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APPENDICES

Appendix A Solid Waste Management Unit Summary

Appendix B Constituents of Concern for Wastes from Petroleum Processes

Appendix C Sampling Methods and Procedures

Appendix D Chemical Analytical Procedures

Appendix E Reporting Requirements

ATTACHMENTS

Attachment 1 Navajo ~~Refining Company Artesia Refinery RCRA Part B Post-closure Permit Application Sections 4.0 through 9.0, Appendix 2 and Appendix 3~~

Attachment 2 ~~Navajo Refining Company Artesia Refinery RCRA Part B Post-closure Permit Application Sections 13.0, 15.0, 16.0, Attachments B-4 through B-6 and B-8~~

LIST OF ACRONYMS

AOC	Area of Concern
AST	Aboveground Storage Tank
ASTM	American Society for Testing and Materials
bbls	Barrels
BGS	Below Ground Surface
BS/BSD	Blank Spike/Blank Spike Duplicate
CAMU	Corrective Action Management Unit
CEC	Cation Exchange Capacity
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
CMS	Corrective Measure Study
COC	Chain of Custody
DOT	U.S. Department of Transportation
DQO	Data Quality Objectives
DRO	Diesel-range organics
EC	Emergency Coordinator
EPA	U.S. Environmental Protection Agency
GC/MS	Gas Chromatography/Mass Spectrometry
GRO	Gasoline-range organics
HWB	Hazardous Waste Bureau
HWA	New Mexico Hazardous Waste Act
ICP	Integrated Contingency Plan
LDR	Land Disposal Restrictions

LIST OF ACRONYMS (Continued)

MSDS	Material Safety Data Sheet
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NMAC	New Mexico Administrative Code
NMED	New Mexico Environment Department
NCL	North Colony Landfarm Regulated Unit
OCD	New Mexico Department of Energy, Minerals and Natural Resources Oil Conservation Division
ORO	Oil-range organics
PARCC	Precision, Accuracy, Representativeness, Completeness, and Comparability
PAHs	Polynuclear Aromatic Hydrocarbons
PCBs	Polychlorinated Biphenyls
PID	Photo-ionization Detector
PPE	Personal Protective Equipment
QA/QC	Quality Assurance/Quality Control
QAPP	Quality Assurance Project Plans
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SAR	SWMU Assessment Report
SSL	Soil Screening Levels
SOP	Standard Operating Procedures
SVOCs	Semivolatile Organic Compounds
SWMU	Solid Waste Management Unit
TEL	Tetra Ethyl Lead Impoundment (Regulated Unit)

LIST OF ACRONYMS (Continued)

TMD	Three-mile Ditch
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage and Disposal Facility
ULSD	Ultra Low Sulfur Diesel
VOCs	Volatile Organic Compounds
WQCC	New Mexico Water Quality Control Commission

~~1~~MODULE I - GENERAL PERMIT CONDITIONS

1.1 EFFECT OF PERMIT

The Secretary of the New Mexico Environment Department (Secretary) issues this Post-Closure Care Permit (the Permit) to the Navajo Refining Company (Navajo), the owner and operator of the Artesia Refinery Facility (EPA ID Number NMD 048918817). This Permit authorizes and requires Navajo (the Permittee) to conduct closure and post-closure care at a hazardous waste surface impoundment and post-closure care at a closed hazardous waste impoundment and a closed hazardous waste land treatment unit at the Artesia Refinery. This Permit establishes the general and specific standards for these activities, pursuant to the New Mexico Hazardous Waste Act (HWA), NMSA 1978, 74-4-1 *et seq*. (Repl. Pamp. 1993) and the New Mexico Hazardous Waste Management Regulations, 20.4.1.100 NMAC *et seq*.

Compliance with this Permit during its term shall constitute compliance, for purposes of enforcement, with Subtitle C of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. 6901 *et. seq*. and the New Mexico Hazardous Waste Act and their implementing regulations. Compliance with this Permit shall not constitute a defense to any order issued or any action brought under Sections 74-4-10, 74-4-10.1 or 74-4-13 NMSA 1978; Section 3008 of RCRA, 42 U.S.C. 6928, Section 3013 of RCRA, 42 U.S.C. 6934, Section 7002(a)(1)(b) of RCRA, 42 U.S.C. 6972(a) or Section 7003 of RCRA; 42 U.S.C. 6973; or Sections 104, 106(a) or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. 9604, 9606(a) or 9607; or any other law providing for protection of public health or the environment. This permit does not convey any property rights or exclusive privilege, nor authorize any injury to persons or property, any invasion of other private rights, or any infringement of State or local laws or regulations pursuant to 20.4.1.900 NMAC incorporating 40 CFR 270.4 and 270.30(g).

This Permit consists of Permit Modules I through IV, Permit Appendices A through E and Permit Attachments 1 and 2. The Permittee shall comply with the post-closure care, corrective action, and other activities and standards specified in this Permit and the Permit Application.

1.2 PERMIT ACTIONS

1.2.1 Permit Modification, Suspension, and Revocation

This Permit may be modified, suspended or revoked for cause, as specified in Section 74-4-4.2 NMSA 1978 and 20.4.1.901.B and .900 NMAC (incorporating 40 CFR 270.41, 270.42, and 270.43). The filing of a request for a permit modification, suspension, or revocation, or the notification of planned changes or anticipated noncompliance on the part of the Permittee, does not stay the applicability or enforceability of any Permit condition. [20.4.1.900 NMAC incorporating 40 CFR 270.4(a) and 270.30(f)]

1.2.2 Permit Renewal

The Permittee may renew this Permit by submitting an application for a new permit at least 180 days before the expiration date of this Permit, in accordance with 20.4.1.900 NMAC (incorporating 40

CFR 270.10(h) and 270.30(b) and 40 CFR 124) and Permit Condition 1.5.3. In reviewing any application for a Permit renewal, the Secretary shall consider improvements in the state of control and measurement technology and changes in applicable regulations. [20.4.1.900 NMAC incorporating 40 CFR 270.30(b)]

1.3 SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby.

1.4 DEFINITIONS

Unless otherwise expressly provided herein, the terms used in this Permit shall have the meaning set forth in the HWA, RCRA, and/or their implementing regulations.

"AOC" means any area of concern that may have a release of hazardous waste or hazardous constituents, which is not from a solid waste management unit and is suspected or determined by the Secretary to pose a potential threat to human health or the environment.

“CAMU” means a corrective action management unit defined as an area within a facility that is used only for managing remediation wastes for implementing corrective action or cleanup at the Facility [20.4.1.100 NMAC and 20.4.1.500 NMAC (incorporating 40 CFR 260.10 and 264.552)].

“Evaporation Ponds” means Evaporation Ponds 2, 3, 5, and 6 encompassing approximately 91 acres and located approximately three miles east of the Artesia Refinery process areas adjacent to the Pecos River.

"Facility" means the Artesia Refinery owned by the Navajo Refining Company and located in Township 17 South, Range 26 East, Sections 1, 2, 9, 10, 11, 12 and the southern portion of Township 17 South, Range 27 East, Section 6, Eddy County, New Mexico, EPA ID No. NMD 048918817.

"Hazardous Constituent" means any constituent identified in 20.4.1.200 NMAC (incorporating Appendix VIII of 40 CFR Part 261), any constituent identified in 20.4.1.500 NMAC (incorporating Appendix IX of 40 CFR Part 264), any constituent identified in a hazardous waste listed in 20.4.1.200 NMAC (incorporating 40 CFR part 261 Subpart D), any constituent identified in a toxicity characteristic waste in 20.4.1.200 NMAC (incorporating 40 CFR 261.24, Table 1) or any other constituent determined to be hazardous by the Secretary.

"HWA" means the New Mexico Hazardous Waste Act, NMSA 1978, 74-4-1 *et seq*. (Repl. Pamp. 1993).

"MCLs" means Maximum Contaminant Levels under the Federal Safe Drinking Water Act, 42 U.S.C. 300f *et seq*.

“North Colony Landfarm” (NCL) means the approximately 4.25 acre land treatment unit located in the northwest corner of the Refinery North Division, adjacent to the north of above ground storage

tanks 834 and 838. Tank 815 is located within the boundaries of the NCL and has a capacity of 80,000 barrels (bbls). Tank 815 is used to store ultra low sulfur diesel (ULSD) fuel.

"OCD" means the New Mexico Department of Energy, Minerals and Natural Resources Oil Conservation Division.

"OCD standards" means the maximum allowable soil and groundwater contaminant concentrations listed in the New Mexico OCD Guidelines for Remediation of Leaks, Spills and Releases. [19.15.A NMAC through 19.15.D NMAC]

"Permittee" means the Navajo Refining Company Artesia Refinery.

"RCRA" means the Resource Conservation and Recovery Act, 42 U.S.C. 6901 *et seq*.

"Regional Administrator" means the Regional Administrator of EPA Region VI, or his or her designee or authorized representative.

"Secretary" means the Secretary of the New Mexico Environment Department (NMED) or the Secretary's designee or authorized representative.

"Solid waste management unit" or "SWMU" means any discernible unit at which solid wastes have been placed at any time, and from which the Secretary determines there may be a risk of a release of hazardous constituents, irrespective of whether the unit was intended for the management of solid or hazardous waste. Placement of solid waste includes one time and accidental events that were not remediated, as well as any unit or area at which solid waste has been routinely and systematically placed.

"Tetra-Ethyl Lead Impoundment" (TEL) means the approximately 0.9-acre land treatment unit located in the Refinery North Division adjacent to the east side of the wastewater treatment system.

"WQCC standards" means the maximum allowable ground water contaminant concentrations as listed at 20 6.2.3103 NMAC.

1.5 DUTIES AND REQUIREMENTS

1.5.1 Duty to Comply

The Permittee shall comply with all conditions in this Permit, except to the extent and for the duration such noncompliance is authorized by an emergency permit issued pursuant to 20.4.1.900 NMAC (incorporating 40 CFR 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of the HWA and/or RCRA and may subject the Permittee, its successors and assigns, officers, directors, employees, parents or subsidiaries, to an administrative or civil enforcement action, including civil penalties and injunctive relief, under Sections 74-4-10 or 74-10.1 NMSA 1978, or Section 3008(a) and (g) of RCRA, 42 U.S.C. 6928(a) and (g), or Section 3013 of RCRA, 42 U.S.C. 6934; to permit modification, suspension, revocation or denial under Section 74-4-4.2 NMSA 1978; to citizen suit under Section 7002(a) of RCRA, 42 U.S.C. 6972(a); to criminal penalties under Section 74-4-11 NMSA 1978 or Section 3008(d), (e) and (f) of RCRA, 42 U.S.C. 6928(d), (e) and (f); or to some combination of the foregoing.

1.5.2 Duty to Reapply

If the Permittee will continue an activity allowed or required by this Permit after the expiration date of this Permit, the Permittee shall submit a complete application for a new Permit at least 180 days before this Permit expires, unless an extension is granted by the Secretary. [20.4.1.900 NMAC incorporating 40 CFR 270.10(h) and 270.30(b)]

1.5.3 Permit Expiration

This Permit shall be effective for ten years from its effective date. [20.4.1.900 NMAC incorporating 40 CFR 270.50(a)] This Permit and all conditions herein will remain in effect beyond the Permit's expiration date, if the Permittee has submitted a timely, complete application for renewal of this Permit 180 days prior to the expiration date of this Permit, in accordance with 20.4.1.900 NMAC (incorporating 40 CFR 270.10 and 270.13 through 270.29) and, through no fault of the Permittee, the Secretary has not issued a new Permit on or before the expiration date of this Permit. [20.4.1.900 NMAC incorporating 40 CFR 270.10(h) and 270.51]

1.5.4 Duty to Mitigate

In the event of noncompliance with this Permit, the Permittee shall take all reasonable steps to minimize releases of petroleum, hazardous waste and hazardous constituents to the environment and shall carry out such measures as are reasonable to prevent significant adverse impacts on human health or the environment. [20.4.1.900 NMAC incorporating 40 CFR 270.30(d)]

1.5.5 Proper Operation and Maintenance

The Permittee shall at all times properly operate and maintain all facilities and systems of treatment and control and related appurtenances which are installed or used by the Permittee to achieve compliance with the conditions of this Permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance/quality control procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this Permit. [20.4.1.900 NMAC incorporating 40 CFR 270.30(e)]

1.5.6 Duty to Provide Information

The Permittee shall furnish to the Secretary, within a reasonable time period specified by the Secretary, any relevant information which the Secretary requests to determine whether cause exists for modifying, suspending, or revoking this Permit, or to determine compliance with this Permit. The Permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this Permit pursuant to 20.4.1.500 and 20.4.1.900 NMAC incorporating 40 CFR 264.74(a) and 270.30(h). Permit condition 1.5.6 shall not be construed to limit, in any manner, the Secretary's information gathering authority under Section 74-4-4.3 of the HWA, Section 3007(a) of RCRA, 42 U.S.C. 6927(a) or other applicable law.

1.5.7 Inspection and Entry

Pursuant to 20.4.1.900 NMAC, incorporating 40 CFR 270.30(i), the Permittee shall allow the Secretary, or authorized representatives, upon the presentation of credentials and other documents as may be required by law to:

a. Enter at reasonable times upon the Permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Permit;

b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Permit;

c. Inspect, at reasonable times, any Facility equipment (including monitoring and control equipment), practices, or operations regulated or required under this Permit; and

d. Sample or monitor, at reasonable times, for the purposes of assuring Permit compliance or as otherwise authorized by the HWA or RCRA, any substances or parameters at any location. [20.4.1.900 NMAC incorporating 40 CFR 270.30(i)]

Permit Condition 1.5.7 shall not be construed to limit, in any manner, the Secretary's inspection and entry authority under Section 74-4-4.3 of the HWA, Section 3007(a) of RCRA, 42 U.S.C. 6927(a) or any other applicable law.

