0	<5.0	<10.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<100	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<10.0	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<100	<1.0
Styrene	0.5	<0.5	<0.5	<10.0	<0.5
Toluene	0.5	<0.5	<0.5	<10.0	<0.5
Xvlenes	0.5	<05	-0.5	<10.0	<05

RFI COMPLIANCE DATA

GIANT REFINING COMPANY – CINIZA

SWMU #5

8240/8260 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	0517V11.0	0517V16.0	0517V20.0	0518V11.0
Benzene	<0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	<0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	<0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	<0.5	<0.5	<0.5	<0.5	<0.5
1,4–Dichloroethane	<5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dioxane	<50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	<0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	<1.0	<1.0	<1.0	<1.0	<1.0
Styrene	<0.5	<0.5	<0.5	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	<0.5	<0.5	<0.5	<0.5	<0.5

0518V11.0E* 0518V16.0 0518V16.0D 0518V20.0

Benzene	<0.5
Carbon Disulfide	<0.5
Chlorobenzene	<0.5
Chloroethylvinyl ether	<1.0
1,2-Dibromoethane	<0.5
1,4–Dichloroethane	<5.0
1,4–Dioxane	<50.0
Ethylbenzene	<0.5
Methyl ethyl ketone	<1.0
Styrene	<0.5
Toluene	<0.5
Xylenes	<0.5

<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<1.0	<1.0	<1.0	<1.0
<0.5	<0.5	<0.5	<0.5
<5.0	<5.0	<5.0	<5.0
<50.0	<50.0	<50.0	<50.0
<0.5	<0.5	<0.5	<0.5
<1.0	<1.0	<1.0	<1.0
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5

*Equipment Rinsate

0519V11.0	0519V20.0

Benzene	<0.5
Carbon Disulfide	<0.5
Chlorobenzene	<0.5
Chloroethylvinyl ether	<1.0
1,2-Dibromoethane	<0.5
1,4-Dichloroethane	<5.0
1,4–Dioxane	<50.0
Ethylbenzene	<0.5
Methyl ethyl ketone	<1.0
Styrene	<0.5
Toluene	<0.5
Xylenes	<0.5

<0.5	<0.5
<0.5	<0.5
<0.5	<0.5
<1.0	<1.0
<0.5	<0.5
<5.0	<5.0
<50.0	<50.0
<0.5	<0.5
<1.0	<1.0
<0.5	<0.5
<0.5	<0.5
<0.5	<0.5

SWMU #5 8240/8260 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	0517V11.0	0517V16.0	0517V20.0	0518V11.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,4Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5
	·				

0518V11.0E* 0518V16.0 0518V16.0D 0518V20.0

Benzene	
Carbon Disulfide	
Chlorobenzene	
Chloroethylvinyl ether	
1,2–Dibromoethane	
1,4–Dichloroethane	
1,4–Dioxane	
Ethylbenzene	
Methyl ethyl ketone	
Styrene	
Toluene	
Xylenes	

	_
<0.5	
<0.5	
<0.5	
<1.0	
<0.5	
<5.0	
<50.0	
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	<0.5 <0.5 <1.0 <0.5 <5.0 <50.0 <0.5 <1.0 <0.5 <1.0 <0.5 <0.5 <0.5

<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<1.0	<1.0	<1.0	<1.0
<0.5	<0.5	<0.5	<0.5
<5.0	<5.0	<5.0	<5.0
<50.0	<50.0	<50.0	<50.0
<0.5	<0.5	<0.5	<0.5
<1.0	<1.0	<1.0	<1.0
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5
<0.5	<0.5	<0.5	<0.5

*Equipment Rinsate

0519V11.0	0519V20.0

Benzene	
Carbon Disulfide	
Chlorobenzene	
Chloroethylvinyl ether	
1,2-Dibromoethane	
1,4–Dichloroethane	
1,4–Dioxane	
Ethylbenzene	
Methyl ethyl ketone	
Styrene	
Toluene	
Xylenes	

<0.5	<0.5
<0.5	<0.5
<0.5	<0.5
<1.0	<1.0
<0.5	<0.5
<5.0	<5.0
<50.0	<50.0
<0.5	<0.5
<1.0	<1.0
<0.5	<0.5
<0.5	<0.5
<0.5	<0.5

RFI COMPLIANCE DATA

GIANT REFINING COMPANY – CINIZA

SWMU #5 82

8270 SKINNER LIST

	DETECTION	CORIN	G NUMBER		
PARAMETER	LIMIT	0513V11.0	0513V16.0	0513V20.0	0514V11.0
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	9.6	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.

SWMU #5

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8270 SKINNER LIST, cont.

PARAMETER LIMIT 0514V16.0 0514V16.0 0515V11.0 0515V16.0 Anthracene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0			DETECTION				
Anthracene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 <t< td=""><td>PARAMETER</td><td>ן ך</td><td>LIMIT</td><td>0514V16.0</td><td>0514V20.0</td><td>0515V11.0</td><td>0515V16.0</td></t<>	PARAMETER	ן ך	LIMIT	0514V16.0	0514V20.0	0515V11.0	0515V16.0
Anthracene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0							
Benzenethiol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Anthracene	וך	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>Benzenethiol</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Benzenethiol		5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 </td <td>Benzo(a)anthracene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Benzo(a)anthracene		5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)fiouranthene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 </td <td>Benzo(b)flouranthene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Benzo(b)flouranthene		5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Benzo(k)flouranthene	7	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl) phthalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <th< td=""><td>Benzo(a)pyrene</td><td></td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></th<>	Benzo(a)pyrene		5.0	<5.0	<5.0	<5.0	<5.0
phthalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 <	Bis(2-ethylhexyl)						
Butyl benzyl phthalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 </td <td>phthalate</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	phthalate		5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Butyl benzyl phthalate		5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a, j)acridine 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 <td>Chrysene</td> <td>7</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Chrysene	7	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 </td <td>Dibenz(a,j)acridine</td> <td>_</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Dibenz(a,j)acridine	_	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 <td>Dibenzo(a,h)anthracene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Dibenzo(a,h)anthracene		5.0	<5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Di-n-butyl phthalate		5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1,2-Dichlorobenzene</td> <td>7</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1,2-Dichlorobenzene	7	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1,3-Dichlorobenzene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1,3-Dichlorobenzene		5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	1,4–Dichlorobenzene		5.0	<5.0	<5.0	<5.0	<5.0
7,12-Dimethylbenz(a) anthracene5.0 <5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dimethylphenol5.0 <5.0 <5.0 <5.0 <5.0 <5.0 Dimethyl phthalate5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dinitrophenol25.0 $<25.$ $<25.$ $<25.$ $<25.$ Di-n-octyl phalate5.0 <5.0 <5.0 <5.0 <5.0 Flouranthene5.0 <5.0 <5.0 <5.0 <5.0 Indene5.0 <5.0 <5.0 <5.0 <5.0 Methylchrysene5.0 <5.0 <5.0 <5.0 <5.0 1-Methylphenol5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dimethylphenol5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dimethylphenol5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dimethylphenol5.0 <5.0 <5.0 <5.0 <5.0 3-Methylphenol5.0 <5.0 <5.0 <5.0 <5.0 4-Methylphenol5.0 <5.0 <5.0 <5.0 <5.0 4-Methylphenol5.0 <5.0 <5.0 <5.0 <5.0 4-Nitrophenol5.0 <5.0 <5.0 <5.0 <5.0 Phenol5.0 <5.0 <5.0 <5.0 <5.0 Phenol5.0 <5.0 <5.0 <5.0 <5.0 Phenol5.0 <5.0 <5.0 <5.0 <5.0 Pyrene <td>Diethyl phthalate</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Diethyl phthalate		5.0	<5.0	<5.0	<5.0	<5.0
anthracene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Dimethyl phthalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 2,4-Dinitrophenol 25.0 $< 25.$ $< 25.$ $< 25.$ $< 25.$ Di-n-octyl phalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Flouranthene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Indene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Methylchrysene 5.0 < 5.0 < 5.0 < 5.0 1-Methylnaphthalene 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 < 5.0 < 5.0 3-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Nitrophenol 5.0 < 5.0 < 5.0 < 5.0 Phenol 5.0 < 5.0 < 5.0 < 5.0 Phenol 5.0 < 5.0 < 5.0 < 5.0 Pyrene 5.0 < 5.0 < 5.0 < 5.0 Pyrene 5.0 < 5.0 < 5.0 < 5.0 Pyridine 1	7,12-Dimethylbenz(a)						
2,4-Dimethylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>anthracene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	anthracene		5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate 5.0 <5.0 <5.0 <5.0 <5.0 $2,4$ -Dinitrophenol 25.0 25.0 $<25.$ $<25.$ $<25.$ $<25.$ Di-n-octyl phalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 Flouranthene 5.0 5.0 <5.0 <5.0 <5.0 <5.0 Indene 5.0 5.0 <5.0 <5.0 <5.0 <5.0 Methylchrysene 5.0 <5.0 <5.0 <5.0 <5.0 1-Methylnaphthalene 5.0 <5.0 <5.0 <5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 <5.0 <5.0 <5.0 3-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 4-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 A-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 Phenol 5.0 <5.0 <5.0 <5.0 <5.0 Phenol 5.0 <5.0 <5.0 <5.0 <5.0 Phenol 5.0 <5.0 <5.0 <5.0 <5.0 Pyrene 5.0 <5.0 <5.0 <5.0	2,4-Dimethylphenol		5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dimethyl phthalate		5.0	<5.0	<5.0	<5.0	<5.0
Di-n-octyl phalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>2,4-Dinitrophenol</td> <td></td> <td>25.0</td> <td><25.</td> <td><25.</td> <td><25.</td> <td><25.</td>	2,4-Dinitrophenol		25.0	<25.	<25.	<25.	<25.
Flouranthene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Di-n-octyl phalate		5.0	<5.0	<5.0	<5.0	<5.0
Indene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Flouranthene</td><td></td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Flouranthene		5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Indene		5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>Methylchrysene</td> <td>-</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Methylchrysene	-	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1-Methylnaphthalene</td> <td></td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1-Methylnaphthalene		5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	2,4–Dimethylphenol		5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	3-Methylphenol	-1	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	4-Methylphenol		5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol 25.0 <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25.	Naphthalene		5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	4-Nitrophenol		25.0	<25.	<25.	<25.	<25.
Phenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Phenanthrene</td><td></td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Phenanthrene		5.0	<5.0	<5.0	<5.0	<5.0
Pyrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Phenol</td><td>7</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Phenol	7	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine 10.0 <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10.	Pyrene	1	5.0	<5.0	<5.0	<5.0	<5.0
Quinoline 25.0 <25. <25. <25.	Pyridine	-1	10.0	<10.	<10.	<10.	<10.
	Quinoline	1	25.0	<25.	<25.	<25.	<25.

SWMU #5

8270 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	0515V20.0	0516V11.0	0516V16.0	0516V20.0
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	13	<5.0	7.5	13.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.

SWMU #5

8270 SKINNER LIST, cont.

		DETECTION					
PARAMETER	٦	LIMIT	0517	V11.0	0517V16.0	0517V20.0	0518V11.0
	_						
Anthracene		5.0	<	5.0	<5.0	<5.0	<5.0
Benzenethiol	_	5.0	<	5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene		5.0	<	5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	7	5.0	<	5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene		5.0	<	5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene		5.0	<	5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)							
phthalate		5.0	<	5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate		5.0	<	5.0	<5.0	<5.0	<5.0
Chrysene		5.0	<	5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine		5.0	<	5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene		5.0	<	5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	7	5.0	<	5.0	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	1	5.0	<	5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene		5.0	<	5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene		5.0	<	5.0	<5.0	<5.0	<5.0
Diethyl phthalate		5.0	<	5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					1		
anthracene		5.0	<	5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol		5.0	<	5.0	<5.0	<5.0	<5.0
Dimethyl phthalate		5.0	<	5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol		25.0	<	25.	<25.	<25.	<25.
Di-n-octyl phalate		5.0	<	5.0	<5.0	<5.0	<5.0
Flouranthene		5.0	<	:5.0	<5.0	<5.0	<5.0
Indene		5.0	<	5.0	<5.0	<5.0	<5.0
Methylchrysene		5.0	<	5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene		5.0	<	5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol		5.0	<	5.0	<5.0	<5.0	<5.0
3-Methylphenol		5.0	<	(5.0	<5.0	<5.0	<5.0
4-Methylphenol		5.0	<	(5.0	<5.0	<5.0	<5.0
Naphthalene	\neg	5.0	~	5.0	<5.0	<5.0	<5.0
4-Nitrophenol		25.0	<	25.	<25.	<25.	<25.
Phenanthrene		5.0	<	(5.0	<5.0	<5.0	<5.0
Phenol		5.0	<	(5.0	<5.0	<5.0	<5.0
Pyrene		5.0	<	(5.0	<5.0	<5.0	<5.0
Pyridine		10.0	<		<10.	<10.	<10.
Quinoline	-	25.0	<	25.	<25.	<25.	<25.
L			L	-		J	L

SWMU #5 8270 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	0518V16.0	518V16.0	0518V20.0	0519V11.0
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)				1	
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	. <5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
1,2–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.
					<u> </u>

