

Source Water Assessment

A Hydrogeologic Susceptibility and
Vulnerability Assessment for
City of Soldotna- Well F
Drinking Water System,
Kenai area, Alaska
PWSID 241054.006

February 2004

DRINKING WATER PROTECTION PROGRAM REPORT 1441
Alaska Department of Environmental Conservation

Source Water Assessment for City of Soldotna- Well F Drinking Water System Kenai area, Alaska PWSID 241054.006

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The Drinking Water Protection Program (DWPP) is producing Source Water Assessments in compliance with the Safe Drinking Water Act Amendments of 1996. Each assessment includes a delineation of the source water area, an inventory of potential and existing contaminant sources that may impact the water, a risk ranking for each of these contaminants, and an evaluation of the potential vulnerability of these drinking water sources.

These assessments are intended to provide public water systems owners/operators, communities, and local governments with the best available information that may be used to protect the quality of their drinking water. The assessments combine information obtained from various sources, including the U.S. Environmental Protection Agency, Alaska Department of Environmental Conservation (ADEC), public water system owners/operators, and other public information sources. The results of this assessment are subject to change if additional data becomes available. It is anticipated this assessment will be updated every five years to reflect any changes in the vulnerability and/or susceptibility of public drinking water source. If you have any additional information that may affect the results of this assessment, please contact the Program Coordinator of DWPP, (907) 269-7521.

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Source Water Assessment for City of Soldotna-Well F Source of Public Drinking Water, Kenai area, Alaska

Drinking Water Protection Program Alaska Department of Environmental Conservation

EXECUTIVE SUMMARY

The public water system for City of Kenai is a Class A (Community) water system currently consisting of four wells. This report assesses Well F. The well is located a few blocks east of the Kenai Spur Highway. The wellhead received a susceptibility rating of **Low** and the aquifer received a susceptibility rating of **Medium**. Combining these two ratings produces a **Low** rating for the natural susceptibility of the well. Identified potential and current sources of contaminants for the City of Soldotna-Well F include: large capacity septic systems, roads, residential septic systems, sewer lines, residential area, motor vehicle water disposal wells, underground fuel tanks, recognized contaminated sites, leaking underground storage tanks, print shops, photo shops, florists, pharmacies, paint sales, gasoline stations, motor vehicle repair shops, cement manufacturing, furniture manufacturing/repair, seafood processing, medical facilities, and various commercial and industrial activities. These identified potential and existing sources of contamination are considered as sources of bacteria and viruses, nitrates and/or nitrites, and volatile organic chemicals, inorganic chemicals, synthetic organic chemicals and other organic chemicals. Overall, the City of Soldotna-Well F received a vulnerability rating of **Medium** for bacteria/viruses, nitrates/nitrites and synthetic organic chemicals and **High** for volatile organic chemicals, inorganic chemicals and other organic chemicals.

CITY OF KENAI- PUBLIC DRINKING WATER SYSTEM

The City of Kenai public water system (PWS) is a Class A (Community) water system. The system currently consists of four wells: Well F, B, C and F. The system is planning to add a fifth well, however the well is not active at this time. This report assesses Well F which is a few block west of the Kenai Spur Highway. (See Map 1 of Appendix A) The assessments of Well A, B and C are located in Report No. 1440, No. 1435, No. 1439 respectively.

The City of Kenai is part of the Kenai Peninsula Borough, which is located directly south of the city of Anchorage (Please see the inset of Map 1 in Appendix A for location). The borough encompasses 25,600 square miles, of which only 15,700 square miles is land.

The Kenai Peninsula is broken into two distinct geographic areas; the Kenai Mountains and the Kenai Lowlands. Kenai and its surrounding communities are located in the Kenai Lowlands. Communities located within the Kenai Lowlands include Sterling, Soldotna, Kenai, Kenai, Clam Gulch, Ninilchik, and Homer.

The Kenai Peninsula area topography varies from about 3,000 feet to 5,000 feet above sea level in the Kenai Mountains, the highest point being about 6,400 feet above sea level. The Kenai Peninsula is dotted with many lakes and small streams, including three large lakes (Kenai Lake, Skilak Lake, and Tustemena Lake) and two substantial rivers (Kenai River, and Kasilof River) (USGS 1915).

The City of Soldotna-Well F water system is located within the Kenai Lowlands, which is a sub-province of the Cook Inlet-Susitna Lowland physiographic region. The Kenai Lowland is a glaciated coastal shelf situated west of the northeast-trending Kenai Mountains. Approximately 100 miles long, the coastal shelf is bordered on the west by Cook Inlet, on the east by Kenai Mountains, on the north by Turnagain Arm, and on the south by the Caribou Hills and Kachemak Bay. The following summary of regional geology and hydrogeology is based on studies by Bailey and Hogan (1995); Freethey and Scully (1980); Glass (1996); Hartman, et al. (1972); and Karlstrom (1964).

The Kenai Lowland is underlain by bedrock. Tertiary sedimentary bedrock is more than 500 feet below the city of Kenai airport, but is exposed along beach cliffs and road cuts near the southwest end of the lowland. Unconsolidated surficial deposits of Quaternary age include coastal deposits, glaciolacustrine deposits, glaciofluvial deposits, glacial moraine deposits, and periglacial wind deposits. Unconsolidated Quaternary cover on the lowlands generally thickens from south to North being thin or absent in the Homer area, and over 750 feet thick near Kenai.

The most significant groundwater resources of the Kenai Lowlands are contained in Quaternary coarse-grained sands and gravels. Flood plain, river terrace and other alluvial deposits are common aquifer materials in the area, and are characterized by high rates of recharge, and large saturated thicknesses. Other

favorable materials include proglacial lake and associated river deposits and glacial outwash deposits consisting of meltwater sorted sand and gravel material. Unsorted glacial moraine and drift deposits generally have poor groundwater yields, as do discontinuous layers of confining clays and silt that are common throughout the unconsolidated materials. The relatively thicker sequence of unconsolidated sediments in the northern portions of the Kenai Lowlands locally hosts thicker, more extensive clay aquitards and multiple aquifers.

The Kenai Peninsula area has a central water system; however, many homes and businesses in the area rely on individual wells for their water supply. Most of these wells are deep with depths between 50 and 200 feet. Static water levels in many of these wells are between 10 and 30 feet below the surface. Although groundwater quality can vary significantly in short distance, groundwater supplies are abundant in the area.

The Sanitary Survey (2002) indicates that the well is properly sealed. A properly installed sanitary seal may provide protection against contaminant from entering the source waters at the casing. The well is not located in a floodplain and the surface is sloped away from the wellhead. The well is properly grouted. Proper grouting provides added protection against contaminants traveling along the well casing and into source waters.

This system operates year round and serves up to 3500 residents and 500 non-residents through 1100 service connections.

CITY OF SOLDOTNA-WELL F DRINKING WATER PROTECTION AREA

In order to evaluate whether a drinking water source is at risk, we must first evaluate what are the most likely pathways for surface contamination to reach the groundwater. These areas are determined by looking at the characteristics of the soil, groundwater, aquifer, and well.

The most probable area for contamination to reach the drinking water well is the area that contributes water to the well, the groundwater recharge area. This area is designated as the drinking water protection area (DWPA). Because releases of contaminants within the protection area are most likely to impact the drinking water well, this area will serve as the focus for voluntary protection efforts.

An analytical calculation was used to determine the size and shape of the DWPA for City of Soldotna-Well F. The input parameters describing the attributes of the

aquifer in this calculation were adopted from Groundwater (*Freeze and Cherry 1979*). Available geology and groundwater contours were also considered to take into account any uncertainties in groundwater flow and aquifer characteristics to arrive at a meaningful protection area.

The protection areas established for wells by the ADEC are usually separated into four zones, limited by the watershed. These zones correspond to differences in the time-of-travel (TOT) of the water moving through the aquifer to the well (Please refer to the Guidance Manual for Class A Public Water Systems for additional information).

The time of travel for contaminants within the water varies and is dependent on the physical and chemical characteristics of each contaminant. The following is a summary of the four protection area zones for wells and the calculated time-of-travel for each:

Table 1. Definition of Zones

| Zone | Definition |
|-------------|---|
| A | ¼ the distance for the 2-yr. time-of-travel |
| B | Less than 2 years time-of-travel |
| C | Less than 5 years time-of-travel |
| D | Less than 10 years time-of-travel |

The DWPA for the City of Soldotna-Well F was determined using an analytical calculation and includes Zone A, B, C, and D (See Map 1 of Appendix A).

INVENTORY OF POTENTIAL AND EXISTING CONTAMINANT SOURCES

The Drinking Water Protection Program has completed an inventory of potential and existing sources of contamination within the City of Soldotna-Well F DWPA. This inventory was completed through a search of agency records and other publicly available information. Potential sources of contamination to the drinking water aquifer include a wide range of categories and types. Potential drinking water contaminants are found within agricultural, residential, commercial, and industrial areas, but can also occur within areas that have little or no development.

For the basis of all Class A public water system assessments, six categories of drinking water contaminants were inventoried. They include:

- Bacteria and viruses;
- Nitrates and/or nitrites;
- Volatile organic chemicals;

- Heavy metals, cyanide, and other inorganic chemicals;
- Synthetic organic chemicals; and
- Other organic chemicals.

The sources are displayed on Map 1 of Appendix C and summarized in Table 1 of Appendix B.

RANKING OF CONTAMINANT RISKS

Once the potential and existing sources of contamination have been identified, they are assigned a ranking according to what type and level of risk they represent. Ranking of contaminant risks for a “potential” or “existing” source of contamination is a function of toxicity and volumes of specific contaminants associated with that source. Rankings include:

- Low;
- Medium;
- High; and
- Very High.

The time-of-travel for contaminants within the water varies and is dependent on the physical and chemical characteristics of each contaminant. Bacteria and Viruses are only inventoried in Zones A and B because of their short life span. Only “Very High” and “High” rankings are inventoried within the outer Zone D due to the probability of contaminant dilution by the time the contaminants get to the well.

Tables 2 through 4 in Appendix B contain the ranking of potential and existing sources of contamination with respect to bacteria and viruses, nitrates and/or nitrites, and volatile organic chemicals.

VULNERABILITY OF CITY OF SOLDOTNA-WELL F DRINKING WATER SYSTEM

Vulnerability of a drinking water source to contamination is a combination of two factors:

- Natural susceptibility; and
- Contaminant risks.

Appendix D contains eight charts, which together form the ‘Vulnerability Analysis’ for a source water assessment for a public drinking water source. Chart 1 analyzes the ‘Susceptibility of the Wellhead’ to contamination by looking at the construction of the Well Fnd its surrounding area. Chart 2 analyzes the ‘Susceptibility of the Aquifer’ to contamination by looking at the naturally occurring attributes of the water source and influences on the groundwater system that might lead to contamination. Chart 3 analyzes ‘Contaminant Risks’ for the drinking water source with respect to bacteria and viruses. The ‘Contaminant Risks’ portion of the analysis considers potential

sources of contaminants as Well Fs a review of contamination that has or may have occurred, but has not arrived or been detected at the well. Lastly, Chart 4 contains the ‘Vulnerability Analysis for Bacteria and Viruses’. Charts 5 through 8 contain the Contaminant Risks and Vulnerability Analyses for nitrates and nitrites and volatile organic chemicals, respectively.

A score for the Natural Susceptibility is reached by considering the properties of the Well Fnd the aquifer.

Susceptibility of the Wellhead (0 – 25 Points)
(Chart 1 of Appendix D)

+

Susceptibility of the Aquifer (0 – 25 Points)
(Chart 2 of Appendix D)

=

Natural Susceptibility (Susceptibility of the Well)
(0 – 50 Points)

A ranking is assigned for the Natural Susceptibility according to the point score:

Natural Susceptibility Ratings

| | |
|----------------|-----------|
| 40 to 50 pts | Very High |
| 30 to < 40 pts | High |
| 20 to < 30 pts | Medium |
| < 20 pts | Low |

City of Soldotna-Well F’s well is completed in confined aquifer setting. The well is 458 feet below ground surface (bgs) and is screened from 195-265 feet bgs. The static water level at the time of drilling (2000) was 122 feet below ground surface. The well penetrates approximately 100 feet of clay. This clay confining layer may provide a protective barrier from the movement of contaminants in the subsurface. However, wells penetrating the confining layer may provide a quick path for contaminants to enter the confining aquifer. In addition, increased pumping in the aquifer could lower the hydrostatic pressure making it possible for contaminants to migrate from the unconfined aquifer to the confined aquifer.

Table 2 shows the Susceptibility scores and ratings for the City of Soldotna-Well F.

Table 2. Susceptibility

| | Score | Rating |
|--------------------------------|-------|--------|
| Susceptibility of the Wellhead | 0 | Low |
| Susceptibility of the Aquifer | 10 | Medium |
| Natural Susceptibility | 0 | Low |

| Contaminant Risk Ratings | |
|--------------------------|-----------|
| 40 to 50 pts | Very High |
| 30 to < 40 pts | High |
| 20 to < 30 pts | Medium |
| < 20 pts | Low |

Contaminant risks to a drinking water source depend on the type, number or density, and distribution of contaminant sources. This score has been derived from an examination of existing and historical contamination that has been detected at the drinking water source through routine sampling. It also evaluates potential sources of contamination. Flow charts are used to assign a point score, and ratings are assigned in the same way as for the natural susceptibility:

Table 3 summarizes the Contaminant Risks for each category of drinking water contaminants..

Table 3. Contaminant Risks

| Category | Score | Rating |
|--|-------|-----------|
| Bacteria and Viruses | 40 | Very High |
| Nitrates and/or Nitrites | 40 | Very High |
| Volatile Organic Chemicals | 50 | Very High |
| Heavy Metals, Cyanide, and Other Inorganic Chemicals | 50 | Very High |
| Synthetic Organic Chemicals | 30 | High |
| Other Organic Chemicals | 50 | Very High |

Finally, an overall vulnerability score is assigned for each water system by combining each of the contaminant risk scores with the natural susceptibility score:

Natural Susceptibility (0 – 50 points)

+

Contaminant Risks (0 – 50 points)

=

Vulnerability of the Drinking Water Source to Contamination (0 – 100).

Again, rankings are assigned according to a point score:

Table 4 contains the overall vulnerability scores (0 – 100) and ratings for each of the three categories of drinking water contaminants. Note: scores are rounded off to the nearest five.

| Overall Vulnerability Ratings | |
|-------------------------------|-----------|
| 80 to 100 pts | Very High |
| 60 to < 80 pts | High |
| 40 to < 60 pts | Medium |
| < 40 pts | Low |

Table 4. Overall Vulnerability

| Category | Score | Rating |
|--|-------|--------|
| Bacteria and Viruses | 50 | Medium |
| Nitrates and Nitrites | 50 | Medium |
| Volatile Organic Chemicals | 60 | High |
| Heavy Metals, Cyanide, and Other Inorganic Chemicals | 60 | High |
| Synthetic Organic Chemicals | 40 | Medium |
| Other Organic Chemicals | 60 | High |

Bacteria and Viruses

Large capacity septic systems, seafood processing, medical facilities, roads, residential area, residential septic systems and sewer lines, represent the greatest risk for bacteria and viruses to this drinking water well.

