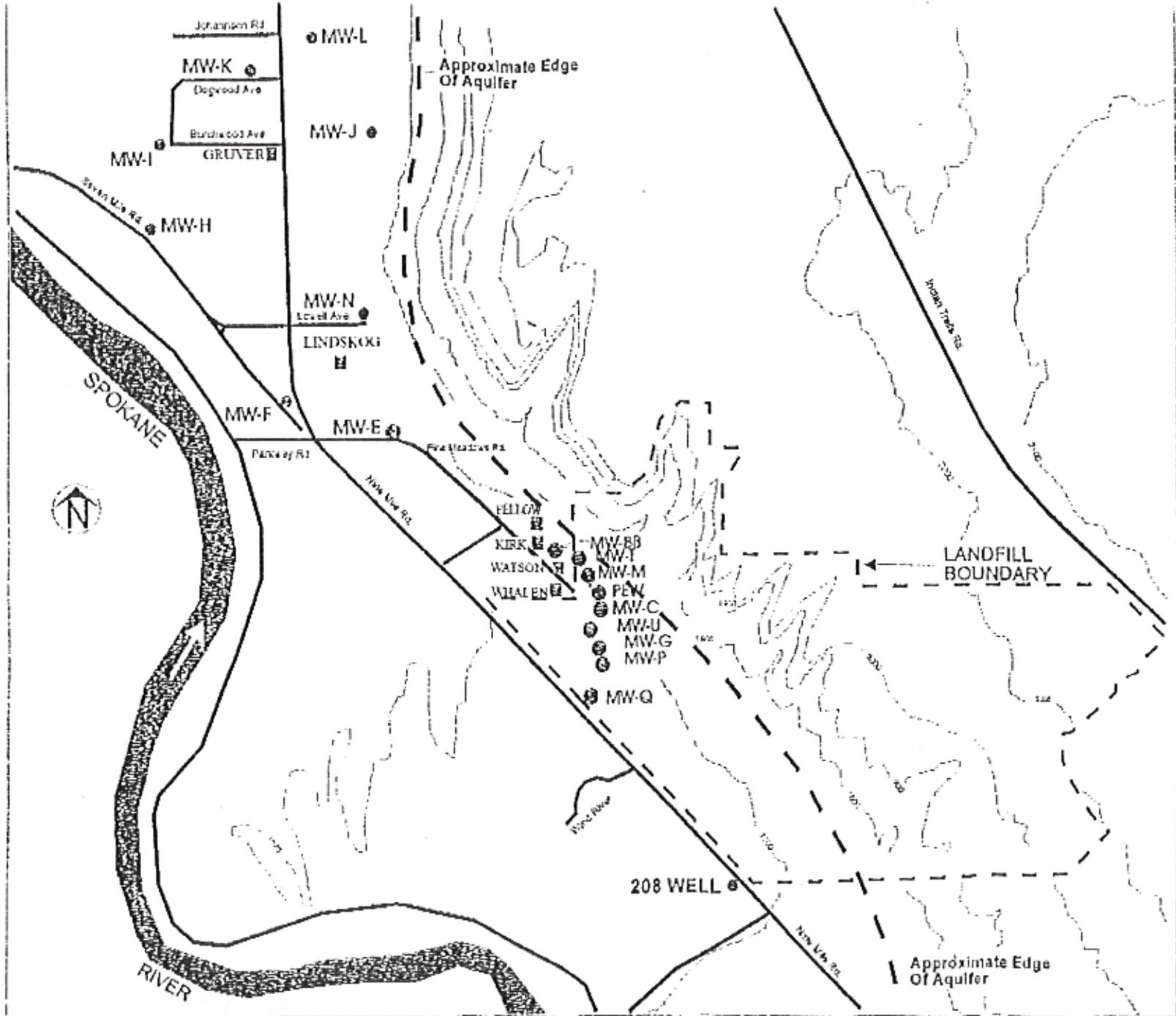


Figure 1
Vicinity Map



City of Spokane
 Northside Landfill

- Domestic Wells
- Monitoring Wells

Figure 2

3. **Local regulatory authorities and response agencies** (i.e., State and Tribal offices, emergency response office, police department, office of public health or environmental health, zoning office, recorder of deeds, or other city and county offices, etc.) Fill in all that apply.

