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ENFORCMENT

DATE:

2006-1984

STATE OF NEW MEXICO
NEW MEXICO OIL CONSERVATION DIVISION

IN THE MATTER OF
GIANT REFINING COMPANY,

NM-OCD 2006-100

Respondent.

STIPULATED FINAL ORDER

The New Mexico Oil Conservation Division (hereinafter, "OCD") and Giant Industries Arizona, Inc., d/b/a Giant Refining Company (hereinafter, "Giant"), stipulate and agree to resolve the Administrative Compliance Order NM-OCD 2006-100 (hereinafter, "Compliance Order") on the terms and conditions in this Stipulated Final Order (hereinafter, "Order"). For the purposes of this Order, Giant admits the jurisdictional allegations of the Compliance Order under the Water Quality Act (hereinafter "Act"), NMSA 1978 Sections 74-6-1 *et seq.*, and the Water Quality Control Commission Regulations ("WQCC Rules"), and consents to the relief specified in this Order.

I. BACKGROUND

A. Parties

1. The OCD, a division of the New Mexico Energy, Minerals and Natural Resources Department, is the state division charged with administration and enforcement of the Act and the WQCC Rules, as pertaining to New Mexico's oil and gas activity, which includes oil refineries.

2. Pursuant to NMSA 1978 Section 70-2-6 OCD is a constituent agency of the Water Quality Control Commission (hereinafter, "Commission"), NMSA 1978 Section 74-6-2.J(4).

3. Giant is an Arizona corporation authorized to do business in the State of New Mexico under Public Regulation Commission (hereinafter, "PRC") SCC number 0796037.

B. Relevant Rules and Statutes

4. WQCC Rule 20.6.2.1203 NMAC (hereinafter, "WQCC Rule 1203") requires notification of discharges that may affect groundwater and/or surface water.

5. Section 74-6-10, NMSA 1978 of the Act provides for civil penalties of up to **ten thousand dollars (\$10,000.00) per day** for violations of the Act. The OCD is authorized to enforce these penalties as they relate to the protection of groundwater, human health and the environment. *See Sections 74-6-2, 74-6-4, NMSA 1978.*

C. Background of Dispute

6. Giant owns and operates the Bloomfield Oil Refinery (hereinafter "Refinery") located in the NW/4 NE/4 and the S/2 NE/4 and the N/2 NE/4 SE/4 of Section 27, and the S/2 NW/4 and the N/2 NW/4 SW/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

7. The Refinery is permitted by the OCD pursuant to WQCC Rule 3104 [20.6.2.3104 NMAC]. Giant is the current holder of discharge permit GW-01.

8. On August 11, 2004, OCD employees Bill Olson, Wayne Price and Denny Faust inspected Giant's Refinery.

9. As a result of the inspection, the OCD issued the Compliance Order dated February 23, 2006 against Giant, captioned as Administrative Compliance Order, NM-OCD 2006-100. A copy is attached as Exhibit A and is incorporated into this Order as if fully set forth herein.

II. CONCLUSIONS of LAW

10. The OCD has jurisdiction over Giant and the subject matter in this Order pursuant to the Act and WQCC Rules.

11. Giant is a person as defined in the Act (NMSA 1978, Section 74-6-2.H) and in WQCC Rule 20.6.2.7II NMAC.

III. ALLEGED VIOLATIONS

12. Giant violated WQCC Rule 1203 by failing to notify the OCD of discharges that may affect groundwater and/or surface water. The OCD has determined that there were three violations of this rule, which were failure to notify the OCD of contaminants in the two tributaries and the Tank # 37 area. The OCD recommends a civil penalty for each violation of \$10,000.00, for a total of penalty of \$30,000.00.

13. Giant violated 20.6.4 NMAC on three occasions, by allowing hydrocarbon and toxic constituents to seep into two tributaries to the San Juan River and allowing toxic pollutants to enter the San Juan River. This was also a violation of the terms of its permit. The OCD recommends a civil penalty of \$10,000.00 per violation, for a total penalty of \$30,000.00.

14. Giant violated WQCC Rule 3104 on two occasions by failing to comply with the terms and conditions of their permit. Giant violated Part 1.8 of their discharge

plan by failing to prevent oil from reaching navigable waters, and condition 17a of their approval conditions by failing to install recovery systems to prevent the contamination from entering a river, which was also a violation of the New Mexico Standards for Interstate and Intrastate Surface Water Standards, 20.6.4 NMAC. The OCD recommends a civil penalty of \$15,000.00 for each violation, for a total of \$30,000.00.

IV. COMPROMISE and SETTLEMENT

15. Giant admits neither fault nor liability for the alleged violations or findings of fact set forth in the Compliance Order or in this Order, but acknowledges it is a person as defined by NMSA 1978, Section 74-6-2.H and may be subject to civil penalties under NMSA 1978, Section 74-6-10, if found to be in violation of the Act or WQCC Rules.

16. The parties have engaged in settlement discussions to resolve the dispute described above, and desire to resolve the issues raised by the Compliance Order without the necessity of litigation and the costs associated therewith.

17. Taking into account both aggravating and mitigating factors, the OCD hereby assesses a civil penalty of **Ninety Thousand Dollars (\$90,000.00)** against Giant for three (3) alleged violations of WQCC Rule 1203 (failure to notify the OCD of discharges that may affect groundwater and/or surface water); three (3) alleged violations of 20.6.4 NMAC (allowing hydrocarbon and toxic constituents to seep into two tributaries to the San Juan River and allowing toxic pollutants to enter the San Juan River); and two (2) alleged violations of WQCC Rule 3104 (failing to comply with the terms and conditions of their permit).

18. **Sixty Thousand Dollars (\$60,000.00)** of the penalty will be waived provided that:

(a) No later than December 22, 2005, Giant provides to the OCD an acceptable assessment, remediation, and contingency plan for the entire area of the Refinery north of the slurry wall barrier to the San Juan River, inclusive of the Jackson Lake Terrace formation. The plan shall contain a schedule for Giant to accomplish the recommendations of the plan. Both the plan and schedule are subject to OCD conditions. Giant may request a time extension for accomplishing recommendations. The OCD, in its sole discretion, may grant any requested extension for good cause shown by Giant. The OCD acknowledges that Giant submitted a draft plan to the OCD on December 22, 2005. In response to OCD's concerns and comments regarding that plan, Giant submitted a revised plan to the OCD on February 3, 2006. The OCD is in the process of reviewing the revised plan to determine if it meets the OCD's concerns.

(b) By July 1, 2006, Giant shall develop an operation, checking and maintenance schedule spreadsheet for the Refinery. This schedule shall include an investigation schedule to determine all sources of contamination within the Refinery, and shall include testing of all large petroleum storage tanks, below ground tanks, pressure testing process lines, sumps and other possible above and underground sources of

contamination in the Refinery, finished products terminal, tank farm areas, and pits. Exempted from this one time testing requirement to be completed within five (5) years are large tanks that have been tested within the past five (5) years or are due to be tested within the next five (5) years under other regulatory agency rules, regulations or guidelines, or under any other standards accepted by regulatory agencies, such as API Code 653, provided that these tanks shall be identified in the spreadsheet and test dates and results provided to the OCD. Giant may request a time extension for accomplishing requirements or recommendations, which the OCD, in its sole discretion, may grant for good cause shown by Giant.

(c) No later than July 1, 2006, Giant shall submit an application to modify discharge plan GW-01 to the OCD. The application shall include a comprehensive ground water monitoring and remediation plan (hereinafter, "Plan"), which shall include the items required in subparagraphs (a) and (b), above. The Plan shall include a long-term monitoring and remediation plan for both the Refinery proper and the area north of the recently installed slurry wall, to and including all seeps, existing or potential, along the bluff. It shall account for all remediation systems and safeguards in place site-wide, including the French drain collection system, the 2600 foot underground slurry barrier wall and associated collection and observation wells, the sheet-piling and underground slurry barrier wall in the river terrace area, periodic sampling of the river and bio-venting system to be constructed on the river terrace (the OCD acknowledges that the bio-venting system has been constructed). Giant may request a time extension for accomplishing these conditions of waiver, which the OCD, in its sole discretion, may grant for good cause shown by Giant.

19. In the event these conditions are not met by the designated deadlines, **Twenty Thousand Dollars (\$20,000.00)** of the conditionally waived penalty shall immediately become due and payable for each of the three above designated deadlines.

20. Giant shall pay the **Thirty Thousand Dollars (\$30,000.00)** civil penalty upon execution of this Order. Payment shall be made by company, certified or cashier's check made payable to the "New Mexico Oil Conservation Division" and mailed or hand delivered to the New Mexico Oil Conservation Division, Attention: Director, 1220 South Saint Francis Drive, Santa Fe, New Mexico 87505.

21. The parties agree to this Order for the sole purpose of settling the Compliance Order. Giant expressly agrees it shall pay the civil penalty set out above and meet all the terms and conditions of the Compromise and Settlement Paragraphs 15 through 20, including all subparts.

V. OTHER TERMS AND CONDITIONS

22. Waiver. By signing this Order, Giant expressly waives any right, pursuant to the Act or otherwise, to a hearing either prior or subsequent to the entry of this Order or to an appeal from this Order.

23. Enforcement. The OCD retains the right to pursue relief for any violation not addressed herein. The OCD retains the right to enforce this Order by suit or otherwise to the same extent and with the same effect as a final Order of the Water Quality Control Commission entered after notice and hearing in accordance with all terms and provisions of the Act. Nothing in this Order relieves Giant of liability should its operations fail to adequately investigate and remediate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, nothing in this Order relieves Giant of its responsibility for compliance with any federal, state or local laws and/or regulations. The laws of New Mexico shall govern the construction and interpretation of this Order.

24. Binding Effect. This Order shall be binding on the parties and their officers, directors, employees, agents, subsidiaries, successors, assigns, trustees or receivers.

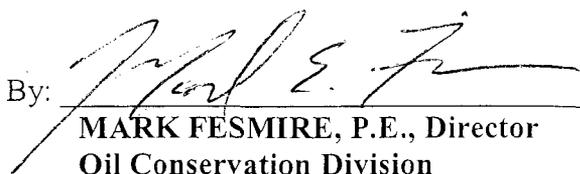
25. Integration. This Order supersedes all prior written and oral communications between the parties concerning the subject matter of this Order, and contains the entire agreement between the parties. This Order shall not be modified without the express written consent of the parties.

26. Waiver of State Liability. Giant shall assume all costs and liabilities incurred in performing any obligation under this Order. The OCD, on its own behalf or on behalf of the Department of Energy, Minerals and Natural Resources, shall not assume any liability for Giant's performance of any obligation under this Order.

27. Disclosure to Successors-in-Interest. Giant shall disclose this Order to any successor-in-interest to the Refinery and shall advise such successor-in-interest that this Order is binding on the successor-in-interest until such time as Giant complies with its terms and conditions or it is terminated by written agreement of the parties.

28. Effective Date. This Order shall become effective upon execution by the Division Director of the OCD.

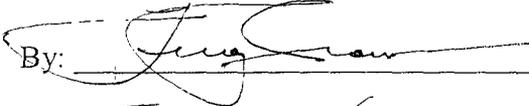
Done at Santa Fe, New Mexico this 1st day of ~~February~~ ^{March} 2006.

By: 
MARK FESMIRE, P.E., Director
Oil Conservation Division

ACCEPTANCE

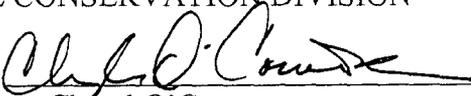
GIANT REFINING COMPANY hereby accepts the foregoing Order, and agrees to all of the terms and provisions set forth in the Order.

GIANT INDUSTRIES ARIZONA, INC. D/B/A
GIANT REFINING COMPANY

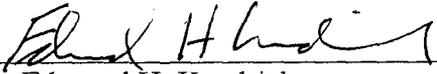
By: 
Title: EXECUTIVE VICE PRESIDENT
Date: February 24, 2006

APPROVED:

ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION

By: 
Cheryl O'Connor
Assistant General Counsel, OCD

GIANT INDUSTRIES ARIZONA, INC. D/B/A
GIANT REFINING COMPANY

By: 
Edmund H. Kendrick
Attorney for Giant
P.O. Box 2307
Santa Fe, New Mexico 87504-2307

**STATE OF NEW MEXICO
NEW MEXICO OIL CONSERVATION DIVISION**

**IN THE MATTER OF
GIANT REFINING COMPANY,**

NM-OCD 2006-100

Respondent.

February 23, 2006

ADMINISTRATIVE COMPLIANCE ORDER

Pursuant to the New Mexico Water Quality Act (hereinafter, "WQA"), NMSA 1978, §§ 74-6-1 to 74-6-17, the Director of the New Mexico Oil Conservation Division (hereinafter, "OCD") issues this Administrative Compliance Order (hereinafter, "Order") to Respondent Giant Refining Company (hereinafter, "Giant Refining") to enforce the WQA and the Water Quality Control Commission (hereinafter, "WQCC") Rules, 20.6.2 NMAC, for violations of the WQA and WQCC Rules.

I. FINDINGS OF FACT

1. The OCD is an agency of the executive branch of New Mexico Energy, Minerals, and Natural Resources Department and is charged with administration and enforcement of the Oil and Gas Act, NMSA 1978, Section 70-1-5, *et seq.* (hereinafter, "OGA"), and OCD Rules, including administration and enforcement of the WQA and the WQCC Rules when specifically pertaining to New Mexico's Oil and Gas activity, which includes oil refineries. Giant owns and operates the Bloomfield Oil Refinery, located in the NW/4 NE/4 and the S/2 NE/4 and the N/2 NE/4 SE/4 of Section 27, and the S/2 NW/4 and the N/2 NW/4 SW/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

2. The Bloomfield Refinery (also referred to as the "Site") is permitted by the OCD pursuant to WQCC Rule 20.6.2.3104 NMAC. Giant is the holder of discharge permit GW-001 (hereinafter, "Permit"). The Permit contains certain conditions, to which Giant must adhere, and as written, does not authorize discharge of effluent or leachate that may move directly or indirectly into groundwater or surface water. It does require certain best management practices and proper handling of all waste in order to protect fresh water, address storm water runoff, vadose zone and water pollution, and requires that all spills/releases shall be reported, remediated and abated pursuant to both OCD and WQCC rules. In addition, the Permit requires Giant to abide by the information submitted and commitments made in the discharge permit application.

3. On August 11, 2004, OCD employees Bill Olson, Wayne Price and Denny Foust discovered active discharges of hydrocarbon in two small tributaries (i.e., draws) on the north side of the refinery. Hydrocarbon saturated stained soil and dead vegetation was noted during inspection of the draws. The contamination had migrated down the draws to within a few feet of the San Juan River. In addition, a new seep was noted in the embankment at the Hammond Ditch Tank 37 collection area. The Hammond ditch road easily accesses the Tank 37 area. Therefore, the new seep should have been discovered by Giant and should have been a "Red Flag" to Giant employees that contamination was not being contained properly.

4. Discharge permit condition number 15 requires Giant to report all spill/releases pursuant to OCD Rule 19.15.3.116 NMAC and WQCC Rule 20.6.2.1203 NMAC. Giant did not report this contamination to OCD, and Giant failed to properly contain the contamination.

5. Water contaminants and toxic pollutants that may affect human health have been present in the ground water beneath the Site. These water contaminants and toxic pollutants include phase separated hydrocarbons, benzene, toluene, ethylbenzene, xylenes, heavy metals and inorganic salts. See 20.6.2.3103 NMAC (setting forth numeric standards for contaminants for ground water) and 20.6.2.7.VV NMAC (setting forth toxic pollutant standards). The OCD is concerned that Giant has lost control of the contamination beneath the Site, and that pollution will

continue to enter the San Juan River and tributaries, with an adverse impact on public health and the environment. Giant has not adequately investigated, controlled, remediated and abated the pollution.

6. Immediately following the discovery outlined above, the OCD instructed Giant to initiate emergency clean-up actions and construct barriers to protect the San Juan River and downstream water users. During Giant's emergency remedial actions, initial soil samples were collected from the two small tributaries, i.e., draws, on the north side of the refinery. The analytical results indicated that levels of benzene (1.190 mg/l) were found which exceeded the WQCC groundwater standard of .01 mg/l. Benzene is a chemical constituent of crude oil and by-products manufactured at the oil refinery. Benzene is considered a toxic pollutant, as defined by WQCC Rule 20.6.2.7.VV NMAC.

7. Giant's discharge permit condition number 2, "Commitments," requires Giant to abide by all commitments submitted in the discharge plan renewal dated July 06, 1999 and supplemental information. As part of its Permit application, Giant submitted a Spill Prevention Control and Countermeasure Plan. Part 1.8 of this plan provided that Giant would provide containment or diversionary structures or equipment to prevent oil from reaching navigable waters. Part 1.9 of the plan provided that Giant would perform the required inspections on a continuous basis. Giant has failed to perform these functions and is in violation of Permit condition number 2.

8. In a letter issued to Giant on December 30, 2002, the OCD approved conditions for ground water remediation and monitoring. Pursuant to OCD Rule 19.15.3.116 NMAC, Permit condition number 19 required Giant to notify the OCD of the discovery of separate-phase hydrocarbons or the exceedance of a WQCC standard in any down gradient monitor well, where separate-phase hydrocarbons were not present or where contaminant concentrations did not exceed

WQCC standards during the preceding monitoring event. In reviewing Giant's April 2004 Groundwater Remediation and Monitoring Annual Report, the OCD discovered that monitoring point P-5 had a benzene content of 1.4 mg/l, which exceeds the groundwater standard of .01 mg/l. Monitoring point P-5 is the final monitoring point for the sheet-piling project located within a few feet of the San Juan River. In addition, the groundwater in this area is obviously hydraulically connected to the San Juan River. Giant failed to address this issue pursuant to Permit approval condition number 17a of the December 30, 2002 letter. Also required under condition 17a is a requirement that Giant install a recovery system to prevent contamination from the Refinery from entering the river. This was never done. Thus, Giant is discharging toxic pollutants into the San Juan River, a violation of the State of the New Mexico Standards for Interstate and Intrastate Surface Water Standards 20.6.4 NMAC and is, accordingly, in violation of the Permit conditions.

II. CONCLUSIONS OF LAW

1. The OCD has jurisdiction over Giant and over the subject matter of this Order pursuant to NMSA 1978, Section 70-2-12.B(22) of the OGA, the WQA and WQCC Rules.

2. Giant is a "person" as defined in NMSA 1978, Section 74-6-2.I of the WQA and 20.6.2.7.ii NMAC.

3. WQCC Rule 20.6.2.1203 NMAC required Giant to provide notification of discharges that may affect ground and/or surface water. Giant has three separate violations of this Rule by failing to notify the OCD of contaminants in the two tributaries and at Tank #37. *See* Finding No. 3, *supra*.

The civil penalty for these violations is \$10,000 per violation, for a total of \$30,000.

4. By allowing hydrocarbon and toxic constituents to seep into two tributaries of the San Juan River, Giant is in violation of the State of New Mexico Standards for Interstate and Intrastate Surface Water Standards set out in 20.6.4 NMAC. *See* Finding No. 5, *supra*. It is also in violation by allowing toxic pollutants to enter the San Juan River. *See* Finding No. 5, *supra*.

The civil penalty for these violations is \$10,000 per violation for a total of \$30,000.

5. Twice, Giant violated WQCC Rule 3104, requiring the permittee to comply with the terms and conditions of the permit. Giant violated Part 1.8 of their discharge plan by failing to prevent oil from reaching navigable waters, and condition 17a of their approval conditions by failing to install recovery systems to prevent the contamination from entering a river, which was also a violation of the New Mexico Standards for Interstate and Intrastate Surface Water Standards, 20.6.4 NMAC. *See*, Findings No. 7 and 8. The civil penalty for these permit violations is \$15,000 per violation, for a total of \$30,000.

NOW, THEREFORE, THE OCD HEREBY ORDERS:

III. COMPLIANCE ORDER

1. Based upon the foregoing findings of fact and conclusions of law, Giant Refining Company is ordered to comply with the following schedule of compliance.

2. Within 30 days of the date of this Order, Giant Refining Company shall submit for OCD approval an application for a major modification of the current discharge permit including all required fees. The modification shall include a comprehensive action plan describing how Giant intends to prevent hydrocarbons and toxic pollutants from entering into groundwater and migrating into the San Juan River and its tributaries. The plan shall include all of the requirements listed in OCD's Emergency Action Directive dated August 13, 2004 and include a commitment to continue the investigation, remediation of contaminated soils and abatement of existing groundwater contamination on and off site. The plan shall also include additional monitoring and recovery wells throughout the plant area, including at the slurry wall and sheet-piling projects near the San Juan River.

IV. CIVIL PENALTY

3. The OCD hereby assesses a civil penalty against the Respondent in this Order of **Ninety Thousand Dollars (\$90,000.00)**. This penalty amount is derived as shown under Conclusions of Law items 1-5 and has taken into account mitigating circumstances and good faith effort performed to date. This penalty shall be due within 30 days of the date of this Order.

4. If Giant Refining Company fails to comply with the Schedule of Compliance set forth above, the Director of OCD may assess an additional civil penalty of up to \$25,000 for each day of noncompliance with the Order. NMSA 1978, § 74-6-10(F)(1).

V. RIGHT TO ANSWER AND REQUEST A HEARING

5. Pursuant to Section 74-6-10.G of the WQA, Respondent has the right to answer this Order and to request a hearing. If the Respondent (a) contests any material or legal matter upon which the Order is based, (b) contends that the Respondent is entitled to prevail as a matter of law, or (c) otherwise contests the appropriateness of the Order, the Respondent may request a hearing by mailing or delivering within 30 days of receipt of this Order, a written Request for Hearing and Answer to the Order to:

Water Quality Control Commission Hearing Clerk
C/o New Mexico Environment Department
Harold Runnels Building, Rm. 2050 South
1190 Saint Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

Respondent must attach a copy of this Order to the Request for Hearing.

6. The Respondent's Answer shall clearly and directly admit, deny or explain each of the factual allegations contained in the Order with regard to which the Respondent has any knowledge. Where the Respondent has no knowledge of a particular factual allegation, the Respondent shall so state, and the Respondent may deny the allegation on that basis. Any allegation of the Order not specifically denied shall be deemed admitted.

7. The Respondent's Answer shall also include any affirmative defense upon which the

Respondent intends to rely. Any affirmative defense not asserted in the Answer, except a defense asserting lack of subject matter jurisdiction, shall be deemed waived.

VI. FINALITY OF ORDER

8. This Order shall become final unless the Respondent files a Request for Hearing and Answer with the WQCC within 30 days of receipt of this Order. Failure to file an Answer constitutes an admission of all facts alleged in the Order and a waiver of the right to a hearing under Section 74-6-10(G) of WQA concerning this Order. Unless the Respondent requests a hearing and files an Answer, the Schedule of Compliance set forth in this Order shall become final.

VII. SETTLEMENT CONFERENCE

9. Whether Respondent requests a hearing and files an Answer, the Respondent may confer with the OCD concerning settlement. The OCD encourages settlement consistent with the provisions and objectives of the WQA and applicable WQCC rules. Settlement discussions do not extend the thirty (30) day deadline for filing the Respondent's Answer and a request for hearing, or alter the deadlines for compliance with this Order. Settlement discussions may be pursued as an alternative to and simultaneously with the hearing proceedings. The Respondent may appear at the settlement conference itself and/or be represented by legal counsel.

10. Any settlement reached by the parties shall be finalized by a written, stipulated final order, which must resolve all issues raised in the Order, shall be final and binding all parties to the Order, and shall not be appealable. If reached more than thirty days following the issuance of this Compliance Order, the Water Quality Control Commission must approve a stipulated final order.

11. To explore the possibility of settlement in this matter, contact Wayne Price, Environment Director, New Mexico Oil Conservation Division, 1220 St. Francis Drive, Santa Fe, New Mexico 87505, 505-476-3487.

12. Compliance with the requirements of this Order does not relieve Respondent

of the obligation to comply with all other applicable laws and Rules.

VIII. TERMINATION

13. This Order shall terminate when Respondent certifies that all requirements of this Order have been met and the OCD has approved such certification, or when the parties have entered into a stipulated final order, which has been, if applicable, approved by the Water Quality Control Commission.



for

Mark Fesmire, Director
Oil Conservation Division

STATE OF NEW MEXICO
NEW MEXICO OIL CONSERVATION DIVISION

IN THE MATTER OF
Giant Refining Company (Giant)

COMPLIANCE ORDER
NM-OCD 2006-001

RESPONDENT.

September 16, 2005

ADMINISTRATIVE COMPLIANCE ORDER

Pursuant to the New Mexico Water Quality Act ("WQA"), NMSA 1978, §§ 74-6-1 to 74-6-17, the Director of the New Mexico Oil Conservation Division (OCD), acting through his designee, the Compliance and Enforcement Manager, issues this Compliance Order ("Order") to Respondent Giant Refining Company. ("Giant Refining Company", "Respondent" or "GIANT") to enforce the WQA and the Water Quality Control Commission ("WQCC") Rules, 20.6.2 NMAC, for violations of the WQA and WQCC Rules.

FINDINGS OF FACT

1. OCD an agency of the executive branch of New Mexico Energy, Minerals, and Natural Resources Department is charged with administration and enforcement of the Oil and Gas Act N.M.S.A. 1978 (OGA) and OCD Rules including administration and enforcement of the WQA and the WQCC Rules when specifically pertaining to New Mexico's Oil and Gas activity which includes oil refineries. Giant Refining Company owns and operates the Bloomfield Oil Refinery located in the NW/4 NE/4 and the S/2 NE/4 and the N/2 NE/4 SE/4 of Section 27, and the S/2 NW/4 and the N/2 NW/4 SW/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

2. The Bloomfield Refinery is permitted by the OCD pursuant to WQCC Rule 20.6.2.3104 and is a current holder of discharge permit GW-001. The Permit as written does not authorize discharges of effluent or leachate that may move directly or indirectly into groundwater or surface water. The permit requires certain best management practices and proper handling of all waste in order to protect fresh water, addresses stormwater water runoff, vadose zone and water pollution, and requires that all spills/releases shall be reported, remediated and abated pursuant to both OCD and WQCC rules. In addition, the permit requires Giant to abide by the information submitted and commitments in the discharge permit application.

3. On August 11, 2004, New Mexico Oil Conservation Division (OCD) employees Bill Olson, Wayne Price and Denny Foust discovered active discharges of hydrocarbon in two small tributaries (draws) on the north side of the refinery. Hydrocarbon saturated stained soil and dead vegetation was noted during inspection of the draws. The contamination had migrated down the draws to within a few feet of the San Juan River. In addition, a new seep was noted in the embankment at the Hammond Ditch tank 37-collection area. Tank 37 area is easily accessed by the Hammond ditch road and should have been a "Red Flag" to Giant employees that contamination was not being contained properly. The discharge permit condition #15 requires Giant to report all spill/releases pursuant to OCD rule 116 and WQCC 1203. Giant did not report this contamination to OCD, and Giant failed to properly contain the contamination.

4. Other water contaminants and toxic pollutants that may affect human health have been present in the ground water beneath the Site. These water contaminants and toxic pollutants include phase separated hydrocarbons, benzene, toluene, ethylbenzene, xylenes, heavy metals and inorganic salts. See 20.6.2.3103 NMAC (setting forth numeric standards for contaminants for ground water) and 20.6.2.7.VV NMAC (setting forth toxic pollutants). Giant has lost control of the contamination beneath the site, and OCD is concerned that pollution will continue to enter the San Juan River and tributaries with an adverse impact on public health and the environment. Giant has not adequately investigated, controlled, remediated and abated the pollution.

5. OCD instructed Giant to initiate emergency clean-up actions and construct barriers to protect the San Juan River and downstream water users. During Giant's emergency remedial actions initial soil samples were collected from the two small tributaries (draws) on the north side of the refinery. The analytical results indicated that levels of benzene (1.190 mg/l) were found which exceeded the WQCC groundwater standard of .01 mg/l. Benzene is a chemical constituent of crude oil and by-products manufactured at the oil refinery. Benzene is considered a toxic pollutant as defined in the WQCC Rules 20.6.2.7.VV.

6. Giant's discharge permit condition #2 "Commitments" requires Giant to abide by all commitments submitted in the discharge Plan renewal dated July 06, 1999 and supplemental information. Giant submitted a Spill Prevention Control and Countermeasure Plan. Part 1.8 of this plan provided that giant would provide containment or diversionary structures or equipment to prevent oil from reaching navigable waters. Part 1.9 of the plan provided that Giant would perform the required inspections on a continuous basis. Giant has failed to perform these functions and is in violation of permit condition #2.

7. OCD approved Giant's discharge permit GW-001 on April 19, 2000. Condition #18 required Giant to submit a stormwater run-off plan for OCD approval by August 15, 2000. Giant failed to submit the plan. OCD finds that Giant was negligent because a stormwater run-off plan would have provided early detection of the contamination found by OCD inspectors. Giant has violated the permit conditions by not supplying and implementing such a plan.

8. OCD requested Giant to submit a surface water monitoring plan in a letter dated July 17, 2002. Giant failed to submit a plan. OCD finds that Giant was negligent because a surface water monitoring run-off plan would have provided early detection of the contamination found by OCD inspectors. Giant has violated the permit conditions by not supplying and implementing such a plan.

9. In a letter issued to Giant on December 30, 2002 OCD approved conditions for ground water remediation and monitoring. Condition # 19 required Giant to notify the NMOCD of the discovery

of separate-phase hydrocarbons or the exceedance of a WQCC standard in any down gradient monitor well where separate-phase hydrocarbons were not present or where contaminant concentrations did not exceed WQCC standards during the preceding monitoring event pursuant to NMOCD rule 116. In reviewing Giant's April 2004 Groundwater Remediation and Monitoring Annual Report OCD discovered that monitoring point P-5 had a benzene content of 1.4 mg/l which exceeds the groundwater standard of .01 mg/l. Monitoring point P-5 is the final monitoring point for the sheet-piling project located within a few feet of the San Juan River. In addition, the groundwater in this area is obviously hydraulically connected to the San Juan River. Giant failed to address this issue pursuant to approval condition #17 a. of the December 30, 2002 approval conditions by not providing conclusions and recommendations for this issue, and Giant has failed to install recovery systems to prevent this contamination from entering the river. Giant is discharging toxic pollutants to the San Juan River, a violation of the State of the New Mexico Standards for Interstate and Intrastate Surface Water Standards 20.6.4 NMAC and is accordingly in violation of the permit conditions.

CONCLUSIONS OF LAW

1. OCD has jurisdiction over Giant Refining Company and over the subject matter of this Order pursuant to Section 70-2-12.B(22) of the Oil and Gas Act, the WQA and WQCC Rules.
2. Giant Refining Company is a "person" as defined in Section 74-6-2.I of the WQA and Section 20.6.2.7.ii NMAC.
3. Reference Finding #4 Above: Giant Refining Company violated WQCC Rules, Section 20.6.2.1203 which requires notification of discharges that may affect groundwater, and/or surface water. Giant failed to notify OCD of the mattersw found in finding #4 described above. OCD has determined there are three violations associated with finding #4. The presence of contaminants in two tributaries and Tank #37 area were not reported to OCD. The civil penalty for these violations is \$10,000 per violation for a total of \$30,000.

4. Reference Finding #5 and #9 Above: Giant has allowed hydrocarbon and toxic constituents to seep into two tributaries of the San Juan River (refer to finding #5 above). Giant has allowed toxic pollutants to enter the San Juan River (refer to finding #9 above). Giant is in violation of the State of New Mexico Standards for Interstate and Intrastate Surface Water Standards 20.6.4 NMAC. The civil penalty for these violations is \$10,000 per violation for a total of \$30,000.

5. Reference Finding #6,7,8 and 9 Above: Giant Refining Company violated Sections 20.6.2.3 104 which requires the permittee to comply with the terms and conditions of the permit. Giant failed to implement these conditions as indicated in Findings #6,7,8 and 9 above. The civil penalty for these permit violations is \$15,000/violation for a total of \$60,000.

Now, therefore, OCD hereby orders:

COMPLIANCE ORDER

1. Based upon the foregoing findings of fact and conclusions of law, Giant Refining Company is ordered to comply with the following schedule of compliance.

2. Within 30 days of the date of this Order, Giant Refining Company shall submit for OCD approval an application for a major modification of the current discharge permit including all required fees. The modification shall include a comprehensive action plan describing how Giant intends to prevent hydrocarbons and toxic pollutants from entering into groundwater and migrating into the San Juan River and its tributaries. The plan shall include all of the requirements listed in OCD's Emergency Action Directive dated August 13, 2004 and include a commitment to continue the investigation, remediation of

contaminated soils and abatement of existing groundwater contamination on and off site. The plan shall also include additional monitoring and recovery wells throughout the plant area including at the slurry wall and sheet-piling projects near the San Juan River.

CIVIL PENALTY

3. OCD hereby assesses a civil penalty against the Respondent in this Order of \$120,000.00 Dollars. This penalty amount is derived as shown under Conclusions of Law items 1-5 and has taken into account mitigating circumstances and good faith effort performed to date. This penalty shall be due within 30 days of the date of this Order.

4. If Giant Refining Company fails to comply with the Schedule of Compliance set forth above, the Director of OCD may assess an additional civil penalty of up to \$25,000 for each day of noncompliance with the Order. NMSA 1978, § 74-6-10(F)(1).

RIGHT TO ANSWER AND REQUEST A HEARING

5. Pursuant to Section 74-6-10.G of the WQA, Respondent has the right to answer this Order and to request a hearing. If the Respondent (a) contests any material or legal matter upon which the Order is based, (b) contends that the Respondent is entitled to prevail as a matter of law, or (c) otherwise contests the appropriateness of the Order, the Respondent may request a hearing by mailing or delivering within 30 days of receipt of this Order, a written Request for Hearing and Answer to the Order to:

Water Quality Control Commission Hearing Clerk
C/o New Mexico Environment Department
Harold Runnels Building, Rm. 2050 South
1190 Saint Francis Drive
P.O. Box 26110
Santa Fe, New Mexico 87502-6110

The Respondent must attach a copy of this Order to the Request for Hearing.

6. The Respondent's Answer shall clearly and directly admit, deny or explain each of the factual allegations contained in the Order with regard to which the Respondent has any knowledge. Where the Respondent has no knowledge of a particular factual allegation the Respondent shall so state, and the Respondent may deny the allegation on that basis. Any allegation of the Order not specifically denied shall be deemed admitted.

7. The Respondent's Answer shall also include any affirmative defense upon which the Respondent intends to rely. Any affirmative defense not asserted in the Answer, except a defense asserting lack of subject matter jurisdiction, shall be deemed waived.

FINALITY OF ORDER

8. This Order shall become final unless the Respondent files a Request for Hearing and answer with the WQCC within 30 days of receipt of this Order. Failure to file an Answer constitutes an admission of all facts alleged in the Order and a waiver of the right to a hearing under Section 74-6-10(G) of WQA concerning this Order. Unless the Respondent requests a hearing and files an Answer, the Schedule of Compliance set forth in this Order shall become final.

SETTLEMENT CONFERENCE

9. Whether or not Respondent requests a hearing and files an Answer, the Respondent may confer with OCD concerning settlement. OCD encourages settlement consistent with the provisions and objectives of the WQA and applicable WQCC rules. Settlement discussions do not extend the 30 day deadline for filing the Respondent's Answer and a request for hearing, or alter the deadlines for compliance with this Order. Settlement discussions may be pursued as an alternative to and simultaneously with the hearing proceedings. The Respondent may appear at the settlement conference

itself and/or be represented by legal counsel.

10. Any settlement reached by the parties shall be finalized by written, stipulated final order. A stipulated final order must resolve all issues raised in the Order, must be approved by the Director of OCD, shall be final and binding all parties to the Order, and shall not be appealable.

11. To explore the possibility of settlement in this matter, contact David K. Brooks, Assistant General Counsel, Office of General Counsel, New Mexico Oil Conservation Division, 1220 St. Francis Drive, Santa Fe, New Mexico 87505, 505-476-3450.

12. Compliance with the requirements of this Order does not relieve Respondent of the obligation to comply with all other applicable laws and Rules.

TERMINATION

13. This Order shall terminate when Respondent certifies that all requirements of this Order have been met, and OCD has approved such certification, or when the Director of OCD approves a stipulated final order.



J. Daniel Sanchez
Compliance and Enforcement Manager - Oil Conservation Division



BRUCE KING
GOVERNOR

ANITA LOCKWOOD
CABINET SECRETARY

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

AMENDED ADMINISTRATIVE ORDER SWD-528

APPLICATION OF BLOOMFIELD REFINING COMPANY FOR WASTE WATER DISPOSAL, SAN JUAN COUNTY, NEW MEXICO.

**ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION**

Under the provisions of Rule 701(B), Bloomfield Refining Company made application to the New Mexico Oil Conservation Division on September 22, 1992, for permission to complete for Class I non-hazardous waste water disposal its Bloomfield Refining Well No. 1 located 2442 feet from the South line and 1250 feet from the West line (Unit I) of Section 27, Township 29 North, Range 11 West, NMPM, San Juan County, New Mexico.

THE DIVISION DIRECTOR FINDS THAT:

- (1) The application has been duly filed under the provisions of Rule 701(B) of the Division Rules and Regulations;
- (2) Satisfactory information has been provided that all offset operators and surface owners have been duly notified;
- (3) The applicant has presented satisfactory evidence that all requirements prescribed in Rule 701 will be met; and
- (4) The applicant has presented satisfactory evidence that all requirements prescribed in Part 5 of the Water Quality Control Commission regulations will be met.
- (5) No objections have been received within the waiting period prescribed by said rule.

IT IS THEREFORE ORDERED THAT:

The applicant herein, Bloomfield Refining Company is hereby authorized to complete its Bloomfield Refining Well No. 1 located 2442 feet from the South line and 1250 feet from the West line (Unit I) of Section 27, Township 29 North, Range 11 West, NMPM, San Juan

County, New Mexico, in such manner as to permit the injection of waste water for disposal purposes into the Cliffhouse and Upper Menefee formations at approximately 3294 feet to 3460 feet through 2 7/8-inch plastic-lined tubing set in a packer located at approximately 3240 feet.

IT IS FURTHER ORDERED THAT:

The operator shall have in effect, prior to commencing construction operations, a plugging bond approvable by the Division, for the estimated amount required to plug the well according to the proposed closure plan and adjusted for inflation for the estimated life of the well.

Additionally, the operator shall, as a requirement of said well's construction, circulate cement to the surface, on the surface, intermediate and long strings of casing, as applicable.

Prior to commencing injection operations into said well, the operator shall either, 1) perform cement squeeze operations to establish a top of cement in both wells at approximately 2800 feet or, 2) plug and abandon the Amoco Davis Gas Com Unit F Well No. 1.

The operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

Prior to commencing injection operations into the well, the casing shall be pressure tested from the surface to the packer setting depth to assure the integrity of said casing.

The casing-tubing annulus shall be loaded with an inert fluid and maintained at a pressure of 100 psi and equipped with a device for continuous monitoring of the pressure pursuant to the approved Division Discharge Plan GW-130.

The injection well or system shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than 659 psi.

The operator shall conduct on an annual basis, a mechanical integrity test in a manner pursuant to conditions in the approved Division Discharge Plan GW-130.

The Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Cliffhouse and Upper Menefee formations. Such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

The operator shall notify the supervisors of the Aztec district office and the Environmental Bureau of the Division of the date and time of the installation of disposal equipment and of the annual mechanical integrity test so that the same may be inspected and witnessed.

The operator shall immediately notify the supervisor of the Aztec district office and the Environmental Bureau of the Division of the failure of the tubing, casing, or packer in said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

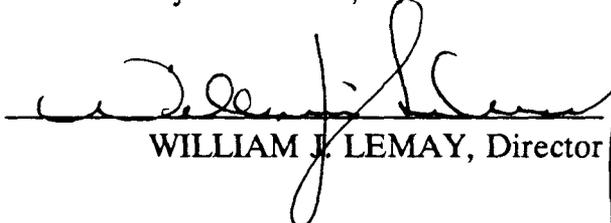
PROVIDED FURTHER THAT, jurisdiction of this cause is hereby retained by the Division for the entry of such further order or orders as may be deemed necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of the operator to conduct operations in a manner which will ensure the protection of fresh water or in a manner inconsistent with the requirements set forth in this order, the Division may, after notice and hearing, terminate the injection authority granted herein.

The operator shall submit monthly reports of the disposal operations in accordance with Rule Nos. 706 and 1120 of the Division Rules and Regulations.

The operator shall provide a representative analysis of the injected fluids on a quarterly basis, pursuant to WQCC 5-208.A.2.(a).

The injection authority granted herein shall terminate one year after the effective date of this order if the operator has not commenced injection operations into the subject well, provided however, the Division, upon written request by the operator, may grant an extension thereof for good cause shown.

Approved at Santa Fe, New Mexico, on this 6th day of October, 1993.


WILLIAM J. LEMAY, Director

WJL/BES/amg

xc: Oil Conservation Division - Hobbs
Environmental Bureau - Santa Fe
Files: GW-1
GW-130



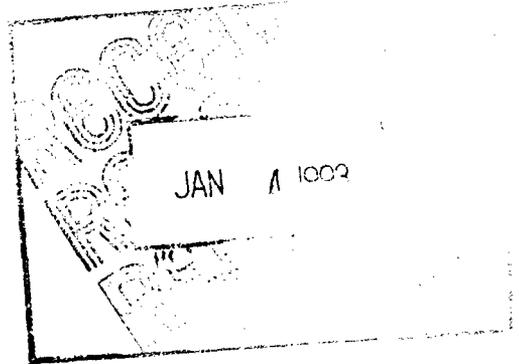
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

copy - FILE "92 Blue

December 31, 1992

Mr. David Roderick, Refinery Manager
Bloomfield Refining Company
P. O. Box 159
Bloomfield, New Mexico 87413



RE: Bloomfield Refining Company, Inc.
EPA ID# NMD089416416

Dear Mr. Roderick:

Enclosed please find three (3) copies of the final RCRA § 3008(h) Administrative Order on Consent (Order) for Bloomfield Refining Company (BRC). The effective date of the Order is December 31, 1992. This Order is submitted pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by § 3008(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) as further amended by the Hazardous and Solid Waste Amendments of 1984, 42 USC § 6928(h).

If you have any questions, or if your technical consultants have any questions, please do not hesitate to call me at (214) 655-8317.

Sincerely,


Greg J. Lyssy
Technical Section (6H-CX)
RCRA Enforcement Branch
Hazardous Waste Management Division

Enclosures

cc: Joe Guida, Guida & Associates
Kathleen Sisneros, New Mexico Environment Department
Benito Garcia, New Mexico Environment Department
Ed Horst New Mexico Environment Department

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6

1992 DEC 31 AM 9:19
REGIONAL ADMINISTRATOR VI

IN THE MATTER OF:)

Bloomfield Refining Company)
P.O. Box 159)
Bloomfield, New Mexico)

EPA I.D. NO. NMD089416416)

RESPONDENT)

ADMINISTRATIVE
ORDER ON CONSENT

U.S. EPA DOCKET NO.
VI-303-H

PROCEEDING UNDER SECTION
3008(h) OF THE RESOURCE
CONSERVATION AND RECOVERY
ACT, AS AMENDED, 42
U.S.C. SECTION 6928(h).

I. JURISDICTION

This Administrative Order on Consent (Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 3008(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, (RCRA), and further amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6928(h). The authority to issue this Administrative Order has been delegated to the Regional Administrator by EPA Delegation Nos. 8-31 and 8-32, dated April 16, 1985, and further delegated to the Director of the Hazardous Waste Management Division, Region 6 (Director).

This Order is issued to Bloomfield Refining Company, a Delaware Corporation (Respondent), owner/operator at the facility located at #50 County Road 4990, Bloomfield, New Mexico (Facility). Respondent admits EPA's jurisdiction to issue this Order and to enforce its terms. Further, Respondent will not contest EPA's jurisdiction to: compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial; require Respondent's full or interim compliance with the terms of this Order; or impose sanctions for noncompliance with this Order.

By consenting to this Order and by complying with its provisions, Respondent does not admit the truth of any fact or legal finding or determination asserted herein, other than those necessary to establish jurisdiction as described in the previous paragraphs. Neither this Order nor any part thereof shall constitute any evidence, admission, or adjudication of any wrongdoing, misconduct, liability, responsibility, or estoppel on the part of Respondent, or any director, officer, employee, or affiliate thereof, except as evidence for purposes of enforcement of this Order. Respondent reserves all rights to contest any subsequent Order or judicial proceeding associated with implementation of corrective measures.

II. PARTIES BOUND

1. This Order shall apply to and bind Respondent, its officers, directors, employees, agents, trustees, receivers, successors, assigns, and all other persons, including, but not limited to, firms, corporations, subsidiaries, contractors, consultants acting under or on behalf of Respondent, and within the scope of their employment.

2. No change in ownership, corporate, or partnership status relating to the facility will in any way alter the status or responsibility of the Respondent under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of the Respondent by the express terms and conditions of this Order, irrespective of its use of employees, agents or consultants to perform any such tasks.
3. Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order.
4. Respondent shall provide a copy of this Order to all primary contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) calendar days of the effective date of this Order or date of such retention of services and shall condition all such contracts on compliance with the terms of this Order.
5. Respondent shall give notice of this Order to any successors in interest prior to transfer of ownership or operation of the facility and shall notify EPA no later than thirty (30) days prior to such transfer. In its discretion, EPA may shorten the advance notification period provided herein.
6. Any documents transferring ownership and/or operations of the Facility from Respondent to a successor-in-interest shall include written notice of this Order; however, Respondent shall, no less than fifteen (15) days prior to transfer of ownership or operation of the Facility, provide written notice of this Order to its successor-in-interest, and written notice of said transfer of ownership and/or operation to EPA.
7. Respondent agrees to undertake all actions required by the terms and conditions of this Order including any portions of this Order incorporated by reference. Respondent explicitly waives its rights to request a hearing on this matter and consents to the issuance of this Order without hearing pursuant to § 3008(b) of RCRA and as an Order issued pursuant to § 3008(h) of RCRA.

III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of EPA and Respondent are: (1) to perform Interim Measures (IM) at the facility to mitigate potential threats to human health or the environment; (2) to perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release(s) of hazardous waste or hazardous constituents at or from the facility; and (3) to perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for corrective action(s) to prevent or mitigate any migration of release(s) of hazardous wastes or hazardous constituents at or from the facility, and to collect any other information necessary to support the selection of corrective measures at the facility.

IV. FINDINGS OF FACT

1. Respondent is Bloomfield Refining Company, #50 County Road 4990, Bloomfield, New Mexico, 87413, and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15). Bloomfield Refining Company is a Delaware Corporation and is a wholly-owned subsidiary of Gary-Williams Energy Corporation, Inc.
2. The facility is located off of Sullivan Road (County Road 4990), Bloomfield, San Juan County, New Mexico, at 36 degrees, 41 minutes and 50 seconds latitude and 107 degrees, 58 minutes, and 20 seconds longitude. This location is less than one mile south of Bloomfield, New Mexico, off Highway 44.

3. Plateau, Inc., the former owner of the facility, operated hazardous waste management units at the facility after November 19, 1980. Plateau, Inc. is located at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc., is a wholly-owned subsidiary of Suburban Propane Gas Corporation, a New Jersey corporation.
4. On or about October 31, 1984, Suburban Propane Gas Corporation sold the facility to Respondent.
5. Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), requires any person generating or transporting any listed or characteristic hazardous waste, or owning or operating a facility for treatment, storage or disposal of such substance, to file with the EPA a notification stating the location and general description of such activity or the listed or characteristic hazardous wastes handled by such persons.
6. Pursuant to Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), on August 18, 1980, Plateau, Inc., notified EPA of its hazardous waste activity. In this notification, Plateau, Inc., identified itself as a generator, treater, storer and/or disposer of hazardous waste at the facility.
7. Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), provides that any person who complies with the provisions of Section 3005(e) shall be treated as having been issued a permit. Such a facility shall be considered to be under interim status, and shall be required to meet all applicable requirements of RCRA.
8. In its RCRA Part A permit application (permit application) dated November 19, 1980, Plateau, Inc., notified the Administrator of EPA and the New Mexico Environmental Improvement Division (NMEID), that it was engaged in the generation and storage at the facility of hazardous wastes identified and listed in 40 CFR Part 261 and used surface impoundments for the treatment, storage, or disposal (process code S04) of hazardous wastes at the facility. Plateau also noted on the application that the surface impoundments may have received hazardous materials in the past, but the contents have not been adequately characterized.
9. The facility, comprised of 287 acres, consists of petroleum refining operations having five (5) RCRA-regulated hazardous waste management units which received the following hazardous wastes or hazardous waste constituents as identified in the facility's permit application:
 - a) hazardous wastes from specific sources identified at 40 CFR § 261.32;
 - i) K049 - Slop oil emulsion solids from the petroleum refining industry,
 - ii) K050 - Heat exchanger bundle cleaning sludge from the petroleum refining industry,
 - iii) K051 - API separator sludge from the petroleum refining industry,
 - iv) K052 - Tank bottoms (leaded) from the petroleum refining industry.
10. During May and June, 1983, EPA personnel conducted inspections that revealed significant seepage of ground water from the contact of the cobble bed and the Nacimiento formation at the face of the bluff above the San Juan River.
11. Analysis of samples of these seeps taken during a May, 1984, inspection showed elevated levels of organic and inorganic contamination (Attachment I - Table I) released from the facility to the San Juan River.

12. On July 15, 1982, May 10, 1983, June 7-8, 1983, March 19-23, 1984, and May 4, 1984 EPA conducted Compliance Evaluation Inspections (CEIs) to assess the facility's compliance with the RCRA Hazardous Waste Management regulations.
13. The May 10, 1983, inspection was conducted to also assess potential adverse environmental impacts, including endangerment to human health, welfare, or the environment pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. § 9601 et seq.
14. According to an EPA RCRA Facility Assessment Evaluation (RFA) conducted June 27, 1987, the facility has thirteen (13) Solid Waste Management Units (SWMUs), five (5) of which are considered to be RCRA-regulated SWMUs and are listed below:
 - a) South Oily Water Pond (SOWP) (immediately downstream of the API separator);
 - b) North Oily Water Pond (NOWP) (immediately downstream of the SOWP);
 - c) Evaporation Ponds (2);
 - d) Landfill; and
 - e) Landfill Runoff Ponds.
15. The RCRA § 3013 42 U.S.C. § 6934, Final report was submitted by Respondent on or about February 8, 1987. The presence of hydrocarbon-contaminated groundwater was observed at monitoring wells MW#4, MW#9, and MW#10 documenting a release to the groundwater from the facility. The sampling results are listed in Attachment I, Table II.
16. Attachment I, Table III lists the chemicals found in the groundwater at the facility and the health-based classification based on the weight of evidence for these chemicals.
17. On September 12-14, 1989, a Comprehensive Ground Water Monitoring Evaluation (CME) by the EPA was conducted at the facility. The CME was conducted to assess the facility's compliance with RCRA ground water monitoring requirements found at 40 CFR § 265.90 et seq. According to the CME report, the following was noted:
 - a) The NOWP and SOWP have only one (1) downgradient well in place; and
 - b) The landfill and landfill pond have only one (1) downgradient well in place. These areas are separate units and are required to be monitored separately.
18. During the September 1989 CME, samples were taken of the monitoring wells at the facility. The sample results are listed in Attachment I, Table IV.
19. The Toxicity Characteristic Rule was effective on September 25, 1990, and is codified at 40 CFR Part 261.24, establishing regulatory levels for 25 organic chemicals in addition to the eight metals and six pesticides on the existing list of constituents which exhibit the characteristic of toxicity and are regulated under RCRA.
20. On September 25, 1990, Respondent submitted an Amended Notification of Regulated Waste Activity and a Part A Application to EPA identifying itself as a treater, storer or disposer of hazardous waste.

21. In the Part A Application, Respondent identified the SOWP and NOWP as Hazardous Waste Aeration Impoundments (Aeration Impoundments).
22. In the Part A Application, Respondent identified the Aeration Impoundments as units regulated under the TC Rule specifically for benzene concentrations (D018).
23. This Order is based upon the Administrative Record compiled by EPA, which is available for public examination at the Region 6 offices, 1445 Ross Avenue, Dallas, Texas, during normal business hours, Monday through Friday.
24. Based on the release of hazardous waste or hazardous waste constituents into the environment from Respondent's facility, the actions ordered below are necessary to protect human health or the environment.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set out above, and the administrative record, the Director has determined that:

1. Respondent is the operator/owner of the facility, as that term is defined at 40 CFR § 260.10;
2. The location at Bloomfield, New Mexico, where Respondent is doing business, is a "facility" as that term is defined at 40 CFR § 260.10;
3. Respondent is a person defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15);
4. The facility is authorized to operate under interim status pursuant to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e);
5. There have been releases of hazardous wastes or hazardous waste constituents into the environment from the facility as defined by § 3001 of RCRA, 42 U.S.C. § 6921.
6. The interim measures and comprehensive corrective actions (actions) required by this Order are consistent with RCRA and are necessary to protect human health and the environment.

VI. WORK TO BE PERFORMED

Based on the foregoing, it is hereby ORDERED that Respondent shall perform, undertake, continue to take, and complete each of the following actions to the satisfaction of EPA and in accordance with the terms, procedures and schedules set forth in Attachment II - Corrective Action Plan (CAP) in the manner and by the dates specified below. The dates specified below and those in the CAP shall coincide. If there is a conflict of dates, the dates presented in the CAP shall be utilized.

1. INTERIM MEASURES (IM)
 - a) No later than forty-five (45) days after the effective date of this Order, Respondent shall submit an approvable draft Interim Measures Workplan (IM Workplan) for EPA review and approval. The IM Workplan shall be prepared in accordance with the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft IM Workplan, Respondent shall submit a Final IM Workplan to EPA for review and EPA's approval addressing EPA's comments. Upon EPA approval of the Final IM Workplan, Respondent shall undertake, or continue to take, the interim measures in accordance with the IM Workplan and concurrently with the RCRA Facility Investigation.

- b) The IM Workplan shall ensure that the Interim Measures are designed to mitigate current or potential threat(s) to human health and/or to the environment, and are consistent with, and integrated into, any long term solution at the facility. The IM Workplan shall document the procedures to be used by the Respondent for the implementation of Interim Measures and shall include, but not be limited to, the objectives, design, construction, operation, monitoring and maintenance requirements, and detailed schedules for the Interim Measures.
- c) In the event Respondent identifies a current or potential threat to human health and/or the environment, the Respondent shall immediately notify EPA orally and in writing within five (5) days of such identification, summarizing the immediacy and magnitude of the potential threat to human health and/or the environment. Within thirty (30) days of notifying EPA, the Respondent shall submit to EPA an IM Workplan for approval that identifies Interim Measures which mitigate this threat and are consistent with and integrated into any long term remedy at the Facility.

2. RCRA FACILITY INVESTIGATION

- a) Within ninety (90) days of the effective date of this Order, Respondent shall submit to EPA an approvable Draft Workplan for a RCRA Facility Investigation (RFI). The Draft RFI Workplan is subject to approval by EPA and shall be performed in a manner consistent with the RFI Scope of Work contained in the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Workplan, Respondent shall submit a Final RFI Workplan to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA. Upon approval of the Final RFI Workplan, Respondent shall implement the Workplan. The RFI Workplan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations, and EPA guidance documents, including: Interim Final RCRA Facility Investigation Guidance (EPA 530/SW-89-031, 4 vols.); RCRA Ground Water Monitoring Technical Enforcement Guidance document (OSWER Directive Number 9951.1); Test Methods for Evaluating Solid Waste, SW 846 (2nd Edition); and any other documents determined by EPA to be relevant during the course of this action.
- b) The RFI Workplan shall be designed to define the presence, magnitude, extent, direction, and rate of movement of any hazardous wastes or hazardous waste constituents within and beyond the facility boundary. The Respondent shall conduct those investigations necessary to:
 - i) characterize the source(s) of contamination;
 - ii) characterize the potential pathways of contaminant migration;
 - iii) define the degree and extent of contamination;
 - iv) identify actual or potential receptors; and
 - v) support the development of alternatives from which a Corrective Measure will be selected by EPA.

A specific schedule for implementation of all activities shall be included in the RFI Workplan. In accordance with the provisions of Attachment II herein, the RFI workplan shall include: (1) a Project Management Plan; (2) a Data Collection Quality Assurance Plan; (3) a Data Management Plan; (4) a Health and Safety Plan; and (5) a Community Relations Plan.

- c) Within 365 days of the approval of the RFI Workplan, Respondent shall submit to EPA an approvable Draft RFI Report. The RFI Report is subject to approval by EPA and shall be performed in a manner consistent with the requirements contained in Attachment II. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Report, Respondent shall submit a Final RFI Report to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA.

3. CORRECTIVE MEASURES STUDY

- a) Upon completion of the RCRA Facility Investigation, Respondent shall undertake and complete a Corrective Measure Study (CMS) in accordance with the CMS Scope of Work in Attachment II and in accordance with EPA guidance documents determined to be relevant during the course of this action.
- b) Respondent shall submit a Draft CMS Report to EPA within sixty (60) calendar days of approval of the Final RFI Report. The CMS Report shall include, but not be limited to the following:
 - i) identification and development of the corrective measures alternatives;
 - ii) evaluation of the corrective measure alternatives;
 - iii) justification and recommendation of the corrective measure(s).

EPA shall review the draft CMS Report and provide comments to Respondent. No later than thirty (30) days after receipt of EPA's comments on the Draft CMS Report, Respondent shall submit a Final CMS Report to EPA for review and EPA's approval addressing all of EPA's comments.

4. CORRECTIVE MEASURES IMPLEMENTATION

Upon EPA's selection of the corrective measure, if Respondent has complied with the terms of this Consent Order, EPA shall provide a sixty (60) day period for negotiation of an administrative order on consent, a judicial consent decree, a RCRA Permit, or modification of a RCRA Permit, for implementation of the selected corrective measure. If agreement is not reached during this period, EPA reserves all rights it has to implement the corrective measure or other remedial response and to take any other appropriate actions under RCRA, CERCLA, or any other available legal authority, including issuance of a unilateral administrative order directing Respondent to implement the corrective measure.

5. SUBMISSIONS/AGENCY APPROVAL/ADDITIONAL WORK

- a) Within thirty (30) calendar days of approval or modification by EPA of any Workplan(s) or Report(s), Respondent shall commence work and implement the tasks required by the Workplan(s) or Report(s) submitted pursuant to the Scope(s) of Work contained in Attachment II, in accordance with the standards, specifications and schedule stated in the Workplan(s) or Report(s), as approved or modified by EPA.
- b) Beginning with the month following the effective date of this Order, Respondent shall provide EPA with progress reports every month, due on the tenth (10) day of the following month. On a quarterly basis, the progress reports shall include the results of all sampling and testing performed under this Order. The progress reports shall conform to requirements in relevant Scopes of Work contained in Attachment II.

- c) EPA's Project Manager designated pursuant to Section VII of this Order will review all draft and final reports or workplans and notify Respondent in writing of EPA's approval or disapproval of the report or workplan or any part thereof. EPA will specify in writing any modifications necessary for approval of the subject document. Within thirty (30) days of receipt of EPA's disapproval of any report or workplan, Respondent shall address the deficiencies and submit a revised report. If Respondent believes an extension of time is necessary for a deliverable, Respondent shall submit such written request to EPA. EPA shall determine if such extension request is warranted and will either grant or deny the request. EPA shall approve, disapprove, or modify the revised submittal. EPA-approved reports and workplans shall be deemed incorporated into and part of this Order.
- d) Three (3) copies of all documents, including Plans, Reports, and other correspondence to be submitted pursuant to this Order shall be hand-delivered or sent by certified mail, return receipt requested, or the equivalent including express mail service, to the EPA Project Manager. An additional one (1) copy shall be sent to the New Mexico Environment Department (NMED). Documents shall be deemed submitted on the date of mailing, or, if delivered by hand, on the date of delivery. For purposes of the United States Postal Service, the date of mailing shall be determined by the postmark. For express mail services, the date of mailing shall be the date of delivery to the express mail carrier, as evidenced by a completed express mail receipt form, which shall bear the date the document is delivered to the express mail service. If any hand delivery serviced utilized does not record its date of delivery, then the Respondent shall include with the document a statement certifying the date on which the document was delivered.
- e) All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer, scientist, or geologist with expertise in hazardous waste site cleanup. The Respondent shall notify EPA in writing of the name, title, and qualifications of the engineer or geologist, and of any contractors or subcontractors and their personnel to be used in carrying out the terms of this Order thirty (30) calendar days after the effective date of this Order, or date of retention. If EPA objects to the qualifications of the engineer, geologist, or scientist, EPA shall notify Respondent within thirty (30) calendar after receipt of Respondent's notification pursuant to this section.
- f) EPA may determine that certain tasks and deliverables, including investigatory work or engineering evaluation, are necessary in addition to the tasks and deliverables included in the Workplans. When new information indicates that such additional work is necessary, EPA will request, in writing, that Respondent perform the additional work and shall specify the basis and reasons for EPA's determination that the additional work is necessary. Within thirty (30) calendar days after the receipt of such request, Respondent may request a meeting with EPA to discuss the additional work. Thereafter, Respondent shall perform such additional IM, RFI, or CMS work EPA has requested according to an EPA-approved Workplan or Schedule. All additional work performed by Respondent under this paragraph shall be performed in a manner consistent with this Order.
- g) EPA acknowledges that Respondent is currently conducting remedial actions at the facility under the jurisdiction of New Mexico State Agencies. EPA will coordinate with relevant State Agencies, as appropriate, during the pendency of this Order.

VII. PROJECT MANAGER

1. Within ten (10) days of the effective date of this Order, EPA and Respondent shall each designate a Project Manager. Each Project Manager shall be responsible for overseeing the implementation

of this Order. The EPA Project Manager will be EPA's designated representative at the facility. All communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the Project Manager.