Only a small amount of bacteria and viruses are required to endanger public health. Coli forms are found naturally in the environment and although they aren't necessarily a health threat, it is an indicator of other potentially harmful bacteria in the water, more specifically, fecal coli forms and E. coli which only come from human and animal fecal waste (EPA, 2002). Harmful bacteria can cause diarrhea, cramps, nausea, headaches, or other symptoms (EPA, 2002). Sampling has not detected bacteria or viruses within source waters.

After combining the contaminant risk for bacteria and viruses with the natural susceptibility of the well, the overall vulnerability of the well to contamination is medium.

Nitrates and Nitrites

Large capacity septic systems, roads, , residential area, residential septic systems and sewerlines, represent the greatest risk to nitrates and nitrites for this source of public drinking water.

Nitrates are very mobile, moving at approximately the same rate as water. The sampling history for the City of Soldotna-Well F well indicates that nitrate concentrations have not been detected.

After combining the contaminant risk for nitrates and nitrites with the natural susceptibility of the well, the overall vulnerability of the well to nitrate and nitrite contamination is medium.

Volatile Organic Chemicals

Car washes, gasoline stations, heavy equipment storage, motor vehicle dealerships, motor vehicle repair shops, photographic supplies/processing, paint sales, print shops, motor vehicle waste disposal wells, cement manufacturing, furniture manufacturing/repair, underground fuel tanks, recognized contaminates sites, roads, large capacity septic systems, residential septic systems and residential areas represent the greatest identified risk for volatile organic chemical contamination to the well.

Approximately 20% residents in the area typically heat their homes with various types of on-site fuel sources, including propane and heating oil stored in aboveground or underground storage tanks. Although this report does not address heating oil tanks (unless their location is known), they can pose a risk of volatile organic chemical contamination to drinking water sources. The most common causes of fuel leaks of these heating oil systems are overfilling the tank, ruptured fuel lines, leaking storage tanks, damaged or faulty valves and vandalism. Secondary containment around the tank and regular system maintenance can help prevent many of these harmful fuel leaks and help protect the drinking water supply.

Volatile Organic Chemicals have not been detected within source waters. After combining the contaminant risk for volatile organic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is high.

Heavy Metals, Cyanide, and Other Inorganic Chemicals

Car wash, motor vehicle repair shops, photographic supplies/processing, print shops, motor vehicle waste disposal wells, cement manufacturing, motor vehicle waste disposal wells, underground fuel tanks, recognized contaminated sites, roads, large capacity septic systems, residential septic systems and residential areas and existing contamination present the greatest risk for inorganic chemicals to the well.

Samplings of inorganic chemicals have detected arsenic at levels above the maximum contaminant levels (MCLs). The MCL is the maximum level of contaminant that is allowed to exist in drinking water and still be consumed by humans without harmful health effects. The most recent detection of arsenic detected 0.024 mg/l which exceeds the current MCL of 0.01mg/l. Prolonged exposure to levels exceeding the MCL can cause skin damage, problems with circulatory systems, and may create an increased risk of developing cancer (EPA, 2002).

After combining the contaminant risk for heavy metals, cyanide and other inorganic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is high.

Synthetic Organic Chemicals

Residential septic systems, large capacity septic systems, furniture manufacturing/repair and residential areas represent the greatest risk for inorganic chemicals to the well.

Sampling in 1995 did not detect synthetic organic chemicals. The system currently has an SOC waiver and is not required to sample.

After combining the contaminant risk for synthetic organic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is medium.

Other Organic Chemicals

Car washes, heavy equipment storage, motor vehicle dealerships, photographic supplies/processing, motor vehicle waste disposal wells, cement manufacturing, furniture repair/processing, vehicle maintenance facilities, roads, large capacity septic systems, residential area and residential septic systems represent the greatest risk for other organic chemicals to the well.

Sampling in 1995 did not detect other organic chemicals. The system currently has an OOC waiver and is not required to sample.

After combining the contaminant risk for synthetic organic chemicals with the natural susceptibility of the well, the overall vulnerability of the well to contamination is high.

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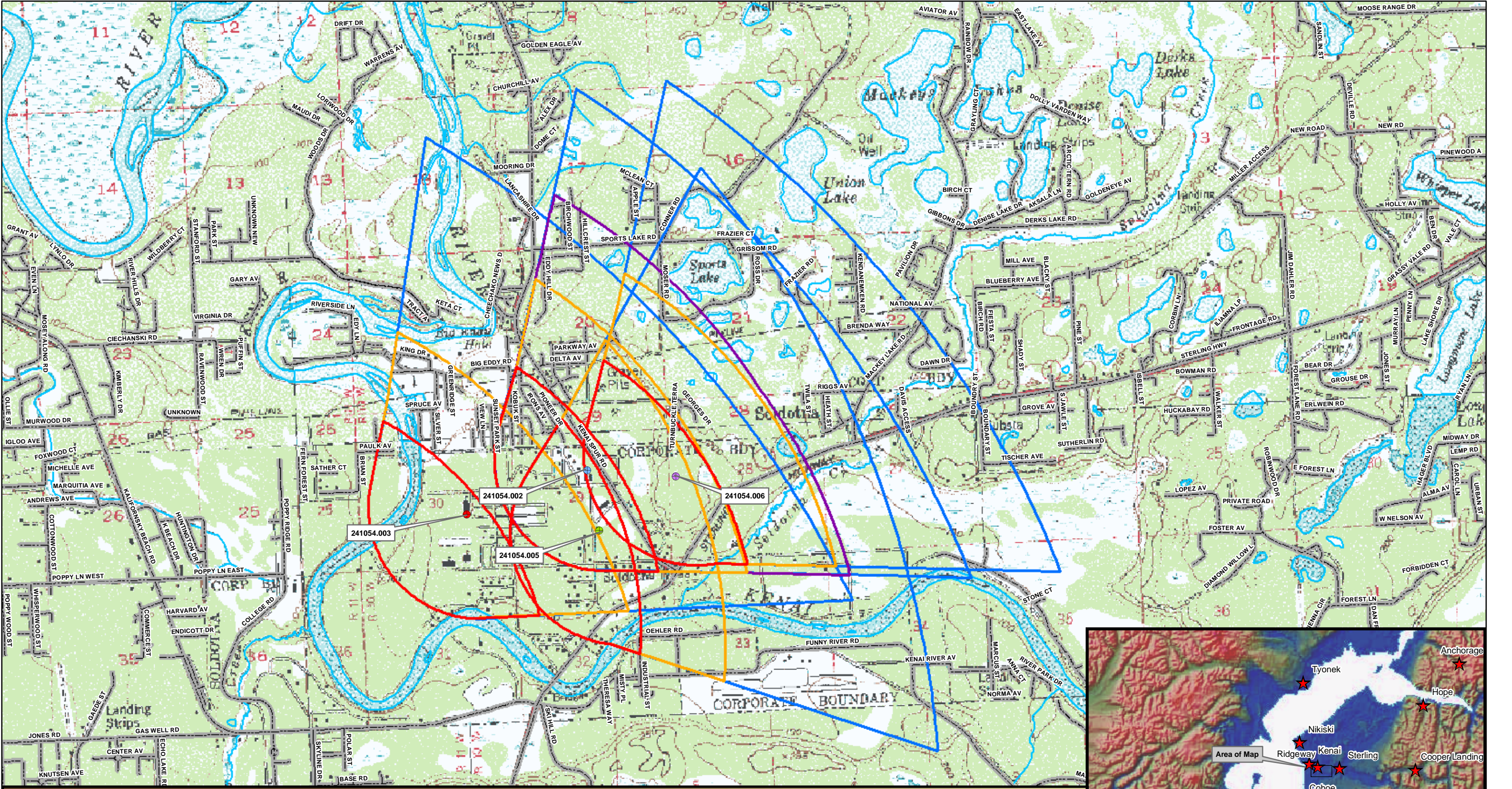
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ACKNOWLEDGMENT

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APPENDIX A

City of Soldotna-Well F Drinking Water Protection Area Location Map (Map 1)



Map 1- City of Soldotna: Drinking Water Protection Areas

PWSID: 241054



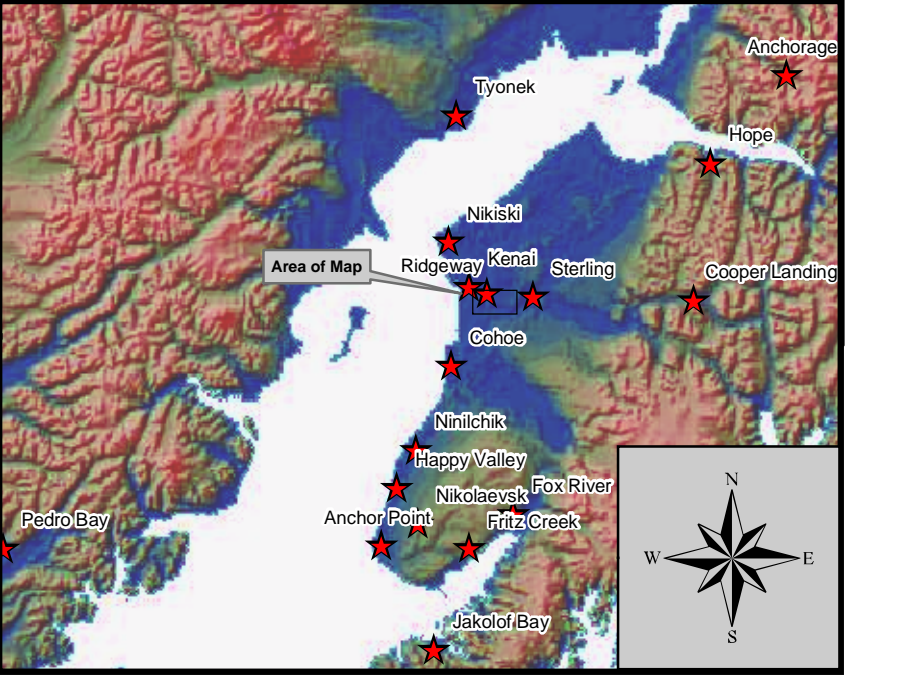
0 4,000 8,000 Feet

1:36,591

Data Sources:
Kenai Borough: Roads and parcels
USGS-63,360 topo map and hillshade
Potential Sources of Contamination: ADEC

Legend

| | | |
|-----------------------------|-------------------------------|-----------------------|
| Public Water Systems | Zone A Protection Area | Kenai_land_use |
| ● 241054.002 | Zone A Protection Area | Kenai_land_use |
| ● 241054.003 | Zone B Protection Area | Roads |
| ● 241054.005 | Zone D Protection Area | Rivers and Streams |
| ● 241054.006 | Zone C Protection Area | |



APPENDIX B

Contaminant Source Inventory and Risk Ranking for City of Soldotna-Well F (Tables 1-7)

Table 1

**Contaminant Source Inventory for
City of Soldotna-Well F**

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Map Number | Comments |
|---|------------------------------|------------------|-------------|-------------------|--------------------------|
| Car washes with engine or undercarriage cleaning | C08 | C08-1 | A | 2 | 224 KENAI AVE |
| Construction trade areas and materials | C09 | C09-1 | A | 2 | 35581 KENAI SPUR HWY |
| Construction trade areas and materials | C09 | C09-2 | A | 2 | 224 KENAI AVE |
| Florists | C12 | C12-1 | A | 2 | 35557 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-1 | A | 2 | 35482 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-2 | A | 2 | 43883 STERLING HWY |
| Hardware stores | C17 | C17-1 | A | 2 | 35477 KENAI SPUR HWY # 2 |
| Hardware stores | C17 | C17-2 | A | 2 | 35440 KENAI SPUR HWY |
| Hardware stores | C17 | C17-3 | A | 2 | 35220 KENAI SPUR HWY |
| Hardware stores | C17 | C17-4 | A | 2 | 312 TYEE ST |
| Hardware stores | C17 | C17-5 | A | 2 | 35060 KENAI SPUR HWY |
| Heavy equipment rental/storage | C18 | C18-1 | A | 2 | 35338 KENAI SPUR HWY # 1 |
| Heavy equipment rental/storage | C18 | C18-2 | A | 2 | 224 KENAI AVE |
| Laboratories (chemical, soils, and research) | C20 | C20-1 | A | 22 | 35186 KENAI SPUR HWY |
| Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (with service department) | C27 | C27-1 | A | 2 | 35105 KENAI SPUR HWY |
| Motor/motor vehicle supplies stores | C28 | C28-2 | A | 2 | 43867 STERLING HWY |
| Motor vehicle rental facilities - cars, trucks, ATV's, snow machines (with service department) | C30 | C30-1 | A | 2 | 43965 STERLING HWY |
| Motor /motor vehicle repair shops | C31 | C31-1 | A | 2 | 369 TYEE ST |
| Motor /motor vehicle repair shops | C31 | C31-2 | A | 2 | 43850 STERLING HWY |
| Paint sales /service | C32 | C32-1 | A | 2 | 35093 KENAI SPUR HWY |
| Pet groomers | C34 | C34-1 | A | 2 | HC 1 BOX 95 |
| Pet groomers | C34 | C34-2 | A | 2 | 35324 KENAI SPUR HWY |
| Pharmacies (with on-site wastewater disposal) | C35 | C35-1 | A | 2 | 43843 STERLING HWY |