Agency Ecology
 Contact Bill Fees Fenu Engineer 7/29/02
 Name Title Date Phone no.
 Problems; suggestions; Report attached Eastern Region Office 509-625-5790
N. 4601 Monroe 99205-1295

Agency _____
 Contact _____
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

Agency _____
 Contact _____
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

Agency _____
 Contact _____
 Name Title Date Phone no.
 Problems; suggestions; Report attached _____

4. **Other interviews** (optional) Report attached.

Monica
Disposal Operations Supervisor

III. ON-SITE DOCUMENTS & RECORDS VERIFIED (Check all that apply)

1.	O&M Documents <input checked="" type="checkbox"/> O&M manual <input checked="" type="checkbox"/> As-built drawings <input checked="" type="checkbox"/> Maintenance logs Remarks _____	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
2.	Site-Specific Health and Safety Plan <input checked="" type="checkbox"/> Contingency plan/emergency response plan Remarks _____	<input type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A
3.	O&M and OSHA Training Records Remarks <u>Managers of Landfill Operation (State Reg)</u> <u>WICHA Right to Know</u>	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
4.	Permits and Service Agreements <input checked="" type="checkbox"/> Air discharge permit <input checked="" type="checkbox"/> Effluent discharge <input type="checkbox"/> Waste disposal, POTW <input type="checkbox"/> Other permits Remarks <u>Substate requirements for red charge</u>	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available <input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date <input type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A <input type="checkbox"/> N/A
5.	Gas Generation Records Remarks <u>NEO Corp. Private part</u> <u>2 x 750 Kw generators</u>	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
6.	Settlement Monument Records Remarks _____	<input type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A
7.	Groundwater Monitoring Records Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
8.	Leachate Extraction Records Remarks _____	<input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A
9.	Discharge Compliance Records <input checked="" type="checkbox"/> Air <input checked="" type="checkbox"/> Water (effluent) Remarks _____	<input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Readily available	<input checked="" type="checkbox"/> Up to date <input checked="" type="checkbox"/> Up to date	<input type="checkbox"/> N/A <input type="checkbox"/> N/A
10.	Daily Access/Security Logs Remarks <u>Records of haulers</u> <u>Daily activity log for workers</u>	<input checked="" type="checkbox"/> Readily available	<input type="checkbox"/> Up to date	<input type="checkbox"/> N/A

IV. O&M COSTS

1. O&M Organization

- | | |
|--|--|
| <input type="checkbox"/> State in-house | <input type="checkbox"/> Contractor for State |
| <input checked="" type="checkbox"/> PRP in-house | <input type="checkbox"/> Contractor for PRP |
| <input type="checkbox"/> Federal Facility in-house | <input type="checkbox"/> Contractor for Federal Facility |
| <input type="checkbox"/> Other _____ | |

2. O&M Cost Records

- Readily available Up to date
 Funding mechanism/agreement in place
 Original O&M cost estimate 75,000 yr Breakdown attached

Total annual cost by year for review period if available

From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From <u>2001</u>	To _____	<u>\$ 950,000</u>	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	
From _____	To _____	_____	<input type="checkbox"/> Breakdown attached
Date	Date	Total cost	

3. Unanticipated or Unusually High O&M Costs During Review Period

Describe costs and reasons: _____

V. ACCESS AND INSTITUTIONAL CONTROLS Applicable N/A

A. Fencing

1. **Fencing damaged** Location shown on site map Gates secured N/A
- Remarks _____

B. Other Access Restrictions

1. **Signs and other security measures** Location shown on site map N/A
- Remarks Controlled by fencing - on-site personnel

C. Institutional Controls (ICs)				
1.	Implementation and enforcement	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Site conditions imply ICs not properly implemented	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Site conditions imply ICs not being fully enforced	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
	Type of monitoring (e.g., self-reporting, drive by) <u>self reporting/drive by</u>			
	Frequency <u>daily 5/wk</u>			
	Responsible party/agency <u>Spokane</u>			
	Contact <u>Dean Fowler</u>			
	Name	Title	Date	Phone no.
	Reporting is up-to-date <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
	Reports are verified by the lead agency <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
	Specific requirements in deed or decision documents have been met <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A			
	Violations have been reported <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A			
	Other problems or suggestions: <input type="checkbox"/> Report attached			