1.5.8 Monitoring Records

1.5.8.a Records and Information

The Permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart or electronic recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, records of all data used to complete the Application for this Permit, and records from all ground-water monitoring wells and associated ground-water surface elevations for a period of at least three years from the date of the sample, measurement, report, record, certification, or Application, or until post-closure care and corrective action are approved as complete by the Secretary, whichever is later. The Secretary may extend these periods at any time, and these periods shall be automatically extended during the course of any unresolved enforcement action regarding the Facility. [20.4.1.500 and 20.4.1.900 NMAC incorporating 40 CFR 264.74(b) and 270.30(j)(2)]

1.5.8.b Monitoring Information

Records of monitoring information shall include:

i. The dates, exact place, and times of sampling or measurements;

ii. Identification of the individuals who performed the sampling or measurements;

iii. The dates analyses were performed;

iv. The chain-of-custody records and the name and address of the laboratory that performed the analyses;

v. The analytical techniques or methods used;

vi. The quality assurance/quality control procedures used; and

vii. The results of such analyses. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(j)(3))]

1.5.9 Reporting Planned Changes

The Permittee shall give notice to the Secretary, as soon as possible, of any planned physical alterations or additions to the Facility, of other changes to the Facility or activities that may impact the Permittee's compliance with this Permit~~,~~ or of any other instance of noncompliance with this Permit. [20.4.1.900 NMAC incorporating 40 CFR 270.30(l)(1), (2), and (10)]

1.5.10 Reporting Anticipated Noncompliance

The Permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity that may result in noncompliance with permit requirements. [20.4.1.900 NMAC incorporating 40 CFR 270.30(l)(2)]

1.5.11 Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts or submitted incorrect information in any document submitted to the Secretary, the Permittee shall promptly submit such facts or information in writing to the Secretary. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(11))]

1.5.12 Transfer of Permits

The Permittee shall not transfer this Permit to any person except after notice to the Secretary. The Secretary shall require modification or revocation and reissuance of this Permit, as specified by 20.4.1.901 and 20.4.1.900 NMAC (incorporating 40 CFR 270.40(b) and 270.41(b)(2)), to identify the new Permittee and incorporate such other requirements as may be necessary under the HWA and RCRA and implementing regulations. Before transferring ownership or operation of the Facility, the Permittee shall notify the new owner or operator in writing of the requirements of 20.4 NMAC, 40 CFR Parts 264 and 270 and this Permit. [20.4.1.500 and .900 NMAC incorporating 40 CFR 264.12(c) and 270.30(l)(3)]

1.5.13 Twenty-four Hour Reporting

1.5.13.a Oral Reporting

The Permittee shall report orally to the Secretary any noncompliance with this that may endanger human health or the environment. Such report shall be made within 24 hours from the time the Permittee becomes aware of the noncompliance and shall include:

i. Information concerning the release of any petroleum, hazardous waste or hazardous constituent at the Facility that may endanger public drinking water supplies;

ii. Information concerning the release or discharge of any petroleum, hazardous waste or hazardous constituent, or of a fire or explosion at the Facility, which could threaten the environment or human health at and outside the Facility. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(6)(i))]

1.5.13.b Description of Occurrences

The description of the occurrence and its cause shall include:

i. Name, address, and telephone number of the Permittee and the Facility;

ii. Date, time, and type of incident;

iii. Name and quantity of materials involved;

iv. The extent of injuries, if any;

v. An assessment of actual or potential hazards to the environment and human health at and outside the Facility; and

vi. Estimated quantity and disposition of recovered material that resulted from the incident. [20.4.1.900 NMAC (incorporating 40 CFR 270.30(l)(6)(ii))]

1.5.13.c Written Notice

The Permittee also shall submit a written notice to the Secretary within five calendar days of the time the Permittee becomes aware of the noncompliance under Permit Condition 1.5.13.a. above. The written notice shall contain the following information:

i. a description of the noncompliance and its cause;

ii. the period(s) of noncompliance (including exact dates and times), and, if the noncompliance has not been corrected, the anticipated time it is expected to be corrected; and

iii. the steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance or imminent hazard and to eliminate any hazard or threat.

The Secretary may waive the five-day written notice requirement in favor of a written report within 15 days. [20.4.1.900 NMAC incorporating 40 CFR 270.30(l)(6)(iii)]

1.5.13.d Other Noncompliance

The Permittee shall report all other instances of noncompliance not otherwise required to be reported above, at the time monitoring reports are submitted. The reports shall contain the information listed in Permit Condition 1.5.13. [20.4.1.900 NMAC incorporating 40 CFR 270.30(l)(10)]

1.5.14 Other Information

Whenever the Permittee becomes aware that it failed to submit any relevant facts in the Permit Application, or submitted incorrect information in a Permit Application or in any report to the Secretary, the Permittee shall promptly notify the Secretary of such facts or information. [20.4.1.900 NMAC incorporating 40 CFR 270.30(l)(11)]

1.6 SIGNATORY REQUIREMENT

The Permittee shall sign and certify, as specified in 20.4.1.900 NMAC (incorporating 40 CFR 270.11), all applications, reports, or information submitted to the Secretary [20.4.1.900 NMAC incorporating 40 CFR 270.30(k)]. The certification, signed by a responsible official of Navajo Refining Company, shall state: "To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this report is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

1.7 REPORTS, NOTIFICATIONS, AND SUBMISSIONS TO THE SECRETARY

All reports, notifications, or other submissions that are required by this Permit to be submitted to the Secretary shall be sent by certified mail or hand-delivered to:

Bureau Chief
Hazardous Waste Bureau
New Mexico Environment Department
2905 Rodeo Park Drive East
Building 1
Santa Fe, NM 87505-6303

1.8 CONFIDENTIAL INFORMATION

The Permittee may claim confidentiality for any information submitted to or requested by the Secretary or required by this Permit, to the extent authorized by Section 74-4-4.3(D) NMSA 1978 and 20.4.1.900 NMAC incorporating 40 CFR 270.12.

1.9 DOCUMENTS TO BE MAINTAINED AT THE FACILITY

The Permittee shall maintain at the Facility, until post-closure care and corrective action are approved as complete by the Secretary, the following documents and all amendments, revisions, and modifications to these documents:

a. This Permit and its attachments;

b. Inspection schedules, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.15(b)(2) and this Permit;

c. Operating record, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.73 and this Permit;

d. Post-Closure Plan, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.118(a) and this Permit;

e. Annually-adjusted cost estimate for facility post-closure, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.144(d) and this Permit;

f. The schedule for submittal of corrective action work plans approved by the Secretary and all corrective action work plans and other documents prepared to fulfill the requirements of this Permit.

g. Groundwater monitoring and all other corrective action documents required by this Permit ~~Condition 1.5. above~~.

1.10 ENFORCEMENT

1.10.1 Waiver of Defenses

In any judicial action brought in New Mexico District Court for the First Judicial District under the HWA, or in the United States District Court for the District of New Mexico under RCRA (or under the HWA asserting supplemental jurisdiction under 28 U.S.C. 1367), the Permittee waives all objections and defenses it may have to the jurisdiction of either such State or federal court or to venue in either such State or federal district.

1.10.2 Admissibility of Data

In any administrative or judicial action to enforce this Permit, the Permittee waives any objection to the admissibility as evidence of any data generated pursuant to this Permit.

~~2~~MODULE II - GENERAL FACILITY CONDITIONS

2.1 DESIGN AND OPERATION OF FACILITY

The Permittee shall maintain and operate the Facility to minimize the possibility of a fire, explosion, or any unplanned, sudden, or non-sudden release of hazardous waste constituents to air, soil, surface water, or groundwater that could threaten human health or the environment. [20.4.1.500 NMAC incorporating 40 CFR 264.31] The Permittee must comply with the requirements of 20.4.1.500 incorporating 40 CFR 264 Subparts AA, BB, and CC as applicable.

2.2 OFF-SITE WASTES

The Permittee shall not accept hazardous waste at the North Colony Landfarm (NCL) or Tetra-ethyl Lead Impoundment (TEL) from any off-site source. Remediation waste generated as part of corrective action activities at the Facility may be disposed at the Evaporation Ponds location in a corrective action management unit (CAMU) established pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.552. The design and siting of the CAMU shall be approved by the Secretary prior to the construction of the CAMU and placement of any waste materials in the CAMU.

2.3 SECURITY

The Permittee shall comply with the security provisions specified in 20.4.1.500 NMAC incorporating 40 CFR 264.14(b)(2) and (c) and in Permit Attachment 1 (Permit Application, Section 4.0), in order to prevent unknowing or unauthorized entry onto the NCL, TEL or Evaporation Ponds by persons or livestock.

2.4 GENERAL INSPECTION REQUIREMENTS

The Permittee shall implement the inspection schedule specified in Permit Attachment 1 (Permit Application Section 5.0). The Permittee shall remedy any deterioration or malfunction discovered by such an inspection. The Permittee shall maintain records of inspections in accordance with Permit Attachment 1 (Permit Application, Section 5.0, Figures B-2 through B-4) and in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.15.

2.5 PERSONNEL TRAINING

The Permittee shall conduct personnel training, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.16. This training program shall follow the procedures included in the computer-based training program maintained at the Navajo Refining Company Administrative offices located at the Artesia Refinery.. The Permittee shall make the computer-based training program available for review immediately upon request by the Secretary. The Permittee shall maintain training documents and records, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.16(d) and (e).

2.6 SPECIAL PROVISIONS FOR IGNITABLE, REACTIVE, OR INCOMPATIBLE WASTE

The Permittee shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste in accordance with the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.17(a).

2.7 PREPAREDNESS AND PREVENTION

2.7.1 Required Equipment

The Permittee shall maintain at the facility, at a minimum, the emergency equipment specified in Permit Attachment 1 or the most recent version of the ~~SPCC~~ Integrated Contingency Plan (ICP) (as updated) and ~~the Facility Response Plan(Permit Application, Section 7.0 and Appendices 2 and 3)~~ maintained at the Facility. [20.4.1.500 NMAC incorporating 40 CFR 264.32] The Permittee~~s~~ shall submit an updated ~~SPCC and Facility Response Plans~~ ICP to the NMED within 30 days upon request by the Secretary.

2.7.2 Testing and Maintenance of Equipment

The Permittee shall test and maintain the equipment specified in Permit Condition 2.7.1 above, as necessary, to assure its proper operation in time of emergency. [20.4.1.500 NMAC incorporating 40 CFR 264.33]

2.7.3 Access to Communications and Alarm System

The Permittee shall maintain access to the communications and alarm system specified in Permit Attachment 1 ~~of this Permit (Permit Application, Section 7.0 and Appendices 2 and 3)~~ or the most recent version of the ~~SPCC Plan and the Facility Response Plan~~ICP maintained at the Facility. [20.4.1.500 NMAC incorporating 40 CFR 264.34] The Permittee~~s~~ shall submit an updated ~~SPCC and Facility Response Plans~~ICP to the NMED within 30 days upon request by the Secretary.

2.7.4 Arrangements with Local Authorities

The Permittee shall maintain emergency arrangements with state and local authorities, as specified in the Permit Application, Appendices 2 and 3. [20.4.1.500 NMAC incorporating 40 CFR 264.37]

2.8 CONTINGENCY PLAN

2.8.1 Implementation of Plan

The Permittee shall immediately carry out the provisions of the Contingency Plan, Permit Attachment 1 ~~(Permit Application Section 7.0)~~ or the most recent version of the ~~SPCC Plan and the Facility Response Plan maintained at the Facility~~ICP, whenever there is a fire, explosion, or release of hazardous waste or constituents that could threaten human health or the environment. The plan must cover the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264subpart D. The Permittee~~s~~ shall submit an updated ~~SPCC and Facility Response Plans~~ICP to the NMED within 30 days upon request by the Secretary.

2.8.2 Copies of Plan

The Permittee shall maintain copies of the contingency plan at the Facility and submit copies of the plan to local emergency response agencies in accordance with the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.53.

2.8.3 Amendments to Plan

The Permittee shall review and immediately amend, if necessary, the Contingency Plan, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.54.

2.8.4 Emergency Coordinator

A trained emergency coordinator shall be available either on the premises or on call and able to reach the Facility within a short time at all times in case of an emergency, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.55.

2.9 RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Permittee shall comply with the following requirements:

2.9.1 Operating Record

The Permittee shall maintain at the Facility, until the end of the post-closure care period or completion of corrective action, whichever is later, a written record of waste, soil, and groundwater analyses. The written operating record shall include all waste management and other information required under 20.4.1.500 NMAC incorporating 40 CFR 264.73(b) (4), (5), (6), (8), (10), (12) and (14) and Permit Conditions 1.5.8. and 1.5.13. [20.4.1.500 NMAC incorporating 40 CFR 264.73]

2.9.2 Biennial Report

The Permittee shall comply with the biennial reporting requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.75.

2.10 GENERAL CLOSURE REQUIREMENTS

2.10.1 Performance Standard

The Permittee shall close the regulated units, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.111 and in accordance with this Permit. The Permittee shall implement the Closure Plans included in Permit Attachment 2 (Permit Application Section 13.0) and pursuant to the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.112(a) and (b), 264.178, 264.197, 264.228, 264.258, 264.280, 264.310, and 264.351.

2.10.2 Amendment to Closure Plan

The Permittee shall amend the Closure Plan, pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.112(c)), whenever necessary.

2.10.3 Notification of Closure

The Permittee shall notify the Secretary in writing at least 60 days prior to the date on which he expects to begin closure of the CAMU if it is constructed at the facility, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.112(d) and 40 CFR 264 Subpart S and amendments (67 Federal Register (FR) 2962-3029, January 22, 2002).

2.10.4 Time Allowed For Closure

After receiving the final volume of waste, the Permittee shall treat, remove from the unit or facility, or dispose of on site all hazardous waste and shall complete closure activities, in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.113 and 40 CFR 264 Subpart S and amendments (67 FR 2962-3029, January 22, 2002).

2.10.5 Disposal or Decontamination of Equipment, Structures, and Soils

The Permittee shall decontaminate and/or dispose of all contaminated equipment, structures, and soils, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.114 and Permit Attachment 2 (Permit Application Section13.0).

2.10.6 Certification of Closure

Upon completion of closure of each hazardous waste disposal unit, the Permittee shall certify that the facility has been closed in accordance with the specifications in the Closure Plan, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.115.

2.10.7 Survey Plat

The Permittee shall submit a survey plat no later than the submission of certification of closure of each hazardous waste disposal unit, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.116.

2.11 GENERAL POST-CLOSURE REQUIREMENTS

2.11.1 Post-closure Care Period

The Permittee shall begin post-closure care for each regulated unit after completion of closure of the unit and continue for 30 years after that date. Post-closure care shall be conducted pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.117 and the Post-Closure Plan, Permit Attachment 2. The Post-Closure Plan shall meet the requirements of this Permit and be conducted in accordance with the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.118(a) and (b), 264.197, 264.228, 264.258, 264.280, and 264.310 also must be covered by the attached plan.

2.11.2 Post-Closure Security

The Permittee shall maintain security at the Facility during the post-closure care period, in accordance with the Post-closure Plan, Permit Attachment 2, and 20.4.1.500 NMAC incorporating 40 CFR 264.117(b).

2.11.3 Amendment to Post-closure Plan

The Permittee shall amend the Post-closure Plan pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.118(d), whenever necessary.

2.11.4 Post-closure Notices

2.11.5 Records

No later than 60 days after certification of closure of each hazardous waste disposal unit, the Permittee shall submit records of the type, location, and quantity of hazardous waste disposed within each cell or disposal unit, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.119(a).

2.11.5.a Notification and Certification

Within 60 days of certification of closure of the first hazardous waste disposal unit and the last hazardous waste disposal unit, the Permittee shall do the following:

i. Record a notation on the deed to the Facility property, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.119(b)(1).

ii. Submit to the Secretary a certification that a notation on the deed to the Facility property, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.119(b)(2), has been recorded.

2.11.5.b Modifications to the Permit

The Permittee shall request and obtain a Permit modification prior to post-closure removal of hazardous wastes, hazardous waste residues, or contaminated soils, pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.119(c).

2.11.6 Certification of Completion of Post-closure Care

The Permittee shall certify that the post-closure care period was performed in accordance with the specifications in the Post-closure Plan and as required by 20.4.1.500 NMAC incorporating 40 CFR 264.120.

2.12 COST ESTIMATE FOR FACILITY CLOSURE AND POST-CLOSURE

2.12.1 Cost Estimates

The Permittee's most recent closure and post-closure cost estimates, prepared in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.142 and 264.144 shall be included in Permit Attachment 2 (Permit Application Sections 15.0 and 16.0).

2.12.2 Adjustments to the Cost Estimates

The Permittee must adjust the closure and post-closure cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with 20.4.1.500 NMAC incorporating 40 CFR 264.143 and 264.145 and the conditions included in this Permit. The Permittee must adjust the closure and post-closure cost estimates for inflation within 30 days after the close of the firm's fiscal year and before submission of updated information to the Secretary, as specified in 20.4.1.500 NMAC incorporating 40 CFR 264.142(b) and 264.144(b).

2.12.3 Revision of the Cost Estimates

The Permittee must revise the closure cost estimate or post-closure cost estimates whenever there is a change in the facility's Closure Plan or Post-closure Plan, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.142(c) and 264.144(c).

