CLASS I WASTE INJECTION WELL PERMIT APPLICATION

PROCEDURES FOR

FORM UIC-1

PERMITTING PROCESS

Permitting Overview. The permitting process is a two-step procedure.

1) **Initial Review for Permit to Construct.** After the Engineering Division ("the Division") has received, reviewed, and found that the application meets the requirements of Statewide Order 29-N-1 (non-hazardous) or 29-N-2 (hazardous), a Permit to Construct (*Order to Construct*) shall be issued. This Order shall allow the well to be drilled, completed, and tested, or to be converted and tested as described in the approved application.

2) **Final Review for Permit to Inject.** After constructing the permitted well(s), the applicant shall submit a completion report to the Division for review. If the application requirements were met and the submittal is deemed complete, a Permit to Inject (*Supplement to Order*) authorizing the start of industrial waste injection shall be issued.

Initial Review for Permit to Construct

A. **Organization Report.** The applicant must have a current Organization Report (OR-1) on file with the Office of Permitting and Compliance to submit an application.

B. **Application Receipt.** Upon receipt of an application, the Division will invoice for the UIC-1 form(s). The Division will issue an *Application Receipt* letter acknowledging receipt, and assigning an Application Number.

C. **Administratively Complete Review.** The Division will review the submittal to confirm that all required attachments are included. If complete, the Division will issue an *Administratively Complete* letter to the applicant acknowledging confirmation that all required materials have been provided. If incomplete, the Division will issue a Notice of Deficiency (NOD) requesting the missing attachments. Once an application is deemed *Administratively Complete* it will be placed in the back of the queue to be reviewed. An application must be deemed administratively complete before a technical review can begin.

   i. §105.B.1 and §205.B.1 require all applications to be submitted in triplicate. Please provide one original wet signed hard copy, one working hard copy, and one digital copy in the submittal.

D. **Technical Review.** Once the technical review begins, all required revisions, clarifications, or explanations will be requested through a NOD. During the technical review, the application will be evaluated by a geologist and engineer. Technical reviewers may provide courtesy emails identifying potential deficiencies; however, final revisions should not be submitted until the Division issues a formal signed NOD. The applicant will have 30 days to provide response to the NOD. Additional time may be granted to the applicant upon request for extenuating circumstances. When submitting revisions or responses**, include the Application Number on the upper right corner of each page** (provided in the Administratively Complete letter, Item C). After all revisions have been reviewed, the commissioner will notify the applicant whether the application is deemed technically complete.

E. **Draft Permit.** If the commissioner has determined an application technically complete, a draft permit, fact sheet, and public notice will be prepared. Once drafted, the documents will be provided to the operator to review for correctness.

F. **Public Notice.** The Secretary shall require the applicant to give public notice that a draft permit has been prepared under §111.B.2.c.i or §211.B.2.c.i. Public Notice will be required per §111.E or §211.E. the Division will provide templates and guidance for Public Noticing after the Draft Permit is completed.

G. **Public Hearing.** Public Notice of a hearing has been scheduled under §111.F-H or §211.F-H, *(when applicable).* Hearing notice shall be published by the applicant. the Division will provide templates and guidance for Public Noticing after the Draft Permit is completed if hearing is requested or required.

H. **Permit Decision.** The Office of Permitting and Compliance may issue a final permit decision (*Order to Construct*) within 30 days following the close of the public comment period per §111.I or §211.I; however, this time may be extended due to the nature, complexity, and volume of public comments received.

Final Review for Permit to Inject

I. Technical Review. Once the well is drilled, the operator will be required to submit a Form UIC-WH1, all required surveys, and any additionally required completion documents. If the submittal is complete and the well was drilled and completed according to the application, a Permit to Inject (*Supplement to Order*) will be issued. If the submittal is incomplete or the well was not drilled and completed according to the application, clarification or explanations will be requested through a NOD. Remedial action or a Corrective Action Plan (CAP) may be required prior to obtaining a Permit to Inject (Supplement to Order).

J. Permit Decision. Once all NODs have been addressed, the Office of Permitting and Compliancewill issue a final Permit to Inject and operate the well (*Supplement to Order*).

