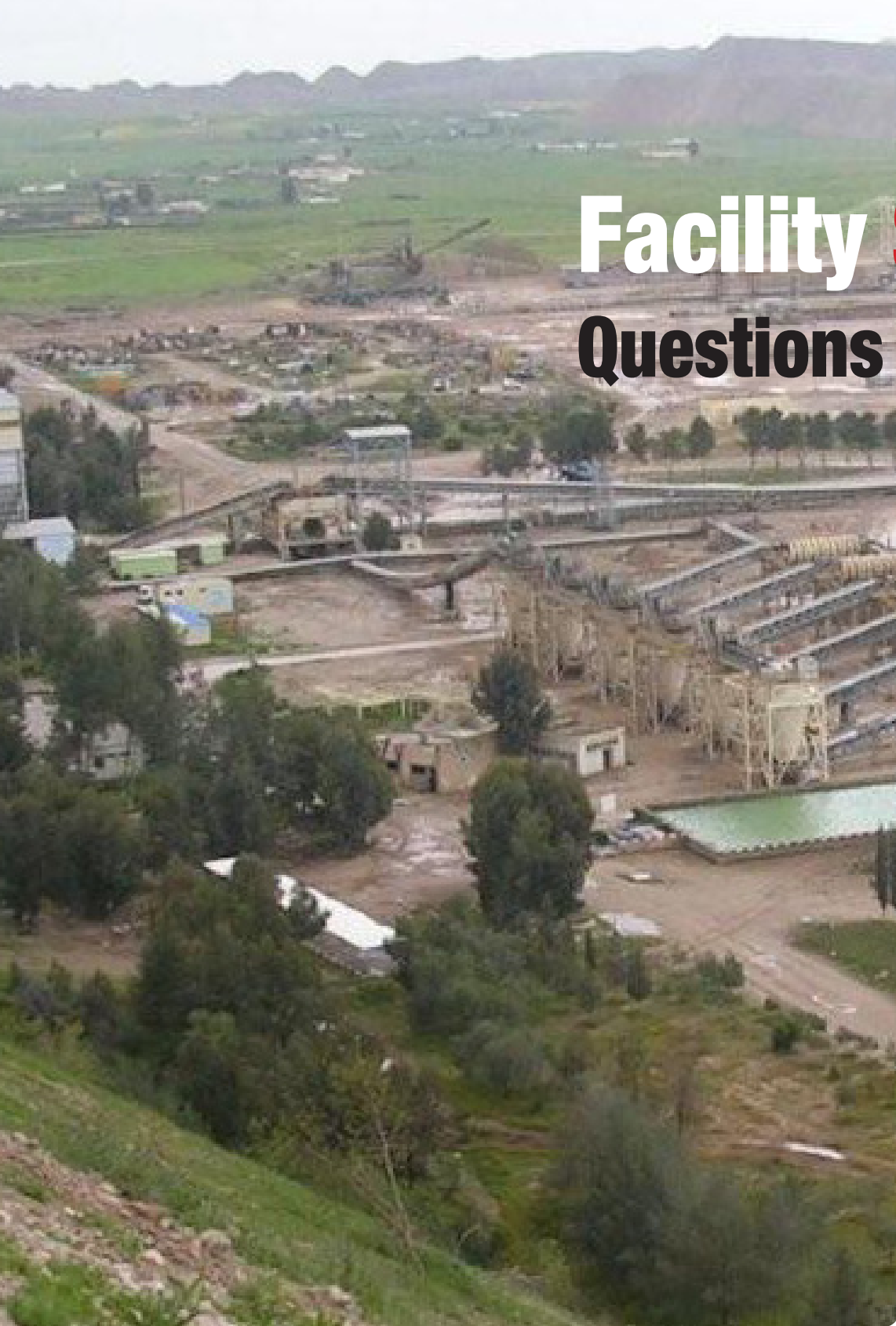


# Facility Siting Questions



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# Facility Siting Questions

Adapted by CHEJ from materials received as  
public information from the State of Texas

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# Center for Health, Environment & Justice