2. The Parties shall provide at least five (5) days written notice prior to changing Project Managers. If either Project Manager shall be temporarily unavailable, an acting Project Manager shall be designated.
3. If EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste, hazardous constituents or is a threat to human health, or environment, or that Respondent is not capable of undertaking any studies or corrective measure ordered, EPA may order Respondent to stop further implementation of this Order for such period of time as EPA determines may be needed to abate any such releases or threats and/or to undertake any action which EPA determines is necessary to abate such releases or threats. The stop work order shall be issued to Respondent's Project Manager by EPA and shall include an explanation as to why the stop work order was required. Failure to comply with EPA's stop work order shall result in a penalty of \$25,000 per day of continued non-compliance with EPA's stop work order pursuant to RCRA Section 3008(h)(2), 42 U.S.C. § 6928(h)(2).
4. In the event the EPA Project Manager suspends the work or any other activity at the facility, the EPA Project Manager has the authority to and shall extend affected schedules under this Order for a period of time equal to that of the suspension of the work plus reasonable additional time for resumption of activities. If the delay pursuant to this Section is caused by Respondent or its contractor's noncompliance with this Order, then any extension of the compliance deadlines shall be at EPA's sole discretion. Any extensions in the schedules set out in this Order or in its attachments must be made by EPA in writing.
5. The absence of the EPA Project Manager from the facility shall not be cause for the stoppage or delay of work.

VIII. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. The Respondent shall submit to EPA the results of all sampling and tests or other data generated by its employees and/or consultants required by the implementation of this Order.
2. Respondent shall submit these results in progress reports as described in Attachment II and paragraph VI.5 of this Order.
3. EPA will make available to the Respondent the results of sampling and/or tests or other data similarly generated by EPA.
4. Respondent will specify the name and address of the laboratory to be used for sample analysis. EPA reserves the right to conduct a performance and QA/QC audit of the above-specified laboratory before, during, or after sample analysis. If the audit reveals deficiencies in lab performance or QA/QC, re-sampling and analysis may be required.
5. At the request of EPA, the Respondent shall allow split or duplicate samples to be collected by EPA, and/or its authorized representatives, of any samples collected by the Respondent as required by the implementation of this Order. The Respondent shall notify EPA not less than fourteen (14) days in advance of any well installation or sample collection activity. In the event EPA conducts any additional sampling, Respondent will be offered the opportunity to split samples with EPA.

IX. REPORTING AND PUBLIC ACCESS TO DOCUMENTS AND SAMPLING

1. Respondent may assert a claim of confidentiality for information submitted concerning its production methods and processes if the information qualifies for exemption from the Freedom of Information Act, as provided for in 5 U.S.C. § 522(b)(4). Respondent may also assert a claim of confidentiality for documents used to determine financial assurance that are submitted to EPA. Analytical data generated pursuant to this Order shall not be claimed as confidential. Confidentiality claims shall be submitted to EPA in accordance with the procedures outlined in 40 CFR § 2.203(b), and must include a written statement explaining how the information claimed to be confidential meets the criteria for use in confidentiality determinations found in 40 CFR § 2.208. If EPA approves the claim, the Agency will afford the information confidential status, as specified in Subpart B of 40 CFR Part 2. Respondent shall have the opportunity to review photographs and videotapes collected by EPA during inspections in order to have the opportunity to claim confidentiality. Respondent has five (5) business days after receipt of said photographs and/or videotapes to assert a claim of confidentiality following the provisions of this paragraph. If Respondent disagrees with a confidentiality determination by EPA, Respondent shall follow the procedures in 40 CFR Part 2. Information determined not confidential may be made available to the public without further notice to Respondent. If Respondent makes no claim of confidentiality for information submitted pursuant to this Order, EPA will make the information available to the public without further notice to Respondent.
2. Any reports, plans, specifications, schedules and attachments required by this Order shall be incorporated into this Order upon approval by EPA. Any noncompliance with such EPA approved plans, reports, specifications, schedules, and attachments shall be construed as a violation of the terms of this Order subject to stipulated penalties outlined in Section XVII of this Order. Oral advice or approvals given by EPA representatives will not relieve Respondent of its obligation to obtain any formal, written approvals required by this Order.

X. PUBLIC COMMENT AND PARTICIPATION

1. Upon approval by EPA of a CMS Final Report, EPA shall make both the RFI Final Report and the CMS Final Report and a summary of EPA's proposed corrective measure(s) and EPA's justification for proposing selection of the corrective measure(s) available to the public for review and comment for a period of at least thirty (30) calendar days.
2. Following the public review and comment period, EPA shall notify Respondent of the corrective measure(s) selected by EPA. If the corrective measure(s) recommended in the CMS Final Report is (are) not the corrective measure(s) selected by EPA after consideration of public comments, EPA shall inform Respondent in writing of the reasons for such decision, and the Respondent shall modify the RFI/CMS based upon public comment if directed to do so by the EPA. The selection and supporting documentation shall be attached to and incorporated as part of this Order. The implementation of the selected corrective measure(s) shall be in accordance with Section VI.4 of this Order.
3. The Administrative Record supporting the selection of the corrective measure(s) will be available for public review at EPA Region 6 in Dallas, Texas during normal business hours.

XI. FACILITY ACCESS AND RECORD RETENTION

1. EPA, and/or any EPA authorized-representative(s) are authorized, allowed, and permitted pursuant to Section 3007(a) of RCRA, 42 U.S.C. § 6927(a) to enter and freely move about all property at the

facility at all reasonable times for the purposes of enforcing the requirements of this Order, including:

- a) interviewing site personnel and contractors; inspecting non-privileged records, operating logs, and contracts related to this Order;
 - b) reviewing the progress of Respondent in carrying out the terms of this Order;
 - c) conducting such tests as EPA deems necessary;
 - d) using a camera, video camcorder, sound recorder, or other documentary type equipment; and
 - e) verifying the reports and data submitted to EPA by the Respondent.
2. In the event of inspections to be performed in the oversight of this Order by non-EPA personnel, EPA will provide advance notice to Respondent of the identity of the EPA-authorized representatives.
 3. The Respondent shall permit EPA to inspect and copy all non-privileged documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Order. All parties with access to the facility pursuant to this paragraph shall comply with applicable health and safety requirements found in 29 CFR Part 1910. Upon gaining entrance to the facility, EPA and/or its designated representatives, in non-emergency situations, will undergo a brief orientation meeting on the facility safety rules. EPA will follow Respondent's health and safety procedures to the greatest extent possible.
 4. To the extent Respondent is required to gain access to areas adjacent to the facility in order to comply with this Order and where those areas are presently owned by parties other than those bound by this Order, the Respondent shall obtain, or will use its best efforts to obtain, site access agreements from the present owners no later than thirty (30) calendar days after EPA approval of the specific workplan which requires access to that property. Best efforts shall include, at a minimum, a certified letter from Respondent to owners requesting access agreements to permit Respondent, EPA, and their authorized representatives to access such property, but not be limited to, requiring Respondent to pay reasonable rental costs and compensation for losses sustained by the owner or occupant of the property. Access agreements shall provide reasonable access to Respondent, its Contractor(s), the United States, EPA, the State, and its representatives, including contractors. In the event that site access agreements are not obtained within thirty (30) calendar days, the Respondent shall notify EPA immediately regarding both the lack of, and efforts to obtain, such agreements.
 5. Nothing in this subsection is intended to limit, affect or otherwise constrain EPA's rights of access to property pursuant to applicable law.
 6. In addition, all data, information, and records created as a requirement of this Order shall be made available to EPA upon request. All employees of Respondent and all persons, including contractors who engage in activity under this Order, shall be available to and shall cooperate with the EPA.
 7. Respondent shall preserve all data, documents, records and information required in the implementation and completion of this Order for six (6) years after termination of the Order. At the end of this six year period and before any such document or information is destroyed, Respondent shall notify EPA that such non-privileged documents and information are available to

EPA for inspection, and upon request, shall provide the original or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this section at any time before expiration of the six year period at the written request of EPA.

XII. FINANCIAL ASSURANCE

1. Within (10) business days of the effective date of this Order, Respondent shall demonstrate its ability to complete the Work and to pay all claims that arise from the performance of the Work through the submission of financial information sufficient to demonstrate to Plaintiff's satisfaction that Respondent has adequate net assets to complete the Work to make it unnecessary to require additional financial assurances. Should such submittal demonstrate that Respondent's total shareholder equity is not less than \$12,500,000.00, such submittal shall be deemed sufficient to demonstrate to Plaintiff's satisfaction that Respondent has adequate net assets to complete the Work to make it unnecessary to require additional assurances. Respondent shall thereafter submit independent audited financial statements containing such information annually on September 30. In the event that Shareholder's equity is less than \$12,500,000.00, Respondent shall, within thirty (30) days of receipt of notice of Plaintiff's determination, obtain and present to EPA for approval one of the following: (a) performance bond; (b) irrevocable standby letter of credit or (c) guarantee by a third party in an amount not to exceed the estimated cost of the remaining Work. Respondent's inability to demonstrate financial ability to complete the Work shall not excuse non-performance of the terms and conditions of this Order or any term thereof.
2. Within thirty (30) days of Respondent's receipt of a notice from EPA that Respondent's financial assurance measures are inadequate, Respondent shall establish an irrevocable standby letter of credit or shall otherwise provide (per 40 CFR § 265.142) additional financial assurances according to the terms provided in said notice. Such additional financial assurance measures shall be available to EPA to perform such terms or conditions established pursuant to the Order, provided that prior to drawing upon any such assurance measure, EPA shall notify the Respondent in writing of its alleged failure to perform the requirements of this Order and provide Respondent with a reasonable time period of not less than fifteen (15) calendar days within which to remedy the alleged nonperformance.
3. This Order in no way negates Respondent's obligation to establish and/or maintain financial assurances for closure and post-closure care under 40 CFR §§ 265.143 and 265.145.

XIII. DISPUTE RESOLUTION

1. The Parties to this Order shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution can not be achieved informally within ten (10) business days, the procedures of this section shall be implemented to resolve a dispute.
2. Except as provided in paragraph 4 of this Section, if Respondent disagrees, in whole or in part, with any EPA disapproval or modification or other decision or directive made by EPA pursuant to this Order, Respondent shall notify EPA in writing of its objections and the basis therefore within fourteen (14) calendar days of receipt of EPA's disapproval, decision, or directive. Said notice shall set forth the specific points of the dispute, the position Respondent is maintaining should be adopted as consistent with the requirements of this Order, the basis for Respondent's position, and any matters which it considers necessary for EPA's determination. Within ten (10) business days of EPA's receipt of such written notice, EPA shall provide to Respondent its decision on the pending dispute. The time periods established in this paragraph may be extended by mutual agreement of the parties in writing.

3. EPA's decision pursuant to paragraph two (2) of this Section shall be binding upon both parties to this Order, unless Respondent within ten (10) calendar days notifies EPA in writing of its continued objection(s) and requests the Hazardous Waste Management Division Director for Region 6, or his designee, to convene an informal conference for the purpose of discussing Respondent's objections and the reasons for EPA's determination. The Hazardous Waste Management Division Director shall issue a written decision within ten (10) calendar days from the date of the informal conference. The failure to invoke these Dispute Resolution procedures shall constitute a waiver of the right to contest a specific requirement of this Order. The time periods established in this paragraph may be extended by mutual agreement of the parties in writing.
4. If Respondent disputes an EPA determination requiring Respondent to perform additional work, as per Section VI.5 of this Order, Respondent shall have thirty (30) days from receipt of EPA's written determination to notify EPA in writing of its objections and may request the director to request an informal conference for the purposes of discussing Respondent's objections and the reasons for EPA's determinations. After this informal conference, the Director shall state, in writing, his decision regarding the issues in dispute. Such decision shall be implemented immediately by Respondent. If Respondent does not request an informal conference to discuss its objections to EPA's request for additional work, Respondent must perform the additional work requirements as directed by EPA.
5. In any dispute, Respondent shall have the burden of proving that EPA's position is incorrect.
6. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute, shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order, except to the extent that the Respondent's position is upheld in the dispute resolution process or any subsequent judicial proceedings.
7. During the pendency of the dispute resolution process, stipulated penalties, with respect to the disputed matter, and interest shall accrue, but payment of stipulated penalties shall be stayed pending resolution of the dispute. Stipulated penalties shall be calculated for each day of noncompliance with this Order beginning with the first day of noncompliance and including the period which the Dispute Resolution procedures were ongoing. If, however, the dispute is ultimately resolved in Respondent's favor, no stipulated penalties on the disputed issue or any directly related issue shall be due.
8. Unless otherwise specifically set forth herein, the failure to provide expressly for dispute resolution in any section of this Order is not intended and shall not bar Respondent from invoking this Section as to any dispute under this Order.

XIV. REIMBURSEMENT OF OVERSIGHT COSTS

Oversight costs are those costs incurred by the United States for EPA salary, travel, equipment, analysis, and contractor costs related to the facility. Respondent agrees to pay EPA for oversight costs associated with the implementation and execution of this Order, unless otherwise prohibited by law, in the following manner:

1. At the end of each six (6) month period beginning from the effective date of this Order, EPA will submit to Respondent a tabulation and an explanation of all oversight costs incurred with respect to this Order by EPA during the previous six (6) month period.
2. Payments to EPA for all EPA oversight costs, up to a maximum of \$75,000 per 12 month period, shall be made by money order, certified check, or cashier's check payable to the Treasurer of the United States within thirty (30) days of receipt of EPA's tabulation and shall be submitted to the following address:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 360582M
Pittsburgh, PA 15251

3. Document No. VI-303-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. If EPA does not receive payment within thirty (30) days of the Respondent's receipt of the tabulation of oversight costs, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
5. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid principal amount not paid within ninety (90) or more days of Respondent's receipt of the tabulation of oversight costs.

XV. RESERVATION OF RIGHTS

1. EPA expressly reserves all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, and 42 U.S.C § 6928(h)(2). The Order shall not be construed as a waiver or limitation of any rights, remedies, powers, and/or authorities which EPA has under RCRA, CERCLA, or any other statutory, regulatory or common law enforcement authority of the United States.
2. This Order shall not be construed to effect or limit the rights or responsibilities of any Federal, State, a local agency or authority pursuant to any other statutory provision, nor shall the entry of this Order and Respondent's consent to comply herewith, limit or otherwise preclude the EPA from taking additional enforcement actions pursuant to RCRA § 3008(h), 42 U.S.C. § 6928(h), CERCLA § 106 42 U.S.C. § 9606, or any other available legal authority, should the EPA determine that such actions are warranted. Nor shall this Order be construed to affect or limit in any way the obligation of the Respondent to comply with all Federal, State and local laws and regulations governing the activities required by this Order. This Order shall not be construed as a ruling or determination of any issue related to any Federal, State or local permit whether required in order to implement this Order or required in order to continue or alter operations of the facility (including but not limited

to construction, operation or closure permits required under RCRA) and the Respondent shall remain subject to all such permitting requirements. Nothing in this Order is intended to release or waive any claim, cause of action, demand or defense in law or equity that any party to this Agreement may have against any person(s) or entity not a party to this Agreement.

3. EPA expressly reserves all rights and defenses that it may have, including the right both to disapprove of work performed by Respondent pursuant to this Order and to request that Respondent perform tasks in addition to those stated in the Corrective Action Plan portion of this Order.
4. Notwithstanding any other provision of this Order, the Respondent shall remain responsible for obtaining any Federal, State, or local permit for any activity at the facility including those necessary for the performance of the work and for the operation or closure of the facility.

XVI. SUBSEQUENT MODIFICATION OF THE FINAL ORDER

1. This Order may be amended by mutual agreement of EPA and the Respondent. Any such amendments shall be in writing, shall be first signed by the Respondent, and shall be effective and incorporated into the Order on the date that such amendments are signed by EPA. In the event that a mutual agreement of the parties to modify this Order is not reached, such disagreement shall be the subject to the dispute resolution procedures in Section XIII of this Order.
2. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by EPA, incorporated into this Order, unless expressly stated otherwise in EPA's approval notice. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order and shall subject Respondent to the stipulated penalty provisions included in Section XVII of this Order.
3. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other written documents submitted by Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XVII. STIPULATED PENALTIES

1. Unless there has been a written modification of a schedule by EPA, or the force majeure provisions of this Order are invoked, in the event Respondent fails to meet any scheduled requirement set forth in this Order, Respondent agrees to pay a Stipulated Penalty as follows:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st day through 30th day	\$ 1,000.00
31th day through 90th day	\$ 2,500.00
91th day and beyond	\$10,000.00

2. Stipulated penalties under this Section shall be paid within thirty (30) calendar days after Respondent's receipt of written notification of noncompliance from EPA. Such stipulated penalties shall be paid by money order, certified check, or cashier's check made payable to the "Treasurer of the United States" and mailed to:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 360582M
Pittsburgh, PA, 15251

3. Document No. VI-303-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. Respondent may dispute EPA's right to the stated amount of penalties by invoking the dispute resolution procedures under Section XIII of this Order. If Respondent does not prevail upon resolution of the dispute, EPA shall collect all penalties which accrued prior to and during the period of dispute. If Respondent prevails upon resolution of the dispute, no penalties shall be payable.
5. If EPA does not receive payment within thirty (30) days of the due date, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
6. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid penalty amount not paid within ninety (90) or more days of Respondent's receipt of the notification of non-compliance.
7. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the requirements of this Order.

XVIII. EPA APPROVALS/DISAPPROVALS

All decisions, determinations and approvals required to be made by EPA under this Order must be in writing signed by the Project Manager. If the EPA does not approve any plan, report or other item required to be submitted to EPA for its approval pursuant to this Order, the Respondent shall address any deficiencies as directed by the EPA and resubmit the plan, report or other item within the time period specified in this Order for EPA's approval. Wherever in this Order approval is required, approval from EPA's Project Manager shall suffice for purposes of securing final approval.

XIX. PARTICIPATION IN COMMUNITY RELATIONS ACTIVITIES

Respondent shall be given notice of and shall participate in public meetings, as appropriate, which may be held or sponsored by EPA to explain activities at or concerning the facility, including the findings of the RFI and CMS. In addition, Respondent shall provide all support reasonably requested of them by EPA in carrying out the EPA approved Community Relations Plan. Before issuing a press release to the news media, with reference to any of the work required by this Order, both Parties shall attempt to provide advance notice to the appropriate Project Manager.

XX. TERMINATION AND SATISFACTION

The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, but not including the record preservation provision of paragraph XI., or other such continuing obligations, have been satisfactorily completed. EPA's determination under this section shall not be unreasonably withheld and should not be made later than ninety (90) days following any petition for termination submitted by Respondent. The provisions of this Order shall be deemed superseded if both parties agree that the requirements of the Order have been incorporated into a RCRA Permit or other Order in accordance Section XXVII of this Order.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify, save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or their agents, independent contractors, receivers, trustees, and assignees in carrying out activities required by this Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

XXII. QUALITY ASSURANCE

Throughout all sample collections and analysis activities, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, which shall be part of proposed and approved plans. In addition, Respondent shall:

1. Follow all relevant EPA guidance for sampling and analysis unless determined by EPA not to be applicable;
2. Notify EPA and NMED not less than seven (7) days in advance of any field sampling or installation activity;
3. Inform the EPA Project Manager in advance which laboratories will be used by Respondent and ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analysis;
4. Ensure that laboratories used by Respondent for analyses perform such analyses according to EPA methods (SW-846, 2nd Edition or as superseded) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondent shall submit all protocols to be used for analyses to EPA for approval no later than thirty (30) days prior to the commencement of analyses and shall not implement such protocols until receipt of EPA approval; and

5. Ensure that laboratories used by Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analysis of a reasonable number of known samples provided by EPA to demonstrate the quality of the analytical data.

XXIII. FORCE MAJEURE

1. Respondent shall perform all the requirements of this Order according to the time limits set unless this performance is prevented or delayed by events which constitute a force majeure.
2. For the purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondent including its consultants and contractors, which could not have been prevented or mitigated through the exercise of due diligence, that delays or prevents the performance of any obligation under this Order. Such events do not include increased costs of performance, economic hardship, changed economic circumstances, normal precipitation events, or failure to submit timely and complete applications for Federal, State, or local permits. Any failure to obtain necessary governmental permits and approvals necessary to accomplish work in this Order shall be treated in the same manner as force majeure events pursuant to this Order, provided that Respondent has submitted timely and complete applications to obtain such permits and approvals and has cooperated with the issuing Agency and urged the issuance of the permit or the granting of approval.
3. Respondent has the burden of proving that any delay is or will be caused by events reasonably beyond its control.
4. In the event of a force majeure, the time for performance of the activity delayed by the force majeure shall be extended for the period of the delay attributable to the force majeure plus reasonable additional time for resumption of activities. The time for performance of any activity dependent on the delayed activity shall be similarly extended, except to the extent that the dependent activity can be implemented in a shorter time. EPA shall determine whether subsequent requirements are to be delayed and the time period granted for any delay. Respondent shall adopt all reasonable measure to avoid or minimize any delay caused by a force majeure.
5. In the event of a force majeure, Respondent shall immediately notify EPA by telephone within two (2) working days after Respondent becomes aware of the event and shall within seven (7) days of the oral notification, notify EPA in writing of the cause and anticipated length of the delay. The notification shall also state the measures taken and/or to be taken to prevent or minimize the delay, and the time table by which Respondent intends to implement the delayed activity. Failure of Respondent to comply with the force majeure notice requirements will be deemed a forfeiture of its right to force majeure.

XXIV. NO FINAL AGENCY ACTION

Notwithstanding any other provisions of this Order, no action or decision by EPA, including without limitation decisions of the Director of the Hazardous Waste Management Division or the Regional Administrator, pursuant to this Order shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondent's compliance with the mandate(s) of this Order.

XXV. PENALTY PROVISIONS

Failure or refusal to carry out the terms of this Order in a manner deemed satisfactory to EPA subjects Respondent to a civil penalty in an amount not to exceed \$25,000 for each day of non-compliance with this Order in accordance with Section 3008(h) of RCRA, 42 U.S.C. § 6928(h).

XXVI. STATEMENT OF SEVERABILITY

If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall not be effected thereby.

XXVII. SURVIVABILITY/PERMIT INTEGRATION

1. Subsequent to the issuance of this Order, a RCRA permit may be issued to the facility incorporating the requirements of this Order by reference. The parties to the Order agree that all approved corrective action investigations associated with this Order shall satisfy, and be incorporated into, any subsequent RCRA permit terms and conditions imposed at the facility and Respondent will not be required to re-perform or expand upon such activities except as may be necessitated by changes in law and/or regulations, discovery of conditions not previously identified, or work insufficiently performed by Respondent or its contractors.
2. Any requirements of this Order shall not terminate upon the issuance of a RCRA permit unless (i) all Order requirements of the Corrective Action Plan (Attachment II) are expressly replaced by the requirements in the permit or (ii) all provisions of this Order have been fully complied with to EPA's Satisfaction as per Section XX of this Order, or any combination of (i) and (ii).

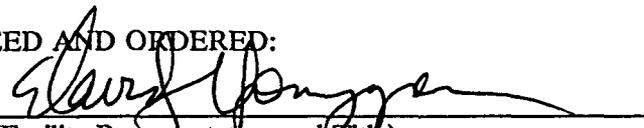
XXVIII. EFFECTIVE DATE

The effective date of this Order shall be the date on which it is signed by the EPA and EPA shall notify Respondent by telephone on such date that this Order has been signed. Because this Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. § 6928(b).

IT IS SO AGREED AND ORDERED:

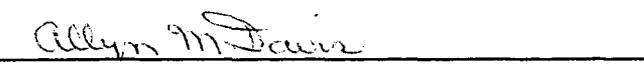
Date: 12-21-92

By:


(Facility Representative and Title)
David J. Younggren, Sr. Vice President

Date: 12-31-92

By:


Allyn M. Davis, Director
Hazardous Waste Management Division
U.S. Environmental Protection Agency

ATTACHMENT I
TABLES

Table I
(Concentrations, ppm)

Compound	MF-1162 (soil)	MF-1161 (soil)	MF-5119 (oil)	F-3476 (water)	F-3475 (Soil)
Chromium	0.02	1.5	80		
Manganese	7.19	347			
Arsenic	0.049	3.9			
Lead	0.031	4.4			

Table I (Continued)
Concentrations in ppb
(unless otherwise stated)

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
2-Methylnaphthalene	2,600 ppm	4,600	48,000
Benzene	3,100 ppm	21,000	
Ethylbenzene	3,200 ppm	280,000	
Toluene	12,000 ppm	560,000	
Xylene	11,000 ppm	1,100,000	
Cyclohexane	1,900 ppm	150,000	
Dimethylcyclohexane		61,000	
Napthalene		32,000	36,000
Unknown VOA		95,000	3,000
2-methylhexane		43,000	
Unknown VOA		97,000	
Trimethyl Pentene		23,000	
Unknown VOA		51,000	
2-Methyl Heptane		140,000	
Octane		470,000	
Unknown VOA		130,000	

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Methyl Benzene		14,000	
Dimethyl Hexane		3,600	
Ethyl Benzene		8,800	
Benzene Propyl	950 ppm	5,000	
Ethyl Methyl Benzene	1,700 ppm	17,000	64,000
Trimethyl Benzene	3,000 ppm	22,000	72,000
Methyl Propyl Benzene		4,800	46,000
Unknown ABN		8,600	
Ethyl Dimethyl Benzene		2,400	
Unknown ABN		37,000	
Octane		8,800	
Phenanthrene/ Anthracene		3,400	
Benzene Methyl, Methyl Ethyl			54,000
Alkane or Derivative			68,000
Unknown ABN			130,000
Unknown ABN			52,000
Unknown ABN			51,000
Alkane or Derivative			64,000
Napthalene Derivative			210,000
Unknown ABN			72,000
Heptadecane Tetramethyl			61,000
Alkane			140,000
Unknown ABN			34,000

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Alkane or Derivative			98,000
Eicosane			140,000
N-nitrosodiphenylamine	76 ppm		
Methylcyclopentane	2,300 ppm		
Methylcyclopentane	2,600 ppm		
Alcohol or Alkene	5,000 ppm		

Table II Concentrations in mg/l

Compound	MW #4					MW #9					MW #10				
	3/26	6/23	9/18	12/16		3/26	6/23	9/18	12/16		3/26	6/23	9/18	12/16	
Cyanide		0.5					0.4						0.050		
Total Phenol	0.633	0.430	0.085	0.096		0.304	0.372	0.17	0.16		0.147	0.186	0.065	0.055	
TOC	110	130	63	170		143	1,809	240	275		34	76	125	114	
TDS	1,868	2,266	2,398	2,128		2,360	1,718	1,428	1,684		1,546	2,820	2,408	3,272	
Chloride	500	989.7	754	675		149	1,010	89	109		245	569.8	587	457	
Sulfate		12.5				13.0	114		20		5.3	165		10	
Benzene	11.8	3.1	6.65	1.91		7.4	4	17.7	1.49		0.093		0.041	14.1	
Toluene	7.5	0.290	0.407	1.78		6.3	1.7	10.6	0.754				0.054	7.4	
Ethyl benzene	0.107	0.070	0.140	4.48		3.2	0.71	0.015	0.504					0.03	
Antimony				0.40					0.4					0.56	
Arsenic		0.070	0.08					0.02				0.053			
Cadmium	0.060										0.020				
Lead	0.074	0.066					0.059					0.059	0.05		
Nickel	0.08		0.12			0.30	0.25	0.13	0.16		0.08	0.25	0.18	0.08	
Selenium		0.080	0.063	0.03			0.040					0.040	0.071	0.03	
Zinc		0.019	0.008	0.04		0.012	0.015	0.05	0.011			0.015	0.16	0.01	

Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
2,4-Dichloro phenol	0.200				0.160	0.150			0.025			
2,4-Dimethyl phenol		0.058							0.020			
4,6-Dinitro-o-cresol	0.100											
2,4-Dinitro phenol	0.050											
2-Nitro phenol			0.108	0.026							0.002	
4-Nitro phenol	0.090		0.302	0.331			1.10				0.016	
Phenol	0.202				0.149	0.170	0.013	0.133	0.090			
Benzo(a) anthracene		0.016	0.010				0.007					
Chrysene	0.012											
Fluorine	0.150			0.023	0.012				0.033			
Naphthalene	0.036	0.019	0.015	0.036				0.029				0.004
Pyrene	0.166		0.005				0.010		0.030			
2-Chloro phenol			0.001									

Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
P-chloro- m-cresol			0.045									
pH	6.84	6.85	6.70	6.73	7.01	6.98	6.89	6.91	7.07	7.08	6.93	7.05
Conductivity		3800	3900	3800		2500	2200	2600		4400	4800	5100

Table III

Compound	Weight of Evidence Classification*
Chromium VI	A
Manganese	D
Inorganic Arsenic	A
Lead	B2
Cadmium	B1
Selenium	D
Zinc	D
Benzene	A
Ethylbenzene	D
Toluene	D
Xylene	D
Napthalene	D
Phenanthrene	D
Anthracene	D
n-Nitrosodiphenylamine	B2
Phenol	D
Benzo(a)anthracene	B2
Chrysene	B2
Flourene	D
Pyrene	D

- *
Group A - Human Carcinogen
Group B - Probable Human Carcinogen
 B1 - Has limited human evidence
 B2 - Has sufficient animal evidence, but inadequate or no human evidence
Group C - Possible Human Carcinogen
Group D - Not Classifiable as to human Carcinogenicity

Table IV
Concentrations in ppb

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Barium	210	39			1540	39
Chromium	116	1110				
Lead					252	
Mercury	0.6					
# Unknown ABNs	0	3	2	13	15	1
bis-(2-Ethylhexal) phthalate		38				
Phenol					46	
2-Methylphenol					81	
4-Methylphenol					43	
2,4-Dimethylphenol					16	
Napthalene					91	
2-Methyl napthalene					33	
# Unknown VOA				10	10	
2-butanone						
Ethyl Benzene				1660	352	

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Benzene				8200	23800	
Toluene				8040	8820	
O-xylene				1800	1970	
m/p-xylene				12100	10900	

ATTACHMENT II
CORRECTIVE ACTION PLAN

IMPLEMENTATION OF INTERIM MEASURES

A. PURPOSE

Interim Measures are implemented so as to mitigate a current or potential threat to human health and/or the environment. Interim Measures must be consistent with and integrated into any long term remedy at the Facility. Where applicable, Respondent may provide information on existing interim measures and their effectiveness.

B. SCOPE

The Interim Measures to be implemented at the Facility consist of the following tasks:

1. Interim Measures Work Plan
2. Interim Ground Water Recovery System
3. Reports

C. IMPLEMENTATION OF INTERIM MEASURES

The Respondent shall submit a workplan as described below in accordance with Section VI.1 of the Order.

1. Interim Measures (IM) Workplan

The IM Workplan shall be submitted within forty-five (45) days of the effective date of this Order and shall consist of:

- a. A description of on-going interim measures;
- b. The necessary number of recovery wells or recovery trenches sufficient to recover free product from the northwest portion of the site near the San Juan River, to the extent possible prior to completing the RFI, so as to prevent further migration to the San Juan River. If the installed system does not recover measurable quantities of non-aqueous phase liquids, it shall become part of the extraction system used to treat groundwater.
- c. A statement of the objectives of each interim measure specified above including how the measure mitigates a potential threat to human health and the environment and is consistent with and integrated into any long term plan for the facility; and
- d. Proposed location, design, construction, operation, and maintenance requirements of the interim measures.

2. Interim Measures

- a. Within thirty (30) days after EPA approval of the IM Workplan, Respondent shall implement a system designed to control the migration of hazardous constituents with ground water recovery wells or ground water migration/recovery trenches. The effects of the extraction system shall be

monitored. All ground water monitoring wells shall be considered for use as potential recovery and/or observation wells.

- b. Upon the effective date of this order Respondent will continue with efforts to achieve certified closure of all formerly active regulated surface impoundments in accordance with a State approved closure plan.
- c. Within sixty (60) days after the effective date of this order Respondent shall either:
 - (1) use an existing wastewater treatment system or construct a water treatment system capable of treating contaminated ground water from recovery wells in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances. Respondent shall obtain a discharge permit which will allow the discharge of treated groundwater in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances;
 - (2) construct or obtain storage capacity in compliance with RCRA for recovered contaminated ground water and/or;
 - (3) provide transportation for recovered contaminated groundwater for off-site treatment or disposal in compliance with RCRA.
- d. Within thirty (30) days after the effective date of this Order, Respondent shall locate and notify all owners of off-site wells which have documented or possible groundwater contamination which may be attributed to activities at the Facility. Notification shall include, as a minimum:
 - (1) that the contamination exists and caution should be exercised when using water from their wells for watering lawns, washing vehicles, etc.,
 - (2) that the water should not be used for drinking, cooking, bathing, or swimming.

3. Reports

The Respondent shall prepare plans, specifications, and reports as set forth above to document the design, construction, operation, maintenance, and monitoring of the interim measures. For interim measures which are currently being utilized, Respondent shall provide current status reports in the progress reports. In addition, the documentation shall include, but not be limited to the following:

a. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly IM progress reports for the first year, and quarterly thereafter, containing:

- (1) A description and estimate of the percentage of the IM completed;
- (2) Summaries of all findings;

- (3) Summaries of all changes made in the IM during the reporting period;
- (4) Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- (5) Summaries of all problems or potential problems encountered during the reporting period;
- (6) Actions being taken to rectify problems;
- (7) Changes in personnel during the reporting period;
- (8) Projected work for the next reporting period;
- (9) Copies of daily reports, inspection reports, etc.; and
- (10) Copies of validated laboratory results shall be submitted quarterly.

4. Interim Measure Implementation Reports

- a. Sixty (60) days after the completion of the construction of the IM (except for long term operation, maintenance and monitoring), the Respondent shall submit an IM Implementation Report to EPA. The Report shall document that the project is consistent with the design specifications, and if the interim measures are performing adequately. The report shall include, but not be limited to the following elements:
 - (1) Synopsis of the interim measures and certification of the design and construction;
 - (2) Explanation of any modifications to the plans and why these were necessary for the project;
 - (3) Listing of the criteria, established before the interim measures were initiated, for judging the functioning of the interim measures and also explaining any modification to these criteria;
 - (4) Results of facility monitoring, evaluating to what extent the interim measures will meet or exceed the performance criteria; and
 - (5) Explanation of the operation and maintenance (including monitoring) to be undertaken at the Facility.
- b. This report shall include the inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviations from design and material specifications (with justifying documentation) and as-built drawings.
- c. The Respondent shall finalize the Interim Measures Workplan and

incorporate or address comments received on the draft submissions.

5. Facility Submission Summary

A summary of the information reporting requirements contained in the Interim Measures Scope of Work is present below:

<u>Facility Submission</u>	<u>Due date*</u>
Submit Draft IM Workplan	45 days.
Submit Final IM Workplan	30 days after receipt of EPA's comments on the draft IM Workplan.
Implement IM Workplan	30 days after EPA's approval of the IM Workplan.
Notify Local Well Owners Draft IM Report	30 days 60 days after completion of construction of the IM.
Final IM Report	30 days after EPA comments on Draft IM Report.
Progress Reports	Monthly for the first year and quarterly thereafter.

*All dates are calculated from the effective date of this Order unless otherwise specified.

I. RCRA FACILITY INVESTIGATION (RFI)

A. PURPOSE

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. Respondent may submit previous data, plans and reports already developed from previous investigations at the facility. EPA will review these documents. Those documents which meet EPA approval may be used to satisfy parts of the Order requirements. The RFI will be conducted in accordance with EPA guidance documents and the requirements of state and federal statutes and regulations. Respondent may also use any relevant proposed rules, as approved by EPA. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI at the facility. In order to define the scope of the RFI Workplan, the Description of Current Conditions (Task I) shall follow the format of Facility Investigation (Task III) incorporating the appropriate portions of the RFI Workplan requirements. The proposed RFI Workplan shall then include the portions of the Facility Investigation not adequately covered under Task I, as determined and approved by EPA.

B. SCOPE

The RFI (RFI) consists of six tasks:

1. Task I: Preliminary Report: Description of Current Conditions
 - a. Facility Background
 - b. Nature and Extent of Contamination
 - c. Pre-Investigation Evaluation of Corrective Measure Technologies
2. Task II: RFI Workplan
 - a. Project Management Plan
 - b. Data Collection Quality Assurance Plan
 - c. Data Management Plan
 - d. Health and Safety Plan
 - e. Community Relations Plan
3. Task III: Facility Investigation
 - a. Environmental Setting
 - b. Source Characterization
 - c. Contamination Characterization
 - d. Potential Receptor Identification

4. Task IV: Investigation Analysis
5. Task V: Laboratory and Bench-Scale Studies
6. Task VI: Progress Reports

C. TASK I: PRELIMINARY REPORT: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to the EPA for review and approval a Preliminary Report providing the information as set forth below. The data gathered during any previous investigations or inspections and other relevant data shall be included.

1. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

- a. Map(s) depicting the following:
 - (1) General geographic location;
 - (2) Property lines, with the owners of all adjacent property clearly indicated, and all land previously owned and/or used by the Facility around what has been designated as the Facility;
 - (3) Topography (with a contour interval of five (5) or ten (10) feet and an approximate scale of 1-inch to 200-feet), showing waterways, all wetlands, floodplains, surface water features, drainage patterns;
 - (4) All tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;
 - (5) All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
 - (6) All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980;
 - (7) All known past and present product and underground waste tanks or piping;
 - (8) Surrounding land uses (residential, commercial, agricultural, recreational); and
 - (9) The location of all production and groundwater monitoring wells. These wells shall be clearly labeled with ground and top of casing elevations included.

All maps shall be of sufficient detail and accuracy to locate and report all

past, current and future work performed at the site;

- b. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;
- c. Approximate dates or periods of all known major past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or Federal response units or private parties), including any inspection reports or technical reports generated as a result of the response which are necessary to determine a release; and
- d. A summary of past permits requested and/or received, any enforcement actions and their subsequent responses and a list of studies performed for the Facility.

2. Nature and Extent of Contamination

The Respondent shall include in the Preliminary Report the existing information on the nature and extent of contamination.

- a. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, major spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following:
 - (1) Location of unit/area (which shall be depicted on a facility map);
 - (2) Quantities of solid and hazardous wastes;
 - (3) Hazardous waste or constituents, to the extent known; and
 - (4) Identification of areas where additional information is necessary.
- b. The Respondent shall prepare an assessment and description of the existing degree and extent of contamination. This should include:
 - (1) Available monitoring data and qualitative information on locations and levels of contamination at the facility;
 - (2) All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
 - (3) The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

3. Pre-Investigation Evaluation of Corrective Measure Technologies

Respondent shall include in the Preliminary Report an identification of site criteria that

influence the selection of corrective measure technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. Respondent shall also identify any field, laboratory, bench or pilot scale data that need to be collected in the facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

D. TASK II: RFI WORKPLAN REQUIREMENTS

The Respondent shall prepare Draft and Final RFI Workplans in accordance with Section VI.2. of the Order. The Draft RFI Workplan shall include the development of several plans, which shall be prepared concurrently. EPA will review the Draft RFI Workplan and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Workplan to address such comments and shall submit the revised RFI Workplan to the EPA. EPA will approve the revised RFI Workplan or modify it. The RFI Workplan as approved or modified by EPA shall become the Final RFI Workplan. During the RFI, it may be necessary to revise the Final RFI Workplan to accommodate the facility specific situation. The RFI Workplan includes the following:

1. Project Management Plan

The Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and personnel. The technical approach shall include the prioritization rationale necessary to investigate each media (soil, ground water, surface water, soil gas, and air). This includes each area of concern which may have contamination from facility activities. Respondent may use the Corrective Action Management Unit (CAMU) concept in the approach to identifying specific areas of the investigation. The technical approach shall address all the relevant requirements set forth in Task III of this Corrective Action Plan. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI. This plan shall also document the overall management approach to the RFI.

2. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

a. Data Collection Strategy

The Data Collection Strategy shall include but not be limited to the following:

- (1) Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;
- (2) Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
- (3) Description of the methodology used to assure that the data accurately and precisely represent the characteristics of a population, parameter variations at a sampling point, and process

conditions or environmental conditions.

Examples of factors which shall be considered and discussed include:

- (a) Environmental conditions at the time of sampling;
 - (b) Number of sampling points;
 - (c) Representativeness of selected media; and
 - (d) Representativeness of selected analytical parameters.
- (4) Description of the measures to be taken to assure that the following data sets can be compared to each other:
- (a) RFI data generated by the Respondent;
 - (b) RFI data generated by parties other than the Respondent;
 - (c) Data previously generated by Respondent or Respondent's agents.
- (5) Details relating to the schedule and information to be provided in quality assurance reports. The reports shall include but not be limited to:
- (a) Periodic assessment of measurement data accuracy, precision, and completeness;
 - (b) Results of performance audits;
 - (c) Results of system audits;
 - (d) Significant quality assurance problems and recommended solutions; and
 - (e) Resolutions of previously stated problems.

b. Sampling

The Sampling section shall discuss:

- (1) Selecting appropriate sampling locations, depths, etc.;
- (2) Determining a statistically sufficient number of sampling sites;
- (3) Measuring all necessary ancillary data;
- (4) Determining conditions under which sampling will be conducted;
- (5) Determining which media are to be sampled (e.g., groundwater, air,

soil, sediment, etc.);

- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of sampling and length of sampling period;
- (8) Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- (9) Documenting field sampling operations and procedures, including:
 - (a) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);
 - (b) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
 - (c) Documentation of specific sample preservation method;
 - (d) Calibration of field devices;
 - (e) Collection of replicate samples;
 - (f) Submission of field-biased blanks, where appropriate;
 - (g) Potential interferences present at the facility;
 - (h) Construction materials and techniques, associated with monitoring wells and piezometers;
 - (i) Field equipment listing and sample containers;
 - (j) Sampling order; and
 - (k) Decontamination procedures.
- (10) Selecting appropriate sample containers;
- (11) Sample preservation; and
- (12) Chain-of-custody, including:
 - (a) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
 - (b) Pre-prepared sample labels containing all information necessary for effective sample tracking.

c. Field Measurements

The Field Measurements section shall discuss:

- (1) Selecting appropriate field measurement locations, depths, etc.;
- (2) Providing a statistically sufficient number of field measurements;
- (3) Measuring all necessary ancillary data;
- (4) Determining conditions under which field measurement should be conducted;
- (5) Determining which media are to be addressed by appropriate field measurements (e.g., groundwater, air, soil, sediment, etc.);
- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of field measurement and length of field measurements period; and
- (8) Documenting field measurement operations and procedures, including:
 - (a) Procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition;
 - (b) Calibration of field devices;
 - (c) Collection of replicate measurements;
 - (d) Submission of field-biased blanks, where appropriate;
 - (e) Potential interferences present at the facility;
 - (f) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
 - (g) Field equipment listing;
 - (h) Order in which field measurements were made; and
 - (i) Decontamination procedures.

d. Contaminated Material Disposal

All contaminated material generated by activities required in the RFI shall be disposed of in accordance with all state and Federal regulations.

e. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

- (1) Chain-of-custody procedures, including:
 - (a) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
 - (b) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - (c) Specification of laboratory sample custody procedures for sample handling, storage, and disbursement for analysis.
- (2) Sample storage procedures and holding times;
- (3) Sample preparation methods;
- (4) Analytical procedures, including:
 - (a) Scope and application of the procedure;
 - (b) Sample matrix;
 - (c) Potential interferences;
 - (d) Precision and accuracy of the methodology; and
 - (e) Method detection limits.
 - (f) Calibration procedures and frequency;
 - (g) Data reduction, validation and reporting;
 - (h) Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check sample(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vi) "Blind" quality control sample(s);
 - vii) Control charts;
 - viii) Surrogate samples;

- ix) Zero and span gases; and
- x) Reagent quality control checks.
- (i) Preventive maintenance procedures and schedules;
- (j) Corrective action (for laboratory problems); and
- (k) Turnaround time.

3. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

a. Data Record

The data record shall include the following:

- (1) Unique sample or field measurement code;
- (2) Sampling or field measurement location and sample or measurement type;
- (3) Sampling or field measurement raw data;
- (4) Laboratory analysis ID number;
- (5) Property or component measured; and
- (6) Result of analysis (e.g., concentration).

b. Tabular Displays

The following data shall be presented in tabular displays:

- (1) Unsorted (raw) data;
- (2) Results for each medium, or for each constituent monitored;
- (3) Data reduction for statistical analysis;
- (4) Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- (5) Summary data.

c. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- (1) Display sampling locations and sampling grids;
- (2) Boundaries of sampling areas, and areas where more sampling is required;
- (3) Levels of contamination at each sampling location;
- (4) Geographical extent of contamination;
- (5) Display contamination levels, averages, and maxima;
- (6) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and
- (7) Indicate features affecting intramedia transport and show potential receptors.
- (8) Illustrate the pertinent structural geology in the area of the Facility, including detailed structural geology of the Facility.

E. Health and Safety Plan

The Respondent shall prepare a facility RFI Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:
 - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
 - b. Describe the known hazards and evaluate the risks associated with each activity conducted, including, but not limited to on and off-site exposure to contaminants during the implementation of interim measures at the facility.
 - c. List key personnel and alternates responsible for site safety, response operations, and for protection of public health;
 - d. Delineate work areas;
 - e. Describe levels of protection to be worn by personnel in work area;
 - f. Establish procedures to control site access;
 - g. Describe decontamination procedures for personnel and equipment;
 - h. Establish site emergency procedures;
 - i. Address emergency medical procedures for injuries and toxicological problems;

- j. Describe requirements for an environmental surveillance program;
 - k. Specify any routine and special training required for responders; and
 - l. Establish procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - b. EPA Order 1440.1 - Respiratory Protection;
 - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
 - d. Facility Contingency Plan;
 - e. EPA Standard Operating Safety Guide (1984);
 - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
 - g. State and local regulations; and
 - h. Other EPA guidance as provided.

F. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

II. TASK III: FACILITY INVESTIGATION

The Respondent shall conduct those investigations necessary to: characterize the Facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to support the development and evaluation of the alternatives during the Corrective Measures Study.

The facility investigation activities shall follow the RFI Workplan. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan.

At the conclusion of the investigation, the Respondent shall prepare and submit to EPA for approval a Draft RFI Report which shall contain an analysis and a summary of all facility investigations implemented pursuant to the conditions contained in this Task. EPA will review the Draft RFI Report and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Report to address such comments and shall submit the revised RFI Report to EPA. EPA shall either approve of the report or modify it.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the Facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall prepare a report evaluating hydrogeologic conditions at the Facility. This report shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Facility, including:
 - (1) Regional and facility specific stratigraphy;
 - (2) Regional structural geology;
 - (3) Depositional history;
 - (4) Identification and characterization of areas and amounts of recharge and discharge.
 - (5) Regional and facility specific groundwater flow patterns.
- b. An analysis of any topographic features that might influence the groundwater flow system.
- c. Based on field data, tests, cores, and available literature, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the Facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:
 - (1) Hydraulic conductivity and porosity (total and effective);
 - (2) Lithology, grain size, sorting, degree of cementation;
 - (3) An interpretation of hydraulic interconnections between saturated zones; and
 - (4) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.).
- d. Based on field studies, cores, and available literature, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
 - (1) Sand and gravel deposits in unconsolidated deposits; and

- (2) Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
 - (1) Water-level contour and/or potentiometric maps;
 - (2) Hydrologic cross sections showing vertical gradients;
 - (3) The flow system, including the vertical and horizontal components of flow;
 - (4) Any temporal changes in hydraulic gradients, due to seasonal influences; and
 - f. A description of man made influences that may affect the hydrogeology of the Facility, identifying:
 - (1) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and
 - (2) Man made hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Respondent shall conduct a program and/or utilize existing data from previous investigations to characterize the geologic units above the water table in the vicinity of the contaminant release(s). Such characterization shall include but not be limited to, the following information:

- a. USCS soil classification;
- b. Soil profile, including ASTM classification of soils;
- c. Directional relative permeability;
- d. Bulk density;
- e. Soil pH;
- f. Particle size distribution;
- g. Moisture content;
- h. Infiltration (field test);
- i. Storage capacity;

- j. Mineral content; and
- k. Soil conductivity.

3. Surface Water and Sediment

The Respondent shall conduct a program and/or utilize existing data from previous investigations or available literature to characterize any marshes, creeks, wetland areas, or ditches surrounding and crossing the Facility. Such characterization shall include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
 - (1) For all local wetland areas, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (i.e., 100 year event);
 - (2) Drainage patterns; and
 - (3) Evapotranspiration rates.
- b. Description of the chemistry of surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, and specific contaminant concentrations, as proposed by the Respondent and approved by EPA.
- c. Description of sediment characteristics including:
 - (1) Deposition area;
 - (2) Thickness profile; and
 - (3) Physical parameters (e.g., grain size, density, ion exchange capacity, etc.).

B. Source Characterization

Respondent shall document and quantify the following specific characteristics at all known source areas subsequent to November 1980 and to the extent known or ascertainable for periods prior thereto:

- 1. Source Areas
- 2. Unit/Disposal Area characteristics:
 - a. Location of unit/disposal area;
 - b. Type of unit/disposal area;
 - c. Design features;

- d. Operating practices (past and present);
 - e. Period of operation;
 - f. Age of unit/disposal area;
 - g. General physical conditions; and
 - h. Method used to close the unit/disposal area.
3. Waste Characteristics:
- a. Type of waste placed in each unit;
 - (1) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
 - (2) Quantity; and
 - (3) Chemical composition.
 - b. Physical and chemical characteristics of the wastes;
 - (1) Physical form (solid, liquid, gas);
 - (2) Physical description (e.g., powder, oily sludge);
 - (3) Temperature;
 - (4) pH;
 - (5) General chemical class (e.g., acid, base, solvent);
 - (6) Molecular weight;
 - (7) Density;
 - (8) Boiling point;
 - (9) Viscosity;
 - (10) Solubility in water;
 - (11) Cohesiveness of the waste; and
 - (12) Vapor pressure;
 - c. Migration and dispersal characteristics of the waste;
 - (1) Sorption;
 - (2) Biodegradability, bioconcentration, biotransformation;

- (3) Photodegradation rates;
- (4) Hydrolysis rates; and
- (5) Chemical transformations.

The Respondent shall document the procedures used in making the above determinations.

C. Contamination Characterization

The Respondent shall collect and/or utilize previously collected field data, available literature, and analytical data on groundwater, soils, surface water and sediment contamination in the vicinity of the Facility. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, and conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Respondent shall address the following types of contamination at the Facility:

1. Groundwater Contamination

Respondent shall characterize the vertical and horizontal extent of the groundwater contamination plume. Characterization of the plume beyond facility boundaries shall be conducted where necessary in order to fully delineate the plume. This characterization shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of groundwater;
- d. The horizontal and vertical concentration profiles of 40 CFR Part 264, Appendix IX constituents for volatile organics, semi-volatile organics and metals and TPH in the groundwater that are measured by EPA approved procedures;
- e. A minimum of two sampling events utilizing the parameters identified in paragraph II.C.1.d. are required in all new wells, with the exception of new wells which contain floating LNAPL's. Respondent shall develop an approach for sampling of wells which contain LNAPL's. Respondent may use an indicator parameter list after the initial two rounds of sampling;
- f. An evaluation of factors influencing the plume movement; and
- g. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation and/or utilize previously collected data to characterize the nature and extent of any contamination of the soil units above the water table. The investigation shall provide the following information:

- a. A description of the vertical and horizontal extent of contamination both on site and off-site, as necessary;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific soil properties and contaminant concentrations as proposed by Respondent and approved by EPA to include at a minimum;
 - (1) USCS soil classification;
 - (2) Soil profile, including ASTM classification of soils;
 - (3) bulk density of soil;
 - (4) soil pH;
 - (5) particle size distribution;
 - (6) moisture content;
 - (7) storage capacity;
 - (8) mineral content;
 - (9) soil conductivity;
 - (10) concentration of 40 CFR Part 264, Appendix IX constituents for volatile organics, semi-volatile organics and metals and TPH. Respondent shall propose appropriate field and laboratory screening techniques.
- d. The direction of contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. Off-site soil contaminant plumes, if present, shall be defined.

The Respondent shall document the procedures used in making the above determinations.

- f. A characterization of the physical and chemical nature of soils and contaminants in the following areas;

- (1) All ditches and run-off accumulation areas at or near the facility property boundaries;
 - (2) All contaminated soil storage areas and waste piles;
 - (3) Railcar unloading areas;
 - (4) Truck unloading areas; and
 - (5) Any other areas of concern.
- g. Maps of all areas included in the soil investigation which are at an appropriate scale which adequately depicts the necessary information.

3. Surface Water and Sediment Contamination

The Respondent shall conduct a surface water and sediment investigation and/or utilize previously collected data to characterize contamination resulting from releases at the Facility.

The investigation shall include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The stream/surface water velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. The surface water and sediment investigation must include the following to ensure adequate assessment of contaminants at or near the Facility:
 - (1) Samples from drainage ditches, culverts, etc., which accept water from the Facility and drain to wetland areas;
 - (2) Samples from wetland area at or near the Facility property boundaries;
 - (3) Samples from wetland areas, if it is determined that contaminated constituents may have reached these areas;
 - (4) Analysis of samples for general water quality parameters, and should at minimum, include temperature, pH, dissolved oxygen (DO), conductivity, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), total dissolved solids (TDS), total organic carbon (TOC), and nutrients; and

(5) Analysis of samples for constituents related to past and present Facility activities as described in C.2.c.10 of this section.

g. Maps for all areas included in the surface water and sediment investigation which are at a scale which adequately depicts the necessary information.

The Respondent shall document the procedures used in making the above determinations.

4. Air Quality Monitoring

Respondent may submit their current air permit and any existing additional air data for review to determine if it meets the requirements of air quality monitoring. Respondent may also present air modeling or other scientifically predictive information to meet the air quality monitoring requirements without using individual air monitoring stations. If EPA determines that air monitoring stations are necessary, Respondent shall install, operate and maintain the necessary air monitoring stations, as applicable. The purpose of monitoring air quality at the Facility is to determine the daily concentration and nature of possible air emissions migrating from the Facility. The air monitoring program must be capable of determining the velocity, direction, concentration and composition of the contaminants released. The proposal must include a list of potential contaminants for monitoring and the rationale for their selection.

5. Monitoring Wastewater Discharge

Respondent shall monitor the discharged treated wastewater for appropriate and relevant parameters. The monitoring program must meet all applicable Federal, State and local requirements. Respondent shall use accepted protocols for sampling and laboratory analyses which shall be submitted to the State and EPA for review with the RFI Workplan. Respondent may submit their current wastewater discharge permit for review to determine if it meets the requirements of this section.

6. Wetlands Monitoring

Respondent shall investigate all wetland areas as, defined by Section 404 of the Clean Water Act, at or near the Facility property boundaries. Respondent shall determine if contamination has reached any wetland areas with a sampling and analysis plan, and/or previously collected data designed to characterize the physical and chemical nature of surface water, sediments, soils, and contaminants.

D. Potential Receptors

The Respondent shall collect all available data describing the human populations and environmental systems that are susceptible to contaminant exposure from the Facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of groundwater:

a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial) for each aquifer around and beneath the Facility; and

- b. Location of groundwater users including wells and discharge areas.
2. Local uses and possible future uses of surface waters draining the Facility:
 - a. Domestic and municipal (e.g. potable and lawn/gardening watering);
 - b. Recreational (e.g. swimming, fishing);
 - c. Agricultural;
 - d. Industrial; and
 - e. Environmental (e.g. fish and wildlife propagation).
3. Human use of or access to the Facility and adjacent lands, including but not limited to:
 - a. Recreation;
 - b. Hunting;
 - c. Residential;
 - d. Commercial;
 - e. Zoning; and
 - f. Relationship between population locations and prevailing wind direction.
4. A description of the biota in surface water bodies on, adjacent to, or affected by the Facility.
5. A description of the ecology overlying and adjacent to the Facility.
6. A demographic profile of the people who use or have access to the Facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.
7. A description of any endangered or threatened species near the Facility.

E. TASK IV: INVESTIGATION ANALYSIS

Within sixty (60) days of Respondent' receipt of EPA's approval of the Final RFI Report, the Respondent shall submit an Investigation Analysis Report to support the selection of Protection Standards for the Facility. The report shall describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area.

1. Protection Standards
 - a. Groundwater Protection Standards

For regulated units the Respondent shall provide information to support the EPA's selection/development of Groundwater Protection Standards for all constituents

identified in the groundwater during the Facility Investigation (Task III). The Groundwater Protection Standards shall consist of:

- (1) For any constituents listed in Table 1 of 40 CFR 264.94, the respective value given in that table (MCL) if the background level of the constituent is below the given in Table 1; or
- (2) The background level of that constituent in the groundwater; or
- (3) Those level of constituents which are demonstrated as being protective of human health and the environment as determined by a risk-based study.

b. Other Relevant Protection Standards

The Respondent shall identify relevant and applicable standards for the protection of human health and the environment (e.g. National Ambient Air Quality Standards, Federally approved state water quality standards, etc.).

F. TASK V: FIELD, LABORATORY AND/OR BENCH-SCALE STUDIES

1. Based on the EPA approved report submitted pursuant to Task I-3 of this Order, Respondent shall, as required conduct laboratory and/or bench scale studies, if necessary to determine the applicability of a corrective measure technology or technologies to facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.
2. The Respondent shall develop a testing plan identifying the types(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.
3. Upon completion of the testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.
4. The Respondent shall submit a report summarizing the testing program and its results, both positive and negative, to EPA within sixty (60) days from receipt of EPA approval of the Final RFI Report.

G. TASK VI: PROGRESS REPORTS

The Respondent shall at a minimum provide the State and EPA with signed, monthly RFI progress reports containing:

1. A description and estimate of the percentage of the RFI completed;
2. Summaries of all findings;
3. Summaries of all changes made in the RFI during the reporting period;
4. Summaries of all contacts with representatives of the local community, public

interest groups or the State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in contact personnel during the reporting period;
8. Projected work for the next reporting period;
9. Copies of daily reports, inspection reports, etc.; and
10. Copies of validated laboratory results shall be submitted quarterly.

H. FACILITY SUBMISSION SUMMARY

The RFI Scope of Work submittal summary is presented below:

<u>FACILITY SUBMISSION</u>	<u>DUE DATE*</u>
Preliminary Report: Description of Current Conditions (Task I)	90 days
Draft RFI Workplan (Task II)	90 days
Revised RFI Workplan (Task II)	30 days after receipt of EPA comments on Draft RFI Workplan
Implementation of Approved RFI (Task II)	30 days after receipt of Workplan EPA approval of Revised RFI Workplan
Draft RFI Report (Task III)	365 days after RFI Workplan Approval
Final RFI Report (Task III)	30 days after EPA comment on Draft RFI Report
Investigation Analysis (Task IV) and the Field, Laboratory and/or Bench-Scale Studies (Task V)	60 days after receipt of EPA approval of Final RFI Report
Progress Reports on Tasks I through V	MONTHLY

* All due dates are calculated from the effective date of this Order unless otherwise specified.

III. CORRECTIVE MEASURE STUDY

A. PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate corrective action alternatives and to recommend the corrective measure or measures to be taken at the Facility. Respondent may combine the CMS report with the Field, Laboratory and/or Bench-Scale Report. The Respondent will furnish the personnel, materials, and services necessary to prepare the corrective measure study, except as otherwise specified.

B. SCOPE

The Corrective Measure Study consists of four tasks:

1. Task VII: Identification and Development of the Corrective Measure Alternatives
 - a. Description of Current Situation
 - b. Establishment of Corrective Action Objectives
 - c. Screening of Corrective Measures Technologies
 - d. Identification of the Corrective Measure Alternatives
2. Task VIII: Evaluation of the Corrective Measure Alternatives
 - a. Technical/Environmental/Human Health/Institutional
 - b. Cost Estimate
3. Task IX: Justification and Recommendation of the Corrective Measure or Measures
 - a. Technical
 - b. Human Health
 - c. Environmental
4. Task X: Reports
 - a. Progress Reports
 - b. Draft Report
 - c. Final Report

C. TASK VII: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVES

Based on the results of the RFI and in consideration of the identified Corrective Measure Technologies (Task I.3), the Respondent shall identify, screen and develop the alternatives for

removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

1. Description of Current Situation

The Respondent shall submit an update to the information describing the current situation at the Facility and the known nature and extent of the contamination as documented by the RFI Report. The Respondent shall provide an update to information presented in Task I of the RFI to the State and EPA regarding previous response activities and any interim measures which have or are being implemented at the Facility. The Respondent shall also make a facility specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

2. Establishment of Corrective Action Objectives

The Respondent shall propose to the EPA for review and approval, facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable state and Federal statutes and regulations, including any applicable proposed rules.

3. Screening of Corrective Measure Technologies

The Respondent shall review the results of the RFI and reassess the technologies specified in Task I.3. and identify additional technologies which are applicable at the Facility. The Respondent shall screen the preliminary corrective measure technologies identified in Task I.3 of the RFI and any supplemental technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

a. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

b. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

c. Technology Limitations

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

4. Identification of the Corrective Measure Alternatives

The Respondent shall develop the corrective measure alternatives based on the corrective action objectives and analysis of Corrective Measure Technologies, as presented in Task I.3 of the RFI and as supplemented following the preparation of the RFI Report. The Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the Facility. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task I.3, as supplemented in the development of the alternatives.

D. TASK VIII: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVES

The Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Respondent shall also develop cost estimates of each corrective measure.