APPLICATION GUIDELINES

A. These guidelines are intended to provide applicants with a checklist to assure the minimum required information is provided. **[DO NOT INCLUDE THESE GUIDELINES WITH THE PERMIT APPLICATION]**

B. This list applies to new wells to be drilled, wells to be converted, and those seeking re-permit.

C. Supporting documentation shall be provided as attachments to the application. Label attachments within each section/subsection with an appropriate identification in the lower right-hand corner, e.g. Attachment 2.1, Attachment 2.2.

D. Any Conservation Orders pertaining to the permitting of this well should be attached.

E. The Form UIC-1 should be certified with an original signature from an associate of the operating company. ***(§105.D / §205.D).*** The associate may be an officer; manager; general partner; proprietor; operator of the well, field, or facility; or any direct employee of the operating company employed in a decision-making role. This Office will not accept a signature from an agent or consultant of the operating company to certify the application.

F. If applying for a Class I injection well permit on a NEW or EXISTING Commercial Facility, be sure to submit the appropriate documents to the Louisiana Department of Environmental Quality (LDEQ).

   i. Commercial Wells Injecting Hazardous Waste Accompanied by a Manifest ***(§203.E)***

G. If applying for a Class I Hazardous injection well permit, be sure to submit the appropriate documents to the Environmental Protection Agency (EPA) for the No-Migration Petition.

SUBMIT THE FOLLOWING INFORMATION IN THE FOLLOWING ORDER

Application checklist for an initial technical review to obtain a *Permit to Construct*.

I. TABLE OF CONTENTS

II. APPLICATION FORMS

- ☐ Form UIC-1 *[§105.B-E.1 / §205.B-E.1]*
- ☐ Form MD-10-R-A-1 Application to Amend Permit to Drill *(conversions only)*

III. FINANCIAL ASSURANCE

- ☐ Performance Bond or other assurance of financial responsibility *[§107.C / §207.C]*

IV. FILING FEES

- ☐ Applicable non-refundable filing fees per LAC 43: XIX Chapter 7 as indicated below. Make checks payable to *Office of Permitting and Compliance.*
  - ☐ Application for Noncommercial Injection Well fee per LAC 43:XIX.703.A; OR
  - ☐ Application for Commercial Injection Well fee per LAC 43:XIX.703.A; OR
  - ☐ Application for Amend Permit to Drill (Form MD-10-R-A-1) fee per LAC 43:XIX.703.A; if applicable
  - ☐ Application for Public Hearing fee per LAC 43:XIX.703.A; if applicable

V. ADMINISTRATIVE INFORMATION

- ☐ Location Plat: The Location Plat should be prepared according to the standards of the Injection and Mining Division Location Plat Policy No. IMD-GS-10.
- ☐ Adjacent Landowners Map and List of mailing addresses of Adjacent Landowners
- ☐ Constitutional Responses to SOS Decision

VI. TECHNICAL REPORT

A. INTRODUCTION

- ☐ Provide an introduction to the nature of the facility and the demand for proposed injection processes.
- ☐ Professional Certifications Requirement: Include a statement detailing which Sections of the application where reviewed and certified by each professional:
  - ☐ Professional Geologist
  - ☐ Professional Engineer

B. REGIONAL AND LOCAL GEOLOGY AND HYDROGEOLOGY *[§105.E.2.d-g / §205.E.2]*

- ☐ Regional Geology and Hydrogeology background
- ☐ Local Surface and Subsurface Geology and Hydrogeology Background
  - ☐ Local Stratigraphy
  - ☐ Proposed Formations for disposal
  - ☐ Proposed Formations for confinement of fluid movement
- ☐ Regional Maps
  - ☐ Structure Map(s) and Isopach Map(s) of regional geology and hydrogeology
  - ☐ Cross-Section(s) of regional geology and hydrogeology
  - ☐ 10,000 TDS map (USDW map)
  - ☐ Seismic hazard map *[§205.E.2.g]*
  - ☐ Salt dome map (if applicable)
  - ☐ Fault plan map (if applicable)
- ☐ Local Maps
  - ☐ Structure Map(s) of local geology and hydrogeology
    - ☐ Structure Map of Proposed/Existing Injection Zone
    - ☐ Structure Map of each Proposed/Existing Injection Interval(s)
    - ☐ Structure Map of Confining Zones (Upper and Lower)
  - ☐ Isopach Map(s) of local geology and hydrogeology
    - ☐ Isopach Map of Proposed/Existing Injection Zone
    - ☐ Isopach Map of each Proposed/Existing Injection Interval(s)
    - ☐ Isopach Map of Confining Zones (Upper and Lower)
  - ☐ Cross-Section(s) of local geology and hydrogeology
    - ☐ Strike Cross-Section (N-S)
    - ☐ Dip Cross-Section (W-E)
  - ☐ Local Potentiometric Surface Map