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|-------------------|---|
| Photography supplies/photo processing laboratories | C36 | C36-1 | A | 2 | 35036 KENAI SPUR HWY |
| Printers, publishers, copiers | C37 | C37-1 | A | 2 | 35251 KENAI SPUR HWY # A |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | 3 | 1 large capacity septic system in Zone A |
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | 2 | 43965 STERLING HWY |
| Cement manufacturing | I08 | I08-1 | A | 2 | 224 KENAI AVE |
| Seafood processing | N10 | N10-1 | A | 2 | 35282 KENAI SPUR HWY |
| Residential Areas | R01 | R01-1 | A | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | 3 | 11 residential septic systems in Zone A |
| Tanks, diesel (underground) | T08 | T08-1 | A | 2 | 35482 KENAI SPUR HWY |
| Tanks, diesel (underground) | T08 | T08-2 | A | 2 | 43883 STERLING HWY |
| Tanks, diesel (underground) | T08 | T08-3 | A | 2 | 43843 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-1 | A | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-2 | A | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-3 | A | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-4 | A | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-5 | A | 2 | 43843 STERLING HWY |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-1 | A | 2/3 | Kenai Spur Highway-Drum dump behind Alaska Truss. Possible PCB contamination. Priority: Unranked |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-2 | A | 2 | North Aspen Drive. Drum spill on city street. 1992 55 gallon drum was discovered in the right-of-way of Aspen St. Soil excavated and removed from site. Priority: Low |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-3 | A | 2/3 | 35320 Kenai Spur Hwy- Coastal Drilling. Pit Suspected to contain old engines, oil drilling parts, vehicles, construction wastes, and drilling mud in unknown amounts. Known contamination by PCB's, BTEX, lead and chlorinated solvents. Priority: High |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-4 | A | 2/3 | Town and Country Septic Disposal-Fontier Avenue. Off Ridgway Drilling mud reportedly dumped in septic system in 1987. Priority: Low |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-6 | A | 2/3 | Sterling Hwy. East of "Y"-Mary Miller-Soldotna Junction. Surface stains in gravel, leaks, spills, sumps and possible LUST's. Site of garage and heavy construction equipment storage yards. Priority: Medium |
| Open Leaking Underground Fuel Storage Tank (LUST) Sites | U07 | U07-1 | A | 2/3 | 35482 KENAI SPUR HWY |

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|-------------------|--|
| Closed Leaking Underground Fuel Storage Tank (LUST) Sites | U08 | U08-1 | A | 2/3 | 43965 STERLING HWY |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Motor vehicle/general storage yards/facilities | X27 | X27-1 | A | 2 | 35338 KENAI SPUR HWY # 8 |
| Motor vehicle/general storage yards/facilities | X27 | X27-2 | A | 2 | 312 TYEE ST |
| Campgrounds and RV Parks | X35 | X35-1 | A | 2 | 35546 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | 2 | 35670 KENAI SPUR HWY # 104B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | 2 | 145 KASILOF ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | 2 | 35561 KENAI SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | 2 | 35338 KENAI SPUR HWY # 18 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | 2 | 224 KENAI AVE |

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|-------------------|---|
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | 3 | 3 large capacity septic systems in Zone B |
| Residential Areas | R01 | R01-2 | B | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | 3 | 39 residential septic systems in Zone B. |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-5 | B | 2/3 | Turnbuckle Terrace Road-Drum Dump. 5 barrels with unknown contents. Priority: Unranked. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Furniture manufacturing, repair, and finishing shops | C14 | C14-1 | C | 2 | 35865 PARK ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | 3 | 3 large capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | 3 | 115 residential acres in Zone C. |
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | 3 | 1 car wash well in Zone D. |
| Government vehicle maintenance facilities | X19 | X19-1 | D | 2 | 42499 STERLING HWY |

Table 2

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Bacteria and Viruses*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Pharmacies (with on-site wastewater disposal) | C35 | C35-1 | A | Low | 2 | 43843 STERLING HWY |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | High | 3 | 1 large capacity septic system in Zone A |
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | Low | 2 | 43965 STERLING HWY |
| Seafood processing | N10 | N10-1 | A | Medium | 2 | 35282 KENAI SPUR HWY |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | Low | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Campgrounds and RV Parks | X35 | X35-1 | A | Low | 2 | 35546 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | Medium | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | Medium | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | Medium | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | Medium | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | Medium | 2 | 35670 KENAI SPUR HWY # 104B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | Medium | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | Medium | 2 | 145 KASILOF ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | Medium | 2 | 35561 KENAI SPUR HWY # B |

Table 2 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Bacteria and Viruses*

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | Medium | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | Medium | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | Medium | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | Medium | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | Medium | 2 | 35338 KENAI SPUR HWY # 18 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | Medium | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | Medium | 2 | 224 KENAI AVE |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | High | 3 | 3 large capacity septic in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septic in Zone B. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | Low | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | High | 3 | 3 lage capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | Low | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | High | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | Low | 3 | 1 car wash well in Zone D. |

Table 2 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Bacteria and Viruses*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|--------------------------------|----------------------------------|------------------|-------------|--------------------------------------|-----------------------|-----------------|
|--------------------------------|----------------------------------|------------------|-------------|--------------------------------------|-----------------------|-----------------|

Table 3

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Nitrates/Nitrites*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Florists | C12 | C12-1 | A | Low | 2 | 35557 KENAI SPUR HWY |
| Hardware stores | C17 | C17-1 | A | Low | 2 | 35477 KENAI SPUR HWY # 2 |
| Hardware stores | C17 | C17-2 | A | Low | 2 | 35440 KENAI SPUR HWY |
| Hardware stores | C17 | C17-3 | A | Low | 2 | 35220 KENAI SPUR HWY |
| Hardware stores | C17 | C17-4 | A | Low | 2 | 312 TYEE ST |
| Hardware stores | C17 | C17-5 | A | Low | 2 | 35060 KENAI SPUR HWY |
| Pharmacies (with on-site wastewater disposal) | C35 | C35-1 | A | Low | 2 | 43843 STERLING HWY |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | High | 3 | 1 large capacity septic system in Zone A |
| Seafood processing | N10 | N10-1 | A | Low | 2 | 35282 KENAI SPUR HWY |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | Low | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Campgrounds and RV Parks | X35 | X35-1 | A | Low | 2 | 35546 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | Low | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | Low | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | Low | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | Low | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | Low | 2 | 35670 KENAI SPUR HWY # 104B |

Table 3 (continued)

**Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Nitrates/Nitrites**

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | Low | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | Low | 2 | 145 KASILOF ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | Low | 2 | 35561 KENAI SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | Low | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | Low | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | Low | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | Low | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | Low | 2 | 35338 KENAI SPUR HWY # 18 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | Low | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | Low | 2 | 224 KENAI AVE |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | High | 3 | 3 large capacity septic in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septic in Zone B. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | Low | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | High | 3 | 3 lage capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |

Table 3 (continued)

**Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Nitrates/Nitrites**

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | Low | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | High | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | Low | 3 | 1 car wash well in Zone D. |

Table 4

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Volatile Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--------------------------|
| Car washes with engine or undercarriage cleaning | C08 | C08-1 | A | High | 2 | 224 KENAI AVE |
| Construction trade areas and materials | C09 | C09-1 | A | Low | 2 | 35581 KENAI SPUR HWY |
| Construction trade areas and materials | C09 | C09-2 | A | Low | 2 | 224 KENAI AVE |
| Gasoline stations (without repair shop) | C15 | C15-1 | A | High | 2 | 35482 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-2 | A | High | 2 | 43883 STERLING HWY |
| Hardware stores | C17 | C17-1 | A | Low | 2 | 35477 KENAI SPUR HWY # 2 |
| Hardware stores | C17 | C17-2 | A | Low | 2 | 35440 KENAI SPUR HWY |
| Hardware stores | C17 | C17-3 | A | Low | 2 | 35220 KENAI SPUR HWY |
| Hardware stores | C17 | C17-4 | A | Low | 2 | 312 TYEE ST |
| Hardware stores | C17 | C17-5 | A | Low | 2 | 35060 KENAI SPUR HWY |
| Heavy equipment rental/storage | C18 | C18-1 | A | Medium | 2 | 35338 KENAI SPUR HWY # 1 |
| Heavy equipment rental/storage | C18 | C18-2 | A | Medium | 2 | 224 KENAI AVE |
| Laboratories (chemical, soils, and research) | C20 | C20-1 | A | Low | 22 | 35186 KENAI SPUR HWY |
| Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (with service department) | C27 | C27-1 | A | Medium | 2 | 35105 KENAI SPUR HWY |
| Motor/motor vehicle supplies stores | C28 | C28-2 | A | Low | 2 | 43867 STERLING HWY |
| Motor vehicle rental facilities - cars, trucks, ATV's, snow machines (with service department) | C30 | C30-1 | A | Medium | 2 | 43965 STERLING HWY |
| Motor /motor vehicle repair shops | C31 | C31-1 | A | Medium | 2 | 369 TYEE ST |
| Motor /motor vehicle repair shops | C31 | C31-2 | A | Medium | 2 | 43850 STERLING HWY |
| Paint sales /service | C32 | C32-1 | A | Medium | 2 | 35093 KENAI SPUR HWY |

Table 4 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Volatile Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Pet groomers | C34 | C34-1 | A | Low | 2 | HC 1 BOX 95 |
| Pet groomers | C34 | C34-2 | A | Low | 2 | 35324 KENAI SPUR HWY |
| Photography supplies/photo processing laboratories | C36 | C36-1 | A | Medium | 2 | 35036 KENAI SPUR HWY |
| Printers, publishers, copiers | C37 | C37-1 | A | High | 2 | 35251 KENAI SPUR HWY # A |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | Low | 3 | 1 large capacity septic system in Zone A |
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | High | 2 | 43965 STERLING HWY |
| Cement manufacturing | I08 | I08-1 | A | High | 2 | 224 KENAI AVE |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Tanks, diesel (underground) | T08 | T08-1 | A | High | 2 | 35482 KENAI SPUR HWY |
| Tanks, diesel (underground) | T08 | T08-2 | A | High | 2 | 43883 STERLING HWY |
| Tanks, diesel (underground) | T08 | T08-3 | A | High | 2 | 43843 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-1 | A | High | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-2 | A | High | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-3 | A | High | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-4 | A | High | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-5 | A | High | 2 | 43843 STERLING HWY |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-2 | A | Low | 2 | North Aspen Drive. Drum spill on city street. 1992 55 gallon drum was discovered in the right-of-way of Aspen St. Soil excavated and removed from site. Priority: Low |

Table 4 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Volatile Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-3 | A | High | 2/3 | 35320 Kenai Spur Hwy- Coastal Drilling. Pit Suspected to contain old engines, oil drilling parts, vehicles, construction wastes, and drilling mud in unknown amounts. Known contamination by PCB's, BTEX, lead and chlorinated solvents. Priority: High |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-6 | A | Medium | 2/3 | Sterling Hwy. East of "Y"-Mary Miller-Soldotna Junction. Surface stains in gravel, leaks, spills, sumps and possible LUST's. Site of garage and heavy construction equipment storage yards. Priority: Medium |
| Open Leaking Underground Fuel Storage Tank (LUST) Sites | U07 | U07-1 | A | Low | 2/3 | 35482 KENAI SPUR HWY |
| Closed Leaking Underground Fuel Storage Tank (LUST) Sites | U08 | U08-1 | A | Low | 2/3 | 43965 STERLING HWY |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | Low | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Motor vehicle/general storage yards/facilities | X27 | X27-1 | A | Low | 2 | 35338 KENAI SPUR HWY # 8 |
| Motor vehicle/general storage yards/facilities | X27 | X27-2 | A | Low | 2 | 312 TYEE ST |
| Campgrounds and RV Parks | X35 | X35-1 | A | Low | 2 | 35546 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | Low | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | Low | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | Low | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | Low | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | Low | 2 | 35670 KENAI SPUR HWY # 104B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | Low | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | Low | 2 | 145 KASILOF ST |

Table 4 (continued)

**Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Volatile Organic Chemicals**

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | Low | 2 | 35561 KENAI SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | Low | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | Low | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | Low | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | Low | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | Low | 2 | 35338 KENAI SPUR HWY # 18 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | Low | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | Low | 2 | 224 KENAI AVE |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | Low | 3 | 3 large capacity septic in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septic in Zone B. |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-5 | B | Low | 2/3 | Turnbuckle Terrace Road-Drum Dump. 5 barrels with unknown contents. Priority: Unranked. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | Low | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Furniture manufacturing, repair, and finishing shops | C14 | C14-1 | C | Medium | 2 | 35865 PARK ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | Low | 3 | 3 lage capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |

Table 4 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Volatile Organic Chemicals*

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | Low | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | Low | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | Medium | 3 | 1 car wash well in Zone D. |
| Government vehicle maintenance facilities | X19 | X19-1 | D | Medium | 2 | 42499 STERLING HWY |

Table 5

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--------------------------|
| Car washes with engine or undercarriage cleaning | C08 | C08-1 | A | Medium | 2 | 224 KENAI AVE |
| Construction trade areas and materials | C09 | C09-1 | A | Low | 2 | 35581 KENAI SPUR HWY |
| Construction trade areas and materials | C09 | C09-2 | A | Low | 2 | 224 KENAI AVE |
| Florists | C12 | C12-1 | A | Low | 2 | 35557 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-1 | A | Low | 2 | 35482 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-2 | A | Low | 2 | 43883 STERLING HWY |
| Hardware stores | C17 | C17-1 | A | Low | 2 | 35477 KENAI SPUR HWY # 2 |
| Hardware stores | C17 | C17-2 | A | Low | 2 | 35440 KENAI SPUR HWY |
| Hardware stores | C17 | C17-3 | A | Low | 2 | 35220 KENAI SPUR HWY |
| Hardware stores | C17 | C17-4 | A | Low | 2 | 312 TYEE ST |
| Hardware stores | C17 | C17-5 | A | Low | 2 | 35060 KENAI SPUR HWY |
| Heavy equipment rental/storage | C18 | C18-1 | A | Low | 2 | 35338 KENAI SPUR HWY # 1 |
| Heavy equipment rental/storage | C18 | C18-2 | A | Low | 2 | 224 KENAI AVE |
| Laboratories (chemical, soils, and research) | C20 | C20-1 | A | Low | 22 | 35186 KENAI SPUR HWY |
| Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (with service department) | C27 | C27-1 | A | Low | 2 | 35105 KENAI SPUR HWY |
| Motor/motor vehicle supplies stores | C28 | C28-2 | A | Low | 2 | 43867 STERLING HWY |
| Motor vehicle rental facilities - cars, trucks, ATV's, snow machines (with service department) | C30 | C30-1 | A | Low | 2 | 43965 STERLING HWY |
| Motor /motor vehicle repair shops | C31 | C31-1 | A | Medium | 2 | 369 TYEE ST |
| Motor /motor vehicle repair shops | C31 | C31-2 | A | Medium | 2 | 43850 STERLING HWY |