1. Technical/Environmental/Human Health/Institutional

The Respondent shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and approximate quantities of utilities required. The Respondent shall evaluate each alternative in the four following areas:

a. Technical

The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(1) The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:

(a) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be

determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

- (b) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.
- (2) The Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:
- (a) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and
 - (b) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- (3) The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:
- (a) Constructability is determined by conditions both internal and external to the facility conditions and include such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the Facility (i.e., remote location vs. a congested urban area). The Respondent shall evaluate what measures can

be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

(b) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

(4) The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

b. Environmental

The Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

c. Human Health

The Respondent shall assess each alternative in terms of the extent of which it mitigates short-and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA.

d. Institutional

The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

2. Cost Estimate

The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

- a. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.
- (1) Direct capital costs include:
 - (a) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure;
 - (b) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
 - (c) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and
 - (d) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.
 - (2) Indirect capital costs include:
 - (a) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
 - (b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
 - (c) Startup and shakedown costs: Costs incurred during corrective measure startup; and
 - (d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.
- b. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Respondent shall consider the following operation and maintenance cost components:
- (1) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
 - (2) Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
 - (3) Auxiliary materials and energy: Costs of such items as chemicals

and electricity for treatment plant operations, water and sewer service, and fuel;

- (4) Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
- (5) Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
- (6) Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
- (7) Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
- (8) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- (9) Other costs: Items that do not fit any of the above categories.

E. TASK IX: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

1. Technical

- a. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- b. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be given preference;
- c. Implementability - corrective measure or measures which can be constructed and operating to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- d. Safety - corrective measure or measures which pose the least threat to the

safety of nearby residents and environments as well as workers during implementation will be preferred.

2. Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

3. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

F. TASK X: REPORTS

The Respondent shall submit a Corrective Measure Study Report presenting the results of Tasks VII through IX and recommending a corrective measure alternative. The CMS progress report can be combined with the monthly RFI progress report.

1. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly CMS progress reports containing:

- a. A description and estimate of the percentage of the CMS completed;
- b. Summaries of all findings;
- c. Summaries of all changes made in the CMS during the reporting period;
- d. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- e. Summaries of all problems or potential problems encountered during the reporting period;
- f. Actions being taken to rectify problems;
- g. Changes in the personnel involved with the CMS during reporting period;
- h. Projected work for the next reporting period; and
- i. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

2. Draft Report

The Report shall at a minimum include:

- a. A description of the Facility;

- b. Site topographic map; and
- c. Preliminary layouts.
- d. A summary of the corrective measure or measures;
 - (1) Description of the corrective measure or measures and rationale for selection;
 - (2) Performance expectations;
 - (3) Preliminary design criteria and rationale;
 - (4) General operation and maintenance requirements; and
 - (5) Long-term monitoring requirements.
- e. A summary of the RFI and impact on the selected corrective measure or measures;
 - (1) Field studies (groundwater, surface water, soil, air); and
 - (2) Laboratory studies (bench scale, pick scale).
- f. Design and Implementation Precautions;
 - (1) Special technical problems;
 - (2) Additional engineering data required;
 - (3) Permits and regulatory requirements;
 - (4) Access, easements, right-of-way;
 - (5) Health and safety requirements; and
 - (6) Community relations activities.
- g. Cost Estimates and Schedules;
 - (1) Capital cost estimate;
 - (2) Operation and maintenance cost estimate; and
 - (3) Project schedule (design, construction, operation).

3. Final Report

The Respondent shall finalize the CMS Report addressing comments received from EPA on the Draft CMS Report.

G. FACILITY SUBMISSION SUMMARY

A summary of the information reporting requirements contained in the Corrective Measure Study Scope of Work is presented below:

<u>FACILITY SUBMISSION</u>	<u>DUE DATE</u>
Draft CMS Report (Tasks VII, VIII, and IX)	60 days after receipt of EPA approval of the Final RFI Report
Final CMS Report (Tasks VII, VIII, and IX)	30 days after receipt of EPA comments on the Draft CMS Report
Progress Reports (Tasks VII, VIII, and IX)	Monthly, the progress report may be combined, as appropriate, with the monthly RFI progress report

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROTECTION AGENCY)	
)	
Complainant,)	
v.)	DOCKET NO. RCRA VI-501-H
)	
PLATEAU, INC.)	
SUBURBAN PROPANE GAS CORP.)	
BLOOMFIELD REFINING CO., INC.)	
GARY ENERGY CORP.)	
)	
Respondents.)	

CONSENT AGREEMENT AND FINAL ORDER

PRELIMINARY STATEMENT

1. This proceeding for the assessment of a civil penalty was instituted pursuant to Section 3008 of the Resource Conservation and Recovery Act of 1976, as amended (hereinafter called "RCRA"), 42 U.S.C. §6928. This proceeding was instituted by the issuance of a Compliance Order and Notice of Opportunity for Hearing (hereinafter called "Compliance Order"), served upon Bloomfield Refining Co., Inc. (hereinafter called "BRC") and Gary Energy Corp. (hereinafter called "Gary"), and the other above named Respondents, by Complainant, Director, Air and Waste Management Division, of the United States Environmental Protection Agency (hereinafter "EPA"), on or about March 29, 1985, by certified mail, return receipt requested, charging that Respondents violated Subtitle C of RCRA, Sections 3002, 3004, 3005, and 3010, 42 U.S.C. §§6922, 6924, 6925, and 6930 and the regulations promulgated thereunder at Title 40 of the Code of Federal Regulations (40 CFR), and the New Mexico Statutes Annotated, Chapter 74, Article 4, hereinafter referred to as NMSA-74-4, and the

regulations promulgated thereunder at Environmental Improvement Board Hazardous Waste Management Regulations Amendment 2 (HWMR-2). The issues in this proceeding between EPA and Respondents Plateau, Inc. and Suburban Propane Gas Corporation were resolved by the issuance of a Partial Consent Agreement and Final Order dated September 27, 1985. This Consent Agreement and Final Order resolves all remaining issues in this proceeding between EPA and Respondents BRC and Gary. The term "Respondents" as used hereinafter within refers collectively to Respondents BRC and Gary, unless specifically denoted otherwise.

2. This Consent Agreement and Final Order (hereinafter called "Consent Order") is entered into without the taking of any testimony and without the adjudication of any issue of law or fact in this action.

3. This Consent Order constitutes a full and complete settlement between Respondents and the Complainant of the civil violation of Subtitle C of RCRA charged against Respondents in this proceeding based upon the facts which were or should have been known. It shall have no effect as to any proceeding which might be, or has been, initiated under Sections 3008(h) or 3013 of RCRA.

4. For purposes of this proceeding only, Respondents admit the jurisdictional allegations of the Compliance Order; however, Respondents neither admit nor deny specific factual allegations contained in the Compliance Order or this consent order.

Respondents deny that their actions with respect to the Bloomfield Refinery constitute violation of any requirement of Subtitle C of RCRA; and Respondents do not concur with the conclusions of law set forth below, as well as those contained in the Compliance Order.

5. For purposes of this proceeding only, Respondents hereby expressly waive their right to receive an administrative hearing on any issue of law or fact set forth herein.

6. Respondents consent to the issuance of the Order herein-after recited and consent to the assessment of the stated civil penalty in the amount set out in the Order below.

FINDINGS OF FACT/CONCLUSIONS OF LAW

1. In 1963, Plateau, Inc., a New Mexico Corporation with business headquarters in Albuquerque, New Mexico, purchased a petroleum refinery located east of Sullivan Road, Bloomfield, San Juan County, New Mexico and owned and/or operated said facility continuously until on or about October 31, 1984. From on or about November 19, 1980, to October 31, 1984, Plateau, Inc. owned and/or operated a hazardous waste management facility at said location.

2. Gary Energy Corporation is a Colorado corporation with business headquarters at 115 Inverness Drive, East, Englewood, Colorado, 80112, and is a wholly owned subsidiary of Gary Williams Oil Producer, Inc. Bloomfield Refining Company, Inc., is a

Colorado corporation with business headquarters at 115 Inverness Drive, East, Englewood, Colorado, 80112, and is a wholly owned subsidiary of Gary Energy Corporation. On or about October 31, 1984, Respondents purchased the aforementioned Bloomfield, New Mexico, petroleum refinery from Plateau, Inc. and currently own and/or operate said business. Since on or about October 31, 1984, Respondents have owned and/or operated a hazardous waste management facility at said location.

3. Respondents are persons as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15), and 40 CFR §260.10, and as defined in NMSA-74-4-3.J. and Section 102.A.70. of HWMR-2.

4. Respondents are "generators" and "owners" and "operators" of a "hazardous waste management facility" used for the "treatment, storage, and disposal" of "hazardous waste" in accordance with the definitions of these terms under Section 1004 of RCRA, 42 U.S.C. §6903, and 40 CFR §260.10 and NMSA 74-4-3 and Section 102.A. of HWMR-2.

5. The EPA regulations at 40 CFR §§261, 262, 264, 265, and 270, and the corresponding EPA authorized New Mexico regulations at Sections 201, 202, 203, 204, 206, and 302 of HWMR-2, were established pursuant to Subtitle C, Sections 3001, 3002, 3004, 3005, 3006, and 3010 of RCRA, 42 U.S.C. §§ 6921, 6922, 6924, 6925, 6926, 6930, and are requirements of Subtitle C of RCRA, 42 U.S.C. §6921 et seq. A violation of any of the EPA, or EPA authorized New Mexico regulations, is a violation of Subtitle C of RCRA.

6. Pursuant to Section 3010 of RCRA, 42 U.S.C. §6930, Plateau, Inc. notified EPA of hazardous waste activity at its facility located east of Sullivan Road, Bloomfield, New Mexico, on August 18, 1980. In its notification, Plateau, Inc. identified itself as a generator and a treater, storer, and disposer of hazardous waste. In accordance with Section 3005 of RCRA, 42 U.S.C. §6925, Plateau, Inc. submitted Part A of its RCRA permit application for the Bloomfield Refinery facility, which was received on November 19, 1980. On or about April 16, 1982, Plateau, Inc., filed an amended RCRA notification of hazardous waste activity in which it claimed to be only a generator of hazardous waste, and not a treater, storer, or disposer of hazardous waste.

7. 40 CFR §270.72(d) and Section 302.C.3.d. of HWMR-2, require that changes in the ownership or operational control of a facility may be made if the new owner or operator submits a revised RCRA Part A permit application no later than 90 days prior to the scheduled change. All other interim status duties are transferred effective immediately upon the date of the change of ownership of the facility.

8. On or about October 31, 1984, Suburban Propane Gas Corporation sold the Plateau, Inc., Bloomfield, Refinery facility at Bloomfield, New Mexico, to Respondents. To date, no revised RCRA Part A permit application has been received from Respondents by Complainant.

9. Therefore, Respondents have violated 40 CFR §270.72(d) and Section 302.C.3.d. of HWMR-2, by failing to submit a revised RCRA Part A permit application no later than ninety (90) days prior to a change in facility ownership.

ORDER

1. Pursuant to the authority of Section 3008 of RCRA, 42 U.S.C. §6928, and upon consideration of the above Findings of Fact and Conclusions of Law, the nature, circumstances, extent, and gravity of Respondents' violations, or Respondents' ability to pay, of Respondents' good faith efforts to comply or lack thereof, of Respondents' history of compliance or lack thereof, and Respondents' degree of willfulness and/or negligence, and after consideration of the record herein, it is ORDERED that Respondents BRC and Gary of Englewood, Colorado, respectively, pay a civil penalty in the amount of FIVE THOUSAND SEVEN HUNDRED DOLLARS (\$5,700), the penalty to be paid within thirty (30) days of execution of this Consent Agreement and Final Order. Said penalty is to be paid by cashier's or certified check made payable to the Treasurer, United States of America and forwarded to:

U.S. EPA - Region VI
(Regional Hearing Clerk)
P.O. Box 360582M
Pittsburgh, Pennsylvania 15351

2. It is further ORDERED that Respondent shall immediately comply with the following requirements with respect to the Bloomfield, New Mexico, Refinery facility which is the subject of this Consent Order:

A. Respondent shall not store any hazardous waste on site, including its transportation terminal, except to the extent that such storage is authorized for up to ninety (90) days pursuant to 40 CFR Part 262 and corresponding New Mexico regulations at HWMR-2. Respondent shall not treat or dispose of any hazardous waste on site, including its transportation terminal.

B. Respondents shall not introduce any 1,1,1-trichloroethane, or any other hazardous waste listed at 40 CFR Part 261, Subpart D, into its Bloomfield Refinery sewer system.

C. Respondents shall insure that API Separator Sludge (Waste Code K051) is not "re-suspended and carried over" from the Bloomfield Refinery API Separator, as described in the Memorandum of the Director, Office of Solid Waste, U.S. EPA, dated December 7, 1984, attached hereto as Exhibit A. In order to effect this requirement, Respondents shall clean out the facility's API Separator not less frequently than every two years, or whenever the API Separator Sludge level reaches a height of 2.5 feet above the base of the API Separator, whichever occurs first. Any sludge removed from the API Separator will be properly manifested and handled as a hazardous waste. This procedure will be documented in the facility's operating record.

D. Respondents shall discharge only wastewater from the Slop Oil tank to the API Separator without oily emulsion solids, and shall document its efforts as performed, to insure the same in the facility operating record. Any slop oils in the

tank shall be returned to the refinery process and commingled with normal process streams; and any slop oil emulsion solids removed from the tank will be properly handled as hazardous waste, including manifesting if taken off-site.

E. Respondents shall, with respect to the spent caustic tank: (1) remove its contents in less than ninety (90) days on a continuing basis; (2) comply with the standards established under 40 CFR §262.34, and its New Mexico equivalent regulations at HWMR-2, for on-site hazardous waste storage up to ninety (90) days; and (3) perform alterations to the pipe between the caustic tank and facility wastewater system to insure that no discharge of caustic can occur. Respondents shall promptly repair any leaks that should occur in the caustic tank or caustic tank piping and shall install a containment dike around the base of the caustic tank. When removed from the spent caustic tank, material shall be properly handled as a hazardous waste. This may include transportation off-site for legitimate recycling, provided that the material is properly manifested as a hazardous waste, if required, and all other applicable regulatory requirements are met, including documentation in the facility operating record.

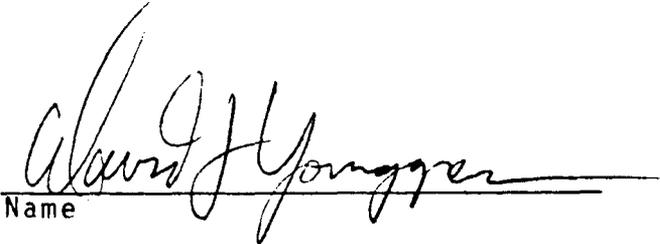
F. All materials removed from the south oily water pond (SOWP) and the north oily water pond (NOWP) prior to NMEID approval of the closure plan required by paragraph 3 below, including NMEID approval of the certification by a registered professional engineer of the removal of all hazardous waste from SOWP and NOWP, shall be properly handled as hazardous waste.

In the event that materials from SOWP or NOWP are removed after NMEID approval of the closure plan, or materials are removed from the north evaporation pond (NEP), or the south evaporation pond (SEP), at any time, Respondents shall comply with the approved closure plan and shall analyze such material prior to any removal to determine whether said material is a hazardous waste in accordance with Subpart C of 40 CFR Part 261 and its New Mexico equivalent regulations at HWMR-2, including specifically, with respect to the characteristic of "reactivity", whether such removal, or subsequent handling, may result in the generation of toxic gases in sufficient quantities to present a danger to human health or the environment. Said reactivity analysis shall be conducted in accordance with the method set forth in the July 12, 1985, memorandum addressed from Eileen Claussen, Director of the Characterization and Assessment Division, U. S. EPA, to Solid Waste Branch Chiefs, Regions I to X, U. S. EPA, entitled: "Interim Thresholds for Toxic Gas Generation Reactivity (§261.23(a)(5))". In the event such material would be characterized as hazardous waste following the guidelines of said memo after such analysis, or meet the definition of any other hazardous waste characteristic, Respondents shall properly handle such material as hazardous waste. Respondents shall also comply with 40 CFR 262.11 and the equivalent New Mexico regulations at HWMR-2, and other requirements, when and where applicable.

3. It is further ordered that Respondents shall immediately commence all activities specified in "A Sampling and Closure Proposal for the API Wastewater Ponds, Landfill, and Landfill Pond at the Bloomfield Refinery" by Engineering Science, Inc., Austin, Texas, dated September 1985, and attached hereto as Exhibit B. The analysis specified on page 5 and 6 of Exhibit B shall include the test for EP toxicity for metals. Further, Respondents shall remove all materials from the NOWP and SOWP, properly handling such materials as hazardous waste, prior to the conduct of any sampling as specified in Exhibit B. Following the conduct of these activities, Respondent shall submit copies of all analytical results and analysis or reporting required under Exhibit B to EPA and NMEID, as received. Respondent shall perform such reasonable additional activities as may be requested by EPA or NMEID, based upon a review of the analytical results/analysis required by Exhibit B, and submit such information to EPA/NMEID for review. Following accomplishment of the activities required by Exhibit B, Respondent shall submit its closure plan, along with proof of financial assurance for closure, to the Director, NMEID, with a copy to EPA no later than November 23, 1985. In addition to the requirements of Exhibit B, as revised or modified, and other pertinent requirements, including, but not limited to, certification by a registered professional engineer of the removal of all hazardous waste from NOWP and SOWP, in accordance with the closure performance standard of 40 CFR §265.111 and its New Mexico equivalent regulation at HWMR-2, Respondent's closure plan shall

require commencement of implementation within thirty (30) days of final NMEID approval and shall incorporate the provisions of subparagraphs (2.A.) through (2.F.) above.

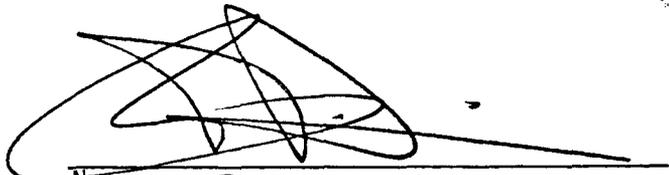
Dated: 11-22-85


Name

VICE PRESIDENT
Title

Bloomfield Refining Company, Inc.

Dated: 11-22-85


Name

President
Title

Gary Energy Corporation

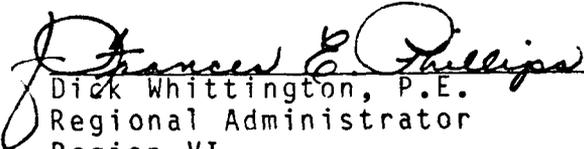
Dated: 11/26/85

Allyn M. Davis
Allyn M. Davis, Director
Hazardous Waste Management
Division
Region VI,
United States Environmental
Protection Agency

Dated: 11/26/85

Paul Seals
Paul Seals, Regional Counsel
Region VI,
United States Environmental
Protection Agency

It is so ORDERED. This Order shall become effective immediately.



Dick Whittington, P.E.
Regional Administrator
Region VI
United States
Environmental Protection Agency

Dated this 26th day of November 1985,
at Dallas, Texas.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL PROTECTION
AGENCY

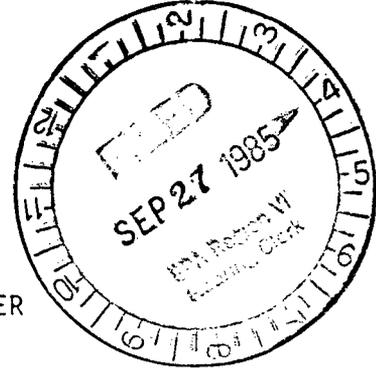
Complainant,

v.

PLATEAU, INC.
SUBURBAN PROPANE GAS CORP.
BLOOMFIELD REFINING CO., INC.
GARY ENERGY CORP.

Respondents.

DOCKET NO. RCRA VI-501-H



PARTIAL CONSENT AGREEMENT AND FINAL ORDER
STIPULATIONS

1. This proceeding for the assessment of a civil penalty was instituted pursuant to Section 3008 of the Resource Conservation and Recovery Act of 1976, as amended (hereinafter called "RCRA"), 42 U.S.C. §6928. This proceeding was instituted by the issuance of a Compliance Order and Notice of Opportunity for Hearing (hereinafter called "Compliance Order"), served upon Plateau, Inc. (hereinafter called "Plateau") and Suburban Propane Gas Corporation (hereinafter called "SPGC"), and the other above named Respondents, by Complainant, Director, Air and Waste Management Division, of the United States Environmental Protection Agency (hereinafter "EPA"), on or about March 29, 1985, by certified mail, return receipt requested, charging that Respondents violated Subtitle C of RCRA, Sections 3002, 3004, 3005, and 3010, 42 U.S.C. §§6922, 6924, 6925, and 6930 and the regulations promulgated thereunder at Title 40 of the Code of Federal Regulations (40 CFR), and the New Mexico Statutes Annotated, Chapter 74, Article 4, hereinafter referred to as NMSA-74-4, and the regulations promulgated thereunder at Environmental Improvement Board Hazardous Waste Management Regulations Amendment 2 (HWMR-2).

2. This Partial Consent Agreement and Final Order is a full and complete settlement between Complainant and Plateau, SPGC, and of their affiliates, as to all civil violations of Subtitle C of RCRA and of HWMR-2 that are alleged, or could have been alleged in this proceeding concerning the Bloomfield, New Mexico, facility against Respondents Plateau and SPGC based upon facts which are or should have been known; but it shall have no effect as to any proceeding which might be, or have been, initiated under Sections 3008(h) or 3013 of RCRA. Further, it is of no effect with respect to Respondents Bloomfield Refining Company, Inc. and Gary Energy Corp. The term "Respondents", as used hereinafter, for the purposes of this Consent Agreement and Final Order, refers only to Plateau and SPGC.

3. For purposes of this proceeding only, Respondents Plateau and SPGC admit the jurisdictional allegations of the Compliance Order; however, Respondents neither admit nor deny specific factual allegations contained in the Compliance Order, which is attached hereto as exhibit A and incorporated as if fully set forth herein. Respondents deny that the handling and management of waste by Plateau at the Bloomfield Refinery violated any requirement of Subtitle C of RCRA or HWMR-2.

4. For purposes of this proceeding only, Respondents hereby expressly waive their right to request a hearing on any issue of law or fact set forth or incorporated herein.

5. Respondents consent to the issuance of the Order hereinafter recited and consent to the payment of the stated civil penalty in the amount set out in the Order below.

6. For purposes of this proceeding only, Respondents Plateau and SPGC waive any objection to the jurisdiction or authority of the Regional Administrator to issue this Order.

ORDER

Pursuant to the authority of Section 3008 of RCRA, 42 U.S.C. Section 6928, and upon consideration of the above Stipulations, the nature, circumstances, extent, and gravity of Respondents' violations, of Respondents' ability to pay, of Respondents' good faith efforts to comply or lack thereof, of Respondents' history of noncompliance or lack thereof, and Respondents' degree of willfulness and/or negligence, and after consideration of the record herein, it is ORDERED that Respondent, Plateau, Inc., Albuquerque, New Mexico, pay a civil penalty in the amount of SEVENTY FIVE THOUSAND DOLLARS (\$75,000), the penalty to be paid within thirty (30) days of execution of this Partial Consent Agreement and Final Order. Said penalty is to be paid by cashier's or certified check made payable to the Treasurer, United States of America and forwarded to:

U.S. EPA - Region VI
(Regional Hearing Clerk)
P.O. Box 360582M
Pittsburgh, PA 15351

Dated: Sept. 25, 1985

Kevin T. McIver
Kevin T. McIver, Secretary
Plateau, Inc.
Respondent

Dated: Sept 25, 1985

William J. Owen, Jr.
William J. Owen, Jr.
Senior Vice President
Suburban Propane Gas Corporation
Respondent

Dated: September 26, 1985

Allyn M. Davis
Allyn M. Davis, Director
Air and Waste Management Division
EPA, Region VI

Dated: September 26, 1985

Paul Seals
Paul Seals
Regional Counsel
EPA, Region VI

It is so ORDERED. This Order shall become effective immediately.

J. James E. Phillips
Dick Whittington, P.E.
Regional Administrator
EPA Region VI

Dated this 27th day of September 1985, at Dallas, Texas.

EXHIBIT A

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION VI
DALLAS, TEXAS

IN THE MATTER OF:

PLATEAU, INC.
SUBURBAN PROPANE GAS CORPORATION
BLOOMFIELD REFINING COMPANY, INC.
GARY ENERGY CORPORATION
Bloomfield Refinery
Bloomfield, New Mexico
EPA I.D. Number NMD089416416

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DOCKET NUMBER

RCRA VI-501-H

COMPLIANCE ORDER AND NOTICE
OF OPPORTUNITY FOR HEARING

This COMPLIANCE ORDER AND NOTICE OF OPPORTUNITY FOR HEARING, hereinafter referred to as Order, is issued pursuant to Section 3008 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, (as amended), 42 U.S.C. §6928, (hereinafter referred to as RCRA).

Pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. §6928(a)(2), EPA may, after providing notice to the State, enforce the requirements of Subtitle C of RCRA in a State which has received interim authorization to carry out a hazardous waste management program under Section 3006(c) of RCRA, 42 U.S.C. §6926(c). The State of New Mexico was authorized to carry out its hazardous waste management program in lieu of the federal program. On September 30, 1983, the State of New Mexico received interim authorization to operate Phase I and Phase II A and B of the federal hazardous waste management program. On January 11, 1985, the State of New Mexico received final authorization to operate the federal hazardous waste management program. Therefore, EPA sets forth violations in accordance with applicable laws and regulations established under both the EPA and the New Mexico hazardous waste management



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET

DALLAS, TEXAS 75270

November 26, 1985

Joseph F. Guida, Esquire
Gardere & Wynn
Attorneys and Counselors
1500 Diamond Shamrock Tower
Dallas, Texas 75201

Re: Bloomfield Refining Company, Inc.
Gary Energy Corporation
RCRA Docket No. VI-501-H

Dear Joe:

Enclosed is a copy of the Consent Agreement and Final Order filed in connection with the above referenced proceeding. Please note that the Order requires payment of the civil penalty within thirty (30) days of execution of this Consent Agreement and Final Order. Said penalty is to be paid by cashier's or certified check made payable to the Treasurer, United States of America and forwarded to:

U.S. EPA - Region VI
(Regional Hearing Clerk)
P.O. Box 360582M
Pittsburgh, PA 15351

Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in cursive script, appearing to read "James L. Turner".

James L. Turner
Attorney
Office of Regional Counsel

Enclosure

Mr. Ronald W. Williams, President
Bloomfield Refining Company, Inc.
and
Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
115 Inverness Drive, East
Englewood, Colorado 80112

CERTIFICATE OF SERVICE

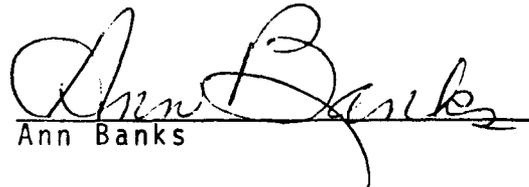
I hereby certify that the original of the foregoing Consent Agreement and Final Order, RCRA Docket No. VI-501-H, was hand-delivered to the Regional Hearing Clerk, EPA, Region VI, and that true and correct copies of same were placed in the United States Mail, certified mail, return receipt requested, on this 26th day of November 1985, addressed to the following:

Honorable Frank W. Vanderheyden
Administrative Law Judge
Office of Administrative Law Judges (A-110)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 10460

Joseph F. Guida, Esquire
Gardere & Wynn
Attorneys and Counselors
1500 Diamond Shamrock Tower
Dallas, Texas 75201

Mr. Ronald W. Williams, President
Bloomfield Refining Company, Inc.
and

Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
115 Inverness Drive, East
Englewood, Colorado 80112


Ann Banks



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

RECEIVED

JAN - 5 1993

D. RODERICK

December 31, 1992

Mr. David Roderick, Refinery Manager
Bloomfield Refining Company
P. O. Box 159
Bloomfield, New Mexico 87413

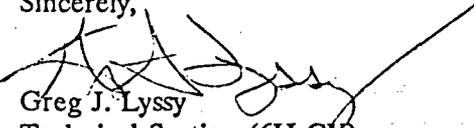
RE: Bloomfield Refining Company, Inc.
EPA ID# NMD089416416

Dear Mr. Roderick:

Enclosed please find three (3) copies of the final RCRA § 3008(h) Administrative Order on Consent (Order) for Bloomfield Refinery Company (BRC). The effective date of the Order is December 31, 1992. This Order is submitted pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by § 3008(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) as further amended by the Hazardous and Solid Waste Amendments of 1984, 42 USC § 6928(h).

If you have any questions, or if your technical consultants have any questions, please do not hesitate to call me at (214) 655-8317.

Sincerely,


Greg J. Lyssy
Technical Section (6H-CX)
RCRA Enforcement Branch
Hazardous Waste Management Division

Enclosures

cc: Joe Guida, Guida & Associates
Kathleen Sisneros, New Mexico Environment Department
Benito Garcia, New Mexico Environment Department
Ed Horst New Mexico Environment Department

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 6

REGIONAL ADMINISTRATOR
EPA REGION VI

1992 DEC 31 AM 9:19

RECEIVED

IN THE MATTER OF:)

Bloomfield Refining Company)
P.O. Box 159)
Bloomfield, New Mexico)

EPA I.D. NO. NMD089416416)

RESPONDENT)

ADMINISTRATIVE
ORDER ON CONSENT

U.S. EPA DOCKET NO.
VI-303-H

PROCEEDING UNDER SECTION
3008(h) OF THE RESOURCE
CONSERVATION AND RECOVERY
ACT, AS AMENDED, 42
U.S.C. SECTION 6928(h).

I. JURISDICTION

This Administrative Order on Consent (Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 3008(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, (RCRA), and further amended by the Hazardous and Solid Waste Amendments of 1984, 42 U.S.C. § 6928(h). The authority to issue this Administrative Order has been delegated to the Regional Administrator by EPA Delegation Nos. 8-31 and 8-32, dated April 16, 1985, and further delegated to the Director of the Hazardous Waste Management Division, Region 6 (Director).

This Order is issued to Bloomfield Refining Company, a Delaware Corporation (Respondent), owner/operator at the facility located at #50 County Road 4990, Bloomfield, New Mexico (Facility). Respondent admits EPA's jurisdiction to issue this Order and to enforce its terms. Further, Respondent will not contest EPA's jurisdiction to: compel compliance with this Order in any subsequent enforcement proceedings, either administrative or judicial; require Respondent's full or interim compliance with the terms of this Order; or impose sanctions for noncompliance with this Order.

By consenting to this Order and by complying with its provisions, Respondent does not admit the truth of any fact or legal finding or determination asserted herein, other than those necessary to establish jurisdiction as described in the previous paragraphs. Neither this Order nor any part thereof shall constitute any evidence, admission, or adjudication of any wrongdoing, misconduct, liability, responsibility, or estoppel on the part of Respondent, or any director, officer, employee, or affiliate thereof, except as evidence for purposes of enforcement of this Order. Respondent reserves all rights to contest any subsequent Order or judicial proceeding associated with implementation of corrective measures.

II. PARTIES BOUND

1. This Order shall apply to and bind Respondent, its officers, directors, employees, agents, trustees, receivers, successors, assigns, and all other persons, including, but not limited to, firms, corporations, subsidiaries, contractors, consultants acting under or on behalf of Respondent, and within the scope of their employment.

2. No change in ownership, corporate, or partnership status relating to the facility will in any way alter the status or responsibility of the Respondent under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of the Respondent by the express terms and conditions of this Order, irrespective of its use of employees, agents or consultants to perform any such tasks.
3. Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order.
4. Respondent shall provide a copy of this Order to all primary contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) calendar days of the effective date of this Order or date of such retention of services and shall condition all such contracts on compliance with the terms of this Order.
5. Respondent shall give notice of this Order to any successors in interest prior to transfer of ownership or operation of the facility and shall notify EPA no later than thirty (30) days prior to such transfer. In its discretion, EPA may shorten the advance notification period provided herein.
6. Any documents transferring ownership and/or operations of the Facility from Respondent to a successor-in-interest shall include written notice of this Order; however, Respondent shall, no less than fifteen (15) days prior to transfer of ownership or operation of the Facility, provide written notice of this Order to its successor-in-interest, and written notice of said transfer of ownership and/or operation to EPA.
7. Respondent agrees to undertake all actions required by the terms and conditions of this Order including any portions of this Order incorporated by reference. Respondent explicitly waives its rights to request a hearing on this matter and consents to the issuance of this Order without hearing pursuant to § 3008(b) of RCRA and as an Order issued pursuant to § 3008(h) of RCRA.

III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of EPA and Respondent are: (1) to perform Interim Measures (IM) at the facility to mitigate potential threats to human health or the environment; (2) to perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release(s) of hazardous waste or hazardous constituents at or from the facility; and (3) to perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for corrective action(s) to prevent or mitigate any migration of release(s) of hazardous wastes or hazardous constituents at or from the facility, and to collect any other information necessary to support the selection of corrective measures at the facility.

IV. FINDINGS OF FACT

1. Respondent is Bloomfield Refining Company, #50 County Road 4990, Bloomfield, New Mexico, 87413, and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15). Bloomfield Refining Company is a Delaware Corporation and is a wholly-owned subsidiary of Gary-Williams Energy Corporation, Inc.
2. The facility is located off of Sullivan Road (County Road 4990), Bloomfield, San Juan County, New Mexico, at 36 degrees, 41 minutes and 50 seconds latitude and 107 degrees, 58 minutes, and 20 seconds longitude. This location is less than one mile south of Bloomfield, New Mexico, off Highway 44.

3. Plateau, Inc., the former owner of the facility, operated hazardous waste management units at the facility after November 19, 1980. Plateau, Inc. is located at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc., is a wholly-owned subsidiary of Suburban Propane Gas Corporation, a New Jersey corporation.
4. On or about October 31, 1984, Suburban Propane Gas Corporation sold the facility to Respondent.
5. Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), requires any person generating or transporting any listed or characteristic hazardous waste, or owning or operating a facility for treatment, storage or disposal of such substance, to file with the EPA a notification stating the location and general description of such activity or the listed or characteristic hazardous wastes handled by such persons.
6. Pursuant to Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), on August 18, 1980, Plateau, Inc., notified EPA of its hazardous waste activity. In this notification, Plateau, Inc., identified itself as a generator, treater, storer and/or disposer of hazardous waste at the facility.
7. Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), provides that any person who complies with the provisions of Section 3005(e) shall be treated as having been issued a permit. Such a facility shall be considered to be under interim status, and shall be required to meet all applicable requirements of RCRA.
8. In its RCRA Part A permit application (permit application) dated November 19, 1980, Plateau, Inc., notified the Administrator of EPA and the New Mexico Environmental Improvement Division (NMEID), that it was engaged in the generation and storage at the facility of hazardous wastes identified and listed in 40 CFR Part 261 and used surface impoundments for the treatment, storage, or disposal (process code S04) of hazardous wastes at the facility. Plateau also noted on the application that the surface impoundments may have received hazardous materials in the past, but the contents have not been adequately characterized.
9. The facility, comprised of 287 acres, consists of petroleum refining operations having five (5) RCRA-regulated hazardous waste management units which received the following hazardous wastes or hazardous waste constituents as identified in the facility's permit application:
 - a) hazardous wastes from specific sources identified at 40 CFR § 261.32;
 - i) K049 - Slop oil emulsion solids from the petroleum refining industry,
 - ii) K050 - Heat exchanger bundle cleaning sludge from the petroleum refining industry,
 - iii) K051 - API separator sludge from the petroleum refining industry,
 - iv) K052 - Tank bottoms (leaded) from the petroleum refining industry.
10. During May and June, 1983, EPA personnel conducted inspections that revealed significant seepage of ground water from the contact of the cobble bed and the Nacimiento formation at the face of the bluff above the San Juan River.
11. Analysis of samples of these seeps taken during a May, 1984, inspection showed elevated levels of organic and inorganic contamination (Attachment I - Table I) released from the facility to the San Juan River.

12. On July 15, 1982, May 10, 1983, June 7-8, 1983, March 19-23, 1984, and May 4, 1984 EPA conducted Compliance Evaluation Inspections (CEIs) to assess the facility's compliance with the RCRA Hazardous Waste Management regulations.
13. The May 10, 1983, inspection was conducted to also assess potential adverse environmental impacts, including endangerment to human health, welfare, or the environment pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 42 U.S.C. § 9601 et seq.
14. According to an EPA RCRA Facility Assessment Evaluation (RFA) conducted June 27, 1987, the facility has thirteen (13) Solid Waste Management Units (SWMUs), five (5) of which are considered to be RCRA-regulated SWMUs and are listed below:
 - a) South Oily Water Pond (SOWP) (immediately downstream of the API separator);
 - b) North Oily Water Pond (NOWP) (immediately downstream of the SOWP);
 - c) Evaporation Ponds (2);
 - d) Landfill; and
 - e) Landfill Runoff Ponds.
15. The RCRA § 3013 42 U.S.C. § 6934, Final report was submitted by Respondent on or about February 8, 1987. The presence of hydrocarbon-contaminated groundwater was observed at monitoring wells MW#4, MW#9, and MW#10 documenting a release to the groundwater from the facility. The sampling results are listed in Attachment I, Table II.
16. Attachment I, Table III lists the chemicals found in the groundwater at the facility and the health-based classification based on the weight of evidence for these chemicals.
17. On September 12-14, 1989, a Comprehensive Ground Water Monitoring Evaluation (CME) by the EPA was conducted at the facility. The CME was conducted to assess the facility's compliance with RCRA ground water monitoring requirements found at 40 CFR § 265.90 et seq. According to the CME report, the following was noted:
 - a) The NOWP and SOWP have only one (1) downgradient well in place; and
 - b) The landfill and landfill pond have only one (1) downgradient well in place. These areas are separate units and are required to be monitored separately.
18. During the September 1989 CME, samples were taken of the monitoring wells at the facility. The sample results are listed in Attachment I, Table IV.
19. The Toxicity Characteristic Rule was effective on September 25, 1990, and is codified at 40 CFR Part 261.24, establishing regulatory levels for 25 organic chemicals in addition to the eight metals and six pesticides on the existing list of constituents which exhibit the characteristic of toxicity and are regulated under RCRA.
20. On September 25, 1990, Respondent submitted an Amended Notification of Regulated Waste Activity and a Part A Application to EPA identifying itself as a treater, storer or disposer of hazardous waste.

21. In the Part A Application, Respondent identified the SOWP and NOWP as Hazardous Waste Aeration Impoundments (Aeration Impoundments).
22. In the Part A Application, Respondent identified the Aeration Impoundments as units regulated under the TC Rule specifically for benzene concentrations (D018).
23. This Order is based upon the Administrative Record compiled by EPA, which is available for public examination at the Region 6 offices, 1445 Ross Avenue, Dallas, Texas, during normal business hours, Monday through Friday.
24. Based on the release of hazardous waste or hazardous waste constituents into the environment from Respondent's facility, the actions ordered below are necessary to protect human health or the environment.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set out above, and the administrative record, the Director has determined that:

1. Respondent is the operator/owner of the facility, as that term is defined at 40 CFR § 260.10;
2. The location at Bloomfield, New Mexico, where Respondent is doing business, is a "facility" as that term is defined at 40 CFR § 260.10;
3. Respondent is a person defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15);
4. The facility is authorized to operate under interim status pursuant to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e);
5. There have been releases of hazardous wastes or hazardous waste constituents into the environment from the facility as defined by § 3001 of RCRA, 42 U.S.C. § 6921.
6. The interim measures and comprehensive corrective actions (actions) required by this Order are consistent with RCRA and are necessary to protect human health and the environment.

VI. WORK TO BE PERFORMED

Based on the foregoing, it is hereby ORDERED that Respondent shall perform, undertake, continue to take, and complete each of the following actions to the satisfaction of EPA and in accordance with the terms, procedures and schedules set forth in Attachment II - Corrective Action Plan (CAP) in the manner and by the dates specified below. The dates specified below and those in the CAP shall coincide. If there is a conflict of dates, the dates presented in the CAP shall be utilized.

1. INTERIM MEASURES (IM)
 - a) No later than forty-five (45) days after the effective date of this Order, Respondent shall submit an approvable draft Interim Measures Workplan (IM Workplan) for EPA review and approval. The IM Workplan shall be prepared in accordance with the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft IM Workplan, Respondent shall submit a Final IM Workplan to EPA for review and EPA's approval addressing EPA's comments. Upon EPA approval of the Final IM Workplan, Respondent shall undertake, or continue to take, the interim measures in accordance with the IM Workplan and concurrently with the RCRA Facility Investigation.

- b) The IM Workplan shall ensure that the Interim Measures are designed to mitigate current or potential threat(s) to human health and/or to the environment, and are consistent with, and integrated into, any long term solution at the facility. The IM Workplan shall document the procedures to be used by the Respondent for the implementation of Interim Measures and shall include, but not be limited to, the objectives, design, construction, operation, monitoring and maintenance requirements, and detailed schedules for the Interim Measures.
- c) In the event Respondent identifies a current or potential threat to human health and/or the environment, the Respondent shall immediately notify EPA orally and in writing within five (5) days of such identification, summarizing the immediacy and magnitude of the potential threat to human health and/or the environment. Within thirty (30) days of notifying EPA, the Respondent shall submit to EPA an IM Workplan for approval that identifies Interim Measures which mitigate this threat and are consistent with and integrated into any long term remedy at the Facility.

2. RCRA FACILITY INVESTIGATION

- a) Within ninety (90) days of the effective date of this Order, Respondent shall submit to EPA an approvable Draft Workplan for a RCRA Facility Investigation (RFI). The Draft RFI Workplan is subject to approval by EPA and shall be performed in a manner consistent with the RFI Scope of Work contained in the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Workplan, Respondent shall submit a Final RFI Workplan to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA. Upon approval of the Final RFI Workplan, Respondent shall implement the Workplan. The RFI Workplan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations, and EPA guidance documents, including: Interim Final RCRA Facility Investigation Guidance (EPA 530/SW-89-031, 4 vols.); RCRA Ground Water Monitoring Technical Enforcement Guidance document (OSWER Directive Number 9951.1); Test Methods for Evaluating Solid Waste, SW 846 (2nd Edition); and any other documents determined by EPA to be relevant during the course of this action.
- b) The RFI Workplan shall be designed to define the presence, magnitude, extent, direction, and rate of movement of any hazardous wastes or hazardous waste constituents within and beyond the facility boundary. The Respondent shall conduct those investigations necessary to:
 - i) characterize the source(s) of contamination;
 - ii) characterize the potential pathways of contaminant migration;
 - iii) define the degree and extent of contamination;
 - iv) identify actual or potential receptors; and
 - v) support the development of alternatives from which a Corrective Measure will be selected by EPA.

A specific schedule for implementation of all activities shall be included in the RFI Workplan. In accordance with the provisions of Attachment II herein, the RFI workplan shall include: (1) a Project Management Plan; (2) a Data Collection Quality Assurance Plan; (3) a Data Management Plan; (4) a Health and Safety Plan; and (5) a Community Relations Plan.

- c) Within 365 days of the approval of the RFI Workplan, Respondent shall submit to EPA an approvable Draft RFI Report. The RFI Report is subject to approval by EPA and shall be performed in a manner consistent with the requirements contained in Attachment II. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Report, Respondent shall submit a Final RFI Report to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA.

3. CORRECTIVE MEASURES STUDY

- a) Upon completion of the RCRA Facility Investigation, Respondent shall undertake and complete a Corrective Measure Study (CMS) in accordance with the CMS Scope of Work in Attachment II and in accordance with EPA guidance documents determined to be relevant during the course of this action.
- b) Respondent shall submit a Draft CMS Report to EPA within sixty (60) calendar days of approval of the Final RFI Report. The CMS Report shall include, but not be limited to the following:
 - i) identification and development of the corrective measures alternatives;
 - ii) evaluation of the corrective measure alternatives;
 - iii) justification and recommendation of the corrective measure(s).

EPA shall review the draft CMS Report and provide comments to Respondent. No later than thirty (30) days after receipt of EPA's comments on the Draft CMS Report, Respondent shall submit a Final CMS Report to EPA for review and EPA's approval addressing all of EPA's comments.

4. CORRECTIVE MEASURES IMPLEMENTATION

Upon EPA's selection of the corrective measure, if Respondent has complied with the terms of this Consent Order, EPA shall provide a sixty (60) day period for negotiation of an administrative order on consent, a judicial consent decree, a RCRA Permit, or modification of a RCRA Permit, for implementation of the selected corrective measure. If agreement is not reached during this period, EPA reserves all rights it has to implement the corrective measure or other remedial response and to take any other appropriate actions under RCRA, CERCLA, or any other available legal authority, including issuance of a unilateral administrative order directing Respondent to implement the corrective measure.

5. SUBMISSIONS/AGENCY APPROVAL/ADDITIONAL WORK

- a) Within thirty (30) calendar days of approval or modification by EPA of any Workplan(s) or Report(s), Respondent shall commence work and implement the tasks required by the Workplan(s) or Report(s) submitted pursuant to the Scope(s) of Work contained in Attachment II, in accordance with the standards, specifications and schedule stated in the Workplan(s) or Report(s), as approved or modified by EPA.
- b) Beginning with the month following the effective date of this Order, Respondent shall provide EPA with progress reports every month, due on the tenth (10) day of the following month. On a quarterly basis, the progress reports shall include the results of all sampling and testing performed under this Order. The progress reports shall conform to requirements in relevant Scopes of Work contained in Attachment II.

- c) EPA's Project Manager designated pursuant to Section VII of this Order will review all draft and final reports or workplans and notify Respondent in writing of EPA's approval or disapproval of the report or workplan or any part thereof. EPA will specify in writing any modifications necessary for approval of the subject document. Within thirty (30) days of receipt of EPA's disapproval of any report or workplan, Respondent shall address the deficiencies and submit a revised report. If Respondent believes an extension of time is necessary for a deliverable, Respondent shall submit such written request to EPA. EPA shall determine if such extension request is warranted and will either grant or deny the request. EPA shall approve, disapprove, or modify the revised submittal. EPA-approved reports and workplans shall be deemed incorporated into and part of this Order.
- d) Three (3) copies of all documents, including Plans, Reports, and other correspondence to be submitted pursuant to this Order shall be hand-delivered or sent by certified mail, return receipt requested, or the equivalent including express mail service, to the EPA Project Manager. An additional one (1) copy shall be sent to the New Mexico Environment Department (NMED). Documents shall be deemed submitted on the date of mailing, or, if delivered by hand, on the date of delivery. For purposes of the United States Postal Service, the date of mailing shall be determined by the postmark. For express mail services, the date of mailing shall be the date of delivery to the express mail carrier, as evidenced by a completed express mail receipt form, which shall bear the date the document is delivered to the express mail service. If any hand delivery serviced utilized does not record its date of delivery, then the Respondent shall include with the document a statement certifying the date on which the document was delivered.
- e) All work performed pursuant to this Order shall be under the direction and supervision of a professional engineer, scientist, or geologist with expertise in hazardous waste site cleanup. The Respondent shall notify EPA in writing of the name, title, and qualifications of the engineer or geologist, and of any contractors or subcontractors and their personnel to be used in carrying out the terms of this Order thirty (30) calendar days after the effective date of this Order, or date of retention. If EPA objects to the qualifications of the engineer, geologist, or scientist, EPA shall notify Respondent within thirty (30) calendar after receipt of Respondent's notification pursuant to this section.
- f) EPA may determine that certain tasks and deliverables, including investigatory work or engineering evaluation, are necessary in addition to the tasks and deliverables included in the Workplans. When new information indicates that such additional work is necessary, EPA will request, in writing, that Respondent perform the additional work and shall specify the basis and reasons for EPA's determination that the additional work is necessary. Within thirty (30) calendar days after the receipt of such request, Respondent may request a meeting with EPA to discuss the additional work. Thereafter, Respondent shall perform such additional IM, RFI, or CMS work EPA has requested according to an EPA-approved Workplan or Schedule. All additional work performed by Respondent under this paragraph shall be performed in a manner consistent with this Order.
- g) EPA acknowledges that Respondent is currently conducting remedial actions at the facility under the jurisdiction of New Mexico State Agencies. EPA will coordinate with relevant State Agencies, as appropriate, during the pendency of this Order.

VII. PROJECT MANAGER

1. Within ten (10) days of the effective date of this Order, EPA and Respondent shall each designate a Project Manager. Each Project Manager shall be responsible for overseeing the implementation

of this Order. The EPA Project Manager will be EPA's designated representative at the facility. All communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the Project Manager.

2. The Parties shall provide at least five (5) days written notice prior to changing Project Managers. If either Project Manager shall be temporarily unavailable, an acting Project Manager shall be designated.
3. If EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste, hazardous constituents or is a threat to human health, or environment, or that Respondent is not capable of undertaking any studies or corrective measure ordered, EPA may order Respondent to stop further implementation of this Order for such period of time as EPA determines may be needed to abate any such releases or threats and/or to undertake any action which EPA determines is necessary to abate such releases or threats. The stop work order shall be issued to Respondent's Project Manager by EPA and shall include an explanation as to why the stop work order was required. Failure to comply with EPA's stop work order shall result in a penalty of \$25,000 per day of continued non-compliance with EPA's stop work order pursuant to RCRA Section 3008(h)(2), 42 U.S.C. § 6928(h)(2).
4. In the event the EPA Project Manager suspends the work or any other activity at the facility, the EPA Project Manager has the authority to and shall extend affected schedules under this Order for a period of time equal to that of the suspension of the work plus reasonable additional time for resumption of activities. If the delay pursuant to this Section is caused by Respondent or its contractor's noncompliance with this Order, then any extension of the compliance deadlines shall be at EPA's sole discretion. Any extensions in the schedules set out in this Order or in its attachments must be made by EPA in writing.
5. The absence of the EPA Project Manager from the facility shall not be cause for the stoppage or delay of work.

VIII. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. The Respondent shall submit to EPA the results of all sampling and tests or other data generated by its employees and/or consultants required by the implementation of this Order.
2. Respondent shall submit these results in progress reports as described in Attachment II and paragraph VI.5 of this Order.
3. EPA will make available to the Respondent the results of sampling and/or tests or other data similarly generated by EPA.
4. Respondent will specify the name and address of the laboratory to be used for sample analysis. EPA reserves the right to conduct a performance and QA/QC audit of the above-specified laboratory before, during, or after sample analysis. If the audit reveals deficiencies in lab performance or QA/QC, re-sampling and analysis may be required.
5. At the request of EPA, the Respondent shall allow split or duplicate samples to be collected by EPA, and/or its authorized representatives, of any samples collected by the Respondent as required by the implementation of this Order. The Respondent shall notify EPA not less than fourteen (14) days in advance of any well installation or sample collection activity. In the event EPA conducts any additional sampling, Respondent will be offered the opportunity to split samples with EPA.

IX. REPORTING AND PUBLIC ACCESS TO DOCUMENTS AND SAMPLING

1. Respondent may assert a claim of confidentiality for information submitted concerning its production methods and processes if the information qualifies for exemption from the Freedom of Information Act, as provided for in 5 U.S.C. § 522(b)(4). Respondent may also assert a claim of confidentiality for documents used to determine financial assurance that are submitted to EPA. Analytical data generated pursuant to this Order shall not be claimed as confidential. Confidentiality claims shall be submitted to EPA in accordance with the procedures outlined in 40 CFR § 2.203(b), and must include a written statement explaining how the information claimed to be confidential meets the criteria for use in confidentiality determinations found in 40 CFR § 2.208. If EPA approves the claim, the Agency will afford the information confidential status, as specified in Subpart B of 40 CFR Part 2. Respondent shall have the opportunity to review photographs and videotapes collected by EPA during inspections in order to have the opportunity to claim confidentiality. Respondent has five (5) business days after receipt of said photographs and/or videotapes to assert a claim of confidentiality following the provisions of this paragraph. If Respondent disagrees with a confidentiality determination by EPA, Respondent shall follow the procedures in 40 CFR Part 2. Information determined not confidential may be made available to the public without further notice to Respondent. If Respondent makes no claim of confidentiality for information submitted pursuant to this Order, EPA will make the information available to the public without further notice to Respondent.
2. Any reports, plans, specifications, schedules and attachments required by this Order shall be incorporated into this Order upon approval by EPA. Any noncompliance with such EPA approved plans, reports, specifications, schedules, and attachments shall be construed as a violation of the terms of this Order subject to stipulated penalties outlined in Section XVII of this Order. Oral advice or approvals given by EPA representatives will not relieve Respondent of its obligation to obtain any formal, written approvals required by this Order.

X. PUBLIC COMMENT AND PARTICIPATION

1. Upon approval by EPA of a CMS Final Report, EPA shall make both the RFI Final Report and the CMS Final Report and a summary of EPA's proposed corrective measure(s) and EPA's justification for proposing selection of the corrective measure(s) available to the public for review and comment for a period of at least thirty (30) calendar days.
2. Following the public review and comment period, EPA shall notify Respondent of the corrective measure(s) selected by EPA. If the corrective measure(s) recommended in the CMS Final Report is (are) not the corrective measure(s) selected by EPA after consideration of public comments, EPA shall inform Respondent in writing of the reasons for such decision, and the Respondent shall modify the RFI/CMS based upon public comment if directed to do so by the EPA. The selection and supporting documentation shall be attached to and incorporated as part of this Order. The implementation of the selected corrective measure(s) shall be in accordance with Section VI.4 of this Order.
3. The Administrative Record supporting the selection of the corrective measure(s) will be available for public review at EPA Region 6 in Dallas, Texas during normal business hours.

XI. FACILITY ACCESS AND RECORD RETENTION

1. EPA, and/or any EPA authorized-representative(s) are authorized, allowed, and permitted pursuant to Section 3007(a) of RCRA, 42 U.S.C. § 6927(a) to enter and freely move about all property at the

facility at all reasonable times for the purposes of enforcing the requirements of this Order, including:

- a) interviewing site personnel and contractors; inspecting non-privileged records, operating logs, and contracts related to this Order;
 - b) reviewing the progress of Respondent in carrying out the terms of this Order;
 - c) conducting such tests as EPA deems necessary;
 - d) using a camera, video camcorder, sound recorder, or other documentary type equipment; and
 - e) verifying the reports and data submitted to EPA by the Respondent.
2. In the event of inspections to be performed in the oversight of this Order by non-EPA personnel, EPA will provide advance notice to Respondent of the identity of the EPA-authorized representatives.
 3. The Respondent shall permit EPA to inspect and copy all non-privileged documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Order. All parties with access to the facility pursuant to this paragraph shall comply with applicable health and safety requirements found in 29 CFR Part 1910. Upon gaining entrance to the facility, EPA and/or its designated representatives, in non-emergency situations, will undergo a brief orientation meeting on the facility safety rules. EPA will follow Respondent's health and safety procedures to the greatest extent possible.
 4. To the extent Respondent is required to gain access to areas adjacent to the facility in order to comply with this Order and where those areas are presently owned by parties other than those bound by this Order, the Respondent shall obtain, or will use its best efforts to obtain, site access agreements from the present owners no later than thirty (30) calendar days after EPA approval of the specific workplan which requires access to that property. Best efforts shall include, at a minimum, a certified letter from Respondent to owners requesting access agreements to permit Respondent, EPA, and their authorized representatives to access such property, but not be limited to, requiring Respondent to pay reasonable rental costs and compensation for losses sustained by the owner or occupant of the property. Access agreements shall provide reasonable access to Respondent, its Contractor(s), the United States, EPA, the State, and its representatives, including contractors. In the event that site access agreements are not obtained within thirty (30) calendar days, the Respondent shall notify EPA immediately regarding both the lack of, and efforts to obtain, such agreements.
 5. Nothing in this subsection is intended to limit, affect or otherwise constrain EPA's rights of access to property pursuant to applicable law.
 6. In addition, all data, information, and records created as a requirement of this Order shall be made available to EPA upon request. All employees of Respondent and all persons, including contractors who engage in activity under this Order, shall be available to and shall cooperate with the EPA.
 7. Respondent shall preserve all data, documents, records and information required in the implementation and completion of this Order for six (6) years after termination of the Order. At the end of this six year period and before any such document or information is destroyed, Respondent shall notify EPA that such non-privileged documents and information are available to

EPA for inspection, and upon request, shall provide the original or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this section at any time before expiration of the six year period at the written request of EPA.

XII. FINANCIAL ASSURANCE

1. Within (10) business days of the effective date of this Order, Respondent shall demonstrate its ability to complete the Work and to pay all claims that arise from the performance of the Work through the submission of financial information sufficient to demonstrate to Plaintiff's satisfaction that Respondent has adequate net assets to complete the Work to make it unnecessary to require additional financial assurances. Should such submittal demonstrate that Respondent's total shareholder equity is not less than \$12,500,000.00, such submittal shall be deemed sufficient to demonstrate to Plaintiff's satisfaction that Respondent has adequate net assets to complete the Work to make it unnecessary to require additional assurances. Respondent shall thereafter submit independent audited financial statements containing such information annually on September 30. In the event that Shareholder's equity is less than \$12,500,000.00, Respondent shall, within thirty (30) days of receipt of notice of Plaintiff's determination, obtain and present to EPA for approval one of the following: (a) performance bond; (b) irrevocable standby letter of credit or (c) guarantee by a third party in an amount not to exceed the estimated cost of the remaining Work. Respondent's inability to demonstrate financial ability to complete the Work shall not excuse non-performance of the terms and conditions of this Order or any term thereof.
2. Within thirty (30) days of Respondent's receipt of a notice from EPA that Respondent's financial assurance measures are inadequate, Respondent shall establish an irrevocable standby letter of credit or shall otherwise provide (per 40 CFR § 265.142) additional financial assurances according to the terms provided in said notice. Such additional financial assurance measures shall be available to EPA to perform such terms or conditions established pursuant to the Order, provided that prior to drawing upon any such assurance measure, EPA shall notify the Respondent in writing of its alleged failure to perform the requirements of this Order and provide Respondent with a reasonable time period of not less than fifteen (15) calendar days within which to remedy the alleged nonperformance.
3. This Order in no way negates Respondent's obligation to establish and/or maintain financial assurances for closure and post-closure care under 40 CFR §§ 265.143 and 265.145.

XIII. DISPUTE RESOLUTION

1. The Parties to this Order shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution can not be achieved informally within ten (10) business days, the procedures of this section shall be implemented to resolve a dispute.
2. Except as provided in paragraph 4 of this Section, if Respondent disagrees, in whole or in part, with any EPA disapproval or modification or other decision or directive made by EPA pursuant to this Order, Respondent shall notify EPA in writing of its objections and the basis therefore within fourteen (14) calendar days of receipt of EPA's disapproval, decision, or directive. Said notice shall set forth the specific points of the dispute, the position Respondent is maintaining should be adopted as consistent with the requirements of this Order, the basis for Respondent's position, and any matters which it considers necessary for EPA's determination. Within ten (10) business days of EPA's receipt of such written notice, EPA shall provide to Respondent its decision on the pending dispute. The time periods established in this paragraph may be extended by mutual agreement of the parties in writing.

3. EPA's decision pursuant to paragraph two (2) of this Section shall be binding upon both parties to this Order, unless Respondent within ten (10) calendar days notifies EPA in writing of its continued objection(s) and requests the Hazardous Waste Management Division Director for Region 6, or his designee, to convene an informal conference for the purpose of discussing Respondent's objections and the reasons for EPA's determination. The Hazardous Waste Management Division Director shall issue a written decision within ten (10) calendar days from the date of the informal conference. The failure to invoke these Dispute Resolution procedures shall constitute a waiver of the right to contest a specific requirement of this Order. The time periods established in this paragraph may be extended by mutual agreement of the parties in writing.
4. If Respondent disputes an EPA determination requiring Respondent to perform additional work, as per Section VI.5 of this Order, Respondent shall have thirty (30) days from receipt of EPA's written determination to notify EPA in writing of its objections and may request the director to request an informal conference for the purposes of discussing Respondent's objections and the reasons for EPA's determinations. After this informal conference, the Director shall state, in writing, his decision regarding the issues in dispute. Such decision shall be implemented immediately by Respondent. If Respondent does not request an informal conference to discuss its objections to EPA's request for additional work, Respondent must perform the additional work requirements as directed by EPA.
5. In any dispute, Respondent shall have the burden of proving that EPA's position is incorrect.
6. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute, shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order, except to the extent that the Respondent's position is upheld in the dispute resolution process or any subsequent judicial proceedings.
7. During the pendency of the dispute resolution process, stipulated penalties, with respect to the disputed matter, and interest shall accrue, but payment of stipulated penalties shall be stayed pending resolution of the dispute. Stipulated penalties shall be calculated for each day of noncompliance with this Order beginning with the first day of noncompliance and including the period which the Dispute Resolution procedures were ongoing. If, however, the dispute is ultimately resolved in Respondent's favor, no stipulated penalties on the disputed issue or any directly related issue shall be due.
8. Unless otherwise specifically set forth herein, the failure to provide expressly for dispute resolution in any section of this Order is not intended and shall not bar Respondent from invoking this Section as to any dispute under this Order.

XIV. REIMBURSEMENT OF OVERSIGHT COSTS

Oversight costs are those costs incurred by the United States for EPA salary, travel, equipment, analysis, and contractor costs related to the facility. Respondent agrees to pay EPA for oversight costs associated with the implementation and execution of this Order, unless otherwise prohibited by law, in the following manner:

1. At the end of each six (6) month period beginning from the effective date of this Order, EPA will submit to Respondent a tabulation and an explanation of all oversight costs incurred with respect to this Order by EPA during the previous six (6) month period.
2. Payments to EPA for all EPA oversight costs, up to a maximum of \$75,000 per 12 month period, shall be made by money order, certified check, or cashier's check payable to the Treasurer of the United States within thirty (30) days of receipt of EPA's tabulation and shall be submitted to the following address:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 360582M
Pittsburgh, PA 15251

3. Document No. VI-303-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. If EPA does not receive payment within thirty (30) days of the Respondent's receipt of the tabulation of oversight costs, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
5. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid principal amount not paid within ninety (90) or more days of Respondent's receipt of the tabulation of oversight costs.