2.12.4 Records of Cost Estimates

The Permittee must keep at the Facility the latest closure cost estimate and post-closure cost estimates as required by 20.4.1.500 NMAC incorporating 40 CFR 264.142(d) and 264.144(d).

2.13 FINANCIAL ASSURANCE FOR FACILITY CLOSURE AND POST-CLOSURE

The Permittee shall demonstrate continuous compliance with 20.4.1.500 NMAC incorporating 40 CFR 264.143, 264.145, 264.146 by providing documentation of financial assurance, as required by 20.4.1.500 NMAC incorporating 40 CFR 264.151 or 264.149, in at least the amount of the cost estimates required by Permit Condition 2.12. Changes in financial assurance mechanisms must be approved by the Secretary pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.143 ,264.145 or 264.149.

2.14 LIABILITY REQUIREMENTS

The Permittee shall demonstrate continuous compliance with the requirement of 20.4.1.500 NMAC incorporating 40 CFR 264.147(a) to have and maintain liability coverage for sudden and accidental occurrences in the amount of at least $1 million per occurrence, with an annual aggregate of at least $2 million, exclusive of legal defense costs.

2.15 INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with 20.4.1.500 NMAC incorporating 40 CFR 264.148, whenever necessary in the case that the owner/operator, guarantors or financial institutions become incapable of fulfilling the financial assurance obligations required by 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart H.

~~3~~MODULE III – POST-CLOSURE CARE

III.A. MODULE HIGHLIGHTS

This Permit implements post-closure care requirements for soil contamination left in place after closure of the following: (1) a land treatment unit (NCL) used for treatment of RCRA-regulated hazardous waste, (2) an surface impoundment (TEL) used for the storage and weathering of regulated tetra-ethyl lead- and petroleum-contaminated soils and sludges and, (3) surface impoundments (evaporation ponds) that received treated and untreated refinery wastewater.

The NCL is an approximately 4.25-acre land treatment unit located adjacent to the north of aboveground diesel storage tanks 834 and 838. The NCL contains within its boundaries Tank 815, an 80,0000 bbls tank used to store ULSD fuel. Tank 815 is located on the eastern half of the NCL and is surrounded by earthen berms that provide secondary containment for this tank. The NCL received hazardous wastes (K049, K050, K051 and K052) between 1980 and 1990. The New Mexico Health Department Environmental Improvement Division (NMEID) issued Navajo a land treatment demonstration permit for the NCL in 1989. The NMEID was the predecessor to the NMED. A land treatment permit was not issued after the land treatment demonstration permit expired in 1990. Soil and groundwater beneath the NCL has been affected by possible releases from the landfarm and from petroleum release(s) from the adjacent tank farm (tanks 834 and 838) located south of the NCL.

The TEL site (tetra ethyl lead weathering impoundment site) is an approximately 0.9-acre surface impoundment used to treat oily wastes and other hazardous materials. The unit also was used historically for weathering of pipe and other materials generated in refinery tetra ethyl lead processes. The piping and other process materials were removed from the site after weathering. Nonhazardous wastes were placed in the TEL site between 1980 and 1983. Placement of waste in the TEL site was discontinued in 1983. The TEL surface impoundment was capped with crushed and compacted caliche and revegetated in 1989. Closure was approved by NMEID in June 1989. Post-closure care is in effect.

The Evaporation Ponds (surface impoundments) are located adjacent to the Pecos River approximately three miles east of the refinery. There are a total of five evaporation ponds. Pond 1 received refinery wastewater between the early 1930s and 1987 and is considered a part of solid waste management unit (SWMU) 4. Ponds 2, 3, 5, and 6 were constructed between 1966 and 1988. Pond 4 was never constructed. The combined surface area of evaporation ponds 2 through 6 is approximately 95 acres. Wastewater effluent discharged directly from the refinery to Pond 1 via an open ditch (Three-Mile Ditch [TMD]) until 1987. In 1987, discharge to Pond 1 was discontinued and Pond 1 was taken out of service. Refinery wastewater was discharged from the refinery through a wastewater conveyance pipe that replaced the TMD to Pond 2 between 1987 and 1994 and to pond 5 between 1994 and 1999. Ponds 3 and 6 received overflow from Ponds 2 and 5. Discharge to Ponds 2, 3, 5 and 6 was discontinued in September 1999. Navajo began operation of an on-site wastewater treatment system that discharges to the City of Artesia publicly owned treatment works (POTW) and to a Class I injection well owned by Navajo in October 1999. The Class I injection well operates under a discharge permit issued by the New Mexico Oil Conservation Division (OCD).

Post-closure care requirements shall remain in place at the NCL, TEL and Evaporation Ponds for 30 years after closure, unless the post-closure period is shortened or lengthened pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(2)). The Permittee is required to implement a groundwater monitoring program, consisting of monitoring and sampling monitoring wells in the vicinity of these units until completion of corrective action and the demonstration of attainment of soil and groundwater cleanup standards for three years, pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.96, 264.97 and 264.98).

3.1 UNIT IDENTIFICATION

The Permittee shall provide post-closure care for the following hazardous waste management units, subject to the terms and conditions of this permit:

North Colony Landfarm (NCL)

Tetra-ethyl Lead surface impoundment (TEL)

Evaporation Ponds 2 through 6 surface impoundments

3.2 POST-CLOSURE PROCEDURES AND USE OF PROPERTY

3.2.1 Post-Closure Care Period

The Permittee shall comply with post-closure care requirements for 30 years after completion of closure of each regulated unit, unless the Secretary approves shortening or lengthening the post-closure care period pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(2)) or until corrective action is completed pursuant to 20.4.1.400 NMAC (incorporating 40 CFR 264.100). Post-closure care shall be conducted in accordance with 20.4.1.500 NMAC incorporating 40 CFR Part 264, Subpart G, and the Post-closure Plan included in Permit Attachment 2 (Permit Application Volume 1 Section 13.0) and subject to the terms and conditions of this Permit. [20.4.1.500 NMAC (incorporating 40 CFR 264.117)]

The Permittee shall implement the Post-closure Plan included in Permit Attachment 2 (Permit Application Section 13.0) and in accordance with the requirements of this Permit. All post-closure care activities must be conducted in accordance with the provisions of the Post-closure Plan pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.117(d) and 264.118(b) and the requirements included in this Permit.

3.2.2 Groundwater Monitoring

The Permittee shall monitor the ground water, maintain all ground water monitoring wells and comply with all other applicable requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart F) during the post-closure period. [20.4.1.500 NMAC (incorporating 40 CFR 264.117(a)(1))]

3.2.3 Post-closure Care of Regulated Units

Post-closure care of regulated units shall be conducted after closure has been completed. The requirements for post-closure care at each regulated unit are listed below

3.2.3.a North Colony Landfarm Post-closure Care

The Permittee shall comply with the requirements for land treatment units at the NCL in accordance with Permit Attachment 2 ~~(Attachment B-4 of the Permit Application)~~ and shall:

a. certify in writing that a cover has been established at the NCL by January 31, 2010. ~~Site investigation activities and soil and groundwater monitoring are currently in place during this post-closure care period~~. The established vegetative cover is located on the western portion of the NCL and shall be ~~was revegetated~~ using plants native to the area ~~to reduce the possibility of airborne migration of residual waste constituents from the unit. The NCL will be irrigated at the beginning of the revegetation process in order to encourage plant growth.~~ Tank 815 and the area surrounding the tank within the secondary containment shall ~~will~~ serve~~s~~ as cover ~~during their operation on the facility~~. In the event that Tank 815 is removed in the future, the NCL must be characterized to determine if releases of petroleum-related contamination to the environment have occurred. Any necessary remediation of contaminated soils and groundwater must be completed and the eastern portion of the NCL shall be revegetated in the same manner as the western portions of the unit within 360 days of removal of the tank. Post closure monitoring shall continue throughout the post-closure care period established by NMED. ~~over the NCL~~

b. maintain the integrity and effectiveness of the final vegetative cover;

c~~b~~. prevent run-on and run-off from eroding or otherwise damaging the vegetative cover;

d~~c~~. protect and maintain surveyed benchmarks used in complying with the surveying and record keeping requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.280 and 264.309). [20.4.1.500 NMAC (incorporating 40 CFR 264.310(b))]; and

e~~d~~. conduct sampling of the treatment zone (the non-native soils present in the NCL at depths above the contact with native soils) and of the native soils immediately beneath the treatment zone [20.4.1.500 NMAC (incorporating 40 CFR 264.278)] at intervals of five ~~four(4)~~ years, ~~nine (9) years and 19 years after the effective date of this Permit~~throughout the post-closure period beginning in 2014. The sampling shall consist of obtaining a minimum of 24 samples from each zone (a minimum of a total of 48 samples) during each event at locations approved by the Secretary. In 2014 the sampling shall also include collection of 16 soil samples from the center of the Tank 815 secondary containment berms (four samples must be obtained from each side of the secondary containment structure). The soil samples shall be submitted to an analytical laboratory for chemical analysis of VOCs, SVOCs, RCRA metals, GRO, DRO and ORO by analytical methods approved by the Secretary. The Permittee shall submit a Soil Sampling Work Plan for sampling the treatment zone at the NCL to the Secretary for approval no less than ~~30~~ 60 days prior to each the sampling event. If the ~~Department~~ Secretary disapproves the Soil Sampling Work Plan, the Secretary will notify the Permittee in writing of the Soil Sampling Work Plan's deficiencies and specify a due date for submission of a revised Soil Sampling Work Plan. Upon receipt of such notification of

disapproval, the Permittee shall submit to the Secretary, within the specified timeframe, a revised Soil Sampling Work Plan that corrects the deficiencies. The Secretary must approve the plan, in writing, prior to the implementation of each Soil Sampling Work Plan.

f. install four soil borings around Tank 815 every five years beginning in 2014 and continue throughout the post-closure care period. The borings must be drilled to the water table and soil samples shall be collected and screened in the field for the presence of petroleum hydrocarbons at 2.5 foot intervals. Discrete soil samples must be collected from the treatment zone (non-native soils present in the NCL at depths above the contact with the native soils), from the native soils immediately beneath the treatment zone [20.4.1.500 NMAC (incorporating 40 CFR § 264.278)] and from the water table. The soil samples shall be submitted to an analytical laboratory for chemical analysis of VOCs, SVOCs, RCRA metals, GRO, DRO and ORO using analytical methods approved by the Secretary. The soil boring locations must be approved by the Secretary. These sampling requirements shall be incorporated into the Soil Sampling Work Plan discussed in subparagraph e. above.

g. notify the Secretary and the Oil Conservation Division (OCD) within 24 hours of discovery, and in accordance with Section 1.5.13 (Twenty-four Hour Reporting), of a release from Tank 815 on the ground surface, through soil or groundwater sampling or monitoring, or from any other portion of the Facility that may affect the NCL. The Permittee shall notify the Secretary, in writing, within five calendar days of the discovery of such a release in accordance with Permit Section 1.5.13.c.

h. monitoring well 108 (MW-108) must be sampled semi-annually beginning in 2010. The groundwater samples shall be submitted to an analytical laboratory for chemical analysis of VOCs, SVOCs, RCRA metals, GRO, DRO extended, and general chemistry parameters. The sampling frequency and chemical analysis maybe modified by the Secretary as necessary. The monitoring requirements for MW-108 must also be included in the Facility Wide Groundwater Monitoring Work Plan, as updated.

i. comply with the provisions of the Oil Conservation Division (OCD) Discharge Permit (and any modifications thereto) for Tank 815.

j. inspect the final cover on the NCL monthly and after major storm events for the items listed in the inspection logs for the NCL in Attachment 1 and Attachment 2 of this Permit.

k. inspect Tank 815 daily for signs of deterioration, leaks, or accumulation inside the containment area. At a minimum, Tank 815 must also be gauged once per day to determine the product level in the tank to check for inventory losses. The product level measurements shall be conducted using a method capable of detecting inventory losses of less than one gallon per day. The visual inspections and gauging must be recorded on inspection sheets and kept in the Facility operating record. Such records must be made available for the Secretary's review upon request. The Permittee must provide to the Secretary a plan pertaining to ultrasonic or other Department and OCD-approved product level monitoring method for Tank 815 no later than July 31, 2010. In addition, the Permittee shall:

l. conduct weekly visual inspections of the locations where piping penetrates the secondary containment berm located south of Tank 815.

m. incorporate Tank 815 inspection requirements into the ICP (Tank 815 shall be included in Volume II: Annexes, Annex 7, Section 7.7.3.3) and adhere to procedures describe therein to prevent spills from occurring and to direct response activities should they occur.

n. document all inspection requirements identified in this Section (3.2.3.a) using appropriate inspection logs included in Attachments 1 and Attachment 2 of this Permit and in the appropriate sections of the ICP and include the documentation in the Facility Operating Record.

3.2.3.b Tetra-ethyl Lead Surface Impoundment Post-closure Care

The Permittee shall comply with the requirements for surface impoundment units at the TEL, shall manage the TEL in accordance with Attachment B-6 of the Permit Application and shall:

a. maintain the integrity and effectiveness of the final cover, including making repairs to the cover, as necessary, to correct the effects of settling, subsidence, erosion, or other events;

b. prevent run-on and run-off from eroding or otherwise damaging the final cover;

c. protect and maintain surveyed benchmarks used in complying with the surveying and record keeping requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.309; and

d. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F). [20.4.1.500 NMAC incorporating 40 CFR 264.310(b)]

3.2.3.c Evaporation Ponds Post-closure Care

The Permittee shall comply with the requirements for the surface impoundments, known as the Evaporation Ponds, after closure and corrective action are completed and shall:

a. maintain the integrity and effectiveness of the final cover, including making repairs to the cover, as necessary, to correct the effects of settling, subsidence, erosion, or other events;

b. prevent run-on and run-off from eroding or otherwise damaging the final cover;

c. protect and maintain surveyed benchmarks used in complying with the surveying and record keeping requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.309); and

d. maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F. [20.4.1.500 NMAC (incorporating 40 CFR 264.228(b))]

3.2.3.d Corrective Action Management Units

If a corrective action management unit is constructed for the purpose of disposal of remediation waste at the Evaporation Ponds location, the Permittee shall manage CAMU, if constructed, during operation, closure and after closure is complete, in accordance with the following requirements:

a. Site and construct the CAMU in accordance with the requirements for corrective action management units outlined in 20.4.1.500 NMAC incorporating 40 CFR 264.552 and the final CAMU rule (67FR 2962-3029, January 22, 2002);

b. Maintain the integrity and effectiveness of the final cover, including making repairs to the cover, as necessary, to correct the effects of settling, subsidence, erosion, or other events;

c. Prevent run-on and run-off from eroding or otherwise damaging the final cover;

d. Protect and maintain surveyed benchmarks used in complying with the surveying and record keeping requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.309; and

e. Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F). [20.4.1.500 NMAC (incorporating 40 CFR 264.228(b))]

3.2.4 Security

The Permittee shall maintain security at the Facility during the post-closure care period, in accordance with the Post-closure Care Plan and all security requirements specified in this Permit and the Permit Attachment 1 (Permit Application, Part B, Section 4.0). [20.4.1.500 NMAC incorporating 40 CFR 264.117(b)]

3.2.5 Post-closure Care Maintenance

The Permittee shall not allow any use of the Facility that will disturb the integrity of the final cover or the function of the Facility's monitoring or corrective action systems during the post-closure care period. [20.4.1.500 NMAC incorporating 40 CFR 264.117(c)]

3.2.6 Inspections

The Permittee shall inspect the components, structures and equipment at the NCL, TEL and Evaporation Ponds, as appropriate in accordance with the requirements specified in Permit Condition 2.4 and Permit Attachment 1 (Permit Application Part B, Section 5.0) pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(1)(ii).