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**Mentoring a Movement**

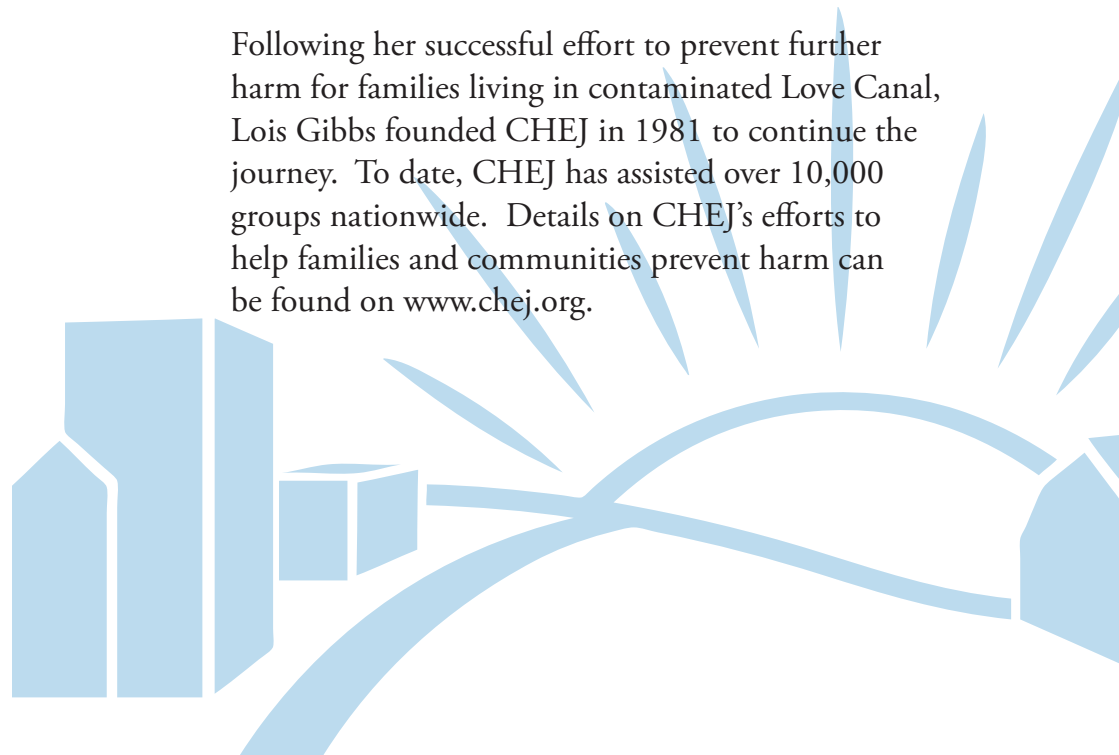
**Empowering People**

**Preventing Harm**

## **About the Center for Health, Environment & Justice**

CHEJ mentors the movement to build healthier communities by empowering people to prevent the harm caused by chemical and toxic threats. We accomplish our work by connecting local community groups to national initiatives and corporate campaigns. CHEJ works with communities to empower groups by providing the tools, strategic vision, and encouragement they need to advocate for human health and the prevention of harm.

Following her successful effort to prevent further harm for families living in contaminated Love Canal, Lois Gibbs founded CHEJ in 1981 to continue the journey. To date, CHEJ has assisted over 10,000 groups nationwide. Details on CHEJ's efforts to help families and communities prevent harm can be found on [www.chej.org](http://www.chej.org).



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# Chapter 1. Introduction

The following are questions and concerns you should raise about any hazardous waste facility, either proposed or existing, including landfills, deep well injections, sites surface impoundments, incinerators, and resource recovery facilities. Relevant transport and storage issues and concerns are also included.

The Keystone Center's Discussion Resources Group prepared these questions as part of a report for the State of Texas Department of Water Resources. They are not necessarily fully comprehensive and not all questions will apply to all situations. However, the many relevant and important questions should serve as a guide for raising additional issues and concerns.

# Chapter 2. Economic Considerations

## A. Is this facility needed?

1. How was need for the facility established?
  - a. Was a local and regional survey done?
  - b. What is the on-site capacity for treated waste vs. the off-site capacity?
  - c. Is it beneficial to good regional hazardous waste management?
  - d. Is there a generic survey of hazardous waste needs for the area and compatibility with this plan?
  - e. Is the technology proposed an improvement over that presently available?
  - f. Will this facility replace an outmoded/worse polluting one?
  - g. What geographical area will it serve?