C. AREA OF REVIEW (AOR), BASE MAPS, AND RELATED TABLES/LISTS *[§105.E.2-3.a / §205.E.2-3.a]*

NOTE: AOR and Freshwater Well (FWW) Maps may be combined

- ☐ USGS Topographic Map or other map (extending 1-mile beyond property boundaries) that depicts the facility of each injection well and those wells, springs, surface water bodies, or drinking water wells in the map area.
- ☐ Freshwater Well Map
- ☐ Table of Freshwater Wells within the AOR. The Freshwater Wells table must identify the following for each well listed:
  - ☐ State Water Well Number
  - ☐ Owners Name
  - ☐ Well Depth
  - ☐ Geologic Unit
  - ☐ Water Level
  - ☐ Casing Diameter
  - ☐ Parish Name
  - ☐ Use Description
  - ☐ Well Status
  - ☐ Location (Latitude and Longitude, NAD27)
- ☐ Area of Review Base Map. This map must identify all artificial penetrations (non-FWW) by the well name and number, well serial number, and location of the following wells:
  - ☐ The proposed injection well(s)
  - ☐ All producing wells
  - ☐ All disposal/injection wells
  - ☐ All shut-in wells
  - ☐ All plugged and abandoned well(s)
  - ☐ All dry holes
  - ☐ All surface bodies of water
  - ☐ All mines (surface and subsurface)
  - ☐ Quarries

- ☐ All pertinent surface features including residences and roads
- ☐ Table of Artificial Penetrations (excluding FWW) within the AOR. The Artificial Penetration tables must identify the following for each penetration listed:
  - ☐ Operator Name
  - ☐ Well Name and Number
  - ☐ State Serial Number
  - ☐ Location (Latitude and Longitude, NAD27)
  - ☐ Well Type
  - ☐ Well Status
  - ☐ Construction details
    - ☐ Spud Date
    - ☐ Total Depth
    - ☐ Plugging and/or Completion Depths
- ☐ The protocol taken to identify, locate, and ascertain the condition of all wells within the AOR which penetrate the proposed injection zone or confining zone *[§205.E.2.a.vi]*
- ☐ Corrective Action Plan (CAP) *[§105.E.3.k / §205.E.3.k]*
- ☐ Corrective Action Protocol *[§109.A.3 / §209.C]*
  - Common approvable CAP options
    - ➢ Documentation to prove a sufficient cement isolation barrier exist in the deficient offset well(s)
    - ➢ Cone of Influence (COI) Calculation to demonstrate that injection will not cause sufficient pressure build-up to induce vertical fluid migration through the deficient well(s)
    - ➢ Re-enter deficient well(s) and plug according to current standards

NOTE: The Area of Review for an individual Class I well shall be a fixed radius around the wellbore of not less than 2 miles. A Cone of Influence (COI) Calculation will be required to demonstrate that injection will not cause sufficient pressure build-up to induce vertical fluid migration through any deficient well(s). If the COI is greater than 2 miles, the AOR must be extended to include any well(s) within the COI radius from the subject well. If the applicant is proposing injection into multiple wells within the same interval(s), the COI must account for the total cumulative injection for all proposed wells at that site [§109.A.2.a / §209.B.1].

D. ANALYSES

- ☐ Freshwater Analysis *[§105.E.3.n / §205.E.2.a.v]*
- ☐ Injection Fluid Sources
- ☐ Injection Fluid Analyses *[§105.E.3.b.iii / §205.E.3.b.iii]*
- ☐ Injection Fluid Monitoring Plan / Waste Analysis Plan *[§109.A.7.a-c / §209.I.1]*
- ☐ Waste Identification Plan
  - ☐ Waste Pre-acceptance requirements *[§203.E]*