3.3 NOTICES AND CERTIFICATION

3.3.1 Record of Land Use

No later than 60 days after completion of the site investigations specified in this Permit and selection of corrective measures for the Evaporation Ponds in accordance with the requirements of this Permit, the Permittee shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Secretary, a record of the type, location, and quantity of hazardous wastes present at the Evaporation Ponds. The Permittee shall comply with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.119(a)) described above upon closure of a CAMU, if a CAMU is constructed at the Evaporation Ponds site. Within 60 days after this Permit is issued, the Permittee shall:

a. Record, in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.119(b)(1), a notation on the deed to the facility property or on some other instrument that is normally examined during the title search that will in perpetuity notify any potential purchaser of the property that:

i) the land has been used to manage hazardous wastes;

ii) use of the land is restricted under 20.4.1.500 NMAC incorporating 40 CFR 264.116 and 264.119(a); and,

iii) the survey plats and records of the type, location, and quantity of hazardous wastes applied to the NCL, TEL and Evaporation Ponds at the Facility have been filed with the Secretary and the City of Artesia and Eddy County, New Mexico in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.119(b)(1)(iii).

b. Submit a certification to the Secretary, signed by the Permittee, that he or she has recorded the notations specified above, including a copy of the documents in which the notations have been placed [20.4.1.500 NMAC incorporating 40 CFR 264.119(b)(2].

3.3.2 Removal of Waste or Contaminated Soils

If the Permittee wishes to remove any hazardous waste, hazardous waste residue, or contaminated soils from the NCL, TEL or the Evaporation Ponds, then he or she shall request a modification to this Permit in accordance with the applicable requirements at 20.4.1.900 NMAC incorporating 40 CFR Parts 270 and 124. The Permittee shall demonstrate that the removal of hazardous waste will satisfy all applicable HWA and RCRA requirements for generation and transport of hazardous waste. [20.4.1.500 NMAC (incorporating 40 CFR 264.119(c))]

3.3.3 Certification of Completion of Post-closure Care

No later than 60 days after completion of the established post-closure care period for each regulated unit, the Permittee shall submit to the Secretary, by registered mail, a certification that post-closure care was performed at the specific unit in accordance with the specifications in the Post-closure Plan. The certification must be signed by the Permittee and an independent New Mexico registered professional engineer. Documentation supporting the independent, registered professional engineer's certification for each unit must be furnished to the Secretary upon request until the Secretary releases the Permittee from the financial assurance requirements for post-closure care under 20.4.1.500 NMAC incorporating 40 CFR 264.145(i). [20.4.1.500 NMAC incorporating 40 CFR 264.120]

3.4 FINANCIAL ASSURANCE

The Permittee shall maintain financial assurance and comply with all applicable requirements of 20.4.1.500 NMAC (incorporating 40 CFR Part 264, Subpart H), during the post-closure period. The Permittee shall demonstrate continuous compliance with financial assurance requirements by providing documentation of financial assurance in compliance with 20.4.1.500 NMAC (incorporating 40 CFR 264.145 and 264.151), in at least the amount of the cost estimate required by 20.4.1.500 NMAC (incorporating 40 CFR 264.144), and Permit Condition 3.4.1. Changes in

financial assurance mechanisms must be approved by the Secretary pursuant to 20.4.1.500 NMAC (incorporating 40 CFR 264.145).

3.4.1 Cost Estimate for Facility Post-Closure

The Permittee's most recent closure and post-closure cost estimate for each regulated unit, prepared in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.142 and 264.144), is included in Permit Attachment 2 (Permit Application, Part B, Sections 15 and 16 and Attachment B-8).

a. The Permittee shall adjust the post-closure cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument used to comply with 20.4.1.500 NMAC incorporating 40 CFR 264.145, and Permit Condition 3.5. If a financial test or corporate guarantee is used as the financial instrument, the cost estimate must be updated for inflation within 30 days after the end of the Permittee's fiscal year. [20.4.1.500 NMAC incorporating 40 CFR 264.144(b)]

b. The Permittee shall revise the post-closure cost estimate for each regulated unit whenever there is a change in the Facility's Post-Closure Plan for that regulated unit. [20.4.1.500 NMAC (incorporating 40 CFR 264.144(c))]

c. The Permittee shall keep in the operating record at the Facility the latest post-closure cost estimates. [20.4.1.500 NMAC (incorporating 40 CFR 264.144(d))]

d. Financial assurance funds may be released, upon approval by the Secretary, if the value of the financial assurance mechanism exceeds the remaining cost of post-closure care at a specific regulated unit. The Permittee must demonstrate to the Secretary that the value of the financial assurance mechanism exceeds the remaining cost of post-closure care, in order for the Secretary to approve a release of funds. [20.4.1.500 NMAC (incorporating 40 CFR 264.145(a)(10))]

e. The Permittee shall submit itemized bills to the Secretary when requesting reimbursement from the trustee for post-closure care under 20.4.1.500 NMAC (incorporating 40 CFR 264.145(a)(11)).

3.5 POST-CLOSURE PERMIT MODIFICATIONS

The Permittee shall request a Permit modification to authorize a change in the approved unit-specific Post-Closure Plan when a change is made in the Post-Closure Plan. This request shall be in accordance with applicable requirements of 20.4.1.900 NMAC (incorporating 40 CFR Part 270, Subpart D and 40 CFR Part 124), and must include a class determination request and a copy of the proposed amended unit-specific Post-closure Plan for approval by the Secretary. The Permittee shall request a Permit modification whenever changes in operating plans or Facility design affect the approved Post-closure Plans for any regulated units, or other events occur that affect the approved Post-closure Plans. The Permittee shall submit a written request for a Permit modification at least 60 days prior to the proposed change in Facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected any of the Post-Closure Plans. [20.4.1.500 NMAC (incorporating 40 CFR 264.118(d))]

3.6 INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Permittee shall comply with 20.4.1.500 NMAC incorporating 40 CFR 264.148, in the event of bankruptcy proceedings naming the owner or operator or bankruptcy of the financial assurance issuing institution. [20.4.1.500 NMAC incorporating 40 CFR 264.148]

4MODULE IV - CORRECTIVE ACTION

4.1 CORRECTIVE ACTION PROGRAM

The corrective action program that the Permittee shall follow to address the release to soil and groundwater from the Evaporation Ponds, NCL, TEL or other units, if detected, during the post-closure care period, is described in this Permit Module and in the Appendices to this Permit. Additional monitoring which is included in the Permit Application is incorporated herein by reference and made an enforceable part of this Permit. The investigation approach, sampling strategy, monitoring plan and remediation option, if applicable, for corrective action for detected soil and groundwater contamination is specific to the contaminants and release event(s) and is generally described in this Permit.

4.1.1 GROUND WATER, SOIL AND SURFACE WATER CLEANUP LEVELS

The Permittee shall attain the cleanup levels specified below when implementing the closure, post-closure and corrective action requirements of this Permit.

4.1.1.a Ground water Cleanup Levels

1. The Permittee shall attain the following cleanup levels for all hazardous waste and hazardous constituents in groundwater:

    a. For any contaminant for which EPA has adopted a maximum contaminant level (MCL) for drinking water under 40 CFR parts 141 and 143, the MCL shall be the cleanup level;

    b. For any contaminant for which the New Mexico Water Quality Control Commission (WQCC) has adopted numeric standards for ground water listed in 20.6.2.3103 NMAC, the ground water standard shall be the cleanup level; and

    c. For any contaminant that the WQCC has identified as a toxic pollutant listed in 20.6.2.7.WW NMAC, the level approved by NMED under paragraph 2 or 3 below shall be the cleanup level;

    For any contaminant for which more than one of the cleanup levels set forth in subparagraphs a, b, and c above would apply, the lowest (or otherwise most protective) level shall be the applicable cleanup level.

2. If a cleanup level under Item 1 above does not exist for a carcinogenic hazardous waste or hazardous constituent, then the Permittee shall use the most recent version of the EPA *Regional Screening Levels for Chemical Contaminants at Superfund Sites* (RSLs) for tap water and a target excess cancer risk level of 10^{-5} to develop a proposed cleanup level for NMED approval. The Permittee may use other scientific or regulatory information currently available to the public to develop and propose a cleanup level for

NMED approval provided that the level is lower (or otherwise more protective) than the RSL.

3. If a cleanup level under Item 1 above does not exist for a noncarcinogenic hazardous waste or hazardous constituent, then the Permittee shall use the most recent version of the EPA RSLs for tap water and a Hazard Index (HI) of one (1.0) to develop a proposed cleanup level for NMED approval. The Permittee may use other scientific or regulatory information currently available to the public to develop and propose a cleanup level for NMED approval provided that the level is lower (or otherwise more protective) than the RSL.

4. The Permittee must use the most recent version of NMED's Total Petroleum Hydrocarbon (TPH) Screening Guidelines (as it may be updated) to determine cleanup levels for petroleum hydrocarbons detected in groundwater.

4.1.1.b Soil Cleanup Levels

The Permittee shall attain the following cleanup levels for hazardous waste and hazardous constituents in soil:

1. For all individual contaminants for which NMED has specified a soil screening level in NMED's *Technical Background Document for Development of Soil Screening Levels*, the residential or industrial land use scenario cleanup level shall be the screening level specified in the most recent version of that document. The method for determining cleanup levels for sites with multiple contaminants shall follow NMED's *Technical Background Document for Development of Soil Screening Levels (as updated)* and items 2, 3 and 4 below, as applicable;

2. The Permittee shall propose a soil cleanup level for PCBs based on NMED's Position Paper Risk-based Remediation of Polychlorinated Biphenyls at RCRA Corrective Action Sites (March 2000, as updated);

3. The Permittee shall use NMED's *Total Petroleum Hydrocarbon (TPH) Screening Guidelines* (as it may be updated) to determine soil cleanup levels for petroleum hydrocarbons; and

4. If a NMED soil screening level has not been established for a hazardous waste or hazardous constituent, the Permittee shall propose for NMED approval, a cleanup level based on the most recent version of the EPA RSLs (based on a HI of one (1.0) for compounds designated as "n" (noncarcinogen effects), "max" (maximum concentration), and "sat" (soil saturation concentration), or ten times the EPA Region RSLs for compounds designated "c" (carcinogen effects) (*i.e.*, a target excess cancer risk level of 10^{-5}).

4.1.1.c Land Use Determination

All soil cleanup levels shall be based on a residential land use scenario unless NMED determines that an alternate land use is appropriate (*e.g.*, subsistence farming, cultural, or industrial). The Permittee may only propose an alternate land use with less stringent cleanup levels (e.g., industrial)

if NMED or EPA can legally and practicably enforce the institutional controls limiting the land use. If an alternate land use for which NMED or EPA has not established soil cleanup levels is determined to be the current and reasonably foreseeable future land use, then the Permittee may propose cleanup levels based on a risk assessment using a target excess cancer risk level of 10^{-5} for carcinogenic hazardous waste or hazardous constituent or, for noncarcinogenic hazardous waste or hazardous constituent, a HI of one (1.0).

4.1.1.d Surface Water Cleanup Levels

The Respondents shall comply with the surface water quality standards outlined in the Clean Water Act (33 U.S.C. §§ 1251 to 1387), the New Mexico WQCC Regulations (20.6.2 NMAC), the State of New Mexico Standards for Interstate and Intrastate Surface Waters (20.6.4 NMAC) and the procedures for alternative abatement standards (20.6.2.4103 NMAC).

4.1.1.e Ecological Risk cleanup levels

The Permittee shall derive cleanup levels for each hazardous waste and hazardous constituent for each ecological zone at the Facility using the methodology in NMED's *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening–Level Ecological Risk Assessment.* If the ecological risk evaluation indicates that a lower cleanup level for a hazardous waste or hazardous constituent in groundwater, soil, or surface water is necessary to protect environmental receptors, NMED may establish cleanup levels based on ecological risk for hazardous waste or hazardous constituents in groundwater, soil, or surface water that are lower than levels that are solely protective of human health.

4.1.1.f Background Concentrations

If the naturally occurring (background) concentration of a hazardous waste or hazardous constituent in ground water, soil, or surface water exceeds the standards specified above, then the cleanup level shall be the background concentration. To use background concentration as a cleanup level, the Permittee must obtain a written background determination from NMED.

4.1.1.g Variance from Cleanup Levels

The Permittee may seek a variance from a cleanup level for soil or ground water as follows;

4.1.1.g.i WQCC Standards

The Permittee may seek a technical infeasibility determination or alternative abatement standard from a WQCC standard in accordance with 20.6.2.4103.E or F NMAC.

4.1.1.g.ii Soil Standards and Non-WQCC Ground water Standards

The Permittee may seek a variance from any cleanup level for soil or for ground water (other than a WQCC standard) by submitting a written request to NMED for a determination that attainment of the cleanup level is technically infeasible or otherwise impracticable due to conflict with other environmental laws or requirements for the preservation of cultural resources. If based on technical

infeasibility, the request shall include a demonstration of technical or physical impossibility of attaining the cleanup level using potential corrective action remedies. If, based on conflict with other environmental laws or requirements for the preservation of cultural resources, the request shall include documentation showing that Permittee has attempted to resolve the conflict or mitigate the impact on cultural or natural resources and shall explain why mitigating measures cannot resolve the conflict or adequately protect the cultural or natural resource (e.g., consultation and a determination of incidental taking or reasonable and prudent measures to minimize the impact under 16 U.S.C. § 1536). All requests shall include a discussion of the effectiveness of potential corrective action remedies, whether the proposed variance will allow a present or future hazard to public health or the environment, and any other information required by the NMED. In addition, the request shall propose alternate cleanup levels for NMED approval, based on the effectiveness of potential corrective action remedies and a site-specific risk assessment based on NMED's guidance, *Technical Background Document for Development of Soil Screening Levels* (August 2006 as updated), *Assessing Human Health Risks Posed by Chemicals: Screening Level Risk Assessment* (March 2000), and *Guidance for Assessing Ecological Risks Posed by Chemicals: Screening-Level Ecological Risk Assessment* (March 2000, as updated).

~~4.1.1~~4.1.2 CORRECTIVE MEASURES

The Permittee shall implement corrective measures at the Facility, as necessary, in accordance with the requirements of this Section (4). The results of the investigations required in this Permit, and other information available to the Secretary, will be used as the basis for determining whether further investigation or corrective measures are necessary at each SWMU, AOC or other Facility site. The general procedures for implementing corrective measures are described in this Section (4).

4.2 INTERIM MEASURES

4.2.1 General

The Secretary will require interim measures, if the Secretary determines that such measures are necessary, to reduce or prevent migration of contaminants or human or environmental exposure to contaminants while long-term corrective action remedies are evaluated and implemented. Upon making such a determination, the Department will notify the Permittee.

4.2.2 Interim Measures Work Plan

Within 90 days after receiving notification from the Secretary that interim measures are required, the Permittee shall submit to the Secretary for approval an Interim Measures Work Plan that shall include an implementation schedule.

4.2.3 Approval of Interim Measures Work Plan

If the Department disapproves the Interim Measures Work Plan, the Secretary will notify the Permittee in writing of the Interim Measures Work Plan's deficiencies and specify a due date for submission of a revised Interim Measures Work Plan. Upon receipt of such notification of disapproval, the Permittee shall submit to the Secretary, within the specified timeframe, a revised Interim Measures Work Plan that corrects the deficiencies.