## B. What are the profit expectations?

1. Is this a high or low risk project?
2. Longevity of facility
  - a. Is expansion anticipated?
  - b. Within how many years?
3. Who owns the facility?
4. Are the owners financially backed by others?
5. Who are the competitors?

## C. Who are the facility operators?

1. Do the operators have experience with this type of facility?
2. Will the company that owns the facility also operate facility?
3. Who will seek the permits?
4. How can operators' expertise be evaluated if new to this field?

## D. What will be the economic effects on the community?

1. What are the possible effects on property values?
2. Who will receive any increase in tax base?
3. How much tax revenue may be generated?
4. Will public costs rise?
  - a. Police protection?
  - b. Fire protection?
  - c. Road maintenance?
  - d. Emergency response equipment and facilities?

## E. What is the potential for compensation to the community?

1. Will the company be donating equipment to the community?
2. Will the company be paying fees to a general revenue fund?
3. What guarantees have been made concerning property values?
4. Will parks or recreational areas be built?

## F. What are the plans for closure and post closure?

1. When is closure anticipated?
2. Who is responsible for the site after closure?
3. What assurances will there be that site will be closed in accordance with the plan?
4. What financial assurances have been made to ensure problems can be handled after closure?
5. Who certifies that the site is properly closed?
6. How are people protected from unwittingly buying closure?
  - a. Will the type of facility be described in the deed?
  - b. What future uses are possible?

# Chapter 3. Function of Facility

## A. Storage

## B. Waste to be handled

1. What waste will be handled?
  - a. In what quantities?
  - b. What are the physical and chemical characteristics of the waste?
    - What degree of hazard is anticipated?
    - What makes the waste hazardous?
2. What wastes will not be handled – why?
3. Where will the waste come from?
  - a. What waste will be generated on-site?
  - b. What waste will be generated off-site?
    - Locally?
    - Regionally?
    - Within the State?
    - Out of state?
    - Out of country?
  - c. What are the consumer products from which such waste results?
4. Will non-manifested waste be accepted?
5. Where will waste go if not handled at this site?

## C. Does this facility fit into an integrated hazardous waste management system (reduction, recovery, recycling, sale/exchange storage, treatment, disposal)?

1. On-site?
2. Regionally?

## D. Is this facility part of a master plan to provide hazardous waste management?

1. Whose plan?
2. How does it fit into the plan?
3. What is the geographical area served by plan?

## E. Are there plans for future expansion?

1. For additional facilities?
2. For additional types of facilities?
3. What is the time frame within which expansion will take place?



# Chapter 4. Technology To Be Used: General Questions

## **A. Why was this technology chosen?**

1. Are there other technologies available?
2. Can the wastes to be handled be recycled, sold, exchanged, or treated to avoid disposing of them as hazardous waste?
3. What engineering design and operating techniques have been included to compensate for any site deficiencies?

## **B. What quality assurance/control measure will be used?**

1. Who will identify/define the waste to be treated?
  - a. What will the role of generator be?
  - b. What will be the role of facility?
2. What are the plans for lab work?
3. How will out-of-spec wastes be handled?
4. What will happen to rejected wastes?

## **C. How reliable is the technology?**

1. What do we know from past experiences with it?
2. Have there been any serious environmental impacts?
3. How was it tested to ensure long-term safety and effectiveness?

## **D. Sequence of technology used from arrival of wastes to end process at facility (flow chart)?**

1. Analysis of waste
2. Unloading
3. Storage
4. Treatment
5. Disposal
6. Any residual requiring further handling
7. Monitoring
8. Closure
9. Post closure

# Chapter 5. Technology To Be Used: Specific Questions

## A. Land Disposal

1. What types of land disposal will be used?
  - a. Surface impoundment?
  - b. Land application/treatment?
  - c. Landfill (burial)?
  - d. Other – specify?
2. What kinds of technology will be used before land disposal of the waste?
  - a. Treatment, stabilization?
  - b. Segregation of non-compatible wastes?
  - c. Handling of containerized waste?
3. What kinds of technology will be used to protect the environment?
4. What are the closure plans?
  - a. For interim partial closure of each cell?
  - b. For final closure of full facility?
5. What are the post closure plans?
  - a. Will there be periodic monitoring and maintenance?
  - b. What is the post closure period?
  - c. What financing and cost assurance will be provided?
  - d. What are the responsibilities of the facility operator? Landowner? Local and State units of government?