Table 5 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Paint sales /service | C32 | C32-1 | A | Low | 2 | 35093 KENAI SPUR HWY |
| Pharmacies (with on-site wastewater disposal) | C35 | C35-1 | A | Low | 2 | 43843 STERLING HWY |
| Photography supplies/photo processing laboratories | C36 | C36-1 | A | Medium | 2 | 35036 KENAI SPUR HWY |
| Printers, publishers, copiers | C37 | C37-1 | A | Medium | 2 | 35251 KENAI SPUR HWY # A |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | Low | 3 | 1 large capacity septic system in Zone A |
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | High | 2 | 43965 STERLING HWY |
| Cement manufacturing | I08 | I08-1 | A | Medium | 2 | 224 KENAI AVE |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Tanks, gasoline (underground) | T12 | T12-1 | A | Medium | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-2 | A | Medium | 2 | 35482 KENAI SPUR HWY |
| Tanks, gasoline (underground) | T12 | T12-3 | A | Medium | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-4 | A | Medium | 2 | 43883 STERLING HWY |
| Tanks, gasoline (underground) | T12 | T12-5 | A | Medium | 2 | 43843 STERLING HWY |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-1 | A | Low | 2/3 | Kenai Spur Highway-Drum dump behind Alaska Truss. Possible PCB contamination. Priority: Unranked |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-2 | A | Low | 2 | North Aspen Drive. Drum spill on city street. 1992 55 gallon drum was discovered in the right-of-way of Aspen St. Soil excavated and removed from site. Priority: Low |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-3 | A | High | 2/3 | 35320 Kenai Spur Hwy- Coastal Drilling. Pit Suspected to contain old engines, oil drilling parts, vehicles, construction wastes, and drilling mud in unknown amounts. Known contamination by PCB's, BTEX, lead and chlorinated solvents. Priority: High |

Table 5 (continued)

Contaminant Source Inventory and Risk Ranking for

PWSID 241054.006

City of Soldotna-Well F

Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-4 | A | Low | 2/3 | Town and Country Septic Disposal-Fontier Avenue. Off Ridgway Drilling mud reportedly dumped in septage system in 1987. Priority: Low |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | Low | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | Low | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | Low | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | Low | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | Low | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | Low | 2 | 35670 KENAI SPUR HWY # 104B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | Low | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | Low | 2 | 145 KASILOF ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | Low | 2 | 35561 KENAI SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | Low | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | Low | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | Low | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | Low | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | Low | 2 | 35338 KENAI SPUR HWY # 18 |

Table 5 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Heavy Metals, Cyanide and Other Inorganic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | Low | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | Low | 2 | 224 KENAI AVE |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | Low | 3 | 3 large capacity septs in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septs in Zone B. |
| Contaminated sites, DEC recognized, non-Superfund, non-RCRA | U04 | U04-5 | B | Low | 2/3 | Turnbuckle Terrace Road-Drum Dump. 5 barrels with unknown contents. Priority: Unranked. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | Low | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Furniture manufacturing, repair, and finishing shops | C14 | C14-1 | C | Low | 2 | 35865 PARK ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | Low | 3 | 3 lage capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | Low | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | Low | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | Medium | 3 | 1 car wash well in Zone D. |
| Government vehicle maintenance facilities | X19 | X19-1 | D | Low | 2 | 42499 STERLING HWY |

Table 6

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Synthetic Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Paint sales /service | C32 | C32-1 | A | Low | 2 | 35093 KENAI SPUR HWY |
| Pet groomers | C34 | C34-1 | A | Low | 2 | HC 1 BOX 95 |
| Pet groomers | C34 | C34-2 | A | Low | 2 | 35324 KENAI SPUR HWY |
| Photography supplies/photo processing laboratories | C36 | C36-1 | A | Low | 2 | 35036 KENAI SPUR HWY |
| Printers, publishers, copiers | C37 | C37-1 | A | Low | 2 | 35251 KENAI SPUR HWY # A |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | Low | 3 | 1 large capacity septic system in Zone A |
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | Low | 2 | 43965 STERLING HWY |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-1 | A | Low | 2 | 35670 KENAI SPUR HWY # 101 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-10 | A | Low | 2 | 35477 KENAI SPUR HWY # 214 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-11 | A | Low | 2 | 42479 STERLING HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-12 | A | Low | 2 | 35670 KENAI SPUR HWY # 103 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-13 | A | Low | 2 | 35670 KENAI SPUR HWY # 104B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-14 | A | Low | 2 | 35670 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-15 | A | Low | 2 | 145 KASILOF ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-2 | A | Low | 2 | 35561 KENAI SPUR HWY # B |

Table 6 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Synthetic Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|---|
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-3 | A | Low | 2 | 35477 KENAI SPUR HWY # 201 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-4 | A | Low | 2 | 35251 SPUR HWY # B |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-5 | A | Low | 2 | 35338 KENAI SPUR HWY |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-6 | A | Low | 2 | 35338 KENAI SPUR HWY # 22 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-7 | A | Low | 2 | 35338 KENAI SPUR HWY # 18 |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-8 | A | Low | 2 | 176 N BIRCH ST |
| Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) | X40 | X40-9 | A | Low | 2 | 224 KENAI AVE |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | Low | 3 | 3 large capacity septic in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septic in Zone B. |
| Furniture manufacturing, repair, and finishing shops | C14 | C14-1 | C | Medium | 2 | 35865 PARK ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | Low | 3 | 3 lage capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | Low | 3 | 17 large capacity septic systems in Zone D. |

Table 7

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Other Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Car washes with engine or undercarriage cleaning | C08 | C08-1 | A | Medium | 2 | 224 KENAI AVE |
| Construction trade areas and materials | C09 | C09-1 | A | Low | 2 | 35581 KENAI SPUR HWY |
| Construction trade areas and materials | C09 | C09-2 | A | Low | 2 | 224 KENAI AVE |
| Gasoline stations (without repair shop) | C15 | C15-1 | A | Low | 2 | 35482 KENAI SPUR HWY |
| Gasoline stations (without repair shop) | C15 | C15-2 | A | Low | 2 | 43883 STERLING HWY |
| Hardware stores | C17 | C17-1 | A | Low | 2 | 35477 KENAI SPUR HWY # 2 |
| Hardware stores | C17 | C17-2 | A | Low | 2 | 35440 KENAI SPUR HWY |
| Hardware stores | C17 | C17-3 | A | Low | 2 | 35220 KENAI SPUR HWY |
| Hardware stores | C17 | C17-4 | A | Low | 2 | 312 TYEE ST |
| Hardware stores | C17 | C17-5 | A | Low | 2 | 35060 KENAI SPUR HWY |
| Heavy equipment rental/storage | C18 | C18-1 | A | Medium | 2 | 35338 KENAI SPUR HWY # 1 |
| Heavy equipment rental/storage | C18 | C18-2 | A | Medium | 2 | 224 KENAI AVE |
| Motor vehicle dealerships - cars, trucks, motor cycles, ATV's, snow machines, boats (with service department) | C27 | C27-1 | A | Medium | 2 | 35105 KENAI SPUR HWY |
| Motor vehicle rental facilities - cars, trucks, ATV's, snow machines (with service department) | C30 | C30-1 | A | Medium | 2 | 43965 STERLING HWY |
| Motor /motor vehicle repair shops | C31 | C31-1 | A | Medium | 2 | 369 TYEE ST |
| Motor /motor vehicle repair shops | C31 | C31-2 | A | Medium | 2 | 43850 STERLING HWY |
| Photography supplies/photo processing laboratories | C36 | C36-1 | A | Low | 2 | 35036 KENAI SPUR HWY |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10 | A | Low | 3 | 1 large capacity septic system in Zone A |

Table 7 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Other Organic Chemicals*

PWSID 241054.006

| Contaminant Source Type | Contaminant Source ID | CS ID tag | Zone | Risk Ranking for Analysis | Map Number | Comments |
|---|------------------------------|------------------|-------------|----------------------------------|-------------------|--|
| Injection wells (Class V) Motor Vehicle Waste Disposal Well | D42 | D42-1 | A | Medium | 2 | 43965 STERLING HWY |
| Cement manufacturing | I08 | I08-1 | A | Very High | 2 | 224 KENAI AVE |
| Residential Areas | R01 | R01-1 | A | Low | 3 | 25 residential acres in Zone A |
| Septic systems (serves one single-family home) | R02 | R02-1-11 | A | Low | 3 | 11 residential septic systems in Zone A |
| Highways and roads, paved (cement or asphalt) | X20 | X20-1-16 | A | Low | 3 | Approximately 16 roads in Zone A. Assumed to be paved. |
| Motor vehicle/general storage yards/facilities | X27 | X27-1 | A | Low | 2 | 35338 KENAI SPUR HWY # 8 |
| Motor vehicle/general storage yards/facilities | X27 | X27-2 | A | Low | 2 | 312 TYEE ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-2-4 | B | Low | 3 | 3 large capacity septic systems in Zone B |
| Residential Areas | R01 | R01-2 | B | Low | 3 | 70 residential acres in Zone B. |
| Septic systems (serves one single-family home) | R02 | R02-12-50 | B | Low | 3 | 39 residential septic systems in Zone B. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-17-32 | B | Low | 3 | Approximately 15 roads in Zone B. Assumed to be paved. |
| Furniture manufacturing, repair, and finishing shops | C14 | C14-1 | C | Medium | 2 | 35865 PARK ST |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-5-7 | C | Low | 3 | 3 large capacity septic systems in Zone C. |
| Residential Areas | R01 | R01-3 | C | Low | 3 | 115 residential acres in Zone C. |
| Septic systems (serves one single-family home) | R02 | R02-51-92 | C | Low | 3 | 42 residential septic systems in Zone C. |
| Highways and roads, paved (cement or asphalt) | X20 | X20-33-50 | C | Low | 3 | Approximately 18 roads in Zone C. Assumed to be paved. |
| Injection wells (Class V) Large-Capacity Septic System (Drainfield Disposal Method) | D10 | D10-8-24 | D | Low | 3 | 17 large capacity septic systems in Zone D. |
| Injection wells (Class V) Car Wash Wells | D32 | D32-1 | D | Low | 3 | 1 car wash well in Zone D. |
| Government vehicle maintenance facilities | X19 | X19-1 | D | Medium | 2 | 42499 STERLING HWY |

Table 7 (continued)

*Contaminant Source Inventory and Risk Ranking for
City of Soldotna-Well F
Sources of Other Organic Chemicals*

PWSID 241054.006

| <i>Contaminant Source Type</i> | <i>Contaminant Source ID</i> | <i>CS ID tag</i> | <i>Zone</i> | <i>Risk Ranking for Analysis</i> | <i>Map Number</i> | <i>Comments</i> |
|--------------------------------|----------------------------------|------------------|-------------|--------------------------------------|-----------------------|-----------------|
|--------------------------------|----------------------------------|------------------|-------------|--------------------------------------|-----------------------|-----------------|

APPENDIX C

City of Soldotna-Well F Drinking Water Protection Area and Potential and Existing Contaminant Sources (Map 2 and 3)

City of Soldotna Well F PWSID 241054.006

- Injection wells (Class V) Septic System (Drainfield Disposal Method) (D10)
- Injection wells (Class V) Car Wash Wells (D32)
- Septic systems (serves one single-family home and/or less than 20 people)(R02)
- Residential Area (R02)
- Car washes with engine or undercarriage cleaning (C08)
- Construction trade areas and materials (C09)
- Florists (C12)
- Furniture manufacturing, repair, and finishing shops (C14)
- Gasoline stations (without repair shop) (C15)
- Hardware stores (C17)
- Heavy equipment rental/storage (C18)
- Laboratories (chemical, soils, and research) (C20)
- Motor vehicle dealerships (with service department) C27)
- Motor/motor vehicle supplies stores (C28)
- Motor vehicle rental facilities (with service department) (C30)
- Motor /motor vehicle repair shops (C31)
- Paint sales /service (C32)
- Pet groomers (C34)
- Pharmacies (with on-site wastewater disposal) (C35)
- Photography supplies/photo processing laboratories (C36)
- Printers, publishers, copiers (C37)
- Injection wells (Class V) Motor Vehicle Waste Disposal Well (D42)
- Cement Manufacturing (I08)
- Seafood processing (N10)
- Tanks, diesel (underground) (T08)
- Tanks, gasoline (underground) (T12)
- Contaminated sites, DEC recognized, non-Superfund, non-RCRA (U04)
- Open Leaking Underground Fuel Storage Tank (LUST) Sites (U07)
- Closed Leaking Underground Fuel Storage Tank (LUST) Sites (U08)
- Government vehicle maintenance facilities (X19)
- Motor vehicle/general storage yards/facilities (X27)
- Campgrounds and RV Parks (X35)
- Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) (X40)

Data Sources:
ADEC-Potential Sources of Contamination
Kenai Peninsula Borough-roads, parcels