4.2.4 Interim Measures Implementation

The Permittee shall implement the interim measures in accordance with the approved Interim Measures Work Plan and implementation schedule.

4.2.5 Emergency Interim Measures

The Permittee may determine, during implementation of site investigation activities, that emergency interim measures are necessary to address an immediate threat of harm to human health or the environment. The Permittee shall notify the Secretary within three 3 days of discovery of the facts giving rise to the threat, and shall propose emergency interim measures to address the threat. If the Secretary approves the emergency interim measures in writing, the Permittee may implement the emergency interim measures without submitting an interim measures work plan.

4.2.6 Interim Measure Report

Within 90 days after completion of interim measures, the Permittee shall submit to the Secretary an Interim Measures Report summarizing the results of the interim measures. The report shall include copies of the results of all field screening, monitoring, sampling, analysis and other data generated as part of the interim measures implementation.

4.3 RISK ANALYSIS

4.3.1 General

The Permittee shall attain the cleanup goals outlined in Module IV of this Permit for all media at each site or unit for which the Secretary determines that corrective action is necessary to protect human health or the environment. The Permittee may propose to demonstrate to the Secretary that achievement of a cleanup goal at a particular site is technically infeasible. The Permittee shall have the burden of making such demonstration to the Secretary's satisfaction. If the Permittee proposes to demonstrate the technical infeasibility of achievement of a groundwater cleanup goal that is a WQCC standard, the applicable requirements of the WQCC Regulations, 6.2.4103.E and 4103.F NMAC, shall be followed. If the Secretary approves the technical infeasibility demonstration, the Permittee shall prepare a site-specific risk assessment for that site to identify alternate cleanup goals or, if the WQCC Regulations apply, alternate abatement standards. The risk assessment shall include both a human health risk assessment and an ecological risk assessment.

4.3.2 Risk Analysis Report

Within 90 days after receiving from the Secretary a written determination that a technical infeasibility demonstration has been approved, the Permittee shall submit to the Secretary for approval a Risk Analysis Report for that site. The Permittee shall follow the Risk Analysis Report format outlined in Appendix E.5 of this Permit.

4.3.2.a Conceptual Site Model

The risk analysis shall include information on the expected fate and transport of contaminants detected at the site or unit including a list of all sources of contamination at the site. Sources that are

no longer considered to be releasing petroleum-related and hazardous constituents, but represent the point of origination for contaminants transported to other locations shall be included. The discussion of fate and transport shall address potential migration of each petroleum-related and hazardous constituent in each medium, potential breakdown products and their migration, and anticipated pathways of exposure for human and ecological receptors.

For human health risk assessments, the conceptual site model shall include residential land use as the future land use for all risk assessments. Site-specific future land use may be included, provided that written approval to consider a site-specific nonresidential future land use scenario has been obtained from the Secretary prior to inclusion in the risk assessment.

Conceptual site models presented for ecological risk assessments shall identify assessment endpoints and measurement receptors for the site. The discussion of the model shall explain how the measurement receptors for the site are protective of the wildlife receptors.

4.3.2.b Risk Screening Levels

The risk assessment shall include the actual screening values used for each contaminant for comparison to all human health and ecological risk screening levels. The Department's soil screening levels (SSLs) for residential soil shall be used to screen soil for human health. For those contaminants not appearing on the NMED's SSL table, the EPA ~~Region 6~~ RSLs ~~soil screening~~must be ~~value~~ adjusted to meet the NMED's target risk goal of 10^{-5} for total risk for carcinogens shall be used to screen the site for human health risks. Screening for ecological risk shall be conducted using the U.S. EPA ecological soil screening levels (ECO-SSLs), or derive a screening level using the methodology in the NMED's "Guidance for Assessing Ecological Risks Posed by Chemicals: Screening –Level Ecological Risk Assessment" (as updated). If no valid toxicological studies exist for a particular receptor or contaminant, the contaminant/receptor combination shall be addressed using qualitative methods. If an approved site-specific risk scenario is used for the human health risk assessment, the Permittees shall include all toxicity information and exposure assessment equations used for the site-specific scenario as well as the sources for that information. Other regulatory levels applicable to screening the site, such as drinking water MCLs and WQCC standards, shall also be included in the risk analysis.

4.4 CORRECTIVE MEASURES STUDY

4.4.1 General

The Secretary will require corrective measures at a site if the Secretary determines, based on the Investigation Report and other information available to the Secretary, that there has been a release of petroleum-related constituents, hazardous waste or hazardous waste constituents into the environment at the site and that corrective action is necessary to protect human health or the environment. Upon making such a determination, the Secretary will notify the Permittee.

4.4.2 Corrective Measures Study Report

Within 180 days after receiving notification from the Secretary that a corrective measures study is required, the Permittee shall submit to the Secretary for approval a Corrective Measures Study

Report. The Permittee shall follow the Corrective Measures Evaluation Report format outlined in Appendix E.6 of this Permit. The corrective measures study shall evaluate potential remedial alternatives and shall recommend a preferred remedy that will be protective of human health and the environment and attain the appropriate cleanup goals. The Corrective Measures Study Report shall, at a minimum, comply with Appendix E.6 of this Permit and include the following:

a. A description of the location, status, and current use of the site.

b. A description of the history of site operations and the history of releases of petroleum-related and hazardous contaminants.

c. A description of site surface conditions.

d. A description of site subsurface conditions.

e. A description of on- and off-site contamination in all affected media.

f. An identification and description of all sources of petroleum-related and hazardous contaminants.

g. An identification and description of contaminant migration pathways.

h. An identification and description of potential receptors.

i. A description of cleanup standards or other regulatory criteria.

j. An identification and description of a range of remedy alternatives.

k. Remedial alternative pilot or bench scale testing results.

l. A detailed evaluation and rating of each of the remedy alternatives, applying the criteria set forth in Appendix E.6.j ~~and I.C.4~~.

m. An identification of a proposed preferred remedy or remedies.

n. Preliminary design criteria of the selected remedy or remedies.

o. A proposed schedule for implementation of the preferred remedy.

4.4.3 Cleanup Standards

The Permittee shall select corrective measures that are capable of achieving the cleanup standards and goals outlined in Module IV of this Permit or, if the cleanup standards or goals cannot be achieved, approved risk-based cleanup goals established by a risk analysis.

4.4.4 Remedy Evaluation Criteria

4.4.4.a Threshold Criteria

The Permittee shall evaluate each of the remedy alternatives for the following threshold criteria. To be selected, the remedy alternative must:

a. Be protective of human health and the environment.

b. Attain applicable media cleanup standards.

c. Control the source or sources of releases so as to reduce or eliminate, to the extent practicable, further releases of hazardous waste and hazardous constituents that may pose a threat to human health and the environment.

d. Comply with applicable standards for management of wastes.

4.4.4.b Remedial Alternative Evaluation Criteria

The Permittee~~s~~ shall evaluate each of the remedy alternatives for the factors described in this Section (4.4.4.b). These factors shall be balanced in proposing a preferred alternative. Presumptive remedies may be used as an alternative to the corrective measures evaluation process upon approval by the Secretary. Public participation requirements shall apply to the implementation of presumptive remedies.

4.4.4.b.i Long-Term Reliability and Effectiveness

The remedy shall be evaluated for long-term reliability and effectiveness. This factor includes consideration of the magnitude of risks that will remain after implementation of the remedy; the extent of long-term monitoring or other management that will be required after implementation of the remedy; the uncertainties associated with leaving hazardous wastes or hazardous waste constituents in place; and the potential for failure of the remedy. A remedy that reduces risks with little long-term management, and that has proven effective under similar conditions, shall be preferred.

4.4.4.b.ii Reduction of Toxicity, Mobility, or Volume

The remedy shall be evaluated for its reduction in the toxicity, mobility, and volume of petroleum-related constituents, hazardous wastes and hazardous constituents. A remedy that uses treatment to more completely and permanently reduce the toxicity, mobility, and volume of petroleum-related constituents, hazardous wastes and hazardous constituents shall be preferred.

4.4.4.b.iii Short-Term Effectiveness

The remedy shall be evaluated for its short-term effectiveness. This factor includes consideration of the short-term reduction in existing risks that the remedy would achieve; the time needed to achieve that reduction; and the short-term risks that might be posed to the community, workers, and the

environment during implementation of the remedy. A remedy that quickly reduces short-term risks, without creating significant additional risks, shall be preferred.

4.4.4.b.iv Implementability

The remedy shall be evaluated for its implementability, or the difficulty of implementing the remedy. This factor includes consideration of installation and construction difficulties; operation and maintenance difficulties; difficulties with cleanup technology; permitting and approvals; and the availability of necessary equipment, services, expertise, and storage and disposal capacity. A remedy that can be implemented quickly and easily, and poses fewer and lesser difficulties, shall be preferred.

4.4.4.b.v Cost

The remedy shall be evaluated for its cost. This factor includes a consideration of both capital costs, and operation and maintenance costs. Capital costs shall include, without limitation, construction and installation costs; equipment costs; land development costs; and indirect costs including engineering costs, legal fees, permitting fees, startup and shakedown costs, and contingency allowances. Operation and maintenance costs shall include, without limitation, operating labor and materials costs; maintenance labor and materials costs; replacement costs; utilities; monitoring and reporting costs; administrative costs; indirect costs; and contingency allowances. All costs shall be calculated based on their net present value. A remedy that is less costly, but does not sacrifice protection of health and the environment, shall be preferred.

4.4.5 Approval of Corrective Measures Evaluation Report

If the Secretary disapproves the Corrective Measures Study Report, the Secretary will notify the Permittee in writing of the Corrective Measures Study's deficiencies and specify a due date for submission of a revised Corrective Measures Study Report. Upon receipt of such notification of disapproval, the Permittee shall submit to the Secretary, within the specified time, a revised Corrective Measures Study Report that corrects the deficiencies. If the Secretary approves the Corrective Measures Study Report, the Secretary will notify the Permittee in writing.

4.4.6 Statement of Basis

Upon approval of the Corrective Measures Study and remedy selection, the Secretary will select a remedy or remedies for the subject unit. The Secretary will issue a Statement of Basis for selection of the remedy, and will receive public comment on the remedy. The public comment period will extend for 60 days from the date of the public notice of the Statement of Basis. The Secretary will select a final remedy and issue a response to public comments within 90 days, or other appropriate time, after the end of the public comment period.

4.5 CORRECTIVE MEASURES IMPLEMENTATION

4.5.1 General

The Permittee shall implement the final remedy selected by the Secretary.

4.5.2 Corrective Measures Implementation Plan

Within 90 days after the Secretary's selection of a final remedy, or such other time as the Secretary determines, the Permittee shall submit to the Secretary for approval a Corrective Measures Implementation Plan outlining the design, construction, operation, maintenance, and performance monitoring for the selected remedy, and a schedule for its implementation. The Corrective Measures Implementation Plan shall, at a minimum, include the following elements:

a. A description of the selected final remedy.

b. A description of the cleanup goals and remediation system objectives.

c. An identification and description of the qualifications of all persons, consultants, and contractors that will be implementing the remedy.

d. Detailed engineering design drawings and systems specifications for all elements of the remedy.

e. A construction work plan.

f. An operation and maintenance plan.

g. The results of any remedy pilot tests.

h. A plan for monitoring the performance of the remedy, including sampling and laboratory analysis of all affected media.

i. A waste management plan.

j. A proposed schedule for submission to the Secretary of periodic progress reports.

k. A proposed schedule for implementation of the remedy.

4.5.3 Health and Safety Plan

The Permittee shall conduct all activities in accordance with the Health and Safety Plan as described in the most recent versions of Navajo Refining Company's Work Permit System (Safe Work-Hazardous Assessment, Hot Work Plan, Confined Space Entry Plan, Excavation Permit and Emergency Plan) during all construction, operation, maintenance, and monitoring activities conducted during corrective measures implementation.

4.5.4 Progress Reports

The Permittee shall submit to the Secretary progress reports in accordance with the schedule approved in the Corrective Measures Implementation Plan. The progress reports shall, at a minimum, include the following information:

a. A description of the remedy work completed during the reporting period.

b. A summary of all problems, potential problems, or delays encountered during the reporting period.

c. A description of all actions taken to eliminate or mitigate the problems, potential problems, or delays.

d. A discussion of the remedy work projected for the next reporting period, including all sampling events.

e. Copies of the results of all monitoring, including sampling and analysis, and other data generated during the reporting period.

f. Copies of all waste disposal records generated during the reporting period.

4.5.5 Remedy Completion

4.5.5.a Remedy Completion Report

Within ninety (90) days after completion of remedy, the Permittee shall submit to the Secretary a Remedy Completion Report. The report shall, at a minimum, include the following items:

a. A summary of the work completed.

b. A statement, signed by a registered professional engineer, that the remedy has been completed in full satisfaction of the terms of this Permit.

c. As-built drawings and specifications signed and stamped by a registered professional engineer.

d. Copies of the results of all monitoring, including sampling and analysis, and other data generated during the remedy implementation, if not already submitted in a progress report.

e. Copies of all waste disposal records, not already submitted in a progress report.

f. A certification, signed by a responsible official of Navajo Refining Company, stating: "To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this report is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4.5.5.b Certification of Completion

Upon receipt of the Remedy Completion Report, the Secretary will determine whether the remedy has been completed in full satisfaction of the terms of this Permit. The Secretary may conduct an inspection of the site or unit, or request additional information from the Permittee, to make this determination. If the Secretary determines that the remedy has not been satisfactorily completed, it will notify the Permittee in writing of the actions that are necessary to complete the remedy. The Permittee shall implement such actions in accordance with the notification. If the Secretary determines that the remedy has been satisfactorily completed, it will issue to the Permittee a written

Certification of Completion of the remedy for that site or unit. The Permittee may then petition the Secretary for a Corrective Action Complete determination.