## B. Deep Well Injection

1. Well Construction
  - a. What is the depth of the well?
  - b. What is the design of the well casing?
  - c. What monitoring equipment will be used?
  - d. Are there any local faults?
  - e. Are there any wells in the area?
2. Pretreatment
  - a. Will sediment be removed?
  - b. What is the compatibility of the mixed waste?
3. Processes to assure environmental protection
4. What closure technology will be used?
5. What technology will be available if remedial action is needed?

## C. Recycling/ Recovery

1. How will it be accomplished?
2. Are there plans for energy conversion?
3. Will supplemental fuel be needed?  
If so, what type?
4. How reliable are the waste characteristics?
5. What is the prospect for long-term demand?

## D. Storage

1. How is waste stored?
2. How long will it be stored?
3. Where will the waste go next?

## E. Incineration

1. How complete will destruction be?
2. Will supplemental fuel be needed?  
If so, what type?
3. How will air quality be protected?
4. What plans have been made for air quality monitoring?
5. How will the operation of the incinerator be monitored?
6. What are the procedures in case of an upset?

## F. Treatment

1. What type of treatment will be used?
2. What type of wastes will be treated?
3. How completely will waste be rendered nonhazardous?
4. What will happen to the treated waste?

# Chapter 6. Site Characteristics

## A. How have site characteristics been determined?

1. What geo-technical investigation has been done?
2. What other assessment techniques have been done?

## B. Characteristics to be considered

1. Site geology
2. Hydrology
3. Topography
4. Soil properties
5. Aquifer location
  - a. What is the relationship to the water table?
  - b. Are there wells presently in the area?
  - c. What is the flow rate and direction of groundwater flow?
  - d. What is the groundwater quality?
  - e. Does the aquifer connect with others?
  - f. Is there an aquifer recharge area?
6. Climatic Conditions
  - a. Are the conditions normal?
  - b. What is the potential for natural disasters?

7. Is the site in or near environmentally sensitive areas?
  - a. Wetlands?
  - b. Shoreline?
  - c. Flood prone area?
  - d. Aquifer recharge zone?
  - e. Endangered species critical habitat?
  - f. Hurricane storm surge area?
  - g. Prime agricultural area?
  - h. Other?
8. Are there subsidence problems?
9. How close is it to residences/schools/etc?
10. Are there evacuation routes in area?
11. What is the current character of surrounding area?
12. What are the zoning regulations for the site? Nearby areas?
13. What plans currently exist for site and area?
14. What transportation routes will be used?

## C. Why was this site chosen?

1. Were others considered?
2. Are others still under consideration?
3. Why were others rejected?

# Chapter 7. Environmental Quality

## A. Surface drainage

1. Is the site in a flood plain?
  - a. Which one? By whose standard?
    - How current were the maps used to make this determination?
  - b. What is the elevation of the land?
  - c. Are dikes planned?
    - Internally?
    - Along the perimeter?
  - d. Is diking required or desired?
    - What will be the height?
    - How will it be protected from erosion?
    - What designed will be used to prevent storm damage?
    - Will access to the site be provided over or through dikes?
2. Storm water management
  - a. How will it be controlled?
  - b. What provisions have been made for treatment/discharges during storms?
  - c. What will the effect be on the receiving body of water?
  - d. Will residuals remain?
  - e. Are there sludge management plans?
3. Hurricane vulnerability
  - a. Is the site in an area subject to storm surge?
  - b. What are the design storm specifications?
  - c. Is damage from wave action possible?
  - d. For what levels of wind speed is facility designed?

## B. Groundwater protection

1. Groundwater resources
  - a. Are aquifers used for drinking water?
    - Is groundwater used now for other purposes? Will it be used in the future?
    - Where are the wells located?
    - Proximity to surface water?

## 2. Soil

- a. What are the physical characteristics of the soil, including permeability?
- b. What are the chemical characteristics, including compatibility with wastes to be handled?

## 3. Leachate Collection

- a. How will leachate be collected?
- b. How will leachate be treated?
- c. For how long will leachate be collected? Treated?

## 4. Liners

- a. What is required? Desired?
- b. What areas of the facility will be lined?
- c. Integrity of liner
  - Type: Is the liner clay or synthetic?
  - How thick is the liner?
  - How will it be constructed?
  - What is its compatibility with wastes to be handled? Has it been tested?
- d. What remedial action is possible?