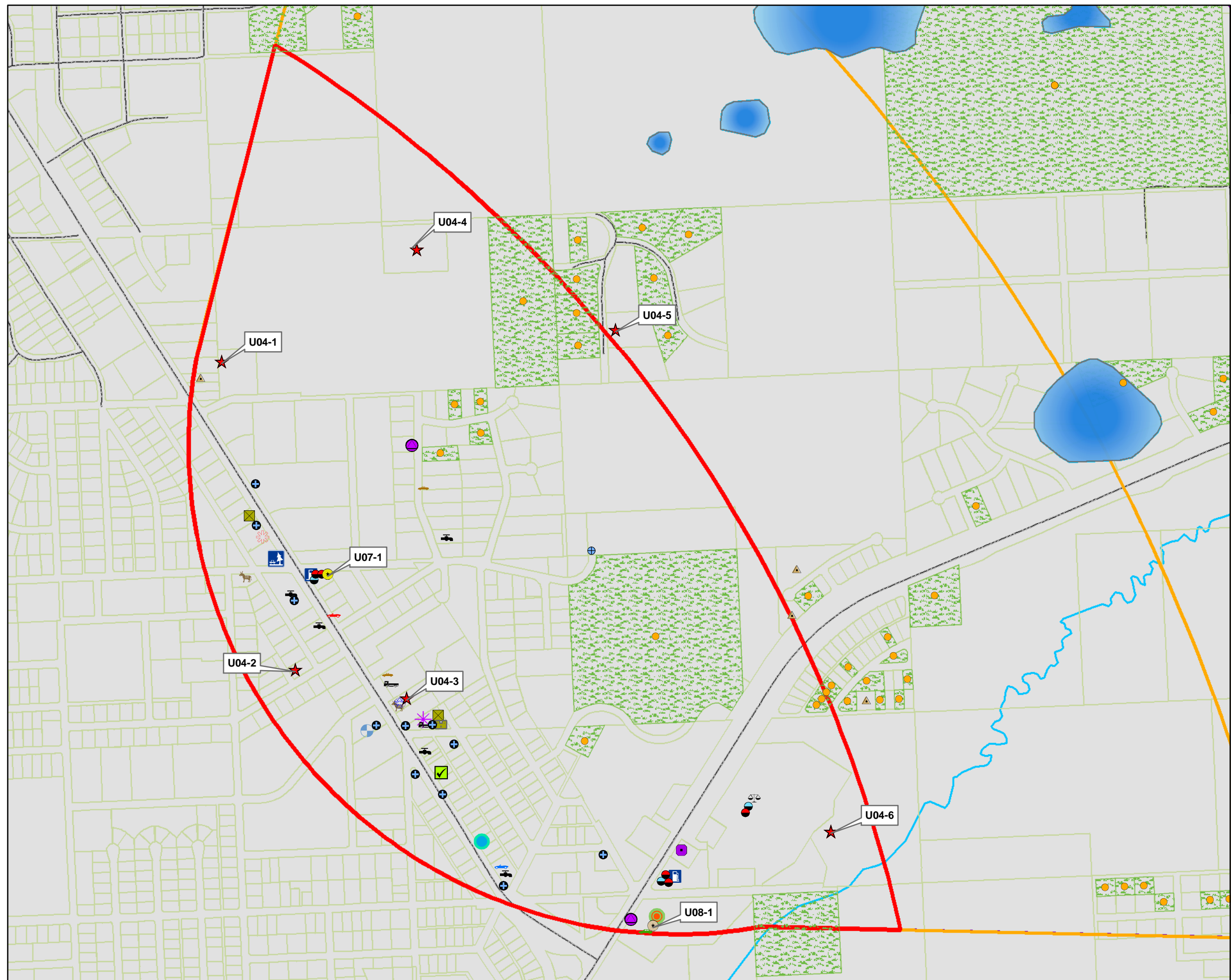


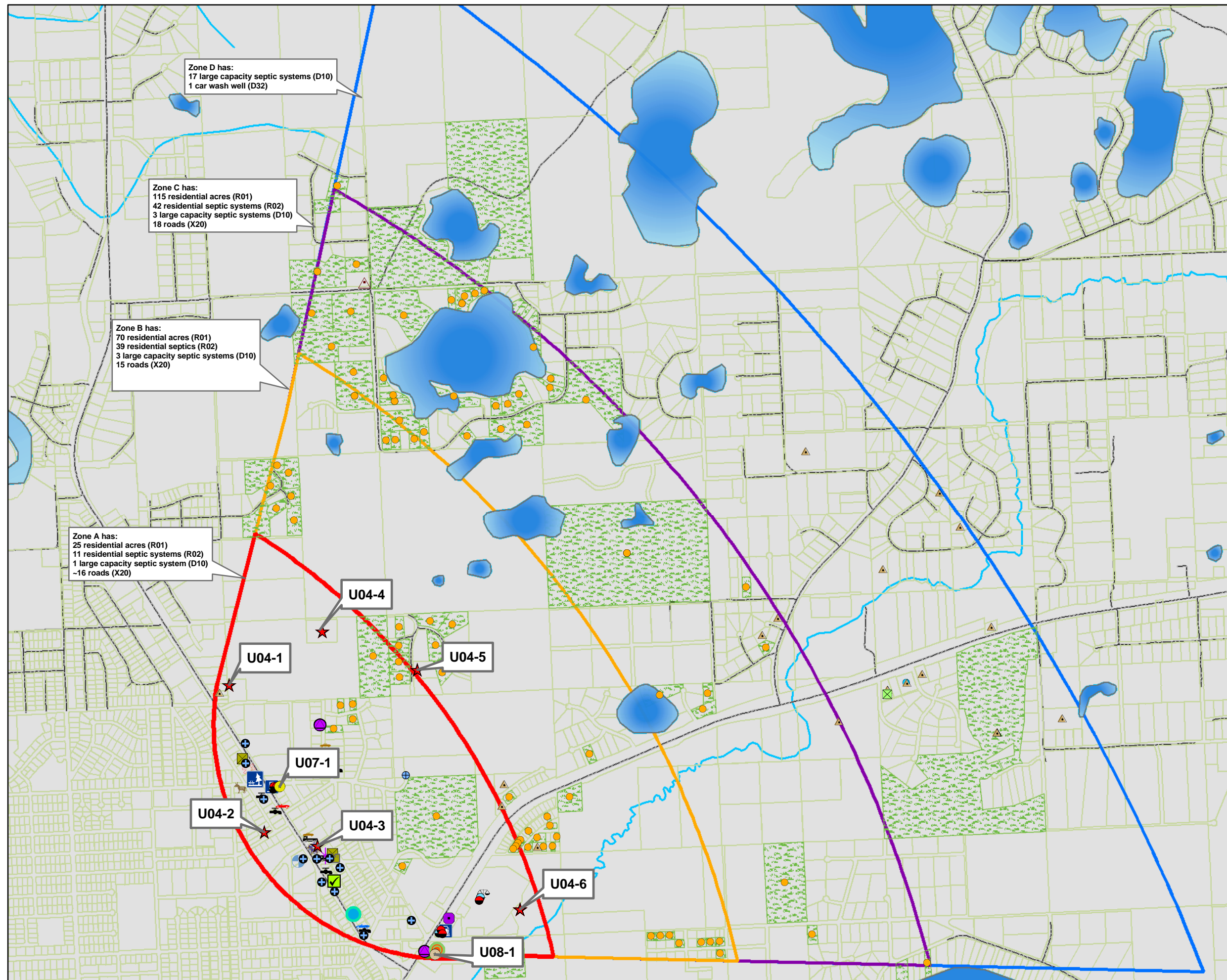
0 720 1,440 Feet

1:8,854



Map 2





- Injection wells (Class V) Septic System (Drainfield Disposal Method) (D10)
- Injection wells (Class V) Car Wash Wells (D32)
- Septic systems (serves one single-family home and/or less than 20 people) (R02)
- Residential Area (R02)
- Car washes with engine or undercarriage cleaning (C08)
- Construction trade areas and materials (C09)
- Florists (C12)
- Furniture manufacturing, repair, and finishing shops (C14)
- Gasoline stations (without repair shop) (C15)
- Hardware stores (C17)
- Heavy equipment rental/storage (C18)
- Laboratories (chemical, soils, and research) (C20)
- Motor vehicle dealerships (with service department) (C27)
- Motor/motor vehicle supplies stores (C28)
- Motor vehicle rental facilities (with service department) (C30)
- Motor/motor vehicle repair shops (C31)
- Paint sales/service (C32)
- Pet groomers (C34)
- Pharmacies (with on-site wastewater disposal) (C35)
- Photography supplies/photo processing laboratories (C36)
- Printers, publishers, copiers (C37)
- Injection wells (Class V) Motor Vehicle Waste Disposal Well (D42)
- Cement Manufacturing (I08)
- Seafood processing (N10)
- Tanks, diesel (underground) (T08)
- Tanks, gasoline (underground) (T12)
- Contaminated sites, DEC recognized, non-Superfund, non-RCRA (U04)
- Open Leaking Underground Fuel Storage Tank (LUST) Sites (U07)
- Closed Leaking Underground Fuel Storage Tank (LUST) Sites (U08)
- Government vehicle maintenance facilities (X19)
- Motor vehicle/general storage yards/facilities (X27)
- Campgrounds and RV Parks (X35)
- Medical/veterinary facilities (doctor or dentist offices, hospitals, nursing homes) (X40)

Data Sources:
ADEC-Potential Sources of Contamination
Kenai Peninsula Borough-roads, parcels



0 1,500 3,000 Feet

1:18,507



Map 3

APPENDIX D

Vulnerability Analysis for City of Soldotna-Well F Public Drinking Water Source (Charts 1-14)

Chart 1. Susceptibility of the wellhead - City of Soldotna-Well F PWSID 241054.006

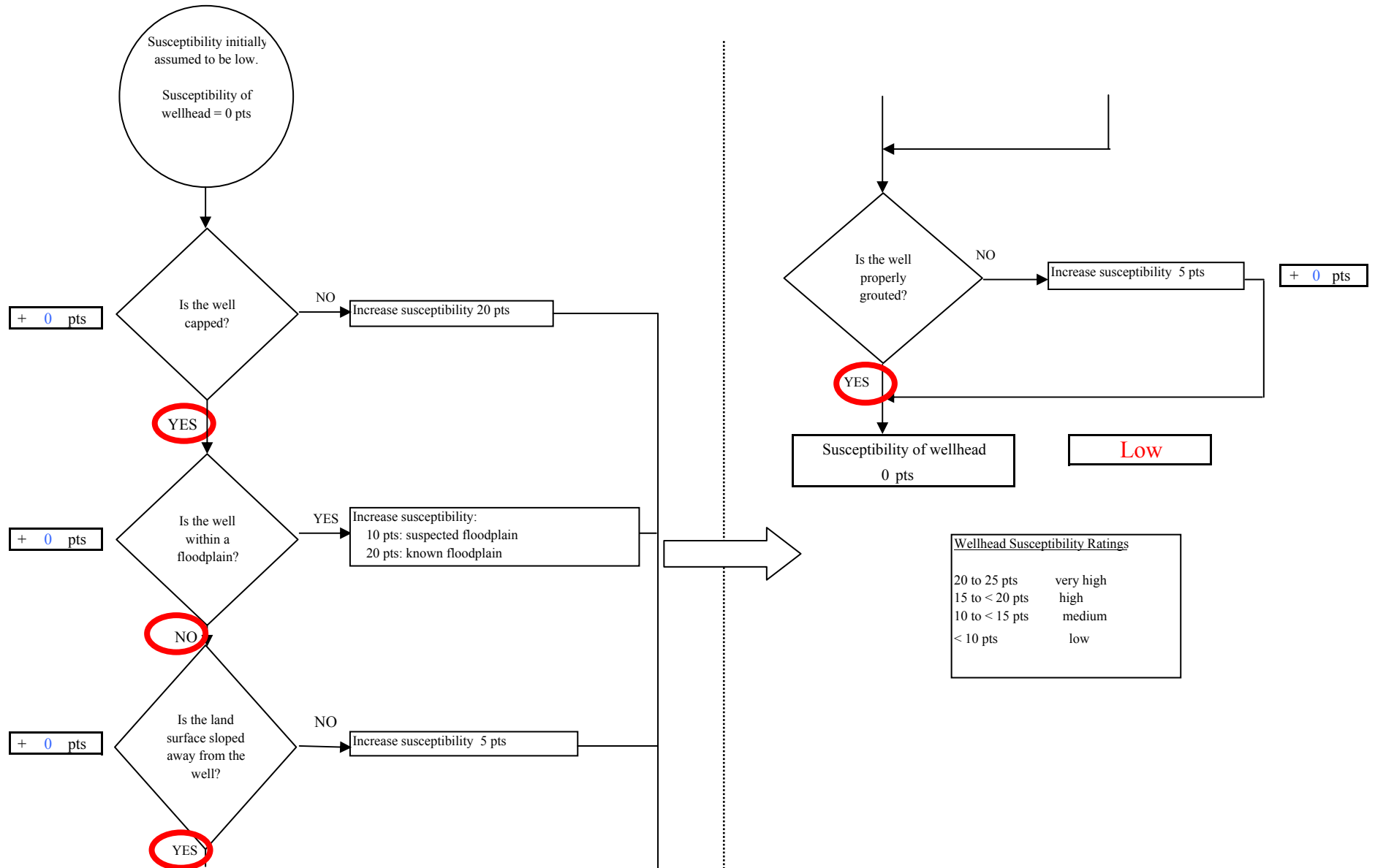


Chart 2. Susceptibility of the aquifer - City of Soldotna-Well F PWSID 241054.006