XV. RESERVATION OF RIGHTS

1. EPA expressly reserves all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, and 42 U.S.C § 6928(h)(2). The Order shall not be construed as a waiver or limitation of any rights, remedies, powers, and/or authorities which EPA has under RCRA, CERCLA, or any other statutory, regulatory or common law enforcement authority of the United States.
2. This Order shall not be construed to effect or limit the rights or responsibilities of any Federal, State, a local agency or authority pursuant to any other statutory provision, nor shall the entry of this Order and Respondent's consent to comply herewith, limit or otherwise preclude the EPA from taking additional enforcement actions pursuant to RCRA § 3008(h), 42 U.S.C. § 6928(h), CERCLA § 106 42 U.S.C. § 9606, or any other available legal authority, should the EPA determine that such actions are warranted. Nor shall this Order be construed to affect or limit in any way the obligation of the Respondent to comply with all Federal, State and local laws and regulations governing the activities required by this Order. This Order shall not be construed as a ruling or determination of any issue related to any Federal, State or local permit whether required in order to implement this Order or required in order to continue or alter operations of the facility (including but not limited

to construction, operation or closure permits required under RCRA) and the Respondent shall remain subject to all such permitting requirements. Nothing in this Order is intended to release or waive any claim, cause of action, demand or defense in law or equity that any party to this Agreement may have against any person(s) or entity not a party to this Agreement.

3. EPA expressly reserves all rights and defenses that it may have, including the right both to disapprove of work performed by Respondent pursuant to this Order and to request that Respondent perform tasks in addition to those stated in the Corrective Action Plan portion of this Order.
4. Notwithstanding any other provision of this Order, the Respondent shall remain responsible for obtaining any Federal, State, or local permit for any activity at the facility including those necessary for the performance of the work and for the operation or closure of the facility.

XVI. SUBSEQUENT MODIFICATION OF THE FINAL ORDER

1. This Order may be amended by mutual agreement of EPA and the Respondent. Any such amendments shall be in writing, shall be first signed by the Respondent, and shall be effective and incorporated into the Order on the date that such amendments are signed by EPA. In the event that a mutual agreement of the parties to modify this Order is not reached, such disagreement shall be the subject to the dispute resolution procedures in Section XIII of this Order.
2. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by EPA, incorporated into this Order, unless expressly stated otherwise in EPA's approval notice. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order and shall subject Respondent to the stipulated penalty provisions included in Section XVII of this Order.
3. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any other written documents submitted by Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XVII. STIPULATED PENALTIES

1. Unless there has been a written modification of a schedule by EPA, or the force majeure provisions of this Order are invoked, in the event Respondent fails to meet any scheduled requirement set forth in this Order, Respondent agrees to pay a Stipulated Penalty as follows:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st day through 30th day	\$ 1,000.00
31th day through 90th day	\$ 2,500.00
91th day and beyond	\$10,000.00

2. Stipulated penalties under this Section shall be paid within thirty (30) calendar days after Respondent's receipt of written notification of noncompliance from EPA. Such stipulated penalties shall be paid by money order, certified check, or cashier's check made payable to the "Treasurer of the United States" and mailed to:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 360582M
Pittsburgh, PA, 15251

3. Document No. VI-303-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. Respondent may dispute EPA's right to the stated amount of penalties by invoking the dispute resolution procedures under Section XIII of this Order. If Respondent does not prevail upon resolution of the dispute, EPA shall collect all penalties which accrued prior to and during the period of dispute. If Respondent prevails upon resolution of the dispute, no penalties shall be payable.
5. If EPA does not receive payment within thirty (30) days of the due date, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
6. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid penalty amount not paid within ninety (90) or more days of Respondent's receipt of the notification of non-compliance.
7. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the requirements of this Order.

XVIII. EPA APPROVALS/DISAPPROVALS

All decisions, determinations and approvals required to be made by EPA under this Order must be in writing signed by the Project Manager. If the EPA does not approve any plan, report or other item required to be submitted to EPA for its approval pursuant to this Order, the Respondent shall address any deficiencies as directed by the EPA and resubmit the plan, report or other item within the time period specified in this Order for EPA's approval. Wherever in this Order approval is required, approval from EPA's Project Manager shall suffice for purposes of securing final approval.

XIX. PARTICIPATION IN COMMUNITY RELATIONS ACTIVITIES

Respondent shall be given notice of and shall participate in public meetings, as appropriate, which may be held or sponsored by EPA to explain activities at or concerning the facility, including the findings of the RFI and CMS. In addition, Respondent shall provide all support reasonably requested of them by EPA in carrying out the EPA approved Community Relations Plan. Before issuing a press release to the news media, with reference to any of the work required by this Order, both Parties shall attempt to provide advance notice to the appropriate Project Manager.

XX. TERMINATION AND SATISFACTION

The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, but not including the record preservation provision of paragraph XI, or other such continuing obligations, have been satisfactorily completed. EPA's determination under this section shall not be unreasonably withheld and should not be made later than ninety (90) days following any petition for termination submitted by Respondent. The provisions of this Order shall be deemed superseded if both parties agree that the requirements of the Order have been incorporated into a RCRA Permit or other Order in accordance Section XXVII of this Order.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify, save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or their agents, independent contractors, receivers, trustees, and assignees in carrying out activities required by this Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

XXII. QUALITY ASSURANCE

Throughout all sample collections and analysis activities, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, which shall be part of proposed and approved plans. In addition, Respondent shall:

1. Follow all relevant EPA guidance for sampling and analysis unless determined by EPA not to be applicable;
2. Notify EPA and NMED not less than seven (7) days in advance of any field sampling or installation activity;
3. Inform the EPA Project Manager in advance which laboratories will be used by Respondent and ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analysis;
4. Ensure that laboratories used by Respondent for analyses perform such analyses according to EPA methods (SW-846, 2nd Edition or as superseded) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondent shall submit all protocols to be used for analyses to EPA for approval no later than thirty (30) days prior to the commencement of analyses and shall not implement such protocols until receipt of EPA approval; and

5. Ensure that laboratories used by Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analysis of a reasonable number of known samples provided by EPA to demonstrate the quality of the analytical data.

XXIII. FORCE MAJEURE

1. Respondent shall perform all the requirements of this Order according to the time limits set unless this performance is prevented or delayed by events which constitute a force majeure.
2. For the purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondent including its consultants and contractors, which could not have been prevented or mitigated through the exercise of due diligence, that delays or prevents the performance of any obligation under this Order. Such events do not include increased costs of performance, economic hardship, changed economic circumstances, normal precipitation events, or failure to submit timely and complete applications for Federal, State, or local permits. Any failure to obtain necessary governmental permits and approvals necessary to accomplish work in this Order shall be treated in the same manner as force majeure events pursuant to this Order, provided that Respondent has submitted timely and complete applications to obtain such permits and approvals and has cooperated with the issuing Agency and urged the issuance of the permit or the granting of approval.
3. Respondent has the burden of proving that any delay is or will be caused by events reasonably beyond its control.
4. In the event of a force majeure, the time for performance of the activity delayed by the force majeure shall be extended for the period of the delay attributable to the force majeure plus reasonable additional time for resumption of activities. The time for performance of any activity dependent on the delayed activity shall be similarly extended, except to the extent that the dependent activity can be implemented in a shorter time. EPA shall determine whether subsequent requirements are to be delayed and the time period granted for any delay. Respondent shall adopt all reasonable measure to avoid or minimize any delay caused by a force majeure.
5. In the event of a force majeure, Respondent shall immediately notify EPA by telephone within two (2) working days after Respondent becomes aware of the event and shall within seven (7) days of the oral notification, notify EPA in writing of the cause and anticipated length of the delay. The notification shall also state the measures taken and/or to be taken to prevent or minimize the delay, and the time table by which Respondent intends to implement the delayed activity. Failure of Respondent to comply with the force majeure notice requirements will be deemed a forfeiture of its right to force majeure.

XXIV. NO FINAL AGENCY ACTION

Notwithstanding any other provisions of this Order, no action or decision by EPA, including without limitation decisions of the Director of the Hazardous Waste Management Division or the Regional Administrator, pursuant to this Order shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondent's compliance with the mandate(s) of this Order.

XXV. PENALTY PROVISIONS

Failure or refusal to carry out the terms of this Order in a manner deemed satisfactory to EPA subjects Respondent to a civil penalty in an amount not to exceed \$25,000 for each day of non-compliance with this Order in accordance with Section 3008(h) of RCRA, 42 U.S.C. § 6928(h).

XXVI. STATEMENT OF SEVERABILITY

If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall not be effected thereby.

XXVII. SURVIVABILITY/PERMIT INTEGRATION

1. Subsequent to the issuance of this Order, a RCRA permit may be issued to the facility incorporating the requirements of this Order by reference. The parties to the Order agree that all approved corrective action investigations associated with this Order shall satisfy, and be incorporated into, any subsequent RCRA permit terms and conditions imposed at the facility and Respondent will not be required to re-perform or expand upon such activities except as may be necessitated by changes in law and/or regulations, discovery of conditions not previously identified, or work insufficiently performed by Respondent or its contractors.
2. Any requirements of this Order shall not terminate upon the issuance of a RCRA permit unless (i) all Order requirements of the Corrective Action Plan (Attachment II) are expressly replaced by the requirements in the permit or (ii) all provisions of this Order have been fully complied with to EPA's Satisfaction as per Section XX of this Order, or any combination of (i) and (ii).

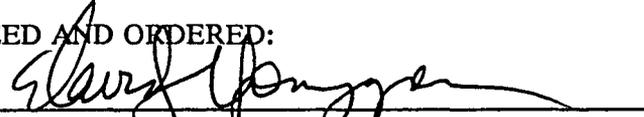
XXVIII. EFFECTIVE DATE

The effective date of this Order shall be the date on which it is signed by the EPA and EPA shall notify Respondent by telephone on such date that this Order has been signed. Because this Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. § 6928(b).

IT IS SO AGREED AND ORDERED:

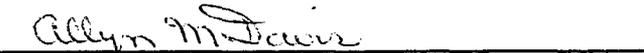
Date: 12-21-92

By:


(Facility Representative and Title)
David J. Younggren, Sr. Vice President

Date: 12-31-92

By:


Allyn M. Davis, Director
Hazardous Waste Management Division
U.S. Environmental Protection Agency

ATTACHMENT I
TABLES

Table I
(Concentrations, ppm)

Compound	MF-1162 (soil)	MF-1161 (soil)	MF-5119 (oil)	F-3476 (water)	F-3475 (Soil)
Chromium	0.02	1.5	80		
Manganese	7.19	347			
Arsenic	0.049	3.9			
Lead	0.031	4.4			

Table I (Continued)
Concentrations in ppb
(unless otherwise stated)

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
2-Methylnapthalene	2,600 ppm	4,600	48,000
Benzene	3,100 ppm	21,000	
Ethylbenzene	3,200 ppm	280,000	
Toluene	12,000 ppm	560,000	
Xylene	11,000 ppm	1,100,000	
Cyclohexane	1,900 ppm	150,000	
Dimethylcyclohexane		61,000	
Napthalene		32,000	36,000
Unknown VOA		95,000	3,000
2-methylhexane		43,000	
Unknown VOA		97,000	
Trimethyl Pentene		23,000	
Unknown VOA		51,000	
2-Methyl Heptane		140,000	
Octane		470,000	
Unknown VOA		130,000	

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Methyl Benzene		14,000	
Dimethyl Hexane		3,600	
Ethyl Benzene		8,800	
Benzene Propyl	950 ppm	5,000	
Ethyl Methyl Benzene	1,700 ppm	17,000	64,000
Trimethyl Benzene	3,000 ppm	22,000	72,000
Methyl Propyl Benzene		4,800	46,000
Unknown ABN		8,600	
Ethyl Dimethyl Benzene		2,400	
Unknown ABN		37,000	
Octane		8,800	
Phenanthrene/ Anthracene		3,400	
Benzene Methyl, Methyl Ethyl			54,000
Alkane or Derivative			68,000
Unknown ABN			130,000
Unknown ABN			52,000
Unknown ABN			51,000
Alkane or Derivative			64,000
Napthalene Derivative			210,000
Unknown ABN			72,000
Heptadecane Tetramethyl			61,000
Alkane			140,000
Unknown ABN			34,000

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Alkane or Derivative			98,000
Eicosane			140,000
N-nitrosodiphenylamine	76 ppm		
Methylcyclopentane	2,300 ppm		
Methylcyclopentane	2,600 ppm		
Alcohol or Alkene	5,000 ppm		

Table II Concentrations in mg/l

Compound	MW #4					MW #9					MW #10				
	3/26	6/23	9/18	12/16		3/26	6/23	9/18	12/16		3/26	6/23	9/18	12/16	
Cyanide		0.5					0.4						0.050		
Total Phenol	0.633	0.430	0.085	0.096		0.304	0.372	0.17	0.16		0.147	0.186	0.065	0.055	
TOC	110	130	63	170		143	1,809	240	275		34	76	125	114	
TDS	1,868	2,266	2,398	2,128		2,360	1,718	1,428	1,684		1,546	2,820	2,408	3,272	
Chloride	500	989.7	754	675		149	1,010	89	109		245	569.8	587	457	
Sulfate		12.5				13.0	114		20		5.3	165		10	
Benzene	11.8	3.1	6.65	1.91		7.4	4	17.7	1.49		0.093		0.041	14.1	
Toluene	7.5	0.290	0.407	1.78		6.3	1.7	10.6	0.754				0.054	7.4	
Ethyl benzene	0.107	0.070	0.140	4.48		3.2	0.71	0.015	0.504					0.03	
Antimony				0.40					0.4					0.56	
Arsenic		0.070	0.08					0.02				0.053			
Cadmium	0.060										0.020				
Lead	0.074	0.066					0.059					0.059	0.05		
Nickel	0.08		0.12			0.30	0.25	0.13	0.16		0.08	0.25	0.18	0.08	
Selenium		0.080	0.063	0.03			0.040					0.040	0.071	0.03	
Zinc		0.019	0.008	0.04		0.012	0.015	0.05	0.011			0.015	0.16	0.01	

Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
2,4-Dichloro phenol	0.200				0.160	0.150			0.025			
2,4-Dimethyl phenol		0.058							0.020			
4,6-Dinitro-o-cresol	0.100											
2,4-Dinitro phenol	0.050											
2-Nitro phenol			0.108	0.026							0.002	
4-Nitro phenol	0.090		0.302	0.331			1.10				0.016	
Phenol	0.202				0.149	0.170	0.013	0.133	0.090			
Benzo(a) anthra cene		0.016	0.010				0.007					
Chrysene	0.012											
Fluorine	0.150			0.023	0.012				0.033			
Naphtha lene	0.036	0.019	0.015	0.036				0.029				0.004
Pyrene	0.166		0.005				0.010		0.030			
2-Chloro phenol			0.001									

Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
P-chloro-m-cresol			0.045									
pH	6.84	6.85	6.70	6.73	7.01	6.98	6.89	6.91	7.07	7.08	6.93	7.05
Conductivity		3800	3900	3800		2500	2200	2600		4400	4800	5100

Table III

Compound	Weight of Evidence Classification *
Chromium VI	A
Manganese	D
Inorganic Arsenic	A
Lead	B2
Cadmium	B1
Selenium	D
Zinc	D
Benzene	A
Ethylbenzene	D
Toluene	D
Xylene	D
Napthalene	D
Phenanthrene	D
Anthracene	D
n-Nitrosodiphenylamine	B2
Phenol	D
Benzo(a)anthracene	B2
Chrysene	B2
Flourene	D
Pyrene	D

- *
Group A - Human Carcinogen
Group B - Probable Human Carcinogen
 B1 - Has limited human evidence
 B2 - Has sufficient animal evidence, but inadequate or no human evidence
Group C - Possible Human Carcinogen
Group D - Not Classifiable as to human Carcinogenicity

Table IV
Concentrations in ppb

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Barium	210	39			1540	39
Chromium	116	1110				
Lead					252	
Mercury	0.6					
# Unknown ABNs	0	3	2	13	15	1
bis-(2-Ethylhexal) pthalate		38				
Phenol					46	
2-Methylphenol					81	
4-Methylphenol					43	
2,4-Dimethylphenol					16	
Napthalene					91	
2-Methyl napthalene					33	
# Unknown VOA				10	10	
2-butanone						
Ethyl Benzene				1660	352	

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Benzene				8200	23800	
Toluene				8040	8820	
O-xylene				1800	1970	
m/p-xylene				12100	10900	

ATTACHMENT II
CORRECTIVE ACTION PLAN

IMPLEMENTATION OF INTERIM MEASURES

A. PURPOSE

Interim Measures are implemented so as to mitigate a current or potential threat to human health and/or the environment. Interim Measures must be consistent with and integrated into any long term remedy at the Facility. Where applicable, Respondent may provide information on existing interim measures and their effectiveness.

B. SCOPE

The Interim Measures to be implemented at the Facility consist of the following tasks:

1. Interim Measures Work Plan
2. Interim Ground Water Recovery System
3. Reports

C. IMPLEMENTATION OF INTERIM MEASURES

The Respondent shall submit a workplan as described below in accordance with Section VI.1 of the Order.

1. Interim Measures (IM) Workplan

The IM Workplan shall be submitted within forty-five (45) days of the effective date of this Order and shall consist of:

- a. A description of on-going interim measures;
- b. The necessary number of recovery wells or recovery trenches sufficient to recover free product from the northwest portion of the site near the San Juan River, to the extent possible prior to completing the RFI, so as to prevent further migration to the San Juan River. If the installed system does not recover measurable quantities of non-aqueous phase liquids, it shall become part of the extraction system used to treat groundwater.
- c. A statement of the objectives of each interim measure specified above including how the measure mitigates a potential threat to human health and the environment and is consistent with and integrated into any long term plan for the facility; and
- d. Proposed location, design, construction, operation, and maintenance requirements of the interim measures.

2. Interim Measures

- a. Within thirty (30) days after EPA approval of the IM Workplan, Respondent shall implement a system designed to control the migration of hazardous constituents with ground water recovery wells or ground water migration/recovery trenches. The effects of the extraction system shall be

monitored. All ground water monitoring wells shall be considered for use as potential recovery and/or observation wells.

- b. Upon the effective date of this order Respondent will continue with efforts to achieve certified closure of all formerly active regulated surface impoundments in accordance with a State approved closure plan.
- c. Within sixty (60) days after the effective date of this order Respondent shall either:
 - (1) use an existing wastewater treatment system or construct a water treatment system capable of treating contaminated ground water from recovery wells in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances. Respondent shall obtain a discharge permit which will allow the discharge of treated groundwater in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances;
 - (2) construct or obtain storage capacity in compliance with RCRA for recovered contaminated ground water and/or;
 - (3) provide transportation for recovered contaminated groundwater for off-site treatment or disposal in compliance with RCRA.
- d. Within thirty (30) days after the effective date of this Order, Respondent shall locate and notify all owners of off-site wells which have documented or possible groundwater contamination which may be attributed to activities at the Facility. Notification shall include, as a minimum:
 - (1) that the contamination exists and caution should be exercised when using water from their wells for watering lawns, washing vehicles, etc.,
 - (2) that the water should not be used for drinking, cooking, bathing, or swimming.

3. Reports

The Respondent shall prepare plans, specifications, and reports as set forth above to document the design, construction, operation, maintenance, and monitoring of the interim measures. For interim measures which are currently being utilized, Respondent shall provide current status reports in the progress reports. In addition, the documentation shall include, but not be limited to the following:

a. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly IM progress reports for the first year, and quarterly thereafter, containing:

- (1) A description and estimate of the percentage of the IM completed;
- (2) Summaries of all findings;

- (3) Summaries of all changes made in the IM during the reporting period;
- (4) Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- (5) Summaries of all problems or potential problems encountered during the reporting period;
- (6) Actions being taken to rectify problems;
- (7) Changes in personnel during the reporting period;
- (8) Projected work for the next reporting period;
- (9) Copies of daily reports, inspection reports, etc.; and
- (10) Copies of validated laboratory results shall be submitted quarterly.

4. Interim Measure Implementation Reports

- a. Sixty (60) days after the completion of the construction of the IM (except for long term operation, maintenance and monitoring), the Respondent shall submit an IM Implementation Report to EPA. The Report shall document that the project is consistent with the design specifications, and if the interim measures are performing adequately. The report shall include, but not be limited to the following elements:
 - (1) Synopsis of the interim measures and certification of the design and construction;
 - (2) Explanation of any modifications to the plans and why these were necessary for the project;
 - (3) Listing of the criteria, established before the interim measures were initiated, for judging the functioning of the interim measures and also explaining any modification to these criteria;
 - (4) Results of facility monitoring, evaluating to what extent the interim measures will meet or exceed the performance criteria; and
 - (5) Explanation of the operation and maintenance (including monitoring) to be undertaken at the Facility.
- b. This report shall include the inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviations from design and material specifications (with justifying documentation) and as-built drawings.
- c. The Respondent shall finalize the Interim Measures Workplan and

incorporate or address comments received on the draft submissions.

5. Facility Submission Summary

A summary of the information reporting requirements contained in the Interim Measures Scope of Work is present below:

<u>Facility Submission</u>	<u>Due date*</u>
Submit Draft IM Workplan	45 days.
Submit Final IM Workplan	30 days after receipt of EPA's comments on the draft IM Workplan.
Implement IM Workplan	30 days after EPA's approval of the IM Workplan.
Notify Local Well Owners Draft IM Report	30 days 60 days after completion of construction of the IM.
Final IM Report	30 days after EPA comments on Draft IM Report.
Progress Reports	Monthly for the first year and quarterly thereafter.

*All dates are calculated from the effective date of this Order unless otherwise specified.

I. RCRA FACILITY INVESTIGATION (RFI)

A. PURPOSE

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. Respondent may submit previous data, plans and reports already developed from previous investigations at the facility. EPA will review these documents. Those documents which meet EPA approval may be used to satisfy parts of the Order requirements. The RFI will be conducted in accordance with EPA guidance documents and the requirements of state and federal statutes and regulations. Respondent may also use any relevant proposed rules, as approved by EPA. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI at the facility. In order to define the scope of the RFI Workplan, the Description of Current Conditions (Task I) shall follow the format of Facility Investigation (Task III) incorporating the appropriate portions of the RFI Workplan requirements. The proposed RFI Workplan shall then include the portions of the Facility Investigation not adequately covered under Task I, as determined and approved by EPA.

B. SCOPE

The RFI (RFI) consists of six tasks:

1. Task I: Preliminary Report: Description of Current Conditions
 - a. Facility Background
 - b. Nature and Extent of Contamination
 - c. Pre-Investigation Evaluation of Corrective Measure Technologies
2. Task II: RFI Workplan
 - a. Project Management Plan
 - b. Data Collection Quality Assurance Plan
 - c. Data Management Plan
 - d. Health and Safety Plan
 - e. Community Relations Plan
3. Task III: Facility Investigation
 - a. Environmental Setting
 - b. Source Characterization
 - c. Contamination Characterization
 - d. Potential Receptor Identification

4. Task IV: Investigation Analysis
5. Task V: Laboratory and Bench-Scale Studies
6. Task VI: Progress Reports

C. TASK I: PRELIMINARY REPORT: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to the EPA for review and approval a Preliminary Report providing the information as set forth below. The data gathered during any previous investigations or inspections and other relevant data shall be included.

1. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

- a. Map(s) depicting the following:
 - (1) General geographic location;
 - (2) Property lines, with the owners of all adjacent property clearly indicated, and all land previously owned and/or used by the Facility around what has been designated as the Facility;
 - (3) Topography (with a contour interval of five (5) or ten (10) feet and an approximate scale of 1-inch to 200-feet), showing waterways, all wetlands, floodplains, surface water features, drainage patterns;
 - (4) All tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;
 - (5) All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;
 - (6) All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980;
 - (7) All known past and present product and underground waste tanks or piping;
 - (8) Surrounding land uses (residential, commercial, agricultural, recreational); and
 - (9) The location of all production and groundwater monitoring wells. These wells shall be clearly labeled with ground and top of casing elevations included.

All maps shall be of sufficient detail and accuracy to locate and report all

past, current and future work performed at the site;

- b. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;
- c. Approximate dates or periods of all known major past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or Federal response units or private parties), including any inspection reports or technical reports generated as a result of the response which are necessary to determine a release; and
- d. A summary of past permits requested and/or received, any enforcement actions and their subsequent responses and a list of studies performed for the Facility.

2. Nature and Extent of Contamination

The Respondent shall include in the Preliminary Report the existing information on the nature and extent of contamination.

- a. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, major spill areas, and other suspected source areas of contamination. For each area, the Respondent shall identify the following:
 - (1) Location of unit/area (which shall be depicted on a facility map);
 - (2) Quantities of solid and hazardous wastes;
 - (3) Hazardous waste or constituents, to the extent known; and
 - (4) Identification of areas where additional information is necessary.
- b. The Respondent shall prepare an assessment and description of the existing degree and extent of contamination. This should include:
 - (1) Available monitoring data and qualitative information on locations and levels of contamination at the facility;
 - (2) All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
 - (3) The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

3. Pre-Investigation Evaluation of Corrective Measure Technologies

Respondent shall include in the Preliminary Report an identification of site criteria that

influence the selection of corrective measure technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. Respondent shall also identify any field, laboratory, bench or pilot scale data that need to be collected in the facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

D. TASK II: RFI WORKPLAN REQUIREMENTS

The Respondent shall prepare Draft and Final RFI Workplans in accordance with Section VI.2. of the Order. The Draft RFI Workplan shall include the development of several plans, which shall be prepared concurrently. EPA will review the Draft RFI Workplan and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Workplan to address such comments and shall submit the revised RFI Workplan to the EPA. EPA will approve the revised RFI Workplan or modify it. The RFI Workplan as approved or modified by EPA shall become the Final RFI Workplan. During the RFI, it may be necessary to revise the Final RFI Workplan to accommodate the facility specific situation. The RFI Workplan includes the following:

1. Project Management Plan

The Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and personnel. The technical approach shall include the prioritization rationale necessary to investigate each media (soil, ground water, surface water, soil gas, and air). This includes each area of concern which may have contamination from facility activities. Respondent may use the Corrective Action Management Unit (CAMU) concept in the approach to identifying specific areas of the investigation. The technical approach shall address all the relevant requirements set forth in Task III of this Corrective Action Plan. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI. This plan shall also document the overall management approach to the RFI.

2. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

a. Data Collection Strategy

The Data Collection Strategy shall include but not be limited to the following:

- (1) Description of the intended uses for the data, and the necessary level of precision and accuracy for these intended uses;
- (2) Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
- (3) Description of the methodology used to assure that the data accurately and precisely represent the characteristics of a population, parameter variations at a sampling point, and process

conditions or environmental conditions.

Examples of factors which shall be considered and discussed include:

- (a) Environmental conditions at the time of sampling;
 - (b) Number of sampling points;
 - (c) Representativeness of selected media; and
 - (d) Representativeness of selected analytical parameters.
- (4) Description of the measures to be taken to assure that the following data sets can be compared to each other:
- (a) RFI data generated by the Respondent;
 - (b) RFI data generated by parties other than the Respondent;
 - (c) Data previously generated by Respondent or Respondent's agents.
- (5) Details relating to the schedule and information to be provided in quality assurance reports. The reports shall include but not be limited to:
- (a) Periodic assessment of measurement data accuracy, precision, and completeness;
 - (b) Results of performance audits;
 - (c) Results of system audits;
 - (d) Significant quality assurance problems and recommended solutions; and
 - (e) Resolutions of previously stated problems.

b. Sampling

The Sampling section shall discuss:

- (1) Selecting appropriate sampling locations, depths, etc.;
- (2) Determining a statistically sufficient number of sampling sites;
- (3) Measuring all necessary ancillary data;
- (4) Determining conditions under which sampling will be conducted;
- (5) Determining which media are to be sampled (e.g., groundwater, air,

soil, sediment, etc.);

- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of sampling and length of sampling period;
- (8) Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- (9) Documenting field sampling operations and procedures, including:
 - (a) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);
 - (b) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;
 - (c) Documentation of specific sample preservation method;
 - (d) Calibration of field devices;
 - (e) Collection of replicate samples;
 - (f) Submission of field-biased blanks, where appropriate;
 - (g) Potential interferences present at the facility;
 - (h) Construction materials and techniques, associated with monitoring wells and piezometers;
 - (i) Field equipment listing and sample containers;
 - (j) Sampling order; and
 - (k) Decontamination procedures.
- (10) Selecting appropriate sample containers;
- (11) Sample preservation; and
- (12) Chain-of-custody, including:
 - (a) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
 - (b) Pre-prepared sample labels containing all information necessary for effective sample tracking.

c. Field Measurements

The Field Measurements section shall discuss:

- (1) Selecting appropriate field measurement locations, depths, etc.;
- (2) Providing a statistically sufficient number of field measurements;
- (3) Measuring all necessary ancillary data;
- (4) Determining conditions under which field measurement should be conducted;
- (5) Determining which media are to be addressed by appropriate field measurements (e.g., groundwater, air, soil, sediment, etc.);
- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of field measurement and length of field measurements period; and
- (8) Documenting field measurement operations and procedures, including:
 - (a) Procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition;
 - (b) Calibration of field devices;
 - (c) Collection of replicate measurements;
 - (d) Submission of field-biased blanks, where appropriate;
 - (e) Potential interferences present at the facility;
 - (f) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
 - (g) Field equipment listing;
 - (h) Order in which field measurements were made; and
 - (i) Decontamination procedures.

d. Contaminated Material Disposal

All contaminated material generated by activities required in the RFI shall be disposed of in accordance with all state and Federal regulations.

e. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

- (1) Chain-of-custody procedures, including:
 - (a) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
 - (b) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - (c) Specification of laboratory sample custody procedures for sample handling, storage, and disbursement for analysis.
- (2) Sample storage procedures and holding times;
- (3) Sample preparation methods;
- (4) Analytical procedures, including:
 - (a) Scope and application of the procedure;
 - (b) Sample matrix;
 - (c) Potential interferences;
 - (d) Precision and accuracy of the methodology; and
 - (e) Method detection limits.
 - (f) Calibration procedures and frequency;
 - (g) Data reduction, validation and reporting;
 - (h) Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check sample(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vi) "Blind" quality control sample(s);
 - vii) Control charts;
 - viii) Surrogate samples;

- ix) Zero and span gases; and
- x) Reagent quality control checks.
- (i) Preventive maintenance procedures and schedules;
- (j) Corrective action (for laboratory problems); and
- (k) Turnaround time.

3. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

a. Data Record

The data record shall include the following:

- (1) Unique sample or field measurement code;
- (2) Sampling or field measurement location and sample or measurement type;
- (3) Sampling or field measurement raw data;
- (4) Laboratory analysis ID number;
- (5) Property or component measured; and
- (6) Result of analysis (e.g., concentration).

b. Tabular Displays

The following data shall be presented in tabular displays:

- (1) Unsorted (raw) data;
- (2) Results for each medium, or for each constituent monitored;
- (3) Data reduction for statistical analysis;
- (4) Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- (5) Summary data.

c. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- (1) Display sampling locations and sampling grids;
- (2) Boundaries of sampling areas, and areas where more sampling is required;
- (3) Levels of contamination at each sampling location;
- (4) Geographical extent of contamination;
- (5) Display contamination levels, averages, and maxima;
- (6) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and
- (7) Indicate features affecting intramedia transport and show potential receptors.
- (8) Illustrate the pertinent structural geology in the area of the Facility, including detailed structural geology of the Facility.

E. Health and Safety Plan

The Respondent shall prepare a facility RFI Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:
 - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
 - b. Describe the known hazards and evaluate the risks associated with each activity conducted, including, but not limited to on and off-site exposure to contaminants during the implementation of interim measures at the facility.
 - c. List key personnel and alternates responsible for site safety, response operations, and for protection of public health;
 - d. Delineate work areas;
 - e. Describe levels of protection to be worn by personnel in work area;
 - f. Establish procedures to control site access;
 - g. Describe decontamination procedures for personnel and equipment;
 - h. Establish site emergency procedures;
 - i. Address emergency medical procedures for injuries and toxicological problems;

- j. Describe requirements for an environmental surveillance program;
 - k. Specify any routine and special training required for responders; and
 - l. Establish procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
- a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - b. EPA Order 1440.1 - Respiratory Protection;
 - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
 - d. Facility Contingency Plan;
 - e. EPA Standard Operating Safety Guide (1984);
 - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
 - g. State and local regulations; and
 - h. Other EPA guidance as provided.

F. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

II. TASK III: FACILITY INVESTIGATION

The Respondent shall conduct those investigations necessary to: characterize the Facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to support the development and evaluation of the alternatives during the Corrective Measures Study.

The facility investigation activities shall follow the RFI Workplan. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan.

At the conclusion of the investigation, the Respondent shall prepare and submit to EPA for approval a Draft RFI Report which shall contain an analysis and a summary of all facility investigations implemented pursuant to the conditions contained in this Task. EPA will review the Draft RFI Report and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Report to address such comments and shall submit the revised RFI Report to EPA. EPA shall either approve of the report or modify it.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the Facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall prepare a report evaluating hydrogeologic conditions at the Facility. This report shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Facility, including:
 - (1) Regional and facility specific stratigraphy;
 - (2) Regional structural geology;
 - (3) Depositional history;
 - (4) Identification and characterization of areas and amounts of recharge and discharge.
 - (5) Regional and facility specific groundwater flow patterns.
- b. An analysis of any topographic features that might influence the groundwater flow system.
- c. Based on field data, tests, cores, and available literature, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the Facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:
 - (1) Hydraulic conductivity and porosity (total and effective);
 - (2) Lithology, grain size, sorting, degree of cementation;
 - (3) An interpretation of hydraulic interconnections between saturated zones; and
 - (4) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.).
- d. Based on field studies, cores, and available literature, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
 - (1) Sand and gravel deposits in unconsolidated deposits; and

- (2) Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
- e. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- (1) Water-level contour and/or potentiometric maps;
 - (2) Hydrologic cross sections showing vertical gradients;
 - (3) The flow system, including the vertical and horizontal components of flow;
 - (4) Any temporal changes in hydraulic gradients, due to seasonal influences; and
- f. A description of man made influences that may affect the hydrogeology of the Facility, identifying:
- (1) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and
 - (2) Man made hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Respondent shall conduct a program and/or utilize existing data from previous investigations to characterize the geologic units above the water table in the vicinity of the contaminant release(s). Such characterization shall include but not be limited to, the following information:

- a. USCS soil classification;
- b. Soil profile, including ASTM classification of soils;
- c. Directional relative permeability;
- d. Bulk density;
- e. Soil pH;
- f. Particle size distribution;
- g. Moisture content;
- h. Infiltration (field test);
- i. Storage capacity;

- j. Mineral content; and
- k. Soil conductivity.

3. Surface Water and Sediment

The Respondent shall conduct a program and/or utilize existing data from previous investigations or available literature to characterize any marshes, creeks, wetland areas, or ditches surrounding and crossing the Facility. Such characterization shall include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
 - (1) For all local wetland areas, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (i.e., 100 year event);
 - (2) Drainage patterns; and
 - (3) Evapotranspiration rates.
- b. Description of the chemistry of surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, and specific contaminant concentrations, as proposed by the Respondent and approved by EPA.
- c. Description of sediment characteristics including:
 - (1) Deposition area;
 - (2) Thickness profile; and
 - (3) Physical parameters (e.g., grain size, density, ion exchange capacity, etc.).

B. Source Characterization

Respondent shall document and quantify the following specific characteristics at all known source areas subsequent to November 1980 and to the extent known or ascertainable for periods prior thereto:

- 1. Source Areas
- 2. Unit/Disposal Area characteristics:
 - a. Location of unit/disposal area;
 - b. Type of unit/disposal area;
 - c. Design features;

- d. Operating practices (past and present);
 - e. Period of operation;
 - f. Age of unit/disposal area;
 - g. General physical conditions; and
 - h. Method used to close the unit/disposal area.
3. Waste Characteristics:
- a. Type of waste placed in each unit;
 - (1) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
 - (2) Quantity; and
 - (3) Chemical composition.
 - b. Physical and chemical characteristics of the wastes;
 - (1) Physical form (solid, liquid, gas);
 - (2) Physical description (e.g., powder, oily sludge);
 - (3) Temperature;
 - (4) pH;
 - (5) General chemical class (e.g., acid, base, solvent);
 - (6) Molecular weight;
 - (7) Density;
 - (8) Boiling point;
 - (9) Viscosity;
 - (10) Solubility in water;
 - (11) Cohesiveness of the waste; and
 - (12) Vapor pressure.
 - c. Migration and dispersal characteristics of the waste;
 - (1) Sorption;
 - (2) Biodegradability, bioconcentration, biotransformation;

- (3) Photodegradation rates;
- (4) Hydrolysis rates; and
- (5) Chemical transformations.

The Respondent shall document the procedures used in making the above determinations.

C. Contamination Characterization

The Respondent shall collect and/or utilize previously collected field data, available literature, and analytical data on groundwater, soils, surface water and sediment contamination in the vicinity of the Facility. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, and conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Respondent shall address the following types of contamination at the Facility:

1. Groundwater Contamination

Respondent shall characterize the vertical and horizontal extent of the groundwater contamination plume. Characterization of the plume beyond facility boundaries shall be conducted where necessary in order to fully delineate the plume. This characterization shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of groundwater;
- d. The horizontal and vertical concentration profiles of 40 CFR Part 264, Appendix IX constituents for volatile organics, semi-volatile organics and metals and TPH in the groundwater that are measured by EPA approved procedures;
- e. A minimum of two sampling events utilizing the parameters identified in paragraph II.C.1.d. are required in all new wells, with the exception of new wells which contain floating LNAPL's. Respondent shall develop an approach for sampling of wells which contain LNAPL's. Respondent may use an indicator parameter list after the initial two rounds of sampling;
- f. An evaluation of factors influencing the plume movement; and
- g. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation and/or utilize previously collected data to characterize the nature and extent of any contamination of the soil units above the water table. The investigation shall provide the following information:

- a. A description of the vertical and horizontal extent of contamination both on site and off-site, as necessary;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific soil properties and contaminant concentrations as proposed by Respondent and approved by EPA to include at a minimum;
 - (1) USCS soil classification;
 - (2) Soil profile, including ASTM classification of soils;
 - (3) bulk density of soil;
 - (4) soil pH;
 - (5) particle size distribution;
 - (6) moisture content;
 - (7) storage capacity;
 - (8) mineral content;
 - (9) soil conductivity;
 - (10) concentration of 40 CFR Part 264, Appendix IX constituents for volatile organics, semi-volatile organics and metals and TPH. Respondent shall propose appropriate field and laboratory screening techniques.
- d. The direction of contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. Off-site soil contaminant plumes, if present, shall be defined.

The Respondent shall document the procedures used in making the above determinations.

- f. A characterization of the physical and chemical nature of soils and contaminants in the following areas;

- (1) All ditches and run-off accumulation areas at or near the facility property boundaries;
 - (2) All contaminated soil storage areas and waste piles;
 - (3) Railcar unloading areas;
 - (4) Truck unloading areas; and
 - (5) Any other areas of concern.
- g. Maps of all areas included in the soil investigation which are at an appropriate scale which adequately depicts the necessary information.

3. Surface Water and Sediment Contamination

The Respondent shall conduct a surface water and sediment investigation and/or utilize previously collected data to characterize contamination resulting from releases at the Facility.

The investigation shall include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The stream/surface water velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. The surface water and sediment investigation must include the following to ensure adequate assessment of contaminants at or near the Facility:
 - (1) Samples from drainage ditches, culverts, etc., which accept water from the Facility and drain to wetland areas;
 - (2) Samples from wetland area at or near the Facility property boundaries;
 - (3) Samples from wetland areas, if it is determined that contaminated constituents may have reached these areas;
 - (4) Analysis of samples for general water quality parameters, and should at minimum, include temperature, pH, dissolved oxygen (DO), conductivity, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), total dissolved solids (TDS), total organic carbon (TOC), and nutrients; and

(5) Analysis of samples for constituents related to past and present Facility activities as described in C.2.c.10 of this section.

g. Maps for all areas included in the surface water and sediment investigation which are at a scale which adequately depicts the necessary information.

The Respondent shall document the procedures used in making the above determinations.

4. Air Quality Monitoring

Respondent may submit their current air permit and any existing additional air data for review to determine if it meets the requirements of air quality monitoring. Respondent may also present air modeling or other scientifically predictive information to meet the air quality monitoring requirements without using individual air monitoring stations. If EPA determines that air monitoring stations are necessary, Respondent shall install, operate and maintain the necessary air monitoring stations, as applicable. The purpose of monitoring air quality at the Facility is to determine the daily concentration and nature of possible air emissions migrating from the Facility. The air monitoring program must be capable of determining the velocity, direction, concentration and composition of the contaminants released. The proposal must include a list of potential contaminants for monitoring and the rationale for their selection.

5. Monitoring Wastewater Discharge

Respondent shall monitor the discharged treated wastewater for appropriate and relevant parameters. The monitoring program must meet all applicable Federal, State and local requirements. Respondent shall use accepted protocols for sampling and laboratory analyses which shall be submitted to the State and EPA for review with the RFI Workplan. Respondent may submit their current wastewater discharge permit for review to determine if it meets the requirements of this section.

6. Wetlands Monitoring

Respondent shall investigate all wetland areas as, defined by Section 404 of the Clean Water Act, at or near the Facility property boundaries. Respondent shall determine if contamination has reached any wetland areas with a sampling and analysis plan, and/or previously collected data designed to characterize the physical and chemical nature of surface water, sediments, soils, and contaminants.

D. Potential Receptors

The Respondent shall collect all available data describing the human populations and environmental systems that are susceptible to contaminant exposure from the Facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of groundwater:
 - a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial) for each aquifer around and beneath the Facility; and

- b. Location of groundwater users including wells and discharge areas.
2. Local uses and possible future uses of surface waters draining the Facility:
 - a. Domestic and municipal (e.g. potable and lawn/gardening watering);
 - b. Recreational (e.g. swimming, fishing);
 - c. Agricultural;
 - d. Industrial; and
 - e. Environmental (e.g. fish and wildlife propagation).
 3. Human use of or access to the Facility and adjacent lands, including but not limited to:
 - a. Recreation;
 - b. Hunting;
 - c. Residential;
 - d. Commercial;
 - e. Zoning; and
 - f. Relationship between population locations and prevailing wind direction.
 4. A description of the biota in surface water bodies on, adjacent to, or affected by the Facility.
 5. A description of the ecology overlying and adjacent to the Facility.
 6. A demographic profile of the people who use or have access to the Facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.
 7. A description of any endangered or threatened species near the Facility.

E. TASK IV: INVESTIGATION ANALYSIS

Within sixty (60) days of Respondent' receipt of EPA's approval of the Final RFI Report, the Respondent shall submit an Investigation Analysis Report to support the selection of Protection Standards for the Facility. The report shall describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area.

1. Protection Standards

a. Groundwater Protection Standards

For regulated units the Respondent shall provide information to support the EPA's selection/development of Groundwater Protection Standards for all constituents

identified in the groundwater during the Facility Investigation (Task III). The Groundwater Protection Standards shall consist of:

- (1) For any constituents listed in Table 1 of 40 CFR 264.94, the respective value given in that table (MCL) if the background level of the constituent is below the given in Table 1; or
- (2) The background level of that constituent in the groundwater; or
- (3) Those level of constituents which are demonstrated as being protective of human health and the environment as determined by a risk-based study.

b. Other Relevant Protection Standards

The Respondent shall identify relevant and applicable standards for the protection of human health and the environment (e.g. National Ambient Air Quality Standards, Federally approved state water quality standards, etc.).

F. TASK V: FIELD, LABORATORY AND/OR BENCH-SCALE STUDIES

1. Based on the EPA approved report submitted pursuant to Task I-3 of this Order, Respondent shall, as required conduct laboratory and/or bench scale studies, if necessary to determine the applicability of a corrective measure technology or technologies to facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.
2. The Respondent shall develop a testing plan identifying the types(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.
3. Upon completion of the testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.
4. The Respondent shall submit a report summarizing the testing program and its results, both positive and negative, to EPA within sixty (60) days from receipt of EPA approval of the Final RFI Report.

G. TASK VI: PROGRESS REPORTS

The Respondent shall at a minimum provide the State and EPA with signed, monthly RFI progress reports containing:

1. A description and estimate of the percentage of the RFI completed;
2. Summaries of all findings;
3. Summaries of all changes made in the RFI during the reporting period;
4. Summaries of all contacts with representatives of the local community, public

interest groups or the State government during the reporting period;

5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in contact personnel during the reporting period;
8. Projected work for the next reporting period;
9. Copies of daily reports, inspection reports, etc.; and
10. Copies of validated laboratory results shall be submitted quarterly.

H. FACILITY SUBMISSION SUMMARY

The RFI Scope of Work submittal summary is presented below:

<u>FACILITY SUBMISSION</u>	<u>DUE DATE*</u>
Preliminary Report: Description of Current Conditions (Task I)	90 days
Draft RFI Workplan (Task II)	90 days
Revised RFI Workplan (Task II)	30 days after receipt of EPA comments on Draft RFI Workplan
Implementation of Approved RFI (Task II)	30 days after receipt of Workplan EPA approval of Revised RFI Workplan
Draft RFI Report (Task III)	365 days after RFI Workplan Approval
Final RFI Report (Task III)	30 days after EPA comment on Draft RFI Report
Investigation Analysis (Task IV) and the Field, Laboratory and/or Bench-Scale Studies (Task V)	60 days after receipt of EPA approval of Final RFI Report
Progress Reports on Tasks I through V	MONTHLY

* All due dates are calculated from the effective date of this Order unless otherwise specified.

III. CORRECTIVE MEASURE STUDY

A. PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate corrective action alternatives and to recommend the corrective measure or measures to be taken at the Facility. Respondent may combine the CMS report with the Field, Laboratory and/or Bench-Scale Report. The Respondent will furnish the personnel, materials, and services necessary to prepare the corrective measure study, except as otherwise specified.

B. SCOPE

The Corrective Measure Study consists of four tasks:

1. Task VII: Identification and Development of the Corrective Measure Alternatives
 - a. Description of Current Situation
 - b. Establishment of Corrective Action Objectives
 - c. Screening of Corrective Measures Technologies
 - d. Identification of the Corrective Measure Alternatives
2. Task VIII: Evaluation of the Corrective Measure Alternatives
 - a. Technical/Environmental/Human Health/Institutional
 - b. Cost Estimate
3. Task IX: Justification and Recommendation of the Corrective Measure or Measures
 - a. Technical
 - b. Human Health
 - c. Environmental
4. Task X: Reports
 - a. Progress Reports
 - b. Draft Report
 - c. Final Report

C. TASK VII: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVES

Based on the results of the RFI and in consideration of the identified Corrective Measure Technologies (Task I.3), the Respondent shall identify, screen and develop the alternatives for

removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

1. Description of Current Situation

The Respondent shall submit an update to the information describing the current situation at the Facility and the known nature and extent of the contamination as documented by the RFI Report. The Respondent shall provide an update to information presented in Task I of the RFI to the State and EPA regarding previous response activities and any interim measures which have or are being implemented at the Facility. The Respondent shall also make a facility specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

2. Establishment of Corrective Action Objectives

The Respondent shall propose to the EPA for review and approval, facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable state and Federal statutes and regulations, including any applicable proposed rules.

3. Screening of Corrective Measure Technologies

The Respondent shall review the results of the RFI and reassess the technologies specified in Task I.3. and identify additional technologies which are applicable at the Facility. The Respondent shall screen the preliminary corrective measure technologies identified in Task I.3 of the RFI and any supplemental technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

a. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

b. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

c. Technology Limitations

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

4. Identification of the Corrective Measure Alternatives

The Respondent shall develop the corrective measure alternatives based on the corrective action objectives and analysis of Corrective Measure Technologies, as presented in Task I.3 of the RFI and as supplemented following the preparation of the RFI Report. The Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the Facility. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task I.3, as supplemented in the development of the alternatives.

D. TASK VIII: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVES

The Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Respondent shall also develop cost estimates of each corrective measure.

1. Technical/Environmental/Human Health/Institutional

The Respondent shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and approximate quantities of utilities required. The Respondent shall evaluate each alternative in the four following areas:

a. Technical

The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(1) The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:

(a) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be

determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

- (b) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.
- (2) The Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:
- (a) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and
 - (b) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.
- (3) The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:
- (a) Constructability is determined by conditions both internal and external to the facility conditions and include such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the Facility (i.e., remote location vs. a congested urban area). The Respondent shall evaluate what measures can

be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

(b) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

(4) The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

b. Environmental

The Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

c. Human Health

The Respondent shall assess each alternative in terms of the extent of which it mitigates short- and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA.

d. Institutional

The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

2. Cost Estimate

The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

- a. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.
- (1) Direct capital costs include:
 - (a) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure;
 - (b) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
 - (c) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and
 - (d) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.
 - (2) Indirect capital costs include:
 - (a) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
 - (b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
 - (c) Startup and shakedown costs: Costs incurred during corrective measure startup; and
 - (d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.
- b. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective measure. The Respondent shall consider the following operation and maintenance cost components:
- (1) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
 - (2) Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
 - (3) Auxiliary materials and energy: Costs of such items as chemicals

and electricity for treatment plant operations, water and sewer service, and fuel;

- (4) Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
- (5) Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
- (6) Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
- (7) Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
- (8) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- (9) Other costs: Items that do not fit any of the above categories.

E. TASK IX: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

1. Technical

- a. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- b. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be given preference;
- c. Implementability - corrective measure or measures which can be constructed and operating to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- d. Safety - corrective measure or measures which pose the least threat to the

safety of nearby residents and environments as well as workers during implementation will be preferred.

2. Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

3. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the shortest period of time on the environment will be favored.

F. TASK X: REPORTS

The Respondent shall submit a Corrective Measure Study Report presenting the results of Tasks VII through IX and recommending a corrective measure alternative. The CMS progress report can be combined with the monthly RFI progress report.

1. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly CMS progress reports containing:

- a. A description and estimate of the percentage of the CMS completed;
- b. Summaries of all findings;
- c. Summaries of all changes made in the CMS during the reporting period;
- d. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- e. Summaries of all problems or potential problems encountered during the reporting period;
- f. Actions being taken to rectify problems;
- g. Changes in the personnel involved with the CMS during reporting period;
- h. Projected work for the next reporting period; and
- i. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

2. Draft Report

The Report shall at a minimum include:

- a. A description of the Facility;

- b. Site topographic map; and
- c. Preliminary layouts.
- d. A summary of the corrective measure or measures;
 - (1) Description of the corrective measure or measures and rationale for selection;
 - (2) Performance expectations;
 - (3) Preliminary design criteria and rationale;
 - (4) General operation and maintenance requirements; and
 - (5) Long-term monitoring requirements.
- e. A summary of the RFI and impact on the selected corrective measure or measures;
 - (1) Field studies (groundwater, surface water, soil, air); and
 - (2) Laboratory studies (bench scale, pick scale).
- f. Design and Implementation Precautions;
 - (1) Special technical problems;
 - (2) Additional engineering data required;
 - (3) Permits and regulatory requirements;
 - (4) Access, easements, right-of-way;
 - (5) Health and safety requirements; and
 - (6) Community relations activities.
- g. Cost Estimates and Schedules;
 - (1) Capital cost estimate;
 - (2) Operation and maintenance cost estimate; and
 - (3) Project schedule (design, construction, operation).

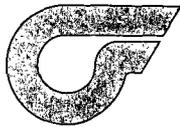
3. Final Report

The Respondent shall finalize the CMS Report addressing comments received from EPA on the Draft CMS Report.

G. FACILITY SUBMISSION SUMMARY

A summary of the information reporting requirements contained in the Corrective Measure Study Scope of Work is presented below:

<u>FACILITY SUBMISSION</u>	<u>DUE DATE</u>
Draft CMS Report (Tasks VII, VIII, and IX)	60 days after receipt of EPA approval of the Final RFI Report
Final CMS Report (Tasks VII, VIII, and IX)	30 days after receipt of EPA comments on the Draft CMS Report
Progress Reports (Tasks VII, VIII, and IX)	Monthly, the progress report may be combined, as appropriate, with the monthly RFI progress report



Bloomfield Refining
Company

A Gary Energy Corporation Subsidiary

OIL CONSERVATION DIVISION
RECEIVED

'92 MAR 11 AM 9 02

April 30, 1992

Mr. Roger Anderson
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

RE: Draft Administrative Order from EPA

Dear Mr. Anderson:

Enclosed please find a copy of a draft Administrative Order we received from the U.S. EPA. Since the New Mexico Oil Conservation Division has authority in New Mexico to administer corrective action for product releases at refineries, we thought you may want to be involved in the negotiations with the EPA concerning the final Administrative Order on Consent that may result.

We are committed to continued progress in our ground water remediation program. The draft Order does not appear to consider the progress we have made under your oversight. We would appreciate your assistance in keeping our program moving forward in a practical manner.

Sincerely yours,

Chris Hawley
Environmental Manager

CH/jm

Enclosure

cc: Dave Roderick
Joe Warr
John Goodrich
Joe Guida



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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

APR 8 1992

CERTIFIED MAIL RETURN RECEIPT REQUESTED

RECEIVED

APR 14 1992

D. RODERICK

Mr. David Roderick, Refinery Manager
Bloomfield Refining Company
P. O. Box 159
Bloomfield, New Mexico 87413

RE: Bloomfield Refining Company, Inc.
EPA ID# NMD089416416

Dear Mr. Roderick:

Enclosed please find a copy of the draft § 3008(h) Administrative Order on Consent (Order) for the Bloomfield Refinery Company (BRC) located east of Sullivan Road, in Bloomfield, New Mexico. This Order is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by § 3008(h) of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA) as further amended by the Hazardous and Solid Waste Amendments of 1984, 42 USC § 6928(h). The authority to issue this Order has been delegated to the Regional Administrator by EPA Delegation Nos. 8-31 and 8-32, dated April 16, 1985, and further delegated to the Director of the Hazardous Waste Management Division.

BRC has thirty (30) days from the receipt of this Order in which to provide a written response pursuant to the Order and an additional thirty (30) days in which to negotiate in good faith. If an agreement in principle is not reached between BRC and EPA within this sixty (60) day period, EPA may exercise its authorities under § 3008(h) of RCRA. EPA has set a high priority for corrective actions to begin as soon as possible at the Facility and is committed to resolving any problems which may arise.

If you have any questions, please call Mr. Keith N. Phillips of my staff at (214) 655-6480 or Mr. Bennett Stokes in the Office of Regional Counsel at (214) 655-2120.

Sincerely,


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

cc: Kathleen Sisneros (NMED)

firms, corporations, subsidiaries, contractors, consultants acting under or on behalf of Respondent.

2. No change in ownership, corporate, or partnership status relating to the facility will in any way alter the status or responsibility of the Respondent under this Order. Respondent will be responsible for and liable for any failure to carry out all activities required of the Respondent by the express terms and conditions of this Order, irrespective of its use of employees, agents or consultants to perform any such tasks.
3. Each undersigned representative of the parties to this Order certifies that he or she is fully authorized to enter into the terms and conditions of this Order.
4. Respondent shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) calendar days of the effective date of this Order or date of such retention of services and shall condition all such contracts on compliance with the terms of this Order.
5. Respondent shall give notice of this Order to any successors in interest prior to transfer of ownership or operation of the facility and shall notify EPA no later than thirty (30) days prior to such transfer.

III. STATEMENT OF PURPOSE

In entering into this Order, the mutual objectives of EPA and Respondent are: (1) to perform Interim Measures (IM) at the facility to mitigate potential threats to human health or the environment; (2) to perform a RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release(s) of hazardous waste or hazardous constituents at or from the facility; (3) to perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for corrective action(s) to prevent or mitigate any migration of release(s) of hazardous wastes or hazardous constituents at or from the facility, and to collect any other information necessary to support the selection of corrective measures at the facility; and (4) to perform a Corrective Measure Implementation (CMI) implementing the corrective measure or measures selected by EPA for the facility.

IV. FINDINGS OF FACT

1. Respondent is Gary-Williams Energy Corporation, (henceforth referred to as Gary Energy), 115 Inverness Drive East, Englewood, Colorado, 80112. Gary Energy is a corporation incorporated under the laws of the State of New Mexico, and is a person as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15). Gary Energy is a wholly-owned subsidiary of Gary Williams Oil Producer, Inc.. Bloomfield Refinery Company, Inc., is a Colorado Corporation, 115 Inverness Drive East,

Englewood, Colorado, 80112, and is a wholly-owned subsidiary of Gary-Williams Energy Corporation, Inc. Both are hereinafter collectively referred to as "Respondent."

2. The facility is located east of Sullivan Road, Bloomfield, San Juan County, New Mexico, at 36 degrees, 58 minutes and 50 seconds latitude and 107 degrees, 58 minutes, and 20 seconds longitude. This location is one mile south of Bloomfield, New Mexico, on Highway 44.
3. Plateau, Inc., the former owner of the facility, operated the hazardous waste management units at the facility after November 19, 1980. Plateau, Inc. is located at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc., is a wholly-owned subsidiary of Suburban Propane Gas Corporation, a New Jersey corporation.
4. On or about October 31, 1984, Suburban Propane Gas Corporation sold the facility to Respondent.
5. Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), requires any person generating or transporting any listed or characteristic hazardous waste, or owning or operating a facility for treatment, storage or disposal of such substance, to file with the EPA a notification stating the location and general description of such activity or the listed or characteristic hazardous wastes handled by such persons.
6. Pursuant to Section 3010(a) of RCRA, 42 U.S.C. § 6930(a), on August 18, 1980, Plateau, Inc., notified EPA of its hazardous waste activity. In this notification, Plateau, Inc., identified itself as a generator, treater, storer and/or disposer of hazardous waste at the facility.
7. Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), provides that any person who complies with the provisions of Section 3005(e) shall be treated as having been issued a permit. Such a facility shall be considered to be under interim status, and shall be required to meet all applicable requirements of RCRA.
8. In its RCRA Part A permit application (permit application) dated November 19, 1980, Plateau, Inc., notified the Administrator of EPA and the New Mexico Environmental Improvement Division (NMEID), that it was engaged in the generation and storage at the facility of hazardous wastes identified and listed in 40 CFR Part 261 and used surface impoundments for the treatment, storage, or disposal (process code S04) of hazardous wastes at the facility.
9. The facility, comprised of 287 acres, consists of petroleum refining operations having five (5) RCRA-regulated hazardous waste management units which received the following hazardous wastes or hazardous waste constituents as identified in the facility's permit application:

- a) hazardous wastes from specific sources identified at 40 CFR § 261.32;
 - i) K049 - Slop oil emulsion solids from the petroleum refining industry,
 - ii) K050 - Heat exchanger bundle cleaning sludge from the petroleum refining industry,
 - iii) K051 - API separator sludge from the petroleum refining industry,
 - iv) K052 - Tank bottoms (leaded) from the petroleum refining industry.
10. Plateau, Inc., pursuant to 40 CFR Parts 261.20 and 260.22, submitted a Delisting Petition to the U.S. EPA on May 21, 1982, for the following hazardous wastes:
 - a) waste code K049;
 - b) waste code K050;
 - c) waste code K051.
11. On May 3, 1983, the U.S. EPA denied the Delisting Petition.
12. In accordance with 40 CFR, Part 265, Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities, on October 8, 1981, Plateau, Inc., submitted a ground water monitoring waiver demonstration to EPA and NMEID for their review.
 - a) In its comments to the waiver, NMEID stated that the demonstration was inadequate to justify a waiver. The comments further stated that it was probable that seepage from the facility was flowing into the Hammand Ditch and/or the San Juan River. The possible contamination of surface water bodies by toxic pollutants undermined Plateau's ability to demonstrate that there was a low potential for migration of pollutants to surface water.
 - b) In a letter to Plateau, Inc., dated March 12, 1984, NMEID denied the ground water monitoring waiver demonstration and required Plateau, Inc., to comply with all applicable ground water monitoring requirements found at 40 CFR § 265.90 et seq.
13. Although Plateau, Inc., asserted in its waiver demonstration that no ground water is known to exist in or above the impermeable Nacimiento formation, the Nacimiento is overlain by a highly permeable cobble bed which allows ground water flow, which also underlies the facility.

14. During May and June, 1983, EPA personnel conducted inspections that revealed significant seepage of ground water from the contact of the cobble bed and the Nacimiento formation at the face of the bluff above the San Juan River.
15. Analysis of samples of these seeps taken during a May, 1984, inspection showed a high level of organic and inorganic contamination (Attachment I - Table I) released from the facility to the San Juan River.
16. On July 15, 1982, May 10, 1983, June 7-8, 1983, March 19-23, 1984, and May 4, 1984 EPA conducted Compliance Evaluation Inspections (CEIs) to assess the facility's compliance with the RCRA Hazardous Waste Management regulations.
17. The May 10, 1983, inspection was conducted to also assess potential adverse environmental impacts, including endangerment to human health, welfare, or the environment pursuant to the Comprehensive Environmental Response and Liability Act (CERCLA) 42 U.S.C. § 9601 et seq.
18. In addition to the hazardous wastes listed above, on or about the date of the 1984 inspection, Plateau, Inc., treated, stored, or disposed of at its facility, the following hazardous wastes:
 - a) waste code D001, ignitable hazardous waste;
 - b) waste code D002, corrosive hazardous waste (pH greater than 12.5) stored in a tank located near the API separator;
 - c) waste code D003, reactive hazardous waste located near the API separator, in the South Oily Water Pond (SOWP), the South Evaporation Pond, the North Evaporation Pond, and the Landfill Pond; } 2 Sulfides
 - d) waste code F002.
19. During the May, 1984 sampling event, soil and water samples were collected upstream and downstream on the San Juan River of the present location of the facility:
 - a) The upstream samples exhibited 225 ppb of unknown organics in the water samples, 430 ppb 1,1,2, - trichloroethane, 320 ppb 1,1,2,2, - tetrachloroethane, and 7,700 ppb of unknown Acid Base/Neutral organics in the soil samples. Inorganics were not detected in either the water or soil samples.
 - b) Downstream samples exhibited 26 ppb of unknown trichloroethane, 950 ppb 1,1,2,2 - tetrachloroethane, 680 ppb 1,1,2-trichloroethane, 680 ppb di-n-octyl phthalate, and 2,460 ppb of

unknown Acid/Base/Neutral organics in the soil samples.