E. WELL CONSTRUCTION AND COMPLETION DATA *[See §109.A.4 / §209.E for Technical Standards]*

- ☐ Schematics *[§105.E.3.f / §205.E.3.f]*
- ☐ Facility Diagram
- ☐ Drilling Program *[§105.E.3.h / §205.E.3.h]*
- ☐ Logging Program (Conversions required to submit existing open-hole logs) *[§105.E.3.h / §205.E.3.h]*
  - ☐ Open-hole Logs (Required from TD to Surface)
  - ☐ Cased-hole Logs
    - ☐ Cement Bond Log
    - ☐ Radioactive Tracer Survey
- ☐ Formation Testing Program *[§105.E.3.c / §205.E.3.c]*
  - ☐ Falloff Testing Guidance
- ☐ Cementing and Casing Program *[§105.E.3.h / §205.E.3.h]*
- ☐ Deviation Checks *[§105.E.3.h / §205.E.3.h]*

- ☐ Work Prognosis

F. OPERATING DATA *[§105.E.3.b / §205.E.3.b]*

- ☐ On-site requirements
- ☐ Injection Rate and Volumes (average and maximum) *[§105.E.3.b.i / §205.E.3.b.i]*
- ☐ Injection Pressures (average and maximum) *[§105.E.3.b.ii / §205.E.3.b.ii]*
- ☐ Stimulation Program *[§105.E.3.d / §205.E.3.d]*
- ☐ Injection Procedures *[§105.E.3.e / §205.E.3.e]*
- ☐ Formation Calculations
  - ☐ Pressure Build-up Model [§105.E.3.l / §205.E.3.l]
  - ☐ Waste Front Calculation [§105.E.3.m / §205.E.3.m]
  - ☐ Cone of Influence (COI) Calculation
- ☐ Pre-Operation Mechanical Integrity Test
- ☐ Workovers, Stimulations, Waste Stream Changes

G. MONITORING PLANS *[§105.E.3.g / §205.E.3.g]*

- ☐ Continuous Monitoring Devices *[§109.A / §209.H.]*
- ☐ Mechanical Integrity Monitoring Plan *[§109.A.9 / §209.H]*
- ☐ Contingency Plan *[§105.E.3.i / §205.E.3.i]*

H. PLUGGING AND ABANDONMENT PLAN *[§105.E.3.j / §205.E.3.j]*

- ☐ Plugging and Abandonment Plan
- ☐ Closure Plan
- ☐ Closure Cost
- ☐ Financial Security (Bond/LOC)

NOTE: Noncommercial wells should include surface facilities and tanks directly related to the injection wells.

CONSTITUTIONAL CONSIDERATIONS: 'IT DECISION" QUESTIONS

Louisiana Constitutional Article IX, § 1, of the Louisiana Constitution imposes a duty of environmental protection on all State agencies and officials which require a balancing process in which environmental costs and benefits must be given careful consideration along with economic, social and other factors. The balancing process was required of State agencies by Save Ourselves, Inc., et al. vs, the Louisiana Environmental Control Commission, et al. 452 So.2d 1152 (La. 1984), hereafter "IT Decision".

The "IT Decision" involved a hazardous waste permit under the State's Hazardous Waste Management Plan consistent with the federal Resource Conservation and Recovery Act ("RCRA"). To meet its obligation under the "IT Decision", the Department of Environmental Quality ("LDEQ") prepared a list of questions which addresses what LDEQ deemed necessary to make permit decisions. The main questions touch upon certain issues and considerations which would be applicable to Office of Permitting and Compliance permit decisions, although we are not administering a RCRA authorized program.

In order to satisfy the constitutional requirements, the Office of Permitting and Compliance must conduct the 'balancing process' utilizing the information and data which will form part of the record supporting the decision on your application to permit your proposed activity. As the applicant for an injection well permit, it is incumbent upon you to provide such information as will be required to evaluate your application considering the "IT Decision". It is suggested that your staff review the court case to determine what information you believe must be provided.

You must furnish this Office with such information in adequate detail together with sufficient justification and supporting data to allow us to fulfill our constitutional obligation. Your furnishing of this information is above and beyond the requirements of Statewide Order Nos. 29-N-1 and 29-N-2. However, your permit application prepared pursuant to those Statewide Orders is not to be considered deficient because of these overriding constitutional requirements. Your prompt response to the "IT Decision" questions is in your best interest. If we cannot satisfactorily address our constitutional obligations, we may be unable to grant your application.

The following list of questions are those prepared by LDEQ and should be used as guidance when preparing a response to the "IT Decision". Although the questions focus on waste issues, the intent of the questions was to have the applicant consider the potential impacts of the proposed project on human health and the environment. When considering each of the questions, please formulate a response relative to the proposed project. Please, restate the questions before providing your response.