4.6 CORRECTIVE ACTION FOR ~~REGULATED UNITS~~PERMITTED UNITS

4.6.1 North Colony Landfarm (NCL)

4.6.1.a Corrective Action for Soil

a. The Permittee shall comply with the sampling strategy for soils, consisting of a sampling program and, if necessary, further characterization, as described in this Permit Module and the Permit Appendices. The Permittee shall notify NMED if there is a statistically significant increase in concentrations of petroleum-related constituents or hazardous constituents in the soils located in the treatment zone (non-native soils present in the NCL at depths above the contact with native soils) relative to the concentrations detected during previous (1995) sampling results, in soils located beneath the treatment zone (native soils present at depths directly [less than one foot] beneath the treatment zone) [20.4.1.500 NMAC incorporating 40 CFR 264.278] or in groundwater beneath, or downgradient from, the treatment zone:

b. If the Permittee demonstrates attainment of soil remediation standards for land treatment units in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.271 and demonstrates that soil and groundwater quality beneath and down gradient of the NCL meets the applicable requirements for soil and groundwater cleanup in accordance with the clean up levels established in Permit Section 4.1.1, the applicable requirements of 20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F, ~~NMED soil screening guidelines, NMED TPH cleanup guidance~~, and the OCD soil cleanup guidelines outlined in 19.15 NMAC, ~~and WQCC groundwater cleanup standards outlined in 20 6.2.3103 NMAC~~ then the Permittee may submit a request to the Secretary to shorten the post-closure care period in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(i). The Secretary may extend the post-closure care period applicable to the NCL the Secretary determines that soil or groundwater cleanup goals have not been attained or if an extended period is necessary to protect human health and the environment. [20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(ii)]

4.6.1.b Corrective Action for Groundwater

The Permittee shall comply with the monitoring program for groundwater specified in this Permit Module (4); and in accordance with the requirements of 20.4.1.500 NMAC incorporating 40 CFR Part 264, Subpart F and the cleanup levels established in Permit Section 4.1.1~~WQCC standards included in 20 6.2 NMAC~~. The Permittee shall recover phase-separated hydrocarbons, where present, beneath the NCL and both up gradient and down gradient from the subject unit.

a. General Requirements

i. Groundwater Protection Standard

(a)Hazardous Constituents. The Permittee shall monitor at the locations, frequencies, and for the hazardous constituents, and chemical analyses established in the ~~specified in~~ Facility Wide Groundwater Monitoring Work Plan. ~~20.6.2.3103 NMAC and the constituents listed in 20.4.1.500 NMAC Appendix IX that are included in Appendix B of this permit [the modified Skinner List (Exhibit 3, EPA RCRA Delisting Program Guidance Manual for the Petitioner, March 23, 2000]. Groundwater sampling at and in the vicinity of the NCL will include chemical analyses for the modified Skinner List analytes including, but not limited to, the following petroleum-related and hazardous constituents:~~

~~Benzene~~

~~Ethylbenzene~~

~~Toluene~~

~~Total Xylenes~~

~~PAHs as total Naphthalene plus monomethylnaphthalenes~~

~~Bis(2-ethylhexyl)phthalate (DEHP)~~

~~Arsenic~~

~~Lead~~

~~Chromium [20.4.1.500 NMAC (incorporating 40 CFR 264.93)~~

~~The Permittee also shall analyze groundwater samples at the NCL for DRO and for general chemistry parameters included in 20.6.2.3103 NMAC.~~

(b)Concentration Limits. The maximum concentrations of hazardous constituents in groundwater shall not exceed the cleanup standards established in Section 4.1.1. ~~shall not exceed the lesser of WQCC standards or the EPA MCLs (incorporating 40 CFR Part 141) and include~~:

~~Benzene 5µg/L~~

~~Ethylbenzene 700µg/L~~

~~Toluene 750µg/L~~

~~Total Xylenes 620µg/L~~

~~PAHs 30µg/L~~

~~[as total Naphthalene plus monomethylnaphthalenes]~~

~~DEHP 6µg/L~~

~~Lead 15µg/L~~

~~Arsenic 50µg/L~~

~~Chromium 50µg/L~~

~~[20.4.1.500 NMAC incorporating 40 CFR 264.94]~~

~~The EPA Region VI Human Health Medium-Specific Screening Level for Tap Water shall be considered the concentration limit in groundwater for those constituents for which a MCL or WQCC standard has not been established.~~

(c)Point of Compliance. The concentration(s) shall not exceed the cleanup standards established in Section 4.1.1 and ~~limits referenced in Permit Condition 4.6.1.b(b)~~ shall apply at and down gradient from the intercept of the uppermost aquifer and monitoring wells NCL-32, NCL-33, NCL-34 ~~and~~ NCL-44, and MW-108. [20.4.1.500 NMAC incorporating 40 CFR 264.95]

(d) The Permittee shall continue to conduct compliance monitoring until the post-closure care period is complete pursuant to 20.4.1.900 NMAC incorporating 40 CFR 264.99(b) and 270.14 (c)(7). ~~-~~Compliance monitoring shall continue until the groundwater protection standard as defined in 4.6.1.b.a. has been achieved for a period of three years. [20.4.1.500 NMAC incorporating 40 CFR 264.100 (f)]

(e) If the Permittee or the Secretary determines that the Compliance Monitoring Program established by this Permit no longer satisfies the requirements of RCRA, the HWA, and pursuant regulations, then the Permittee shall submit an application for a Permit modification, within 90 days of making such determination, to make any appropriate changes to the program. [20.4.1.500 NMAC (incorporating 40 CFR 264.100(h))]

ii. Groundwater Monitoring

(a) The Permittee shall maintain a ground water monitoring program to demonstrate the effectiveness of the corrective action program for groundwater and that meets the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.97).

(b) The Permittee shall maintain groundwater monitoring wells at the locations of the compliance points and at the locations of monitoring wells NCL-49, MW-18, MW-45, MW-53, MW-54A, MW-55, MW-56 and at all additional locations required by the Secretary. [20.4.1.500 and 900 NMAC incorporating 40 CFR 264.97 and 270.14(c)]

(c) The Permittee shall monitor the wells at the NCL and compliance points and the identified constituents as required by the Facility Wide Groundwater Monitoring Work Plan. The results of such monitoring and sampling must be included in the Annual Groundwater Monitoring Report. ~~listed in 4.1.2.b.a.i(c) and 4.1.2.b.a.ii(b) above for the hazardous constituents on a semi-annual basis during the post-closure care period pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.93 and submit groundwater monitoring reports to the Secretary in the format described in Appendix E of this Permit.~~ The Secretary may require groundwater monitoring at additional locations and intervals.

(d) The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer each time groundwater is sampled. [20.4.1.500 NMAC (incorporating 40 CFR 264.98)]

iii. Groundwater Surface Elevation

The Permittee shall determine the ground-water surface elevation each time groundwater is sampled at each well as specified by the Facility Wide Groundwater Monitoring Work Plan~~and at least on a semi-annual basis~~. [20.4.1.500 NMAC (incorporating 40 CFR 264.97(f))]

iv. Sampling and Analysis Procedures

The Permittee shall comply with the procedures specified in Appendices C and D of this Permit when obtaining and analyzing samples from the ground water monitoring wells. [20.4.1.500 NMAC incorporating 40 CFR 264.97(d) and (e)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [20.4.1.900 NMAC incorporating 40 CFR 270.30(j)(1)]. The method used to obtain a representative sample to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Secretary. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis or an equivalent method approved by the Secretary.

v. Statistical Procedures

When evaluating the monitoring results to determine the effects of corrective action measures using statistical evaluation, the Permittee shall comply with the procedures specified in 20.4.1.500 NMAC [incorporating 40 CFR 264.97(h) and 264.97(i)(1), (5) and (6)], if statistical evaluation is determined to be appropriate by the Secretary.

vi. Record Keeping and Reporting

The Permittee shall enter all monitoring, testing and analytical data obtained in the operating record. The data must include all computations, calculated means, variances, and results of the statistical tests specified in Permit Condition 4.6.1.b.a.ii~~(g)~~ above. [20.4.1.500 NMAC (incorporating 40 CFR 264.97)]

The Permittee shall submit a written report to the Secretary summarizing the results of the groundwater monitoring and sampling program [20. 4.1.500 NMAC incorporating 40 CFR 264.77(c) and 264.100(g)] within 90 days after the completion of field activities for each monitoring event or an alternate date specified by the Secretary. The reports shall be submitted in the format described in Appendix E of this Permit.

vii. Well Replacement and Abandonment

The Permittee shall replace any groundwater monitoring well removed from service with a monitoring well located as close to the abandoned well as practicable. The Permittee shall submit

the proposed location and construction specifications for the new well to the Secretary for prior approval.

The Permittee shall report the surveyed location and elevation of a new monitoring well when the well is installed.

The Permittee shall obtain approval from the Secretary to delete wells from the monitoring program. Wells deleted from the monitoring program shall be plugged and abandoned by the Permittee in accordance with *Rules and Regulations Governing Well Driller Licensing; Construction, Repair, and Plugging of Wells* [19.27.4 NMAC] ~~so as~~ to ensure that the abandoned well will not serve to transport contaminants to the aquifer. The Permittee shall submit well plugging and abandonment specifications to the Secretary for approval prior to abandoning the well.

b. Corrective Action Program for Releases from the North Colony Landfarm

If the Permittee determines, pursuant to Permit Condition 3.2.3.a.~~d~~ e and 4.6.1.a, that there is a statistically significant increase of hazardous or regulated constituents in the soils below the treatment zone, the Permittee shall notify the Secretary of this finding in writing within seven calendar days, indicating which constituents have shown statistically significant increases. If the Permittee makes such a determination then the Permittee shall apply for a permit modification within 90 days to address corrective action to mitigate migration of hazardous or regulated constituents from the NCL. [20.4.1.500 NMAC incorporating 40 CFR 264.278 (f), (g) and (h)] The Permittee is not required to submit the permit modification required by Permit Condition (4.6.1.b.vii.b) if the Permittee successfully demonstrates in writing to the Secretary, within 90 days, that a source other than the regulated unit caused the increase or that the increase resulted from an error in sampling, analysis or evaluation. If the Permittee intends to make such demonstration, the Permittee shall:

(a) Notify the Secretary in writing within seven (7) calendar days of determining a statistically significant increase below the treatment zone that he intends to make a determination under this paragraph;

(b) Within 90 days, submit a report to the Secretary demonstrating that a source other than the regulated units caused the increase or that the increase resulted from errors in sampling, analysis or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the treatment zone monitoring program at the facility;

(d) Continue to monitor in accordance with the monitoring program established under this section. [20.4.1.500 NMAC incorporating 40 CFR 264.278(h)]; and

(e) Within 90 days, submit to the Secretary a work plan for corrective action prepared in the format described in Appendix E of this permit, to investigate and remediate the alternate source of the increase in hazardous constituents beneath or down gradient from the regulated unit.

4.6.2 Tetra Ethyl Lead Impoundment (TEL)

4.6.2.a Corrective Action for Soil

The Permittee shall identify and characterize the source of petroleum-related or hazardous constituents detected in soils and groundwater beneath and in the vicinity of the TEL. The Permittee shall submit a work plan to the Secretary to characterize soils in areas surrounding and upgradient from the TEL in order to identify the source, magnitude and extent of petroleum-related and hazardous constituents in the vicinity of the unit. The work plan shall be prepared in accordance with the format described in Appendix E of this Permit. The work plan submittal date shall be proposed as part of the schedule required under Section 4.7.5 of this Permit.

The Permittee shall notify NMED if there is a statistically significant increase in petroleum-related or hazardous constituents in the groundwater or soils beneath the TEL and/or upgradient or downgradient from the TEL that indicates a new, or newly discovered, release of contaminants. [20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F].

If the Permittee demonstrates compliance for surface impoundments with waste residues or contaminated materials left in place after final closure in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264.228(b)) and demonstrates that soil and groundwater quality beneath, up gradient and down gradient of the TEL meets the requirements for soil and groundwater cleanup in accordance with 20.4.1.500 NMAC (incorporating 40 CFR 264 Subpart F), the cleanup standards established in Section 4.1.1 ~~HWB soil cleanup guidelines~~, and the OCD soil cleanup guidelines included in 19.15 NMAC, ~~and WQCC groundwater cleanup standards, incorporating 20.6.2.3103 NMAC~~, then the Permittee may submit a request to the Secretary to shorten the post-closure care period pursuant to 20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(i). The Secretary may extend the post-closure care period applicable to the TEL if the Secretary determines that soil and groundwater cleanup goals have not been attained or if an extended period is necessary to protect human health and the environment. [20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(ii)]

4.6.2.b Corrective Action for Groundwater

The Permittee shall comply with the monitoring program for groundwater specified in this Permit, 20.4.1.500 NMAC incorporating 40 CFR Part 264, Subpart F, and the clean up standards established in Section 4.1.1~~WQCC standards included in 20.6.2.3103 NMAC~~. The Permittee shall recover phase-separated hydrocarbons, where present, beneath the unit and both up gradient and down gradient from the TEL.

a. General Requirements

i. Groundwater Protection Standard

(a) Hazardous Constituents. The Permittee shall monitor at the locations, frequencies, and for the hazardous constituents and chemical analyses established in the Facility Wide Groundwater Monitoring Work Plan ~~specified in 20.6.2.3103 NMAC and the constituents listed in 20.4.1.500 NMAC Appendix IX that are included in Appendix B of this permit [the modified Skinner List (Exhibit 3, EPA RCRA Delisting Program Guidance Manual for the Petitioner, March 23, 2000].~~

~~Groundwater sampling at and in the vicinity of the TEL will include chemical analyses for the modified Skinner List analytes including, but not limited to, the constituents of concern listed in Section 4.6.1.b.a.i.(a) of this Permit, GRO, DRO and the general chemistry parameters required by 20.6.2.3103 NMAC.~~

(b) Concentration Limits. The maximum concentrations of hazardous constituents in the groundwater shall not exceed the ~~lesser~~cleanup standards established in Section 4.1.1. ~~of WQCC standards or the EPA MCLs as listed in Section 4.6.1.b.a.i.(b) of this Permit. The EPA Region VI Human Health Medium-specific Screening Level for Tap Water shall be considered the concentration limit in groundwater for those constituents for which a MCL or WQCC standard has not been established.~~

(c) Point of Compliance. The concentration(s) shall not exceed the cleanup standards established in Section 4.1.1 and ~~limits included in Permit Condition 4.6.1.b.a.i.(b)~~ shall apply at and down gradient from the intercept of the uppermost aquifer and monitoring wells TEL-1, TEL-2, and TEL-3. [20.4.1.500 NMAC (incorporating 40 CFR 264.95)]

(d) The Permittee shall continue the compliance monitoring program until the post-closure care period is complete [20.4.1.900 NMAC (incorporating 40 CFR 264.99(b) and 270.14 (c)(7))]. Compliance monitoring shall continue until the groundwater protection standard as defined in 4.6.1.b.a.i.(b) has been achieved for a period of three years. [20.4.1.500 NMAC incorporating 40 CFR 264.100 (f)]

(e) If the Permittee or the Secretary determines that the compliance monitoring program established by this Permit no longer satisfies the requirements of RCRA, the HWA, and pursuant regulations, then the Permittee shall submit an application for a Permit modification, within 90 days of the Secretary's determination, to make any appropriate changes to the program. [20.4.1.500 NMAC incorporating 40 CFR 264.100(h)]

ii. Groundwater Monitoring

(a) The Permittee shall maintain a groundwater monitoring program to demonstrate the effectiveness of the Corrective Action Program for groundwater and that meets the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.97.

(b) The Permittee shall maintain groundwater monitoring wells at the locations of the compliance points and at the locations of monitoring wells TEL-4, MW-49 and at all additional locations required by the Secretary. [20.4.1.500 and 900 NMAC incorporating 40 CFR 264.97 and 270.14(c)]

(c) The Permittee shall monitor the wells at the TEL and compliance points and the identified constituents as required by the Facility Wide Groundwater Monitoring Work Plan. The results of such monitoring and sampling must be included in the Annual Groundwater Monitoring Report. ~~listed in 4.6.2.b.a.i(c) and 4.6.2.b.a.ii(b) above for petroleum-related and hazardous constituents on a semi-annual basis during the post-closure care period [20.4.1.500 NMAC (incorporating 40 CFR 264.93)] and submit groundwater monitoring reports to the Secretary in the format described in Appendix E of this Permit.~~ The Secretary may require groundwater monitoring at additional locations and intervals.