20. Inspections and information collected during 1982-1983 determined that API Separator Sludge (Waste Code K049, K050, K051) came to be located in the South Oily Water Pond (SOWP) and the North Oily Water Pond (NOWP) immediately downstream of the API Separator.
- a) In its 1982 Delisting Petition, Plateau, Inc., described samples of K051 waste as having been collected from the oily water pond (surface impoundment) downstream of the API separator.
 - b) In the Delisting Petition, representative samples of the API separation sludge collected from the oily water pond downstream of the API separator showed proportionate amounts of the three subject listed wastes.
 - c) In the Delisting Petition, the manufacturing processes or other operations and feed materials producing the waste found in the pond downstream containing API separator sludge were described.
 - d) On July 14, 1982, Oscar Simpson, of the New Mexico Oil Conservation Division (NMOCD), conducted a sampling event at the Plateau, Inc., facility. As noted in the sample descriptions from the inspection, the effluent from the API separator was very hot and oily.
 - e) In a letter dated October 29, 1982, regarding the review of Plateau, Inc., Updated Discharge Plan from Hydro Science Engineers, Inc. to Oscar Simpson of NMOCD, George V. Sabol of Hydro Science Engineers, stated that among factors considered to evaluate the operation of API separators, "removal [of sludges] is temperature dependent" (high temperature reduces removal efficiency).
 - f) On or about July 12-14, 1982, Oscar Simpson of NMOCD conducted sampling visits of the facility. The samples of the API effluent were analyzed to determine the levels of hazardous waste, or hazardous waste constituents, flowing into the SOWP immediately downstream from the API separator. The analytical results are exhibited in Attachment I, Table II.
 - g) In a memorandum dated April 1, 1983, to Raymond R. Sisneros, Health Program Manager, Permit Section, NMEID, Jack Ellvinger of NMEID stated that "while at Plateau, Inc., with EPA for the last two inspections, I observed that the API separator was

not functioning properly and a great deal of the material was passing on to the ponds."

- h) On April 4, 1983, Jack Ellvinger of NMEID wrote a Record of Communication (ROC) to the facility file documenting a phone conversation he had with Oscar Simpson of the NMOCD. The ROC stated that Mr. Simpson, while conducting an inspection of the facility for NMOCD, had observed that the API separator was not being properly operated, allowing API separator sludge and other wastes to flow into the pond immediately downstream of the API separator.
- 21. On or about October 29 through November 1, 1982, Plateau, Inc.'s, contractor, Energy Extractors Inc., removed K051 from the two unlined surface impoundments, SOWP and the NOWP. Approximately 89,852 gallons of this material were removed and pumped to trucks owned or contracted by Pacific Intermountain Express Company (P.I.E.). These fourteen (14) shipments were then transported, at the facility's direction, by P.I.E. to Overthrust Tool and Supply Inc. (Overthrust Tool) in Vernel, Utah, on or about October 30 through November 2, 1982.
 - 22. On March 22, 1983, the U.S. EPA, Region VIII, Denver, Colorado, was notified by the Utah Solid and Hazardous Waste Committee (USHWC), that Plateau, Inc., had possibly illegally transported K051 to Vernel, Utah.
 - 23. On or about April 21, 1983, USHWC issued a Notification of Violations and Order of Compliance to Plateau requiring that it remove hazardous waste (waste code K051) from the storage tank located at the Overthrust Tool facility in Vernel, Utah, to an approved hazardous waste treatment, storage and disposal facility within sixty (60) days of the Order.
 - 24. Investigations by National Enforcement Investigation Center of the EPA (NEIC) in 1983 found that facility personnel dumped or land-treated hazardous wastes, waste codes K051, K050, and/or K049, on the facility, in violation of RCRA, § 3008(2), 42 U.S.C. § 6928(2).
 - a) In April 1983, the NEIC implemented an investigation predicated upon receipt of information that approximately 90,000 gallons of a listed hazardous waste (waste code K051), were transferred and/or disposed of by the facility.
 - b) Preliminary investigations determined that Plateau, Inc. shipped approximately 90,000 gallons of "pit sludge" (API separator sludge waste code K051) to Overthrust Tool & Supply, Vernel, Utah, without the proper hazardous waste manifests as required by RCRA. The preliminary findings determined that the transfer of the pit sludge by the facility to

Overthrust Tools violated RCRA by shipping a hazardous waste to an unlicensed facility.

- c) Subsequent investigations by NEIC disclosed that the facility, in violation of RCRA, § 3008(a), 42 U.S.C. § 6928(a), disposed of hazardous wastes (waste codes K051, K050, and/or K049) following the clean out of the SOWP and NOWP in November 1982. Plateau removed approximately eight (8) dump truck loads of contaminated soils from the ponds, disposed of them in an on-site depression (landfill) and covered them.
25. In a letter dated December 4, 1984, to EPA, Plateau, Inc., admitted that it contributed waste code F001 or F002 observed in the effluent of the API separator to the refinery sewer system which leads to the API separator.
26. On or about March 29, 1985, EPA issued a Compliance Order and Notice of Opportunity for Hearing pursuant to RCRA Section 3008(a), 42 U.S.C. § 6928(a), to Respondent for failure to meet the RCRA requirements for treatment, storage and disposal facilities.
27. On or about November 26, 1985, EPA issued an Administrative Order pursuant to Section 3008(a) of the RCRA, 42 U.S.C. § 6928(a), to the Respondent for failure to meet the RCRA requirements for treatment, storage and disposal facilities.
28. According to an EPA RCRA Facility Assessment Evaluation (RFA) conducted June 27, 1987, the facility has thirteen (13) Solid Waste Management Units (SWMUs), five (5) of which are considered to be RCRA-regulated SWMUs and are listed below:
- a) South Oily Water Pond (SOWP) (immediately downstream of the API separator);
 - b) North Oily Water Pond (NOWP) (immediately downstream of the SOWP);
 - c) Evaporation Ponds (2);
 - d) Landfill; and
 - e) Landfill Runoff Ponds.
29. The RCRA § 3013 42 U.S.C. § 6934, Final report was received by the EPA by the Respondent on or about July 29, 1988. The presence of hydrocarbon-contaminated groundwater was observed at monitoring wells MW#4, MW#9, and MW#10 documenting a release to the groundwater from the facility. The sampling results are listed in Attachment I, Table III.
30. Attachment I, Table IV lists the carcinogenic chemicals found in the groundwater at the facility and the carcinogenicity

classification based on the weight of evidence for these chemicals.

31. On September 12-14, 1989, a Comprehensive Ground Water Monitoring Evaluation (CME) by the EPA was conducted at the facility. The CME was conducted to assess the facility's compliance with RCRA ground water monitoring requirements found at 40 CFR § 265.90 et seq. The following violations were found:
- a) The NOWP and SOWP have only one (1) downgradient well in place. According to 40 CFR § 265.91, at least three (3) downgradient wells are required to detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate to the uppermost aquifer;
 - b) The landfill and landfill pond have only one (1) downgradient well in place. These areas are separate units and are required to be monitored separately. According to 40 CFR § 265.91, at least three (3) downgradient wells are required to detect any statistically significant amounts of hazardous waste or hazardous waste constituents that migrate to the uppermost aquifer;
 - c) The facility did not have a sampling and analysis plan on file. 40 CFR § 265.92 requires that the operator must develop and follow a ground water sampling and analysis plan. The plan is required to be available at the facility;
 - d) The facility could not produce an outline of a ground water assessment program. 40 CFR § 265.93 requires that an owner or operator must prepare an outline of a ground water quality assessment program, and that the plan be available at the facility;
 - e) The facility did not have records or reports concerning initial background values for the separate waste management areas. 40 CFR § 265.94 requires that these records be available at the facility.
32. During the CME, samples were taken of the monitoring wells at the facility. The sample results are listed in Attachment I, Table V.
33. On September 25, 1990, EPA promulgated the Toxicity Characteristic Rule, 40 CFR § 261.24 (TC Rule).
34. On September 25, 1990, Respondent submitted an Amended Notification and Part A Application (Amended Notification) to

EPA identifying itself as a treater, storer or disposer of hazardous waste.

35. In the Amended Notification, Respondent identified the SOWP and NOWP as Hazardous Waste Aeration Impoundments (Aeration Impoundments).
36. In the Amended Notification, Respondent identified the Aeration Impoundments as units regulated under the TC Rule specifically for benzene concentrations (D018).
37. This Order is based upon the Administrative Record compiled by EPA, which is available for public examination at the Region 6 offices, 1445 Ross Avenue, Dallas, Texas, during normal business hours, Monday through Friday.
38. Based on the release of hazardous waste or hazardous waste constituents into the environment from Respondent's facility, the actions ordered below are necessary to protect human health or the environment.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set out above, and the administrative record, the Director has determined that:

1. Respondent is the operator/owner of the facility, as that term is defined at 40 CFR § 260.10;
2. The location at Bloomfield, New Mexico, where Respondent is doing business, is a "facility" as that term is defined at 40 CFR § 260.10;
3. Respondent is a person defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15);
4. The facility is authorized to operate under interim status pursuant to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e);
5. There have been releases of hazardous wastes or hazardous waste constituents into the environment from the facility as defined by § 3001 of RCRA, 42 U.S.C. § 6921.
6. The interim measures and comprehensive corrective actions (actions) required by this Order are consistent with RCRA and are necessary to protect human health and the environment.

VI. WORK TO BE PERFORMED

Based on the foregoing, it is hereby ORDERED that Respondent shall perform, undertake, continue to take, and complete each of the following actions to the satisfaction of EPA and in accordance with the terms, procedures and schedules set forth in Attachment II - Corrective Action Plan (CAP) in the manner and by the dates specified below:

1. INTERIM MEASURES (IM)

- a) No later than thirty (30) days after the effective date of this Order, Respondent shall submit an approvable draft Interim Measures Workplan (IM Workplan) for EPA review and approval. The IM Workplan shall be prepared in accordance with the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft IM Workplan, Respondent shall submit a Final IM Workplan to EPA for review and EPA's approval addressing EPA's comments. Upon EPA approval of the Final IM Workplan, Respondent shall undertake, or continue to take, the interim measures in accordance with the IM Workplan and concurrently with the RCRA Facility Investigation.
- b) The IM Workplan shall ensure that the Interim Measures are designed to mitigate current or potential threat(s) to human health and/or to the environment, and are consistent with, and integrated into, any long term solution at the facility. The IM Workplan shall document the procedures to be used by the Respondent for the implementation of Interim Measures and shall include, but not be limited to, the objectives, design, construction, operation, monitoring and maintenance requirements, and detailed schedules for the Interim Measures.
- c) In the event Respondent identifies a current or potential threat to human health and/or the environment, the Respondent shall immediately notify EPA orally and in writing within five (5) days of such identification, summarizing the immediacy and magnitude of the potential threat to human health and/or the environment. Within thirty (30) days of notifying EPA, the Respondent shall submit to EPA an IM Workplan for approval that identifies Interim Measures which mitigate this threat and are consistent with and integrated into any long term remedy at the Facility.

2. RCRA FACILITY INVESTIGATION

- a) Within sixty (60) days of the effective date of this Order, Respondent shall submit to EPA an approvable Draft Workplan for a RCRA Facility Investigation (RFI). The Draft RFI Workplan is subject to approval by EPA and shall be performed in a manner consistent with the RFI Scope of Work contained in the CAP. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Workplan, Respondent shall submit a Final RFI Workplan to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA. Upon approval of the Final RFI Workplan, Respondent shall implement the Workplan. The RFI Workplan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations, and EPA guidance documents, including: Interim Final RCRA Facility Investigation

Guidance (EPA 530/SW-89-031, 4 vols.); RCRA Ground Water Monitoring Technical Enforcement Guidance document (OSWER Directive Number 9951.1); Test Methods for Evaluating Solid Waste, SW 846 (2nd Edition); and any other documents determined by EPA to be relevant during the course of this action.

- b) The RFI Workplan shall be designed to define the presence, magnitude, extent, direction, and rate of movement of any hazardous wastes or hazardous waste constituents within and beyond the facility boundary. The Respondent shall conduct those investigations necessary to:
- i) characterize the source(s) of contamination;
 - ii) characterize the potential pathways of contaminant migration;
 - iii) define the degree and extent of contamination;
 - iv) identify actual or potential receptors; and
 - v) support the development of alternatives from which a Corrective Measure will be selected by EPA.

A specific schedule for implementation of all activities shall be included in the RFI Workplan. In accordance with the provisions of Attachment II herein, the RFI workplan shall include: (1) a Project Management Plan; (2) a Data Collection Quality Assurance Plan; (3) a Data Management Plan; (4) a Health and Safety Plan; and (5) a Community Relations Plan.

- c) Within 365 days of the approval of the RFI Workplan, Respondent shall submit to EPA an approvable Draft RFI Report. The RFI Report is subject to approval by EPA and shall be performed in a manner consistent with the requirements contained in Attachment II. No later than thirty (30) days after receipt of EPA's comments on the Draft RFI Report, Respondent shall submit a Final RFI Report to EPA for review and EPA's approval addressing all of EPA's comments to the satisfaction of EPA.

3. CORRECTIVE MEASURES STUDY

- a) Upon completion of the RCRA Facility Investigation, Respondent shall undertake and complete a Corrective Measure Study (CMS) in accordance with the CMS Scope of Work in Attachment II and in accordance with EPA guidance documents determined to be relevant during the course of this action.

b) Respondent shall submit a Draft CMS Workplan to EPA within thirty (30) calendar days of approval of the Final RFI Report. The CMS Workplan shall include, but not be limited to the following:

- i) a definition of the overall objectives of the study;
- ii) a description of the general approach to investigation and potential remedies;
- iii) the specific plans for evaluating remedies to ensure compliance with remedy standards; and
- iv) the proposed format for the presentation of information.

EPA shall review the draft CMS Workplan and provide comments to Respondent. The Respondent shall revise the draft CMS Workplan addressing all of EPA's comments to EPA's approval. Upon receipt of EPA approval of the CMS Workplan, Respondent shall implement the activities of the Workplan. Upon receipt of EPA approval of the CMS Workplan, Respondent shall implement the activities of the Workplan.

4. CORRECTIVE MEASURES IMPLEMENTATION

a) Within sixty (60) days of Respondent's receipt of notification of EPA's selection of the corrective measures to be implemented, Respondent shall submit to EPA a Corrective Measures Implementation Program Plan (CMI Program Plan). The CMI Program Plan is subject to approval by EPA and shall be performed in a manner consistent with the CMI Scope of Work contained in Attachment II. The CMI Program Plan shall be developed in accordance with, at a minimum, RCRA, its implementing regulations, and relevant EPA guidance documents.

b) The CMI Program Plan shall be designed to facilitate the design, construction, operation, maintenance and monitoring of corrective measures at the Facility. In accordance with Attachment II herein, the CMI Program Plan shall address the development of the following pursuant to the Scope of Work contained in Attachment II:

- i) a Program Management Plan;
- ii) a Community Relations Plan;
- iii) Design Plans and Specifications;
- iv) an Operation and Maintenance Plan;

- v) a Cost Estimate;
- vi) a Project Schedule;
- vii) a Health and Safety Plan; and
- viii) a Construction Quality Assurance Plan.

Upon EPA approval of the CMI Program Plan, Respondent shall implement the activities of the Plan.

5. SUBMISSIONS/AGENCY APPROVAL/ADDITIONAL WORK

- a) Within thirty (30) calendar days of approval or modification by EPA of any Workplan(s) or Report(s), Respondent shall commence work and implement the tasks required by the Workplan(s) or Report(s) submitted pursuant to the Scope(s) of Work contained in Attachment II, in accordance with the standards, specifications and schedule stated in the Workplan(s) or Report(s), as approved or modified by EPA.
- b) Beginning with the month following the effective date of this Order, Respondent shall provide EPA with progress reports every month, due on the tenth (10) day of the following month. On a quarterly basis, the progress reports shall include the results of all sampling and testing performed under this Order. The progress reports shall conform to requirements in relevant Scopes of Work contained in Attachment II.
- c) EPA's Project Manager designated pursuant to Section VII of this Order will review all draft and final reports or workplans and notify Respondent in writing of EPA's approval or disapproval of the Report Workplan or any part thereof. Within thirty (30) days of receipt of EPA's disapproval of any Report, Respondent shall address the deficiencies and submit a revised report. EPA shall approve, disapprove, or modify the revised submittal. EPA-approved Reports shall be deemed incorporated into and part of this Order.
- d) Three (3) copies of all documents, including Plans, Reports, and other correspondence to be submitted pursuant to this Order shall be hand-delivered or sent by certified mail, return receipt requested, or the equivalent, to the EPA Project Manager. An additional one (1) copy shall be sent to the New Mexico Environmental Division (NMED). Respondent shall also submit a copy of all report submittals on 3.5 inch computer disk. Text shall be in a format compatible with WordPerfect version 5.1 or later, and data shall be in a format compatible with Lotus 123 version 2.2 or later.

- e) All work performed pursuant to this Order shall be under the direction and supervision of a registered professional engineer or geologist with expertise in hazardous waste site cleanup. The Respondent shall notify EPA in writing of the name, title, and qualifications of the engineer or geologist, and of any contractors or subcontractors and their personnel to be used in carrying out the terms of this Order thirty (30) calendar days after the effective date of this Order, or within thirty (30) calendar days prior to such contract or subcontract.

- f) EPA may determine that certain tasks and deliverables, including investigatory work or engineering evaluation, are necessary in addition to the tasks and deliverables included in the Workplans. When new information indicates that such additional work is necessary, EPA will request, in writing, that Respondent perform the additional work and shall specify the basis and reasons for EPA's determination that the additional work is necessary. Within thirty (30) calendar days after the receipt of such request, Respondent may request a meeting with EPA to discuss the additional work. Thereafter, Respondent shall perform the additional work EPA has requested according to an EPA-approved Workplan or Schedule. All additional work performed by Respondent under this paragraph shall be performed in a manner consistent with this Order and in accordance with the standards, specifications, schedules and guidance determined to be relevant, or approved by the EPA.

VII. PROJECT MANAGER

1. Within ten (10) days of the effective date of this Order, EPA and Respondent shall each designate a Project Manager. Each Project Manager shall be responsible for overseeing the implementation of this Order. The EPA Project Manager will be EPA's designated representative at the facility. All communications between Respondent and EPA, and all documents, reports, approvals, and other correspondence concerning the activities performed pursuant to the terms and conditions of this Order shall be directed through the Project Manager.
2. The Parties shall provide at least five (5) days written notice prior to changing Project Managers.
3. If EPA determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste, hazardous constituents or is a threat to human health, or environment, or that Respondent is not capable of undertaking any studies or corrective measure ordered, EPA may order Respondent to stop further implementation of this Order for such period of time as EPA determines may be needed to abate any such releases or threats and/or to undertake any action which EPA determines is

necessary to abate such releases or threats. Failure to comply with EPA's stop work order shall result in a penalty of \$25,000 per day of continued non-compliance with EPA's stop work order pursuant to RCRA Section 3008(h)(2), 42 U.S.C. § 6928(h)(2).

4. In the event the EPA Project Manager suspends the work or any other activity at the facility, the EPA Project Manager has the authority to and shall extend affected schedules under this Order for a period of time equal to that of the suspension of the work plus reasonable additional time for resumption of activities. If the delay pursuant to this Section is caused by Respondent or its contractor's noncompliance with this Order, then any extension of the compliance deadlines shall be at EPA's sole discretion. Any extensions in the schedules set out in this Order or in its attachments must be made by EPA in writing.
5. The absence of the EPA Project Manager from the facility shall not be cause for the stoppage or delay of work.

VIII. SAMPLING AND DATA/DOCUMENT AVAILABILITY

1. The Respondent shall submit to EPA the results of all sampling and tests or other data generated by its employees and/or consultants with respect to the implementation of this Order.
2. Respondent shall submit these results in progress reports as described in Attachment II and paragraph VI.5 of this Order.
3. EPA will make available to the Respondent the results of sampling and/or tests or other data similarly generated by EPA.
4. Respondent will specify the name and address of the laboratory to be used for sample analysis. EPA reserves the right to conduct a performance and QA/QC audit of the above-specified laboratory before, during, or after sample analysis. If the audit reveals deficiencies in lab performance or QA/QC, re-sampling and analysis may be required.
5. At the request of EPA, the Respondent shall allow split or duplicate samples to be collected by EPA, and/or its authorized representatives, of any samples collected by the Respondent pursuant to the implementation of this Order. The Respondent shall notify EPA not less than fourteen (14) days in advance of any well installation or sample collection activity. In the event EPA conducts any additional sampling, Respondent will be offered the opportunity to split samples.

IX. REPORTING AND PUBLIC ACCESS TO DOCUMENTS AND SAMPLING

1. Respondent may assert a claim of confidentiality for information submitted concerning its production methods and processes if the information qualifies for exemption from the

Freedom of Information Act, as provided for in 5 U.S.C. § 522(b)(4). Analytical data generated pursuant to this Order shall not be claimed as confidential. Confidentiality claims shall be submitted to EPA in accordance with the procedures outlined in 40 CFR § 2.203(b), and must include a written statement explaining how the information claimed to be confidential meets the criteria for use in confidentiality determinations found in 40 CFR § 2.208. If EPA approves the claim, the Agency will afford the information confidential status, as specified in Subpart B of 40 CFR Part 2. Information determined not confidential may be made available to the public without further notice to Respondent. If Respondent makes no claim of confidentiality for information submitted pursuant to this Order, EPA will make the information available to the public without further notice to Respondent.

2. Any reports, plans, specifications, schedules and attachments required by this Order shall be incorporated into this Order upon approval by EPA. Any noncompliance with such EPA approved plans, reports, specifications, schedules, and attachments shall be construed as a violation of the terms of this Order subject to stipulated penalties outlined in Section XVII of this Order. Oral advice or approvals given by EPA representatives will not relieve Respondent of its obligation to obtain any formal, written approvals required by this Order.

X. PUBLIC COMMENT AND PARTICIPATION

1. Upon approval by EPA of a CMS Final Report, EPA shall make both the RFI Final Report and the CMS Final Report and a summary of EPA's proposed corrective measure(s) and EPA's justification for proposing selection of the corrective measure(s) available to the public for review and comment.
2. Following the public review and comment period, EPA shall notify Respondent of the corrective measure(s) selected by EPA. If the corrective measure(s) recommended in the CMS Final Report is (are) not the corrective measure(s) selected by EPA after consideration of public comments, EPA shall inform Respondent in writing of the reasons for such decision, and the Respondent shall modify the RFI/CMS based upon public comment if directed to do so by the EPA. The selection and supporting documentation shall be attached to and incorporated as part of this Order.
3. The Administrative Record supporting the selection of the corrective measure(s) will be available for public review at EPA Region 6 in Dallas, Texas during normal business hours.

XI. FACILITY ACCESS AND RECORD RETENTION

1. EPA, and/or any EPA authorized-representative(s) are authorized, allowed, and permitted pursuant to Section 3007(a)

of RCRA, 42 U.S.C. § 6927(a) to enter and freely move about all property at the facility at all reasonable times for the purposes of enforcing the requirements of RCRA, including:

- a) interviewing site personnel and contractors; inspecting records, operating logs, and contracts related to the facility;
 - b) reviewing the progress of Respondent in carrying out the terms of this Order;
 - c) conducting such tests as EPA deems necessary;
 - d) using a camera, video camcorder, sound recorder, or other documentary type equipment; and
 - e) verifying the reports and data submitted to EPA by the Respondent.
2. The Respondent shall permit EPA to inspect and copy all documents, and other writings, including all sampling and monitoring data, in any way pertaining to work undertaken pursuant to this Order. All parties with access to the facility pursuant to this paragraph shall comply with applicable health and safety requirements found in 29 CFR Part 1910.
 3. To the extent Respondent is required to gain access to areas adjacent to the facility in order to comply with this Order and where those areas are presently owned by parties other than those bound by this Order, the Respondent shall obtain, or will use its best efforts to obtain, site access agreements from the present owners no later than thirty (30) calendar days after EPA approval of the specific workplan which requires access to that property. Best efforts shall include, but not be limited to, requiring Respondent to pay reasonable rental costs and compensation for losses sustained by the owner or occupant of the property. Access agreements shall provide reasonable access to Respondent, its Contractor(s), the United States, EPA, the State, and its representatives, including contractors. In the event that site access agreements are not obtained within thirty (30) calendar days, the Respondent shall notify EPA immediately regarding both the lack of, and efforts to obtain, such agreements.
 4. Nothing in this subsection is intended to limit, affect or otherwise constrain EPA's rights of access to property pursuant to applicable law.
 5. In addition, all data, information, and records created or maintained in connection with the implementation of work under this Order shall be made available to EPA upon request. All employees of Respondent and all persons, including contractors who engage in activity under this Order, shall be available to and shall cooperate with the EPA.

6. Respondent shall preserve all data, documents, records and information for six (6) years after termination of the Order. At the end of this six year period and before any document or information is destroyed, Respondent shall notify EPA that such documents and information are available to EPA for inspection, and upon request, shall provide the original or copies of such documents and information to EPA. In addition, Respondent shall provide documents and information retained under this section at any time before expiration of the six year period at the written request of EPA.

XII. FINANCIAL ASSURANCE

1. Within ten (10) business days of the effective date of this Order, the Respondent shall establish an escrow account in the amount of \$5,000,000 with a financial institution selected by the Respondent and approved by EPA. This escrow account and agreement shall remain in effect during the pendency of the IM, RFI and CMS unless EPA approves an alternative financial assurance mechanism submitted in accordance with paragraphs XII.2-5 below. Payments from this escrow account shall be made in accordance with the terms of the escrow agreement. This escrow account shall bear interest, to be paid to the Respondent on a quarterly basis, for so long as this Order remains in effect.
2. Within sixty (60) calendar days of the effective date of this Order, Respondent shall present to EPA for review and approval a summary and analysis of Respondent's existing instruments for financial assurance as provided under the financial provisions of 40 CFR § 265.145, and/or any other instruments that have been provided previously by Respondent for any purpose related to liability coverage, corrective measures, closure, and post-closure care of its facility. Respondent shall also provide a copy of each instrument for which a summary and analysis is being provided. The analysis shall describe clearly, but shall not be limited to, the following items:
 - a) The nature and extent to which these instruments are available for access by EPA for the purpose of ensuring the completion of all requirements established pursuant to this Order, including all tasks described in the attachments hereto; and
 - b) Precise dollar amounts that are available to EPA, and schedules for their availability, for the above-stated purposes. The amount of funds available through these instruments must be no less than the sum of funds that would be available if a separate mechanism had been established and maintained for the financial assurance of closure, post-closure care, liability coverage, and the actions required under this Order.

3. EPA shall review the submittal described in paragraph 2 above and EPA shall provide notice to the Respondent as to the adequacy of its existing financial assurance measures for the above-stated purposes, and shall indicate therein what additional financial assurances, if any, must be provided by Respondent to ensure compliance with the terms of this Order.
4. Within thirty (30) days of Respondent's receipt of a notice from EPA that Respondent's financial assurance measures are inadequate, Respondent shall establish an irrevocable standby letter of credit or shall otherwise provide (per 40 CFR § 265.142) additional financial assurances according to the terms provided in said notice. Such additional financial assurance measures shall be available to EPA to perform such terms or conditions established pursuant to the Order, provided that prior to drawing upon any such assurance measure, EPA shall notify the Respondent in writing of its alleged failure to perform the requirements of this Order and provide Respondent with a reasonable time period of not less than fifteen (15) calendar days within which to remedy the alleged nonperformance.
5. This Order in no way negates Respondent's obligation to establish and/or maintain financial assurances for closure and post-closure care under 40 CFR §§ 265.143 and 265.145.

XIII. DISPUTE RESOLUTION

1. The Parties to this Order shall make reasonable efforts to informally resolve disputes at the Project Manager or immediate supervisor level. If resolution can not be achieved informally, the procedures of this section shall be implemented to resolve a dispute.
2. If Respondent disagrees, in whole or in part, with any EPA disapproval or modification or other decision or directive made by EPA pursuant to this Order, Respondent shall notify EPA in writing of its objections and the basis therefore within fourteen (14) calendar days of receipt of EPA's disapproval, decision, or directive. Said notice shall set forth the specific points of the dispute, the position Respondent is maintaining should be adopted as consistent with the requirements of this Order, the basis for Respondent's position, and any matters which it considers necessary for EPA's determination. Within ten (10) business days of EPA's receipt of such written notice, EPA shall provide to Respondent its decision on the pending dispute.
3. EPA's decision pursuant to paragraph one (1) of this Section shall be binding upon both parties to this Order, unless Respondent within ten (10) calendar days notifies EPA in writing of its continued objection(s) and requests the Hazardous Waste Management Division Director for Region 6, or his designee, to convene an informal conference for the purpose of discussing Respondent's objections and the reasons

for EPA's determination. The Hazardous Waste Management Division Director shall issue a written decision within ten (10) calendar days from the date of the informal conference. The failure to invoke these Dispute Resolution procedures shall constitute a waiver of the right to contest a specific requirement of this Order.

4. In any dispute Respondent shall have the burden of showing that EPA's position, including without limitation any interpretation of the terms and conditions of this Order and of applicable federal and state law and regulations, was arbitrary and capricious or otherwise not in accordance with law.
5. The existence of a dispute as defined herein, and EPA's consideration of such matters as placed into dispute, shall not excuse, toll, or suspend any compliance obligation or deadline required pursuant to this Order.
6. During the pendency of the dispute resolution process, stipulated penalties with respect to the disputed matter interest shall accrue, but payment of stipulated penalties shall be stayed pending resolution of the dispute. Stipulated penalties shall be calculated for each day of noncompliance with this Order beginning with the first day of noncompliance and including the period which the Dispute Resolution procedures were ongoing. If, however, the dispute is ultimately resolved in Respondent's favor, no stipulated penalties shall be due.

XIV. REIMBURSEMENT OF OVERSIGHT COSTS

Oversight costs are those costs incurred by the United States for EPA salary, travel, equipment, analysis, and contractor costs related to the facility. Respondent agrees to pay EPA for oversight costs associated with the implementation and execution of this Order, unless otherwise prohibited by law, in the following manner:

1. At the end of each six (6) month period beginning from the effective date of this Order, EPA will submit to Respondent a tabulation and an explanation of all oversight costs incurred with respect to this Order by EPA during the previous six (6) month period.
2. Payments to EPA for all EPA oversight costs shall be made by money order, certified check, or cashier's check payable to the Treasurer of the United States within thirty (30) days of receipt of EPA's tabulation and shall be submitted to the following address:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 360582M
Pittsburgh, PA 15251

3. Document No. VI-___-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. If EPA does not receive payment within thirty (30) days of the Respondent's receipt of the tabulation of oversight costs, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
5. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid principal amount not paid within ninety (90) or more days of Respondent's receipt of the tabulation of oversight costs.

XV. RESERVATION OF RIGHTS

1. EPA expressly reserves all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, which may pertain to Respondent's failure to comply with any of the requirements of this Order, including without limitation the assessment of penalties under Section 3008(h)(2) of RCRA, and 42 U.S.C § 6928(h)(2). The Order shall not be construed as a waiver or limitation of any rights, remedies, powers, and/or authorities which EPA has under RCRA, CERCLA, or any other statutory, regulatory or common law enforcement authority of the United States.

2. This Order shall not be construed to effect or limit the rights or responsibilities of any Federal, State, a local agency or authority pursuant to any other statutory provision, nor shall the entry of this Order and Respondent's consent to comply herewith, limit or otherwise preclude the EPA from taking additional enforcement actions pursuant to RCRA § 3008(h), 42 U.S.C. § 6928(h), CERCLA § 106 42 U.S.C. § 9606, or any other available legal authority, should the EPA determine that such actions are warranted. Nor shall this Order be construed to affect or limit in any way the obligation of the Respondent to comply with all Federal, State and local laws and regulations governing the activities required by this Order. This Order shall not be construed as a ruling or determination of any issue related to any Federal, State or local permit whether required in order to implement this Order or required in order to continue or alter operations of the facility (including but not limited to construction, operation or closure permits required under RCRA) and the Respondent shall remain subject to all such permitting requirements. Nothing in this Order is intended to release or waive any claim, cause of action, demand or defense in law or equity that any party to this Agreement may have against any person(s) or entity not a party to this Agreement.
3. EPA expressly reserves all rights and defenses that it may have, including the right both to disapprove of work performed by Respondent pursuant to this Order and to request that Respondent perform tasks in addition to those stated in the Corrective Action Plan portion of this Order.
4. Notwithstanding any other provision of this Order, the Respondent shall remain responsible for obtaining any Federal, State, or local permit for any activity at the facility including those necessary for the performance of the work and for the operation or closure of the facility.

XVI. SUBSEQUENT MODIFICATION OF THE FINAL ORDER

1. Except as expressly provided for herein, this Order may only be amended by mutual agreement of EPA and the Respondent. Any such amendments shall be in writing, shall be first signed by the Respondent, and shall be effective and incorporated into the Order on the date that such amendments are signed by EPA.
2. Any reports, plans, specifications, schedules, and attachments required by this Order are, upon written approval by EPA, incorporated into this Order. Any noncompliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Order and shall subject Respondent to the stipulated penalty provisions included in Section XVII of this Order.
3. No informal advice, guidance, suggestions, or comments by EPA regarding reports, plans, specifications, schedules, and any

other written documents submitted by Respondent will be construed as relieving Respondent of its obligation to obtain written approval, if and when required by this Order.

XVII. STIPULATED PENALTIES

1. Unless there has been a written modification of a schedule by EPA, or the force majeure provisions of this Order are invoked, in the event Respondent fails to meet any scheduled requirement set forth in this Order, Respondent agrees to pay a Stipulated Penalty as follows:

<u>Period of Failure to Comply</u>	<u>Penalty Per Violation Per Day</u>
1st day through 7th day	\$ 5,000.00
8th day through 21st day	\$ 8,000.00
22st day and beyond	\$15,000.00

2. Stipulated penalties under this Section shall be paid within thirty (30) calendar days after Respondent's receipt of written notification of noncompliance from EPA. Such stipulated penalties shall be paid by money order, certified check, or cashier's check made payable to the "Treasurer of the United States" and mailed to:

Regional Hearing Clerk (6C)
U.S. EPA, Region 6
P.O. Box 365032M
Pittsburgh, PA, 15251

3. Document No. VI-___-H should be clearly typed on the check to ensure proper credit. Respondent shall send simultaneous notices of such payments, including copies of the money order, cashier's check or certified check to the following:

Section Chief
Technical Section, (6H-CX)
RCRA Enforcement Branch
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

Section Chief, (6C-WA)
Office of Regional Counsel
U.S. EPA, Region 6
1445 Ross Avenue
Dallas, TX 75202-2733

4. Respondent may dispute EPA's right to the stated amount of penalties by invoking the dispute resolution procedures under Section XIII of this Order. If Respondent does not prevail upon resolution of the dispute, EPA shall collect all penalties which accrued prior to and during the period of

dispute. If Respondent prevails upon resolution of the dispute, no penalties shall be payable.

5. If EPA does not receive payment within thirty (30) days of the due date, interest will accrue on the amount due from the due date at the current annual rate prescribed and published by the Secretary of the Treasury, pursuant to 31 U.S.C. § 3717, in the Federal Register and the Treasury Fiscal Requirements Annual Bulletin per annum through the date of payment.
6. If the payment is overdue, EPA will also impose a late-payment handling charge of \$15.00, with an additional delinquent notice charge of \$15.00 for each subsequent 30-day period over which an unpaid balance remains. A penalty of 6% per annum on any unpaid penalty amount not paid within ninety (90) or more days of Respondent's receipt of the notification of non-compliance.
7. The stipulated penalties set forth in this Section do not preclude EPA from pursuing any other remedies or sanctions which may be available to EPA by reason of Respondent's failure to comply with any of the requirements of this Order.

XVIII. EPA APPROVALS/DISAPPROVALS

All decisions, determinations and approvals required to be made by EPA under this Order must be in writing signed by the Project Manager. If the EPA does not approve any plan, report or other item required to be submitted to EPA for its approval pursuant to this Order, the Respondent shall address any deficiencies as directed by the EPA and resubmit the plan, report or other item within the time period specified in this Order for EPA's approval. Wherever in this Order approval is required, approval from EPA shall suffice for purposes of securing approvals required under this Order.

XIX. PARTICIPATION IN COMMUNITY RELATIONS ACTIVITIES

Respondent shall be given notice of and shall participate in public meetings, as appropriate, which may be held or sponsored by EPA to explain activities at or concerning the facility, including the findings of the RFI and CMS. In addition, Respondent shall provide all support requested of them by EPA in carrying out the EPA approved Community Relations Plan.

XX. TERMINATION AND SATISFACTION

The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated, to the satisfaction of EPA, that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, but not including the record preservation provision of paragraph XI., or other such continuing obligations, have been satisfactorily completed.

XXI. INDEMNIFICATION OF THE UNITED STATES GOVERNMENT

Respondent agrees to indemnify, save and hold harmless the United States Government, its agencies, departments, agents, and employees, from any and all claims or causes of action arising from or on account of acts or omissions of Respondent or their agents, independent contractors, receivers, trustees, and assignees in carrying out activities required by this Order. This indemnification shall not be construed in any way as affecting or limiting the rights or obligations of Respondent or the United States under their various contracts.

XXII. QUALITY ASSURANCE

Throughout all sample collections and analysis activities, Respondent shall use EPA-approved quality assurance, quality control, and chain-of-custody procedures, which shall be part of proposed and approved plans. In addition, Respondent shall:

1. Follow all EPA guidance for sampling and analysis unless determined by EPA not to be applicable;
2. Notify EPA and NMED not less than fourteen (14) days in advance of any field sampling or installation activity;
3. Inform the EPA Project Manager in advance which laboratories will be used by Respondent and ensure that EPA personnel and EPA authorized representatives have reasonable access to the laboratories and personnel used for analysis;
4. Ensure that laboratories used by Respondent for analyses perform such analyses according to EPA methods (SW-846, 2nd Edition or as superseded) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be used, Respondent shall submit all protocols to be used for analyses to EPA for approval no later than thirty (30) days prior to the commencement of analyses and shall not implement such protocols until receipt of EPA approval; and
5. Ensure that laboratories used by Respondent for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA. As part of such a program, and upon request by EPA, such laboratories shall perform analysis of a reasonable number of known samples provided by EPA to demonstrate the quality of the analytical data.

XXIII. FORCE MAJEURE

1. Respondent shall perform all the requirements of this Order according to the time limits set unless this performance is prevented or delayed by events which constitute a force majeure.

2. For the purposes of this Order, a force majeure is defined as any event arising from causes beyond the control of Respondent, which could not have been prevented or mitigated through the exercise of due diligence, that delays or prevents the performance of any obligation under this Order. Such events do not include increased costs of performance, economic hardship, changed economic circumstances, normal precipitation events, or failure to submit timely and complete applications for Federal, State, or local permits.
3. Respondent has the burden of proving by clear and convincing evidence that any delay is or will be caused by events reasonably beyond its control.
4. In the event of a force majeure, the time for performance of the activity delayed by the force majeure shall be extended for the period of the delay attributable to the force majeure plus reasonable additional time for resumption of activities. The time for performance of any activity dependent on the delayed activity shall be similarly extended, except to the extent that the dependent activity can be implemented in a shorter time. EPA shall determine whether subsequent requirements are to be delayed and the time period granted for any delay. Respondent shall adopt all reasonable measure to avoid or minimize any delay caused by a force majeure.
5. In the event of a force majeure, Respondent shall immediately notify EPA by telephone within 24 hours after Respondent becomes aware of the event and shall within seven (7) days of the oral notification, notify EPA in writing of the cause and anticipated length of the delay. The notification shall also state the measures taken and/or to be taken to prevent or minimize the delay, and the time table by which Respondent intends to implement the delayed activity. Failure of Respondent to comply with the force majeure notice requirements will be deemed a forfeiture of its right to force majeure.

XXIV. NO FINAL AGENCY ACTION

Notwithstanding any other provisions of this Order, no action or decision by EPA, including without limitation decisions of the Director of the Hazardous Waste Management Division or the Regional Administrator, pursuant to this Order shall constitute final agency action giving rise to any rights to judicial review prior to EPA's initiation of judicial action to compel Respondent's compliance with the mandate(s) of this Order.

XXV. PENALTY PROVISIONS

Failure or refusal to carry out the terms of this Order in a manner deemed satisfactory to EPA subjects Respondent to a civil penalty in an amount not to exceed \$25,000 for each day of non-compliance with this Order in accordance with Section 3008(h) of RCRA, 42 U.S.C. § 6928(h).

XXVI. STATEMENT OF SEVERABILITY

If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the application of such provisions to other parties or circumstances and the remainder of the Order shall not be effected thereby.

XXVII. SURVIVABILITY/PERMIT INTEGRATION

1. Subsequent to the issuance of this Order, a RCRA permit may be issued to the facility incorporating the requirements of this Order by reference.
2. Any requirements of this Order shall not terminate upon the issuance of a RCRA permit unless all Order requirements of the Corrective Action Plan (Attachment II) are expressly replaced by the requirements in the permit or all provisions of this Order have been fully complied with to EPA's Satisfaction as per Section XX of this Order.

XXVIII. EFFECTIVE DATE

The effective date of this Order shall be the date on which it is signed by the EPA. Because this Order was entered with the consent of both parties, Respondent waives its right to request a public hearing pursuant to Section 3008(b) of RCRA, 42 U.S.C. § 6928(b).

IT IS SO AGREED AND ORDERED:

Date: _____ By: _____

Allyn M. Davis, Director
Hazardous Waste Management Division
U.S. Environmental Protection Agency

Date: _____ By: _____

(Facility Representative and Title)

ATTACHMENT I
TABLES

April 8, 1992 Draft Order

Table I
(Concentrations, ppm)

Compound	MF-1162 (soil)	MF-1161 (soil)	MF-5119 (oil)	F-3476 (water)	F-3475 (Soil)
Chromium	0.02	1.5	80		
Manganese	7.19	347			
Arsenic	0.049	3.9			
Lead	0.031	4.4			

Concentrations in ppb
(unless otherwise stated)

Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
2-Methylnapthalene	2,600 ppm	4,600	48,000
Benzene	3,100 ppm	21,000	
Ethylbenzene	3,200 ppm	280,000	
Toluene	12,000 ppm	560,000	
Xylene	11,000 ppm	1,100,000	
Cyclohexane	1,900 ppm	150,000	
Dimethylcyclohexane		61,000	
Napthalene		32,000	36,000
Unknown VOA		95,000	3,000
2-methylhexane		43,000	
Unknown VOA		97,000	
Trimethyl Pentene		23,000	
Unknown VOA		51,000	
2-Methyl Heptane		140,000	
Octane		470,000	
Unknown VOA		130,000	
Methyl Benzene		14,000	
Dimethyl Hexane		3,600	
Ethyl Benzene		8,800	

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Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Benzene Propyl	950 ppm	5,000	
Ethyl Methyl Benzene	1,700 ppm	17,000	64,000
Trimethyl Benzene	3,000 ppm	22,000	72,000
Methyl Propyl Benzene		4,800	46,000
Unknown ABN		8,600	
Ethyl Dimethyl Benzene		2,400	
Unknown ABN		37,000	
Octane		8,800	
Phenanthrene/ Anthracene		3,400	
Benzene Methyl, Methyl Ethyl			54,000
Alkane or Derivative			68,000
Unknown ABN			130,000
Unknown ABN			52,000
Unknown ABN			51,000
Alkane or Derivative			64,000
Napthalene Derivative			210,000
Unknown ABN			72,000
Heptadecane Tetramethyl			61,000
Alkane			140,000
Unknown ABN			34,000
Alkane or Derivative			98,000
Eicosane			140,000
N-nitrosodiphenylamine	76 ppm		
Methylcyclopentane	2,300 ppm		
Methylcyclopentane	2,600 ppm		

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Compound	MF-5119 (oil)	F-3476 (water)	F-3475 (soil)
Benzene Dimethyl	8900 ppm	2,500,000	64,000
Alcohol or Alkene	5,000 ppm		

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Table II

Parameter	Concentration
Chromium	0.041 mg/l
Lead	0.12 mg/l
Cobalt	0.069 mg/l
Oil and Grease	15.7 mg/l
Phenols	21.338 mg/l
Chlorides	1499.5 mg/l
Sulfates	239.7 mg/l
Total Dissolved Solids (TDS)	2170 mg/l
Total Organic Carbon (TOC)	323 mg/l
Aliphatic Hydrocarbon Screen	Positive
Benzene	21.130 mg/l
Toluene	21.080 mg/l
Xylene	1.270 mg/l
Cyanide	0.19 - 0.39 mg/l

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Table III Concentrations in mg/l

Compound	MW #4				MW #9				MW #10			
	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
Cyanide		0.5				0.4					0.050	
Total Phenol	0.633	0.430	0.085	0.096	0.30 ₄	0.372	0.17	0.16	0.14 ₇	0.186	0.065	0.055
TOC	110	130	63	170	143	1,809	240	275	34	76	125	114
TDS	1,868	2,266	2,398	2,128	2,360	1,718	1,428	1,684	1,546	2,820	2,408	3,272
Chloride	500	989.7	754	675	149	1,010	89	109	245	569.8	587	457
Sulfate		12.5			13.0	114		20	5.3	165		10
Benzene	11.8	3.1	6.65	1.91	7.4	4	17.7	1.49	0.09 ₃		0.041	14.1
Toluene	7.5	0.290	0.407	1.78	6.3	1.7	10.6	0.754			0.054	7.4
Ethyl benzene	0.107	0.070	0.140	4.48	3.2	0.71	0.015	0.504				0.03
Antimony				0.40				0.4				0.56
Arsenic		0.070	0.08				0.02			0.053		
Cadmium	0.060								0.020			
Lead	0.074	0.066				0.059				0.059	0.05	
Nickel	0.08		0.12		0.30	0.25	0.13	0.16	0.08	0.25	0.18	0.08
Selenium		0.080	0.063	0.03		0.040				0.040	0.071	0.03
Zinc		0.019	0.008	0.04	0.01 ₂	0.015	0.05	0.011		0.015	0.16	0.01

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Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
2,4-Dichloro phenol	0.200				0.16 0	0.150			0.02 5							
2,4-Dimethyl phenol		0.058							0.02 0							
4,6-Dinitro-o-cresol	0.100															
2,4-Dinitro phenol	0.050															
2-Nitro phenol			0.108	0.026											0.002	
4-Nitro phenol	0.090		0.302	0.331			1.10								0.016	
Phenol	0.202				0.14 9	0.170	0.013	0.133	0.09 0							
Benzo(a) anthra cene		0.016	0.010				0.007									
Chrysene	0.012															
Fluorine	0.150			0.023	0.01 2				0.03 3							
Naphtha lene	0.036	0.019	0.015	0.036				0.029								0.004
Pyrene	0.166		0.005				0.010		0.03 0							

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Compound	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16	3/26	6/23	9/18	12/16
2-Chloro phenol			0.001									
P-chloro-m-cresol			0.045									
pH	6.84	6.85	6.70	6.73	7.01	6.98	6.89	6.91	7.07	7.08	6.93	7.05
Conductivity		3800	3900	3800		2500	2200	2600		4400	4800	5100

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Table IV

Compound	Weight of Evidence Classification ⁺
Chromium VI	A
Manganese	D
Inorganic Arsenic	A
Lead	B2
Cadmium	B1
Selenium	D
Zinc	D
Benzene	A
Ethylbenzene	D
Toluene	D
Xylene	D
Napthalene	D
Phenanthrene	D
Anthracene	D
n-Nitrosodiphenylamine	B2
Phenol	D
Benzo(a)anthracene	B2
Chrysene	B2
Flourene	D
Pyrene	D

- * Group A - Human Carcinogen
 Group B - Probable Human Carcinogen
 B1 - Has limited human evidence
 B2 - Has sufficient animal evidence, but inadequate or no human evidence
 Group C - Possible Human Carcinogen
 Group D - Not Classifiable as to human Carcinogenicity

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Table V
Concentrations in ppb

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Barium	210	39			1540	39
Chromium	116	1110				
Lead					252	
Mercury	0.6					
# Unknown ABNs	0	3	2	13	15	1
bis-(2-Ethylhexal) phthalate		38				
Phenol					46	
2-Methylphenol					81	
4-Methylphenol					43	
2,4-Dimethylphenol					16	
Napthalene					91	
2-Methyl naphthalene					33	
# Unknown VOA				10	10	
2-butanone						
Ethyl Benzene				1660	352	
Benzene				8200	23800	

Compound	MW-13	MW-8	MW-7	MW-9 Free Phase	MW-9	MW-1
Arsenic					23.2	
Toluene				8040	8820	
0-xylene				1800	1970	
m/p-xylene				12100	10900	

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ATTACHMENT II
CORRECTIVE ACTION PLAN

April 8, 1992 Draft Order

IMPLEMENTATION OF INTERIM MEASURES

A. PURPOSE

Interim Measures are implemented so as to mitigate a current or potential threat to human health and/or the environment. Interim Measures must be consistent with and integrated into any long term remedy at the Facility.

B. SCOPE

The Interim Measures to be implemented at the Facility consist of the following tasks:

1. Interim Measures Work Plan
2. Interim Ground Water Recovery System
3. Reports

C. IMPLEMENTATION OF INTERIM MEASURES

The Respondent shall submit a workplan as described below in accordance with Section VI.1 of the Order.

1. Interim Measures (IM) Workplan

The IM Workplan shall include:

- a. A statement of the objectives of each interim measure including how the measure mitigates a potential threat to human health and the environment and is consistent with and integrated into any long term plan for the facility; and
 - b. Proposed location, design, construction, operation, and maintenance requirements of the interim measures.
- #### 2. Interim Measures
- a. Within sixty (60) days after the effective date of this order, Respondent shall implement a system designed to control the migration of hazardous constituents with ground water recovery wells. The effects of the extraction system shall be monitored. All ground water monitoring wells shall be considered for use as potential recovery and/or observation wells.

- b. Within sixty (60) days after the effective date of this Order, Respondent shall install recovery wells sufficient to recover free product. If the installed recovery wells do not recover measurable quantities of non-aqueous phase liquids, they shall become part of the extraction system used to treat groundwater.
- c. Upon the effective date of this order Respondent will maximize efforts to expedite certified closure of all formerly active regulated surface impoundments in accordance with a State approved closure plan.
- d. Within sixty (60) days after the effective date of this order Respondent shall either:
 - (1) use an existing wastewater treatment system or construct a water treatment system capable of treating contaminated ground water from recovery wells in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances. Respondent shall obtain a discharge permit which will allow the discharge of treated groundwater in accordance with all Federal, State, and Local laws, regulations, permits, and ordinances;
 - (2) construct or obtain storage capacity in compliance with RCRA for recovered contaminated ground water and/or;
 - (3) provide transportation for recovered contaminated groundwater for off-site treatment or disposal in compliance with RCRA.
- e. Within thirty (30) days after the effective date of this order, Respondent shall locate and notify all owners of off-site wells which have documented or possible groundwater contamination which may be attributed to activities at the Facility. Notification shall include, as a minimum:
 - (1) that the contamination exists and caution should be exercised when using water from their wells for watering lawns, washing vehicles, etc.,

- (2) that the water should not be used for drinking, cooking, bathing, or swimming.

3. Reports

The Respondent shall prepare plans, specifications, and reports as set forth above to document the design, construction, operation, maintenance, and monitoring of the interim measures. In addition the documentation shall include, but not be limited to the following:

a. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly IM progress reports containing:

- (1) A description and estimate of the percentage of the IM completed;
- (2) Summaries of all findings;
- (3) Summaries of all changes made in the IM during the reporting period;
- (4) Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- (5) Summaries of all problems or potential problems encountered during the reporting period;
- (6) Actions being taken to rectify problems;
- (7) Changes in personnel during the reporting period;
- (8) Projected work for the next reporting period; and
- (9) Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

4. Interim Measure Implementation Reports

- a. Thirty (30) days after the completion of the construction of the IM (except for long term operation, maintenance and monitoring), the Respondent shall submit an IM Implementation Report to EPA. The Report shall document

that the project is consistent with the design specifications, and if the interim measures are performing adequately. The report shall include, but not be limited to the following elements:

- (1) Synopsis of the interim measures and certification of the design and construction;
- (2) Explanation of any modifications to the plans and why these were necessary for the project;
- (3) Listing of the criteria, established before the interim measures were initiated, for judging the functioning of the interim measures and also explaining any modification to these criteria;
- (4) Results of facility monitoring, evaluating to what extent the interim measures will meet or exceed the performance criteria; and
- (5) Explanation of the operation and maintenance (including monitoring) to be undertaken at the Facility.

This report shall include the inspection summary reports, inspection data sheets, problem identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviations from design and material specifications (with justifying documentation) and as-built drawings.

- b. The Respondent shall finalize the Interim Measures Workplan and incorporate or address comments received on the draft submissions.

5. Facility Submission Summary

A Summary of the information reporting requirements contained in the Interim Measures Scope of Work is present below:

<u>Facility Submission</u>	<u>Due date*</u>
Submit Draft IM Workplan:	30 days
Submit Final IM Workplan:	30 days after receipt of EPA's comments on the draft IM Workplan
Draft IM Report	30 days after completion of construction of the IM
Final IM Report	30 days after EPA comments on the Draft IM Report
Progress Reports	Monthly

*All dates are calculated from the effective date of this Order unless otherwise specified.

I. RCRA FACILITY INVESTIGATION (RFI)

A. PURPOSE

The purpose of this RCRA Facility Investigation (RFI) is to determine the nature and extent of releases of hazardous waste or constituents from regulated units, solid waste management units, and other source areas at the Facility and to gather all necessary data to support the Corrective Measures Study. The Respondent shall furnish all personnel, materials, and services necessary for, or incidental to, performing the RFI at the facility. In order to define the scope of the RFI Workplan, the Description of Current Conditions (Task I) shall follow the format of Facility Investigation (Task III) incorporating the appropriate portions of the RFI Workplan requirements. The proposed RFI Workplan shall then include the portions of the Facility Investigation not adequately covered under Task I, as determined and approved by EPA.

B. SCOPE

The RFI (RFI) consists of six tasks:

1. Task I: Preliminary Report: Description of Current Conditions
 - a. Facility Background
 - b. Nature and Extent of Contamination
 - c. Pre-Investigation Evaluation of Corrective Measure Technologies
2. Task II: RFI Workplan
 - a. Project Management Plan
 - b. Data Collection Quality Assurance Plan
 - c. Data Management Plan
 - d. Health and Safety Plan
 - e. Community Relations Plan
3. Task III: Facility Investigation
 - a. Environmental Setting
 - b. Source Characterization
 - c. Contamination Characterization

d. Potential Receptor Identification

4. Task IV: Investigation Analysis
5. Task V: Laboratory and Bench-Scale Studies
6. Task VI: Progress Reports

C. TASK I: PRELIMINARY REPORT: DESCRIPTION OF CURRENT CONDITIONS

The Respondent shall submit to the EPA for review and approval a Preliminary Report providing the information as set forth below. The data gathered during any previous investigations or inspections and other relevant data shall be included.

1. Facility Background

The Respondent's report shall summarize the regional location, pertinent boundary features, general facility physiography, hydrogeology, and historical use of the facility for the treatment, storage or disposal of solid and hazardous waste. The Respondent's report shall include:

a. Map(s) depicting the following:

- (1) General geographic location;
- (2) Property lines, with the owners of all adjacent property clearly indicated, and all land previously owned and/or used by the Facility around what has been designated as the Facility;
- (3) Topography (with a contour interval of five (5) or ten (10) feet and an approximate scale of 3/4 inch = 100 feet), showing waterways, all wetlands, floodplains, surface water features, drainage patterns;
- (4) All tanks, buildings, utilities, paved areas, easements, rights-of-way, and other features;
- (5) All solid or hazardous waste treatment, storage or disposal areas active after November 19, 1980;

- (6) All known past solid or hazardous waste treatment, storage or disposal areas regardless of whether they were active on November 19, 1980;
- (7) All known past and present product and underground waste tanks or piping;
- (8) Surrounding land uses (residential, commercial, agricultural, recreational); and
- (9) The location of all production and groundwater monitoring wells. These wells shall be clearly labeled with ground and top of casing elevations included.

All maps shall be of sufficient detail and accuracy to locate and report all past, current and future work performed at the site;

- b. A history and description of ownership and operation, solid and hazardous waste generation, treatment, storage and disposal activities at the facility;
- c. Approximate dates or periods of all known past product and waste spills, identification of the materials spilled, the amount spilled, the location where spilled, and a description of the response actions conducted (local, state, or Federal response units or private parties), including any inspection reports or technical reports generated as a result of the response; and
- d. A summary of past permits requested and/or received, any enforcement actions and their subsequent responses and a list of studies performed for the Facility.

2. Nature and Extent of Contamination

The Respondent shall include in the Preliminary Report the existing information on the nature and extent of contamination.

- a. The Respondent's report shall summarize all possible source areas of contamination. This, at a minimum, should include all regulated units, solid waste management units, spill areas, and other suspected source areas of

contamination. For each area, the Respondent shall identify the following:

- (1) Location of unit/area (which shall be depicted on a facility map);
- (2) Quantities of solid and hazardous wastes;
- (3) Hazardous waste or constituents, to the extent known; and
- (4) Identification of areas where additional information is necessary.

b. The Respondent shall prepare an assessment and description of the existing degree and extent of contamination. This should include:

- (1) Available monitoring data and qualitative information on locations and levels of contamination at the facility;
- (2) All potential migration pathways including information on geology, pedology, hydrogeology, physiography, hydrology, water quality, meteorology, and air quality; and
- (3) The potential impact(s) on human health and the environment, including demography, groundwater and surface water use, and land use.

3. Pre-Investigation Evaluation of Corrective Measure Technologies

Respondent shall include in the Preliminary Report an identification of site criteria that influence the selection of corrective measure technologies that may be used on-site or off-site for the containment, treatment, remediation, and/or disposal of contamination. Respondent shall also identify any field, laboratory, bench or pilot scale data that need to be collected in the facility investigation to facilitate the evaluation and selection of the final corrective measure or measures (e.g., compatibility of waste and construction materials, information to evaluate effectiveness, treatability of wastes, etc.).

D. TASK II: RFI WORKPLAN REQUIREMENTS

The Respondent shall prepare Draft and Final RFI Workplans in accordance with Section VI.2. of the Order. The Draft RFI Workplan shall include the development of several plans, which shall be prepared concurrently. EPA will review the Draft RFI Workplan and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Workplan to address such comments and shall submit the revised RFI Workplan to the EPA. EPA will approve the revised RFI Workplan or modify it. The RFI Workplan as approved or modified by EPA shall become the Final RFI Workplan. During the RFI, it may be necessary to revise the Final RFI Workplan to accommodate the facility specific situation. The RFI Workplan includes the following:

1. Project Management Plan

The Respondent shall prepare a Project Management Plan which will include a discussion of the technical approach, schedules, budget, and personnel. The technical approach shall include the prioritization rationale necessary to investigate each media (soil, ground water, surface water, soil gas, and air). This includes each area of concern which may have contamination from facility activities. The technical approach shall address all the requirements set forth in Task III of this Corrective Action Plan. The Project Management Plan will also include a description of qualifications of personnel performing or directing the RFI. This plan shall also document the overall management approach to the RFI.

2. Data Collection Quality Assurance Plan

The Respondent shall prepare a plan to document all monitoring procedures: sampling, field measurements and sample analysis performed during the investigation to characterize the environmental setting, source, and contamination, so as to ensure that all information, data and resulting decisions are technically sound, statistically valid, and properly documented.

a. Data Collection Strategy

The Data Collection Strategy shall include but not be limited to the following:

- (1) Description of the intended uses for the data, and the necessary level of

precision and accuracy for these intended uses;

- (2) Description of methods and procedures to be used to assess the precision, accuracy and completeness of the measurement data;
- (3) Description of the methodology used to assure that the data accurately and precisely represent the characteristics of a population, parameter variations at a sampling point, and process conditions or environmental conditions.