2.	Adequacy	<input checked="" type="checkbox"/> ICs are adequate	<input type="checkbox"/> ICs are inadequate	<input type="checkbox"/> N/A
	Remarks <u>verify deed notation</u>			

D. General				
1.	Vandalism/trespassing	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No vandalism evident	
	Remarks _____			

2.	Land use changes on site	<input checked="" type="checkbox"/> N/A		
	Remarks _____			

3.	Land use changes off site	<input checked="" type="checkbox"/> N/A		
	Remarks _____			

VI. GENERAL SITE CONDITIONS				
A. Roads				
	<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A		
1.	Roads damaged	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> Roads adequate	<input type="checkbox"/> N/A
	Remarks _____			

B. Other Site Conditions

Remarks _____

VII. LANDFILL COVERS Applicable N/A

A. Landfill Surface

1. **Settlement** (Low spots) Location shown on site map Settlement not evident
Areal extent _____ Depth _____
Remarks _____

2. **Cracks** Location shown on site map Cracking not evident
Lengths 20' Widths 6" Depths 6"
Remarks _____

3. **Erosion** Location shown on site map Erosion not evident
Areal extent _____ Depth _____
Remarks _____

4. **Holes** Location shown on site map Holes not evident
Areal extent _____ Depth _____
Remarks _____

5. **Vegetative Cover** Grass Cover properly established No signs of stress
 Trees/Shrubs (indicate size and locations on a diagram)
Remarks _____

6. **Alternative Cover (armored rock, concrete, etc.)** N/A
Remarks _____

7. **Bulges** Location shown on site map Bulges not evident
Areal extent _____ Height _____
Remarks _____

8.	Wet Areas/Water Damage <input type="checkbox"/> Wet areas <input type="checkbox"/> Ponding <input type="checkbox"/> Seeps <input type="checkbox"/> Soft subgrade Remarks _____	<input checked="" type="checkbox"/> Wet areas/water damage not evident <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____ <input type="checkbox"/> Location shown on site map Areal extent _____	
9.	Slope Instability <input type="checkbox"/> Slides <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> No evidence of slope instability Areal extent _____ Remarks _____		
B. Benches <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A (Horizontally constructed mounds of earth placed across a steep landfill side slope to interrupt the slope in order to slow down the velocity of surface runoff and intercept and convey the runoff to a lined channel.)			
1.	Flows Bypass Bench Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
2.	Bench Breached Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
3.	Bench Overtopped Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> N/A or okay
C. Letdown Channels <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A (Channel lined with erosion control mats, riprap, grout bags, or gabions that descend down the steep side slope of the cover and will allow the runoff water collected by the benches to move off of the landfill cover without creating erosion gullies.)			
1.	Settlement Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No evidence of settlement
2.	Material Degradation Material type _____ Areal extent _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No evidence of degradation
3.	Erosion Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No evidence of erosion
4.	Undercutting Areal extent _____ Depth _____ Remarks _____	<input type="checkbox"/> Location shown on site map	<input checked="" type="checkbox"/> No evidence of undercutting

5.	Obstructions Type _____ <input type="checkbox"/> Location shown on site map Size _____ Remarks _____	Areal extent <input checked="" type="checkbox"/> No obstructions _____	
6.	Excessive Vegetative Growth Type _____ <input checked="" type="checkbox"/> No evidence of excessive growth <input type="checkbox"/> Vegetation in channels does not obstruct flow <input type="checkbox"/> Location shown on site map Remarks _____	Areal extent _____	
D. Cover Penetrations <input type="checkbox"/> Applicable <input type="checkbox"/> N/A			
1.	Gas Vents <input checked="" type="checkbox"/> Active <input type="checkbox"/> Passive <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> Evidence of leakage at penetration <input type="checkbox"/> N/A Remarks _____	<input checked="" type="checkbox"/> Routinely sampled <input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> Good condition <input type="checkbox"/> N/A
2.	Gas Monitoring Probes <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> Evidence of leakage at penetration Remarks _____	<input checked="" type="checkbox"/> Routinely sampled <input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> Good condition <input type="checkbox"/> N/A
3.	Monitoring Wells (within surface area of landfill) <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Evidence of leakage at penetration Remarks _____	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition <input checked="" type="checkbox"/> N/A
4.	Leachate Extraction Wells <input type="checkbox"/> Properly secured/locked <input type="checkbox"/> Functioning <input type="checkbox"/> Evidence of leakage at penetration Remarks _____	<input type="checkbox"/> Routinely sampled <input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition <input checked="" type="checkbox"/> N/A
5.	Settlement Monuments <input type="checkbox"/> Located Remarks _____	<input type="checkbox"/> Routinely surveyed	<input checked="" type="checkbox"/> N/A