RFI COMPLIANCE DATA CINIZA

8270 SKINNER LIST, cont. SWMU #5

PARAMETER LIMIT 0519V20.0 Anthracene 5.0 <5.0 Benzenethiol 5.0 <5.0 Benzo(a)anthracene 5.0 <5.0 Benzo(b)flouranthene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) phthalate 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 <5.0 J.3-Dichlorobenzene 5.0 <5.0 <5.0 J.4-Dichlorobenzene 5.0 <5.0 <5.0 Z.4-Dimethylbenz(a) anthracene 5.0 <5.0 Z.4-Dimethylphenol 5.0 <5.0 <5.0 Dimethyl phthalate 5.0		DETECTION	
Anthracene 5.0 <5.0 Benzenethiol 5.0 <5.0 Benzo(a)anthracene 5.0 <5.0 Benzo(b)flouranthene 5.0 <5.0 Benzo(k)flouranthene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) $phthalate5.0<5.0Butyl benzyl phthalate5.0<5.0Dibenz(a,j)acridine5.0<5.0Dibenz(a,j)acridine5.0<5.0Dibenz(a,j)acridine5.0<5.0Dibenz(a,j)acridine5.0<5.0Dibenz(a,j)acridine5.0<5.0Di-n-butyl phthalate5.0<5.01,2-Dichlorobenzene5.0<5.01,3-Dichlorobenzene5.0<5.01,4-Dichlorobenzene5.0<5.02,4-Dimethylbenz(a)anthracene5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol5.0<5.02,4-Dimethylphenol$	PARAMETER	LIMIT	0519V20.0
Anthracene5.0<5.0Benzenethiol5.0<5.0			
Benzenethiol 5.0 <5.0	Anthracene	5.0	<5.0
Benzo(a)anthracene 5.0 <5.0 Benzo(b)flouranthene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) 5.0 <5.0 phthalate 5.0 <5.0 Butyl benzyl phthalate 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 Dibenzo(a,h)anthracene 5.0 <5.0 J.2-Dichlorobenzene 5.0 <5.0 J.3-Dichlorobenzene 5.0 <5.0 J.4-Dichlorobenzene 5.0 <5.0 Diethyl phthalate 5.0 <5.0 Z,4-Dimethylphenol 5.0 <5.0 Z,4-Dinitrophenol 5.0 <5.0 J-n-octyl phalate 5.0 <5.0 Flouranthene 5.0 <5.0 Indene 5.0	Benzenethiol	5.0	<5.0
Benzo(b)flouranthene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) phthalate 5.0 <5.0 Butyl benzyl phthalate 5.0 <5.0 Chrysene 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 1,2-Dichlorobenzene 5.0 <5.0 1,3-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 2,4-Dimethylbenz(a) anthracene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 Chouranthene 5.0 <5.0 Indene 5.0 <5.0 Indene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 1-Methylnaphthalene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 2,4-Dimethylpheno	Benzo(a)anthracene	5.0	<5.0
Benzo(k)flouranthene 5.0 <5.0 Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) 5.0 <5.0 phthalate 5.0 <5.0 Butyl benzyl phthalate 5.0 <5.0 Chrysene 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 J2-Dichlorobenzene 5.0 <5.0 1,3-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 2,4-Dimethylbenz(a) $anthracene$ 5.0 <5.0 2,4-Dinitrophenol 2.0 <5.0 <5.0 Din-n-octyl phalate 5.0 <5.0 <5.0 Flouranthene 5.0 <5.0 <5.0 <	Benzo(b)flouranthene	5.0	<5.0
Benzo(a)pyrene 5.0 <5.0 Bis(2-ethylhexyl) 5.0 <5.0 phthalate 5.0 <5.0 Butyl benzyl phthalate 5.0 <5.0 Chrysene 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0 J2-Dichlorobenzene 5.0 <5.0 1,3-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 2,4-Dimethylbenz(a) anthracene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 <5.0 Din-n-octyl phalate 5.0 <5.0 <5.0 Flouranthene 5.0 <5.0 <5.0 1-Methylinaphthalene	Benzo(k)flouranthene	5.0	<5.0
Bis(2-ethylhexyl) 5.0 <5.0 phthalate 5.0 <5.0	Benzo(a)pyrene	5.0	<5.0
phthalate 5.0 <5.0 Butyl benzyl phthalate 5.0 <5.0	Bis(2-ethylhexyl)		
Butyl benzyl phthalate 5.0 <5.0 Chrysene 5.0 <5.0	phthalate	5.0	<5.0
Chrysene 5.0 <5.0 Dibenz(a,j)acridine 5.0 <5.0	Butyl benzyl phthalate	5.0	<5.0
Dibenz(a,j)acridine 5.0 <5.0 Dibenzo(a,h)anthracene 5.0 <5.0	Chrysene	5.0	<5.0
Dibenzo(a,h)anthracene 5.0 <5.0 Di-n-butyl phthalate 5.0 <5.0 1,2-Dichlorobenzene 5.0 <5.0 1,3-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 Diethyl phthalate 5.0 <5.0 7,12-Dimethylbenz(a) anthracene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 <5.0 Di-n-octyl phalate 5.0 <5.0 <5.0 Flouranthene 5.0 <5.0 <5.0 Indene 5.0 <5.0 <5.0 <	Dibenz(a,j)acridine	5.0	<5.0
Di-n-butyl phthalate 5.0 <5.0 1,2-Dichlorobenzene 5.0 <5.0 1,3-Dichlorobenzene 5.0 <5.0 1,4-Dichlorobenzene 5.0 <5.0 Diethyl phthalate 5.0 <5.0 Diethyl phthalate 5.0 <5.0 7,12-Dimethylbenz(a) $anthracene$ 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 <5.0 Dimethyl phthalate 5.0 <5.0 <5.0 2,4-Dinitrophenol 25.0 <25.0 <25.0 Dinoctyl phalate 5.0 <5.0 <5.0 Flouranthene 5.0 <5.0 <5.0 Indene 5.0 <5.0 <5.0	Dibenzo(a,h)anthracene	5.0	<5.0
1,2-Dichlorobenzene 5.0 <5.0 $1,3$ -Dichlorobenzene 5.0 <5.0 $1,4$ -Dichlorobenzene 5.0 <5.0 Diethyl phthalate 5.0 <5.0 $7,12$ -Dimethylbenz(a) $anthracene$ 5.0 <5.0 $anthracene$ 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 $2,4$ -Dinitrophenol 25.0 $<25.$ Di -n-octyl phalate 5.0 <5.0 Flouranthene 5.0 <5.0 Indene 5.0 <5.0 Methylchrysene 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 $1-Methylnaphthalene$ 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 $2,4$ -Dimethylphenol 5.0 <5.0 4 -Methylphenol 5.0 <5.0 4 -Methylphenol 5.0 <5.0 4 -Nitrophenol 5.0 <5.0	Di-n-butyl phthalate	5.0	<5.0
1,3-Dichlorobenzene 5.0 <5.0	1,2-Dichlorobenzene	5.0	<5.0
1,4-Dichlorobenzene 5.0 <5.0	1,3-Dichlorobenzene	5.0	<5.0
Diethyl phthalate 5.0 <5.0 7,12Dimethylbenz(a) anthracene 5.0 <5.0	1,4-Dichlorobenzene	5.0	<5.0
7,12-Dimethylbenz(a) anthracene 5.0 <5.0	Diethyl phthalate	5.0	<5.0
anthracene 5.0 < 5.0 $2,4$ -Dimethylphenol 5.0 < 5.0 Dimethyl phthalate 5.0 < 5.0 $2,4$ -Dinitrophenol 25.0 $< 25.$ Di-n-octyl phalate 5.0 < 5.0 Flouranthene 5.0 < 5.0 Indene 5.0 < 5.0 Methylchrysene 5.0 < 5.0 1-Methylnaphthalene 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 3-Methylphenol 5.0 < 5.0 4-Methylphenol 5.0 < 5.0 4-Nitrophenol 5.0 < 5.0 Phenol 5.0 < 5.0 Phenol 5.0 < 5.0 Phenol 5.0 < 5.0 Phenol 5.0 < 5.0	7,12-Dimethylbenz(a)		
2,4-Dimethylphenol 5.0 <5.0	anthracene	5.0	<5.0
Dimethyl phthalate 5.0 <5.0 2,4-Dinitrophenol 25.0 <25.	2,4–Dimethylphenol	5.0	<5.0
2,4-Dinitrophenol 25.0 $<25.$ Di-n-octyl phalate 5.0 <5.0 Flouranthene 5.0 <5.0 Indene 5.0 <5.0 Methylchrysene 5.0 <5.0 1-Methylnaphthalene 5.0 <5.0 2,4-Dimethylphenol 5.0 <5.0 3-Methylphenol 5.0 <5.0 4-Methylphenol 5.0 <5.0 4-Methylphenol 5.0 <5.0 4-Nitrophenol 25.0 $<25.$ Phenanthrene 5.0 <5.0 Phenol 5.0 <5.0 9 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0 < 5.0 <5.0	Dimethyl phthalate	5.0	<5.0
Di-n-octyl phalate 5.0 <5.0 Flouranthene 5.0 <5.0	2,4-Dinitrophenol	25.0	<25.
Flouranthene 5.0 <5.0 Indene 5.0 <5.0	Di-n-octyl phalate	5.0	<5.0
Indene 5.0 <5.0 Methylchrysene 5.0 <5.0	Flouranthene	5.0	<5.0
Methylchrysene 5.0 <5.0 1-Methylnaphthalene 5.0 <5.0	Indene	5.0	<5.0
1-Methylnaphthalene 5.0 <5.0	Methylchrysene	5.0	<5.0
2,4-Dimethylphenol 5.0 <5.0	1-Methylnaphthalene	5.0	<5.0
3-Methylphenol 5.0 <5.0 4-Methylphenol 5.0 <5.0	2,4–Dimethylphenol	5.0	<5.0
4-Methylphenol 5.0 <5.0 Naphthalene 5.0 <5.0	3-Methylphenol	5.0	<5.0
Naphthalene 5.0 <5.0 4-Nitrophenol 25.0 <25.	4-Methylphenol	5.0	<5.0
4-Nitrophenol 25.0 <25. Phenanthrene 5.0 <5.0	Naphthalene	5.0	<5.0
Phenanthrene 5.0 <5.0 Phenol 5.0 <5.0	4–Nitrophenol	25.0	<25.
Phenol 5.0 <5.0 Purpose 5.0 <5.0	Phenanthrene	5.0	<5.0
	Phenol	5.0	<5.0
	Pyrene	5.0	<5.0
Pyridine 10.0 <10.	Pyridine	10.0	<10.
Quinoline 25.0 <25.	Quinoline	25.0	<25.

GIANT REFINING COMPANY

CINIZA

SWMU #6

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8020 BTEX

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	DETECTION	COR	ING NUMBER]	
PARAMETER	LIMIT	0636V16.0	0636V20.0	0637V16.0	0637V16.0D
Benzene	10.0	<10	10	<10	<10
Ethylbenzene	10.0	26	13	600	63
Toluene	10.0	13	10	1100	170
Xylenes	3.0	42	19	8300	1300
					:
		0637V20.0	0638V16.0	0639V16.0	0639V25.0
Benzene	10.0	<10	<10	3000	190
Ethylbenzene	10.0	110	150	160000	15000
Toluene	10.0	73	170	68000	14000
Xylenes	3.0	50	1400	370000	83000
		[
		0640V16.0	0640V24.0	0641V16.0	0641V19.0
Benzene	10.0	4600	290	800*	ND*
Ethylbenzene	10.0	77000	37000	1800*	ND*
Toluene	10.0	37000	23000	500*	ND*
Xylenes	3.0	200000	130000	5400*	500*
		.	•		
		0642V20.0]	0240 ONININ	
Benzene	10.0	<10]		
Ethylbenzene	10.0	450	1		
Toluene	10.0	460			

SWMU #7

8240/8260 SKINNER LIST

	DETECTION	CORING NUMBER			
PARAMETER	LIMIT	0705A7.0	0705A11.0	0705A11.0D	0706A7.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinylether	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl Ethyl Ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5

P۵	PA	METER	2

DETECTION LIMIT

0706A11.0 0706A11.0E*

Benzene	
Carbon Disulfide	
Chlorobenzene	
Chloroethylvinylether	
1,2-Dibromoethane	
1,2–Dichloroethane	
1,4–Dioxane	
Ethylbenzene	
Methyl Ethyl Ketone	
Styrene	
Toluene	
Xylenes	

0.5	<0.5	1.5
0.5	<0.5	
0.5	<0.5	
1.0	<1.0	
0.5	<0.5	、
5.0	<5.0	
50.0	<50.0	
0.5	<0.5	<1.0
1.0	<1.0	
0.5	<0.5	
0.5	<0.5	2.3
0.5	<0.5	1.9

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*Equipment Rinse - 8020 BTEX, ug/L

RFI COMPLIANCE DATA GI GIANT REFINING COMPANY

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SWMU #7 8270 SKINNER LIST

	DETECTION	CORING	NUMBER	
PARAMETER	LIMIT	0705A7.0	0705A11.0	0705A11.0D
	· · · · · · · · · · · · · · · · · · ·			
Anthracene	5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)				
phthalate	5.0	<5.0	<5.0	<5.0
Butyl Benzyl phthalate	5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	<5.0	<5.0	6.2
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0
7,12-Dimethylbenz(a)				
anthracene	5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol	25.0	<25.0	<25.0	<25.0
Di-n-octyl phthalate	5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.0	<25.0	<25.0
Phenanthrene	5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0
Pyroline	10.0	<10.0	<10.0	<10.0
Quinoline	25.0	<25.0	<25.0	<25.0

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SWMU #7

8270 SKINNER LIST, cont.

DETECTION CORING		NUMBER	
PARAMETER	LIMIT	0706A7.0	0706A11.0
			· · · · · · · · · · · · · · · · · · ·
Anthracene	5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0
Bis(2-ethylhexyl)			
phthalate	5.0	<5.0	<5.0
Butyl Benzyl phthalate	5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	5.2	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0
7,12-Dimethylbenz(a)			
anthracene	5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.0	<25.0
Di-n-octyl phthalate	5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.0	<25.0
Phenanthrene	5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0
Pyroline	10.0	<10.0	<10.0
Quinoline	25.0	<25.0	<25.0

SWMU #7 OIL & GREASE / TPH

PARAMETER		CORIN	G NUMBER	0705411.00
			0/05/11.0	0/00/11.00
Oil & Grease	10.0	<10	<10	<10
Total Petroleum Hydrocarbon	10.0	<10	<10	<10
PARAMETER	DETECTION LIMIT	0706A7.0	0706A11.0]
Oil & Grease	10.0	<10	<10]
Total Petroleum Hydrocarbon	10.0	<10	<10]

SWMU #10

TOTAL METALS

DETECTION	CORII	NG NUMBER	l	
LIMIT	1014V19.0	1014V25.0	1015V19.0	1015V25.0
······				
2.5	<2.5	<2.5	<2.5	<2.5
2.5	8.2	9.1	14	8
5.0	15	11	17	14
0.25	<0.25	<0.25	<0.25	<0.25
2.5	<2.5	<2.5	<2.5	<2.5
5.0	370	1100	360	190
2.5	<2.5	<2.5	<2.5	<2.5
2.5	17	18	18	18
2.5	4.1	5.3	5.2	4.8
· · · · · · · · · · · · · · · · · · ·	• <u>•</u> ••••••••••••••••••••••••••••••••••	• • • • • • • • • • • • • • • • • • •		
	2.5 2.5 5.0 0.25 2.5 5.0 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5 2.5	$\begin{array}{c c} \textbf{Deflection} \\ \textbf{LIMIT} \\ \hline 1014V19.0 \\ \hline 1014V1$	DefectionConnectionLIMIT $1014V19.0$ $1014V25.0$ 2.5 2.5 8.2 2.5 8.2 9.1 5.0 15 11 0.25 <0.25 <0.25 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 4.1 5.3	Defection1014V19.01014V25.01015V19.0 2.5 2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5 <2.5

DETECTION 1016V19.0 1016V25.0 1017V19.0 1017V25.0 PARAMETER LIMIT <2.5 Cadmium 2.5 <2.5 <2.5 <2.5 Chromium 2.5 10 14 8.2 12 19 16 17 15 Lead 5.0 Mercury 0.25 <0.25 <0.25 <0.25 <0.25 Arsenic 2.5 <2.5 <2.5 <2.5 <2.5 Barium 340 420 610 5.0 310 Beryllium 2.5 <2.5 <2.5 <2.5 <2.5 Nickel 2.5 19 20 19 18 Vanadium 2.5 <2.5 4.6 3.4 9.5

PARAMETER	DETECTION LIMIT	1018V19.0	1018V25.0	1019V19.0	1019V19.0D
Cadmium	2.5	<2.5	<2.5	<2.5	<2.5
Chromium	2.5	7.6	8.4	12	8.5
Lead	5.0	14	17	19	17
Mercury	0.25	<0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5	<2.5
Barium	5.0	410	690	400	370
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5
Nickel	2.5	17	15	16	13
Vanadium	2.5	4.4	4.0	5.5	<2.5

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SWMU #10

TOTAL METALS

PARAMETER	DETECTION LIMIT	1019V25.0	1020V19.0	1020V25.0	1021V19.0
Cadmium	2.5	<2.5	<2.5	<2.5	<2.5
Chromium	2.5	8.9	11	14	13
Lead	5.0	20	16	20	19
Mercury	0.25	<0.25	<0.25	<0.25	<0.25
Arsenic	2.5	<2.5	<2.5	<2.5	<2.5
Barium	5.0	630	400	360	520
Beryllium	2.5	<2.5	<2.5	<2.5	<2.5
Nickel	2.5	17	16	19	16
Vanadium	2.5	3.3	4.3	5.0	6.8

	DETECTION	
PARAMETER	LIMIT	1021V25.0
Cadmium	2.5	<2.5
Chromium	2.5	9.4
Lead	5.0	20
Mercury	0.25	<0.25
Arsenic	2.5	<2.5
Barium	5.0	680
Beryllium	2.5	<2.5
Nickel	2.5	17
Vanadium	2.5	4.7

SWMU #10

8240/8260 SKINNER LIST

	DETECTION	CORIN	G NUMBER	<u></u>	
PARAMETER	LIMIT	1014V19.0	1014V25.0	1015V19.0	1015V25.0
· · · · · · · · · · · · · · · · · · ·	•	••••••••••••••••••••••••••••••••••••••		·····	
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2–Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,4–Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5
· · · · · · · · · · · · · · · · · · ·		<u> </u>			
	DETECTION				
PARAMETER	LIMIT	1016V19.0	1016V25.0	1017V19.0	1017V25.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2–Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,4–Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5
	<u> </u>			· · · · · · · · · · · · · · · · · · ·	
	DETECTION				
PARAMETER	LIMIT	1018V19.0	1018V25.0	1018V25.0E*	1019V19.0
	·····				
Benzene	0.5	<0.5	<0.5	<10.0	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<10.0	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<10.0	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<20.0	<1.0
1,2–Dibromoethane	0.5	<0.5	<0.5	<10.0	<0.5
1,4-Dichloroethane	5.0	<5.0	<5.0	<10.0	<5.0
1,4-Dioxane	50.0	<50.0	<50.0	<100	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<10.0	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<100	<1.0
Styrene	0.5	<0.5	<0.5	<10.0	<0.5
Toluene	0.5	<0.5	<0.5	<10.0	<0.5
Xylenes	0.5	<0.5	<0.5	<10.0	<0.5

*Equipment Rinsate

SWMU #10

8240/8260 SKINNER LIST, cont.