## 5. Caps

- a. Same questions as liners
- b. What type of erosion control will be used?
- c. What will be done to prevent water from collecting on the site? What will be done to correct settlement?
- d. What re-vegetation is planned? What post closure maintenance is planned?

## 6. Deep well injection has additional concerns

- a. What is the relationship of the aquifer to the injection zone?
- b. What is the compatibility of the waste with area geology?
- c. What remedial action is possible?
- d. Are there limitations on future land use for mining, etc?

**C. Air emissions**

1. What protection is afforded? From which contaminants?
2. What is the potential for unregulated emissions?
3. How will odors be controlled? Any odor control plans?
4. Who will be affected by emissions?
  - a. What is the direction of the prevailing winds?
  - b. What is the frequency of “bad air” conditions?
5. How will vapors be controlled at various stages of the process?

# Chapter 8. Transportation

## **A. How will the waste be transported?**

1. Truck?
2. Rail?
3. Barge?
4. Other possibilities?

## **B. How will the wastes be contained during transport?**

1. What type of container?
  - a. Bulk?
  - b. Drums?
  - c. Other?
2. What protection will there be against leakage?
  - a. What is the compatibility of the wastes with the packaging?
  - b. What is the reliability record of the container?
3. What information will be provided on the container labels?

## **C. Who is responsible for transport?**

1. Who is the company responsible and what is their record?
2. How thorough is the training of drivers?
  - a. How does the company ensure its drivers have safe driving skills?
  - b. What procedures have been set up to deal with emergency?
3. What manifest system will be used?
4. What labeling system will be used?

## **D. What is the timing of the arrivals?**

1. Days?
2. Hours?

## **E. How will the transport be routed?**

1. What routes will be used?
2. Are there any existing restrictions on transportation routes?
  - a. Who imposed them?
  - b. Who enforces them?
  - c. Can penalties be assessed on offenders?
3. What will the effects be on area traffic?
4. What will the effects be on area road conditions?

## **F. What procedures have been set up for responding to spills?**

1. Who is responsible for responding to spills?
2. What clean up techniques will be used?
3. Who will pay for the clean up?

# Chapter 9. Operations

## **A. What actions will be taken when there are operating problems?**

1. What back-up systems are planned?
2. Start-ups and shutdowns
  - a. What will be the effects on permitted emissions?
  - b. What is the anticipated frequency and length of shutdowns?

## **B. Emergency response**

1. What is included in the contingency plan?
2. How will fire protection be provided?
  - a. Is on-site equipment available?
  - b. What mutual aid agreements exist?
  - c. Is there an alarm system in place?

## **C. Site security**

1. Will entry be controlled?
2. Will there be fencing around the facility?
3. Will warning signs be posted?
4. Will surveillance systems be set up?

## **D. Personnel**

1. Will experience be required?
2. What are the technical levels and working experience of staff?
3. What plans exist for training staff?
4. Will staff participate in quality assurance/safety programs?

# Chapter 10. Enforcement

## **A. Regulations**

1. Which regulations apply to this facility and site?
2. What permits are needed?
  - a. Who grants each?
  - b. What are the opportunities for public participation?
3. What are the contents of the permit applications? Are they available to the public?
4. What are the penalties for noncompliance?

## **B. What monitoring will be done to ensure environmental protection?**

1. What techniques will be used?
2. What equipment is available?
3. What will be the frequency of the monitoring?
4. Are there any citizens' reviews planned, for example, an Operations Review Committee?
5. Will communities be informed when a sudden release occurs? How?

## **C. Who is responsible for enforcement?**

1. Owner/operator – self-reporting system?
2. At the local level?
  - a. City?
  - b. County?
  - c. Regional or special district?
3. At the state level?
4. At the federal level?

## **D. What is the sequence and timing of possible enforcement actions?**

1. What corrective measures have been prescribed?
2. What penalties would be assessed?
3. Is litigation possible?

## **E. What is the government's capability for ensuring compliance?**



“CHEJ is the strongest environmental organization today – the one that is making the greatest impact on changing the way our society does business.”

*Ralph Nader*

“CHEJ has been a pioneer nationally in alerting parents to the environmental hazards that can affect the health of their children.”

*New York, New York*

“Again, thank you for all that you do for us out here. I would have given up a long time ago if I had not connected with CHEJ!”

*Claremont, New Hampshire*



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