The following list of questions are those prepared by the Louisiana Department of Environmental Quality (LDEQ) and should be used as guidance when preparing a response to the "IT Decision". Please restate the questions before providing your response. The five questions in bold-face type labeled **A**, **B**, **C**, **D**, and **E** are the primary questions for which you must provide a response. The Sub-question within each group of primary questions are provided as a guide to assist you in formulating a response to those primary questions. You do not have to provide a specific answer to the sub-questions.

A. Have the potential and real adverse environmental effects of the proposed facility been avoided to the maximum extent possible?
(This question requires the permittee to identify adverse environmental effects, both potential and real.)

1. What are the potential environmental impacts of the permittee's proposed facility?
    a. What wastes will be handled?
        i. Classes of chemicals
        ii. Quantities (hazardous and non-hazardous)
        iii. Physical and chemical characteristics
        iv. Hazardous waste classification (listed, characteristic, etc.)
    b. How will they be handled?
        i. Treatment
        ii. Storage
        iii. Disposal

c. Sources of waste
    i. On-site generation (type and percentage of total handled)
    ii. Off-site generation (type and percentage of total handled)
d. Where will the wastes be shipped if not handled at this site?
e. What wastes will remain on-site permanently?

2. By which of the following potential pathways could releases of hazardous materials from the proposed facility endanger local residents or other living organisms?
    a. Air
    b. Water
    c. Soil
    d. Food

3. What is the likelihood or risk potential of such releases?

4. What are the real adverse environmental impacts of the permittee's proposed facility?
    a. Short term effects
        i. Land area taken out of system
    b. Long term effects

B. Does a cost benefit analysis of the environmental impact costs balanced against the social and economic benefits of the proposed facility demonstrate that the latter outweighs the former?
(This question requires the permittee to perform a cost-benefit analysis, or at least a quantitative indication of the economic benefits and a qualitative description of the negative impacts expected from the permittee's operation. The later should come form the answer to question No. 1 above.)

1. How was it determined that this facility was needed?
    a. Local or regional survey
        i. On-site or off-site needs
        ii. Regional solid waste management benefit
        iii. Generic survey of solid waste needs (compatibility with master plan)

2. What will be the positive economic effects on the local community?
    a. How many permanent jobs will be created?
    b. What is the expected annual payroll?
    c. What is the expected economic multiplier from item B2?
    d. What is the expected tax base and who will receive benefits?

3. What will be the potential negative economic effects on the local community?
    a. What are the possible effects on property values?
    b. Will public costs rise for:
        i. Police protection
        ii. Fire protection
        iii. Medical facilities
        iv. Schools
        v. Roads (also see below)
    c. Does the prospective site have the potential for precluding economic development of the area by business or industries because of risk associated with establishing such operations adjacent to the proposed facility?

4. Was transportation a factor in choosing the proposed site?
    a. What mode(s) of transportation will be used for the site?
        i. Truck
        ii. Rail
        iii. Barge
        iv. Other – Pipeline
    b. What geographical area will it serve?

c. By how much will local road traffic volume increase?
    i. Can local roads handle the traffic volume expected?
    ii. Can local roads handle the weight of trucks?
d. What are the long-term expectations of the proposed site?
    i. Longevity of the facility
    ii. Who owns the facility?
    iii. Are the owners financially backed by others?
    iv. When is closure anticipated?
    v. Who is responsible for the site after closure?
    vi. What assurances will there be that the site will be closed in accordance with the plan?
    vii. What financial assurances will be established to demonstrate the ability to handle problems after closure?
    viii. Who certifies that the site is properly closed?
    ix. How are people protected from unwittingly buying land after closure?
        a. Is the closed facility recorded in the deed?
        b. What future use is possible?

C. Are there alternative projects, which would offer more protection to the environment than the proposed facility without unduly curtailing non-environmental benefits?
(This question requires the permittee to demonstrate having considered alternate technologies.)

1. Why was this technology chosen (e.g., incineration over landfills?)
    a. Are other technologies available?
    b. Describe the engineering design and operating techniques used to compensate for any site deficiencies.

2. Is the proposed technology an improvement over that presently available?

3. Describe the reliability of technology chosen.
    a. Past experiences
    b. Environmental Impacts

4. Describe the sequence of technology used from arrival of wastes to the end process at the facility (flow chart).
    a. Analysis of waste
    b. Unloading
    c. Storage
    d. Treatment
    e. Monitoring
    f. Closure
    g. Post-closure
    h. Disposal
        i. Any residuals requiring further handling

5. Will this facility replace an outmoded/worse polluting one?

6. What consumer products are generating the waste to be disposed? Are there alternative products that would entail less hazardous waste generation?