PARAMETER		1019V19 0D	1019V25 0	1020V19.0	1020V25 0
			1010120.0		1020120.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5

	DETECTION		
PARAMETER		1021V19.0	1021V25.0
Deprese			-0 F
Benzene	0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5
Chloroethylvinyl ether	1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5
1,4–Dichloroethane	5.0	<5.0	<5.0
1,4-Dioxane	50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5
Methyl ethyl ketone	1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5

SWMU #10

8270 SKINNER LIST

PARAMETER LIMIT 1014V19.0 1014V25.0 1015V19.0 1015V25.0 Anthracene 5.0 45.0 45.0 45.0 45.0 Benzo(a)anthracene 5.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 45.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 45.0 45.0 45.0 45.0 45.0 Benzo(k)flouranthene 5.0 45.0 <td< th=""><th></th><th>DETECTION</th><th>CORIN</th><th>G NUMBER</th><th></th><th></th></td<>		DETECTION	CORIN	G NUMBER		
Anthracene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	PARAMETER		1014V19.0	1014V25.0	1015V19.0	1015V25.0
Anthracene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0		·	<u></u>			
Benzenethiol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ $< < 5.0$ <th< td=""><td>Benzo(a)anthracene</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></th<>	Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 </td <td>Benzo(b)flouranthene</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl) phthalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <th< td=""><td>Benzo(a)pyrene</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></th<>	Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Bis(2-ethylhexyl)					
Butyl benzyl phthalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	phthalate	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$	Di-n-butyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1,2-Dichlorobenzene</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1,3-Dichlorobenzene</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
7,12-Dimethylbenz(a) anthracene5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol5.0 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Dimethyl phthalate5.0 < 5.0 < 5.0 < 5.0 < 5.0 2,4-Dinitrophenol25.0 $< 25.$ $< 25.$ $< 25.$ Di-n-octyl phalate 5.0 < 5.0 < 5.0 < 5.0 Flouranthene 5.0 < 5.0 < 5.0 < 5.0 Indene 5.0 < 5.0 < 5.0 < 5.0 </td <td>Diethyl phthalate</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
anthracene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 $2,4$ -Dimethyl phthalate 5.0 5.0 < 5.0 < 5.0 < 5.0 < 5.0 $2,4$ -Dinitrophenol 25.0 $< 25.$ $< 25.$ $< 25.$ $< 25.$ $2,4$ -Dinitrophenol 25.0 < 5.0 < 5.0 < 5.0 < 5.0 $2,4$ -Dinitrophenol 25.0 $< 25.$ $< 25.$ $< 25.$ $< 25.$ $Di-n-octyl phalate5.0< 5.0< 5.0< 5.0< 5.0Flouranthene5.0< 5.0< 5.0< 5.0< 5.0Indene5.0< 5.0< 5.0< 5.0< 5.0Indene5.0< 5.0< 5.0< 5.0< 5.0I-Methylnaphthalene5.0< 5.0< 5.0< 5.02,4-Dimethylphenol5.0< 5.0< 5.0< 5.02,4-Dimethylphenol5.0< 5.0< 5.0< 5.02,4-Dimethylphenol5.0< 5.0< 5.0< 5.03-Methylphenol5.0< 5.0< 5.0< 5.04-Methylphenol5.0< 5.0< 5.0< 5.04-Nitrophenol25.0< 25.< 25.< 25.Phenol5.0< 5.0< 5.0< 5.0Pyrene5.0< 5.0< 5.0< 5.0Pyrene5.0< 5.0< 5.0< 5.0Pyrene5.0< 5.0< 5.0<$	7,12-Dimethylbenz(a)					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 $2,4$ -Dinitrophenol 25.0 $225.$ $< 225.$ $< 225.$ $< 225.$ Di-n-octyl phalate 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Flouranthene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Indene 5.0 < 5.0 < 5.0 < 5.0 < 5.0 Methylchrysene 5.0 < 5.0 < 5.0 < 5.0 1-Methylnaphthalene 5.0 < 5.0 < 5.0 < 5.0 2,4-Dimethylphenol 5.0 < 5.0 < 5.0 < 5.0 3-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 3-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Methylphenol 5.0 < 5.0 < 5.0 < 5.0 4-Nitrophenol 5.0 < 5.0 < 5.0 < 5.0 Phenanthrene 5.0 < 5.0 < 5.0 < 5.0 Phenol 5.0 < 5.0 < 5.0 < 5.0 Pyrene 5.0 < 5.0 < 5.0 < 5.0 Pyrene 5.0 < 5.0 < 5.0 < 5.0 Pyridine 10.0 $< 10.$ $< 10.$ $< 10.$ Quinoline 25.0 $< 25.$ $< 25.$ $< 25.$	2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-octyl phalate 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>2,4-Dinitrophenol</td> <td>25.0</td> <td><25.</td> <td><25.</td> <td><25.</td> <td><25.</td>	2,4-Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Flouranthene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Indene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Flouranthene</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	Indene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>Methylchrysene</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <td>1-Methylnaphthalene</td> <td>5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td> <td><5.0</td>	1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol 25.0 <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25. <25.	Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
Phenanthrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0	4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenol 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Phenanthrene</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene 5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <5.0 <t< td=""><td>Phenol</td><td>5.0</td><td><5.0</td><td><5.0</td><td><5.0</td><td><5.0</td></t<>	Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine 10.0 <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10. <10.	Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Quinoline 25.0 <25. <25. <25.	Pyridine	10.0	<10.	<10.	<10.	<10.
	Quinoline	25.0	<25.	<25.	<25.	<25.

SWMU #10

8270 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	1016V19.0	1016V25.0	1017V19.0	1017V25.0
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
1,2–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.

TLS 9/94

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SWMU #10

8270 SKINNER LIST, cont.

	DETECTION				
PARAMETER	LIMIT	1018V19.0	1018V25.0	1019V19.0	1019V19.0D
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	13	<5.0	<5.0	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)		7			
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4–Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.

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SWMU #10

8270 SKINNER LIST, cont.

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	DETECTION				
PARAMETER	LIMIT	1019V25.0	1020V19.0	1020V25.0	1021V19.0
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-butyl phthalate	5.0	11	<5.0	<5.0	11
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4–Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12-Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dinitrophenol	25.0	<25.	<25.	<25.	<25.
Di-n-octyl phalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.	<25.	<25.	<25.
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyridine	10.0	<10.	<10.	<10.	<10.
Quinoline	25.0	<25.	<25.	<25.	<25.

TLS 9/94

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SWMU #10

8270 SKINNER LIST, cont.

	DETECTION	
PARAMETER	LIMIT	1021V25.0
		(<u> </u>
Anthracene	5.0	<5.0
Benzenethiol	5.0	<5.0
Benzo(a)anthracene	5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0
Benzo(a)pyrene	5.0	<5.0
Bis(2–ethylhexyl)		
phthalate	5.0	<5.0
Butyl benzyl phthalate	5.0	<5.0
Chrysene	5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0
Di–n–butyl phthalate	5.0	11
1,2-Dichlorobenzene	5.0	<5.0
1,3–Dichlorobenzene	5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0
Diethyl phthalate	5.0	<5.0
7,12-Dimethylbenz(a)		
anthracene	5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0
Dimethyl phthalate	5.0	<5.0
2,4-Dinitrophenol	25.0	<25.
Di-n-octyl phalate	5.0	<5.0
Flouranthene	5.0	<5.0
Indene	5.0	<5.0
Methylchrysene	5.0	<5.0
1-Methylnaphthalene	5.0	<5.0
2.4-Dimethylphenol	5.0	<5.0
3-Methylphenol	5.0	<5.0
4-Methylohenol	5.0	<5.0
Naphthalene	5.0	<5.0
4-Nitrophenol	25.0	<25.
Phenanthrene		<5.0
Phenol		<5.0
Pyrene		<5.0
Pyridine		<10
Quinoline		<25
2,4-Dimethylphenol 3-Methylphenol 4-Methylphenol Naphthalene 4-Nitrophenol Phenanthrene Phenol Pyrene Pyridine Quinoline	$ \begin{array}{r} 5.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 25.0 \\ 5.0 \\ 5.0 \\ 5.0 \\ 10.0 \\ 25.0 \\ \end{array} $	<5.0 <5.0 <5.0 <5.0 <25. <5.0 <5.0 <5.0 <10. <25.

SWMU #11

8240/8260 SKINNER LIST

	DETECTION	CORING			
PARAMETER	LIMIT	1103V6.0	1103V10.0	1104V6.0	1104V10.0
Benzene	0.5	<0.5	<0.5	<0.5	<0.5
Carbon Disulfide	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroethylvinyl Ether	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromoethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2–Dichloroethane	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dioxane	50.0	<50.0	<50.0	<50.0	<50.0
Ethylbenzene	0.5	<0.5	<0.5	1.6	<0.5
Methyl Ethyl Ketone	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	0.5	<0.5	<0.5	<0.5	<0.5
Toluene	0.5	<0.5	<0.5	<0.5	<0.5
Xylenes	0.5	<0.5	<0.5	5.1	0.5

SWMU #11

8270 SKINNER LIST

	DETECTION	CORING	NUMBER		
PARAMETER	LIMIT	1103V6.0	1103V10.0	1104V6.0	1104V10.0
				···_	·····
Anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzenethiol	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(b)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(k)flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Benzo(a)pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Bis(2-ethylhexyl)					
phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Butyl Benzyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Chrysene	5.0	<5.0	<5.0	<5.0	<5.0
Dibenz(a,j)acridine	5.0	<5.0	<5.0	<5.0	<5.0
Dibenzo(a,h)anthracene	5.0	<5.0	<5.0	<5.0	<5.0
Di-n-btyl phthalate	5.0	<5.0	<5.0	16	<5.0
1,2-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,3-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
1,4-Dichlorobenzene	5.0	<5.0	<5.0	<5.0	<5.0
Diethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
7,12–Dimethylbenz(a)					
anthracene	5.0	<5.0	<5.0	<5.0	<5.0
2,4-Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Dimethyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dinitrophenol	5.0	<25.0	<25.0	<25.0	<25.0
Di-n-octyl phthalate	5.0	<5.0	<5.0	<5.0	<5.0
Flouranthene	5.0	<5.0	<5.0	<5.0	<5.0
Indene	5.0	<5.0	<5.0	<5.0	<5.0
Methylchrysene	5.0	<5.0	<5.0	<5.0	<5.0
1-Methylnaphthalene	5.0	<5.0	<5.0	<5.0	<5.0
2,4–Dimethylphenol	5.0	<5.0	<5.0	<5.0	<5.0
3-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
4-Methylphenol	5.0	<5.0	<5.0	<5.0	<5.0
Naphthalene	5.0	<5.0	<5.0	<5.0	<5.0
4-Nitrophenol	25.0	<25.0	<25.0	<25.0	<25.0
Phenanthrene	5.0	<5.0	<5.0	<5.0	<5.0
Phenol	5.0	<5.0	<5.0	<5.0	<5.0
Pyrene	5.0	<5.0	<5.0	<5.0	<5.0
Pyroline	10.0	<10.0	<10.0	<10.0	<10.0
Quinoline	25.0	<25.0	<25.0	<25.0	<25.0

SHEET	1	OF	3	
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PRECISION ENGINEERING, INC.

File No. 94-114____

Logged By: WHK

Boring Locat

Size & Type of Boring: 4-1/4" ID Hollow Stemmed Auger

1.

Boring L	ocation					LOG OF TEST BORINGS	Locat	ion_C	INIZA	REFINERY
					s	-	Eleva	tion_	EXIS	TING
			i	s	A					
Boring N	umber: <u>RFI 04</u>	04	₽	с	м	Water Level NOT ENCOU	NT. D	ate:_	07/2	29/94
<u></u>			L	A	P					
1 1			0	L	L	MATERIAL CHARACTERISTICS	1	1	1	
LAB #	DEPTH	BLOWS/N	T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	1 BM	LL	PI	CLASS.
i	0.5		1+11+1		C_	CLAY, SANDY, DAMP, VERY SOFT, BROWN	İ	1		
<u>i</u>	1.0		SSSSSS		c	FCC CATALYST(SILICA)	İ	İ		
1			/+//+/		С	CLAY, SANDY, MOIST, SOFT, YELLOW STAINED/RED	Ī	Ì		
i i	1		1+//+/		c	BROWN	Î	Ì		
i i	j		[/+//+/]	2.5	ĹĊ		i	i		
ii	2.9		/+//+/		c	L	i	İ	Ĺ	
1			1+1+1+		С	CLAY, VERY SANDY, MOIST, VERY SOFT, RED BROWN	i	Ì		
i i			/+/+/+		c ·		i –	i		
4	Í		1+/+/+		c		į.	i		
ii	5.0		/*/*/*	5	l c	<u> </u>	i	i		
1 1			111111		c	CLAY, WET TO MOIST, FIRM, RED BROWN	1	1.		
i i			1/////	ĺ	c		j.	i		
i i			inn		c		i	i		i
i i			11111	İ .	j c		i	Ì	•	i i
i i			1/////	7.5] c	1	i	i		l i
i i			11111		c		ì	i		
i i			1/////		c		i	İ		
ii	8.8		1/////		Ĺc		i	i.		
1			++0+++		C	SAND, SLIGHTLY GRAVELLY, DAMP, MODERATELY	i	i		
ii	10.0		**0***	10	c	DENSE, BROWN	i	i		
1	TOTAL DEPTH		i		į		1	i		

oring	Location					LOG OF TEST BORINGS	Locat.	ion <u>C</u>	INIZA	REFINE
			<u></u>		5		Eleva	tion	EXTE	PING
				\$		1	DICIU	<u> </u>	DALD.	110
oring	Number: RFI 04	05		c	м	Water Level NOT ENCOU	NT. D	ate:	07/:	29/94
			L	A	P	1				
	1 1		0	L	L	MATERIAL CHARACTERISTICS	ł	l	l I	l
LAB	DEPTH	BLOWS/N	<u> </u>	Е	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	<u>8M</u>	LL	PI	CLASS
			ssssss		С	FCC CATALYST(SILICA)				
	1		ssssss		С		ļ			
	1.4		SSSSSS		C		<u> </u>		l	
	{ }		1/-*/-*		C	CLAY, SILTY, SANDY, WET, SOFT, YELLOW GRADING	ļ			
			/-*/-*]	2.5		TO BLACK AT 3'		{ .		
	3.3		122222				 1	1		
	4.0		1/+//+/			CLAY, SANDY, MOIST, SOFT, YELLOW BROWN	{ 	i		
	1		+0++0+		c	SAND, SCATTERED HIGHLY WEATHERED GRAVEL, MOIST	 	i –		
	i i		+0++0+	5	c	MODERATELY DENSE, YELLOW BROWN, FREE SURFACE			i	
	5.4	·`	*0**0*		c	FLUID	í Í	i _	İ.	
			//////		C	CLAY, WET, FIRM TO STIFF, RED BROWN	1	i – –		
	i i		1/////		c	1	i	1		
•	i i		11111		c	· .	Ì	İ		
	1		111111	7.5	[c		Ì	Í .		
	1 1		/////		c	· ·			I .	
			1/////		C	1		1		[.
<u> </u>	8.8	·	//////		C	ļ	<u> </u>	ļ		
		×	*-*.*-*		C	SAND, SILTY, MOIST, MODERATELY DENSE, LIGHT		!		
	10.0		*-**-*	10	c	BROWN	<u> </u>			
	TOTAL DEPTH				l					
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SHEET 3 OF 3 -----

PRECISION ENGINEERING, INC.

File No.<u>94-114</u>

Boring Location _ _ LOG OF TEST BORINGS

Location CINIZA REFINERY

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			l		S		Eleva	tion_	EXIST	ING
				s	A					
oring N	umber: RFI 04	06	P	С	м	Water Level <u>NOT ENCOU</u>	<u>NT.</u> D	ate:_	07/2	9/94
<u> </u>			L	A	Р					
ļ			0	L	L	MATERIAL CHARACTERISTICS	ļ			
LAB #	DEPTH	BLOWS/N	T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS.
ļ			/_*/-*		С	CLAY, SANDY, SILTY, MOIST, FIRM, BROWN, SOME	ļ			
1			/-*/-*		С	FCC CATALYST SILICA LENSES	ļ	1		
ļ			/-*/-*		С		1			
ļ			/-*/-*		с		ţ			
	2.6		/_*/-*	2.5	c		ļ	ļ		
1			SSSSSS		с	FCC_CATALYST(SILICA)	ļ	ļ		
	3.4	· · · · · · · · · · · · · · · · · · ·	SSSSSS		С		Į	<u> </u>		
ļ		1	/*-/*-		с	CLAY, SANDY, SILTY, MOIST, FIRM, YELLOW	ļ			
	4.6	·	/*-/*-		C	STAINING BROWN MATRIX	<u> </u>			
ļ			AAAAAA	5	LC	ASPHALTIC BURN RISIDUE	1			
	5.4		AAAAA		C		ļ			
	5.8				с	SANDSTONE, FRIABLE, MOIST, HARD, BROWN RED	<u> </u>			· · · · · · · · · · · · · · · · · · ·
1					С	CLAY, WET, STIFF, BROWN TO RED	ļ			
					С		ļ			
ļ		-	//////	7.5	ГС		1			
					с		1	\ \		
	8.6		11111	ļ	C			ļ		
ļ			/*/*/*		С	CLAY/SAND, INTERBEDS(1" THICK), MOIST, STIFF/	ļ			
			/*/*/* /		С	MODEERATELY DENSE, BROWN	1	ļ		
	10.0		/*/*/*	10	C		<u> </u>			
1	TOTAL DEPTH		ļ		l		ļ			
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SHEET 1 OF 7

PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

Location CINIZA REFINERY

			1 1		1.	I				
	There BET 051	2		S	I A I M	Water Lovel NOT ENCOM	JTT TO		07/1	00/04
ring Nu	Imper: <u>kri 051</u>	.3				water hevel nor Encour	<u>u.</u> D	ace:_		6/94
				T.	Г. Г.	NATERIAL CHARACTERISTICS		1	1	
i han	DEDURH	BLOWS/N	1 ~ 1		2 2	(MOISTURE CONDITION COLOR GRAINSIZE ETC.)	5 M	 T.T.	 рт	CLASS
<u>, v v</u>			1/+/0+/		ـــــــــــــــــــــــــــــــــــــ	TAY SANDY CRAVELLY DRY LOOSE BROWN	<u> </u>	1		_CLASS
1	0.5		1/+/0+/			I		1	1	
			1/+/0+/							
1	201		1/+/0+/					[[·	
<u> </u>			1+0++0+	2 5		CAND CRAVELLY (FINE) DOY TO DAME LOOSE PED		1		
1	201		1+0++0+1	2.5		BROWN MISC BIACE DEBDIS AS WOOD DIECES		1 6	[['	
			1+/++/+			SAND CLAVEY SOME MEDIUM GRAVEL PILL MOIST	·	} 		
1	1		1 + / + + / +]			DED BOOM DIDNED WOOD AND CINCE DEDIG		1	1	
	1	•				RED BROWN, BURNED WOOD AND GLASS DEBRIS, 4"-J		1		
1	1					APPEARS BURNED FROM 5 10 6.1				
	1		1 . / / .	⁻		ľ I			1 ·	
	£ 1		1 - / / -	1				1	1	
	<u>v•</u>		1/_//	 		CTAY STITY WET FIDE DED BROWN OCCASTONIA		I	I	
			1/-//-/			CANDY SPANS A. THICK (DDV)		ξ 1	L 	
				 7 E		SANDI SEAMS 4 IBICK (DRI)		l 1 -	1	
				1				1		
1	ļ			l				1		
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-	ļ		1-11-1	l						
	ļ		/-//-/					ļ		
	l		/-//-/	10	L C				ļ	
	1		/-//-/						ļ	
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1				i						
	12.8		1-11-1	ļ			 t	<u>}</u>	<u>↓</u>	
			1+0++0+			SAND, SILTI, MOIST, DENSE, MOLTICOLORED, LAMINATED		 	<u> </u>	
	1		1.0	1		SAND, GRAVELLI, MOIST, DENSE	1	1	1	
ļ	1			1			1		1	
	ł	.*	*0**0*				 {	1	1	
	15 4		1+0++0+	172	t c		1		ļ	
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l L	}		1/-//-/	ł	C	1 AND 18.		1	1	
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1	1		1-11-1	ļ	C					
	-		1/-//-/				ł	1	1	
			/-//-/	1			1	1	1	
ł			1/-//-/		C C				!	ļ
	20.0		1-11-1	20	c	GRAVELLY AT 20	<u> </u>	Į	<u> </u>	
, 1	IOTAL DEPTH		1	ļ				1		
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SHEET_____OF___7____

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PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

Location CINIZA REFINERY

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		<i></i>			s		Eleva	tion_	EXIST	TING
				s	A				07/	
ring Nu	mber: <u>RF1_05</u>	14		L D		Water Lever <u>NOT ENCOUR</u>	<u>11.</u> D	ate:	0///	28/94
1	1			L	l L	MATERIAL CHARACTERISTICS		1	1	
AB #	DEPTH	BLOWS/N	T	E	-	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M		PI	CLASS.
i			1/+///		c	CLAY, SILTY, SLIGHTY SANDY, MOIST, SOFT TO				
i	i		11+111		с	FIRM, BROWN		i	i i	
İ	i		1//+///		c			İ	i i	
ĺ	ĺ		11+111	ĺ	Ċ	[[
	2.5		11+111	2.5	c	l		 		ļ
1	1		/+//+/	1	c	CLAY, SANDY, SCATTERED FINE GRAVEL, FILL,				
1			/*//*/		c	MOIST, BROWN, TRASH DEBRIS, PVC, RUBBER WASHER	1			
]		/*//*/		c	WOOD, SOME METAL/ALUMINUM COATED WITH ASBESTOS				
			/*//*/		С					
1			/*//*/	5	l c					
	l		/*//*/		C					
ļ			/+//+/		с					
	6.4		/*//*/		C C			<u> </u>		·
	1		/-*/-*			CLAY, SILTY, SANDY, MOIST, STIFF, RED BROWN		1		
	.		1/-*/-*	1/-3				1		
			1/ +/ +	! 1						
	1			{ 		1			1	
	[1//	 					1	1
			1/_+/_+	1		1		1		
1	1		1/-*/*	1.10	t c			1	[[
۱ ۱			/-+/-+	1	l c			ι : 	1	l
i			/-+/-+	ĺ	l c	1		Í.		
i	;]		/-+/-+		C					
i	Ì		/-+/-+		c			ì	Ì	
i			/-*/-*	i	c	1" SAND SEAMS FROM 12.4' TO 13.4'		i .	i i	İ
	13.4		1-+1-+	i	<u>c</u>			i		
1			*****		C	SAND, FINE TO MEDIUM, LAMINATED, MOIST, DENSE,		Ì	1	Í.
1	1		*****	I	C	BROWN TO MULTI COLORED		1		l
	14.8		*****	15	c	l	·	L		
	1		*0**0*		c	SAND, GRAVELLY, MOIST, DENSE, MULTI COLORED			!	
	15.8		+0++0+	ļ	c	GRAVEL, BROWN MATRIX, YELLOW SEAM AT 15.1		<u> </u>		ļ
1	ļ		//-///	ļ	c	CLAY, SLIGHTLY SILTY, WET, STIFF, RED		ļ		
ļ			//-///		C					
ļ	1		//-///					1		1
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ľ	1		11-111		1	1	1 	Ì	ĺ	Ì
			11-111			• •	İ	i	<u> </u>	
r	NOTAL DEPTH		ĺ	i	i		1	1	i	1
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Sheet____3___OF___7____

PRECISION ENGINEERING, INC.

File No. <u>94-114</u>

Boring Location

LOG OF TEST BORINGS

Location CINIZA REFINERY

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				s	A					
oring	Number: RFI 05	15		c	м	Water Level NOT ENCOUN	т. р	ate:	07/2	28/94
· · · · ·	······································			A	P	 				
	1 1		0	L	L	MATERIAL CHARACTERISTICS				
AB #	DEPTH	BLOWS/N	Т	Е	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8 M	LL	PI	CLASS.
			/-/0-/		С	CLAY, SILTY, SCATTERED GRAVEL, MOIST, HARD,		İ		
	i i		1-11-1		с	BROWN		İ		
	1.8		1-10-1		с					
	2.1		*****	L	c	SAND, MEDIUM, MOIST TO DAMP, DENSE, RED BROWN				L
	1		/-+/-+	2.5	С	CLAY, SILTY, SANDY, OCCASIONAL GRAVEL, MOIST,				1
	i i		/-*/-*		с	HARD, BROWN				
	1 1		/-+/-+		с			1		1
	1 1		1-+/-+		C					
	1 1		/-+/-+		C			1		ŀ
			/-*/-*	5	L C					1
	5.3	······································	/-+/-+		c				l	L
	6.2		1-11-1		c	CLAY, SILTY, WET, YELLOW STAIN, RED BROWN		ļ		
	6.5		*-/*-/		c	SAND, SILTY, CLAYEY, SOFT, BLACK, GRADES TO CLAY		<u> </u>		
	1		//////	ł	C	CLAY, WET, SOFT, RED BROWN, SOME BLACK				l
			11/1/1	7.5	[c	MOTTLING				i i
			//////		С	ł		1		l
	[//////		С	1 • •				ł
			11////		c		i.	{		1
			11111		C	• • • • • • • • • • • • • • • • • • •				1
	1		[/////]	10	[c					1
	10.4		11111		c	ļ		L	[L
	10.6		FGFGFG	ļ	c	FIBERGLASS INSULATION		L		ļ
			/*//*/		c	CLAY, SANDY, MOIST TO WET, SOFT, RED BROWN,		1		1
			/*//*/		C	GRADES SANDIER				1
			/+//+/		С			ļ		ļ
			/*//*/		С			ļ		!
			/*//*/		C			1		t
			/*//*/		C					ł
		.*	/+//+/		c					1
		<i>,</i>	/*// <u>*/</u>	15	L C	1				
			/+//+/		C					
	15.8		/+//+/	<u> </u>	c	<u> </u>		<u> </u>	<u> </u>	<u> </u>
	1		/-*/-*	Ì	c	CLAY, SILTY, SANDY, WET, SOFT, RED BROWN]]]
	17.1		/-*/-*	ļ	<u>c</u>	·····		ļ	ļ	<u> </u>
	Į		/-//*/		C	CLAY, SLIGHTLY SILTY, SLIGHTLY SANDY, WET,		1		1
]		/-//+/		C	STIFF TO HARD, RED BROWN		ļ		1
			/-//*/		C			ļ		ļ
			/-//*/	ļ	C			!	1	ļ
			1/-//*/		C				ļ	1
	20.0		1/-//+/	20		IONE 3" ROCK AT 19.7'	ļ	<u> </u>		<u> </u>
	TOTAL DEPTH		1			1	1		1	
				1	1			1		
			1	l	1			l	1	1
	1		}	1	1	1		1	1	
			1			1		1		1
	1 1		1		1		1	1	I	<u> </u>

Sheet 4 of 7

PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

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Location CINIZA REFINERY

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Elevation EXISTING

				S	A					
Boring N	lumber: <u>RFI 05</u>	16	Р	с	м	Water Level <u>NOT ENCOU</u>	<u>*T.</u> Da	ite:	07/2	8/94
			L	A	P					
			0	L	L	MATERIAL CHARACTERISTICS				
LAB #	DEPTH	BLOWS/N	T	Е	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS.
1			1-11-1		с	CLAY, SILTY, SOME CARBONATE NODULES, DAMP TO				
1. 1			/-/+-/		С	MOIST, HARD, BROWN, GRADES SANDIER				
1			1-11-1		С					
i i			/-/+-/		С		1			
i i	1		1-11-1	2.5	с					
j j			1-11-1		с					
Í			1-/+-/		с		l			
i			1-11-1	i i	с					
i	İ		/-/+-/	İ	с	1				
i	İ		1-11-1	5	c		i			
1 I			1-11-1		c		i i			
i			/-/+-/	i	с		l	İ		
i			1/-//-/		с			i		
	İ		/-/+-/		с		i i			
i i			1-11-1	7.5	с		i	i		
			1/-//-/		l c					
ì	Ì		1/-/+-/		с		Ì.			
1	9.0		1-11-1		с		i			
1			+0++0+		с	SAND, MULTICOLORED FINE GRAVEL, DRY TO DAMP,	, ·			
1	10.2		 +0++0+	10	l c	DENSE	i			
1			11-111		c	CLAY, SLIGHTLY SANDY, SOME CARBONATE NODULES,		 		
1	i i		1//-/+/		с	SOME SAND PARTINGS, MOIST, HARD, BROWN,	i	1		
1	i i		11-111	i	с		1	Ì		
1			11-111		c	1		 		
i			1//-/+/		l c		1	i .		
			11-111		c		i			
1			1/-/+/		c		i	l		
i	i i		1//-///	1	c	1				
i			1//-///	1	c		: 	1		
1.		-	1//_/+/	1		1	1	(]		
				<u> </u>	L C		1	1		
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l I			1//~///	1 f		1	1	ι 1	1	
}	1 1		1//_///	\$ 		1	[1	I .	
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t t				 {		1	1	1		1
	 {		11.1.1.1	r 1		1	1	1		
			1//.///	1			1	1		
1			11.1.11	1			1	1	1	1
	! 200		1//-///	1		1	1	 	! 	1
1	TOTAL DEPTE		1	1 20	⁻ 	1	 	↓ 	l	
			I I		1	1	1 }	1	l t	1
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			1		l	1	1	1	 	‡
1	1		1	1	[1	1	1	1	1
Size f	Type of Boris		801100	5+ c+		Auger Togged But		I	⊢	<u> </u>
10120 0	TABE OF BOLL	.y. 4-1/4 ID	HOLIOW	orei	aueq	nuger Dogged By:	mar			

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PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

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LOG OF TEST BORINGS

Location CINIZA REFINERY

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					S		Eleva	tion_	EXIST	CING
				S	A					
oring l	Number: <u>RFI 05</u>	17		C	M	Water Level NOT ENCOU	NT. D	ate:_	07/2	28/94
	1	<u> </u>			L	MATERIAL CHARACTERISTICS	1	1		
LAB #	DEPTH	BLOWS/N	T	Е	Ε	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	1 M		PI	CLASS.
	1.		/+//+/		с	CLAY, SANDY, SCATTERED CARBONATE NODULES,				
	i i		/++/+/		с	OCCASINAL FINE GRAVEL, DAMP, BROWN	ĺ	i		
	i · i		/+//+/		с		İ	i		
	i i		1+1/+/		с		İ	i		
	i i		1/++/+/	2.5	c		İ	İ.		
	2.75		1+11+1		С		ĺ			
	i i		/+/++/		с	CLAY, SANDY, BLOCKY STRUCTURE, CARBONATE	İ			
	i i		1+//+/	ĺ	с	NODULES, MOIST, HARD, RED BROWN, GRADES SANDY		1		
	1 1		/+/++/	[с		1			
	4.7		/+//+/	5	с		L			
	1 1		++0+++		с	SAND, FINE, SLIGETLY GRAVELLY, DRY, LOOSE,		 .		
	1 1		++0+++		с	LIGHT BROWN		[.		
			*+0+++		С	· · · · · ·		Ι.		
	6.8		**0***		с	· · · · · · · · · · · · · · · · · · ·	L			<u> </u>
•	1 1		///+//	7.5	[c	CLAY, SCATTERED CARBONATE NODULES, MASSIVE,		· .		ļ
			111111	[С	TO MOIST, HARD, DARK RED BROWN		'		
			///+//	1	С		1			
			1/////		с		1			
	9.5		///+//		с	·	I	L		
			+/++/+	10	L c	SAND, FINE, CLAYEY, SLABBY(POKER CHIP), MOIST	l	ļ		
			*/**/*		с	TO DAMP, DENSE RED BROWN	1			
			+/++/+		с					
			*/**/*	1	С			[
	12.2		*/**/*		с	· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>		
			/*//*/		С	CLAY, SANDY, MOIST, HARD, RED BROWN				
			/*//*/		С		ļ	ļ		
			/*//*/		С			ļ		
	13.9		/*//*/	ļ	С		ļ	ļ		
			******		С	SAND, FINE, DRY, DENSE, LIGHT BROWN		ļ		
			******	15	С		!	1		
			.		С		ļ	1		
			******		С			ļ		
			******		C			ļ		
			******		С		ł	ļ		
			*****		С			}		
	17.8	<u></u>	1////				<u> </u>	}	 	
			1/-//-/	1		LALAI, SILTI, MASSIVE, MOIST, HARD, RED BROWN		ł		l I
			1/-//-/	1			 1	1		1
	20 0		1/-//-/	1		4	1	1		1
	TOTAL DEPTH		1	120	<u>بر</u>		 	 		
			1	1		1	1	1		ł
			I I	1			1	1	1	[
	I I			1	ł	1	1	1 {	I I	1
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			1	1	• [1	l		1
	•	·····								

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PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