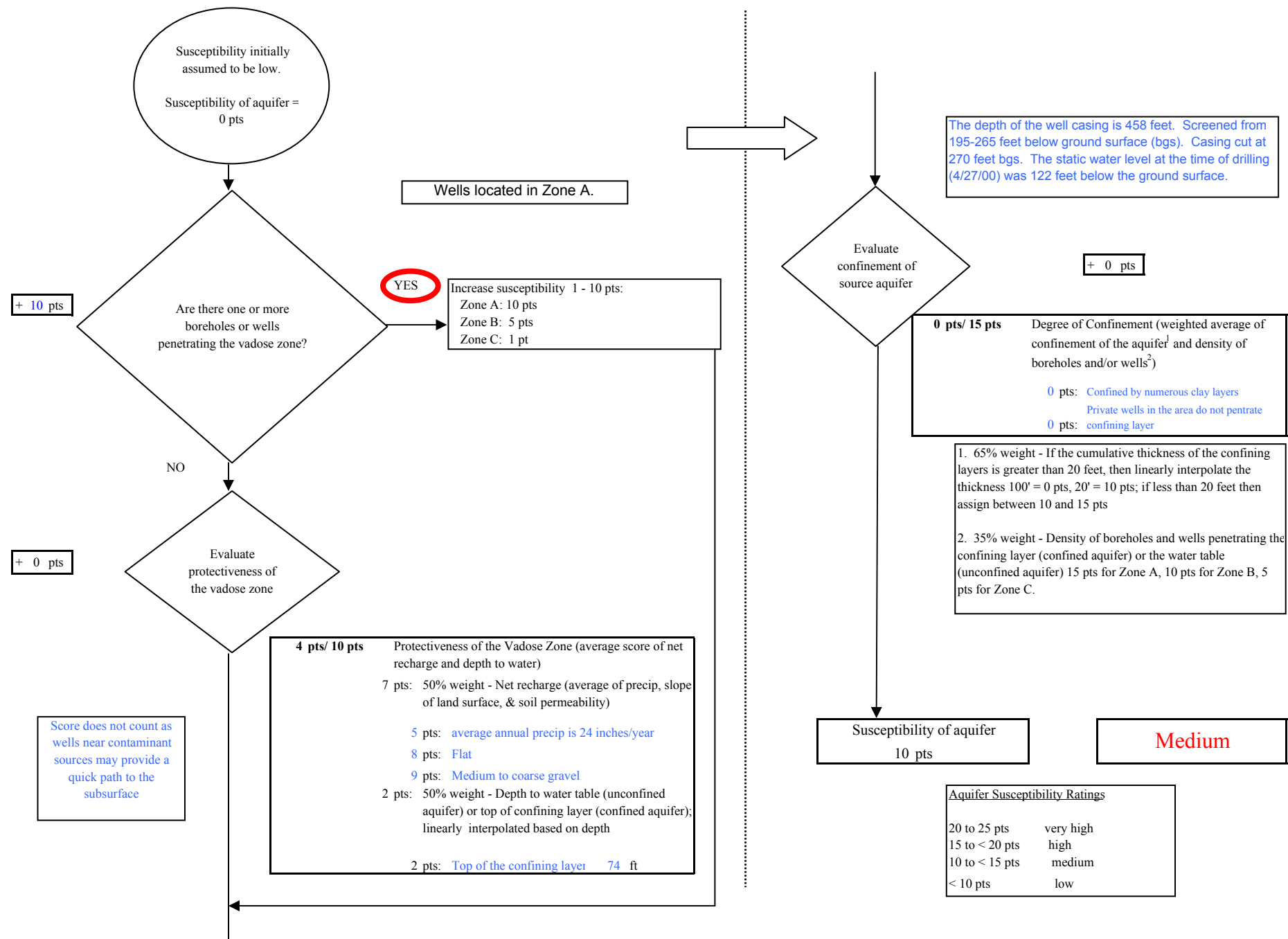


Chart 3. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Bacteria & Viruses

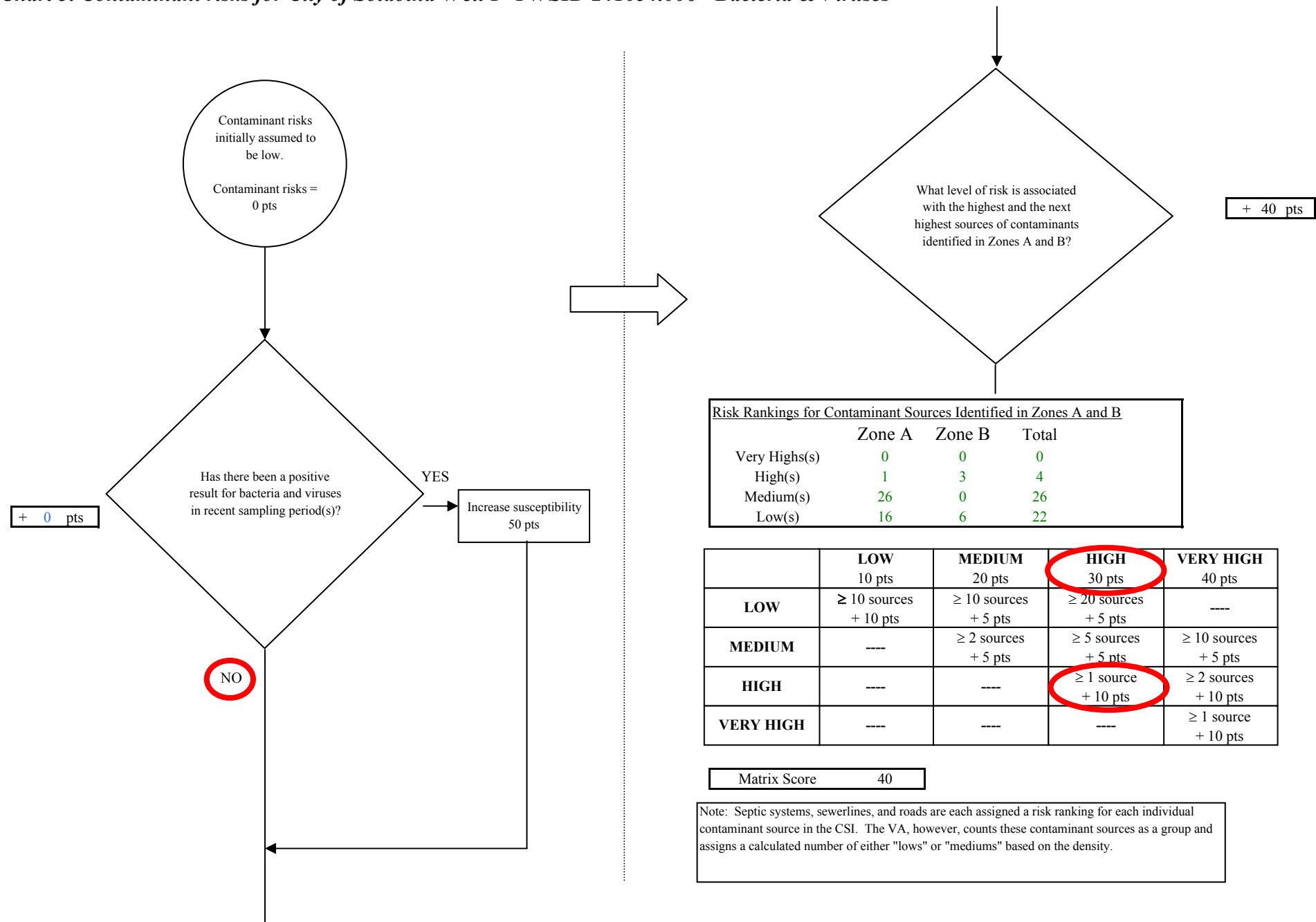


Chart 3. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Bacteria & Viruses

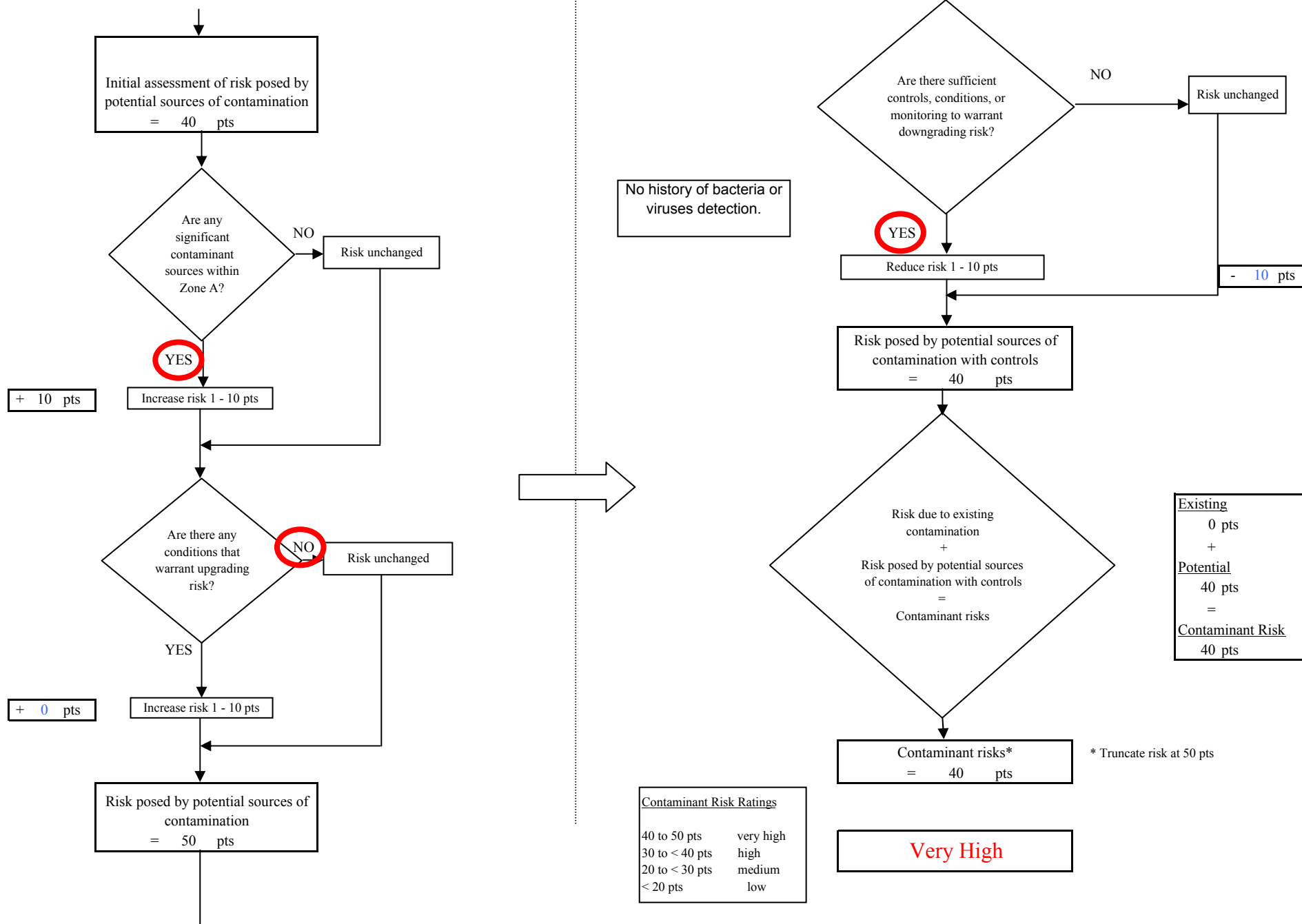


Chart 4. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Bacteria & Viruses

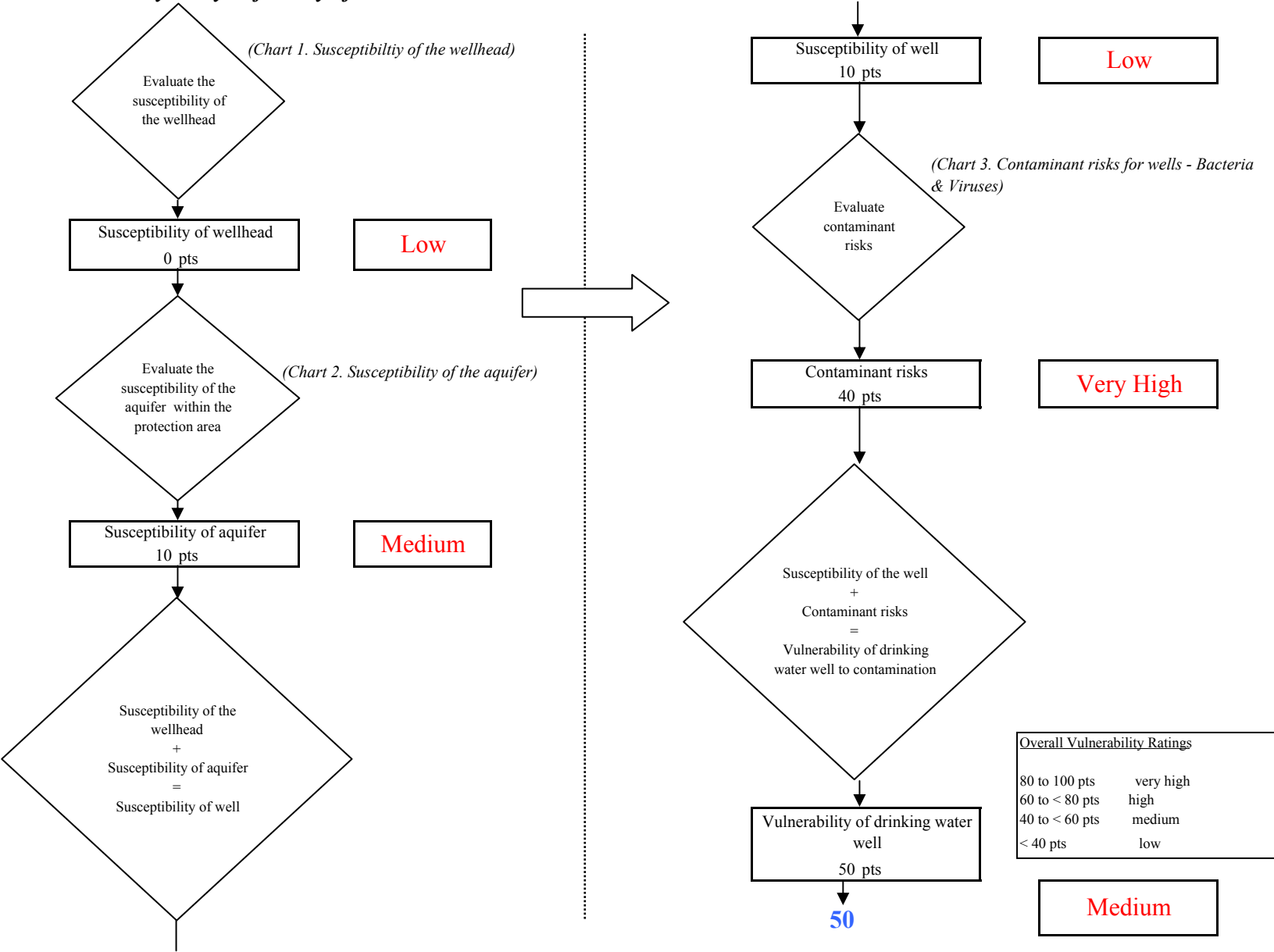


Chart 5. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Nitrates and Nitrites

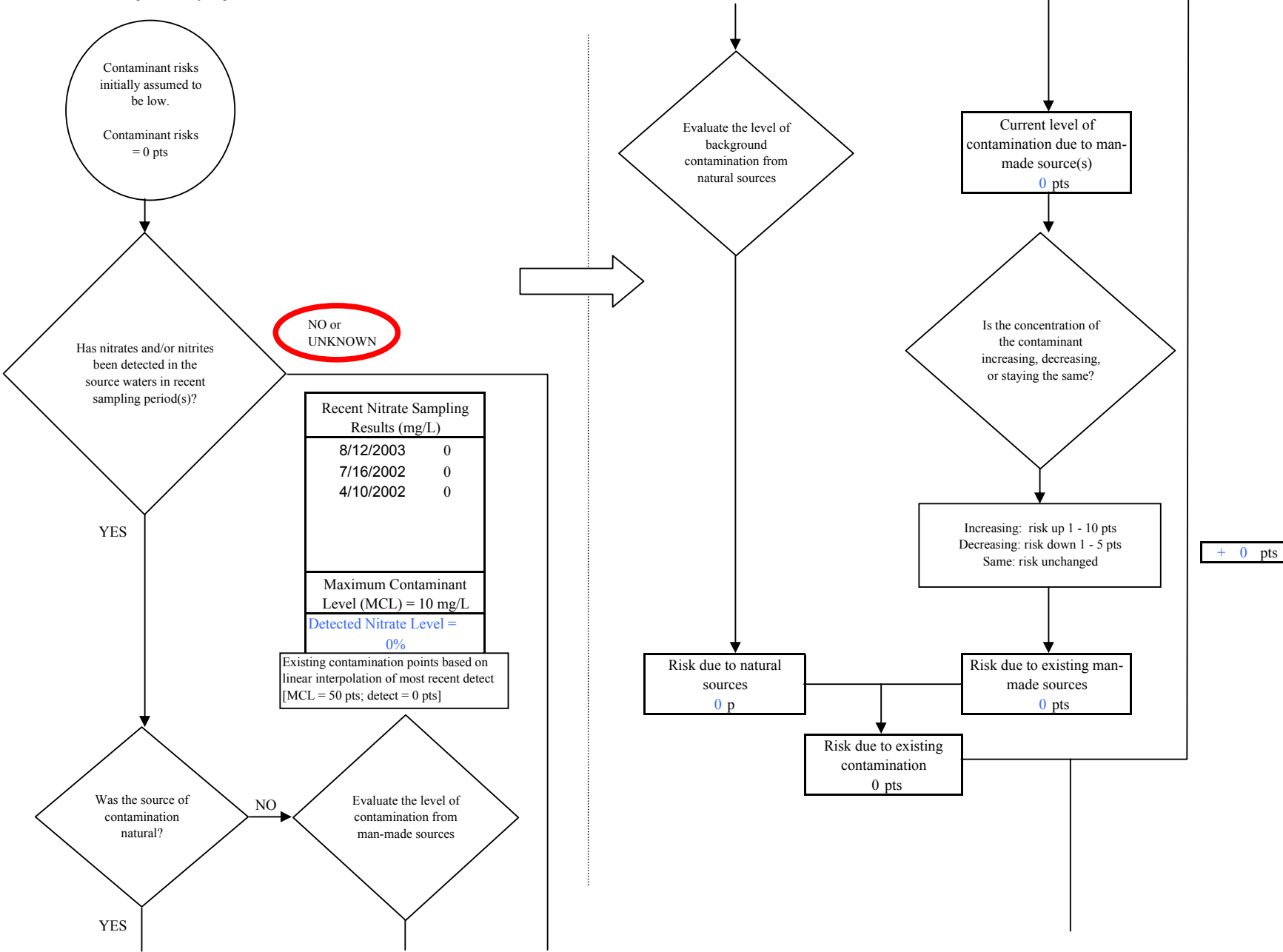


Chart 5. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Nitrates and Nitrites