Examples of factors which shall be considered and discussed include:

- (a) Environmental conditions at the time of sampling;
 - (b) Number of sampling points;
 - (c) Representativeness of selected media; and
 - (d) Representativeness of selected analytical parameters.
- (4) Description of the measures to be taken to assure that the following data sets can be compared to each other:
 - (a) RFI data generated by the Respondent;
 - (b) RFI data generated by parties other than the Respondent;
 - (c) Data previously generated by Respondent or Respondent's agents.
 - (5) Details relating to the schedule and information to be provided in quality assurance reports. The reports shall include but not be limited to:
 - (a) Periodic assessment of measurement data accuracy, precision, and completeness;
 - (b) Results of performance audits;

- (c) Results of system audits;
- (d) Significant quality assurance problems and recommended solutions; and
- (e) Resolutions of previously stated problems.

b. Sampling

The Sampling section shall discuss:

- (1) Selecting appropriate sampling locations, depths, etc.;
- (2) Determining a statistically sufficient number of sampling sites;
- (3) Measuring all necessary ancillary data;
- (4) Determining conditions under which sampling will be conducted;
- (5) Determining which media are to be sampled (e.g., groundwater, air, soil, sediment, etc.);
- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of sampling and length of sampling period;
- (8) Selecting the types of sample (e.g., composites vs. grabs) and number of samples to be collected;
- (9) Documenting field sampling operations and procedures, including;
 - (a) Documentation of procedures for preparation of reagents or supplies which become an integral part of the sample (e.g., filters, and adsorbing reagents);
 - (b) Procedures and forms for recording the exact location and specific considerations associated with sample acquisition;

- (c) Documentation of specific sample preservation method;
 - (d) Calibration of field devices;
 - (e) Collection of replicate samples;
 - (f) Submission of field-biased blanks, where appropriate;
 - (g) Potential interferences present at the facility;
 - (h) Construction materials and techniques, associated with monitoring wells and piezometers;
 - (i) Field equipment listing and sample containers;
 - (j) Sampling order; and
 - (k) Decontamination procedures.
- (10) Selecting appropriate sample containers;
 - (11) Sample preservation; and
 - (12) Chain-of-custody, including:
 - (a) Standardized field tracking reporting forms to establish sample custody in the field prior to shipment; and
 - (b) Pre-prepared sample labels containing all information necessary for effective sample tracking.

c. Field Measurements

The Field Measurements section shall discuss:

- (1) Selecting appropriate field measurement locations, depths, etc.;
- (2) Providing a statistically sufficient number of field measurements;
- (3) Measuring all necessary ancillary data;

- (4) Determining conditions under which field measurement should be conducted;
- (5) Determining which media are to be addressed by appropriate field measurements (e.g., groundwater, air, soil, sediment, etc.);
- (6) Determining which parameters are to be measured and where;
- (7) Selecting the frequency of field measurement and length of field measurements period; and
- (8) Documenting field measurement operations and procedures, including:
 - (a) Procedures and forms for recording raw data and the exact location, time, and facility-specific considerations associated with the data acquisition;
 - (b) Calibration of field devices;
 - (c) Collection of replicate measurements;
 - (d) Submission of field-biased blanks, where appropriate;
 - (e) Potential interferences present at the facility;
 - (f) Construction materials and techniques associated with monitoring wells and piezometers used to collect field data;
 - (g) Field equipment listing;
 - (h) Order in which field measurements were made; and
 - (i) Decontamination procedures.

d. Contaminated Material Disposal

All contaminated material generated by activities required in the RFI shall be disposed of in accordance with all state and Federal regulations.

e. Sample Analysis

The Sample Analysis section of the Data Collection Quality Assurance Plan shall specify the following:

- (1) Chain-of-custody procedures, including:
 - (a) Identification of a responsible party to act as sample custodian at the laboratory facility authorized to sign for incoming field samples, obtain documents of shipment, and verify the data entered onto the sample custody records;
 - (b) Provision for a laboratory sample custody log consisting of serially numbered standard lab-tracking report sheets; and
 - (c) Specification of laboratory sample custody procedures for sample handling, storage, and disbursement for analysis.
- (2) Sample storage procedures and holding times;
- (3) Sample preparation methods;
- (4) Analytical procedures, including:
 - (a) Scope and application of the procedure;
 - (b) Sample matrix;
 - (c) Potential interferences;
 - (d) Precision and accuracy of the methodology; and
 - (e) Method detection limits.
 - (f) Calibration procedures and frequency;
 - (g) Data reduction, validation and reporting;

- (h) Internal quality control checks, laboratory performance and systems audits and frequency, including:
 - i) Method blank(s);
 - ii) Laboratory control sample(s);
 - iii) Calibration check sample(s);
 - iv) Replicate sample(s);
 - v) Matrix-spiked sample(s);
 - vi) "Blind" quality control sample(s);
 - vii) Control charts;
 - viii) Surrogate samples;
 - ix) Zero and span gases; and
 - x) Reagent quality control checks.
- (i) Preventive maintenance procedures and schedules;
- (j) Corrective action (for laboratory problems); and
- (k) Turnaround time.

3. Data Management Plan

The Respondent shall develop and initiate a Data Management Plan to document and track investigation data and results. This plan shall identify and set up data documentation materials and procedures, project file requirements, and project-related progress reporting procedures and documents. The plan shall also provide the format to be used to present the raw data and conclusions of the investigation.

a. Data Record

The data record shall include the following:

- (1) Unique sample or field measurement code;
- (2) Sampling or field measurement location and sample or measurement type;

- (3) Sampling or field measurement raw data;
- (4) Laboratory analysis ID number;
- (5) Property or component measured; and
- (6) Result of analysis (e.g., concentration).

b. Tabular Displays

The following data shall be presented in tabular displays:

- (1) Unsorted (raw) data;
- (2) Results for each medium, or for each constituent monitored;
- (3) Data reduction for statistical analysis;
- (4) Sorting of data by potential stratification factors (e.g., location, soil layer, topography); and
- (5) Summary data.

c. Graphical Displays

The following data shall be presented in graphical formats (e.g., bar graphs, line graphs, area or plan maps, isopleth plots, cross-sectional plots or transects, three dimensional graphs, etc.):

- (1) Display sampling locations and sampling grids;
- (2) Boundaries of sampling areas, and areas where more sampling is required;
- (3) Levels of contamination at each sampling location;
- (4) Geographical extent of contamination;
- (5) Display contamination levels, averages, and maxima;
- (6) Illustrate changes in concentration in relation to distance from the source, time, depth or other parameters; and

- (7) Indicate features affecting intramedia transport and show potential receptors.
- (8) Illustrate the structural geology in the area of the Facility, including detailed structural geology of the Facility.

E. Health and Safety Plan

The Respondent shall prepare a facility RFI Health and Safety Plan.

1. Major elements of the Health and Safety Plan shall include:
 - a. Facility description including availability of resources such as roads, water supply, electricity and telephone service;
 - b. Describe the known hazards and evaluate the risks associated with each activity conducted, including, but not limited to on and off-site exposure to contaminants during the implementation of interim measures at the facility.
 - c. List key personnel and alternates responsible for site safety, response operations, and for protection of public health;
 - d. Delineate work areas;
 - e. Describe levels of protection to be worn by personnel in work area;
 - f. Establish procedures to control site access;
 - g. Describe decontamination procedures for personnel and equipment;
 - h. Establish site emergency procedures;
 - i. Address emergency medical procedures for injuries and toxicological problems;
 - j. Describe requirements for an environmental surveillance program;
 - k. Specify any routine and special training required for responders; and

1. Establish procedures for protecting workers from weather-related problems.
2. The Facility Health and Safety Plan shall be consistent with:
 - a. NIOSH Occupational Safety and Health Guidance Manual for Hazardous Waste Site Activities (1985);
 - b. EPA Order 1440.1 - Respiratory Protection;
 - c. EPA Order 1440.3 - Health and Safety Requirements for Employees engaged in Field Activities;
 - d. Facility Contingency Plan;
 - e. EPA Standard Operating Safety Guide (1984);
 - f. OSHA regulations particularly in 29 CFR 1910 and 1926;
 - g. State and local regulations; and
 - h. Other EPA guidance as provided.

F. Community Relations Plan

The Respondent shall prepare a plan, for the dissemination of information to the public regarding investigation activities and results.

II. TASK III: FACILITY INVESTIGATION

The Respondent shall conduct those investigations necessary to: characterize the Facility (Environmental Setting); define the source (Source Characterization); define the degree and extent of contamination (Contamination Characterization); and identify actual or potential receptors.

The investigations should result in data of adequate technical quality to support the development and evaluation of the alternatives during the Corrective Measures Study.

The facility investigation activities shall follow the RFI Workplan. All sampling and analyses shall be conducted in accordance with the Data Collection Quality Assurance Plan.

At the conclusion of the investigation, the Respondent shall prepare and submit to EPA for approval a Draft RFI Report which shall contain an analysis and a summary of all facility

investigations implemented pursuant to the conditions contained in this Task. EPA will review the Draft RFI Report and provide comments thereon to the Respondent. Within thirty (30) days of receipt of EPA comments, Respondent shall modify the Draft RFI Report to address such comments and shall submit the revised RFI Report to EPA. EPA shall either approve of the report or modify it.

A. Environmental Setting

The Respondent shall collect information to supplement and verify existing information on the environmental setting at the Facility. The Respondent shall characterize the following:

1. Hydrogeology

The Respondent shall prepare a report evaluating hydrogeologic conditions at the Facility. This report shall provide the following information:

- a. A description of the regional and facility specific geologic and hydrogeologic characteristics affecting groundwater flow beneath the Facility, including:
 - (1) Regional and facility specific stratigraphy;
 - (2) Regional structural geology;
 - (3) Depositional history;
 - (4) Identification and characterization of areas and amounts of recharge and discharge.
 - (5) Regional and facility specific groundwater flow patterns.
- b. An analysis of any topographic features that might influence the groundwater flow system.
- c. Based on field data, tests, (gamma and neutron logging of existing and new wells, piezometers and borings) and cores, a representative and accurate classification and description of the hydrogeologic units which may be part of the migration pathways at the Facility (i.e., the aquifers and any intervening saturated and unsaturated units), including:

- (1) Hydraulic conductivity and porosity (total and effective);
 - (2) Lithology, grain size, sorting, degree of cementation;
 - (3) An interpretation of hydraulic interconnections between saturated zones; and
 - (4) The attenuation capacity and mechanisms of the natural earth materials (e.g., ion exchange capacity, organic carbon content, mineral content etc.).
- c. Based on field studies and cores, structural geology and hydrogeologic cross sections showing the extent (depth, thickness, lateral extent) of hydrogeologic units which may be part of the migration pathways identifying:
- (1) Sand and gravel deposits in unconsolidated deposits;
 - (2) Zones of fracturing or channeling in consolidated or unconsolidated deposits; and
 - (3) Zones of higher permeability or lower permeability that might direct and restrict the flow of contaminants;
- d. Based on data obtained from groundwater monitoring wells and piezometers installed upgradient and downgradient of the potential contaminant source, a representative description of water level or fluid pressure monitoring including:
- (1) Water-level contour and/or potentiometric maps;
 - (2) Hydrologic cross sections showing vertical gradients;
 - (3) The flow system, including the vertical and horizontal components of flow;
 - (4) Any temporal changes in hydraulic gradients, due to seasonal influences; and

(5) Create flow net maps using well cluster data.

e. A description of man made influences that may affect the hydrogeology of the Facility, identifying:

(1) Active and inactive local water-supply and production wells with an approximate schedule of pumping; and

(2) Man made hydraulic structures (pipelines, french drains, ditches, etc.).

2. Soils

The Respondent shall conduct a program to characterize the geologic units above the water table in the vicinity of the contaminant release(s). Such characterization shall include but not be limited to, the following information:

- a. USCS soil classification;
- b. Soil profile, including ASTM classification of soils;
- c. Directional relative permeability;
- d. Bulk density;
- e. Soil pH;
- f. Particle size distribution;
- g. Moisture content;
- h. Infiltration (field test);
- i. Storage capacity;
- j. Mineral content; and
- k. Soil conductivity.

3. Surface Water and Sediment

The Respondent shall conduct a program to characterize any marshes, creeks, wetland areas, or ditches surrounding and crossing the Facility. Such characterization shall include, but not be limited to, the following activities and information:

- a. Description of the temporal and permanent surface water bodies including:
 - (1) For all local wetland areas, ditches, and channels: location, elevation, flow, velocity, depth, width, seasonal fluctuations, and flooding tendencies (i.e., 100 year event);
 - (2) Drainage patterns; and
 - (3) Evapotranspiration rates.
- b. Description of the chemistry of surface water and sediments. This includes determining the pH, total dissolved solids, total suspended solids, biochemical oxygen demand, alkalinity, conductivity, dissolved oxygen profiles, nutrients, chemical oxygen demand, total organic carbon, and specific contaminant concentrations, as proposed by the Respondent and approved by EPA.
- c. Description of sediment characteristics including:
 - (1) Deposition area;
 - (2) Thickness profile; and
 - (3) Physical parameters (e.g., grain size, density, ion exchange capacity, etc.).

B. Source Characterization

Respondent shall document and quantify the following specific characteristics at all known source areas subsequent to November 1980 and to the extent known or ascertainable for periods prior thereto:

1. Source Areas
2. Unit/Disposal Area characteristics:
 - a. Location of unit/disposal area;
 - b. Type of unit/disposal area;
 - c. Design features;
 - d. Operating practices (past and present);

- e. Period of operation;
 - f. Age of unit/disposal area;
 - g. General physical conditions; and
 - h. Method used to close the unit/disposal area.
3. Waste Characteristics:
- a. Type of waste placed in each unit;
 - (1) Hazardous classification (e.g., flammable, reactive, corrosive, oxidizing or reducing agent);
 - (2) Quantity; and
 - (3) Chemical composition.
 - b. Physical and chemical characteristics of the wastes;
 - (1) Physical form (solid, liquid, gas);
 - (2) Physical description (e.g., powder, oily sludge);
 - (3) Temperature;
 - (4) pH;
 - (5) General chemical class (e.g., acid, base, solvent);
 - (6) Molecular weight;
 - (7) Density;
 - (8) Boiling point;
 - (9) Viscosity;
 - (10) Solubility in water;
 - (11) Cohesiveness of the waste; and
 - (12) Vapor pressure.
 - c. Migration and dispersal characteristics of the waste;

- (1) Sorption;
- (2) Biodegradability, bioconcentration, biotransformation;
- (3) Photodegradation rates;
- (4) Hydrolysis rates; and
- (5) Chemical transformations.

The Respondent shall document the procedures used in making the above determinations.

C. Contamination Characterization

The Respondent shall collect analytical data on groundwater, soils, surface water and sediment contamination in the vicinity of the Facility. These data shall be sufficient to define the extent, origin, direction, and rate of movement of contaminant plumes. Data shall include time and location of sampling, media sampled, concentrations found, and conditions during sampling, and the identity of the individuals performing the sampling and analysis. The Respondent shall address the following types of contamination at the Facility:

1. Groundwater Contamination

Respondent shall characterize the vertical and horizontal extent of the groundwater contamination plume. This characterization must include monitoring wells completed with the screened interval at the very base of the aquifer as well as monitoring wells completed at various depths dependent upon hydrogeological conditions. Characterization of the plume beyond facility boundaries shall be conducted with a program utilizing present monitoring wells, additional wells, and soil gas testing. This investigation shall at a minimum provide the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility;
- b. The horizontal and vertical direction of contamination movement;
- c. The velocity of groundwater;
- d. The horizontal and vertical concentration profiles of 40 CFR Part 264, Appendix IX

constituents in the groundwater that are measured by EPA approved procedures;

- e. A minimum of two complete Appendix IX analyses are required in all wells;
- f. An evaluation of factors influencing the plume movement; and
- g. An extrapolation of future contaminant movement.

The Respondent shall document the procedures used in making the above determinations (e.g., well design, well construction, geophysics, modeling, etc.).

2. Soil Contamination

The Respondent shall conduct an investigation to characterize the nature and extent of any contamination of the soil and rock units above the water table. The investigation shall provide the following information:

- a. A description of the vertical and horizontal extent of contamination both onsite and off-site;
- b. A description of contaminant and soil chemical properties within the contaminant source area and plume. This includes contaminant solubility, speciation, adsorption, leachability, exchange capacity, biodegradability, hydrolysis, photolysis, oxidation and other factors that might affect contaminant migration and transformation;
- c. Specific soil properties and contaminant concentrations as proposed by Respondent and approved by EPA to include at a minimum;
 - (1) USCS soil classification;
 - (2) Soil profile, including ASTM classification of soils;
 - (3) bulk density of soil;
 - (4) soil pH;
 - (5) particle size distribution;
 - (6) moisture content;

- (7) storage capacity;
 - (8) mineral content;
 - (9) soil conductivity;
 - (10) concentration of 40 CFR Part 264, Appendix IX, constituents.
- d. The direction of contaminant movement;
 - e. An extrapolation of future contaminant movement; and
 - f. The Respondent shall implement a soil boring investigation to determine the extent of soil contamination at the Facility. All borings will extend to a depth of two feet above the water table at the time of drilling. Soil gas monitoring will be performed during all borings. Laboratory analysis of borings for contaminants listed in C.2.c.10 of the above section will be performed on soils at depths where either visual contamination is evident, or soil gas concentrations indicate contamination. Boreholes shall be pressure-cemented back to the surface, utilizing a tremie pipe inserted in the borehole to within two (2) feet of the total depth of the borehole and cement-bentonite grout circulated back to the surface. The cement-bentonite grout shall consist of a 2-5% bentonite content by weight, with pumped grout weight of no less than 12.5 lbs/gal. Any shrinkage after settling of the grout shall be remedied by filling the remaining void with additional cement-bentonite grout. Disposal of all drilled soils will conform to all applicable state and federal regulations.
 - g. Off-site soil contaminant plumes shall be defined using soil borings, soil gas monitoring, laboratory analyses, and closure of boreholes as described immediately above.

The Respondent shall document the procedures used in making the above determinations.

- h. A characterization of the physical and chemical nature of soils and contaminants in the following areas;

- (1) All ditches and run-off accumulation areas at or near the facility property boundaries;
- (2) All contaminated soil storage areas and waste piles;
- (3) Railcar unloading areas;
- (4) Truck unloading areas; and
- (5) Any other areas of concern.

- i. Maps of all areas included in the soil investigation which are at a scale of approximately one inch to twenty feet.

3. Surface Water and Sediment Contamination

The Respondent shall conduct a surface water and sediment investigation to characterize contamination resulting from releases at the Facility.

The investigation shall include, but not be limited to, the following information:

- a. A description of the horizontal and vertical extent of any immiscible or dissolved plume(s) originating from the Facility, and the extent of contamination in underlying sediments;
- b. The horizontal and vertical direction of contaminant movement;
- c. The contaminant velocity;
- d. An evaluation of the physical, biological and chemical factors influencing contaminant movement;
- e. An extrapolation of future contaminant movement; and
- f. The surface water and sediment investigation must include the following to ensure adequate assessment of contaminants at or near the Facility:
 - (1) Samples of any ponded water bodies inside the Facility boundary and immediately outside the Facility boundary;

- (2) Samples from drainage ditches, culverts, etc., which accept water from the Facility and drain to wetland areas;
- (3) Samples from wetland area at or near the Facility property boundaries;
- (4) Samples from wetland areas, if it is determined that contaminated constituents may have reached these areas;
- (5) Analysis of samples for general water quality parameters, and should at minimum, include temperature, pH, dissolved oxygen (DO), conductivity, biochemical oxygen demand (BOD), chemical oxygen demand (COD), total suspended solids (TSS), total dissolved solids (TDS), total organic carbon (TOC), and nutrients; and
- (6) Analysis of samples for constituents related to past and present Facility activities as described in C.2.c.10 of this section.

- g. Maps for all areas included in the surface water and sediment investigation which are on a scale of approximately one inch to twenty feet.

The Respondent shall document the procedures used in making the above determinations.

4. Air Quality Monitoring

Respondent shall install, operate and maintain air monitoring stations. The purpose of monitoring air quality at the Facility is to determine the daily concentration and nature of air emissions migrating from the Facility. The air monitoring program must be capable of determining the velocity, direction, concentration and composition of the contaminants released. The proposal must include a list of potential contaminants for monitoring and the rationale for their selection.

5. Monitoring Wastewater Discharge

Respondent shall monitor the discharged treated wastewater on a weekly basis for the parameters identified in C.2.c.10 of this Section. Respondent shall use accepted protocols for sampling and laboratory

analyses which shall be submitted to the State and EPA for review with the RFI Workplan.

6. Wetlands Monitoring

Respondent shall investigate all wetland areas as, defined by Section 404 of the Clean Water Act, at or near the Facility property boundaries. Respondent shall determine if contamination has reached any wetland areas with a sampling and analysis plan designed to characterize the physical and chemical nature of surface water, sediments, soils, and contaminants.

D. Potential Receptors

The Respondent shall collect all available data describing the human populations and environmental systems that are susceptible to contaminant exposure from the Facility. Chemical analysis of biological samples may be needed. Data on observable effects in ecosystems may also be obtained. The following characteristics shall be identified:

1. Local uses and possible future uses of groundwater:
 - a. Type of use (e.g., drinking water source: municipal or residential, agricultural, domestic/non-potable, and industrial) for each aquifer around and beneath the Facility; and
 - b. Location of groundwater users including wells and discharge areas.
2. Local uses and possible future uses of surface waters draining the Facility:
 - a. Domestic and municipal (e.g. potable and lawn/gardening watering);
 - b. Recreational (e.g. swimming, fishing);
 - c. Agricultural;
 - d. Industrial; and
 - e. Environmental (e.g. fish and wildlife propagation).
3. Human use of or access to the Facility and adjacent lands, including but not limited to:
 - a. Recreation;

- b. Hunting;
 - c. Residential;
 - d. Commercial;
 - e. Zoning; and
 - f. Relationship between population locations and prevailing wind direction.
4. A description of the biota in surface water bodies on, adjacent to, or affected by the Facility.
 5. A description of the ecology overlying and adjacent to the Facility.
 6. A demographic profile of the people who use or have access to the Facility and adjacent land, including, but not limited to: age; sex; and sensitive subgroups.
 7. A description of any endangered or threatened species near the Facility.

E. TASK IV: INVESTIGATION ANALYSIS

Within thirty (30) days of Respondent' receipt of EPA's approval of the Final RFI Report, the Respondent shall submit an Investigation Analysis Report to support the selection of Protection Standards for the Facility. The report shall describe the extent of contamination (qualitative/quantitative) in relation to background levels indicative for the area.

1. Protection Standards

a. Groundwater Protection Standards

For regulated units the Respondent shall provide information to support the EPA's selection/development of Groundwater Protection Standards for all of the Appendix IX constituents found in the groundwater during the Facility Investigation (Task III). The Groundwater Protection Standards shall consist of:

- (1) For any constituents listed in Table 1 of 40 CFR 264.94, the respective value given in that table (MCL) if the background level of the constituent is below the given in Table 1; or

- (2) The background level of that constituent in the groundwater; or
- (3) Those level of constituents which are demonstrated as being protective of human health and the environment.

b. Other Relevant Protection Standards

The Respondent shall identify all relevant and applicable standards for the protection of human health and the environment (e.g. National Ambient Air Quality Standards, Federally approved state water quality standards, etc.

F. TASK V: LABORATORY AND BENCH-SCALE STUDIES

1. Based on the EPA approved report submitted pursuant to Task I-3 of this Order, Respondent shall conduct laboratory and/or bench scale studies to determine the applicability of a corrective measure technology or technologies to facility conditions. The Respondent shall analyze the technologies, based on literature review, vendor contracts, and past experience to determine the testing requirements.
2. The Respondent shall develop a testing plan identifying the types(s) and goal(s) of the study(ies), the level of effort needed, and the procedures to be used for data management and interpretation.
3. Upon completion of the testing, the Respondent shall evaluate the testing results to assess the technology or technologies with respect to the site-specific questions identified in the test plan.
4. The Respondent shall submit a report summarizing the testing program and its results, both positive and negative, to EPA within thirty (30) days from receipt of EPA approval of the Final RFI Report.

G. TASK VI: PROGRESS REPORTS

The Respondent shall at a minimum provide the State and EPA with signed, monthly RFI progress reports containing:

1. A description and estimate of the percentage of the RFI completed;

2. Summaries of all findings;
3. Summaries of all changes made in the RFI during the reporting period;
4. Summaries of all contacts with representatives of the local community, public interest groups or the State government during the reporting period;
5. Summaries of all problems or potential problems encountered during the reporting period;
6. Actions being taken to rectify problems;
7. Changes in contact personnel during the reporting period;
8. Projected work for the next reporting period; and
9. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

RFI Scope of Work is presented below:

FACILITY SUBMISSION	DUE DATE*
Preliminary Report: Description of Current Conditions (Task I)	60 days
Draft RFI Workplan (Task II)	60 days
Revised RFI Workplan (Task II)	30 days after receipt of EPA comments on Draft RFI Workplan
Implementation of Approved RFI Workplan (Task II)	30 days after receipt of EPA approval of Revised RFI Workplan
Draft RFI Report (Task III)	365 days after RFI Workplan Approval
Final RFI Report (Task III)	30 days after EPA comment on Draft RFI Report
Investigation Analysis (Task IV) and the Laboratory and Bench-Scale Studies (Task V)	30 days after receipt of EPA approval of Final RFI Report
Progress Reports on Tasks I through V	MONTHLY

* All due dates are calculated from the effective date of this Order unless otherwise specified.

III. CORRECTIVE MEASURE STUDY

A. PURPOSE

The purpose of this Corrective Measure Study (CMS) is to develop and evaluate corrective action alternatives and to recommend the corrective measure or measures to be taken at the Facility. The Respondent will furnish the personnel, materials, and services necessary to prepare the corrective measure study, except as otherwise specified.

B. SCOPE

The Corrective Measure Study consists of four tasks:

1. Task VII: Identification and Development of the Corrective Measure Alternatives
 - a. Description of Current Situation
 - b. Establishment of Corrective Action Objectives
 - c. Screening of Corrective Measures Technologies
 - d. Identification of the Corrective Measure Alternatives
2. Task VIII: Evaluation of the Corrective Measure Alternatives
 - a. Technical / Environmental / Human Health / Institutional
 - b. Cost Estimate
3. Task IX: Justification and Recommendation of the Corrective Measure or Measures
 - a. Technical
 - b. Human Health
 - c. Environmental
4. Task X: Reports
 - a. Progress Reports
 - b. Draft Report
 - c. Final Report

C. TASK VII: IDENTIFICATION AND DEVELOPMENT OF THE CORRECTIVE ACTION ALTERNATIVES

Based on the results of the RFI and in consideration of the identified Corrective Measure Technologies (Task I.3), the Respondent shall identify, screen and develop the alternatives for removal, containment, treatment and/or other remediation of the contamination based on the objectives established for the corrective action.

1. Description of Current Situation

The Respondent shall submit an update to the information describing the current situation at the Facility and the known nature and extent of the contamination as documented by the RFI Report. The Respondent shall provide an update to information presented in Task I of the RFI to the State and EPA regarding previous response activities and any interim measures which have or are being implemented at the Facility. The Respondent shall also make a facility specific statement of the purpose for the response, based on the results of the RFI. The statement of purpose should identify the actual or potential exposure pathways that should be addressed by corrective measures.

2. Establishment of Corrective Action Objectives

The Respondent shall propose to the EPA for review and approval, facility specific objectives for the corrective action. These objectives shall be based on public health and environmental criteria, information gathered during the RFI, EPA guidance, and the requirements of any applicable state and Federal statutes and regulations.

3. Screening of Corrective Measure Technologies

The Respondent shall review the results of the RFI and reassess the technologies specified in Task I.3. and identify additional technologies which are applicable at the Facility. The Respondent shall screen the preliminary corrective measure technologies identified in Task I.3 of the RFI and any supplemental technologies to eliminate those that may prove infeasible to implement, that rely on technologies unlikely to perform satisfactorily or reliably, or that do not achieve the corrective measure objective within a reasonable time period. This screening process focuses on eliminating those technologies which have severe limitations for a given set of waste and site-specific conditions. The screening step may also eliminate technologies based on inherent technology limitations.

Site, waste, and technology characteristics which are used to screen inapplicable technologies are described in more detail below:

a. Site Characteristics

Site data should be reviewed to identify conditions that may limit or promote the use of certain technologies. Technologies whose use is clearly precluded by site characteristics should be eliminated from further consideration;

b. Waste Characteristics

Identification of waste characteristics that limit the effectiveness or feasibility of technologies is an important part of the screening process. Technologies clearly limited by these waste characteristics should be eliminated from consideration. Waste characteristics particularly affect the feasibility of in-situ methods, direct treatment methods, and land disposal (on/off-site); and

c. Technology Limitations

During the screening process, the level of technology development, performance record, and inherent construction, operation, and maintenance problems should be identified for each technology considered. Technologies that are unreliable, perform poorly, or are not fully demonstrated may be eliminated in the screening process. For example, certain treatment methods have been developed to a point where they can be implemented in the field without extensive technology transfer or development.

4. Identification of the Corrective Measure Alternatives

The Respondent shall develop the corrective measure alternatives based on the corrective action objectives and analysis of Corrective Measure Technologies, as presented in Task I.3 of the RFI and as supplemented following the preparation of the RFI Report. The Respondent shall rely on engineering practice to determine which of the previously identified technologies appear most suitable for the Facility. Technologies can be combined to form the overall corrective action alternatives. The alternatives developed should

represent a workable number of option(s) that each appear to adequately address all site problems and corrective action objectives. Each alternative may consist of an individual technology or a combination of technologies. The Respondent shall document the reasons for excluding technologies, identified in Task I.3, as supplemented in the development of the alternatives.

D. TASK VIII: EVALUATION OF THE CORRECTIVE MEASURE ALTERNATIVES

The Respondent shall describe each corrective measure alternative that passes through the Initial Screening in Task VII and evaluate each corrective measure alternative and its components. The evaluation shall be based on technical, environmental, human health and institutional concerns. The Respondent shall also develop cost estimates of each corrective measure.

1. Technical/Environmental/Human Health/Institutional

The Respondent shall provide a description of each corrective measure alternative which includes but is not limited to the following: preliminary process flow sheets; preliminary sizing and type of construction for buildings and structures; and approximate quantities of utilities required. The Respondent shall evaluate each alternative in the four following areas:

a. Technical

The Respondent shall evaluate each corrective measure alternative based on performance, reliability, implementability and safety.

(1) The Respondent shall evaluate performance based on the effectiveness and useful life of the corrective measure:

(a) Effectiveness shall be evaluated in terms of the ability to perform intended functions, such as containment, diversion, removal, destruction, or treatment. The effectiveness of each corrective measure shall be determined either through design specifications or by performance evaluation. Any specific waste or site characteristics which could potentially impede effectiveness

shall be considered. The evaluation should also consider the effectiveness of combinations of technologies; and

(b) Useful life is defined as the length of time the level of effectiveness can be maintained. Most corrective measure technologies, with the exception of destruction, deteriorate with time. Often, deterioration can be slowed through proper system operation and maintenance, but the technology eventually may require replacement. Each corrective measure shall be evaluated in terms of the projected service lives of its component technologies. Resource availability in the future life of the technology, as well as appropriateness of the technologies, must be considered in estimating the useful life of the project.

(2) The Respondent shall provide information on the reliability of each corrective measure including their operation and maintenance requirements and their demonstrated reliability:

(a) Operation and maintenance requirements include the frequency and complexity of necessary operation and maintenance. Technologies requiring frequent or complex operation and maintenance activities should be regarded as less reliable than technologies requiring little or straightforward operation and maintenance. The availability of labor and materials to meet these requirements shall also be considered; and

(b) Demonstrated and expected reliability is a way of measuring the risk and effect of failure. The Respondent should evaluate whether the technologies have been used effectively under analogous conditions; whether the combination

of technologies have been used together effectively; whether failure of any one technology has an immediate impact on receptors; and whether the corrective measure has the flexibility to deal with uncontrollable changes at the site.

(3) The Respondent shall describe the implementability of each corrective measure including the relative ease of installation (constructability) and the time required to achieve a given level of response:

(a) Constructability is determined by conditions both internal and external to the facility conditions and include such items as location of underground utilities, depth to water table, heterogeneity of subsurface materials, and location of the Facility (i.e., remote location vs. a congested urban area). The Respondent shall evaluate what measures can be taken to facilitate construction under these conditions. External factors which affect implementation include the need for special permits or agreements, equipment availability, and the location of suitable off-site treatment or disposal facilities; and

(b) Time has two components that shall be addressed: the time it takes to implement a corrective measure and the time it takes to actually see beneficial results. Beneficial results are defined as the reduction of contaminants to some acceptable, pre-established level.

(4) The Respondent shall evaluate each corrective measure alternative with regard to safety. This evaluation shall include threats to the safety of nearby communities and environments as well as those to workers during implementation. Factors to consider are fire, explosion, and exposure to hazardous substances.

b. Environmental

The Respondent shall perform an Environmental Assessment for each alternative. The Environmental Assessment shall focus on the facility conditions and pathways of contamination actually addressed by each alternative. The Environmental Assessment for each alternative will include, at a minimum, an evaluation of: the short- and long-term beneficial and adverse effects of the response alternative; any adverse effects on environmentally sensitive areas; and an analysis of measures to mitigate adverse effects.

c. Human Health

The Respondent shall assess each alternative in terms of the extent of which it mitigates short-and long-term potential exposure to any residual contamination and protects human health both during and after implementation of the corrective measure. The assessment will describe the levels and characterizations of contaminants on-site, potential exposure routes, and potentially affected population. Each alternative will be evaluated to determine the level of exposure to contaminants and the reduction over time. For management of mitigation measures, the relative reduction of impact will be determined by comparing residual levels of each alternative with existing criteria, standards, or guidelines acceptable to EPA.

d. Institutional

The Respondent shall assess relevant institutional needs for each alternative. Specifically, the effects of Federal, state and local environmental and public health standards, regulations, guidance, advisories, ordinances, or community relations on the design, operation, and timing of each alternative.

2. Cost Estimate

The Respondent shall develop an estimate of the cost of each corrective measure alternative (and for each phase or segment of the alternative). The cost estimate shall include both capital and operation and maintenance costs.

- a. Capital costs consist of direct (construction) and indirect (nonconstruction and overhead) costs.

(1) Direct capital costs include:

- (a) Construction costs: Costs of materials, labor (including fringe benefits and worker's compensation), and equipment required to install the corrective measure;
- (b) Equipment costs: Costs of treatment, containment, disposal and/or service equipment necessary to implement the action; these materials remain until the corrective action is complete;
- (c) Land and site-development costs: Expenses associated with purchase of land and development of existing property; and
- (d) Buildings and services costs: Costs of process and nonprocess buildings, utility connections, purchased services, and disposal costs.

(2) Indirect capital costs include:

- (a) Engineering expenses: Costs of administration, design, construction supervision, drafting, and testing of corrective measure alternatives;
- (b) Legal fees and license or permit costs: Administrative and technical costs necessary to obtain licenses and permits for installation and operation;
- (c) Startup and shakedown costs: Costs incurred during corrective measure startup; and
- (d) Contingency allowances: Funds to cover costs resulting from unforeseen circumstances, such as adverse weather conditions, strikes, and inadequate facility characterization.

b. Operation and maintenance costs are post-construction costs necessary to ensure continued effectiveness of a corrective

measure. The Respondent shall consider the following operation and maintenance cost components:

- (1) Operating labor costs: Wages, salaries, training, overhead, and fringe benefits associated with the labor needed for post-construction operations;
- (2) Maintenance materials and labor costs: Costs for labor, parts, and other resources required for routine maintenance of facilities and equipment;
- (3) Auxiliary materials and energy: Costs of such items as chemicals and electricity for treatment plant operations, water and sewer service, and fuel;
- (4) Purchased services: Sampling costs, laboratory fees, and professional fees for which the need can be predicted;
- (5) Disposal and treatment costs: Costs of transporting, treating, and disposing of waste materials, such as treatment plant residues, generated during operations;
- (6) Administrative costs: Costs associated with administration of corrective measure operation and maintenance not included under other categories;
- (7) Insurance, taxes, and licensing costs: Costs of such items as liability and sudden accidental insurance; real estate taxes on purchased land or rights-of-way; licensing fees for certain technologies; and permit renewal and reporting costs;
- (8) Maintenance reserve and contingency funds: Annual payments into escrow funds to cover (1) costs of anticipated replacement or rebuilding of equipment and (2) any large unanticipated operation and maintenance costs; and
- (9) Other costs: Items that do not fit any of the above categories.

E. TASK IX: JUSTIFICATION AND RECOMMENDATION OF THE CORRECTIVE MEASURE OR MEASURES

The Respondent shall justify and recommend a corrective measure alternative using technical, human health, and environmental criteria. This recommendation shall include summary tables which allow the alternative or alternatives to be understood easily. Tradeoffs among health risks, environmental effects, and other pertinent factors shall be highlighted. At a minimum, the following criteria will be used to justify the final corrective measure or measures.

1. Technical

- a. Performance - corrective measure or measures which are most effective at performing their intended functions and maintaining the performance over extended periods of time will be given preference;
- b. Reliability - corrective measure or measures which do not require frequent or complex operation and maintenance activities and that have proven effective under waste and facility conditions similar to those anticipated will be given preference;
- c. Implementability - corrective measure or measures which can be constructed and operating to reduce levels of contamination to attain or exceed applicable standards in the shortest period of time will be preferred; and
- d. Safety - corrective measure or measures which pose the least threat to the safety of nearby residents and environments as well as workers during implementation will be preferred.

2. Human Health

The corrective measure or measures must comply with existing EPA criteria, standards, or guidelines for the protection of human health. Corrective measures which provide the minimum level of exposure to contaminants and the maximum reduction in exposure with time are preferred.

3. Environmental

The corrective measure or measures posing the least adverse impact (or greatest improvement) over the

shortest period of time on the environment will be favored.

F. TASK X: REPORTS

The Respondent shall submit a Corrective Measure Study Report presenting the results of Tasks VII through IX and recommending a corrective measure alternative.

1. Progress Reports

The Respondent shall at a minimum provide the State and EPA with signed, monthly CMS progress reports containing:

- a. A description and estimate of the percentage of the CMS completed;
- b. Summaries of all findings;
- c. Summaries of all changes made in the CMS during the reporting period;
- d. Summaries of all contacts with representatives of the local community, public interest groups or State government during the reporting period;
- e. Summaries of all problems or potential problems encountered during the reporting period;
- f. Actions being taken to rectify problems;
- g. Changes in the personnel involved with the CMS during reporting period;
- h. Projected work for the next reporting period; and
- i. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

2. Draft Report

The Report shall at a minimum include:

- a. A description of the Facility;
- b. Site topographic map; and
- c. Preliminary layouts.

- d. A summary of the corrective measure or measures;
 - (1) Description of the corrective measure or measures and rationale for selection;
 - (2) Performance expectations;
 - (3) Preliminary design criteria and rationale;
 - (4) General operation and maintenance requirements; and
 - (5) Long-term monitoring requirements.

- e. A summary of the RFI and impact on the selected corrective measure or measures;
 - (1) Field studies (groundwater, surface water, soil, air); and
 - (2) Laboratory studies (bench scale, pick scale).

- f. Design and Implementation Precautions;
 - (1) Special technical problems;
 - (2) Additional engineering data required;
 - (3) Permits and regulatory requirements;
 - (4) Access, easements, right-of-way;
 - (5) Health and safety requirements; and
 - (6) Community relations activities.

- g. Cost Estimates and Schedules;
 - (1) Capital cost estimate;
 - (2) Operation and maintenance cost estimate; and
 - (3) Project schedule (design, construction, operation).

3. Final Report

The Respondent shall finalize the CMS Report addressing comments received from EPA on the Draft CMS Report.

G. Facility Submission Summary

A summary of the information reporting requirements contained in the Corrective Measure Study Scope of Work is presented below:

<u>FACILITY SUBMISSION</u>	<u>DUE DATE</u>
Draft CMS Report (Tasks VII, VIII, and IX)	30 days after receipt of EPA approval of the Final RFI Report
Final CMS Report (Tasks VII, VIII, and IX)	30 days after receipt of EPA comments on the Draft CMS Report
Progress Reports (Tasks VII, VIII, and IX)	Monthly

IV. CORRECTIVE MEASURE IMPLEMENTATION

A. PURPOSE

The purpose of this Corrective Measure Implementation (CMI) program is to design, construct, operate, maintain, and monitor the performance of the corrective measure or measures selected to protect human health and the environment. Respondents will furnish all personnel, materials and services necessary for the implementation of the corrective measure or measures.

B. SCOPE

The Corrective Measure Implementation program consists of four tasks:

1. Task XI: Corrective Measure Implementation Program Plan
 - a. Program Management Plan
 - b. Community Relations Plan
2. Task XII: Corrective Measure Design
 - a. Design Plans and Specifications
 - b. Operation and Maintenance Plan
 - c. Cost Estimate
 - d. Project schedule
 - e. Construction Quality Assurance Objectives
 - f. Health and Safety Plan
 - g. Design Phases
3. Task XIII: Corrective Measure Construction
 - a. Responsibility and Authority
 - b. Construction Quality Assurance Personnel
 - c. Inspection Activities
 - d. Sampling Requirements
 - e. Documentation

Qualifications

4. Task XIV: Reports
 - a. Progress Reports
 - b. Draft Reports
 - c. Final Reports

C. TASK XI: CORRECTIVE MEASURE IMPLEMENTATION PROGRAM PLAN

Respondents shall prepare a Corrective Measure Implementation Program Plan. This will include the development and implementation of several plans, which require concurrent preparation. It may be necessary to revise plans as the work is performed to focus efforts on a particular problem. The Program Plan includes the following:

1. Program Management Plan

Respondents shall prepare a Program Management Plan which will document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of corrective measure(s). The plan shall document the responsibilities and authorities of all organizations and key personnel involved with the implementation of corrective measures. The Program Management Plan will also include a description of qualifications of key personnel directing the Corrective Measure Implementation Program, including contractor personnel.

2. Community Relations Plan

Respondents shall revise the Community Relations Plan prepared during the RFI to reflect any changes in the level of concern of the community during design and construction activities.

- a. Specific activities which must be conducted during the design stage include, but are not limited to, the following:
 - (1) Revision of the facility Community Relations Plan to reflect community concerns and involvement; and
 - (2) Preparation and distribution of public notices and updated fact sheets at various stages of the engineering design.

- b. Specific activities to be conducted during the construction stage could include activities ranging from group meetings to periodic fact sheets on the technical status of the project.

D. TASK XII: CORRECTIVE MEASURE DESIGN

Respondents shall prepare final construction plans and specifications to implement the corrective measure(s) at the facility as defined in the Corrective Measure Study.

1. Design Plans and Specifications

Respondents shall develop clear and comprehensive design plans and specifications which include but are not limited to the following:

- a. Discussion of the design strategy and the design basis, including:
 - (1) Compliance with all applicable or relevant environmental and public health standards; and
 - (2) Minimization of environmental and public interests.
- b. Discussion of the technical factors of importance including:
 - (1) Use of currently accepted environmental control measures and technology;
 - (2) The constructability of the design; and
 - (3) Use of currently acceptable construction practices and techniques.
- c. Description of assumptions made and detailed justifications of these assumptions.
- d. Discussion of the possible sources of error and references to possible operation and maintenance problems.
- e. Detailed drawings of the proposed design including:
 - (1) Qualitative flow sheets; and
 - (2) Quantitative flow sheets.

- f. Tables listing equipment and specifications.
- g. Tables giving material and energy balances.
- h. Appendices including:
 - (1) Sample calculations (one example presented and explained clearly for significant or unique design calculations); and
 - (2) Derivation of equations essential to the design; and
 - (3) Results of laboratory and/or field tests.

2. Operation and Maintenance Plan

Respondents shall prepare an Operation and Maintenance Plan to cover both the implementation and long term maintenance of the corrective measure(s). The plan shall be composed of the following elements:

- a. Description of normal operation and maintenance (O&M);
 - (1) Description of tasks for operation;
 - (2) Description of tasks for maintenance;
 - (3) Description of prescribed treatment or operation conditions; and
 - (4) Schedule showing frequency of each O&M task.
- b. Description of potential operating problems;
 - (1) Description and analysis of potential operation problems;
 - (2) Sources of information regarding problems; and
 - (3) Common and/or anticipated remedies.
- c. Description of routine monitoring and laboratory testing;
 - (1) Description of monitoring tasks;

- (2) Description of required laboratory tests and their interpretation;
 - (3) Required QA/QC; and
 - (4) Schedule of monitoring frequency and date, if appropriate, when monitoring may cease.
- d. Description of alternate O&M;
- (1) Should systems fail, alternate procedures to prevent undue hazard; and
 - (2) Analysis of vulnerability and additional resource requirements should a failure occur.
- e. Safety plan;
- (1) Description of precautions, of necessary equipment, etc., for site personnel; and
 - (2) Safety tasks required in event of system failure.
- f. Description of equipment;
- (1) Equipment identification;
 - (2) Installation of monitoring components;
 - (3) Maintenance of site equipment; and
 - (4) Replacement schedule for equipment and installed components.
- g. Records and reporting mechanisms required;
- (1) Operating logs;
 - (2) Laboratory records;
 - (3) Records for operating costs;
 - (4) Mechanisms for reporting emergencies;
 - (5) Personnel and maintenance records; and
 - (6) Monthly/annual reports to State agencies.

An initial Draft Operation and Maintenance Plan shall be submitted simultaneously with the Prefinal Design Document submission and the Final Operation and Maintenance Plan with the Final Design Documents.

3. Cost Estimates

Respondents shall develop cost estimates for the purpose of assuring that the facility has the financial resources necessary to construct and implement the corrective measure. The cost estimates developed in the Corrective Measure Study shall be refined to reflect the more detailed/accurate design plans and specifications being developed. The cost estimates shall include both capital, and operation and maintenance costs. Initial Cost Estimates shall be submitted simultaneously with the Prefinal Design Document submission and the Final Cost Estimates with the Final Design Documents.

4. Project Schedule

Respondents shall develop detailed Project Schedules for the construction and implementation of the corrective measure(s) which identify the timing for initiation and completion of all tasks. Respondents shall specifically identify dates for completion of the project and major interim milestones which shall be enforceable under the terms of this order. Initial Project Schedules shall be submitted with the Prefinal Design Document submission and the Final Project schedules with the Final Design Document.

5. Construction Quality Assurance Objectives

Respondents shall identify and document the objectives and framework for the development of a construction quality assurance program including, but not limited to the following:

- a. responsibility and authority;
- b. personnel qualifications;
- c. inspection activities;
- d. sampling requirements; and
- e. documentation.

6. Health and Safety Plan

Respondents shall modify the Health and Safety Plan developed for the RFI to address the activities to be performed at the facility to implement the corrective measure(s).

7. Design Phases

The design of the corrective measure(s) should include the phases outlined below.

a. Preliminary design.

Respondents shall submit the Preliminary design when the design effort is approximately 30% complete. At this stage Respondents shall have field verified the existing conditions of the facility. The preliminary design shall reflect a level of effort such that the technical requirements of the project have been addressed and outlined so that they may be reviewed to determine if the final design will be operable and usable. Supporting data and documentation shall be provided with the design documents defining the functional aspects of the program. The preliminary construction drawings by Respondents shall reflect organization and clarity. The scope of the technical specifications shall be outlined in a manner reflecting the final specifications. Respondents shall include with the preliminary submission design calculations reflecting the same percentage of completion as the designs they support.

b. Intermediate design.

Respondents shall submit the Intermediate design when the design effort is approximately at 60% completion of the project. The intermediate design submittal shall include the same elements as the prefinal design.

c. Correlating plans and specifications.

Before submitting the project specifications, Respondents shall:

- (1) Coordinate and cross-check the specifications and drawings; and

- (2) Complete the proofing of the edited specifications and required cross-checking of all drawings and specifications.

These activities shall be completed prior to the 95% prefinal submittal to the Agency.

d. Equipment start-up and operator training.

Respondents shall prepare, and include in the technical specifications governing treatment systems, contractor requirements for providing:

- (1) appropriate service visits by experienced personnel to supervise the installation, adjustment, startup and operation of the treatment systems; and
- (2) training covering appropriate operational procedures once the startup has been successfully accomplished.

e. Additional studies.

Corrective Measure Implementation may require additional studies to supplement the available technical data. At the direction of EPA for any such studies required, Respondents shall furnish all services, including field work as required, materials, supplies, plant, labor, equipment, investigations, studies and superintendence. Sufficient sampling, testing and analysis shall be performed to optimize the required treatment and/or disposal operations and systems. There shall be an initial meeting of all principal personnel involved in the development of the program. The purpose will be to discuss objectives, resources, communication channels, role of personnel involved and orientation of the site, etc. The interim report shall present the results of the testing with the recommended treatment or disposal system (including options). A review conference shall be scheduled after the interim report has been reviewed by all interested parties. The final report of the testing shall include all data taken during the testing and a summary of the results of the studies.

f. Prefinal and final design.

Respondents shall submit the prefinal/final design documents in two parts. The first submission shall be at 95% completion of design (i.e., prefinal). After approval of the prefinal submission, Respondents shall execute the required revisions and submit the final documents 100% complete with reproducible drawings and specifications.

The prefinal design submittal shall consist of the Design Plans and Specifications, Operation and Maintenance Plan, Capital, Operating and Maintenance Cost Estimate, Quality Assurance Plan, Specifications for, and Project Schedules.

The final design submittal shall consist of the Final Design Plans and Specifications (100% complete), Respondents Final Construction Cost Estimate, the Final Draft Operation and Maintenance Plan, Final Quality Assurance Plan, and Health and Safety specifications. The quality of the design documents should be such that Respondents would be able to include them in a bid package and invite contractors to submit bids for the construction project.

E. TASK XIII: CORRECTIVE MEASURE CONSTRUCTION

Following EPA approval of the final design, Respondents shall develop and implement a construction quality assurance (CQA) program to ensure that the completed corrective measure(s) meets or exceeds all design criteria, plans and specifications. The CQA plan is a facility specific document which must be submitted to the Agency for approval prior to the start of construction. At a minimum, the CQA plan should include the elements which are summarized below. Upon EPA approval of the CQA Plan, Respondents shall construct and implement the corrective measures in accordance with the approved design, schedule and the CQA Plan. Respondents shall also carry out all elements of the approved Operation and Maintenance Plan.

1. Responsibility and Authority

The responsibility and authority of all organizations (i.e., technical consultants, construction firms, etc.) and key personnel involved in the construction of the corrective measure shall be described fully in the CQA plan. Respondents must identify a CQA officer and the necessary supporting inspection staff.

2. Construction Quality Assurance Personnel Qualifications

The qualifications of the CQA officer and supporting inspection personnel shall be presented in the CQA plan to demonstrate that they possess the training and experience necessary to fulfill their identified responsibilities.

3. Inspection Activities

The observations and tests that will be used to monitor/inspect the construction and/or installation of the components of the corrective measure(s) shall be summarized in the CQA plan. The plan shall include the scope and frequency of each type of inspection. Inspections shall verify compliance with all environmental requirements and shall include, but not be limited to air quality and emissions monitoring records, waste disposal records (e.g., RCRA transportation manifests), etc.. The inspection should also ensure compliance with all health and safety procedures. In addition to oversight inspections, Respondents shall conduct the following activities:

a. Preconstruction inspection and meeting.

Respondents shall conduct a preconstruction inspection and meeting with EPA to:

- (1) Review methods for documenting and reporting inspection data;
- (2) Review methods for distributing and storing documents and reports;
- (3) Review work area security and safety protocol;
- (4) Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and
- (5) Conduct a site walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The preconstruction inspection and meeting shall be documented by a designated person and minutes should be transmitted to all parties.

b. Prefinal inspection.

Upon preliminary project completion Respondents shall notify EPA for the purposes of conducting a prefinal inspection. The prefinal inspection will consist of a walk-through inspection of the entire project site. The inspection is to determine whether the project is complete and consistent with the contract documents and the EPA approved corrective measure. Any outstanding construction items discovered during the inspection will be identified and noted. Additionally, treatment equipment will be operationally tested by Respondents. Respondents will certify that the equipment has performed to meet the purpose and intent of the specifications. Retesting will be completed where deficiencies are revealed. The prefinal inspection report should outline the outstanding construction items, actions required to resolve items, completion date for these items, and date for final inspection.

c. Final Inspection.

Upon completion of any outstanding construction items, Respondents shall notify EPA for the purposes of conducting a final inspection. The final inspection will consist of a walk-through inspection of the project site. The prefinal inspection report will be used as a checklist with the final inspection focusing on the outstanding construction items identified in the prefinal inspection. Confirmation shall be made that all outstanding items have been resolved.

4. Sampling Requirements

The sampling activities, sample size, sample locations, frequency of testing, acceptance and rejection criteria, and plans for correcting problems as addressed in the project specifications shall be presented in the CQA plan.

5. Documentation

Reporting requirements for CQA activities shall be described in detail in the CQA plan. This should include such items as daily summary reports, inspections data

sheet, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records also should be presented in the CQA plan.

F. TASK XIV: REPORTS

Respondents shall prepare plans, specifications, and reports as set forth in Task XIII through Task XIV to document the design, construction, operation, maintenance and monitoring of the corrective measure. The documentation shall include, but not be limited to the following:

1. Progress Reports

The Respondents shall at a minimum provide the EPA with signed, monthly progress reports containing:

- a. A description and estimate of the percentage of the CMI completed;
- b. Summaries of all findings and data;
- c. Summaries of all changes made in the CMI during the reporting period;
- d. Summaries of all contacts with representative of the local community, public interest groups or State government during the reporting period;
- e. Summaries of all problems or potential problems encountered during the reporting period;
- f. Actions being taken to rectify problems;
- g. Changes in personnel associated with corrective measures during the reporting period;
- h. Projected work for the next reporting period; and
- i. Copies of daily reports, inspection reports, laboratory/monitoring data, etc.

2. Draft Reports

- a. Respondents shall submit a draft Corrective Measure Implementation Program Plan as outlined in Task XI;
- b. Respondents shall submit draft Construction Plans and Specifications, Design Reports, Project Schedule, Operation and Maintenance Plan, and Study Reports as outlined in Task XII;
- c. Respondents shall submit a draft Construction Quality Assurance Program Plan and Documentation as outlined in Task XIII; and
- d. At the "completion" of the construction of the project, Respondents shall submit a Corrective Measure Implementation Report to the Agency. The Report shall document that the project is consistent with the design specifications, and that the corrective measure is performing adequately. The Report shall include, but not be limited to the following elements:
 - (1) Synopsis of the corrective measure and certification of the design and construction;
 - (2) Explanation of any modifications to the plans and why these were necessary for the project;
 - (3) Listing of the criteria, established before the corrective measure was initiated, for judging the functioning of the corrective measure and also explaining any modification to these criteria;
 - (4) Results of facility monitoring, indicating that the corrective measure will meet or exceed the performance criteria; and
 - (5) Explanation of the operation and maintenance (including monitoring) to be undertaken at the facility.

This report should include all of the daily inspection summary reports, inspection summary reports, inspection data sheets, problem

identification and corrective measure reports, block evaluation reports, photographic reporting data sheets, design engineers' acceptance reports, deviations from designated material specifications (with justifying documentation) and as-built drawings.

3. Final Reports

Respondents shall finalize the Corrective Measure Implementation Program Plan, Construction Plans and Specifications, Design Reports, Operation and Maintenance Plan, Project Schedule Study Reports, Construction QA Program Plan/Documentation, Additional Studies Report and the Corrective Measure Implementation Report incorporating comments received on draft submissions.

G. Submission Summary

A summary of the information reporting requirements contained in the Corrective Measure Implementation Scope of Work is present below:

<u>Facility Submission</u>	<u>Due Date</u>
Draft CMI Program Plan (Task XI)	60 Days after receipt of EPA Remedy Selection
Final CMI Program Plan (Task XI)	15 days after EPA comment on Draft Program Plans
Design Phases (Task XII 7) -Preliminary Design (30% completion) -Intermediate Design (60% completion) -Prefinal Design (95% completion)	120 days after submittal of Final Program Plan
-Final Design (100% completion)	30 days after EPA approval of Prefinal Design
(Task XII 2 through 6) -Draft Submittals	Concurrent with Prefinal Design
-Final Submittals	Concurrent with Final Design
Additional Studies: Interim Report (Task XII 7.e)	[DATE ESTABLISHED PRIOR TO FINAL DESIGN]
Additional Studies: Final Report	15 days after EPA comment on Interim Report
Draft Construction Quality Assurance Plan (Task XIII)	With Final Design
Final Construction Quality Assurance Plan (Task XIII)	15 days after EPA comment on Draft Construction Quality Assurance Plan
Construction of Corrective Measures	As approved in Final Design upon approval of Final CQA plan.

Prefinal Inspection Report
(Task XIII)

Draft CMI Report (Task XIV)

Final CMI Report (Task XIV)

Progress Reports for
Tasks XI through XIII

Progress Reports during operation
and Maintenance

15 days after Prefinal
Inspection

Upon completion of
construction phase

15 days after EPA comment
on Draft CMI Report

Monthly

Semi-annual



Bloomfield Refining
Company

A Gary Energy Corporation Subsidiary

September 14, 1987

Mr. William H. Taylor, Jr.
Chief, Enforcement Section (SA-HE)
U. S. Environmental Protection Agency
Region VI
1201 Elm Street
Dallas, Texas 75270

RE: Administrative Order (AO)
Docket No. RCRA-3013-00-185

Dear Mr. Taylor:

Enclosed are the sampling results obtained from the San Juan River during a low-flow condition on July 24, 1987. The samples were taken as stipulated in the approved work plan. We trust that the attached data submitted as an Amendment to the Final Report fulfills the requirements of the subject Administrative Order.

Again, the data submitted herewith was done in fulfillment of a unilaterally issued Administrative Order. It should not be construed, for any purpose, as an admission of liability under any governmental statute or rule or an admission of any question of law. Furthermore, given the complexity of the investigation, Bloomfield Refining Company reserves the right to further interpret or modify any statements or data contained here, if appropriate, in the future.

Sincerely,

Richard Traylor
Refinery Manager

RT/jm

Attachment

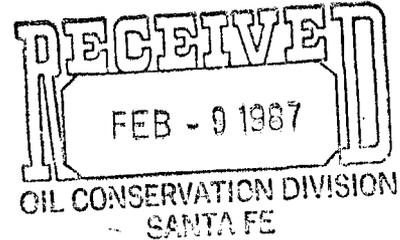
cc: Mr. Jack Ellvinger
New Mexico Environmental Improvement Division
Mr. David G. Boyer
New Mexico Oil Conservation Division



Bloomfield Refining
Company

A Gary Energy Corporation Subsidiary

February 8, 1987



Mr. William H. Taylor, Jr.
Chief, Enforcement Section (SA-HE)
U.S. Environmental Protection Agency
Region VI
1201 Elm Street
Dallas, Texas 75270

RE: Administrative Order (AO)
Docket No. RCRA-3013-00-185

Dear Mr. Taylor:

Enclosed is the final report prepared by Engineering-Science, Inc. (ES) containing the results of the seven tasks outlined in the work plan prepared to address the directives of the subject AO. All work elements with the exception of the surface water sampling have been completed. On January 7, 1987, a request was made to Ms. Beth Koesterer of Region VI for a time extension for the surface water sampling to permit sampling of the San Juan River during low-flow conditions as stipulated in the approved work plan. An amendment to this report will be submitted containing the results of the San Juan River analysis as soon as flow conditions permit the required sampling.

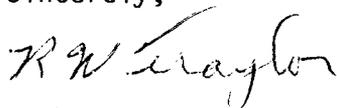
As a result of the subsurface investigative work carried out by BRC, we have agreed with the State of New Mexico Oil Conservation Division (NMOCD) to install two off-site groundwater monitoring wells in an effort to determine if any hydrocarbon migration has occurred to the south and west of the site. We have also agreed to locate a test recovery well on-site in the general vicinity of MW-4. Attached is a copy of our September 26, 1986 letter proposing these steps which was subsequently approved by NMOCD.

We trust that the attached report fulfills the requirements of the Subject AO with the exception of the final river sampling event. We will keep you advised as to the results of the above-mentioned work being carried out under the auspices of NMOCD.

Finally, as you know, the present report was done in fulfillment of a unilaterally-issued administrative order. Nothing herein should be construed, for any purpose, as an admission of liability under any governmental statute or rule or an admission of any question of law.

Furthermore, given the complexity of the investigation, Bloomfield Refining Company reserves the right further to interpret or modify any statements or data contained herein, if appropriate, in the future.

Sincerely,



Richard Traylor
Refinery Manager

RT/jm

Attachment

Cc: Mr. Jack Ellvinger
New Mexico Environmental Improvement Division
Mr. David G. Boyer
New Mexico Oil Conservation Division



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

December 12, 1985



Mr. David G. Boyer
New Mexico Oil Conservation Division
P.O. Box 2088
Land Office Building
Santa Fe, New Mexico 87501

Re: Environmental Protection Agency v.
Plateau, Inc. et al., RCRA-VI-501-H

Dear Mr. Boyer:

Enclosed are copies of Consent Agreements and Final Orders with attachments, dated September 27, 1985, and November 26, 1985, resolving EPA's claims in the above referenced case against Plateau, Inc., Suburban Propane Gas Corporation (SPG), Bloomfield Refining Company, Inc. (BRC), and Gary Energy Corporation (GEC). The agreement with Plateau and SPG calls for a \$75,000 civil penalty for past RCRA violations, including illegal waste shipments to Vernal, Utah. The agreement with BRC and GEC provides for a \$5,700 civil penalty for one RCRA violation, along with submission of a RCRA closure plan and certain modifications with respect to facility operational and waste handling practices. It should also be noted that the Bloomfield Refinery is the subject of a RCRA 3013 order requiring environmental monitoring, analysis, testing, and reporting, which is currently being implemented.

I want to thank you for the assistance provided by you and your staff on this matter, particularly during the visit of Elizabeth Rose and myself on August 31, 1985. As noted above, additional EPA investigations are ongoing at the Bloomfield facility; and I'm certain that we will continue to need your invaluable aid and support.

Please call me at (214) 767-9976 or Will Focht at (214) 767-9884 if you have any questions.

Sincerely,

James L. Turner
Assistant Regional Counsel

Enclosures

Copy in BR-ENV
File



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

December 2, 1985

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Englewood, Colorado 80112-5116

Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Englewood, Colorado 80112-5592

Re: Administrative Order Requiring Submissions and
Implementation of Proposal for Monitoring, Testing,
Analysis and Reporting, Docket No. RCRA 3013-001-85,
as amended

Dear Sirs:

In accordance with paragraph 28 of the above referenced order, you are hereby notified that the modified proposal entitled "A Review of Subsurface Petroleum Hydrocarbons at the Bloomfield Refinery" submitted on August 5, 1985, in response to my letter of July 5, 1985, and in accordance with paragraph 26 of the above-referenced order, is approved. Paragraph 28 of the order requires that you begin implementation of the proposal within ten (10) days following this notice of approval.

Please call me at (214) 767-9730 if you have any questions or have your counsel call Jim Turner of the Office of Regional Counsel at (214) 767-9976.

Sincerely yours,

A handwritten signature in cursive script that reads "William H. Taylor, Jr." with a flourish at the end.