Location CINIZA REFINERY

					s		Eleva	tion_	EXIS	TING
				S	A					
oring Nu	mber: <u>RFI 05</u>	18	P	с	м	Water Level NOT ENCOU	NT. D	ate:_	07/2	29/94
<u>.</u>			L	A	P					
	. 1		0	L	L	MATERIAL CHARACTERISTICS				
	DEPTH	BLOWS/N	T	B	B	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	<u>8M</u>		PI	CLASS
ļ	[/-//*/		с	CLAY, SILTY, SANDY, MOIST, SOFT, BROWN				
ļ			/-//*/		С		ļ			
ļ			/-//*/		C		1			
	1		/-//+/		C	1				
<u></u>	2.5		<u> /-//+/</u>	2.5	C C		ļ			
1			1/-//-/		C	CLAY, SILTY, SCATTERED FINE GRAVEL, OCCASIONAL	ļ			
!			1/-/0-/		C	CARBONATE NODULES, MOIST STIFF BROWN				
			1/-//-/		C					
!			1/-/0-/				ļ			
	5.0		1-11-1		C			 		
	1		1/-/+-/		C	CLAY, SILTY, CARBONATE NODULES, BLOCKY				
1	1		1/-/+-/	1	C	STRUCTURE (<1 CM), SOME SAND PARTINGS, MOIST,	}			
ļ			1/-/+-/	ļ	C	HARD	1			
1	ļ		1/-/+-/		C	1	1]		
ļ	ļ		/-/+-/.	7.5	Γc		Į			
	ļ		1/-/+-/		C]			
			/-/+-/	ļ	C		ļ			
			/*/+*/	ļ	C	GRADES SANDIER AT 8.5	!			
<u>+</u>	9.7		/*/+*/	I	<u> </u>		 	 		
	1		***/**	10	Гc	SAND, SLIGHTLY CLAYEY, GRADATIONAL CONTACTS,	1			
ļ	ļ		***/**	ļ	C	MOIST, LOOSE TO MODERATELY DENSE, BROWN	l			
!			***/**	ļ	C		ļ			
-	·		[***/**	ļ	C		ł	1		
!	l		***/**	!	C					
	ļ	•	***/**	ļ	C		ļ			
	ŀ		***/**		C	1	1	1		
1	ļ		***/**	ļ	l c		ł.			
	1		***/**		C		!			
1	1		***/**	1	C		1			
			***/**	15	t c					
1			***/**	ļ	C	MORE CLAYEY AT 15	j .			
			***/**	ļ	C		!			
1			***/**	ļ	C]	1		
	17.0		***/**	<u> </u>	c		ļ	ļ		
İ			/+//0/		C	CLAY, SANDY, SCATTERED FINE GRAVEL, WET, SOFT	!			
ļ			/+//0/	!	C	TO FIRM, RED BROWN				
ļ			/+//0/		C		ļ			
ļ	ļ		[/+//0/	ļ	C		l	1		
!	ļ		1/+//0/		C					
	1		1/+//0/	20	Γc		1			
!	ļ		1/+//0/	ļ	C		ļ			
ļ			1/+//0/	ļ	C					
	21.5	······	1/+//0/	ļ	C	L	<u> </u>	Į	ļ	
1	TOTAL DEPTH		1				1			
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	,			1						

oring	Location					LOG OF TEST BORINGS	Locat	ion C	INIZA	REFINE
		·····	- 	_		-	20040	<u>.</u>		1001 1110
			.	c	S a		Eleva	tion_	EXIST	ING
oring	Number: RFI 051	9	P	c	M	 Water Level <u>NOT ENCOU</u>	<u>ет.</u> D	ate:	_07/2	29/94
			L	A	P					
	1. I		0	L	L	MATERIAL CHARACTERISTICS]		ĺ
LAB #	DEPTH	BLOWS/N	Т	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
	1		/*//*/		C	CLAY, SANDY, OCCASIONAL FINE GRAVEL, ROOT				
			/*/0*/		C	DEBRIS, MOIST TO WET, SOFT, BROWN				
			1/+//+/		C	1		1		:
			1/+/0+/	2 5						i
			1/+/0+/	2.5	L C					
	3.7		1/*//*/			1		1		
			1/+//+/		l c	CLAY, SANDY, ROOT, PLANT, & WOOD DEBRIS, WET.		↓ 		
			1+//+/		c	VERY SOFT, BROWN		İ.		
	1		1+//+/	5	İc		i i	1		1
			1+//+/		- c	i	i	i	i	1
	6.1		1+//+/		<u>c</u>	·	İ	İ		Ĺ
	1 1		+/++/+		c	SAND, CLAYEY, WATER BEARING, VERY LOOSE, BROWN		Í		1
			+/++/+		c				1	1
			*/**/*	7.5	↓ c			1		1
			*/**/*		c	1	l	l	1	ł
			*/**/*		C					1
	9.2		*/**/*		c			ļ	L	ļ
			//////		C	CLAY, SHALEY, BLOCKY, MOIST NOT WATER BEARING,				1
			1.1111	10	L C	HARD, PURPLE BROWN, SOME GREY CLAY MOTTLING	l	ļ		i
			//////		c			ļ		ļ
			//////		C		[ļ		ļ
			1/////		C	FRIABLE AT 11]		1
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			1/////		l c	1	 	1	 	i
		·	//////	15		1	l I	i I	ι 	ļ
		.*	11111		C C		ĺ	ì		1
			11111		c	i i i i i i i i i i i i i i i i i i i	İ	1		
	j i		11111	i	c	İ	i	i	i	ĺ
	i i		11111	ĺ	jc		İ	i	i	ĺ
	1 İ		1/////		c	ĺ	İ	İ		
	1 1		111111		C		}	1	1	1
	1		/////		c	1				
			11111		c		ļ	ļ	l	ļ
			/////		C			!	ļ	
·	20.0		1/////	20		<u> </u>	Ļ	ļ	↓ _	ļ
	TOTAL DEPTH		}			1	ŀ	!	1	1
						1	 	1	1	
					1	1	1	1	[i 1
			1		1	1	1	1	1	1
			ì		ł		1	l	1	i İ
Size a	Type of Boring			C+	+	Auger Logged By:	*****	+		,

oring L	ocation					LOG OF TEST BORINGS	Locat	ion <u>C</u>	INIZA	REFINE
-					·		-1			
			. .	c	S	4	Eleva	tion_	EXIST	FING
oring N	lumber: RFT 063	6	1 1 P	c	л М	Water Level NOT ENCOU	ס . דא	ate:	08/1	10/94
	<u></u>		I L	A	P		<u></u> 2		007	
	[0	L	L	MATERIAL CHARACTERISTICS	1		1	
LAB #	DEPTH	BLOWS/N	Ţ	E	B	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
Ì			1+//+/		с	CLAY, SLIGHTLY SANDY, SCATTERED FINE GRAVEL,	i	Ì		
	1		1/*/0*/		c	WET, VERY SOFT, BROWN	ĺ		Í	
	·]		1/*//*/		c	1	1	1	1	
			/*/0*/		C		1			
			/+//+/	2.5	ĹĊ		ł			
			/*/0*/		с					
			/+//+/		С					
			/*/0*/		с		ļ			
			/+//+/		C		!	ļ		
			/*/0*/	5	Γc		!			
	5.5		/*//*/		C		ļ	<u> </u>		
ļ			*/**/*		С	SAND, CLAYEY, SLIGHTLY GRAVELLY, MOIST TO WET,	ļ	ł		
			*/*0/*		C	MODERATELY DENSE, GREY BROWN, SANDY CLAY				
			(*/**/*)		C	INTERBEDS 4" THICK	ł			
				1.5						
			1+/+0/+					1		
			+ / + + / +							
			+/+0/+					1		
	10.1		*/**/*	10	l c	1				
			+/**/*			SAND, FINE, CLAYEY, WET, LOOSE	i i	1	 	
	10.9		*/**/*		C	<u></u> ,, - <u></u> , - <u></u> ,,				
			+0/+0+		c	SAND, MEDIUM, GRAVELLY(FINE), SLIGHTLY CLAYEY,	İ	i		
	i i		+0/+0+		c	MOIST, DENSE, MULTICOLORED	i	i	İ	
	Í		*0/*0*		с	1	İ	i	i · i	
1	k j		*0/*0*	1	c		Ì	Ì		ĺ
			+0/+0+		C	1	1	1		ĺ
			*0/+0+		c			1		
			*0/*0*		c	• · · ·		ł		
			*0/*0*	15	[c	1	Į.			
			*0/*0*		C		!			
			*0/*0*	1	C		!	1		
	16.4		+0/+0+	<u> </u>	C		<u> </u>	ļ		
			//*///		C C	CLAY, SLIGHTLY SANDY, WET, STIFF, BROWN	1	1		
	17.6		1/+///				<u> </u>	ļ		ļ
			1/+//+/			(CLAI, SANDI(FINE), WET, STIFF, LIGHT BROWN		1	1	
1			1/+//+/	 }	l c		1	1		
			1/*//*/	l I			1	1	 	1
	20.0		1/+//+/	20	l c		1	1		1
	TOTAL DEPTH	••••••••		- <u>~</u> _ 	Ĭ	······	i	+ I		
			i		İ	i	i	i	i	i
			i		i	i	i	i	i	İ
	l İ		j	i	Ì	i ·	j	i	i	İ
	l İ		Í	İ	İ	İ	i	i	İ	l
					<u> </u>		ļ	I	L	L
Size &	Type of Boring	T: 4-1/4= TT	Hollow	Ct of		Auger Togged But	WOV			
SHEET	2	of	7							
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Boring Location _____

PRECISION ENGINEERING, INC.

File No. 94-114

LOG OF TEST BORINGS

Location	CINIZA	REFINERY

			-1	c	-	1	w			
ring b	Jumbors PRT 06	27			A u	Noter Level NOT ENCOUR	ר ידינ	-+	087	10/94
ring r	Number: <u>RF1 06</u>	37	. <i>P</i> T.	L D	ת עו	Water Level NOI ENCOUR	<u></u> D	ate:		10/94
	l 1		1 0	L	L	MATERIAL CHARACTERISTICS		1	· · ·	
AB 🛔	DEPTH	BLOWS/N	T	B	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
			1/+//+/		С	CLAY, SANDY, WET, SOFT, BROWN, SOME YELLOW				
			/+//+/		с	MOTTLING, RUST LAYER AT 1.2'		İ		
	i i		/+//+/		с	GRADES MORE CLAYEY		i i		
	i i		1+1.1+1		с			i i		
	i i		1/+//+/	2.5	c			i i		
	i. i		1+11+1		c			i		
	i i		1+//+/		c			i i		
	i i		1+11+1		c			i	i i	
	i i		1+//+/	ĺ	c			i		
	i i		1+//+/	5	c			i		
	5.6		1+//+/		Γ <u>c</u>			İ.		i
	1		1-11-1		С	CLAY, SILTY, WET, SOFT, DARK BROWN		İ	1	
	6.4		1/-//-/	İ.	i c	· · · · · · · · · · · · · · · · · · ·		i	İ	İ
			/+/+/+		C	CLAY, VERY SANDY, WET, SOFT, GREY BROWN, BLACK	ĺ	ľ		
	7.5		/*/*/*	7.5	i c	MOTTLING	İ	i		
			+++/++		C	SAND, FINE, SLIGHTLY CLAYEY, WET, MODERATELY				
			+++/++		c	DENSE, GREY BROWN LAMINATED		i	i	İ
	i . i		***/**	Í	c	1	Ì	i	i	j
	i - i		+++/++		c			i		
_	9.7		1+++/++	10	c		Ì	1	İ	1
			+++0++	i ——	C	SAND, MEDIUM, SCATTERD FINE GRAVEL, MOIST,		1	1	
			+++0++		c	GREY		Í	i	ĺ
	i i		***0**		c			i		İ
	i ì		+++0++	ì	l c		Ì	Ì	i	i
	i i		+++0++	ĺ	c	SOME LARGER GRAVEL(2*) BELOW 12'		i	i	ĺ
	i i		+++0++		c			i	İ	
	i i		+++0++	i	l c		ĺ	į	i	i .
	i i		+++0++	i	l c		İ	1	i	
	i i		+++0++	.	c		1	i	· ·	i
	i · i			15	İc			i	Ì	i
			+++0++		l c		ι. [ļ	ļ	1
	15.9		***0**	1	l c	1	1	1	1	1
			1 *****	i	l c	SAND, FINE, MOIST, DENSE, BROWN	 	1	1	
	i ·i		*****	i	c				i	
	17.4		*****		c		 		1	i
	1		S*SS*S	1	l c	SHALE, SANDY, MOIST, VERY HARD, RED GREY,		1	1	1
			S+SS+S	1	c	LAMINATED, MASSIVE	i	1	İ	i
			s+ss+s	İ	c		ļ	1	İ	i
	i i		s+ss+s	i	i c		ĺ	i	i	i
	20.0		S*SS*S	20	c		i	1	i	i
	TOTAL DEPTH		1	ŀ				1		i
			1	İ	1		İ	İ	İ	i
			i		י 	1	, 	1	l	i
	i i		i	l	' 	1		1	1	i
	j l		1	1		1	i	1	İ	l
	; ;		1	1	1		: [i	i

ring Lo	ocation		~		1	LOG OF TEST BORINGS	Locat	ion <u>C</u>	INIZA	REFINER
					S	Ī	Eleva	tion	EXIST	CING
			1	s	A					
ring Nu	mber: <u>RFI 06</u>	38	Р	с	M	Water Level <u>NOT ENCOU</u>	<u>NT.</u> D	ate:	08/0)9/94
				A	P				1	1
 • • •	DEDUR	BT OWS /N	1 7	L		MATERIAL CHARACTERISTICS	. .w	 1.1.	ן דס ו	L CLASS
	DEPTR	BLOWS/M_		<u> </u>	 C	CLAY, SILTY, SCATTERED GRAVEL, WET, VERY SOFT.	611	1		
1	I I		1/-/0/-		c	BROWN	[1		l
ł	Ì		1/-//-/		c	, ··	i			ĺ
	i		/-/0/-		с		İ	i		İ
i	i		/-//-/	2.5	с		İ	i	İ	
j	İ		1-/0/-		с	·	İ	İ		
Ì	ŧ		/-//-/		с					l
	-		1-/0/-	1	C					1
ļ			1-11-1		c		ļ			i
ļ	ļ		1/-/0/-	5	L c		ļ	1		l
ļ	ļ		1/-//-/		C		l			j r
ļ	ļ		1/-/0/-	1			1			i I
ł	6 0		11-11-1	 		1	1	1		1
	<u> </u>		1/+/+/+	7.5		CLAY, VERY SANDY, SILTY, WET, SOFT	↓ 	+ 		 .
ľ	7.7		1/+/+/+	1	L C		1	1		
			1-11-1	+ 	C	CLAY, SILTY, WET, STIFF, BROWN, BLOCKY STRUC-	İ			
i	ĺ		1-11-1	i	c	TURE, OCCASIONAL 2" SAND SEAMS	i	i	i	i ·
İ	9.6		1-11-1	i	c		i	i	İİ	İ
Í			+/++/+	10	Ĺc	SAND, CLAYEY, MOIST, MODERATELY DENSE, BROWN	Í	Ì		l
			+/**/*		C					I
ļ			*/**/*		C		[l ·
	11.3		*/**/*	ļ	c		ļ	<u> </u>	<u> </u>	<u> </u>
ļ	l		1/-//-/	ļ	C	CLAY, SILTY, WET, STIFF, BROWN, FINE BLOCKY	ļ	ļ		(
·			1/-//-/			(<1 CM), SAND SEAMS AT 12.1 & 13.3				1
				 			1		1	1
			1/-//-/	1		1	1		1	1
			1/-//-/	1		1	1			1
i	15.0		1-11-1	15	c	1	1	1	{	1
i			+/++/+	i	c	SAND, CLAYEY, WET, MODERATELY DENSE, BROWN	i	i	İ	
i	i		+/++/+	İ	c		i	i	İ	İ
i	İ		+/++/+	İ	c	ĺ	İ	i	İ	İ
I	İ		+/++/+		c	ļ			1	1
ļ	ļ		*/**/*	ļ	c	MORE CLAYEY AT 17	1	!		ļ
	18.2		<u> +/++/+</u>	<u> </u>	L c	· · · · · · · · · · · · · · · · · · ·	<u> </u>	<u> </u>	ļ	ļ
1	IVIAL DEPTH		1			1	1	1	 	
1			1	1	1	l l	1	1		1
1			1	20	1	1	н 			1
i				1	+ 1		i	ļ	ļ	ί
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!			1	ļ		1	!	!	1	
				1			_	<u> </u>	ļ	<u> </u>

SHEET 4 OF 7

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PRECISION ENGINEERING, INC.

File No. 94-114

Boring	Location	
	-	

LOG OF TEST BORINGS

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					. {	s		Elevat	ion_	EXIST	ING
					s	A					
	Boring N	umber: RFI 06	39	Р	c	м	Water Level_NOT_ENCOUN	T. Da	te:	08/0	9/94
				L	A	P	<u></u>				
		1		0	L	L	MATERIAL CHARACTERISTICS				
	LAB #	DEPTH	BLOWS/N	Т	E	B	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	rr	PI	CLASS.
	1 1	1	.	0/00/0		Ċ	GRAVEL, CLAYEY, MOIST, DENSE, FILL				
		1		0/00/0		с					•
	<u> </u>	1.5		0/00/0		с			!		
	!!!	ļ		/+//+/		С	CLAY, SANDY, WET, STIFF, BROWN				
	!!!	!		/*//*/	2.5	c		1			ļ
	!!	1		/+//+/		С]			ļ
				/*//*/		C		1			1
				/*//*/		C		1			
				/*//*/		С					1
		[/*//*/	5.0	C					
				/*//*/		С	SAND SEAMS AT 5'(GREY)			l	
		6.0		/*//*/		C					
		70					CLART, SILTI, WEI, SIIFF, DROWN		1		
	↓	/.0		1+//+/	7 5		CLAY SANDY WET SOFT BROWN				
				/*//*/					1		
		8.4		/*//*/		c				i	
	1 1	1		1/-//-/		c	CLAY. SILTY. WET. STIFF. BROWN				1
				1/-//-/		c	,,,,				
	i i			1-11-1	10	c					
	i i			1-11-1		c					
	i i	11.1				с	1				
	1			/////		с	CLAY, WET, STIFF, BROWN				
	1			,,,,,,	i	c					
	i i	Í		, <i>,,,,,</i> ,	i	с	1				
	ii	12.9		11111		c					
	1	Í		/+/+/+	İ	с	CLAY, VERY SANDY, SILTY, WET, STIFF				
	- I			/*/*/*		c					
	4	20.0		/*/*/*		с					
				*-**-*	15	L C	SAND, FINE, SILTY, MOIST, OCCASIONAL THIN CLAY				
				*-**-*		С	ZONES, BROWN				
				*-**-*		С					
				*-**-*		C		· [
				*-**-*		С					
				*-**-*		С	1				
	!			*-**-*		С					
	!!!			*-**-*		С					
				*-**-*		С					
				*-**-* 		С					
	<u>+</u>	20.0		+-**-*	20	C					_
				1+0++0+		C	SAND, MEDIUM, GRAVELLY (FINE) MOIST, DENSE,				
	{			1+0++0*	 	C	I PTGET, BKOMN				
				1+0++0+	1						
	1			1+0++0+	 						
	1			1+0++0+	1]						
				+0++0+	1	c					
	i i			+0++0+	 	l c					
	i i			+0++0+		c					
	<u>i</u>	25.0		+0++0+	25	c					
-	·	TOTAL DEPTH		I	i						
	1 İ	i			İ	ĺ	ĺ	ļ			İ
	1	· i		ĺ	i i			İ			
	I İ	i					1				i I
	Ļ	İ		· ·							
	Size &	Type of Borin	g: 4-1/4" ID	Hollow	Sten	med	Auger Logged By:	WHK			