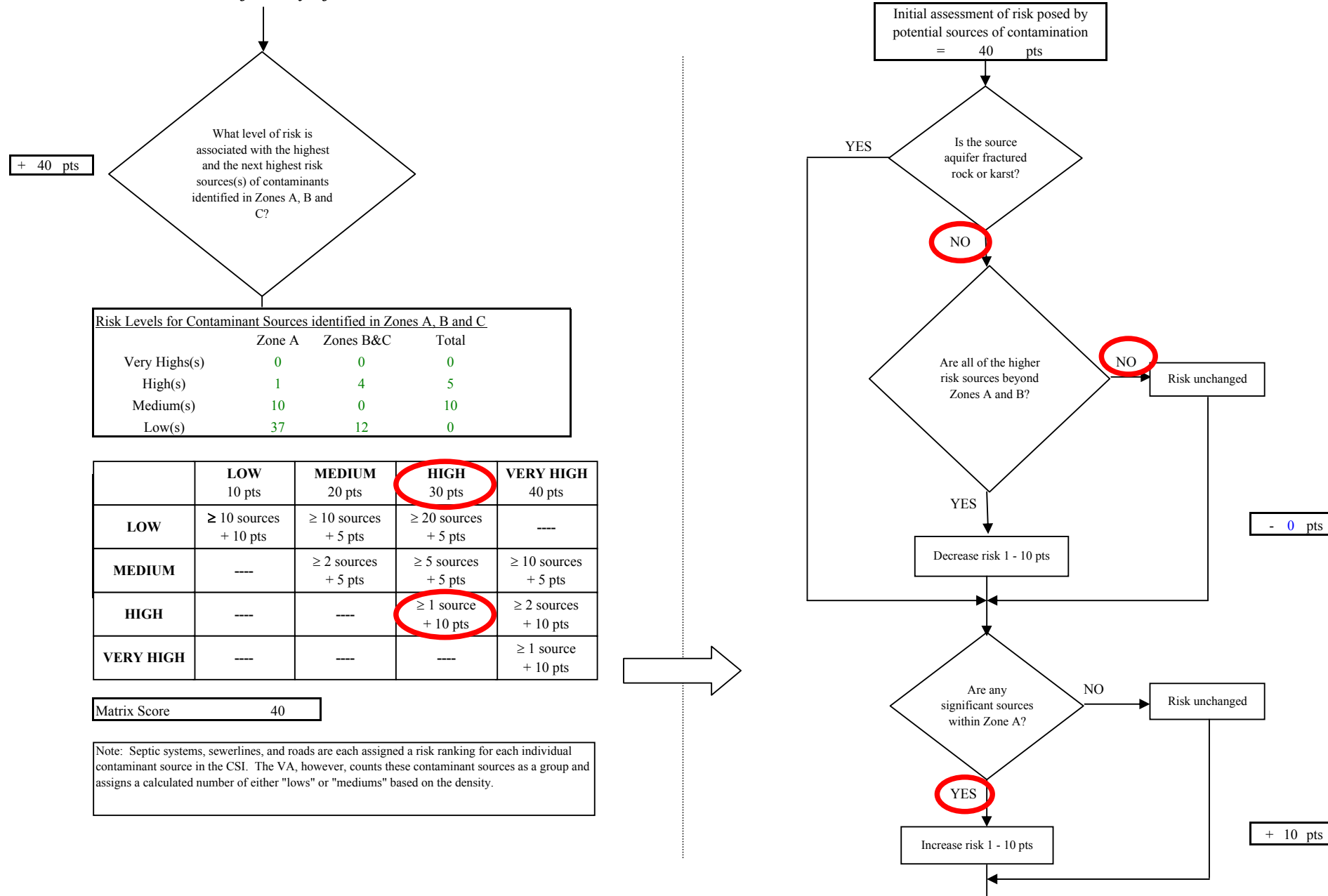


Chart 5. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Nitrates and Nitrites

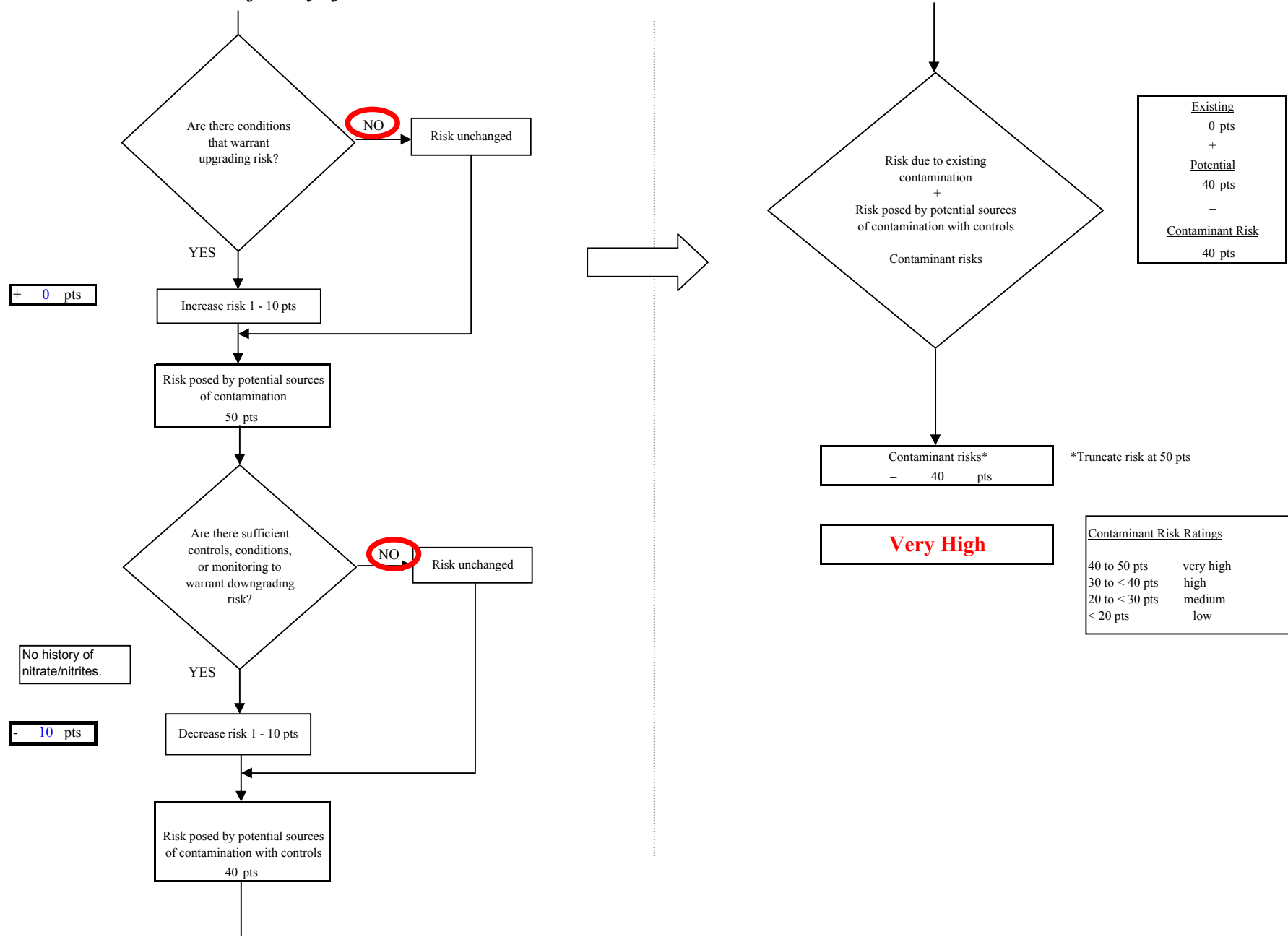


Chart 6. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Nitrates and Nitrites

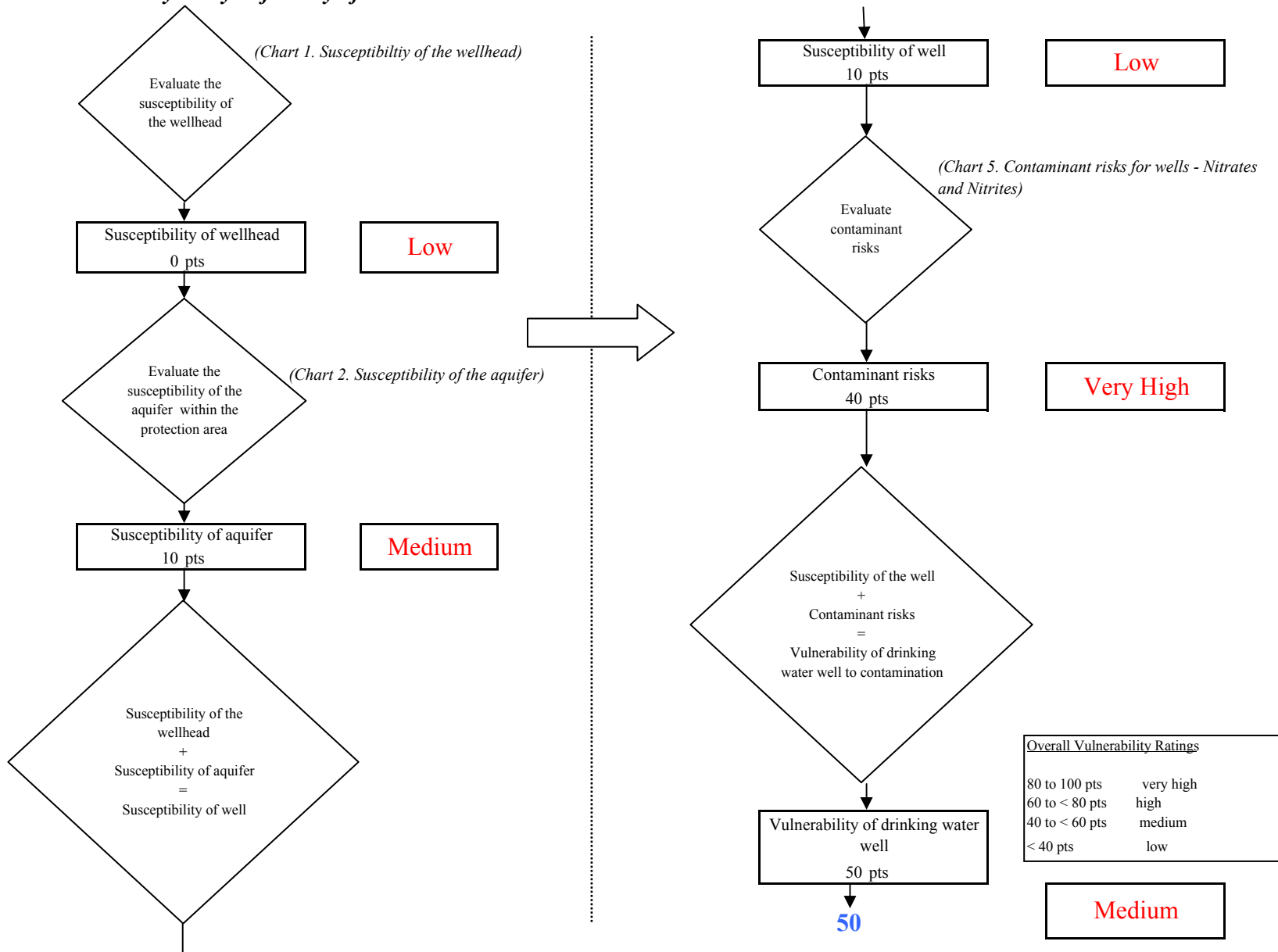


Chart 7. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Volatile Organic Chemicals

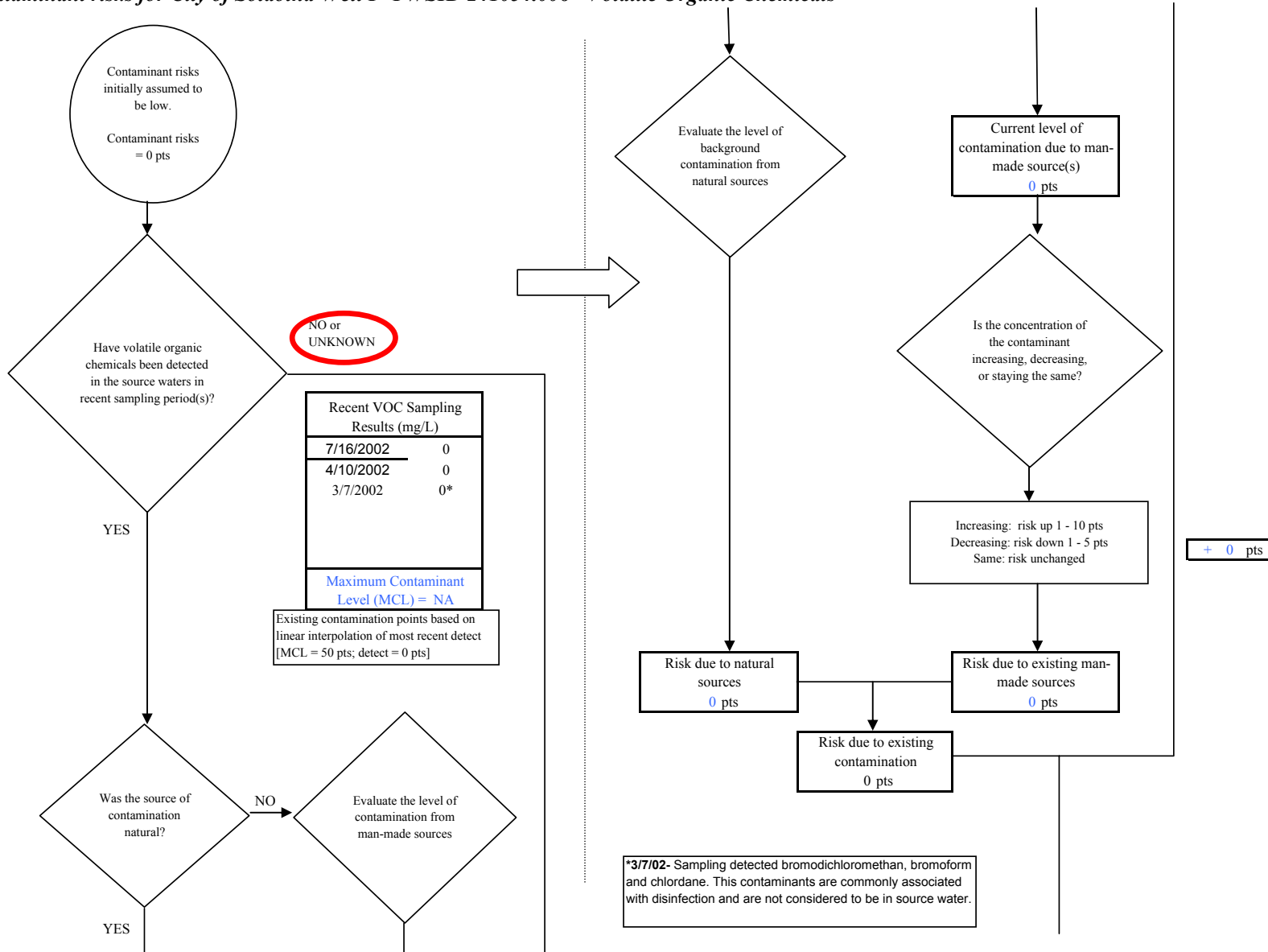


Chart 7. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Volatile Organic Chemicals