William H. Taylor, Jr.
Chief, Enforcement Section

cc: Ms. Denise Fort, NMEID
Mr. David Boyer, NMOCD
Mr. Harold Sersland, BUREC
Joseph F. Guida, Attorney at Law



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

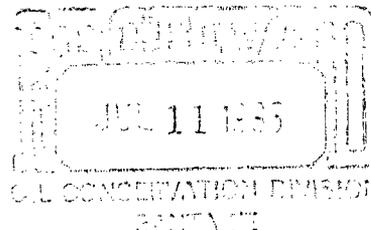
REGION VI

1201 ELM STREET

DALLAS, TEXAS 75270

July 5, 1985

Mr. Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Englewood, Colorado 80112-5116



Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Englewood, Colorado 80112-5592

RE: Revisions to "A Workplan for Monitoring, Testing, Analysis, and Reporting At the Bloomfield Refinery" submitted by Bloomfield Refining Company per 3013 Administrative Order, Docket No. RCRA-3013-00-185

Dear Sirs:

This letter constitutes the notification required by paragraph 28 of the referenced RCRA 3013 ORDER and will serve to confirm the results of our meeting at the EPA Region 6 office in Dallas on June 17, 1985. As you are aware, the purpose of the afternoon meeting was to provide comments on the document you submitted entitled "A Workplan for Monitoring, Testing, Analysis, and Reporting At The Bloomfield Refinery" which was prepared by Engineering-Science.

The proposal was submitted by the Bloomfield Refining Company (BRC) in response to paragraph 26 of the 3013 ORDER which requires a proposal for the monitoring, testing, analysis, and reporting of any hazardous waste contamination associated with the property or facility of the Respondent.

During the meeting, EPA specified deficiencies in the workplan regarding the number, location, and construction of monitoring wells, sampling of the Hammond Ditch and the San Juan River, and aquifer hydraulics. These deficiencies were discussed with you, and a revised proposal was tentatively agreed upon.

The revisions to the BRC proposal are summarized below and must be incorporated in a modified proposal, as required by paragraph 28 of the ORDER.

ELEMENT 1: Electrical Resistivity Survey

An E-R survey of potentially contaminated areas of the refinery was proposed by BRC and accepted by EPA. This information will be used to determine the subsurface dip of the Nacimiento Formation and to identify localized trends or depressions in the clay subcrop. The information will also be

used to identify the locations for additional groundwater monitoring wells, if necessary, for plume delineation. Prior to performing the study, BRC shall submit a plan view map of the refinery illustrating the proposed survey lines and known elevations of the top of the Nacimiento Formation.

ELEMENT 2: Installation of Additional Groundwater Monitoring Wells

A monitoring well, near existing well MW-4, was proposed by BRC and accepted. This well will be screened in the lower Nacimiento Formation and will be sampled to determine if the hydrocarbons detected in the uppermost aquifer have migrated into the lower formation.

In addition to the above well, monitoring wells shall be installed in three other locations at the Bloomfield facility. The areas of concern include:

- North of the API wastewater ponds but south of the Hammond Ditch
- Downgradient of the process units
- Downgradient of the landfill area

All of the proposed monitoring wells shall be constructed with stainless steel materials in the saturated zone, instead of the PVC well screen outlined in the original BRC workplan. PVC well casing can be used in the borehole however, above the water table.

BRC proposed monthly water level measurements in all of the refinery monitoring wells. This information shall be incorporated into a water table contour map and submitted to EPA on a quarterly basis.

ELEMENT 3: Groundwater Sampling at Existing and Proposed Wells

BRC proposed groundwater sampling at the six existing wells and the new proposed well near MW-4 on a quarterly basis, using a stainless steel bailer. The three additional wells proposed by the Agency shall also be included in the quarterly sampling routine as follows:

GROUP I
SAMPLING PARAMETERS

Volatile Organic Priority Pollutants
Acid and Base/Neutral Priority Pollutants
Phenols
Priority Pollutant Metals
Cyanide
Chloride
Sulfate
TOC
TDS
pH

GROUP I
MONITORING WELLS

MW-4
Proposed well @ MW-4
Proposed well north of API ponds
Proposed well north of landfill
Proposed well north of process area

GROUP II
SAMPLING PARAMETERS

Benzene
Ethylbenzene
Toluene
Xylene
Phenols
Priority Pollutant Metals
Cyanide
TOC
TDS
Chloride
Sulfate
pH

GROUP II
MONITORING WELLS

MW-1
MW-2
MW-3
MW-5
MW-6 (if available)

ELEMENT 4: Surface Water Sampling at the San Juan River

BRC proposed a single composite sample, composed of depth integrated samples collected at three locations across the San Juan River. EPA requires that each of the three depth integrated samples be analyzed for the sampling parameters listed below. Each of the three samples shall be prepared by compositing equal samples taken from the surface, two-tenths, and eight-tenths of the total river depth.

A single sample shall be collected from the surface of the river, two-tenths of the distance across the San Juan River, just downstream from the refinery. This sample shall be analyzed for the volatile priority pollutants.

BRC proposed sampling the San Juan River during low flow conditions (approx 300 CFS) or during the last four months of 1985, if low flow conditions do not occur prior to this time. EPA requires that the river flow conditions be documented at the time of sampling, either by measurements at the USGS gauging station 09365000 (subtract readings taken from USGS Animas River station 09364500) or direct flow meter gauging.

SAMPLING PARAMETERS

Acid and Base/Neutral Priority Pollutants
Priority Pollutant Metals
Cyanide
Phenols
TOC
Sulfate
pH

ELEMENT 5: Surface Water Sampling at the Hammond Ditch

BRC proposed sampling the Hammond Ditch at the start of the mid-April irrigation season. Sample locations outlined in the workplan and accepted by EPA include (see attached map):

- downstream of the refinery, south of Sullivan Road
- downstream of the API wastewater ponds

The water samples from these two locations will be collected from the bank nearest the refinery process area. EPA requires that the depth integrated samples proposed by BRC composite equal volumes of water from the surface, two-tenths and eight-tenths of the total ditch depth. The composite samples will be analyzed for the following parameters:

Acid and Base/Neutral Priority Pollutants
Priority Pollutant Metals
Cyanide
Phenols
pH

BRC also proposed that two samples be collected from the same locations listed above and analyzed for volatile priority pollutants. EPA requires that these samples be taken from the water surface of the Hammond Ditch, collected from the bank nearest the refinery process area.

ELEMENT 6: Determination of Aquifer Hydraulics

BRC shall perform a slug or pump test on a select well to determine the hydraulic conductivity of the uppermost aquifer. Adjacent monitoring wells shall be observed during the test (if performing a pump test) to establish the area of influence of pumping and storage coefficient. The test method employed shall satisfy the unconfined aquifer conditions which seem to prevail at the refinery site. EPA requires that the drawdown vs. time or other field data (depending on the test method) be submitted to the Agency at the completion of the test.

Aside from the revisions to the technical elements of the proposed study, BRC's workplan for equipment cleaning and decontamination, chain of custody, and health and safety plans, are acceptable.

Finally, the work plan implementation schedule presented in the BRC proposal is acceptable. This change in the schedule of paragraph 30 and any others so approved, such as in element 4, are subject to the condition that paragraph 30 of the ORDER be amended to reflect such changes. Further, Respondents shall maintain close contact with the EPA and NMEID during the thirteen month study period to assure that the desired objective of delineating the rate and extent of groundwater contamination at the refinery site is achieved. This includes quarterly submittals of groundwater quality and elevation data.

Should you have any questions or comments concerning the requests stated herein, please do not hesitate to contact my office.

Sincerely,

William H. Taylor, Jr.

William H. Taylor Jr., Chief
Enforcement Section

cc: Mr. Peter Pache
New Mexico Environmental
Improvement Division

~~Mr. David Boyer~~
~~New Mexico Oil Conservation Division~~



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
INTERFIRST TWO BUILDING, 1201 ELM STREET
DALLAS, TEXAS 75270

general

RECEIVED

MAY 16 1985

MAY 20 1985

CERTIFIED MAIL: RETURN RECEIPT REQUESTED (P 176 450 053)

SURFACE WATER QUALITY BUREAU

Mr. Paul W. Liscom
Plant Manager
Bloomfield Refining Company
P.O. Box 159
Bloomfield, New Mexico 87413

On October 31, 1984, a certified letter was sent to the attention of Mr. Dwight Stockham.

In that letter he was notified that the Plateau, Inc. (Bloomfield Refining Company) facility, had been reported to be discharging effluent into the waters of the United States that was subject to the National Pollutant Discharge Elimination System (NPDES). They were requested to make application for the wastewater discharge. Enclosed is a letter which we received from Dwight J. Stockham dated November 2, 1984.

This letter should be considered as a second request for the submittal of an NPDES application. If for some reason you are unable to submit the application, please submit an explanation concerning the reasons for non-submittal and a projected date of submission. This information should be submitted to this office within thirty days after receipt of this letter.

You should be aware that an NPDES permit is required if there is any possibility of waste being discharged from your facility which reaches waters of the United States through any means including runoff, ground percolation or accidental overflow.

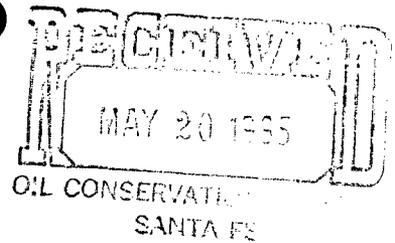
If you have any questions, please contact Jenae Slaven at the above address or telephone (214) 767-4375.

Sincerely,

JS
BS
Boyerne Watson, Chief
Permits Issuance Section (6W-PS)

Enclosure

cc: Kathylene Siscerno
New Mexico Environmental Improvement Division



April 26, 1985

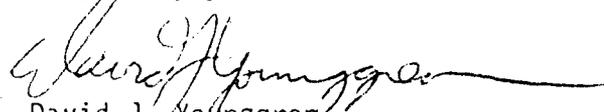
Mr. William H. Taylor, Jr.
Chief, Enforcement Section (6AW-HE)
Region VI, U.S. Environmental Protection Agency
1201 Elm Street
Dallas, TX 75270

Dear Mr. Taylor:

Attached is the proposed detailed workplan for the monitoring, testing, analysis and reporting of any hazardous waste contamination associated with our Bloomfield refining facility located east of Sullivan Road, Bloomfield, New Mexico 87413. The plan was prepared for us by our consultant, Engineering-Science, Inc. I trust that this will meet with your approval. We, of course, will proceed to implement the program immediately upon receipt of notification of your agreement with the proposal.

If you or any of your staff have any questions regarding this proposal, they should be addressed to Mr. Harry F. Mason, Turner, Mason and Company, 400 N. Olive - L.B. 264, Dallas, Texas 75201, or Mr. Joseph F. Guida, Gardere & Wynne, 1500 Diamond Shamrock Tower, Dallas, Texas 75201. Mr. Mason can be reached at (214) 754-0898 and Mr. Guida at (214) 748-7211.

Very truly yours,


David J. Younggren
Vice President Finance and
Administration

attachment

cc: Mr. Peter Pache, Manager
Hazardous Waste Section
Groundwater and Hazardous Waste Bureau
Environmental Improvement Division
New Mexico Health and Environmental Department
P. O. Box 968
Santa Fe, NM 87504-0968

DIV. dam



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET
DALLAS, TEXAS 75270

April 1, 1985

Mr. David G. Boyer
Hydrogeologist
P.O. Box 2088
Land Office Building
Santa Fe, New Mexico 87501

Dear Mr. Boyer:

Enclosed are copies of the \$3013 Administrative Order issued to Bloomfield Refining Company, Inc., Gary Energy Corporation, and the \$3008 Compliance Order issued to Plateau, Inc., Suburban Propane Gas Corporation, Bloomfield Refining Company, Inc., Gary Energy Corporation, as you requested from Bill Taylor, Chief, Enforcement Section, last week.

If I can assist you further, please call me at (214) 767-9883.

Sincerely,

A handwritten signature in cursive script, appearing to read "Ann Banks".

Ann Banks
Case Development Specialist

Enclosures



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

Copy to Laurie, Fern

copies for RMs

July 2, 1985

Ms. Denise Fort, Director
Environmental Improvement Division
New Mexico Health and Environment Department
P.O. Box 968
Santa Fe, New Mexico 87504

Dear Ms. Fort:

Enclosed is a current update on the status of each enforcement action EPA, Region 6 has ongoing in New Mexico. This report will be updated at the beginning of each month so as to keep you abreast of the progress of the enforcement cases.

Should you have any questions, please call me or have your staff contact William H. Taylor, Chief, Enforcement Section, Hazardous Materials Branch, at (214) 767-9730. I hope to see you soon.

Sincerely yours,

Bill Hathaway

William B. Hathaway, Acting Director
Air and Waste Management Division

Enclosure

4. Holloman Air Force Base

On September 25-26, 1984, a meeting was held between EPA and NMEID, to discuss enforcement actions at Holloman Air Force Base (HAFB). It was decided to give HAFB until November 15, 1984, to survey all the hazardous waste generation points and to submit a sampling protocol to EPA for approval. On November 5, 1984, HAFB submitted to EPA the sampling protocol for the sewer ponds. EPA notified the state that EPA would be proceeding with the lead enforcement action. A proposed draft Compliance Order has been prepared and the facility was given the opportunity to meet with EPA and discuss the facts. A "Facts" meeting was held April 23, 1985. The facility has corrected all the problems except the sewage lagoon but they are working on that area. The only new area of consideration that was brought out in the meeting was that the waste oil in the container storage area might not be hazardous waste. The results of the "Facts" meeting is currently being reviewed before issuing the Compliance Order to the facility.

5. Plateau, Inc., NMD029416416 (RCRA Docket No. VI-501-H)

When the inspection report was submitted for review, the lab data was omitted on the landfill area and PCB content. Samples were re-run. Results of the sampling supported the issue that the facility is a treater, storer or disposer of hazardous waste. The facility was bought out by Gary Williams Energy on October 31, 1984. A draft §3008 Order was submitted to the state for review in mid-February 1985. A draft §3013 Order to determine the nature of the hydrocarbon leaks from the facility into the adjacent river was sent to Respondent on September 26, 1984. An informal meeting was held October 15, 1984, with Geary representatives to discuss elements of a groundwater study. EPA met with groundwater consultants for Geary Energy on December 27, 1984, to discuss specific groundwater problems and corrective actions necessary, as required by the §3013 Order. A draft §3008 Compliance Order was completed, reviewed by the Office of Regional Counsel and submitted to the State for comment. A fact finding meeting was held on March 19, 1985. The Compliance Order was issued to the facility on March 27, 1985. Answers to the Compliance Order were filed on May 1, 1985, by Bloomfield Refining and Gary Energy and on May 2, 1985, by Plateau and SPG. A settlement conference was held on May 24, 1985 with Plateau. The attorneys conferred by phone on June 4, 1985, to discuss the issues in the case. A settlement conference was held with representatives from Bloomfield Refinery and Gary Energy on June 17, 1985. A status letter was mailed to the Administrative Law Judge on June 19, 1985.

ENFORCEMENT SENSITIVE

Ma...

ASSURANCE OF DISCONTINUANCE

THIS ASSURANCE OF DISCONTINUANCE dated the 8th day of May, 1984, is made between the New Mexico Water Quality Control Commission (the "Commission") and Plateau, Inc. ("Plateau") a New Mexico Corporation.

WHEREAS, Plateau, Inc. owns and operates a refinery located at Bloomfield, New Mexico;

WHEREAS, the Director of the Oil Conservation Division (OCD) approved a discharge plan for discharges from the refinery on June 5, 1978;

WHEREAS, that approved discharge plan expired on June 5, 1983;

WHEREAS, since approval of the original discharge plan the discharge of effluent at the refinery to a land application area of approximately 10 acres on the refinery premises has become necessary and desirable for efficient operation of the refinery;

WHEREAS, Plateau submitted an updated Discharge Plan to OCD, including the land application of effluent, on June 2, 1982;

WHEREAS, Plateau has responded in a diligent and timely manner to all OCD requests for additional information in connection with the Updated Discharge Plan and;

WHEREAS, OCD has determined that the discharge to the land application area is a "new discharge" for the purposes of WQCC Reg. 3-106;

WHEREAS, the 120 days allowed in WQCC Reg. 3-106 for new discharges to discharge without an approved discharge plan have been exhausted;

WHEREAS, discharges at the refinery, other than the land application discharge have continued since June 5, 1983 pursuant to permission granted by the OCD director under WQCC Reg. 3-106;

WHEREAS, Plateau has not discharged to the land application area since October 14, 1983;

WHEREAS, if Plateau is not allowed to discharge to the land application area beginning on or about May 15, 1984, effluent storage and operational difficulties at the refinery are likely to occur and;

WHEREAS, the Commission and Plateau deem it appropriate to enter into this Assurance of Discontinuance to allow Plateau to discharge to the land application area while the discharge plan review process is completed.

Therefore it is agreed as follows:

1. **MUTUAL COOPERATION:** Plateau and the OCD shall mutually cooperate in accomplishing on a timely basis the completion of the discharge plan review process. Direct communication among Plateau and OCD personnel is encouraged. Plateau will continue to provide information requested by OCD pursuant to the Commission's ground water regulations in a diligent and timely manner.
2. **ENFORCEMENT:** The Commission shall not undertake enforcement against Plateau for discharges to the land application area, as described in the Updated Discharge Plan, occurring during the pendency of this Assurance without first giving Plateau 15 days prior written notice by the OCD Director that Plateau is in violation of the terms of this Assurance. This paragraph shall not preclude appropriate action by the Director or the Commission under section 74-6-11 N.M.S.A. 1978. Failure by Plateau to comply with any condition of this Assurance of Discontinuance shall be actionable as a violation of the Water Quality Act and of this Assurance under section 74-6-5 and 10 N.M.S.A. 1978, as applicable.

Nothing in this Assurance of Discontinuance shall relieve Plateau from the responsibility for complying with all the provisions of the Water Quality Act, the regulations promulgated thereunder or any other provision of law except as otherwise specifically provided herein.

3. **NO ADMISSION:** The terms, execution and any conduct in accordance herewith shall not constitute an admission or waiver of any kind by Plateau relating to matters under

~~AS~~
8010 - 860



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI
1201 ELM STREET
DALLAS, TEXAS 75270

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Engelwood, Colorado 80112-5116

Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Engelwood, Colorado 80112-5592

RE: Administrative Order Requiring Submission and Implementation of
Proposal for Monitoring, Testing, Analysis and Reporting.
Docket No. RCRA-3013-00-185

Dear Sirs:

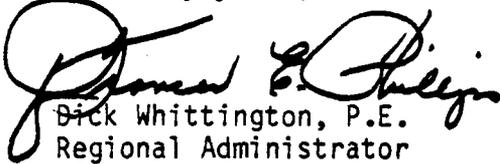
Enclosed herein is a certified copy of an Administrative Order issued to Gary Energy Corporation and Bloomfield Refining Company, Inc. (the "Companies"), pursuant to Section 3013 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6934. This Order is effective and has been entered into the administrative record by the Regional Hearing Clerk. It concerns your Bloomfield Refinery facility located east of Sullivan Road, Bloomfield, New Mexico 87413.

We call your attention to the fact that this Order requires the submission of a proposal for monitoring, testing, analysis, and reporting within thirty (30) days of its effective date. Upon EPA approval of this proposal, you will be required to implement it in accordance with the schedule prescribed in the Order. The Order also provides for an opportunity to confer with me at any time prior to EPA approval or disapproval of the proposal.

You are advised that failure or refusal to comply with any requirements of this Order may subject the Companies, to civil penalties of up to \$5,000 per day for each day during which such failure or refusal occurs. Further, if EPA determines that the Companies are not able to conduct the activities required by this Order in a satisfactory manner, are not able to conduct the activities contained in the EPA approved proposal, or if actions carried out are deemed unsatisfactory, then EPA or its representatives may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the substantial hazard presented by the Bloomfield Refinery facility. The Companies may then be ordered to reimburse EPA or its representative for the costs of such activity.

If you or your staff have any questions regarding this matter, they should be addressed to William N. Rhea, Chief, Hazardous Materials Branch or James Turner, Attorney, Office of Regional Counsel (6ORC), at 1201 Elm Street, Dallas, Texas 75270. Mr. William N. Rhea may be reached by telephone at (214) 767-9731 and Mr. Turner at (214) 767-9976. We urge your prompt attention to this matter.

Sincerely yours,


Dick Whittington, P.E.
Regional Administrator

Enclosure

cc: Denise Fort, Director
New Mexico Environmental Improvement
Division

1984, Respondent purchased the same aforementioned petroleum refinery from Plateau, Inc., and Suburban Propane Gas Corp., and currently owns and/or operates said business known as the Bloomfield Refinery. Since on or about October 31, 1984, Respondent has owned and/or operated a hazardous waste management facility, the Bloomfield Refinery, at said location.

2. Plateau, Inc., is a New Mexico Corporation with business headquarters at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc., is a wholly owned subsidiary of Suburban Propane Gas Corporation, a New Jersey Corporation with business headquarters at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc., and Suburban Propane Gas Corporation are hereinafter collectively referred to as "Plateau". In 1963, Plateau purchased a petroleum refinery, referred to herein as the "Bloomfield Refinery", located north of Sullivan Road, Bloomfield, San Juan County, New Mexico and owned and/or operated said business continuously until on or about October 31, 1984. From on or about November 19, 1980, to on or about October 31, 1984, Plateau owned and/or operated a hazardous waste management facility at said location.
3. The Bloomfield Refinery processes crude oil which is transported to the refinery by pipeline and truck. Finished petroleum products include gasoline and diesel fuel, although fuel gas, heavy burner fuel, propane, butane, and other petroleum products are produced in smaller quantities. Included on site are tankage, crude unloading facilities, product loading facilities, and various processing units. Ancillary activities such as product storage, transportation, laboratory analysis, engineering,

and administration are also conducted at this site in support of refinery operations and waste disposal activities.

4. The Bloomfield Refinery has been in continuous operation since before 1960. On August 18, 1980, Plateau submitted notification to EPA that it was involved in generating, treating, storing, and disposing of hazardous waste pursuant to RCRA. Listed hazardous waste identified in the notification included slop oil emulsion solids (K049); sludge from heat exchanger bundles (K050); API separator sludge (K051); and leaded tank bottoms (K052). Ignitable and corrosive characteristic wastes were also identified. The modes of waste treatment and disposal carried out at this site include wastewater evaporation by solar evaporation ponds, spray irrigation, and landfarming of various sludges.
5. In a letter to Plateau dated March 12, 1984, the New Mexico Environmental Improvement Division (NMEID) denied a groundwater monitoring waiver demonstration that had been previously submitted by the facility. NMEID required that Plateau comply with all applicable groundwater monitoring requirements including the installation of a groundwater monitoring system. In the letter, NMEID stated that it is probable that seepage from the facility was flowing into the Hammond Ditch and/or the San Juan River, and that Plateau could not demonstrate a low potential for migration of pollutants from the facility into ground and surface waters.
6. The Bloomfield Refinery is situated on a plateau which rises approximately 100 ft. above the elevation of the present day San Juan River.

Stratigraphically, the plateau is capped by a permeable cobble bed 20 to 45 ft. thick, which is overlain by and interfingered with, wind blown silts and sands of variable thickness. The cobble deposit directly overlies the massively bedded clay/shale unit of the Nacimiento Formation, which is known to contain permeable interbeds of sandstone at variable depths. The Nacimiento is approximately 500 ft. thick at the Refinery site, as indicated by the log of a gas well near the facility's southern boundary.

7. The contact between the permeable cobble bed and the lower clay of the Nacimiento Formation is very distinct and typically displays groundwater springs and seeps where it is exposed at the north facing bluff above the San Juan River. Seeps along the bluff emerge in several areas north and northwest, hydraulically down-gradient, of the refinery. Groundwater seepage has also been observed along the intermittent stream channels, which traverse the refinery property, where the formation contacts are exposed.
8. The lower zone of the permeable cobble bed, above the clay/shale contact, is known to contain groundwater as evidenced by the springs and seeps mentioned earlier and by water level measurements taken in the refinery's groundwater monitoring wells. The six wells which were installed February, 1984, were drilled to the top of the Nacimiento clay formation and completely penetrate the cobble bed. Well depths vary between 25 and 54 ft. Their locations are shown in the attached map.
9. Water entering the permeable cobble layer from a variety of recharge sources

apparently migrates vertically through the silts, sands, and cobbles until it encounters the relatively impermeable clays of the Nacimiento Formation. The water then moves horizontally, following the general northerly dip and localized depressions of the clay subcrop, and emerges to the north and northwest of the refinery as groundwater seeps along the bluff.

10. The cobble bed directly beneath the Bloomfield Refinery constitutes the uppermost aquifer in the area and is capable of carrying hazardous waste and hazardous waste constituents into the San Juan River and the Hammond Ditch, both of which are described in the following paragraphs. These waterways supply domestic and agricultural water to downstream users.
11. Directly north of the refinery and below the bluff, the San Juan River flows from an east to west direction. This perennial river is used as a domestic, agricultural, and industrial water supply in the region. Bloomfield Refining utilizes the San Juan River as a water supply for operations. The city of Farmington, approximately 15 miles downstream of the refinery, also uses the river as a municipal water supply.
12. The channel of the San Juan River is filled with alluvial deposits. One such deposit exists directly below the north facing bluff described earlier. This alluvial river terrace ranges up to 150 ft. in width and rises approximately 2 to 3 ft. above the river level. Groundwater levels within the alluvial terrace vary with river flow conditions, which are controlled by the Navajo Dam, 26 miles upstream.
13. The Hammond Irrigation Ditch is another waterway which flows adjacent to refinery operations. This ditch flows from east to west across the

refinery property, between the refinery and the San Juan River (see location map). The ditch is unlined and is excavated into the same permeable cobble deposits upon which the refinery is situated. The Hammond Ditch conveys crop irrigation water to agricultural communities during the irrigation season from mid-April to mid-October.

14. The New Mexico Oil Conservation Division (NMOCD) and the Environmental Protection Agency (EPA) have conducted water and soil investigations at the Bloomfield Refinery on seven different occasions, dating from September, 1981, to March, 1984. These investigations were conducted to assess potential adverse environmental impacts, including endangerment to human health, created by the refinery's alleged violations of the New Mexico Water Quality Control Commission regulations and Federal RCRA statutes.
15. The first sampling investigation conducted by the NMOCD occurred on September 3, 1981, when seven water samples were collected. These samples were analyzed primarily for metals. On July 6, 12, 14 and 28, 1982, NMOCD collected water and soil samples at various points across the refinery property, including the Hammond Ditch, the San Juan River, the alluvial river terrace, and several groundwater seeps. These samples were analyzed for specific organic compounds, TOC, and metals.
16. A summary of results of the NMOCD sampling investigations is as follows:
 - A) Groundwater samples taken from the alluvial river terrace below the refinery were found to contain elevated levels of organic and inorganic compounds. Specific petroleum hydrocarbons include benzene (15.6ppm); toluene (44.6ppm); ethylbenzene (4.0ppm); m-xylene (16.3ppm); oil and

grease (296.2ppm); and TOC (860ppm). Elevated metal concentrations were also detected at levels exceeding Federal primary drinking water standards by 4 to 360 times. These metals include lead (18.1ppm); chromium (.62ppm); and cadmium (.04ppm).

- B) Groundwater samples taken from seeps along the bluff, hydraulically downgradient of the refinery, contained measurable levels of toluene (1.43ppm) and elevated lead concentrations five times greater than Federal standards.
- C) Water samples taken from evaporation pond No. 1 in the northeastern part of the refinery contained lead levels of .09ppm. Groundwater seeps from an arroyo just east of evaporation pond No. 1 also contained elevated lead levels two to three times the Federal standards. This arroyo drains to the San Juan River. Evaporation pond No. 1 is known to leak water to the permeable cobble strata, as evidenced by numerous geophysical tests performed by the Respondent's consultant.
- D) Test trenches were dug by NMOCD near the Hammond Ditch, downstream of refinery operations (see map). Groundwater samples taken from these trenches contained elevated lead concentrations of .10 to .13ppm. The southeast sample had a TOC concentration of 323ppm.
- E) A water sample taken from the Hammond Ditch, in the same area of the test trenches, contained measurable concentrations of oil and grease (1.2ppm) and phenols (.029ppm). Soil samples taken from the ditch, near the API wastewater ponds, also showed measurable levels of toluene (.158ppm); ethylbenzene (.056ppm); and m-xylene (.229ppm).

17. Sampling investigations at the Bloomfield Refinery have also been conducted by the EPA on May 16, 1983, and March 19, 1984. Similar to the NMOCD investigations, water and soil samples were collected from various locations across the refinery property including the Hammond Ditch, the San Juan River, the alluvial river terrace, and several groundwater seeps. In addition, three groundwater monitoring wells, MW-1, MW-4, and MW-5, were sampled during the 1984 EPA visit.

18. A summary of results of the EPA sampling investigations is as follows:

A) Groundwater seeps along the northwestern bluff and the alluvial river terrace of the San Juan River contained the highest concentrations of petroleum contaminants analyzed. Hydrocarbons detected in the seep along the bluff include aromatic solvents (29,300ppm); poly-nuclear aromatics (710ppm); alkanes (18,241ppm); and substituted benzenes (19,352ppm). Chromium was detected at 80ppm. Organic compounds detected in the soil beneath the seeps are similar to those of the seeps and contain hydrocarbons in the 100 to 900ppm range. In addition, the talus slope along the north facing bluff exhibited obvious staining discoloration, and distressed vegetation at its base. Stained soils had distinct hydrocarbon odors. These findings are consistent with the organic contamination noted in groundwater samples taken from the terrace by NMOCD in 1982.

19. The groundwater south of the refinery process units also contains petroleum contaminants. A water sample collected from monitor well No. 4 (see location map) contained compounds similar to the seeps along the bluff and included aromatic solvents (19ppm); naphthalene (200ppb); alkanes (233ppm); and substituted benzenes (99ppm).

20. Soil samples collected from four locations along the Hammond Ditch all contained organic contaminants in concentrations ranging from 1 to 268ppm. Near the API separator ponds, polynuclear aromatic compounds were detected at a total concentration of 18ppm. A number of unknown organic compounds were also detected at this location at a total concentration of 268ppm. Soils sampled from the ditch downstream of the refinery contained alkanes at a total concentration of 45ppm and a variety of unknown organics at 49ppm. By comparison, alkanes were reported in the upstream soil sample of the ditch at 1ppm. Water samples taken from the ditch downstream of the refinery, however, did not contain measurable concentrations of contaminants.
21. Organic and metallic contaminants commonly associated with refinery operations and refined petroleum products are widespread in groundwater of the uppermost aquifer beneath the Bloomfield Refinery. This contamination is evident along the northwestern bluff and intermittent stream channels, both of which drain to the alluvial river terrace. Very high concentrations of petroleum and metallic contaminants have been identified in the alluvial terrace contained within the San Juan River channel, and ultimately seep into the San Juan River.
22. Several United States Geological Survey (USGS) river gauging stations on the San Juan River collect river flow rates and water quality information. One of these stations is located several miles downstream of the Bloomfield Refinery and upstream of the City of Farmington. This station collected water quality data between the years 1978 and 1981. Analysis of the data reported for organic carbon, lead, and chromium indicated a correlation between detectable concentrations

of these parameters with low flow rates in the river. Based in part on this information, migration of petroleum contaminants from the alluvial river deposits may be impacting water quality in the San Juan River.

23. Many of the organic and inorganic compounds enumerated above are designated "Hazardous Wastes" and "Hazardous Waste Constituents" pursuant to RCRA and 40 CFR §261 Subparts A, B, C, and D and Appendix VIII, 45 Federal Register 33119 - 33133 (May 19, 1980) because they have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms. Ingestion of contaminated water containing the hazardous waste found on and adjacent to the Bloomfield Refinery may cause illness, disease, or other harmful effects to humans, as well as plant and other animal life.

DETERMINATION

24. Hazardous waste is present and is, or has been, handled, treated, stored or disposed of at the Bloomfield Refinery described herein. Release of hazardous waste from the Bloomfield Refinery may have occurred. The presence or release of hazardous waste at, or from, the Bloomfield Refinery may present a substantial hazard to human health or the environment.
25. The Regional Administrator has determined that the monitoring, analysis, testing, and reporting of activities that may be required of Respondent under the terms of this ORDER are reasonable and necessary in order to

ascertain the nature and extent of the substantial hazard to human health or the environment that may be presented by the Bloomfield Refinery.

ORDER

Based on the foregoing Determinations and Findings, and in order to ascertain the nature, extent and the source of the substantial hazard to human health or the environment which the Plateau facility may present, Respondent is hereby Ordered to do the following:

26. Within thirty (30) days of the effective date of this ORDER, develop and submit to EPA a proposed detailed workplan (proposal) for the monitoring, testing, analysis, and reporting of any hazardous waste contamination associated with the property or facility of the Respondent. The objective of this proposal is to delineate the rate and extent of groundwater contamination which may be associated with the facility. The proposal shall be prepared in accordance with the attached Site Investigation Scope of Work document marked as Exhibit A hereto. The proposal shall address a well location and construction plan, sampling equipment and sampling techniques, laboratory analysis techniques, a quality assurance/quality control program, decontamination procedures, a health and safety plan, type of documentation, and handling/disposal methods of purged monitoring well water and drilling materials. The proposal shall contain a schedule for conducting the work outlined in Exhibit A, and shall be

submitted to:

William H. Taylor Jr.,
Chief, Enforcement Section
U.S. Environmental Protection Agency
1201 Elm Street
Dallas, Texas 75270

and

Mr. Peter Pache, Manager
Hazardous Waste Section
Groundwater and Hazardous Waste Bureau
Environmental Improvement Division
New Mexico Health and Environmental Department
P.O. Box 968
Santa Fe, New Mexico 87504-0968

27. Respondent shall be afforded an opportunity to confer with EPA regarding the proposal required by paragraph 26 above, at any time prior to EPA approval or disapproval of the proposal. Desire for such a conference should be made known to Mr. William H. Taylor Jr., Chief, Enforcement Section, at the above address. The holding of such a conference shall not vary the thirty (30) day time period required for the submission of the proposal.
28. Within thirty (30) days of submission of the proposal, EPA shall notify Respondent of its approval or disapproval of the proposal. In the event of disapproval, EPA shall specify the deficiencies and the reasons therefor. Within thirty (30) days of notice of such disapproval, Respondent shall modify the proposal to address the deficiencies identified by EPA and submit the revised proposal for review and approval. *C. W. ... ?*
29. Within ten (10) days following EPA approval of the proposal, Respondent shall promptly implement the approved proposal. The

investigation, monitoring and reporting program as set forth in the EPA approved proposal shall be completed according to its approved terms and schedules.

30. Respondent shall complete all task elements of the proposal within four (4) months of receiving EPA approval of the proposal. Within five (5) months of approval of the proposal, Respondent shall report the findings of this work in a written report submitted to EPA and NMEID, which clearly describes and interprets all data and findings (final report) with regard to the rate and extent of groundwater contamination associated with the refinery site. This final report will detail all work pursuant to this ORDER and shall include a presentation of all supportive analytical results, appended or presented in appropriate charts, tables, cross-sections, and/or other graphics as necessary. If, in the judgement of EPA, this final report is inadequate with respect to any requirement of this ORDER, EPA may require clarification or further action as it deems necessary, consistent with this ORDER.
31. All proposals, plans, studies, reports, schedules and/or attachments required by the terms of this ORDER are, upon approval by EPA, incorporated into this ORDER as if fully set forth in text herein. Any noncompliance with such approved proposals, plans, studies, reports, schedules, and/or attachments shall be deemed noncompliance with this ORDER.
32. Respondent shall provide access to its property and/or its facility, as described previously herein, to EPA and NMEID employees, contractors

and consultants at all reasonable times and shall permit such persons to be present and move freely in the areas in which any work is being conducted pursuant to this ORDER.

33. Upon request, Respondent shall split samples with EPA and NMEID or their representatives from any samples collected pursuant to this ORDER. In order to facilitate such efforts, Respondent shall provide at least three (3) days advance notice of any sample collection dates that may differ from those dates set forth for sampling in the EPA approved proposal.
34. Respondent shall insure that all actions required by this ORDER are undertaken in compliance with all applicable federal, state and local LAWS.
35. Whenever notice or information is required to be forwarded by one party to another under the terms of this ORDER, it shall be given in writing by, and directed to the individuals at the addresses specified below, unless those individuals or their successors give notice in writing, to all other parties to this ORDER, of another designated individual to give and receive such communications.

EPA: William H. Taylor Jr.,
Chief, Enforcement Section (6AW-HE)
Region VI, U.S. EPA
1201 Elm Street
Dallas, Texas 75270

Respondent: Ronald W. Williams
President
Bloomfield Refining Co., Inc.
115 Inverness Drive East
Englewood, Colorado 80112-5116

36. Respondent shall submit a copy of all notices and information pursuant to this ORDER to the New Mexico Environmental Improvement Division at the following address:

Peter Pache, Manager
Hazardous Waste Section
Groundwater and Hazardous Waste Bureau
Environmental Improvement Division
New Mexico Health and Environmental Department
P.O. Box 968
Santa Fe, New Mexico 87504-0968

37. Respondent shall appoint a Facility Coordinator, who shall be responsible for oversight of the implementation of this ORDER and activities required herein. EPA and NMEID shall each appoint a Project Officer who will be their designated representatives at the Facility. The Facility Coordinator and Project Officers shall be appointed within seven (7) days of the effective date of this ORDER. Respondent, EPA, and NMEID each have the right to appoint a new Facility Coordinator or Project Officer, respectively, at any time. Such changes will be accomplished by notifying the other party, in writing, at least five (5) days prior to the change. Respondent shall notify EPA and NMEID in writing, within five (5) days of the appointment of a Facility Coordinator, of the name, telephone number, and mailing address of said Facility Coordinator.
38. Routine communications may be exchanged verbally, in person or by telephone between the parties, to facilitate the orderly conduct of work contemplated by this ORDER, but no such communication shall alter or waive any rights and/or obligations of the parties under this ORDER. The terms of this agreement may be altered by mutual written consent.

39. All decisions of EPA under this ORDER shall be presumed to be valid. If Respondent has any objections to any EPA decision made pursuant to this ORDER, Respondent shall notify EPA and NMEID in writing of its objections within fifteen (15) days of receipt of such decision. The parties shall then have an additional fifteen (15) days from the receipt by EPA of the notification of objection to reach agreement. If agreement cannot be reached on any issue(s) within this fifteen (15) day period, the dispute shall be resolved in favor of EPA. This resolution shall be deemed a final agency action. Respondent shall have the right to seek judicial review of this resolution in the appropriate Federal Court. In any such review, Respondent shall have the burden of petitioning the Court for modification of the decision(s) of EPA and shall have the burden of demonstrating that such decision(s) is arbitrary and capricious. Judicial review shall be limited to those issues which were not reconciled by agreement of all the parties to this ORDER.
40. The provisions of this ORDER shall apply to and be binding upon Respondent, its officers, directors, employees, agents, receivers, trustees, assignees, and contractors.
41. Nothing contained in this ORDER shall affect any right, claim or cause of action of any party hereto with respect to third parties.
42. The United States Government and the Government of the State of New Mexico shall not be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondent, its officers, directors, employees, agents, receivers, trustees, successors, assigns or contractors, in carrying out activities pursuant to this ORDER,

nor shall the United States Government or the Government of the State of New Mexico be held out as a party to any contract entered into by Respondent in carrying out activities pursuant to this ORDER.

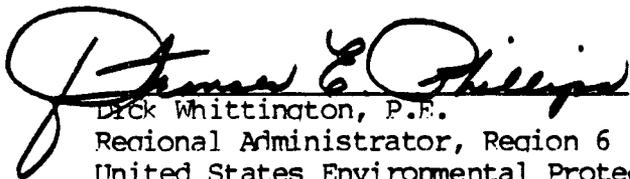
43. If EPA determines that Respondent is not able to conduct the activities required by this ORDER in a satisfactory manner, is not able to conduct the activities contained in the EPA approved proposal, or if actions carried out are deemed unsatisfactory, then EPA or its representatives may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the hazard at the property and/or facility of Respondent. Respondent may then be ordered to reimburse EPA and/or its representatives for the costs of such activity pursuant to Section 3013(d) of RCRA, 42 U.S.C. §6934(d).
44. Respondent is advised that EPA may, in accordance with Section 3013(e) of RCRA, commence a civil action in the United States District Court, if Respondent fails or refuses to comply with this ORDER. Such Court shall have jurisdiction to require compliance with this ORDER and to assess a civil penalty not to exceed \$5,000 for each day during which such failure or refusal occurs.
45. Nothing contained in this ORDER shall be construed as limiting any rights or authority that EPA or NMEID may now, or hereafter, have under RCRA, or any other law, statute or regulation. EPA and NMEID specifically reserve the right to take appropriate removal, remedial,

cost recovery and/or enforcement action pursuant to any law, statute or regulation, including, but not limited to, the right to seek and obtain civil relief and/or penalties, and criminal penalties where authorized, for any violation or law of this ORDER.

46. Respondent shall, within thirty (30) days of execution of this ORDER, post a bond or other security sufficient to guarantee performance of the tasks under this ORDER in a manner satisfactory to EPA under Subpart H of RCRA.
47. Respondent shall give notice of this ORDER to any successor in interest prior to transfer of ownership of property and/or facility and shall simultaneously verify to EPA and NMEID that such notice has been given.
48. This ORDER shall terminate when Respondent certifies that all requirements of this ORDER have been completed and EPA has approved such certification in writing to Respondent.

IT IS SO ORDERED:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY


Dick Whittington, P.E.

Regional Administrator, Region 6
United States Environmental Protection Agency
1201 Elm Street
Dallas, Texas 75270

March 29, 1985
Date

March 29, 1985
Effective Date

EXHIBIT A

SITE INVESTIGATION - GENERAL SCOPE OF WORK

As per the attached ORDER, the Bloomfield Refinery must submit a detailed workplan for the monitoring, testing, analysis, and reporting of the hazardous waste contamination associated with the Bloomfield facility.

The proposal must focus on the evaluation of the rate and extent of migration of hazardous waste which has entered the groundwater system as a result of waste management practices at the Bloomfield refinery site.

The areas of immediate concern include the uppermost aquifer beneath the site and the underlying Nacimiento clay formation; the impact of contaminant migration on the Hammond Ditch, with emphasis around the oily water ponds near the API separator and downstream of refinery operations; and contaminant impacts on the San Juan River as a result of seepage from the alluvial river terrace.

The proposed workplan for the groundwater investigation must include an updated comprehensive summary of the geohydrology of the Bloomfield Refinery site. The summary must address the stratigraphic definition and hydraulic characteristics of the permeable sand, cobble, and clay deposits known to exist under the Bloomfield Refinery property. Emphasis should be given to preparing cross-sectional and plan view diagrams. The workplan must also address, but will not be limited to, the attached work elements. A schedule for completion, as specified under paragraph 30 of the ORDER, must accompany the proposal. The final report must clearly describe and interpret all data and findings.

WORK ELEMENTS

I. Site hydrogeology

A. Description of soils

- 1.) Lithology and stratigraphy
- 2.) Groundwater occurrences and depth to groundwater
- 3.) Aquifer hydraulic properties including gradient, permeability, porosity, direction and velocity of groundwater flow

B. Well location and construction

- 1.) Rationale for well locations
- 2.) Number of wells and depths of completion
- 3.) Description of well dimensions and construction materials in light of pollutant characteristics

Diagrams and illustrations for this section should include:

- An area plan view with well locations, plotted on a base topographic or geologic map
- Soil boring and well construction logs
- Geologic cross sections indicating stratigraphy and saturated zones
- A water table and/or potentiometric map

II. Groundwater sampling equipment and procedures

A. Description of methods and equipment used for well development and evacuation

- 1.) Depth to groundwater prior to evacuation
- 2.) Volume of water evacuated before sampling

B. Sampling equipment and procedures

Describe the following:

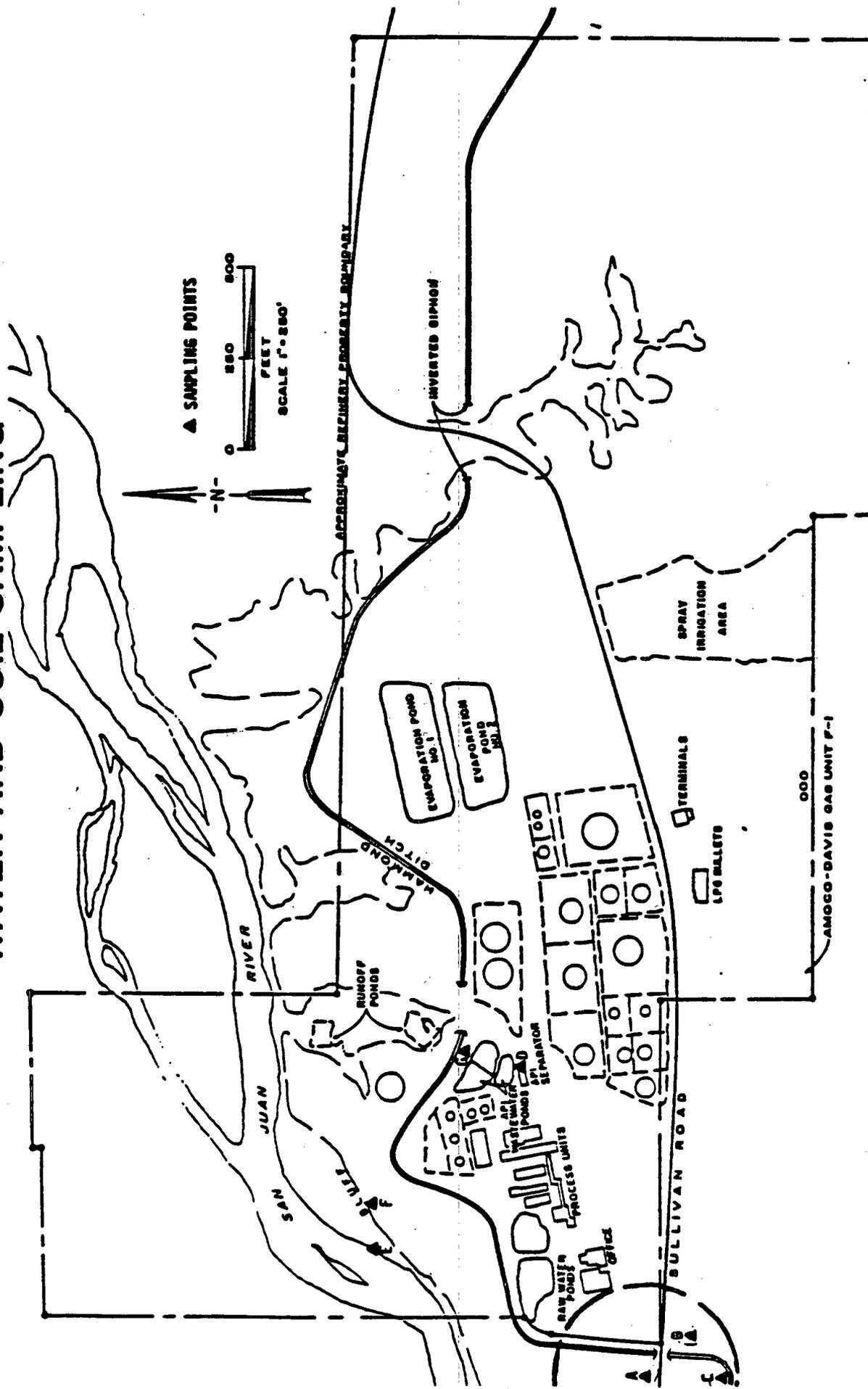
- 1.) Contaminants and chemical parameters selected for analysis and rationale
- 2.) Sampling equipment and reason for selection in light of pollutant characteristics

- C. Handling and preservation techniques
- D. Laboratory analytical methodologies
- E. Quality assurance/quality control program
- F. Decontamination procedures for equipment

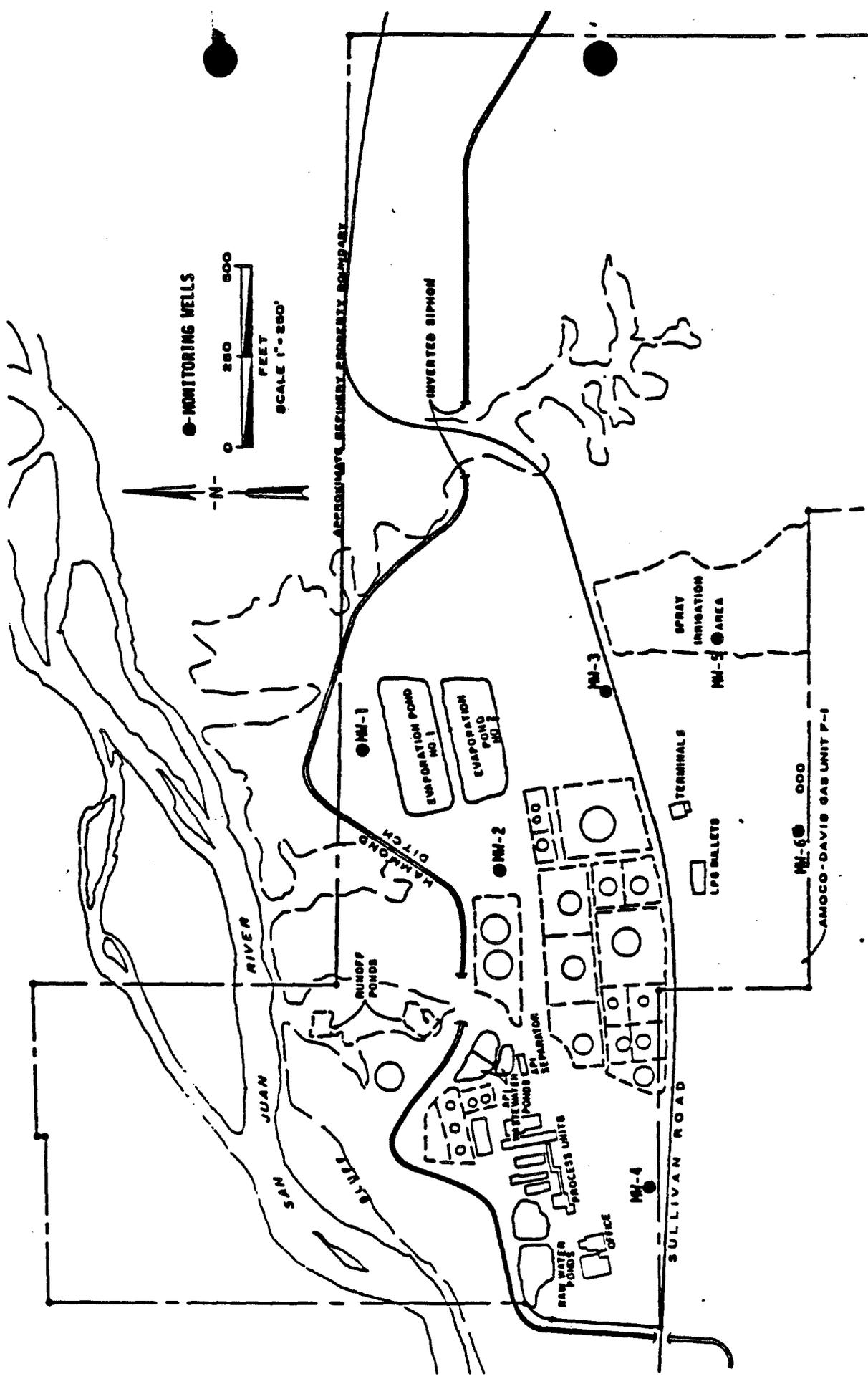
III. Documentation and records

- A. Schedule for project completion
- B. Health and safety plan
- C. Handling and disposal methods for drilling materials and purged well water.

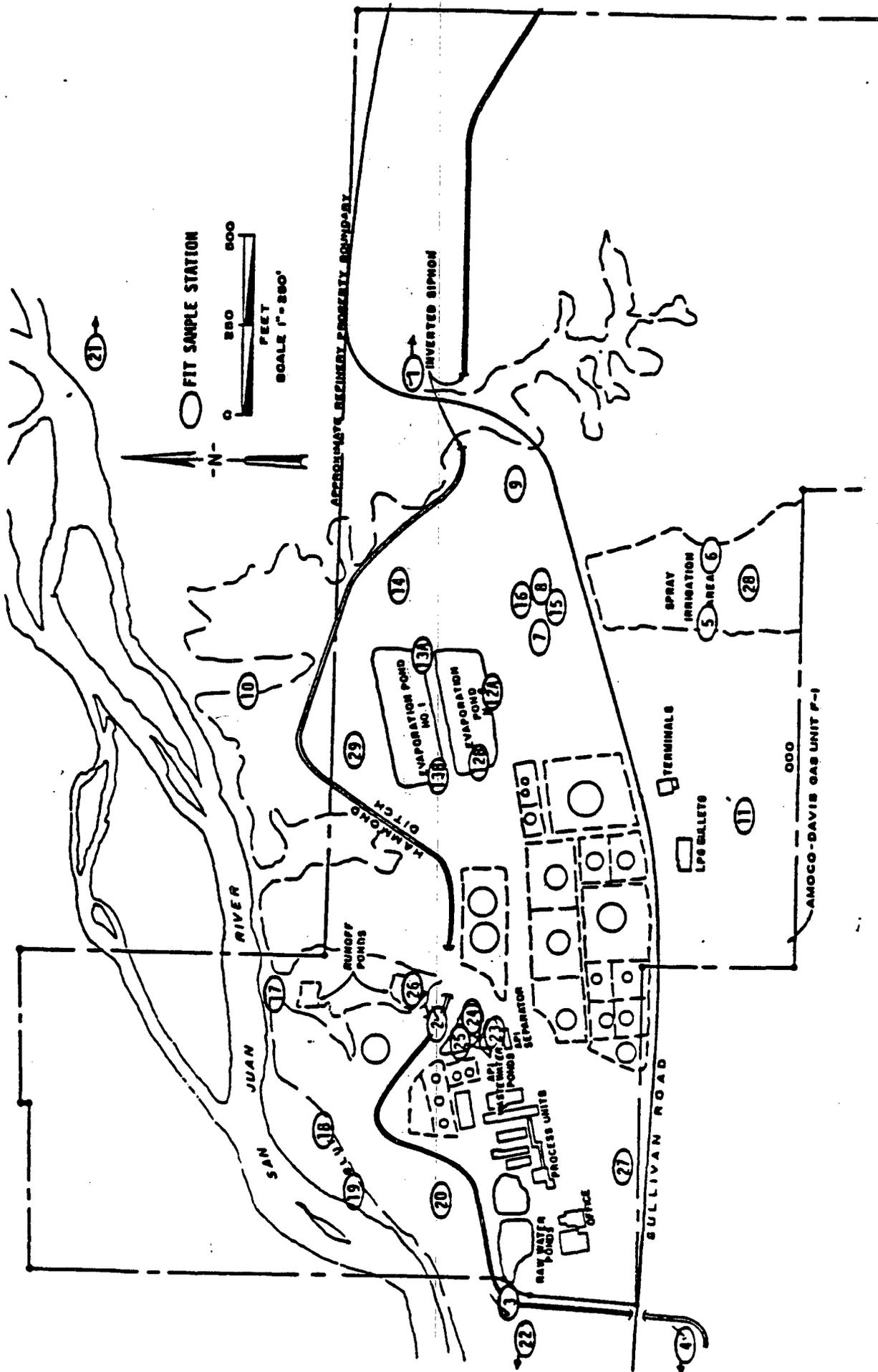
LOCATIONS OF NMOCD AND PLATEAU 7/12 AND 7/14 1982 WATER AND SOIL SAMPLING



LOCATIONS OF GROUNDWATER MONITORING WELLS



LOCATIONS OF 1984 FIT SAMPLES



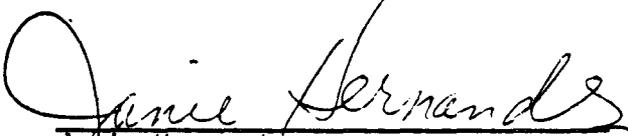
Certificate of Service

I hereby certify that the foregoing letter and the original of the document styled Bloomfield Refining Company, Inc., Gary Energy Corporation, Docket No. RCRA-VI-3013-001-85, was hand-delivered to the Regional Hearing Clerk, EPA, Region VI, Dallas, Texas, and that true and correct copies of same were sent DHL Overnight Express, addressed to the following:

Mr. Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Engelwood, Colorado 80112-5116

Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Engelwood, Colorado 80112-5592

On this 1st day of April 1985.


Jamie Hernandez
Environmental Protection Assistant



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION VI

1201 ELM STREET

DALLAS, TEXAS 75270

MAR 29 1985

CERTIFIED MAIL: RETURN RECEIPT REQUESTED

Mr. Kevin McIver
Secretary and Counsel
Plateau, Inc.
P.O. Box 26251
4520 Montgomery Boulevard, N.E.
Albuquerque, New Mexico 87109

Mr. Mark J. Anton
President
Suburban Propane Gas Corporation
334 Madison Avenue
Morristown, New Jersey 07960

Mr. Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Englewood, Colorado 80112-5116

Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Englewood, Colorado 80112-5592

Re: Compliance Order and Notice of Opportunity for Hearing
Docket No. RCRA VI-501-H
EPA I.D. No. NMD089416416

Gentlemen:

Enclosed herein is a Compliance Order and Notice of Opportunity for Hearing (hereinafter referred to as "Order") filed against Plateau Inc., Suburban Propane Gas Corporation, Bloomfield Refining Company, Inc., and Gary Energy Corporation, pursuant to the Resource Conservation and Recovery Act (RCRA), as amended. It is alleged in the Order that Plateau Inc., Suburban Propane Gas Corporation, Bloomfield Refining Company, Inc., and Gary Energy Corporation, failed to comply with Subtitle C of RCRA and regulations promulgated under authority of 42 U.S.C. §6901 et seq. These violations are specifically set out in the Order.

We call your attention to that part of the Order entitled "Opportunity to Request a Hearing." You are required to respond to this Order within thirty (30) days of your receipt of this Compliance Order or a Default Judgment may be entered and the proposed civil penalty may be assessed without further proceedings. In addition, you could be subject to penalties of up to TWENTY-FIVE THOUSAND DOLLARS (\$25,000) per day per violation for failure to comply with the ORDER section of the Order.

You have the right to be represented by an attorney at any stage of these proceedings. Note that each day the cited violations continue may constitute a new violation for which additional penalties can be imposed.

If you have any questions regarding this matter, please contact William Taylor, Chief, Enforcement Section, Hazardous Materials Branch, U.S. Environmental Protection Agency, Region VI, 1201 Elm Street, InterFirst Two Building, Dallas, Texas, 75270, telephone (214) 767-9730. The attorney for this case is James L. Turner and he can be reached at (214) 767-9976.

We urge your prompt attention to this matter.

Sincerely yours,

Allyn M Davis

Allyn M. Davis, Director
Air and Waste Management Division

Enclosure

cc: Denise Fort, Director
Environmental Improvement Division
New Mexico Health and Environmental Dept.

Louis Rose, Esquire
Environmental Improvement Division
P. O. Box 968
Santa Fe, NM 87504-0968

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION VI
DALLAS, TEXAS

IN THE MATTER OF:	§	DOCKET NUMBER
	§	
PLATEAU, INC.	§	RCRA VI-501-H
SUBURBAN PROPANE GAS CORPORATION	§	
BLOOMFIELD REFINING COMPANY, INC.	§	COMPLIANCE ORDER AND NOTICE
GARY ENERGY CORPORATION	§	OF OPPORTUNITY FOR HEARING
Bloomfield Refinery	§	
Bloomfield, New Mexico	§	
EPA I.D. Number NMD089416416	§	
	§	

This COMPLIANCE ORDER AND NOTICE OF OPPORTUNITY FOR HEARING, hereinafter referred to as Order, is issued pursuant to Section 3008 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, (as amended), 42 U.S.C. §6928, (hereinafter referred to as RCRA).

Pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. §6928(a)(2), EPA may, after providing notice to the State, enforce the requirements of Subtitle C of RCRA in a State which has received interim authorization to carry out a hazardous waste management program under Section 3006(c) of RCRA, 42 U.S.C. §6926(c). The State of New Mexico was authorized to carry out its hazardous waste management program in lieu of the federal program. On September 30, 1983, the State of New Mexico received interim authorization to operate Phase I and Phase II A and B of the federal hazardous waste management program. On January 11, 1985, the State of New Mexico received final authorization to operate the federal hazardous waste management program. Therefore, EPA sets forth violations in accordance with applicable laws and regulations established under both the EPA and the New Mexico hazardous waste management

program, in exercise of its authority under Section 3008 of RCRA, 42, U.S.C. §6928. Pursuant to Section 3008(a)(2) of RCRA, 42 U.S.C. §6928(a)(2), notice of this action has been given to the State of New Mexico.

Complainant, the United States Environmental Protection Agency (hereinafter referred to as EPA or Complainant) will show that you, Respondent Plateau, Inc. and Respondent Suburban Propane Gas Corporation owned and/or operated a hazardous waste management facility at it's petroleum refinery located east of Sullivan Road, City of Bloomfield, County of San Juan, State of New Mexico, EPA I.D. Number NMD089416416 and have violated Subtitle C of RCRA, Sections 3002, 3004, 3005 and 3010, 42 U.S.C. §§6922, 6924, 6925, and 6930 and the regulations promulgated thereunder at Title 40 of the Code of Federal Regulations (40 CFR), and the New Mexico Statutes Annotated, Chapter 74, Article 4, hereinafter referred to as NMSA-74-4, and the regulations promulgated thereunder at Environmental Improvement Board Hazardous Waste Management Regulations Amendment 2 (HWMR-2).

Complainant will also show that you, Respondent Bloomfield Refining Company, Inc. and Respondent Gary Energy Corporation owning and/or operating the same aforementioned facility, since on or about October 31, 1984, have violated Subtitle C of RCRA, Section 3005, 42 U.S.C. §6925, and the regulations promulgated thereunder at 40 CFR Part 270 and NMSA-74-4, and the regulations promulgated thereunder at HWMR-2.