SHEET	5	OF	7
· · ·			

PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location

LOG OF TEST BORINGS

Location CINIZA REFINERY

			1		s		Elevat	ion_	EXIST	ING
				S	A					
Boring 1	Number: <u>RFI 06</u>	40	P	С	м	Water Level NOT ENCOUN	T. Da	ate:	08/0	9/94
			L	A	P					
			0	L	L	MATERIAL CHARACTERISTICS				
LAB #	DEPTH	BLOWS/N	т	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS.
ŀ	1 · 1		/-0/-0		C	CLAY, SILTY, GRAVELLY, DRY, SOFT, RED BROWN				
Ĺ	1.0		/-0/-0		c					
			1-11-1	İ	c	CLAY, SILTY, SLIGHTLY GRAVELLY, WET, VERY SOFT				
İ			/-/0-/	l l	c	RED BROWN				
	j i		1-11-1	2.5	Ĺc	1				
i	i i		1-/0-/		c	i i i		İ		
i		1	1-11-1	i	İc			İ	i	
ì			1/-/0-/	i.	, c			i i	i	
			1-11-1	i	c			i i	j	
i				5.0	İc			ii		
i			1-11-1		Гс Іс			i i	ļ	
	6.0		1-11-1	i	l c	1		i i		
1	1		1/-//-/	1		CLAY, SILTY, SLIGHTLY SANDY, WET, VERY SOFT.				
l l	1		1/-/+-/	1		BLACK/GREY MOTTLING				
E E				175						
E E			/-//-/. /_/+_/	1					1	
	1			1						
	1			1			1		,	
	1		1/-/*-/							
			/-//-/			1				
			/-/+-/	10	t c					
ļ			/-//-/	ļ	C					
<u> </u>	10.9		1/-//-/	Ļ	C C					
			/*-/*-	!	C	CLAY, SANDY, SILTY, WET, SOFT TO PIRM, GREY				
			/*-/*-	ļ	C	BROWN, OCCASIONAL FINE SAND INTERBEDS			į I	
			/*-/*-		c		:		i	
1			/*-/*-	ļ	С				i l	
	13.8		/*-/*-	<u> </u>	с					
[1-11-1	}	С	CLAY, SILTY, WET, FIRM, RED BROWN				
ļ	14.5		1-11-1	L	c				L	
	[*-**-*.	15	↓ c	SAND, SILTY, MOIST, MODERATELY DENSE, GREY			i	
<u> </u>	15.9		*-**-*	I	c					
1			1-11-1		c	CLAY, SILTY, WET, STIFF, RED BROWN				
1			1-11-1	۱·	C		i I			
1	17.6		1-11-1	1	c					
	1.		1+11+1	Ì	c	CLAY, SANDY, WET, FIRM, RED BROWN				
Ĺ	19.2		1/+//+/	i	İc	· · · · · · · · · · · · · · · · · · ·				
Ĺ	19.7		111111	İ	c	CLAY, WET, STIFF, RED BROWN				
	20.0		*/**/*	20	c	SAND, FINE, CLAYEY, MODERATELY DENSE, RED BROWN				
1	1		1-11-1	Ì	İc	CLAY, SILTY, WET, STIFF, RED BROWN, FINE BLOCKY			i	
Ĺ	21.2		1-11-1	i	i c					
i i	1		+/++/+	1	c	SAND. CLAYEY, MOIST, MODERATELY DENSE. RED				
i	i		+/++/+	1		BROWN, OCCASIONAL INTERBEDDED /-1 CHICLAY SEAME			, I	
i	i		*/**/*	 		CONTRACTOR INTERDEDUCCI CAJODAI SEARS	1			
	1		1-1-1× 1+1+1-	1		1			1 I	
	1		1 + / + + / *							
i	25.0		"/""/* +/++/+	1					, I	
1	23.0		1/-//	152	1 <u>c</u>					
ŀ			1/ // //	1		CURL, SILLI, WET, STIFF, BROWN, FINE BLOCKY			·	
	1 27 0		1, 1, 1, 1							
1	21.0		1/-//-/	 			 i			
4	1		=/=*/* =/==/=	1		SAND, MEDIUM, CLAYEY, OCCASIONAL FINE GRAVEL,			!	
			1=/**/* ./.:/	1		MOIST, DENSE, RED BROWN	l			
	1		*/**/*		C				j l	
			*/**/*		l c				1	l I
<u> </u>	30.0	l	<u> */**/*</u>	30	l c		L	ļ	ļ!	
<u> </u>	TOTAL DEPTH		 	ļ	I			I	ļ	
Size &	Type of Borin	ig: 4-1/4" ID	Hollow	Ster	mned	Auger Logged By:	WHK			

Boring 1	Location		_			LOG OF TEST BORINGS	Location CINIZA REFINE						
-					 s		R]eve	tion	RAIC	PING			
	•••••••••••••••••••••••••••••••••••••••		-1	s	A		BIEVA	c1011_		.189			
Boring	Number: RFI 064	1	_ P	с	м	Water Level <u>NOT ENCOU</u>	<u>vr.</u> D	ate:	08/	11/94			
			L	A	₽				•				
			0	L	L	MATERIAL CHARACTERISTICS		ļ					
LAB #	DEPTH	BLOWS/N	T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLAS			
			1			CLAY, GRAVELLY, WET, SOFT, BROWN			 				
	1 0.8		1/*//*/			CLAY, SANDY, WET, FIRM, RED BROWN, OCCASIONAL	 	 					
ļ			1/+//+/		l c	1" SAND SEAMS	1	1	1	1 [
	2.4		/+//+/	2.5	c			1	İ	Ĺ			
i			+0++0+		c	SAND, FINE, GRAVELLY, WET, LOOSE, BROWN W/GREY	Í	ĺ	Ì				
l			+0++0+		c	AND BLACK STREAKS, SHARP CONTACTS	ĺ		İ				
			*0**0*		c		I	l	1	1			
			*0**0*		c					!			
	1		*0**0*	5	L C		1			1			
		×	*0**0* +0**			1		1		1			
 	6.1		+0**0*			CTAY OCCASTONAL CARRONAME NODULES COL 1 1	 	 	 	 			
			1/1+///			STIFF. BROWN	1	1	 	+ [
				7.5			l	1	r I	1			
			1//+///	1	l c	· · ·	1	 	1 	(·			
			1/////		c	1		1	}	1			
Ì	1 1	`	1/+///	i	c		ĺ	i	i	i			
i	i i		11111	ĺ	c		i	İ	i				
i	i i		1/+///	10	ĺ c	Ì	i	i	i				
i ·	i i		11111	İ	Ċ	İ	İ	İ	İ	İ			
l	11.2		1/////		·c		ļ	1	<u> </u>	<u> </u>			
<u> </u>	11.4		*0**0*	Ļ	Ċ	SAND, GRAVELLY, MOIST, LOOSE, BROWN	ļ	ļ	<u> </u>	<u> </u>			
			//+///	}	C	CLAY, SLIGETLY SANDY, WET, STIFF, BROWN			ļ				
	1		//*///		C		Į	ļ		1			
			1//*///	1		1	1		1	1			
I 1	 13 [°] 9		1/1+///	 			1 1 ·	l i	 	1			
+ 1	1 1		1/+//+/	 		CLAY, SANDY, WET, FIRM, BROWN		1	1	 			
, 			/+//+/	15	l c		1 		1	1			
İ	15.3	.*	1+11+1		<u> </u>	l		i		i			
i	1		+/++/+	İ	c	SAND, CLAYEY, WET, SOFT, BROWN	i	i	İ	1			
l	I İ		+/++/+	1	c		I	1	I	I			
l	ļ i		*/.**/*		c	1				ļ			
	1 !		*/**/*	ļ	c	WATER BEARING FROM 17' TO 17.5'	l		1				
Ļ	18.1		*/**/*	<u> </u>	c	L	ļ	<u> </u>	ļ	ļ			
ł			1/*//*/	ŀ	C	CLAY, SANDY, WET, SOPT, BROWN, INTERBEDDED		1	1				
 			<u>_//*//*/</u>	 	1 <u>c</u>	GRAVELLEY SAND ZONES 1/2" THICK	 		 				
1 1	LIVIAL DEPTH		1	1	1	1	 	1	1 1	1			
				1	+			1	1	1			
İ	i i		1	•	i		i	ĺ	1	İ			
ĺ	i - i		i	i	i	ĺ	i	i	i	i			
1	1 İ		i	İ	Í	ĺ	l	Ì	l	1			
			!	ļ	ļ	1		ļ	ļ	!			
	L		1	1	1		I	1	L	Ļ			

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PRECISION ENGINEERING, INC.

File No. 94-114

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bring L	Location		-		-	LOG OF TEST BORINGS	Locat	ion <u>C</u>	INIZA	REFINE
			_		s	Ī	Eleva	tion_	EXIS	TING
				s	A					
oring N	Number: RFI 064	12	_ P	С	M	Water Level <u>NOT ENCOU</u>	NT. D	ate:	08/	09/94
			- L	A	P		1	1		1
		DT 0120 / 11			1 2	MATERIAL CHARACTERISTICS	1		 р т	
<u>AD #</u>		BLOWS/N				CLAY SILTY NOIST SOFT BROWN CRAVELLY ON	_ <u>%ra</u>	1	<u> €-≛</u> 	1
			1/-//-/			SURFACE			1	t
			1/////		C C	CLAY, WET, SOFT, BROWN, 1/2" SAND SEAM AT 1.2"				
			/////		c	<u> </u>	i	i i	j	İ
	2.6		111111	2.5	c	· · · · · · · · · · · · · · · · · · ·	İ	i	i	İ
			/*-/*-		c	CLAY, SANDY, SILTY, FIRM, BROWN, FINE BLOCKY	1	1	1	Ì
j	i i		/*-/*-	ĺ	c		İ	Ì	İ	Ì
İ	i i		/*-/*-	Í	C	1	İ	Ì	Ì	
H			/*-/*-		C	1	1	1		l
I			/*-/*-	5	L c					ļ
.	1		/*-/*-	ļ	С		[1	
			/*-/*-		C	1	ļ	!	!	ļ
	6.5		/*-/*-	<u> </u>	<u> </u>		ļ	<u> </u>	<u> </u>	ļ
	7.0		11111		C	CLAY, SILTY, WET, STIFF, BROWN		<u> </u>	<u> </u>	<u> </u>
	7.7	. <u></u>	*/**/*	7.5	C	SAND, CLAYEY, MOIST, MODERATELY DENSE, BROWN		<u> </u>	ļ	ļ
			1/////		C	CLAY, WET, STIFF, BROWN			ļ	
	8.6	• •						<u> </u>		
1				1		CLAY, SLIGHTLY SANDY, WET, STIFF, BROWN			ł	1
	9.0		1+/+/+/				1	<u> </u>	 	l
			1+/+/+/	110		CLARL, VERI SANDI, WEI, SIIFF, BROWN		-	1	1
1			-/-/-/ +/+/+/	 		1			1	1
(1/-//-/	i —	<u>c</u>	CLAY, SILTY, WET, STIPF, BROWN, SLIGHTLY BLOCKY	·1	+	∔ 	
ļ			1-11-1	1	c	······································	1	ł	i	1
	i i		1-11-1		c		ŀ	i	i	
ļ	i i		1-11-1	İ	c	İ	i	i	i –	İ
	13.4		1-11-1	Ĺ	c			İ	<u> </u>	
ļ			/+//+/		c	CLAY, SANDY, WET, STIFF, BROWN, BLOCKY ~ 3*	1	1	1	
]	1 1		/+//*/		C	l · · · · · · · · · · · · · · · · · · ·	1	1	1	
	14.7		/*//*/	15	C C	· · · · · · · · · · · · · · · · · · ·	<u> </u>	ļ	ļ	<u> </u>
	ļ		*/**/*	ļ	C	SAND, CLAYEY, WET, MODERATELY DENSE, BROWN	1	!		
			*/**/*		C	1				
ļ			*/**/* */::/:				1		ļ	i
į			*/**/* +/++/*			1			1	1
1			*/**/* +/++/+	 			1	1	1	1
i			*/**/* */**/*	1				1	l I	1
			*/**/*	 				1	i 1	1
I			+/++/+	l 1		SOME BLOCKY CLAY INTERBEDS TO 4" FROM 19" TO		1	1	I
	20.0		*/**/*	20	l c	20-	ł	1	 	
	TOTAL DEPTH		1	1	1		i	i	i	İ
	i i		i	i		İ	1	i	i	i
	i i		i	İ	i	İ	i	i	i	İ
l	i i		Í	İ	İ	ĺ	İ	İ	İ	1
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PRECISION ENGINEERING, INC.

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File No. 94-114

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ring L	ocation					LOG OF TEST BORINGS	Locat	ion <u>C</u>	INIZA	REFINE
					S	-	Eleva	tion_	EXIST	ING
				s	A					
ring N	umber: <u>RFI 07</u>	05	P	с	н	Water Level <u>NOT ENCOU</u>	NT. D	ate:	08/1	1/94
			L	A	P					
]	.		0	L	L	MATERIAL CHARACTERISTICS				
AB #	DEPTH	BLOWS/N	Т	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
			/0//0/		C	CLAY, GRAVELLY, WET, STIFF, BROWN, SOME BLACK				
	ļ		/0//0/		С	STREAKS				
ļ			/0//0/		С		l			
	2.0		/0//0/		C		ļ			
1			/*//*/_	2.5	ΓC	CLAY, SANDY, WET, STIFF, BROWN	1			
	3.0		/*//*/							
			1//*///			CLAY, SLIGHTLY SANDY, WET, STIFF, BROWN,				
			1//*///			BLOCKY, SOME CARBONATE NODULES AND CARBONATE	1			
	1		1//*///	 c			1	1 1		
	1		1//*///	<u> </u>]	L C	k 1	1	i i		
	1		1//+///	 		1 · · · · · · · · · · · · · · · · · · ·	1	1 [
	6.5		1/1+///	1 	l c	1		F		
\neg			1+1/+/		c	CLAY, SANDY, MOIST TO WET, STIFF, BROWN.	i	1		
_	7.6	· · ·	1+1/+/	7.5	c	BLOCKY, 2" SAND SEAMS EVERY 7"				
1	1		+/++/+	1	c	SAND, CLAYEY, MOIST TO WET, MODERATELY DENSE,	1	1		
i	i		+/++/+	Ì	c	BROWN	i	İ .		
Ì	8.8		+/++/+	İ	c	i	Ĺ	İ		
	9.5		**/***	<u> </u>	c	SAND, SLIGHTLY CLAYEY, MOIST, MODERATELY DENSE		į.	· .	
			+0++0+	10	[c	SAND, GRAVELLY(FINE), MOIST, DENSE, BROWN	Ì			
	· I		+0*+0*		C					
			*0**0*		c	1				
			*0**0*		С					
			+0++0+	I	C					
	12.3		+0++0+	ļ	C		ļ	<u> </u>		
ľ	TOTAL DEPTH			ļ	ļ					
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			1	ļ	ļ				l	
<u> </u>			 	L	L	<u></u>	Ļ	ļ	L	
	Type of Borin	ig: 4-1/4" TD	Hollow	Ste	mmed	Auger Logged By:	WHK			

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oring L	ocation					LOG OF TEST BORINGS	Locat:	ion <u>C</u>	INIZA	REFINE
					S		Eleva	tion_	EXIST	ING
oring N	umber: <u>RFI_07</u>	06	P	c	A M	Water Level <u>NOT ENCOU</u>	<u>NT.</u> D	ate:	08/1	1/94
	i			A	P		<u> </u>	1	1	
LAB #	DEPTH	BLOWS/N		E	E	(MOISTURE.CONDITION.COLOR.GRAINSIZE.ETC.)	 8M	I LL	 PI	CLASS
			+/0+/0		с	SAND, CLAYEY, GRAVELLY(UP TO 2"), MOIST, DENSE				}
i i			+/o+/o		с	BROWN TO GREEN	Ì	j	i i	1
	1.5		+/0+/0		с	L	L	L		j
ļ			/0//0/		С	CLAY, GRAVELLYY, WET, STIFF, BROWN				!
	1		/0//0/	2.5	с					
	ļ		/0//0/		С			ļ .		
			1/0//0/		C		1			
1	4.5		1/0//0/			1	1	1		
	<u>_</u>		///*///	5	c	CLAY, SLIGHTY SANDY, MOIST, HARD. BROWN. FINE				
	i		11+111		c	BLOCKY(< 0.5 CM), CARBONATE INFILLING IN	i	i	i i	
i	i		1//+///		с	JOINTS	i	i :	i i	
	İ		1//*///	Ì	с		İ	İ	1	1
			//*///		С					
	ļ		//+///	7.5	L c		ļ			I
	7.8	<u>·</u>	//+///		c		<u> </u>			
	. 1		/*//*/ /*//*/			CLAY, SANDY, MOIST TO WET, STIFF, BROWN		} 1] I
ľ	9.7		1/+//+/				1	1 1		1
	10.0		+0++0+	10	c	SAND, GRAVELLY(FINE), MOIST, DENSE, BROWN	[† [Í
ĺ	1		1/////		с	CLAY, WET, STIFF, BROWN	i –	1	i	
1	ĺ		//////	ĺ	с		Í	Ì	İ	
		·	/////	l	С			ļ		1
	11.9	~	//////		С		<u> </u>	·	ļ	ļ
	12.0		/*//*/		C	CLAY, SANDY, WET, STIFF, BROWN	ļ	1		1
	13.1		1++++++			SAND, FINE MOIST, LOOSE, BROWN	 	↓ ↓		
i	TOTAL DEPTH		1	۱ <u> </u>	<u>`</u> _ 		+ 	 		
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PRECISION ENGINEERING, INC.