E. Gas Collection and Treatment		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Gas Treatment Facilities <input checked="" type="checkbox"/> Flaring <input checked="" type="checkbox"/> Good condition Remarks _____	<input checked="" type="checkbox"/> Thermal destruction <input type="checkbox"/> Needs Maintenance	<input checked="" type="checkbox"/> Collection for reuse 2 x 750 kva generators
2.	Gas Collection Wells, Manifolds and Piping <input checked="" type="checkbox"/> Good condition Remarks _____	<input type="checkbox"/> Needs Maintenance	
3.	Gas Monitoring Facilities (e.g., gas monitoring of adjacent homes or buildings) <input checked="" type="checkbox"/> Good condition Remarks _____	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> N/A
F. Cover Drainage Layer		<input type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Outlet Pipes Inspected Remarks _____	<input checked="" type="checkbox"/> Functioning	<input type="checkbox"/> N/A
2.	Outlet Rock Inspected Remarks _____	<input checked="" type="checkbox"/> Functioning	<input type="checkbox"/> N/A
G. Detention/Sedimentation Ponds		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Siltation Areal extent _____ Depth _____ <input checked="" type="checkbox"/> Siltation not evident Remarks _____		<input checked="" type="checkbox"/> N/A
2.	Erosion Areal extent _____ Depth _____ <input checked="" type="checkbox"/> Erosion not evident Remarks _____		
3.	Outlet Works Remarks _____	<input checked="" type="checkbox"/> Functioning	<input type="checkbox"/> N/A
4.	Dam Remarks _____	<input type="checkbox"/> Functioning	<input checked="" type="checkbox"/> N/A

H. Retaining Walls <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1	Deformations <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Deformation not evident Horizontal displacement _____ Vertical displacement _____ Rotational displacement _____ Remarks _____	
2	Degradation <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Degradation not evident Remarks _____	
I. Perimeter Ditches/Off-Site Discharge <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A		
1.	Siltation <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Siltation not evident Areal extent <u>perimeter</u> Depth _____ Remarks _____	
2.	Vegetative Growth <input type="checkbox"/> Location shown on site map <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Vegetation does not impede flow Areal extent _____ Type _____ Remarks _____	
3.	Erosion <input type="checkbox"/> Location shown on site map <input checked="" type="checkbox"/> Erosion not evident Areal extent _____ Depth _____ Remarks _____	
4.	Discharge Structure <input checked="" type="checkbox"/> Functioning <input type="checkbox"/> N/A Remarks _____	
VIII. VERTICAL BARRIER WALLS <input type="checkbox"/> Applicable <input checked="" type="checkbox"/> N/A		
1.	Settlement <input type="checkbox"/> Location shown on site map <input type="checkbox"/> Settlement not evident Areal extent _____ Depth _____ Remarks _____	
2.	Performance Monitoring Type of monitoring _____ <input type="checkbox"/> Performance not monitored Frequency _____ <input type="checkbox"/> Evidence of breaching Head differential _____ Remarks _____	

IX. GROUNDWATER/SURFACE WATER REMEDIES <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
A. Groundwater Extraction Wells, Pumps, and Pipelines <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Pumps, Wellhead Plumbing, and Electrical <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells properly operating <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks _____ <i>Water level low this season - near well shut off level</i>
2.	Extraction System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
3.	Spare Parts and Equipment <input checked="" type="checkbox"/> Readily available <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____
B. Surface Water Collection Structures, Pumps, and Pipelines <input checked="" type="checkbox"/> Applicable <input type="checkbox"/> N/A	
1.	Collection Structures, Pumps, and Electrical <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____
2.	Surface Water Collection System Pipelines, Valves, Valve Boxes, and Other Appurtenances <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks _____ <i>N/A</i>
3.	Spare Parts and Equipment <input type="checkbox"/> Readily available <input type="checkbox"/> Good condition <input type="checkbox"/> Requires upgrade <input type="checkbox"/> Needs to be provided Remarks _____ <i>N/A</i>