(d) The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer each time groundwater is sampled or at least semi-annually. [20.4.1.500 NMAC incorporating 40 CFR 264.98]

iii. Groundwater Surface Elevation

The Permittee shall determine the ground-water surface elevation at each well as specified by the Facility Wide Groundwater Monitoring Work Plan ~~each time groundwater is sampled or, at a minimum, on a semi-annual basis~~. [20.4.1.500 NMAC incorporating 40 CFR 264.97(f)]

iv. Sampling and Analysis Procedures

The Permittee shall comply with the procedures specified in Appendices C and D of this Permit when obtaining and analyzing samples from the groundwater monitoring wells. [20.4.1.500 NMAC incorporating 40 CFR 264.97(d) and (e)]

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [20.4.1.900 NMAC incorporating 40 CFR 270.30(j)(1)]. The method used to obtain a representative sample to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Secretary. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis or an equivalent method approved by the Secretary.

v. Statistical Procedures

When evaluating the monitoring results to determine the effects of corrective action measures that include statistical evaluation, the Permittee shall comply with the procedures specified at in 20.4.1.500 NMAC, incorporating 40 CFR 264.97(h) and 264.97(i)(1), (5) and (6), if statistical evaluation is determined to be appropriate by the Secretary.

vi. Record Keeping and Reporting

The Permittee shall enter all monitoring, testing and analytical data obtained in the operating record. The data must include all computations, calculated means, variances, and results of the statistical tests specified in Permit Condition 4.6.2.b.a.ii~~(g)~~ above. [20.4.1.500 NMAC incorporating 40 CFR 264.97]

The Permittee shall submit a written report to the Secretary summarizing the results of the groundwater monitoring and sampling program [20. 4.1.500 NMAC (incorporating 40 CFR 264.77(c) and 264.100(g)] within 90 days after the completion of field activities for each monitoring event or an alternate date specified the Secretary. The reports shall be submitted in the format described in Appendix E of this Permit.

vii. Well Replacement and Abandonment

The Permittee shall replace any groundwater monitoring well removed from service with a monitoring well located as close to the abandoned well as practicable. The Permittee shall submit

the proposed location and construction specifications for the new well to the Secretary for prior approval.

The Permittee shall report the surveyed location and elevation of a new monitoring well when the well is installed.

The Permittee shall obtain approval from the Secretary to delete wells from the monitoring program. Wells deleted from the monitoring program shall be plugged and abandoned by the Permittee in accordance with *Rules and Regulations Governing Well Driller Licensing; Construction, Repair, and Plugging of Wells* [19.27.4 NMAC] ~~so as~~ to ensure that the abandoned well will not serve to transport contaminants to the aquifer. The Permittee shall submit well plugging and abandonment specifications to the Secretary for approval prior to abandoning the well.

b. Corrective Action Program for Releases from the Tetra Ethyl Lead Impoundment

If the Permittee determines, pursuant to Permit Condition 4.6.2.a and 4.6.2.b that there is a statistically significant increase of petroleum-related or hazardous constituents in the soils or groundwater beneath or in the vicinity of the TEL, the Permittee shall notify the Secretary of this finding in writing within seven calendar days, indicating which constituents have shown statistically significant increases. The Permittee shall apply for a permit modification, within 90 days of making the determination, to address corrective action to mitigate migration of petroleum-related or hazardous constituents from the TEL [20.4.1.500 NMAC incorporating 40 CFR 264.278 (f), (g) and (h)]. The Permittee need not submit the permit modification required by this Permit Condition if the Permittee successfully demonstrates in writing to the Secretary, within 90 days, that a source other than the regulated unit caused the increase or that the increase resulted from an error in sampling, analysis or evaluation. If the Permittee intends to make such a demonstration, the Permittee shall:

(a) Notify the Secretary in writing within seven calendar days of determining a statistically significant increase below the unit that he intends to make a determination under this paragraph;

(b) Within 90 days, submit a report to the Secretary demonstrating that a source other than the regulated units caused the increase or that the increase resulted from errors in sampling, analysis or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the monitoring program at the facility;

(d) Continue to monitor in accordance with the monitoring program established under this section. [20.4.1.500 NMAC incorporating 40 CFR 264.278(h)]; and

(e) Within 90 days, submit to the Secretary a work plan for corrective action, prepared in the format described in Appendix E of this permit, to investigate and remediate the alternate source of the increase in hazardous and/or regulated constituents beneath or downgradient from the regulated unit.

4.6.3 Evaporation Ponds

4.6.3.a Corrective Action for Soil

a. The Permittee shall identify and characterize the source of petroleum-related or hazardous constituents detected in soils and groundwater beneath and in the vicinity of the Evaporation Ponds. The Permittee shall prepare a work plan for submittal to the Secretary to characterize soils and groundwater beneath and in areas surrounding the Evaporation Ponds and downgradient from the unit in order to identify the source, magnitude and extent of hazardous and/or other regulated constituents at and in the vicinity of the unit. The work plan shall be prepared in accordance with the format described in Appendix E of this Permit. The Permittee shall notify NMED if there is a statistically significant increase in petroleum-related or hazardous constituents in the soil or groundwater beneath the Evaporation Ponds and/or down gradient from the Evaporation Ponds that indicates a new release or newly discovered release of contaminants [20.4.1.500 NMAC incorporating 40 CFR 264 Subpart F]. The minimum requirements for characterization of soil and groundwater at and in the vicinity of the Evaporation Ponds are described in this Section.

b. If the Permittee demonstrates compliance for surface impoundments with waste residues or contaminated materials left in place after final closure pursuant to 20.4.1.500 NMAC, incorporating 40 CFR 264.228(b), and demonstrates that soil and groundwater quality beneath and downgradient of the Evaporation Ponds meets the requirements for soil and groundwater cleanup in accordance with the cleanup levels established in Section 4.1.1, 20.4.1.500 NMAC (incorporating 40 CFR 264 Subpart F), ~~HWB soil cleanup guidelines~~, and the OCD soil cleanup guidelines included in 19.15 NMAC~~, and WQCC groundwater cleanup standards included in 20.6.2.3103 NMAC,~~ then the Permittee may submit a request to the Secretary to shorten the post-closure care period in accordance with 20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(i). The Secretary may extend the post-closure care period applicable to the Evaporation Ponds if it is determined that soil and groundwater cleanup goals have not been attained or if an extended period is necessary to protect human health and the environment [20.4.1.500 NMAC incorporating 40 CFR 264.117(a)(2)(ii)]

4.6.3.b Corrective Action for Groundwater

The Permittee shall comply with the Detection and Compliance Monitoring Program for groundwater specified in this Permit Module and in accordance with the requirements of 20.4.1.500 NMAC, incorporating 40 CFR Part 264 Subpart F, and the cleanup levels established in Section 4.1.1~~the WQCC standards included in 20.6.2.3103 NMAC~~. The Permittee shall recover phase-separated hydrocarbons, where present, beneath the unit and down gradient from the unit. The Permittee shall prepare a work plan for submittal to the Secretary to characterize soils and groundwater beneath and in areas surrounding the Evaporation Ponds and downgradient from the unit in order to identify the source, magnitude and extent of hazardous constituents at and in the vicinity of the unit. The work plan shall be prepared in accordance with the format described in Appendix E of this Permit.

a. General Requirements

i. Groundwater Protection Standard

(a) Hazardous Constituents. The Permittee shall monitor at the locations, frequencies, and for the hazardous constituents and chemical analyses established in the Facility Wide Groundwater Monitoring Work Plan ~~specified in 20.6.2.3103 NMAC and the constituents listed in 20.4.1.500 NMAC Appendix IX that are included in Appendix B of this permit [the modified Skinner List (Exhibit 3, EPA RCRA Delisting Program Guidance Manual for the Petitioner, March 23, 2000]. Groundwater sampling at and in the vicinity of the Evaporation Ponds will include chemical analyses for the modified Skinner List analytes including, but not limited to, the constituents of concern listed in Section 4.6.1.b.a.i.(a) of this Permit, GRO, DRO and the general chemistry parameters required by 20.6.2.3103 NMAC~~.

(b) Concentration Limits. The maximum concentrations of hazardous constituents in the groundwater shall not exceed the cleanup standards established in Section 4.1.1 ~~lesser of WQCC standards or the EPA MCLs as listed in Section 4.6.1.b.a.i.(b) of this Permit. The EPA Region VI Human Health Medium-specific Screening Level for Tap Water shall be considered the concentration limit in groundwater for those constituents for which a MCL or WQCC standard has not been established.~~

(c) Point of Compliance. The concentration limits in Permit Condition 4.6.1.b.a.i.(b) shall apply at and downgradient from the intercept of the uppermost aquifer and monitoring wells MW-2A, MW-3, MW-4A, MW-5A, MW-6A, MW-7, OCD-7AR and OCD-8A. [20.4.1.500 NMAC incorporating 40 CFR 264.95] The Secretary shall modify the number and locations of the Point of Compliance monitoring wells after completion of site characterization and other corrective action activities at the Evaporation Ponds.

(d) The Permittee shall continue the compliance monitoring program until the post-closure care period is complete. [20.4.1.900 NMAC incorporating 40 CFR 264.99(b) and 270.14 (c)(7)] Compliance monitoring shall continue until the groundwater protection standard as defined in 4.6.1.b.a.i.(b) has been achieved for a period of three years. [20.4.1.500 NMAC incorporating 40 CFR 264.100 (f)]

(e) If the Permittee or the Secretary determines that the compliance monitoring program established by this Permit no longer satisfies the requirements of RCRA or the HWA, and pursuant regulations, then the Permittee shall submit an application for a Permit modification, within 90 days of making the determination, to make any appropriate changes to the program. [20.4.1.500 NMAC incorporating 40 CFR 264.100(h)]

ii. Groundwater Monitoring

(a) The Permittee shall maintain a groundwater monitoring program to demonstrate the effectiveness of the corrective action program for groundwater and that meets the requirements of 20.4.1.500 NMAC incorporating 40 CFR 264.97.

(b) The Permittee shall maintain groundwater monitoring wells at the locations of the compliance points and at the locations of monitoring wells OCD-1, OCD-2A, OCD-3, OCD-4, OCD-6, OCD-5, MW-10, MW-11A, MW-15, MW-18A, MW-70 (formerly MW-19), MW-22A and at all additional locations required by the Secretary [20.4.1.500 and 900 NMAC incorporating 40 CFR 264.97 and 270.14(c)]. The Secretary shall modify the number and location of the additional monitoring wells

after completion of site characterization and other corrective action activities at the Evaporation Ponds.

(c) The Permittee shall monitor the wells at the Evaporation Ponds and compliance points and the identified constituents as required by the Facility Wide Groundwater Monitoring Work Plan. The results of such monitoring and sampling must be included in the Annual Groundwater Monitoring Report. ~~listed in 4.6.3.b.a.i(c) and 4.6.3.b.a.ii(b) above for the hazardous constituents on a semi-annual basis during the post-closure care period [20.4.1.500 NMAC incorporating 40 CFR 264.93] and submit groundwater monitoring reports to the Secretary in the format described in Appendix E of this Permit Module. The Secretary shall modify the monitoring frequency after completion of site characterization and corrective action at the Evaporation Ponds.~~ The Secretary may require groundwater monitoring at additional locations and intervals.

(d) The Permittee shall determine the groundwater flow rate and direction in the uppermost aquifer each time groundwater is sampled or, at a minimum, semi-annually [20.4.1.500 NMAC incorporating 40 CFR 264.98].

iii. Groundwater Surface Elevation

The Permittee shall determine the ground-water surface elevation at each well each time groundwater is sampled as specified in the Facility Wide Groundwater Monitoring Work Plan~~or, at a minimum, on a semi-annual basis~~. [20.4.1.500 NMAC incorporating 40 CFR 264.97(f)]

iv. Sampling and Analysis Procedures

The Permittee shall comply with the procedures specified in Appendices C and D of this Permit when obtaining and analyzing samples from the ground water monitoring wells [20.4.1.500 NMAC incorporating 40 CFR 264.97(d) and (e)].

Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [20.4.1.900 NMAC incorporating 40 CFR 270.30(j)(1)]. The method used to obtain a representative sample to be analyzed shall be the appropriate method from Appendix I of 40 CFR Part 261 or an equivalent method approved by the Secretary. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Wastewater Analysis or an equivalent method approved by the Secretary.

v. Statistical Procedures

When evaluating the monitoring results to determine the effects of corrective action measures using statistical evaluation, the Permittee shall comply with the procedures specified at in 20.4.1.500 NMAC [incorporating 40 CFR 264.97(h) and 264.97(i)(1), (5) and (6)], if statistical evaluation is determined to be appropriate by the Secretary.

vi. Record Keeping and Reporting

The Permittee shall enter all monitoring, testing and analytical data obtained in the operating record. The data must include all computations, calculated means, variances, and results of the statistical

tests specified in Permit Condition 4.6.3.b.a.ii~~(g)~~ above. [20.4.1.500 NMAC incorporating 40 CFR 264.97]

The Permittee shall submit a written report to the Secretary summarizing the results of the groundwater monitoring and sampling program [20. 4.1.500 NMAC incorporating 40 CFR 264.77(c) and 264.100(g)] within 90 days after the completion of field activities for each monitoring event or an alternate date specified by the Secretary. The reports shall be submitted in the format described in Appendix E of this Permit.

vii. Well Replacement and Abandonment

The Permittee shall replace any groundwater monitoring well removed from service with a monitoring well located as close to the abandoned well as practicable. The Permittee shall submit the proposed location and construction specifications for the new well to the Secretary for prior approval.

The Permittee shall report the surveyed location and elevation of a new monitoring well when the well is installed.

The Permittee shall obtain approval from the Secretary to delete wells from the monitoring program. Wells deleted from the monitoring program shall be plugged and abandoned by the Permittee in accordance with *Rules and Regulations Governing Well Driller Licensing; Construction, Repair, and Plugging of Wells* [19.27.4 NMAC] ~~so as~~ to ensure that the abandoned well will not serve to transport contaminants to the aquifer. The Permittee shall submit well plugging and abandonment specifications to the Secretary for approval prior to abandoning the well.

b. Corrective Action Program for Releases from the Evaporation Ponds

The Evaporation Ponds may be closed with residual waste left in place or with a CAMU emplaced for the management or disposal of remediation waste. The Secretary shall impose specific monitoring requirements if a CAMU is constructed at the Evaporation Ponds location. If the Permittee determines, pursuant to Permit Conditions 4.6.3.a.a that there is a statistically significant increase of petroleum-related or hazardous constituents in the soils or groundwater beneath the Evaporation Ponds, the Permittee shall notify the Secretary of this finding in writing, within seven calendar days of making the determination, indicating which constituents have shown statistically significant increases. The Permittee shall apply for a permit modification, within 90 days of making the determination, to address corrective action to mitigate migration of petroleum-related or hazardous constituents from the Evaporation Ponds [20.4.1.500 NMAC incorporating 40 CFR 264 subpart G and 264.228]. The Permittee need not submit the permit modification required by this Permit Condition if he successfully demonstrates in writing to the Secretary, within 90 days, that a source other than the regulated unit caused the increase or that the increase resulted from an error in sampling, analysis or evaluation. If the Permittee intends to make such demonstration, the Permittee shall:

(a) Notify the Secretary in writing within seven calendar days of determining a statistically significant increase below the unit that he intends to make a determination under this paragraph;

(b) Within 90 days, submit a report to the Secretary demonstrating that a source other than the regulated units caused the increase or that the increase resulted from errors in sampling, analysis or evaluation;

(c) Within 90 days, submit to the Secretary an application for a permit modification to make any appropriate changes to the monitoring program at the facility;

(d) Continue to monitor in accordance with the monitoring program established under this section. [20.4.1.500 NMAC incorporating 40 CFR 264.278(h)]; and

(e) Within 90 days, submit to the Secretary a work plan for corrective action, prepared in the format described in Appendix E of this permit, to investigate and remediate the alternate source of the increase in hazardous constituents beneath or downgradient from the regulated unit.

c. Specific Corrective Action Requirements for Assessment of the Evaporation Ponds

Site characterization is required prior to final closure at the Evaporation Ponds to evaluate for the presence and migration of petroleum-related or hazardous constituents. The Permittee shall prepare a work plan for submittal to the Secretary to characterize soils and groundwater beneath and in areas surrounding the Evaporation Ponds and downgradient from the unit in order to identify the source, magnitude and extent of hazardous and regulated constituents. The work plan shall be prepared in accordance with the format described in Appendix E of this Permit. The work plan shall include proposed investigation locations, sampling and analytical methods and schedules and shall be approved by the Secretary prior to implementation.