D. Are there alternative sites that would offer more protection to the environment than the proposed facility site without unduly curtailing non-environmental benefits?
(This is the question that deals directly with siting criteria.)

1. Why was this site chosen?
    a. Specific advantages of the site:
    b. Were other sites considered and rejected?
    c. Is the location of the site irrevocable; i.e., would denial of permit based on site preclude the project?

2. Is the chosen site in or near environmentally sensitive areas?

a. Wetlands
b. Estuaries
c. Critical habitat
d. Historic or culturally significant areas
    i. Indian mounds
    ii. Antebellum houses
    iii. Tourist attractions or facilities (e.g., bed and breakfast inns)
    iv. Campgrounds or parks

3. What is the zoning and existing land use of the prospective site and nearby area?
    a. Is the site located near existing heavy industrial, chemical process or refinery operations?
    b. Is there a precedent for chemical contamination near the site or is the soil and water pristine?
    c. Is the area particularly noted for its esthetic beauty?

4. Is the site flood prone?
    a. Is the site in a flood plain?
        i. How current are the maps used to make flood plain determinations?
        ii. What is the elevation of the site?
        iii. Is diking required or desired to provide flood protection?
            a. What is the design height of the dike?
            b. How is the dike protected from erosion?
            c. What frequency and design storm was used?
            d. Is the access to the site over or through dikes?
    b. Is the site hurricane vulnerable?
        i. Is the site in an area subject to storm surge?
        ii. What are the design storm specifications?
        iii. Should damage from wave action be considered?
        iv. For what levels of wind speed is the facility designed?

5. Is groundwater protected?
    a. Are aquifers or recharge area underlying the site used for drinking water?
    b. What is the relationship of the site to the water table?
    c. What wells exist in the area?
    d. What is the flow rate and direction of the groundwater flow?
    e. What is the groundwater quality in the underlying aquifers?
    f. Is there a hydraulic connection between the aquifers?

6. Does prospective site pose potential health risks as defined by proximity to:
    a. Prime agricultural area (crop or pasture land)
    b. Residential area
    c. Schools or daycare centers
    d. Hospitals or prisons
    e. Public buildings or entertainment facilities
    f. Food storage area
    g. Existing community health problems that may be aggravated by operation of additional hazardous waste disposal capacity

7. Is air quality protected?
    a. Is the site within an ozone or non-attainment area?
    b. What contaminants are likely to be generated at the site?
    c. What protection is afforded from each contaminant generated by the site?
    d. What is the potential for unregulated emissions?
    e. What plans are implemented to provide for odor control?
    f. Who will be affected by emissions?
        i. What is the direction of the prevailing winds?
        ii. Describe the expected frequency of “bad air” conditions.

g. Describe the control of vapors at various stage of process.

8. Have physical site characteristics been studied; what has been done in terms of a geotechnical
   a. Site geology
   b. Hydrology
   c. Topography
   d. Soil properties
   e. Aquifer location
   f. Subsidence problems
   g. Climatic conditions

E. Are there mitigating measures that would offer more protection to the environment than the facility as proposed without unduly curtailing non-environmental benefits?
(This question requires the permittee to demonstrate having considered the most stringent techniques for reducing or more efficiently handling waste.)

1. Is this facility part of a master plan to provide waste management? Whose plan?
   a. How does it fit into the plan?
   b. What geographical area is served by the plan?

2. Does this facility fit into an integrated waste management system? (Reduction, recovery, recycling, sales tax, exchange, storage, treatment, disposal)
   a. On-site
   b. Regional

3. Can waste be disposed by some other means?
   a. Technology limitations
   b. Cost factors
   c. Other reasons

4. What quality assurance control will be utilized to protect the environment?
   a. Plans for lab work
   b. How are out-of-spec wastes handled?
   c. What happens to rejected wastes?
   d. Treatment stabilization
   e. Segregation of non-compatible wastes
   f. Handling of containerized wastes

5. Innovative techniques used to control release of waste or waste constituents into the environment.
   a. Surface impoundment
   b. Land application treatment
   c. Landfill (burial)
   d. Incinerator
   e. Container storage
   f. Tanks