File No. 94-114____

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			.		S	-	Eleva	tion_	EXIS	ring
				S	A					
ring	Number: <u>RFI 10</u>	13			M D	Water Level NOT ENCOU	NT. D	ate:_	07/2	26/94
	l I						1	1	1	
N 12 4		BT ONS /N				MAIERIAL CHARACIERISTICS	1	 TT	 Ъ Т	
		BLON3/N	1/+/0+/			(ADISTORE, CONDITION, COLOR, GRAINSTEE, ELC.)	<u>671</u> 	1 111	1 21	
	; ;		1/*/0*/	1	c	RED BROWN		l l	1	
			1/*/0*/		c		ł	ł		
	2.0		1/+/0+/		l c			1 .		
			1/-//-/	2.5	l c	CLAY, SILTY, WET, SOFT, MOTTLED BLACK	1	i	1	
	i i		1/-//-/	1	l c	,,,,,,	1	1		
	i i		1/-//-/	i	c			1		
	i i		1/-//-/	i .	c		Î	Ì		
	i i		1/-//-/	1	l c		i	i	ĺ	
	i i		1-11-1	5	c		i	i	1	
	5.5		11-11-1	i	c		i	i	i	
•			1+//+/	i	c	CLAY, SANDY (MEDIUM), WET, BROWN	1	i		
	6.4		11+11+1	İ	c	I	i	i	ĺ	
	6.8		*-**-*	İ	c	SAND, FINE, SILTY, WET, SHARP CONTACTS	i	İ.	İ.	
	İ		1-11-1	7.5	Ĺc	CLAY, SILTY, WET, SOFT, RED BROWN, SOME DARK	1.	1	İ	
	i i		1-11-1	İ	c	STAINING IN THIN VARIED SILTY LENSES	İ	i	İ	
	i i		1-11-1	Í	c		i	İ	İ	
	i i		1-11-1	j .	c		Í	İ	l	
	1		1-11-1	1	c		[1	l I	
			1-11-1	10	ļс		1	1		
	1		/-//-/		C		1 .	1		
			/-//-/	1	C		1	1		
	1		/-//-/		c	I				
			/-//-/		C					
	12.3		1-11-1	<u> </u>	c		ļ	ļ		Ļ
		•	/*-/*-		С	CLAY, SANDY(FINE), SILTY, MOIST TO WET, FIRM,	ļ		ļ	
			/*=/*=		С	RED BROWN, THIN BEDDING PLANES (< 1 CM)	1			
			/*-/*-		С					
			/*-/*-		C					
		s.*	/*-/*-	15	Гс	GRADES LESS SANDY				
•			/*-/*-	ļ	C		ļ		Į –	
	15.8		/*-/*-	Ļ	<u>c</u>		<u> </u>	<u> </u>	<u> </u>	
	16.6		1-11-1	Ļ	<u>c</u>	CLAY, SILTY, WET, FIRM, RED BROWN	<u> </u>	ļ	<u> </u>	ļ
			/s//s/	ļ	с	CLAY, SHALEY, MOIST TO WET, FISSLE, DARK RED	ļ	1	ļ	
			/s//s/	ļ	c	BROWN, GREY SANDY STREAKS, MORE MASSIVE AND	1		ļ	
			/s//s/	!	C	SANDY BELOW 18.3		1		[
			/s//s/	!	C		!	1		
			/s//s/	1	C	· · ·		1	} r	ļ
			/S//S/		C	1	1			ł
	20.0		<u> /5//5/</u> 	120		l		+	↓ I	Į
	LOTAL DEPTH						1		 	l t
				1	1	1	1	1	1	1
			1			8	1		 	1
			1		 	1		1	I I	1
			,			1	1	1	1	1

aning T						OC OF TECT BORINCE	Tocat	ion C	* N T 7 A	DEPTNE
oring L	ocation				<u> </u>		LOCAT:	.on <u>_C</u>	LN1ZA	REFINE
				s	S A		Elevai	tion_	EXIS	CING
oring N	umber: RFT 101	14		c	L A I	Water Level NOT ENCOU	T. D	ate:	07/:	26/94
			L	A	P					
	1		0	L	L	MATERIAL CHARACTERISTICS				
LAB #	DEPTH	BLOWS/N	Т	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	₿ M	LL	PI	_CLASS
	·		/-+/-+		С	CLAY, SILTY, SANDY(FINE), MOIST, SOFT, RED BROWN				
1			/-*/-*		С					
			/-*/-*		С					
ļ			/-*/-*		C					
			/-*/-*_ \/_+/_+	2.5						
ļ			/-*/-* /*/*							
			/_*/_*		l c					
i			/_*/_*		c					
i	1		/_*/-*	5.0	Ĺc			i i		
i	İ		/_*/-*		С			i i		
İ	i		/-*/-*		c			ĺ		
	6.5	<u></u>	/-*/-*		c		<u> </u>			
!	7.0		1-11-1		<u>c</u>	CLAY, SILTY, WET, SOFT, RED BROWN		<u> </u>		
			[/-*/-*]	7.5	L C	CLAY, SILTY, SANDY, WET, SOFT, 7 TO 8.5' BLACK				
	l		/=*/-* / ±/ -		l c	8.5 TO 10' RED BROWN				
			/-*/-* / ±/ -							
	1		/=*/-* /_+/+		10					1
ľ	10-0		/_*/_*	10	l c					
			1/-//-/		Ċ	CLAY, SILTY, WET, SOFT, RED BROWN	i			
	i		1-11-1		c		l			
İ	1		1-11-1		j c		ĺ		i	İ
i	i		/-//-/		c	i	Ì			l
	1		1-11-1		C		ł			
!	13.1		1/-//-/		C		<u> </u>	i	<u> </u>	
· [12.0		-**-		C	SILT, SANDY, WET, SOPT, RED TO DARK BROWN				
	13.8		<u> -**-</u> /_//_/			CLAY STITY WET COPT DED BOODS IN CAND	 	 		
l	15.1 l		1/-//-/	15	C	SEAM AT 14.6'	[l ·		l
	15.7		+/++/+		L c	SAND, CLAYEY, WET, LOOSE, BROWN				
	i		1-11-1		c	CLAY, SILTY, WET, FIRM, RED BROWN	İ.			
İ	i		1-11-1		c	GRADES SHALEY		İ	ĺ	ĺ
i	17.0		1-11-1		c	······				l
l	1		/s//s/		c	CLAY, SHALEY, DAMP TO MOIST, HARD, RED BROWN,				
ļ	1		/s//s/		C	THIN GREY SILTY STREAKS (FEW BELOW 18.5')				
			/S//S/		C					
}	ļ		/S*/S/			GRADES SANDY AND BLOCKY				
			/S*/S/ /c+/c/	20				1		
			/3*/5/. /s*/s/	20	L C		1			i 1
l	1		/s*/s/		l C		l .			
	ł		/s*/s/		c					
	İ		/s+/s/		c		i	i	l	İ
ĺ	İ		/s*/s/		C	1			I	
I	1		/s*/s/		c					
ļ	ļ		/s*/s/		с		l			
ļ	ļ		/s*/s/		C		l			l
	25.0		/S*/S/	25		SLICKEN SIDED JOINT AT 24.1		1		
	TOTAL DEPTH		1/5*/5/	<u> 40</u>	1 <u>C</u>		 		 	
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PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

<u> </u>]		s		Elevat	ion_	EXIST	ING
			l	s	A					
Boring 1	Number: <u>RFI 10</u>	15	P	c	M	Water Level NOT ENCOU	NT. Da	ate:	07/2	6/94
			L	A	P					
					L	MATERIAL CHARACTERISTICS		+ +		GT 160
	DEPTH	BLOWS/N		<u> </u>	8	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	<u>8M</u>			CLASS.
			1/_+/_+			MOIST TO WET, SOFT, BROWN	1			•
1			/=*/-*		c		1			
l			1/-+/-+		c		1 [
Ì			/_*/_*	2.5	c		1			
i			/_*/-*		c		i	i		
i	} 1		1/-+/-+	1	с		1		ı İ	
i	i i		/-+/-+	i i	с		İ	i i	i	
Ĺ	4.5		/-+/-+	i	c		Ĺ		i	
i			/-/0-/	5.0	L c	CLAY, SILTY, SCATTERED FINE GRAVEL, WET, VERY	Ì			
İ	i i		1-/0-/		с	SOFT, BLACK	ĺ	Í		
1	1 1		/-/0 - /		C		l		.	
	6.5		1-10-1	L	L C	<u> </u>	<u> </u>			
1			/*//*/		С	CLAY, SANDY, WET, VERY SOFT, WHERE SANDY FREE			 	
1			1+//+/	7.5	L c	FLUID AND BLACK	l		l	
			/*//*/	ļ	C	3.6" CLAY ZONES AT 7.5', BLACK BROWN			.	
	· · ·		/*//*/	I	C	1	1			
1	1		/*//*/		С		1			
			/+//+/		С					
			/+//+/	10	L c					
	10.4		1+11+1	<u> </u>	c		<u> </u>			
			1-11-1		С	CLAY, SILTY, SOFT, RED BROWN				
ļ			1-11-1	ļ	С		ļ			
			1-11-1	ļ	С					
<u> </u>	12.4		1/-//-/	<u> </u>	c	· · · · · · · · · · · · · · · · · · ·	<u> </u>			
1			1/-//-/	1	C	CLAY, SILTY, WET, SOFT, RED BROWN, INTERBEDDED	l			
·			1/-//-/		C	SILTS & FINE SAND(BLACK STAIN)				
			1/-//-/				 1 .			
				1 1 E			} 1			
	13.0		1/+/+/+	112		TAY UPPY SANDY DED BOOWN CDADES SANDTED	↓ 	1		
			1/*/*/*	 	l C	CONT, VERT SANDI, RED BROWN, GRADED SANDIER	. 			-
		. *	1/+/+/+) [·	r I			
			1/*/*/*	1	l c		 	I		
1			1/s//s/	1	l c	CLAY, SHALEY, MOIST, HARD, RED BROWN, WEAK	1			
i			/s//s/	i	l c	LAMINATIONS AT ~ 1 CM INTERVALS. GREY IS CLAY.	1			
1	1		/s//s/	i	c	FISSILE TO BLOCKY, OCCASIONAL THIN SANDIER	i	i i		
ì			/s//s/	ì	c	(SEAMS (<4•)	1			
i	i i		/s//s/	i	c		İ			
i	į i		/s//s/	20	Ĺc	ļ	į	i i		
İ	i i		/s//s/	Ī	c	İ	İ	i i		
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	25.0		/s//s/	25	<u> </u> c	<u></u>	ļ			
-	TOTAL DEPTH		1		ļ		ļ	1		
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			l	t I			ļ	l	l	l I
			Hell-		 	August		I	ļ	Į
ISIZE &	Type of Borin	g: 4-1/4" ID	MOTTON	Scel	amed	nuger roddeg BA:	WHK			

SHEET 4 OF 9

PRECISION ENGINEERING, INC.

File No. 94-114

n	
Boring	Location

LOG OF TEST BORINGS

•					s		Eleva	tion_	EXIS	TING	
				s	A			- •	07/1		
oring Nu	mber: <u>RFI 10</u>	016	P T		M D	Water Level NOT ENCOUR	NT. D	ate:	0772	26/94	
				L	L L	MATERIAL CHARACTERISTICS	 				-
LAB	DEPTH	BLOWS/N	T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS.	
i			1-11-1	ĺ	c	CLAY, SILTY, OCCASIONAL FINE GRAVEL, MOIST,		i			
İ			j <i>1-11-1</i>	İ	c	SOFT TO FIRM, BROWN		İ	İ	•	
i			1-//-/	İ	c		ĺ		İ		
Í	ĺ		1-11-1	1	C			1			
Í	l		1-11-1	2.5	↓ c	1					
ł	ł		/-//-/	1	c	•					
	3.3		1-11-1	1	C C		<u> </u>	ļ	ļ		-
ļ	l		-/-/-/	ļ	C	SILT/CLAY, WET, VERY SOFT, BLACK					
1			[/-/-/-		C						
			-/-/-/	5.0	L c						
1			1-1-1-1-	1	C						
	5.8		<u>-/-/-/</u>	!	C_			ļ			-
1	1		/-//-/	ļ	C	CLAY, SILTY, WET, VERY SOFT, BLACK MOTTLING					
!			1/-//-/	1	C						
1	l		[/-//-/	7.5	Ļς			Į			
[/-//-/		C			[
1			1/-//-/	ļ					1		
	9.1		1/-//-/	<u> </u>							-
1	9.8		*/**/* */**/*	 10		SAND, CLAYEY, WET, VERY LOOSE, BROWN	 				
		 	1/////	1		CLAY, WET, SOFT, SOME SAND LENSES (<1 CM)	 	1			
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	16.9	L	11111	ĺ.	c	<u> </u>	<u> </u>	ĺ	Í		
Í		ł	/s//s/	1	c	CLAY, SHALEY, MOIST, HARD, RED, SOME GREY CLAY	ł	1			
		l	/s//s/	[C	MOTTLING, FISSILE TO BLOCKY(<1 CM)	1	1	l		
1			/s//s/	1	c			1	1	1	
1			/s//s/	ļ	c	1	l	ļ			
		1	/s//s/	1	C			{]		
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ļ		1	/s//s/	ļ	c		l	ļ	ļ		
			/s//s/		C			ł	ĺ		
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	TOTAL DEPTH	i	1	1		· · · · · · · · · · · · · · · · · · ·		1	1	l .	•
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Size & T	ype of Borin	ng: 4-1/4" ID	Hollow	Ste	mned	Auger Logged By:	WHK	•	•	•	
						hoyyed by.					-

HEET	5	0	F	9	
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PRECISION ENGINEERING, INC.