The following minimum corrective action requirements shall be conducted at the Evaporation Ponds to evaluate for the presence, nature and extent of hazardous and other regulated constituents in soil and groundwater:

4.6.3.c Specific Investigation Requirements For the Evaporation Ponds

(i) Soil Investigation

The Permittee shall conduct subsurface soil investigations within the boundaries of each pond. Soil borings shall be advanced to minimum depths of five feet below the water table or five feet below the maximum depth of contamination as detected by field screening whichever is deeper.

At a minimum, the Permittee shall advance 15 soil borings within the boundaries of former Pond 1, 32 borings within the boundaries of Pond 2, 12 borings within the boundaries of Pond 3, 25 borings within the boundaries of Pond 5, 8 borings within the boundaries of Pond 6 and 12 borings south of the southern berms of former Ponds 1 and 2. The soil boring locations shall generally be biased towards the pond influent outfalls and towards downgradient portions of each evaporation pond. The Permittee may propose an alternate number of soil borings at each pond location in the work plan described in Permit Condition 4.6.3.c. The Permittee must provide justification for modifying the requirements of this Permit Condition (4.6.3.c (i)). The soil boring locations and number of soil borings proposed for the Evaporation Ponds investigation shall be approved by the Secretary prior to the start of field activities.

At a minimum, the Permittee shall collect soil samples, for field screening and chemical analysis, 1) at 2-foot intervals, 2) from each boring between the ground surface and a depth of one foot BGS, 3) from the sludge or sediments directly overlying native soil, 4) from the native soil directly underlying the pond sludge or sediments, 5) from the soils located at the water table interface and 6) from the maximum depth of the boring.

Selected soil samples shall be submitted to an analytical laboratory for chemical analysis of one or more of the following: GRO, DRO, ORO, VOCs, SVOCs and RCRA metals. The method for selection of soil samples for laboratory analyses shall be proposed in the work plan required under this Permit Condition (4.6.3.c).

The Permittee shall prepare a report summarizing the results of the soil investigation in the format described in Appendix E of this Permit within 150 days of the completion of field activities at the Evaporation Ponds.

(ii) Groundwater Investigation

The Permittee shall collect groundwater samples from each soil boring, described in 4.6.3.b. above, at the completion of drilling. The Permittee also shall collect groundwater samples from all monitoring wells associated with current groundwater monitoring at the Evaporation Ponds and all existing wells associated with former site investigations conducted at and in the vicinity of the unit in conjunction with the drilling activities.

At a minimum, the groundwater samples obtained from the soil borings shall be submitted to an analytical laboratory for chemical analysis for VOCs, GRO, DRO and the general chemistry parameters required by the OCD. The Permittee may propose that an alternate number of water samples be collected from the soil borings at each pond location for chemical analysis of one or more of above-listed analyses in the work plan described in Permit Condition 4.6.3.c (ii). The Permittee must provide justification for modifying the requirements of this Permit Condition (4.6.3.c (ii)). The number of groundwater samples obtained from the exploratory soil borings, and the specific groundwater sample analyses conducted for the Evaporation Ponds investigation must be approved by the Secretary prior to the start of field activities.

At a minimum, the groundwater samples obtained from the existing monitoring wells shall be submitted to an analytical laboratory for chemical analysis of one or more of the following: VOCs, GRO, DRO, RCRA metals, SVOCs and the general chemistry parameters required by 20.6.2.3103 NMAC.

The Permittee shall prepare a report summarizing the results of the groundwater investigation in the format described in Appendix E of this Permit within 150 days of the completion of field activities at the Evaporation Ponds.

The Permittee shall properly abandon the soil borings at the completion of collection of the required soil and groundwater samples. The results of the investigations will be used by the Secretary to evaluate the need for additional investigation, additional monitoring points, remedial action and/or adjustments to the groundwater monitoring locations, parameters and schedule.

(iii) Evaporation Pond Closure Plan

Upon completion of soil and groundwater investigations at the Evaporation Ponds, the Secretary will provide a due date for the submittal of a Closure Plan. The Closure Plan shall be prepared in accordance with the requirements of 20.4.1.500 NMAC (incorporating 40 CFR 264.112) and 20.4.1.700 NMAC (incorporating 40 CFR 270.42 (c)). The Closure Plan shall propose to meet the closure performance standard established in 20.4.1.500 NMAC (incorporating 40 CFR 111) and in Permit Section 4.1.1. If the Permittee cannot achieve the closure performance standard then the Permittee shall submit a Permit Modification request to conduct Post-Closure Care at the Evaporation Ponds.

4.7 CORRECTIVE ACTION FOR SWMUs

4.7.1 Applicability

The Conditions of this Part apply to:

(a) The SWMUs and AOCs identified in Appendix A of this Permit.

(b) Any additional SWMUs or AOCs discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means. The terms "discover", "discovery", or "discovered" refer to the date on which the Permittee either: (1) observes evidence of a new SWMU or AOC, (2) observes evidence of a previously unidentified release of hazardous constituents to the environment, or (3) receives information which suggests the presence of a new release of petroleum-related constituents, hazardous waste or hazardous constituents to the environment.

(c) Contamination that has migrated beyond the Facility boundary. The Permittee shall implement corrective action beyond the facility boundary where necessary to protect human health and the environment unless the Permittee demonstrates to the satisfaction of the Secretary that, despite the Permittee's best efforts, as determined by the Secretary, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of responsibility to clean up a release that has migrated beyond the facility boundary where off-site access is denied. On-site measures to address such releases will be determined on a case-by-case basis. Assurances of financial responsibility for completion of such off-site corrective action will be required.

4.7.2 Notification and Assessment Requirements for Existing and Newly Identified SWMUs and AOCs

The Permittee shall notify the Secretary in writing within 15 calendar days of discovery of any suspected previously unidentified SWMU or AOC. The notification shall include, at a minimum, the location of the SWMU or AOC and all available information pertaining to the nature of the release (e.g., media affected, petroleum-related or hazardous constituents released, magnitude of the release, etc.).

The Permittee shall prepare and submit to the Secretary, within 90 days of notification, a SWMU Assessment Report (SAR) for each SWMU or AOC identified under Permit Section 4.7.1 and this section (4.7.2.). At a minimum, the SAR shall provide the following information:

i. Location of the unit(s) on a topographic map of appropriate scale;

ii. Designation of type and function of the unit(s);

iii. General dimensions, capacities and structural description of the unit(s) (supply any available plans/drawings);

iv. Dates that the unit(s) was operated;

v. Specification of all wastes that have been managed and/or released at/in the unit(s) to the extent available, including any available data on petroleum-related or hazardous constituents in the wastes;

vi. All available information pertaining to any release of hazardous waste or hazardous constituents from such unit(s), including groundwater, soil, air, and surface water data;

Based on the results of the SAR, the Secretary will determine the need for further investigations at the SWMUs or AOCs covered in the SAR. The Secretary will notify the Permittee in writing of the final determination of the status of the suspected SWMU or AOC. If the Secretary determines that further investigation is needed, the Permittee shall submit a work plan for such investigation prepared in the format described in this Permit. If the Secretary determines that further investigation of a SWMU or AOC is required, the Permit will be modified pursuant to 20.4.1.901 NMAC and 40 CFR 270 Subpart D, incorporated by 20.4.1.900 NMAC.

4.7.3 Reporting Planned Changes

The Permittee shall give written notice to the Secretary as soon as possible of any planned physical alterations or additions that may impact or affect known or suspected contamination at or from SWMUs or AOCs.

4.7.4 Notification Requirements for Newly Discovered Releases from SWMUs or AOCs

The Permittee shall notify the Secretary in writing of any newly discovered release(s) of hazardous waste or hazardous constituents from a SWMU or AOC discovered during the course of groundwater monitoring, field investigations, environmental audits, or other means, within 15 days of discovery.

If the Secretary determines that further investigation of a SWMU or AOC is needed, the Permittee shall submit a work plan for such investigation prepared in the format described in this Module (4).

4.7.5 SWMU and AOC Investigations

The Permittee shall conduct site investigations, at the SWMUs and AOCs listed in Appendix A of this Permit and at all newly identified SWMUS and AOCs, to evaluate for the presence, nature and extent of hazardous and regulated constituents [20.4.1.500 NMAC incorporating 40 CFR 264.101]. The Permittee shall prepare an investigation work plan for each SWMU and AOC included in Appendix A of this Permit and any other SWMU or AOC identified by the Secretary in accordance

with the format outlined in Appendix E of this Permit. Each work plan shall include all investigation, sampling and monitoring activities proposed for the subject units.

Each investigation work plan shall be submitted to the Secretary for approval. If the Secretary disapproves of a work plan, the Secretary will notify the Permittee, in writing, of the work plan's deficiencies and specify a due date for submittal of a revised work plan. Upon approval by the Secretary, the work plans, and any additions or adjustments therein, shall be incorporated herein by reference and made an enforceable part of this Permit.

The Permittee shall submit a proposed schedule for submittal of the investigation work plans for conducting site characterization activities at each SWMU and AOC listed in Appendix A of this Permit, to the Secretary for approval, within 60 days of the effective date of this Permit. The schedule for submittal of the work plans shall not extend past a maximum of four years from the effective date of this Permit. The Secretary will either approve of disapprove the schedule and order of prioritization for submittal of the work plans for the SWMUs and AOCs listed in Appendix A. If the Secretary disapproves of the schedule or order of prioritization, the Secretary will notify the Permittee, in writing, of the schedule or prioritization deficiencies and specify a due date for submittal of a revised schedule. Upon approval by the Secretary, the schedule, and any additions or adjustments therein, shall be incorporated herein by reference and made an enforceable part of this Permit. The work plan for conducting site characterization activities at the Evaporation Ponds shall be submitted no later than 90 days after the effective date of this Permit.

4.7.6 GROUNDWATER MONITORING

The Permittee shall conduct facility-wide groundwater monitoring in accordance with the requirements for corrective action for releases from solid waste management units and for post-closure care of regulated units [20.4.1.500 NMAC (incorporating 40 CFR Subparts F and G)] with the objective of determining whether the migration of contaminated groundwater is under control as defined in the EPA RCRA-info system CA 750 classification "Groundwater Releases Controlled" determination. The objective for the determination is required for compliance with the Government Performance Results Act of 1993 (GPRA). The groundwater monitoring program shall be conducted in accordance with the requirements described in this Permit and shall be conducted in coordination with all existing on- and off-site groundwater monitoring programs.

4.7.6.a ~~BACKGROUND INFORMATION~~**Facility-Wide Groundwater Monitoring**

~~Within 120 days after the effective date of this Permit, the Permittee~~The Permittee is currently conducting on-and off-site groundwater monitoring at the Facility in accordance with an approved Facility-Wide Groundwater Monitoring Work Plan (FWGMWP). The Permittee must submit an updated revised FWGMWP to the Secretary on an annual basis by June 30th of each respective year. Changes to the FWGMWP shall include, but are not limited to, an updated facility-wide site plan, new well installations or abandonments, changes to the sampling locations, modifications to the sampling methods and procedures, and changes to analytical suites. The wells shall be monitored and sampled in accordance with the methods described in Appendix C of this Permit. The groundwater samples shall be submitted to an analytical laboratory for chemical analysis using

methods approved by the Secretary. The FWGMP shall also comply with OCD's groundwater monitoring requirements.

shall submitto the Secretary updated site plans displaying the locations of all existing on- and off-site monitoring wells, recovery wells, piezometers, water supply wells and other wells located at the refinery, downgradient and cross-gradient from the refinery, and at and in the vicinity of the Evaporation Ponds. All existing wells located between the refinery east to the Pecos River and for the area 1,200 feet south of U.S. Highway 82 between Freeman Avenue and the Pecos River shall be presented on the appropriate site plans. The FWGMWP shall include a site plans shall that includes pertinent geographic and geologic features such as drainages, utility corridors, roads, watercourses, property boundaries, buildings, recovery trenches, oil and gas wells and other relevant structures. The FWGMWP must also include any new well installation and abandonment information. This information must include, but is not limited to, well construction diagrams, boring logs and certifications associated with well abandonment. All well plugging and abandonment methods and associated certifications must be conducted in accordance with *Rules and Regulations Governing Well Driller Licensing; Construction, Repair and Plugging of Wells* [19.27.4 NMAC]. If changes do not affect the facility-wide site plan, and/or no wells have been installed or abandoned in the reporting year, then this must be stated in the revision to the FWGMWP. All available drilling logs and well construction diagrams shall be included with the submittal. The Secretary may adjust the due date for the submittal of the FWGMWP based on the progress of other corrective action activities that occur at the facility.

4.7.6.b GROUNDWATER MONITORING

The Permittee shall submit an Annual Groundwater Monitoring Report to the Secretary on an annual basis, by February 28, of each respective year. The Annual Groundwater Monitoring Report must describe all groundwater monitoring activities that were conducted during the previous year. The Annual Groundwater Monitoring Report must contain a facility-wide site plan that must include but is not limited to any changes to the locations of all existing on-and off-site monitoring wells, recovery wells, piezometers, water supply wells and other wells located at the refinery, downgradient and cross-gradient from the refinery, and at and in the vicinity of the Evaporation Ponds. The facility-wide site plan shall include pertinent geographic and geologic features such as drainages, utility corridors, roads, watercourses, property boundaries, buildings, recovery trenches, oil and gas wells and other relevant structures.

The Permittee shall conduct on-and off-site groundwater monitoring at the Facility. The Permittee shall submit a groundwater monitoring work plan in accordance with the format described in Appendix E of this Permit within 360 days after the effective date of this Permit. The groundwater monitoring plan shall provide a description of OCD groundwater monitoring requirements as well as including the groundwater monitoring requirements described in this Section and Sections 4.6 and 4.7 of this Permit. The Secretary may adjust the due date for the submittal of the annual groundwater monitoring work planreport based on the progress of other corrective action activities that occur at the facility. requirements of the work plan schedule submittal described in Section 4.7.5 above.

~~The work plan shall include the specific groundwater monitoring requirements outlined in Sections 4.6 and 4.7.5 of this Permit Module and shall include semi-annual monitoring and sampling of the following existing on- and off-site wells:~~

~~i. MW-8(plant) MW-16 MW-23(plant) MW-28~~

~~MW-29 MW-39 MW-41 MW-42 MW-43~~

~~MW-46 MW-48 MW-50 MW-52 MW-AE~~

~~MW-AH KWB-2P KWB-4 KWB-5 KWB-6~~

~~KWB-8 KWB-10~~

~~ii. KWB-1A KWB-3A KWB-7~~

~~KWB-9 KWB-11A KWB-12A MW-18(plant)~~

~~MW-45 MW-25 MW-26 MW-27~~

~~iii. RA-307 RA-313 RA-314 RA-1227 RA1331~~

~~RA-3156 RA-3353 RA-4196 RA-4798~~

~~Iv. All additional wells installed to comply with the requirements of this Permit as required by the Secretary.~~

~~The wells shall be monitored and sampled in accordance with the methods described in Appendix C of this Permit. The groundwater samples shall be submitted to an analytical laboratory for chemical analysis of VOCs by EPA Method 8260 or other method approved by the Secretary. Samples obtained from the wells listed in Sections 4.2.6.b (i), (ii) and (iv) also shall be analyzed for RCRA metals (total metals), DRO, SVOCs (if DRO is detected) and major cations/anions on an annual basis.~~