FINDINGS

1. Plateau, Inc. is a New Mexico Corporation with business headquarters at 334 Madison Avenue, Morristown, New Jersey, 07960. Plateau, Inc. is a wholly owned subsidiary of Suburban Propane Gas Corporation, a New Jersey Corporation with business headquarters at 334 Madison Avenue,

Morristown, New Jersey, 07960. Plateau, Inc. and Suburban Propane Gas Corp. are hereinafter collectively referred to as "Respondent-Plateau". In 1963, Respondent-Plateau purchased a petroleum refinery located east of Sullivan Road, Bloomfield, San Juan County, New Mexico and owned and/or operated said business continuously until on or about October 31, 1984. Since on or about November 19, 1980, Respondent-Plateau has owned and/or operated a hazardous waste management facility at said location.

2. Gary Energy Corporation is a Colorado corporation with business headquarters at 115 Inverness Drive, East, Englewood, Colorado, 80112, and is a wholly owned subsidiary of Gary Williams Oil Producer, Inc. Bloomfield Refinery Company, Inc., is a Colorado corporation with business headquarters at 115 Inverness Drive, East, Englewood, Colorado, 80112, and is a wholly owned subsidiary of Gary Energy Corporation. Gary Energy Corporation and Bloomfield Refining Company, Inc. are hereinafter collectively referred to as "Respondent-BRC." On or about October 31, 1984, Respondent-BRC purchased the same aforementioned petroleum refinery from Respondent-Plateau and currently owns and/or operates said business. Since on or about October 31, 1984, Respondent-BRC has owned and/or operated a hazardous waste management facility at said location.

3. Hereinafter, except where specifically noted, the term "Respondents" refers to both Respondent-Plateau and Respondent-BRC.

4. Respondents are persons as defined in Section 1004(15) of RCRA, 42 U.S.C. §6903(15), and 40 CFR §260.10, and as defined in NMSA-74-4-3.J. and Section 102.A.70. of HWMR-2.

5. Respondents were/are a generator and an owner and operator of a hazardous waste management facility used for the treatment, storage, and

disposal of hazardous waste in accordance with the definitions of these terms under Section 1004 of RCRA, 42 U.S.C. §6903, and 40 CFR §260.10 and NMSA 74-4-3 and Section 102.A. of HWMR-2.

6. The EPA regulations at 40 CFR §§261, 262, 264, 265, and 270, and the corresponding EPA authorized New Mexico regulations at Sections 201, 202, 203, 204, 206, and 302 of HWMR-2, were established pursuant to Subtitle C, Sections 3001, 3002, 3004, 3005, 3006, and 3010 of RCRA, 42 U.S.C. §§ 6921, 6922, 6924, 6925, 6926, 6930, and are requirements of Subtitle C of RCRA, 42 U.S.C. §6921 et seq. A violation of any of the EPA or EPA authorized New Mexico regulations is a violation of Subtitle C of RCRA.

7. Pursuant to Section 3010 of RCRA, 42 U.S.C. §6930, Respondent-Plateau notified EPA of hazardous waste activity at its facility located east of Sullivan Road, Bloomfield, New Mexico on August 18, 1980. In its notification, Respondent-Plateau identified itself as a generator and a treater, storer or disposer of the following hazardous wastes:

(a) Ignitable characteristic hazardous waste identified at 40 CFR §261.21

1. D001 - Ignitable hazardous waste

(b) Corrosive characteristic hazardous waste identified at 40 CFR §261.22

1. D002 - Corrosive hazardous waste

(c) Hazardous wastes from specific sources identified at 40 CFR §261.32

1. K049 - Slop oil emulsion solids from the petroleum refining industry

2. K050 - Heat exchanger bundle cleaning sludge from the petroleum refining industry

3. K051 - API separator sludge from the petroleum refining industry

4. K052 - Tank bottoms (leaded) from the petroleum refining industry

8. On March 19-23, 1984, June 7-8, 1983, May 10, 1983, May 4, 1983, and July 15, 1982, Respondent-Plateau was inspected by representatives of Complainant at its facility in Bloomfield, New Mexico. The March 1984, June 1983, and July 1982, inspections were conducted to assess compliance with the RCRA hazardous waste management regulations (also known as Compliance Evaluation Inspections, CEIs). The May 1983 inspections were conducted to assess potential adverse environmental impacts, including endangerment to human health, welfare, or the environment, pursuant to the jurisdiction of the Comprehensive Environmental Response, and Liability Act (CERCLA), otherwise known as "Superfund." Except where specifically noted, the terms 1984, 1983, or 1982 inspection refer to the CEI inspections. Subsequent violations claimed by Complainant against Respondents are based, in part, upon observations by and/or analyses of samples taken by Complainant during any of these inspections.

9. Pursuant to §3005 of RCRA, 42 U.S.C. §6925, Respondent-Plateau submitted Part A of its RCRA permit application for its Bloomfield, New Mexico, facility to EPA which was received on November 19, 1980. The Part A application identified three (3) hazardous waste storage surface impoundments (process codes S04) having volumes of 100,000 gallons, 25,000 gallons and 8,000,000 gallons, respectively.

10. A hazardous waste delisting petition submitted to Complainant pursuant to 40 CFR §§260.20 and 260.22 by Respondent-Plateau on May 21, 1982, identifies four (4) surface impoundments or ponds (#1, #2, #3 and #4) as having volumes of 366,000 gallons, 935,000 gallons, 4,200,000 gallons and 8,500,000 gallons, respectively.

11. In Respondent-Plateau's Part A permit application submitted on November 19, 1980, to Complainant, the south oily water pond (SOWP) and

north oily water pond (NOWP), both containing hazardous waste and located immediately downstream from the API separator, were claimed to have dimensions of 25 feet in diameter and 40 feet by 75 feet square, respectively. On May 12, 1983, Complainant's Environmental Monitoring Systems Laboratory in Las Vegas, Nevada, flew over and took surveillance photographs of Respondent-Plateau's facility in Bloomfield, New Mexico. Analysis of these surveillance photographs shows that SOWP is approximately 50 feet by 100 feet square and NOWP is an irregular shape having perimeter measurements of approximately 150 feet, 75 feet, 200 feet and 100 feet.

12. 40 CFR §270.72(b) and Section 302.C.3.b. of HWMR-2, 42 U.S.C. §3005, state that increases in design capacity of a process used at a facility may be made if the owner or operator submits a revised Part A RCRA permit application prior to such change (along with a justification stating the need for such a change) and the Director approves the change because of a lack of available treatment, storage or disposal capacity at other hazardous waste management facilities.

13. Respondent-Plateau did not submit a revised Part A RCRA permit application and did not obtain prior approval from the Director to increase the design capacity of the storage surface impoundments.

14. Therefore, Respondent-Plateau has violated 40 CFR §270.72(b) and Section 302.C.3.b. of HWMR-2, by failing to submit a revised Part A RCRA permit application and obtaining approval from the Director prior to increasing the design capacity of the storage surface impoundments.

15. 40 CFR §270.13(1) and Section 302.A.4.a.(7) of HWMR-2, require that a topographic map depicting each hazardous waste treatment, storage or disposal unit be submitted with the Part A RCRA permit application.

16. In the Part A RCRA permit application submitted November 19, 1980, and a subsequent amendment to the Part A permit application submitted

March 24, 1981, by Respondent-Plateau, a topographic map depicting the locations of all hazardous waste treatment, storage and disposal units was not included.

17. Therefore, Respondent-Plateau has violated 40 CFR §270.13(1) and Section 302.A.4.a.(7) of HWMR-2, by failing to submit a topographic map of any hazardous waste treatment, storage and disposal units.

18. In addition to the hazardous wastes listed previously in paragraph 7(c), on or about the date of the 1984 inspection, Respondent-Plateau treated, stored, or disposed at it's facility, hazardous waste as that term is defined at 40 CFR §261.21 and Section 201.B.2. of HWMR-2 (ignitable hazardous waste, waste code D001); at 40 CFR §261.22 and Section 201.B.3. of HWMR-2 (corrosive hazardous waste, waste code D002); at 40 CFR §261.23 and Section 201.B.4. of HWMR-2 (reactive hazardous waste, waste code D003); and at 40 CFR §261.31 and Section 201.C.2. of HWMR-2 (spent halogenated solvents, waste code F001 or F002). Specifically, ignitable hazardous waste (flashpoint less than 140°F) was stored in a container located at the transportation terminal at Respondent-Plateau's facility. Corrosive hazardous waste (pH greater than 12.5) was stored in a tank located near the API separator at Respondent-Plateau's facility. Reactive hazardous waste was located near the API separator, in the South Oily Water Pond (SOWP), the South Evaporation Pond (SEP), the North Evaporation Pond (NEP), and the Landfill Pond (LFP). In a letter dated December 4, 1984, to Complainant, Respondent-Plateau admitted that they contributed the spent halogenated solvent 1,1,1-trichloroethane to the refinery sewer system which leads to the API separator.

19. 40 CFR §270.13(j) and Section 302.A.4.a.(15) of HWMR-2, require that the Part A RCRA permit application must list all hazardous waste to be treated, stored or disposed at the facility as well as an estimate of the quantity of such waste to be treated, stored or disposed annually and a description of the process to be used for such waste.

20. In the Part A RCRA permit application submitted November 19, 1980, Respondent-Plateau failed to include waste codes D001, D002, D003 and F001 or F002.

21. Therefore, Respondent-Plateau has violated 40 CFR §270.13(j) and Section 302.A.4.a.(15) of HWMR-2, by failing to include the wastes D001, D002, D003 and F001 or F002 in the Part A RCRA permit application.

22. Section 3005(a) of RCRA, 42 U.S.C. §6925(a), requires each person owning or operating a facility for the treatment, storage or disposal of hazardous waste to have a permit or "interim status" pursuant to this Section. Pursuant to RCRA §3005(e), 42 U.S.C. §6925(e) and the regulations promulgated thereunder at 40 CFR §270.10 (formerly 40 CFR §122.22) and at Section 302.A.1.b. of HWMR-2, owners and operators of hazardous waste management facilities in existence on or before November 19, 1980, are required to submit Part A of the permit application to EPA on or before November 19, 1980. 40 CFR §270.13 and Section 302.A.4.a. of HWMR-2, require that the Part A RCRA permit application contain, among other things, a description of the processes to be used for treating, storing, and disposing of hazardous waste and the design capacity of these items.

23. Respondent-Plateau submitted a Part A RCRA permit application on November 19, 1980, identifying only three (3) surface impoundments used for the storage of hazardous waste (process codes S04).

24. During the 1984 inspection, Complainant's representatives obtained a sample from a 55-gallon drum of waste located at the transportation terminal. Subsequent analysis by Complainant of this sample demonstrated that the drum contained ignitable hazardous waste (waste code D001) as that term is defined at 40 CFR §261.21 and Section 201.B.2. of HWMR-2. Based upon interviews with Respondent-Plateau's personnel present during the inspection, the drum contained

(a) solvent(s) which was/were not intended to be used and which had been stored at that location for more than two years. This hazardous waste container storage (process code S01) is a process that was not included in Respondent-Plateau's RCRA Part A permit application.

25. During the 1984 inspection by Complainant, a sample of the caustic storage tank located adjacent to the API separator was obtained. Subsequent analysis by Complainant demonstrated that the tank contained corrosive and reactive hazardous waste (waste codes D002 and D003, respectively) as those terms are defined at 40 CFR §§261.22 and .23 and Sections 201.B.3. and 201.B.4. of HWMR-2, which was intended to be discarded. Storage of hazardous waste in tanks (process code S02) was not included in Respondent-Plateau's RCRA Part A permit application.

26. Therefore, Respondent-Plateau has violated 40 CFR §§270.10(e), 270.13 and Sections 302.A.1.b. and 302.A.4.a. of HWMR-2, by failing to include in the Part A permit application storage of hazardous waste in containers (process code S01).

27. Therefore, Respondent-Plateau has also violated 40 CFR §§270.10(e), 270.13, and Sections 302.A.1.b. and 302.A.4.a. of HWMR-2, by failing to include in the Part A permit application storage of hazardous waste in tanks (process code S02).

28. 40 CFR §262.20(a) and Section 203.A.1.a. of HWMR-2, require that a generator who offers for hazardous waste for transportation for off-site treatment, storage or disposal, must prepare a manifest before transporting the waste off-site, and that manifest must contain the information set out at 40 CFR §262.21 and Section 203.A.1.e. of HWMR-2. Additionally, 40 CFR §262.20(b) and Section 203.A.1.b. of HWMR-2, require that the generator must designate on the manifest a treatment, storage and disposal facility, which is permitted to

handle the waste described on the manifest.

29. 40 CFR §261.6(b) and Section 201.A.5.b. of HWMR-2, require that hazardous waste listed at 40 CFR §261, Subpart D, including API separator sludge (waste code K051) which is intended to be used, reused, recycled or reclaimed is still subject to regulatory requirements with respect to transportation and storage, including the use of manifests, and shipment to facilities which are permitted to store the waste prior to recycling. 40 CFR §262.12(c) and Section 204.A.5. of HWMR-2, prohibit a generator of hazardous waste from offering its hazardous waste to treatment, storage, or disposal facilities that have not received a RCRA EPA identification number.

30. On or about October 29 through November 1, 1982, Respondent-Plateau's contractor, Energy Extractors, Inc., removed API separator sludge (hazardous waste code K051) as that term is set out at 40 CFR §261.32 and Section 201.C.3. of HWMR-2, from two unlined surface impoundments (SOWP and NOWP) immediately downstream of the API separator at Respondent-Plateau's facility in Bloomfield, New Mexico. Approximately 89,852 gallons of this material were removed by vacuum truck and pumped into 14 bulk tank trucks owned or contracted by Pacific Intermountain Express Company (P.I.E.). These fourteen shipments of hazardous waste were then transported at Respondent-Plateau's direction by the P.I.E. trucks to Overthrust Tool & Supply, Inc. (Overthrust Tool) in Vernal, Utah, on or about October 30 through November 2, 1982, and were then off-loaded into an above-ground storage tank at Overthrust Tool.

31. On or about April 21, 1983, the Utah Solid and Hazardous Waste Committee issued a Notification of Violations and Order of Compliance to Respondent-Plateau requiring that they remove hazardous waste (waste code K051, API separator sludge from the petroleum refining industry) from the storage tank

located at the Overthrust Tool facility in Vernal, Utah, to an approved hazardous waste treatment, storage and disposal facility within 60 days of the Order.

32. On or about April 27, 1983, representatives of Complainant obtained samples of the hazardous waste (waste code K051, API separator sludge) that was transported to Overthrust Tool from Respondent-Plateau's Bloomfield, New Mexico, facility on or about October 29, 1982, through November 2, 1984. This hazardous waste was stored in the tank at the Overthrust Tool facility in Vernal, Utah. Analysis of these samples as performed at the Complainant's National Enforcement Investigations Center's (NEIC) laboratory located in Denver, Colorado, showed that the hazardous waste (waste code K051) contained in the tank was also classified as reactive hazardous waste (waste code D003) as defined at 40 CFR §261.23 and Section 201.B.4. of HWMR-2. A physical description of two of the four samples taken from the tank were characterized as being predominantly a black paste.

33. On or about October 29, 1982, Respondent-Plateau did not prepare a proper manifest for each of the fourteen shipments of the hazardous waste (waste code K051) prior to causing its agent P.I.E. to transport the fourteen shipments of said hazardous waste to the Overthrust Tool facility in Vernal, Utah (a proper manifest is one which incorporates the required information set out at 40 CFR §262.21 and Section 203.A.1.e. of HWMR-2). Respondent-Plateau also failed to designate on any manifest for any of said fourteen (14) shipments of hazardous waste, a permitted facility to handle such hazardous waste.

34. Overthrust Tool in Vernal, Utah, is not, and has never been, a permitted or interim status hazardous waste treatment, storage, or disposal facility and does not have, nor has it ever had, a RCRA EPA identification number.

35. Therefore, on or about October 29, 1982 through November 2, 1982, Respondent-Plateau committed fourteen (14) violations of 40 CFR §262.20(a) and Section 203.A.1.a. of HWMR-2, by failing to prepare manifests containing the information required by 40 CFR §262.21 and Section 203.A.1.e. of HWMR-2, for each of the fourteen (14) shipments of hazardous waste (waste code K051) shipped to Overthrust Tool in Vernal, Utah, prior to transporting this hazardous waste off site.

36. Therefore, on or about October 29, 1982, through November 2, 1982, Respondent-Plateau committed fourteen (14) violations of 40 CFR §262.12(c) and Section 204.A.5. of HWMR-2, by offering fourteen (14) shipments of hazardous waste to a treatment, storage, or disposal facility, Overthrust Tool in Vernal, Utah, which has never received a RCRA EPA identification number.

37. 40 CFR §270.72(c) and Section 302.C.3.c of HWMR-2, require that the owner/operator of a hazardous waste management facility submit to EPA a revised Part A RCRA permit application prior to adding a process at the facility for treatment, storage, or disposal of hazardous waste and to obtain the approval of the Director prior to adding such process.

38. Following the clean-out of the SOWP and NOWP in November 1982, Respondent-Plateau removed API separator sludge (waste code K051) and contaminated soils from the ponds and disposed of them in an on-site landfill. Approximately eight (8) dump truck loads of this hazardous waste sludge was deposited in a dry pit east of the refinery and covered. During the 1984 inspection by Complainant, samples were taken of the landfill. Subsequent analysis by Complainant demonstrated that these sludges were also reactive hazardous waste (waste code D003) as that term is defined at 40 CFR §261.23 and at Section 201.B.4. of HWMR-2. This action by Respondent-Plateau constituted

the addition of a process (process code D80) at its facility for the treatment, storage, or disposal of hazardous waste.

39. Therefore, Respondent-Plateau has violated 40 CFR §270.72(c) and Section 302.C.3.c. of HWMR-2, by failing to submit a revised Part A permit application to Complainant prior to adding a process, specifically the landfill (process code D80) for treatment, storage, or disposal of hazardous waste and obtaining approval from the Director prior to the addition of the process.

40. 40 CFR §265.13(b)(4) and Section 206.B.3.a.(2) of HWMR-2, require that the owner/operator include in the facility's waste analysis plan a provision for review or repeat of initial waste analysis to ensure that the analysis is accurate and up to date.

41. On or about the dates of the 1984 inspection, Respondent-Plateau did not have a provision for the review and repeat of waste analysis.

42. Therefore, Respondent-Plateau has violated 40 CFR §265.13(b)(4) and Section 206.B.3.a.(2) of HWMR-2, by failing to repeat or review waste analysis to ensure it is accurate and up to date.

43. 40 CFR §265.14(b) and Section 206.B.4.b. of HWMR-2, require the owner or operator to prevent the unknowing entry, and minimize the possibility for the unauthorized entry, of persons or livestock onto the active portion of his facility.

44. On or about the dates of the 1984 inspection, persons or livestock were able to approach Respondent-Plateau's facility, specifically the landfill area, from the east without encountering barriers or facility personnel.

45. Therefore, Respondent-Plateau has violated 40 CFR §265.14(b) and Section 206.B.4.b. of HWMR-2, by failing to prevent the unknowing entry of persons or livestock onto the active portion of its facility.

46. 40 CFR §265.16(a) and Section 206.B.6.a. of HWMR-2, require that facility personnel must successfully complete a program of classroom instruction or on-the-job training that teaches them to perform their duties in a way that ensures the facility's compliance with the requirements of this Part (40 CFR Part 265 and Section 206 of HWMR-2).

47. On or about the dates of the 1984 inspection, Complainant noted that Respondent-Plateau had failed to train all personnel who handle hazardous waste. In fact, the only employee of Respondent-Plateau who had documented personnel training was the Associate Environmental Engineer.

48. Therefore, Respondent-Plateau has violated 40 CFR §265.16(a) and Section 206.B.6.a. of HWMR-2, by failing to train all facility personnel to perform their duties in a way that ensures the facility's compliance with the requirements of this Part.

49. 40 CFR §265.16(c) and Section 206.B.6.c. of HWMR-2, require that facility personnel must take part in an annual review of the initial training required herein.

50. On or about the dates of the 1984 inspection, Respondent-Plateau failed to provide annual reviews for personnel training.

51. Therefore, Respondent-Plateau has violated 40 CFR §265.16(c) and Section 206.B.6.c. of HWMR-2, by failing to require that facility personnel participate in an annual review of the initial training.

52. 40 CFR §265.16(d) and Section 206.B.6.d. of HWMR-2, require that the owner or operator must maintain records of introductory and continuing training given to facility personnel.

53. On or about the dates of the 1984 inspection, Respondent-Plateau maintained no records of training received by any facility personnel.

54. Therefore, Respondent-Plateau has violated 40 CFR §265.16(d) and Section 206.B.6.d. of HWMR-2, by failing to maintain records of introductory and continuing training given to facility personnel.

55. 40 CFR §265.52(f) and Section 206.B.10. of HWMR-2, require that the contingency plan required at 40 CFR §265.52 and Section 206.B.10. of HWMR-2, must include an evacuation plan for facility personnel where there is a possibility that evacuation could be necessary.

56. On or about the dates of the 1984 inspection, Respondent-Plateau did not have an evacuation plan for facility personnel in its contingency plan.

57. Therefore, Respondent-Plateau has violated 40 CFR §265.52(f) and Section 206.B.10. of HWMR-2, by failing to include an evacuation plan as part of its contingency plan for facility personnel.

58. 40 CFR §265.112 and Section 206.C.2. of HWMR-2, require the owner or operator to submit by May 19, 1981, a written closure plan. The closure plan must address all hazardous waste units. The plan must include: a description of how and when the facility will be partially closed, if applicable, and finally closed; a description of the steps needed to decontaminate facility equipment during closure; an estimate of the expected year of closure and a schedule for partial or final closure; and the total time required to close the facility.

59. On or about the dates of the 1984 inspection, Respondent-Plateau's closure plan did not include a description of the steps needed to decontaminate facility equipment, an estimate of the expected year of closure and a schedule for partial or final closure, and the total time required to close the facility. It also did not address the containers, tank, landfill, or landfill pond.

60. Therefore, Respondent-Plateau has violated 40 CFR §265.112 and Section 206.C.2. of HWMR-2, by failing to include in its closure plan, a description of the steps needed to decontaminate facility equipment, an estimate of the expected year of closure and a schedule for partial or final closure, the total time required to close the facility, and a description of the closure activities for the container storage area, storage tank, the landfill, and the landfill pond.

61. 40 CFR §265.118 and Section 206.C.2.h. of HWMR-2, require that by May 19, 1981, the owner or operator of a disposal facility must have a written post-closure plan for all hazardous waste disposal units.

62. On or about the dates of the 1984 inspection, Respondent-Plateau had no post-closure plan for its hazardous waste disposal landfill (process code D80).

63. Therefore, Respondent-Plateau has violated 40 CFR §265.118 and Section 206.C.2.h. of HWMR-2, by failing to have a written post-closure plan for its hazardous waste disposal landfill.

64. 40 CFR §265.120 and Section 206.C.2.j. of HWMR-2, require the owner of the property on which a hazardous waste disposal facility is located to record in the deed to the facility property a notification to any potential purchaser of the property that: (a) the land has been used to manage hazardous waste, and (b) its use is restricted under 40 CFR §265.117(c) and Section 206.C.2.g.(3) of HWMR-2.

65. On or about the dates of the 1984 inspection, Respondent-Plateau had no notification on the property deed that its property, specifically the landfill, had been used to dispose of hazardous waste.

66. Therefore, Respondent-Plateau has violated 40 CFR §265.120 and Section 206.C.2.j. of HWMR-2, by failing to include a notification in the property deed that the property, specifically the landfill, had been used to dispose of hazardous waste and that its use was restricted under 40 CFR §265.117(c) and Section 206.C.2.g.(3) of HWMR-2.

67. 40 CFR §270.72(d) and Section 302.C.3.d. of HWMR-2, require that changes in the ownership or operational control of a facility may be made if the new owner or operator submits a revised Part A permit application no later than 90 days prior to the scheduled change. The old owner or operator shall comply with all financial requirements at 40 CFR §265 Subpart H and Section 206.C.3. of HWMR-2, until the new owner demonstrates to Complainant that it is complying with those regulations. All other interim status duties are transferred effective immediately upon the date of the change of ownership of the facility.

68. On or about October 31, 1984, Suburban Propane Gas Corporation sold Respondent-Plateau's facility at Bloomfield, New Mexico to Respondent-BRC. To date, no revised Part A permit application has been received by Complainant. In addition, on February 13, 1985, Complainant received proof of insurance coverage for sudden accidental occurrences for Respondent-BRC's facility in Bloomfield, New Mexico. This coverage is inadequate in the following respects: (1) it demonstrates financial responsibility under Federal regulations instead of the State of New Mexico, (2) Respondent-BRC's facility's EPA identification number for which this coverage is provided is not included, and (3) the liability coverage must be in the amount of at least \$1 million per occurrence with an annual aggregate of at least \$2 million.

69. Therefore, Respondent-BRC has violated 40 CFR §270.72(d) and Section 302.C.3.d. of HWMR-2, by failing to submit a revised Part A permit application no later than 90 days prior to a change in facility ownership.

70. 40 CFR §§265.142-.151 except §§265.144-.147 and Sections 206.C.3.a.-.i. of HWMR-2, except Sections 206.C.3.e.-.h. of HWMR-2, require that by July 6, 1982, an owner or operator of a hazardous waste treatment, storage or disposal facility to establish financial assurance with Complainant for closure care of the facility.

71. To date, Respondent-Plateau has failed to submit a financial assurance to Complainant for closure of Respondent-Plateau's facility in Bloomfield, New Mexico.

72. Therefore, Respondent-Plateau has violated 40 CFR §§265.142 -.151 except §§265.144-.147 and Sections 206.C.3.a.-.i. of HWMR-2, except Sections 206.C.3.e.-.h. of HWMR-2, by failing to submit a financial assurance to Complainant for closure care of Respondent-Plateau's facility.

73. 40 CFR §§265.144-.151 except §265.147 and Sections 206.C.3.e.-.i. of HWMR-2, except Section 206.C.3.h. of HWMR-2, require that by July 6, 1982, an owner or operator of a hazardous waste treatment, storage or disposal facility to establish financial assurance with Complainant for post-closure care of the facility.

74. To date, Respondent-Plateau has failed to submit a financial assurance to Complainant for post-closure care of Respondent-Plateau's facility, specifically the landfill, in Bloomfield, New Mexico.

75. Therefore, Respondent-Plateau has violated 40 CFR §§265.144-.151 except §265.147 and Sections 206.C.3.e.-.i. of HWMR-2, except Section 206.C.3.h. of HWMR-2, by failing to submit a financial assurance to Complainant for post-closure care of Respondent-Plateau's facility.

76. 40 CFR 264.151(j) and Section 206.D.3.j.(10) of HWMR-2, require specific wording for the Hazardous Waste Facility Certificate of Liability Insurance when such a certificate is submitted as financial assurance as

required at 40 CFR §264.147 and Section 206.D.3.h. of HWMR-2, or 40 CFR §265.147 and Section 206.C.3.h. of HWMR-2.

77. The Certificate of Pollution Liability Insurance for Sudden and Accidental Occurrences received by Complainant July 15, 1982, does not have the required wording described at 40 CFR §264.151(j) and Section 206.D.3.j.(10) of HWMR-2.

78. Therefore, Respondent-Plateau has violated 40 CFR §264.151(j) and Section 206.D.3.j.(10) of HWMR-2, by failing to submit to Complainant a Certificate of Liability Insurance with wording as required by these regulations.

79. 40 CFR §264.147(b) and Section 206.C.3.h.(2) of HWMR-2, require proof of liability coverage for nonsudden accidental occurrences or a letter stating when coverage will be obtained be submitted to Complainant by January 15, 1983, for each land disposal unit located at the facility.

80. Respondent-Plateau had not submitted to Complainant either proof of liability coverage for nonsudden accidental occurrences, or a letter stating when coverage would be obtained, by on or about January 15, 1983, the due date for such coverage for the landfill and surface impoundments.

81. Therefore, Respondent-Plateau has violated 40 CFR §264.147(b) and Section 206.C.3.h.(2) of HWMR-2, by failing to submit proof of liability coverage, or a letter stating when coverage would be obtained, by the due date (January 15, 1983) for the landfill and surface impoundments.

82. 40 CFR §265.90 and Section 206.C.1.a. of HWMR-2, require that an owner and operator of a surface impoundment, landfill or land treatment facility which is used to manage hazardous waste must implement a groundwater monitoring program capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility. 40 CFR §265.90(a) requires that this groundwater monitoring

program be implemented within one year after the effective date of these regulations (November 19, 1981).

83. 40 CFR §265.90(c) and Section 206.C.1.a.(3) of HWMR-2, provide that all or part of the groundwater monitoring requirements may be waived if the owner or operator can demonstrate that there is a low potential for migration of hazardous waste or hazardous waste constituents from the facility via the uppermost aquifer to water supply wells or to surface water. Otherwise, the groundwater monitoring requirements are effective as set out in paragraph 85.

84. On October 8, 1981, Respondent-Plateau submitted a groundwater monitoring waiver demonstration to Complainant for its review. On October 22, 1981, Complainant transmitted a copy of the groundwater monitoring waiver demonstration to NMEID for its review and comment. On March 31, 1982, NMEID submitted its comments on the waiver demonstration to Complainant. In these comments, NMEID stated that the demonstration was inadequate to justify a waiver. The comments further stated that it is probable that seepage from the facility is currently flowing into the Hammond Ditch and/or the San Juan River. Therefore, the possible contamination of surface water bodies by toxic pollutants undermines Plateau's (Respondent-Plateau's) ability to demonstrate that there is a low potential for migration of pollutants to surface water. On October 24, 1984, NMEID received final authorization to operate the federal hazardous waste management programs, Phase I and Phase II A and B as previously noted herein. In a letter to NMEID dated approximately February 22, 1984, Complainant recommended that Respondent-Plateau's groundwater monitoring waiver be denied.

85. In a letter to Respondent-Plateau dated March 12, 1984, NMEID denied the groundwater monitoring waiver demonstration and required that

Respondent-Plateau comply with all applicable groundwater monitoring requirements including installation of a groundwater monitoring system.

86. Although Respondent-Plateau asserted in its waiver demonstration that no groundwater is known to exist in or above the impermeable 495 foot thick Nacimiento formation, it is known that the Nacimiento formation is overlain by a highly permeable cobble bed of varying thickness, which in turn underlies Respondent-Plateau's entire facility. During Complainant's inspection in 1983 and 1984, significant seepage was noted from the contact between the cobble bed and the Nacimiento formation at the face of the bluff above the San Juan River. Analysis of samples of these seeps taken during these inspections showed a high level of organic and inorganic contamination.

87. During the 1983 inspection of Respondent-Plateau's facility by Complainant, Complainant noted that no groundwater monitoring system was in place.

88. During the 1984 inspection, Complainant noted that wells installed by Respondent-Plateau on or about February 6 through 9, 1984, were inadequate to detect the migration of contaminants into the uppermost aquifer from the land disposal units used to manage hazardous waste. Specifically, leachate plumes emanating from the SOWP, NOWP and LFP would not be detectable by the existing system due to improper well placement and/or an insufficient number of monitoring wells as required at 40 CFR §265.91 and Section 206.C.1.b. of HWMR-2. In addition, the parameters analyzed for the groundwater monitoring samples did not include all parameters required at 40 CFR §265.92 and Section 206.C.1.c. of HWMR-2, specifically, analyses were not performed for Total Organic Carbon, Total Organic Halogen, Sodium, Pesticides, and Herbicides.

89. Therefore, Respondent-Plateau has violated 40 CFR §265.90 and Section 206.C.1.a. of HWMR-2, by failing to install a groundwater monitoring system capable of determining the facility's impact on the quality of groundwater in the uppermost aquifer underlying the facility.

PROPOSED CIVIL PENALTY

Section 3008 of RCRA authorizes a proposed civil penalty of up to TWENTY-FIVE THOUSAND DOLLARS (\$25,000) per day for each violation. Complainant proposes to assess a civil penalty of TWO HUNDRED THREE THOUSAND, THREE HUNDRED FIFTY DOLLARS (\$203,350) against Respondent-Plateau and NINE THOUSAND FIVE HUNDRED DOLLARS (\$9,500) against Respondent-BRC. This amount has been computed based on the seriousness of the violation, the threat of harm to public health or the environment and the Respondent's efforts to comply with the applicable regulations. The individual penalties for each violation are:

Paragraph	14 - Failure to submit revised Part A and obtain approval prior to increasing storage capacity.	\$ 2,250
Paragraph	17 - Inaccurate topographic map with Part A	300
Paragraph	21 - Failure to include D001, D002, D003 and F001 or F002 wastes in Part A.	1,000
Paragraph	26 - Storage in containers (S01) not included in Part A.	2,250
Paragraph	27 - Storage in tanks (S02) not included in Part A.	9,500
Paragraph	35 - 14 unmanifested shipments of hazardous waste.	42,000
Paragraph	36 - 14 shipments to TSD facility without RCRA EPA identification number.	42,000
Paragraph	39 - Failure to submit revised Part A and obtain approval prior to the addition of a landfill (D80).	22,500

Paragraph	42 - No provision to repeat/review waste analysis.	\$1,000
Paragraph	45 - Inadequate security; access to landfill.	1,000
Paragraph	48 - Failure to train all facility personnel.	9,500
Paragraph	51 - No annual reviews for personnel training.	2,250
Paragraph	54 - No records of personnel training.	2,250
Paragraph	57 - Evacuation plan not included in contingency plan.	300
Paragraph	60 - Inadequate closure plan.	6,500
Paragraph	63 - No post-closure plan for landfill.	2,250
Paragraph	66 - Failure to notify of hazardous waste activity in deed.	9,500
Paragraph	69 - Revised Part A and financial transfer not submitted prior to sale of facility.	9,500
Paragraph	72 - Financial assurance for closure not submitted by deadline.	9,500
Paragraph	75 - Financial assurance for post-closure not submitted by deadline.	9,500
Paragraph	78 - Incorrect wording on certificate of liability insurance.	1,000
Paragraph	81 - No coverage for nonsudden accidental occurrences no notification of date for that coverage.	9,500
Paragraph	89 - No groundwater monitoring for all land disposal units.	17,500

If you wish to contest the imposition of this penalty, see the following section entitled "Opportunity to Request a Hearing."

ORDER

Pursuant to Section 3008 of RCRA, 42 U.S.C. §6928, Respondent-BRC is hereby ordered to take the following actions within THIRTY (30) days of receipt of this Order.

1. Submit a completed Part A permit application to EPA in accordance with Section 302.A.4. of HWMR-2.
2. Develop, implement and submit a waste analysis plan with provisions for the repeat and review of waste analyses in accordance with Section 206.B.3. of HWMR-2.
3. Install a barrier that completely surrounds the active portion of the facility, specifically the landfill, with a means to control entry at all times in accordance with Section 206.B.4. of HWMR-2. Submit proof of compliance.
4. Develop, implement and document a personnel training program in accordance with Section 206.B.6. of HWMR-2. Submit proof of compliance.
5. Develop and maintain, at the facility, an evacuation plan to be included in the contingency plan in accordance with Section 206.B.10.i. of HWMR-2. Submit a copy of this plan. Distribute copies of this plan in accordance with Section 206.B.10.j. of HWMR-2.
6. Develop and maintain, at the facility, a closure plan in accordance with Section 206.C.2. of HWMR-2. Submit a copy of this closure plan.
7. Develop and maintain, at the facility, a post-closure plan, specifically addressing the landfill, in accordance with Section 206.C.2.h. of HWMR-2. Submit a copy of this post-closure plan.
8. Make the necessary deed recordation in accordance with Section 206.C.2.j. of HWMR-2. Submit documentation that the necessary deed notations have been made.

9. Obtain and submit documentation of financial assurance for closure and post-closure care in accordance with Sections 206.C.a.-.i. of HWMR-2, except Section 206.C.h. of HWMR-2, and with Section 206.D.3.j.(10) of HWMR-2.

10. Obtain and submit documentation of insurance coverage for non-sudden accidental occurrences in accordance with Section 206.C.3.h. of HWMR-2.

11. Obtain and submit documentation of adequate insurance coverage for sudden accidental occurrences in accordance with Section 206.C.3.h. of HWMR-2, or Section 206.D.3.h. of HWMR-2.

12. Install adequate groundwater monitoring for all hazardous waste land disposal units in accordance with Section 206.C.1.b. of HWMR-2. Submit proof of compliance.

13. Develop, implement and submit a sample analysis plan which addresses all required parameters for groundwater monitoring in accordance with Section 206.C.1.c. of HWMR-2. Immediately sample each well for all required parameters.

14. In the future, prepare a manifest for each hazardous waste shipment, in accordance with Section 203.A.1.a. of HWMR-2.

15. In the future, designate on the manifests, only facilities having a RCRA EPA identification number for the treatment, storage, and disposal of hazardous wastes, in accordance with Section 204.A.5. of HWMR-2.

In addition, Respondents shall submit documentation to Complainant indicating the specific action Respondents have taken to comply with the provisions of this Order within 45 days of the receipt of this Order.

All original correspondence pursuant to compliance with the Order shall be sent by registered mail, return receipt requested, to the following addresses:

Regional Hearing Clerk (60RC)
U.S. Environmental Protection Agency
Region VI
1201 Elm Street, InterFirst Two Building
Dallas, Texas 75270

Director, Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

NOTICE: If Respondents fail to comply with any requirement of this ORDER or any other regulation promulgated pursuant to RCRA, Respondents shall be subject to liability for the imposition of additional penalties of up to TWENTY-FIVE THOUSAND (\$25,000) DOLLARS for each day of continued non-compliance in accordance with Section 3008 of RCRA, 42 U.S.C., §6928, and may be subject to further enforcement including injunction from any further generating, transporting, treating, storing or disposing of hazardous waste and such other and further relief as may be necessary to achieve compliance with Subtitle C of RCRA.

OPPORTUNITY TO REQUEST A HEARING

You have the right to request a hearing. Any request for a hearing must be in writing and must be filed with the Regional Hearing Clerk (60RC), U.S. EPA, Region VI, 1201 Elm Street, InterFirst Two Building, Dallas, Texas 75270, within thirty (30) days of receipt of this Order. In the event that you do intend to request a hearing for the purpose of contesting any material fact set forth in the Order, or because you feel that the amount of the penalty proposed is inappropriate, or because you feel that you are

entitled to judgment as a matter of law, you must file a written Answer to this Order with the Regional Hearing Clerk at the above address within 30 days of receipt of said Order. Your Answer should clearly and directly admit, deny or explain each of the factual allegations contained in this Order with regard to which you have any knowledge. Your Answer should state (1) the circumstances or arguments which are alleged to constitute the grounds of defense, (2) a concise statement of the facts which you intend to place at issue in the hearing, and (3) whether a hearing is requested. Failure to admit, deny, or explain any material factual allegation contained herein constitutes an admission of the allegation. Hearings held in the assessment of these civil penalties will be conducted in accordance with the provisions of the Administrative Procedure Act (5 U.S.C. §522 et seq.), and the Consolidated Rules of Practice governing these proceedings printed in the Federal Register, Vol. 45, No. 70, Wednesday, April 9, 1980 (40 CFR Part 22). If you fail to file an Answer to this Order with the Regional Hearing Clerk within 30 days of receipt, you may be found to be in default pursuant to 40 CFR §22.17. For purposes of this action, default constitutes an admission of all facts alleged in the Order and a waiver of your right to a hearing under Section 3008 of RCRA, 42 U.S.C. §6928, on such factual allegations. A Default Judgment pursuant to 40 CFR §22.17 may thereafter be issued by the Regional Administrator and the civil penalty proposed herein may be assessed without further proceedings.

SETTLEMENT CONFERENCE

Whether or not you request a hearing, you may confer informally with us concerning the alleged violations or the amount of the proposed penalty. You may wish to appear at the conference yourself or be represented

by counsel. EPA encourages all parties against whom a civil penalty is proposed to be assessed to pursue the possibilities of settlement as a result of informal conferences. Any settlement so reached shall become final upon the issuance of a written Consent Agreement by the Regional Administrator, EPA, Region VI. The issuance of a Consent Agreement shall constitute a waiver of your right to request a hearing on any matter to which you have stipulated therein.

A request for an informal conference does not extend the 30 day period during which a written Answer and a request for hearing must be submitted. The informal conference procedure may be pursued as alternative to and simultaneous with the adjudicatory hearing.

To explore the possibility of settlement in this matter, contact William Taylor, Chief, Enforcement Section, Hazardous Materials Branch, telephone (214) 767-9730. If you are represented by counsel, the attorney on this case is James L. Turner, Office of Regional Counsel, EPA, Region VI, 1201 Elm Street, InterFirst Two Building, Dallas, Texas, 75270, telephone (214) 767-9976.

Allyn M. Davis
Allyn M. Davis, Director
Air and Waste Management Division
U.S. EPA, Region VI

Dated this 29 day of March 1985, at Dallas, Texas.

CERTIFICATE OF SERVICE

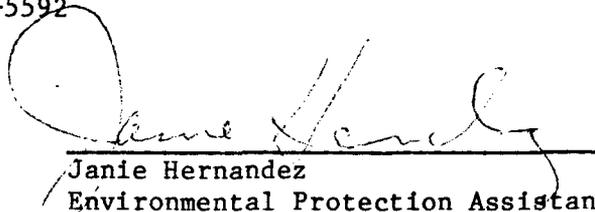
I hereby certify that the foregoing Compliance Order and Notice of Opportunity for Hearing was served upon the Respondents herein together with a copy of the Consolidated Rules of Practices Governing the Administrative Assessment of Civil Penalties and the Revocation or Suspension of Permits, this 29 day of March, 1985 by depositing same in the United States mail, postage prepaid, certified mail, return receipt requested, addressed to:

Mr. Kevin McIver
Secretary and Counsel
Plateau, Inc.
P.O. Box 26251
4520 Montgomery Boulevard, N.E.
Albuquerque, New Mexico 87109

Mr. Mark J. Anton
President
Suburban Propane Gas Corporation
334 Madison Avenue
Morristown, New Jersey 07960

Mr. Ronald W. Williams
President
Bloomfield Refining Company, Inc.
115 Inverness Drive, East
Englewood, Colorado 80112-5116

Mr. Samuel Gary
Chief Executive Officer
Gary Energy Corporation
4 Inverness Court, East
Englewood, Colorado 80112-5592


Janie Hernandez
Environmental Protection Assistant

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION VI

IN THE MATTER OF:

PLATEAU, INC.
ALBUQUERQUE, NEW MEXICO

RESPONDENT

PROCEEDING UNDER §3013 OF THE
RESOURCE CONSERVATION AND
RECOVERY ACT, 42 U.S.C. §6934

ENFORCEMENT CONFIDENTIAL ADMINISTRATIVE ORDER

DOCKET NUMBER RCRA-3013-00-84

ORDER REQUIRING SUBMISSION AND IMPLEMENTATION OF
PROPOSAL FOR MONITORING, TESTING, ANALYSIS, AND REPORTING

RECEIVED
FEB 4 - 1985
OIL CONSERVATION DIVISION
SANTA FE

PREAMBLE

This ADMINISTRATIVE ORDER (ORDER) is issued by the Regional Administrator of Region Six of the United States Environmental Protection Agency (EPA) to the above named Respondent, pursuant to the authority vested in the Administrator of EPA under Section 3013 of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. §6934 and delegated to the Regional Administrator. Notice of the issuance of this ORDER has heretofore been given to the State of New Mexico.

FINDINGS

1. Respondent, Plateau, Inc., is a subsidiary of Suburban Propane Gas Corporation with headquarters at 334 Madison Avenue, Post Office Box 2165R, Morristown, New Jersey 07960. Plateau owns property and operates a facility (the Bloomfield Refinery) located east of Sullivan Road, Bloomfield, New Mexico 87413. The Bloomfield Refinery processes crude oil into finished petroleum products. Included on site are tankage, crude unloading facilities, product loading facilities, and various processing units.

2. The modes of waste treatment and disposal carried out at this site include wastewater evaporation by evaporation ponds and spray irrigation, and landfarming of various sludges. Ancillary activities, such as product storage, transportation, laboratory analyses, engineering, and administration are also conducted at this site in support of refinery operations and disposal activities.

3. The Bloomfield Refinery has been in continuous operation since before 1960. On August 14, 1980 Plateau, Inc. submitted notification to EPA that it was involved in generating, treating, storing, and disposing of hazardous waste pursuant to RCRA. On October 8, 1983 the facility submitted to EPA a request for the waiver of groundwater monitoring requirements under 40 CFR 265.90 through 265.94. A copy of that request was reviewed by NMEID personnel on February 27, 1984. NMEID concluded that Plateau, Inc. did not demonstrate a low potential for migration of hazardous waste from the Bloomfield facility to adjacent surface waters, via the uppermost aquifer, and subsequently denied the request on March 12, 1984.

4. The Bloomfield Refinery is situated on a terrace deposit consisting primarily of a permeable cobble bed 15 to 30 ft. thick, which is overlain by and interfingered with wind blown silts and sands. This terrace deposit directly overlies the massively bedded shale/clay unit of the Nacimiento Formation which is known to contain permeable interbeds of sandstone at variable depths. The interface between the cobble bed and shale is very distinct and typically displays springs and seeps at an exposed north facing bluff above the San Juan River. The river flows from east to west, 1/8 mile north of the refinery (see attached

sampling and location map).

ENFORCEMENT CONFIDENTIAL

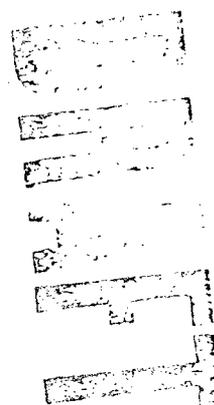
5. The lower zone of the permeable cobble bed, above the shale contact, is known to contain groundwater as evidenced by water level readings taken in Plateau groundwater monitoring wells. The six wells, which were installed February, 1984, were all completed in the top of the Macimiento Formation and completely penetrate the cobble bed. Well depths vary between 25 and 54 feet. Their locations are shown in the attached map.

6. The shallow aquifer beneath the Bloomfield Refinery is capable of carrying hazardous waste and hazardous waste constituents into the Hammond Ditch, described in paragraph 7, and the San Juan River, both of which supply domestic and agricultural water to downstream users.

7. Below the bluff and directly north (hydraulically downgradient) of the refinery lies a broad sandy river terrace that ranges up to 150 ft. wide, and usually only 2 to 3 feet above the river level. Groundwater levels in the sand terrace vary with river flow conditions, which are controlled by operation of the Navajo Dam, 26 miles upstream.

8. In addition to the San Juan River and the intermittent stream channels which traverse the refinery property, the Hammond Irrigation Ditch passes from east to west through the refinery property between the refinery and the San Juan River (see location map). The ditch is unlined and is excavated into the permeable cobble deposits, upon which the refinery is situated. This ditch conveys crop irrigation water to agricultural communities during the irrigation season from mid-April to mid-October.

9. Water samples collected in March, 1984 from Plateau monitor well #4; at a spring on the north facing bluff (sampling station 18); and soil samples from the river terrace (station 19) all contained elevated levels of numerous organic pollutant compounds as identified at 40 CFR 401.15 pursuant to the Clean Water Act §307(a)(1), 33 U.S.C. §1317(a)(1). In addition, the talus slope along the north facing bluff exhibited obvious staining, discoloration and distressed vegetation at its base. Stained soils and seepage from the bluff had distinct hydrocarbon odors.
10. Several shallow holes (1-3 ft. deep) were dug in the river terrace. After allowing groundwater to percolate into the holes, the air volumes in the holes above the groundwater surface were monitored with an HNu photoionizer. A sample of the liquids from each hole was gathered in a jar from which the head space was also monitored. Readings in the holes varied from 100-200 ppm in benzene equivalent; and in headspace from captured liquids, 200-550 ppm benzene equivalent, indicating contamination by organic compounds.
11. The organic contaminants detected in the Plateau monitoring well and soils appear to be products and product constituents of the Bloomfield refinery.
12. Compounds detected in the no.4 Plateau monitoring well; at springs on the north facing bluff; and in soil samples from the river terrace include aromatic solvents, substituted benzenes, naphthalene, polynuclear aromatics, and alkanes. These compounds



are designated "Hazardous Wastes" pursuant to RCRA and 40 CFR 33124, and 33132 (May 19, 1980) because they have been shown in scientific studies to have toxic, carcinogenic, mutagenic, or teratogenic effects on humans or other life forms.

13. Ingestion of contaminated groundwater containing the above enumerated hazardous wastes found in the RFS monitoring wells may cause illness, disease, or other harmful effects to humans, as well as plant and other animal life.

DETERMINATION

14. Hazardous waste is present and is, or has been, handled, treated, stored or disposed of at the Plateau Facility described herein. Release of hazardous waste from the Plateau Facility may have occurred. The presence or release of hazardous waste at, or from, the Plateau Facility may present a substantial hazard to human health or the environment.
15. The Regional Administrator has determined that the monitoring, analysis, testing, and reporting of activities that may be required of Respondent under the terms of this ORDER are reasonable and necessary in order to ascertain the nature and extent of the substantial hazard to human health or the environment that may be presented by the Plateau, Bloomfield Refinery.

ORDER

Based on the foregoing Determinations and Findings, and in order to ascertain the nature, extent and the source of the substantial hazard to human health or the environment which the Plateau facility may present, the Respondent is hereby Ordered to do the following:

16. Within thirty (30) days of the effective date of this ORDER, develop and submit a proposed detailed workplan (proposal) for the monitoring, testing, analysis, and reporting of any hazardous waste contamination associated with the property or facility of the Respondent. The proposal shall be prepared in accordance with the attached Site Investigation Scope of Work document marked as Exhibit A hereto. The proposal shall address a well location and construction plan, sampling equipment and sampling techniques, laboratory analysis techniques, a quality assurance/quality control program, decontamination procedures, a health and safety plan, type of documentation, and handling/disposal methods of purged monitoring well water and drilling materials. The proposal shall contain a schedule for conducting the work outlined in Exhibit A, and shall be submitted to:

Deputy Director, Air and Waste Management Division
~~Chief, Superfund Branch (6AW-S)~~
U.S. Environmental Protection Agency
1201 Elm Street
Dallas, Texas 75270

*and to
Patricia Parker*

~~CONFIDENTIAL~~

17. Respondent shall be afforded an opportunity to confer with EPA, regarding the proposal required by paragraph 16 above at any time prior to EPA approval or disapproval of the proposal. Desire for such a conference should be made known to the EPA attorney at the following address:

James Turner
Office of Regional Counsel
U.S. Environmental Protection Agency
1201 Elm Street
Dallas, Texas 75270

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The holding of such a conference shall not vary the thirty (30) day time period required for the submission of the proposal.

18. Within thirty (30) days of submission of the proposal, EPA shall notify Respondent of its approval or disapproval of the proposal. In the event of disapproval, EPA shall specify the deficiencies and the reasons therefor. Within thirty (30) days of notice of such disapproval, Respondent shall modify the proposal to address the deficiencies identified by EPA and submit the revised proposal for review and approval. E10

19. Within ten (10) days following EPA approval of the proposal, Respondent shall promptly implement the approved proposal. The investigation, monitoring and reporting program as set forth in the EPA approved proposal shall be completed according to its approved terms and schedules.

20. Respondent shall complete all task elements of the proposal within four (4) months of receiving EPA approval of the proposal. Within five (5) months of approval of the proposal, Respondent shall report the findings of this work in a written report submitted to EPA which clearly describes and interprets all data and findings (final report). This final report will detail all work pursuant to this ORDER and shall include a presentation of all supportive analytical results, appended or presented in appropriate charts, tables, crosssections, and/or other graphics as necessary. If, in the judgement of EPA,

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ENFORCEMENT OF ENVIRONMENTAL PROTECTION ACT
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this final report is inadequate with respect to
this ORDER, EPA may require clarification or further actions as it
deems necessary, consistent with this ORDER.

21. All proposals, plans, studies, reports, schedules and/or attachments required by the terms of this ORDER are, upon approval by EPA, incorporated into this ORDER as if fully set forth in text herein. Any noncompliance with such approved proposals, plans, studies, reports, schedules, and/or attachments shall be deemed noncompliance with this ORDER.
22. Respondent shall provide access to its property and/or its facility, as described previously herein, to EPA employees, contractors and consultants at all reasonable times and shall permit such persons to be present and move freely in the areas in which any work is being conducted pursuant to this ORDER.
23. Upon request, Respondent shall split samples with EPA or its representatives from any samples collected pursuant to this ORDER. In order to facilitate such efforts, Respondent shall provide at least three (3) days advance notice of any sample collection dates that may differ from those dates set forth for sampling in the EPA approved proposal.
24. Respondent shall insure that all actions required by this ORDER are undertaken in compliance with all applicable federal, state and local laws.
25. Whenever notice or information is required to be forwarded by one party to another under the terms of this ORDER, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors give notice in writing to all other parties to this ORDER of another designated individual to receive

Deputy Director, Air and Waste Management Division
EPA: Chief, Superfund Branch (SAM-S)
Region VI, ENVIRONMENTAL CONFIDENTIAL
1201 Elm Street
Dallas, Texas 75270

Respondent: ~~Anthony C. Leonard~~
Plateau Inc.
P.O. Box 26251
Albuquerque, New Mexico 87125-6251

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26. Respondent shall submit a copy of all notices and information pursuant to this ORDER to the New Mexico Environmental Improvement Division at the following address:

~~Denise Fuest~~
~~Steven Asher, Director~~
New Mexico Environmental Improvement Division
P.O. Box 968
Santa Fe, New Mexico 87504-0968

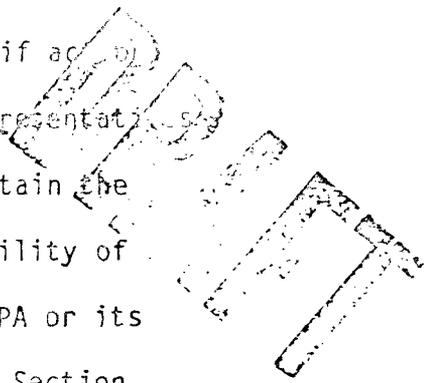
27. Respondent shall appoint a Facility Coordinator, who shall be responsible for oversight of the implementation of this ORDER and activities required herein. EPA shall appoint a Project Officer who will be EPA's designated representative at the Facility. The Facility Coordinator and Project Officer shall be appointed within seven (7) days of the effective date of this ORDER. Respondent and EPA each have the right to appoint a new Facility Coordinator or Project Officer, respectively, at any time. Such changes will be accomplished by notifying the other party, in writing, at least five (5) days prior to the change. Respondent shall notify EPA in writing, within five (5) days of the appointment of a Facility Coordinator, of the name, telephone number, and mailing address of said Facility Coordinator.

28. Routine communications may be exchanged verbally, in person or by telephone, between the parties to facilitate the orderly conduct of work contemplated by this ORDER, but no such communication shall alter or waive any rights and/or obligations of the parties under this ORDER. The terms of this agreement may be altered by mutual written consent.

- 29. All decisions of EPA under this ORDER
 - If Respondent has any objections to any EPA decision made pursuant to this ORDER, Respondent shall notify EPA in writing of its objections within fifteen (15) days of receipt of such decision. The parties shall then have an additional fifteen (15) days from the receipt by EPA of the notification of objection to reach agreement. If agreement cannot be reached on any issue(s) within this fifteen (15) day period, the dispute shall be resolved in favor of EPA. This resolution shall be deemed a final agency action. Respondent shall have the right to seek judicial review of this resolution in the appropriate Federal Court. In any such review, Respondent shall have the burden of petitioning the Court for modification of the decision(s) of EPA and shall have the burden of demonstrating that such decision(s) is arbitrary and capricious. Judicial review shall be limited to those issues which were not reconciled by agreement of all the parties to this ORDER.
- 30. The provisions of this ORDER shall apply to and be binding upon Respondent, its officers, directors, employees, agents, receivers, trustees, assignees, and contractors.
- 31. Nothing contained in this ORDER shall affect any right, claim or cause of action of any party hereto with respect to third parties.
- 32. The United States Government shall not be liable for any injuries or damages to persons or property resulting from acts or omissions of Respondent, its officers, directors, employees, agents, receivers, trustees, successors, assigns or contractors, in carrying out activities pursuant to this ORDER, nor shall the United States Government be held out as a party to any contract entered into by Respondent in carrying out activities pursuant to this ORDER.
- 33. If EPA determines that Respondent is not able to conduct the activities required by this ORDER in a satisfactory manner, is not able to conduct

the activities contained in the EPA approved proposal, or if activities carried out are deemed unsatisfactory, then EPA representatives may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the hazard at the property and/or facility of Respondent. Respondent may then be ordered to reimburse EPA or its representatives for the costs of such activity pursuant to Section 3013(d) of RCRA, 42 U.S.C. §6934(d).

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- 34. Respondent is advised that EPA may, in accordance with Section 3013(e) of RCRA, commence a civil action in the United States District Court, if Respondent fails or refuses to comply with this ORDER. Such Court shall have jurisdiction to require compliance with this ORDER and to assess a civil penalty not to exceed \$5,000 for each day during which such failure or refusal occurs.
- 35. Nothing contained in this ORDER shall be construed as limiting any rights or authority that EPA may now, or hereafter, have under RCRA, or any other law, statute or regulation. EPA specifically reserves the right to take appropriate removal, remedial, cost recovery and/or enforcement action pursuant to any law, statute or regulation, including, but not limited to, the right to seek and obtain civil relief and/or penalties, and criminal penalties where authorized, for any violation or law of this ORDER.
- 36. Respondent shall, within thirty (30) days of execution of this ORDER, post a bond or other security sufficient to guarantee performance of the tasks under this ORDER in a manner satisfactory to EPA.
- 37. Respondent shall give notice of this ORDER to any successor in interest prior to transfer of ownership of property and/or facility and shall simultaneously verify to EPA that such notice has been given.
- 38. This ORDER shall terminate when Respondent certifies that all requirements of this ORDER have been completed and EPA has approved such certification in writing to Respondent.

OR SUBPART 4
OF RCRA - FINANCIAL
ASSURANCES

1984.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

11/17/84

Dick Whittington, P.E.
Regional Administrator, Region 6
United States Environmental
Protection Agency
1201 Elm Street
Dallas, Texas 75270

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EXHIBIT A

SITE INVESTIGATION - GENERAL SCOPE OF WORK

As per the attached ORDER, Plateau, Inc., Bloomfield Refinery, must submit a detailed workplan for the monitoring, testing, analysis, and reporting of any hazardous waste contamination associated with the Bloomfield facility.

The proposal must focus on the evaluation of the rate and extent of migration of hazardous waste which has entered the groundwater system as a result of waste management practices at the Bloomfield refinery site.

The areas of immediate concern lie to the south, near monitor well #4, the oily water waste ponds in the central area of the plant, and the river terrace below the facility. (see attachment A). ALSO INCLUDE HARMONIC DITCH

SCOPE OF WORK

The proposed workplan for the groundwater investigation must address, but will not be limited to, the attached work elements.

WORK ELEMENTS

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I. Site hydrogeology

A. Description of soils

- 1.) Lithology and stratigraphy
- 2.) Groundwater occurrences and depth to groundwater
- 3.) Aquifer hydraulic properties including gradient, permeability, porosity, direction and velocity of groundwater flow

B. Well location and construction

- 1.) Rationale for well locations
- 2.) Number of wells and depths of completion
- 3.) Description of well dimensions and construction materials in light of pollutant characteristics

Diagrams and illustrations for this section should include:

- An area plan view with well locations, plotted on a base topographic or geologic map
- Soil boring and well construction logs
- Geologic cross sections indicating stratigraphy and saturated zones
- A water table and/or potentiometric map

II. Groundwater sampling equipment and procedures

A. Description of methods and equipment used for well development and evacuation

- 1.) Depth to groundwater prior to evacuation
- 2.) Volume of water evacuated before sampling

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B. Sampling equipment and procedures

Describe the following:

- 1.) Contaminants and chemical parameters selected for analysis and rationale
 - 2.) Sampling equipment and reason for selection in light of pollutant characteristics
- C. Handling and preservation techniques
- D. Laboratory analytical methodologies
- E. Quality assurance/quality control program
- F. Decontamination procedures for equipment

III. Documentation and records

- A. Schedule for project completion
- B. Health and safety plan
- C. Handling and disposal methods for drilling materials and purged well water.

Plateau File

OFFICE OF GENERAL COUNSEL
U.S. ENVIRONMENTAL PROTECTION AGENCY
1205 BRADLEY BLVD.
WASHINGTON, D.C. 20460
William Walker, General Counsel

April 27, 1984

Virginia L. Molino
Secretary & General Counsel
Suburban Propane Gas Corporation
334 Madison Avenue
CN 1915
Morristown, New Jersey 07960

Dear Ms. Molino:

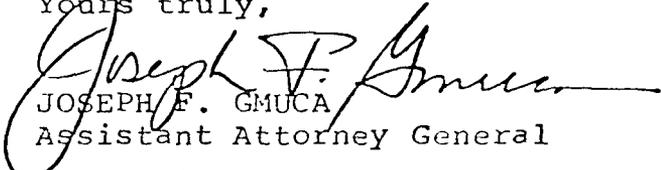
Your letter of April 18, 1984 to Anthony Drypolcher has been referred to me.

I suggest you contact Jim Turner of EPA's Regional Counsel office in Dallas concerning sampling results because the samples which were taken are in EPA's custody.

You will recall that you and I discussed the Plateau refinery's possible legal problems on April 16, 1984 and, I informed you at that time that I was the attorney representing this agency in matters concerning the Plateau refinery. In the future I will expect that you and any other counsel you associate with will contact me rather than our non-legal staff, so that you will comply with Rule 7-104(A)(1) of the Code of Professional Responsibility which requires that: "[d]uring the course of his representation of a client a lawyer shall not: communicate or cause another to communicate on the subject of the representation with a party he knows to be represented by a lawyer in that matter unless he has the prior consent of the lawyer representing such other party or is authorized by law to do so".

I will advise you if we think a meeting with you and your client will be beneficial. In the meantime, if you have any questions, please contact me.

Yours truly,


JOSEPH F. GMUCA
Assistant Attorney General

JFG/sb

cc: Bruce Garber, Esq.
Anthony Drypolcher

EQUAL OPPORTUNITY EMPLOYER