C. Treatment System		<input checked="" type="checkbox"/> Applicable	<input type="checkbox"/> N/A
1.	Treatment Train (Check components that apply) <input type="checkbox"/> Metals removal <input type="checkbox"/> Oil/water separation <input type="checkbox"/> Bioremediation <input checked="" type="checkbox"/> Air stripping <input type="checkbox"/> Carbon adsorbers <input type="checkbox"/> Filters <input type="checkbox"/> Additive (<i>e.g.</i> , chelation agent, flocculent) <input type="checkbox"/> Others <input type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> Sampling ports properly marked and functional <input checked="" type="checkbox"/> Sampling/maintenance log displayed and up to date <input checked="" type="checkbox"/> Equipment properly identified <input type="checkbox"/> Quantity of groundwater treated annually <u>1 MGD</u> <input type="checkbox"/> Quantity of surface water treated annually Remarks		
2.	Electrical Enclosures and Panels (properly rated and functional) <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks		
3.	Tanks, Vaults, Storage Vessels <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition <input type="checkbox"/> Proper secondary containment <input type="checkbox"/> Needs Maintenance Remarks		
4.	Discharge Structure and Appurtenances <input type="checkbox"/> N/A <input checked="" type="checkbox"/> Good condition <input type="checkbox"/> Needs Maintenance Remarks		
5.	Treatment Building(s) <input checked="" type="checkbox"/> N/A <input type="checkbox"/> Good condition (<i>esp.</i> roof and doorways) <input type="checkbox"/> Needs repair <input type="checkbox"/> Chemicals and equipment properly stored Remarks		
6.	Monitoring Wells (pump and treatment remedy) <input checked="" type="checkbox"/> Properly secured/locked <input checked="" type="checkbox"/> Functioning <input checked="" type="checkbox"/> Routinely sampled <input checked="" type="checkbox"/> Good condition <input checked="" type="checkbox"/> All required wells located <input type="checkbox"/> Needs Maintenance <input type="checkbox"/> N/A Remarks		
D. Monitoring Data			
1.	Monitoring Data <input checked="" type="checkbox"/> Is routinely submitted on time <input checked="" type="checkbox"/> Is of acceptable quality		
2.	Monitoring data suggests: <input checked="" type="checkbox"/> Groundwater plume is effectively contained <input checked="" type="checkbox"/> Contaminant concentrations are declining		

D. Monitored Natural Attenuation			
1.	Monitoring Wells (natural attenuation remedy)		
	<input type="checkbox"/> Properly secured/locked	<input type="checkbox"/> Functioning	<input type="checkbox"/> Routinely sampled
	<input type="checkbox"/> All required wells located	<input type="checkbox"/> Needs Maintenance	<input type="checkbox"/> Good condition
	Remarks _____		
X. OTHER REMEDIES			
If there are remedies applied at the site which are not covered above, attach an inspection sheet describing the physical nature and condition of any facility associated with the remedy. An example would be soil vapor extraction.			
XI. OVERALL OBSERVATIONS			
A. Implementation of the Remedy			
Describe issues and observations relating to whether the remedy is effective and functioning as designed. Begin with a brief statement of what the remedy is to accomplish (i.e., to contain contaminant plume, minimize infiltration and gas emission, etc.).			

B. Adequacy of O&M			
Describe issues and observations related to the implementation and scope of O&M procedures. In particular, discuss their relationship to the current and long-term protectiveness of the remedy.			

C. Early Indicators of Potential Remedy Problems

Describe issues and observations such as unexpected changes in the cost or scope of O&M or a high frequency of unscheduled repairs, that suggest that the protectiveness of the remedy may be compromised in the future.

D. Opportunities for Optimization

Describe possible opportunities for optimization in monitoring tasks or the operation of the remedy.