File No. 94-114

Boring	Location	
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LOG OF TEST BORINGS

Location CINIZA REFINERY

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					S		Eleva	tion_	EXIS	FING
oring Nu	mbert PFT 10	17		S	A	Water Isual NOT RUCOL			07/	26/04
bring Nu	Indel: <u>_RF1_10.</u>				n D	Water Level NOT ENCOU	MT. D	ate:	0772	20/94
				L	L	MATERIAL CHARACTERISTICS	1			
	DEPTH	BLOWS/N	~ T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	1 8 M	LL	PI	CLASS
			/-+/-+		С	CLAY, SILTY, SANDY, DAMP TO MOIST, FIRM, BROWN				
i	1		/-*/-*		c		1	i i	İ	1.
i	Í		/_+/_+		с	i		i		
i	i		/-+/-+		с	Ì	İ	i i		
	2.5		/-*/-*	2.5	c		İ		İ	
	ĺ		/-+/-+		С	CLAY, SILTY, SANDY, WET, VERY SOFT, BLACK	l	1		
	Í		/-*/-*		С	BROWN MOTTLED, BLACK FROM 4 TO 6	l	ĺ		
			/-*/-*		С	1	I			
	1		/-*/-*		С					
			/-*/-*	5.0	c		.			
	ļ		/-*/-*		С					
			/-*/-*		С	l				
			/-*/-*		C	SOME FINE GRAVEL AT 6' AND SCATTERED BLACK				
ļ			/-*/-* /_+/ >	 7 =	C C	BROWN MOTTLING				
	1		/-=/-*_ /_+/ +/	11.5		1	l '			
	1		/_+/_+				1			
1			/_*/_*	ł	l c	1	I I	l		
ł	İ		/_*/-*	1	c		[l 		
İ	10.0		/_+/_+	10	c					
ī		· · =	/0//0/	1	с	CLAY, GRAVELLY, WET, LOOSE, RED BROWN, SOME				
i	11.1		/0//0/		с	FREE FLUID		i		
i	· · · · · · · · · · · · · · · · · · ·		//////	İ	С	CLAY, WET, FIRM, RED BROWN	j .	i		
i	i		11111		с	· · · ·	Ì	i		
	ĺ		11111	Í	с	ĺ	İ	i	i	
	12.8		111111		с	ļ	İ	<u> </u>		
L	13.4		*****		c	SAND, FINE, WET, LOOSE, BROWN TO GREY	L			
			1-11-1	· ·	с	CLAY, SILTY, WET, SOFT, RED BROWN, WEAK	. .			
.			/-//-/	I	С	MOTTLING(BLACK SPECKS), GRADES LESS SILTY	. .	1		ł
ļ	·		/-//-/	15	C					
•			/-//-/		C					
	15.8	· · · · ·	/-//-/	<u> </u>	С		ļ			ļ
[1	C	CLAY, WET, FIRM, RED				
	16.8			 t	C		ļ		ļ	
1	. I		/3//3/			CLAI, SHALEI, KED, SOME GREI CLAI MOTTLING,		1		
. 1			/5//5/	ł.		LANTNATIONS	 			
			/s//s/				! 	I 		
l	İ		/s//s/	ŀ	c		' 			-
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i	i		/s//s/	Í	c	İ	Ì			
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ļ	!		/s//s/	1	с			1		
ļ			/s//s/		C	SOME SAND PARTINGS AT 24				· ·
<u>-</u>	25.0		/s//s/	25	C		 		L	L
	TOTAL DEPTH		1			1]
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PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location

LOG OF TEST BORINGS

					S		Elevat	ion	EXIST	TING
			1 1	s	A					
ring Nur	nber: <u>RFI 101</u>	.8	P	C	M	Water Level <u>NOT ENCOUN</u>	<u>T.</u> Da	te:	07/2	27/94
	······		L	A	P					·
		(0	L	L	MATERIAL CHARACTERISTICS		1	I	
AB #	DEPTH	BLOWS/N_	T	Е	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
	!		/-//-/		C	CLAY, SILTY, DAMP TO MOIST, FIRM, BROWN	1	. 1		
l			/-//-/		C	1				
	1.0				c					
	1.8		1/ /0 /	2 5						
1			////	2.5		DECKN NOTTIED BIACK				
ł			/-/0-/			BROWN, MOTILED BLACK				
			1/_/0_/		c			1		
	1		1/-/0-/		l c			1		
i	1		/-/0-/	5.0	c					
			/~/0-/		l c				1	
	6.2		/_/0_/	1	c				i	
1	1		1/-//-/	1	l c	CLAY, SILTY, WET, VERY SOFT, RED BROWN				
l I	7.1		1-11-1	i i	с					
	7.6		1/-+/-+	7.5	c	CLAY, SANDY, SILTY, VERY SOFT, BROWN, SOME DRK				
			111111		с	STREAKING ON BEDDING, FREE FLUID IN BEDDING				
1			11111	1	с	CLAY, WET, SOFT, RED BROWN, SOME BLACK MOTTLING	•			
Ì	9.1		1/////	i	c					
i	9.7		+/**/*		с	SAND, CLAYEY, MOIST TO WET, LOOSE, YELLOW BROWN				
i			11111	10	L c	CLAY, WET, FIRM, RED BROWN				
į	, i		11111	i	c	i i		i		
i				İ	c					
i	i		1/////	i	c	i i i i i i i i i i i i i i i i i i i				
i		•	111111	Ì	с					
i	. 1		111111	i	c					
ì	i		111111	ì	l c	1				
- i	i		1	i	c	1				
i	i		111111	i	c					
i	i			i	c					
i	15.2		1 <i></i>	15	c	· ·		·		
1	Ì		/+//+/	1	c	CLAY, SANDY, WATER BEARING, VERY SOFT, BROWN,				
L	15.9	4	1+//+/	i	j c	SAND LAMINATIONS (<0.5 CM)				İ
	ĺ		/s//s/		c	CLAY, SHALEY, MOIST, HARD, RED TO PURPLE BROWN				
i	i		/s//s/	i	c	SOME GREY CLAY MOTTLING, FISSLE AND FINE BLOCKY				İ
j.	i		/s//s/	i	c	(<1 CM)			•	ĺ
i	i		/s//s/	i	c					İ
i	i		/s//s/	i	c	-				ĺ
i	i		/s//s/	İ	c	ĺ				l
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İ	i		/s//s/	İ	c			l	ĺ	l
İ	i		/s//s/	ĺ	c					
1	i		/s//s/	1	c	GRADES SANDIER BELOW 22.1		·		1
I	İ		/s//s/		c	1		-		
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SHEET 7 OF 9

PRECISION ENGINEERING, INC.

File No. 94-114

Boring	Location	

LOG OF TEST BORINGS

			1		s	-	Elevation	EXIS	TING
			i i	s	A			<u></u>	
Boring Nu	mber: <u>RFI 10</u>	19	P	с	м	Water Level <u>NOT ENCOU</u>	NT. Date:	07/	27/94
			L	A	P				
	. I		0	L	L	MATERIAL CHARACTERISTICS			ĺ
LAB #	DEPTH	BLOWS/N	T	E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	M LL	PI	CLASS.
			1-11-1		С	CLAY, SILTY, MOIST, FIRM TO STIFF, BROWN		1	
	1		/-//-/		С			1	
	1.5		/-//-/		C		<u> </u>	<u> </u>	
	1		/-//-/		C	CLAY, SILTY, WET, SOFT, BROWN			
				2.5					
	1		/-//-/ /_//_/	1					1 1
	1			1					
	1		1-11-1	150				1	1
			1/-//-/	1	L C	l I		1	
	6.0		1/-//-/		l c	5 5		ł	1
			1/-//-/		c	CLAY, SILTY, WET, VERY SOFT. BROWN. SAND SEAMS		1	
	L DEPTH BLOWER 0 L CHORENAL CLOUDER, GRAINSTER, FTC.) 11 PI CLASS. 1.3 [-////] C CALL CONTICUT, COCOR, GRAINSTER, FTC.) 14 11 PI CLASS. 1.3 [-////] C CALL CONTICUT, COCOR, GRAINSTER, FTC.) 14 14 1 1.5 [-////] C CALL C CALL 1<								
	7.2		/+/+/+	7.5	c	CLAY, VERY SANDY, WET, VERY SOFT, GREY		i.	
i i	Image: Set of the set								
i i		Image: Second							
i i	Index: Statution Elevation Elevation Elevation mbor: JZI 1033 P C N Nater Level_EVT ENCODY: Date: DJZIJIA mbor: JZI 1033 P C N Nater Level_EVT ENCODY: Date: DJZIJIA DEFTE NLOSS/N S P CALAS NATERIA: CARAACTERISTICS NA L DJZIJIA DZIJIA DJZIJIA DJZIJIA DZIJIA DJZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA DZIJIA								
i i	İ	NFI 1013 P S A P S A NFI 1013 P C A P Name Name Difference							
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ļ	12.0		1-11-1	ļ	c		↓	_ _	
	12.5		*/*/*/	<u> </u>	c	SAND, CLAYEY, WET, LOOSE, BROWN	ļļ	<u> </u>	
			/-//-/	ļ	C	CLAY, SILTY, WET, FIRM TO STIFF, BROWN		1	
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	1		/-//-/		C				
	1		/-//-/ <u>_</u>	15	Ļс				
			/-//-/		C	· ·			
	16.0	٠.	1/-//-/	!				_ <u>_</u>	
			/S//S/	1	C	CLAY, SHALEY, MOIST, HARD TO VERY HARD, RED			
			/S//S/		C	BROWN, FISSLE AND FINE BLOCKY (<1 CM), SOME			
	ł		/S//S/	1		IGREI CLAY MOTTLING			
	1		1/0//0/			· · ·			
			/s//e/	1					
			1/5//5/	ł		1		1	
			/s//s/	20	l C				
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!	TOTAL DEPTH		1		ļ		ļļ		ļ
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			1						1
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Size & T	Type of Borin	q: 4-1/4" ID	Hollow	Ster	nmed	Auger Logged By:	WHK		

SHEET	8	OF	9

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PRECISION ENGINEERING, INC.

File No.<u>94-114</u>

Boring Location

LOG	OF	TEST	BORINGS

			i i	s	A					
Boring Number: <u>RFI 1020</u>		20	P	P C M Water Level NOT ENCC				ate:	07/3	27/94
			L	A	P					
			0	L	L	MATERIAL CHARACTERISTICS				
AB #	DEPTH	BLOWS/N	Т	Е	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M	LL	PI	CLASS
	I		/-//-/		С	CLAY, SILTY, MOIST TO WET, SOFT, BROWN		1		
	ļ		/-//-/		С					l
ļ			/-//-/		С	1				
1			/-//-/		С	1				
			/-//-/	2.5	L c					ł
·	3.0		/-//-/		С	ļ			ļ	ļ
ł	l		/-//-/		С	CLAY, SILTY, WET, SOFT, BROWN				
1			1-11-1		с	DARK SPOT AT 3.3	l			
1	1		1-11-1	l	С					
			/-//-/	5.0	L C	1	1			
l			/-//-/		C	1			ł	
!	6.0		1-11-1		<u>c</u>	ļ	I			ļ
			+/+/+/		С	SAND, CLAYEY, WET, LOOSE, BROWN				
	6.7		+/+/+/	<u> </u>	c		ļ	ļ		<u> </u>
	.		/////	7.5	L c	CIAY, WET, FIRM TO STIFF, BROWN]		ł	
			//////	[C					
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	11.8		111111	.	c	L		 		I
!			/+//+/	1	C	CLAY, SANDY, WET, SOFT, BROWN				
	12.4		1+//+/	I	c		l	 	[l
	1		1/////		C	CLAY, WET, FIRM TO STIFF, BROWN			l	
	13.5		111111	 	c	l			l	
	13.9		/+//+/	 	c	CLAY, SANDY (FINE TO MEDIUM), WET, HARD, BROWN				l
	1		/s//s/	ľ	C	CLAY, SHALEY, HARD, BROWN TO RED BROWN, THIN				
1	1		/s//s/	15	[c	LAMINATIONS, FISSLE AND FINE BLOCKY(<1 CM),			l	
			/s//s/		C	SOME GREY CLAY MOTTLING			[
		-	/s//s/		c	1				1
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	TOTAL DEPTH		!						ļ]
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SHEET 9 OF 9

PRECISION ENGINEERING, INC.

File No. 94-114

Boring Location _____

LOG OF TEST BORINGS

Location CINIZA REFINERY

			l		s	S Elevation_EXISTING				TING
				s	A					
oring Nu	umber: <u>RFI 10</u>	021	P	С	м	Water Level NOT ENCOUN	<u>IT.</u> Da	ate:	07/2	27/94
			L	A	P					
ļ			0	L	L	MATERIAL CHARACTERISTICS				
LAB #	DEPTH	BLOWS/N	T	E	B	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	8M		PI	CLASS
			/-*/-/		C	CLAY, SILTY, SLIGHTLY SANDY, WET, FIRM, BROWN				
ļ			/-*/-/	1	C					
	1.7		<u>/-+/-/</u>	ļ			;l			
			1/-//-/		C	CLAY, SILTY, WET, SOFT, BROWN, BLACK AT 1.8 TO	1			
	2.4		1/-//-/	12.5			j			
			/*//*/ /*//*/			CLAY, SANDI (APPEARS TO BE IN <0.5 CM STINGS),	; ł			
			1/+//+/	l 1		SOFI TO VERI SOFI, BROWN	: i ł			
		· ·	1/=//=/) 			1 I			
1	5.0		1/*//*/	 5 0			1 I			
			1/////	1		CLAY, WET, SOFT, BROWN				
1	6.1		1//////	1			1			
		I	1+/++/+	 		SAND, CLAYEY, WET (POSSIBLY WATER BEARING).				
1	6.8		+/++/+	1	-	LOOSE, SHARP CONTACT	İ			
			1-11-1	7.5	c	CLAY, SILTY, RARE SAND STRINGER(<0.5 CM), WET.	í			
1			1-11-1	İ	l c	FIRM TO STIFF, RED BROWN	1			
ľ			1-11-1	l	c					
i		1	1-11-1	i	l c		i	i i		
i		1	1/-//-/	Ì	c	1	i I	i i		
í		ĺ	1/-//-/	10	í c		1	i i	Í	
i		1	1-11-1	i	l c		į	i		
i		, . 	1/-//-/	i	l c		i i	i i		
i		l	1-11-1	i	с	SAND STRINGER - 1. AT 11. & 13.	i l	i i		
i		ł	1-11-1	i	c		i i	i i		
Í			1-11-1	i	c		i	i i		
i		1	1-11-1	i	c	i i i i i i i i i i i i i i i i i i i	1 - 1	i i		
Ĺ		Ì	1-11-1	İ	c		l i	j i	i	
	13.9	L	1-11-1	İ	<u> </u> c			İİ		
1		l ·	/s//s/	Ì	C	CLAY, SHALEY, HARD, RED TO RED BROWN, FISSLE	1	ļ		
1		1	/s//s/	15	↓ c	AND BLOCKY (<1 CM), SOME GREY MOTTLING, GRADES	1			
.			/s//s/	1	c	SANDIER	1			
		_	/s//s/		c		ĺ			
1			/s//s/	1	c		1			
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Size & Type of Boring: 4-1/4" ID Hollow Stemmed Auger

Logged By: WHK

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SHEET 1 OF 2

PRECISION ENGINEERING, INC.

LOG OF TEST BORINGS

oring L	ocation					LOG OF TEST BORINGS	Locat	ion <u>C</u>	INIZA	REFINE
		·····			s	Ī	Eleva	tion_	EXIS	TING
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oring N	umber: <u>RFI 110</u>	03	Р	с	м	Water Level NOT ENCOU	NT. D	ate:	08/3	10/94
				A T.	P T			• • • • • • • • • • • • • • • • • • •		
LAB #	DEPTH	BLOWS/N	С Т	E E	E	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	 8M	LL	PI	CLASS
		·····	/*//*/		c	CLAY, SANDY, DRY, VERY SOFT, BROWN				
j	i		1/*//*/	İ	c		İ	i		
]	1.5		1+//+/	<u> </u>	C		L			
			1//+///		C	CLAY, SLIGHTLY SANDY WET, VERY SOFT, GREY BLACK				
	1		1//*///	2.5	1 c		1			
1	1		1//*///		l c	1				
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			11+111		c					
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1			11+111	ļ	С					
•			//*///		C					
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1	7.5		1//*///	 7.5						
		- <u></u>	1/*/*/*		l c	CLAY, VERY SANDY, WET, STIFF, RED BROWN				
	8.5		1+/+/+		c					
	l l		/s//s/	İ	c	CLAY, SHALEY, HARD, WET, RED TO RED BROWN,				
			/s//s/		c	BLOCKY, SOME GREY CLAY STREAKING AND MOTTLING	ĺ			
	l		/s//s/	10	↓ c					
	[/s//s/	[C	[
			1/5//5/							
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Sheet_____OF_____

Boring Location _____

PRECISION ENGINEERING, INC.

LOG OF TEST BORINGS

File No.<u>94-114</u>

Location GIANT REFINERY

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ing Nu	mber: RFT 11	04	 	c	м	Water Level NOT ENCO	MT. D	ate:	08/1	0/94
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	1		0	L	L	MATERIAL CHARACTERISTICS	1			
AB #	DEPTH	BLOWS/N	т	Е	Е	(MOISTURE, CONDITION, COLOR, GRAINSIZE, ETC.)	N#	LL	PI	CLASS
i	İ		/*//*/		с	CLAY, SANDY, DRY, VERY SOFT, BROWN	1	1		
I			/*//*/	i I	С		1			
1			/*//*/		С		ł			
	[//+///		С		1			
	2.5		11+111	2.5	с		·			
ļ	ļ		//*///		С	CLAY, VERY SANDY, WET, VERY SOFT, BROWN	ļ			
ļ			//*///		С		1			
	ļ		/*/*/*		c					
ļ			//+///.		c					
	5.0		1//*///	5.0	<u> </u>		<u> </u>			
ł					C	CLAI, WET, SOFT, RED BROWN				
	<u> </u>		1//+///			CLAY, WET, VERY SOFT, CDEY/BIACE				
1	7.2		1//+///		c	,	1	1		
 			1//*///	7.5	c	CLAY, SANDY, WET, SOFT. BLACK	1	1		
	7.9		11+111		c		Ì			
		· · · · · · · · · · · · · · · · · · ·	1+/+/+		с	SAND, CLAYEY, WET, MODERATELY DENSE, BROWN,	1			
ĺ	· · · · · · · · · · · · · · · · · · ·		/s//s/		с	SLIGHT GREY STREAKS TO 9.5',	i	i i		
İ	i		/s//s/	i	с		i	i		
	9.8		/s//s/	10	c	·	<u>i</u>	İ		
1	Í		/s//s/		с	CLAY, SILTY, VERY SLIGHTLY SANDY, WET, HARD,	Í			
	10.7		/s//s/		с	RED BROWN	ļ			
- I			/s//s/		С	CLAY, SHALEY, WET, HARD, RED BROWN, BLOCKY,	1			
1	1		/s//s/		C	GREY CLAY MOTTLING				
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