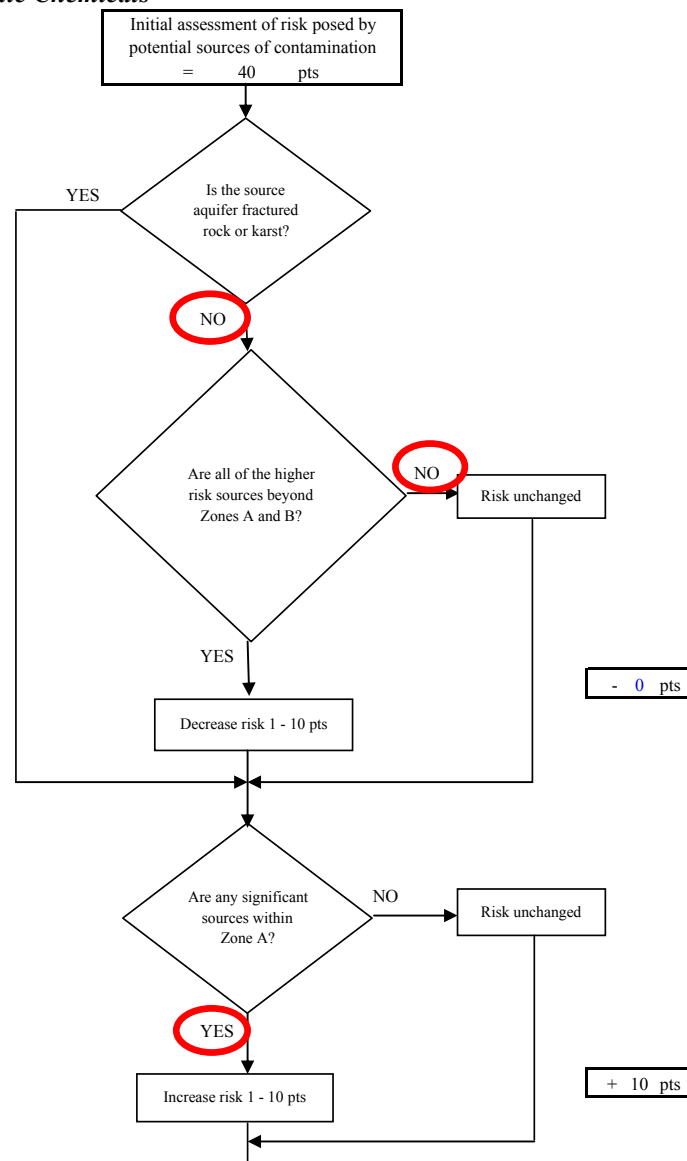
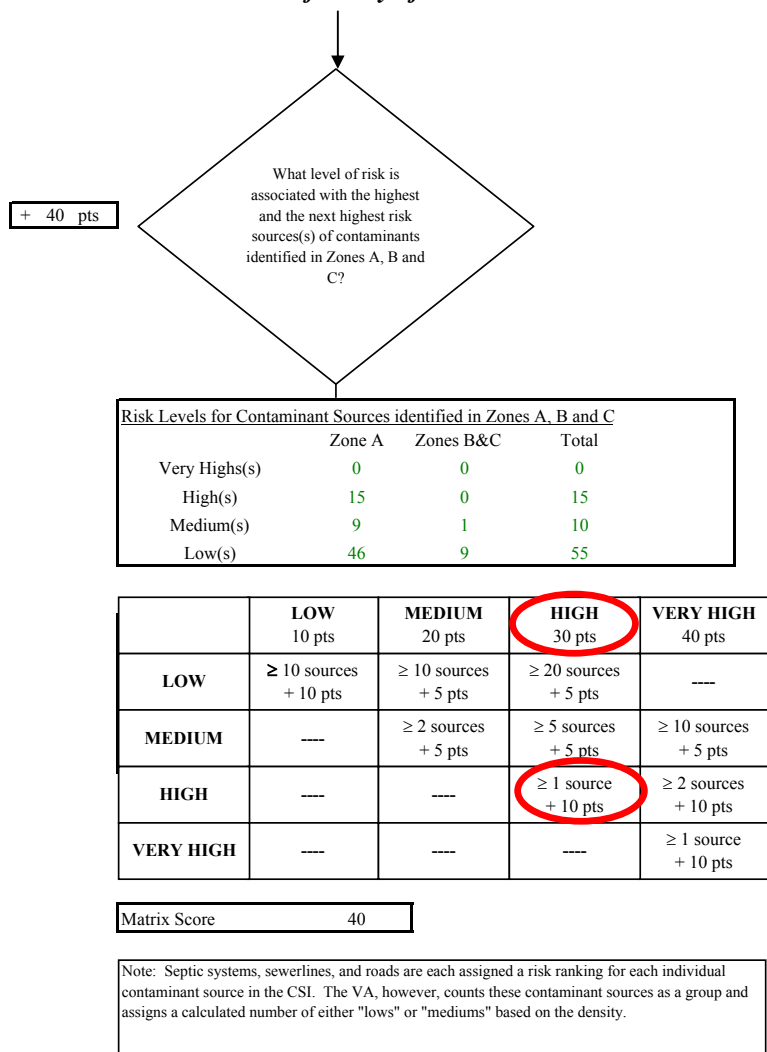


Chart 7. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Volatile Organic Chemicals

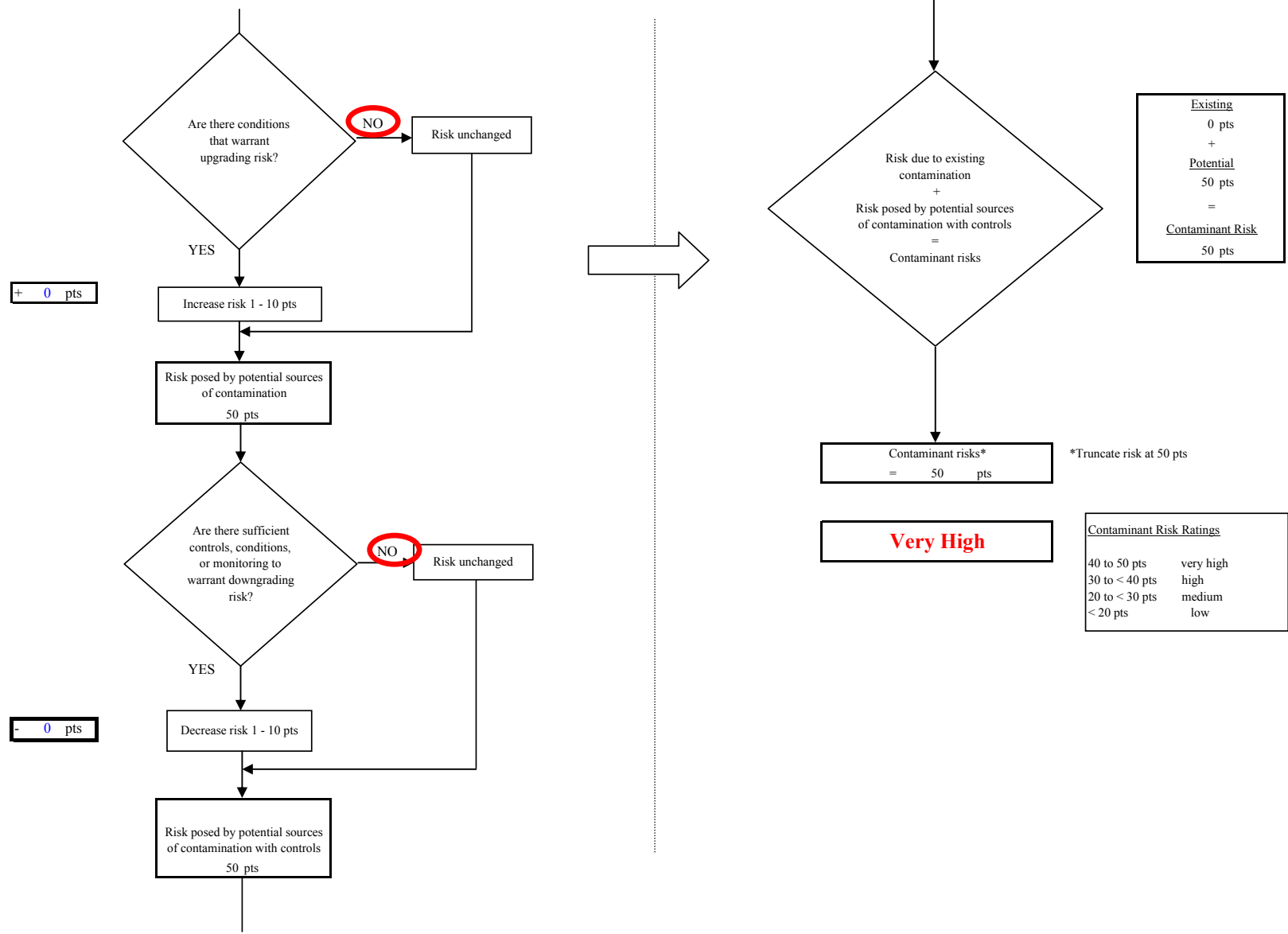


Chart 8. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Volatile Organic Chemicals

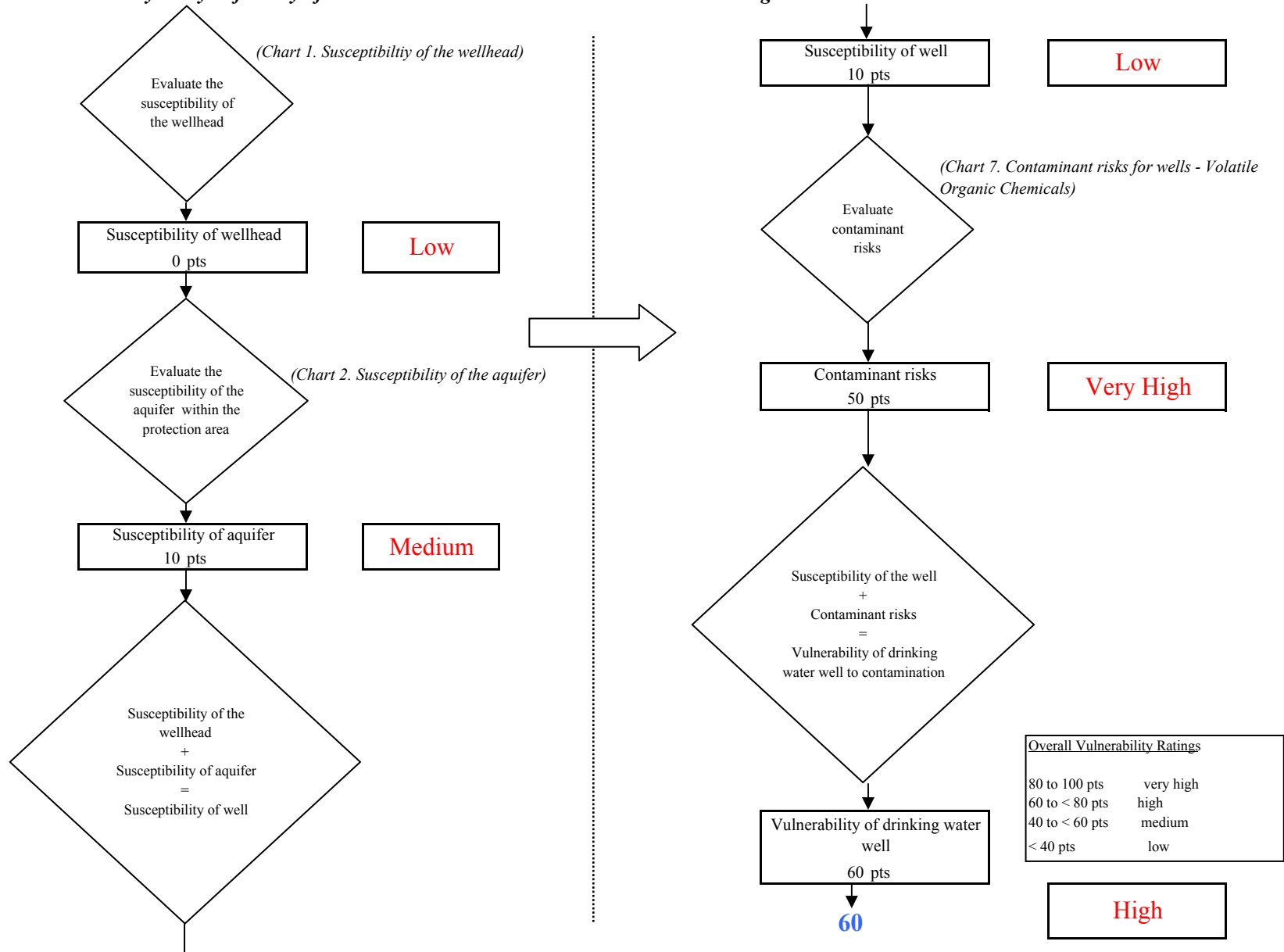


Chart 9. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Heavy Metals, Cyanide and Other Inorganic Chemicals

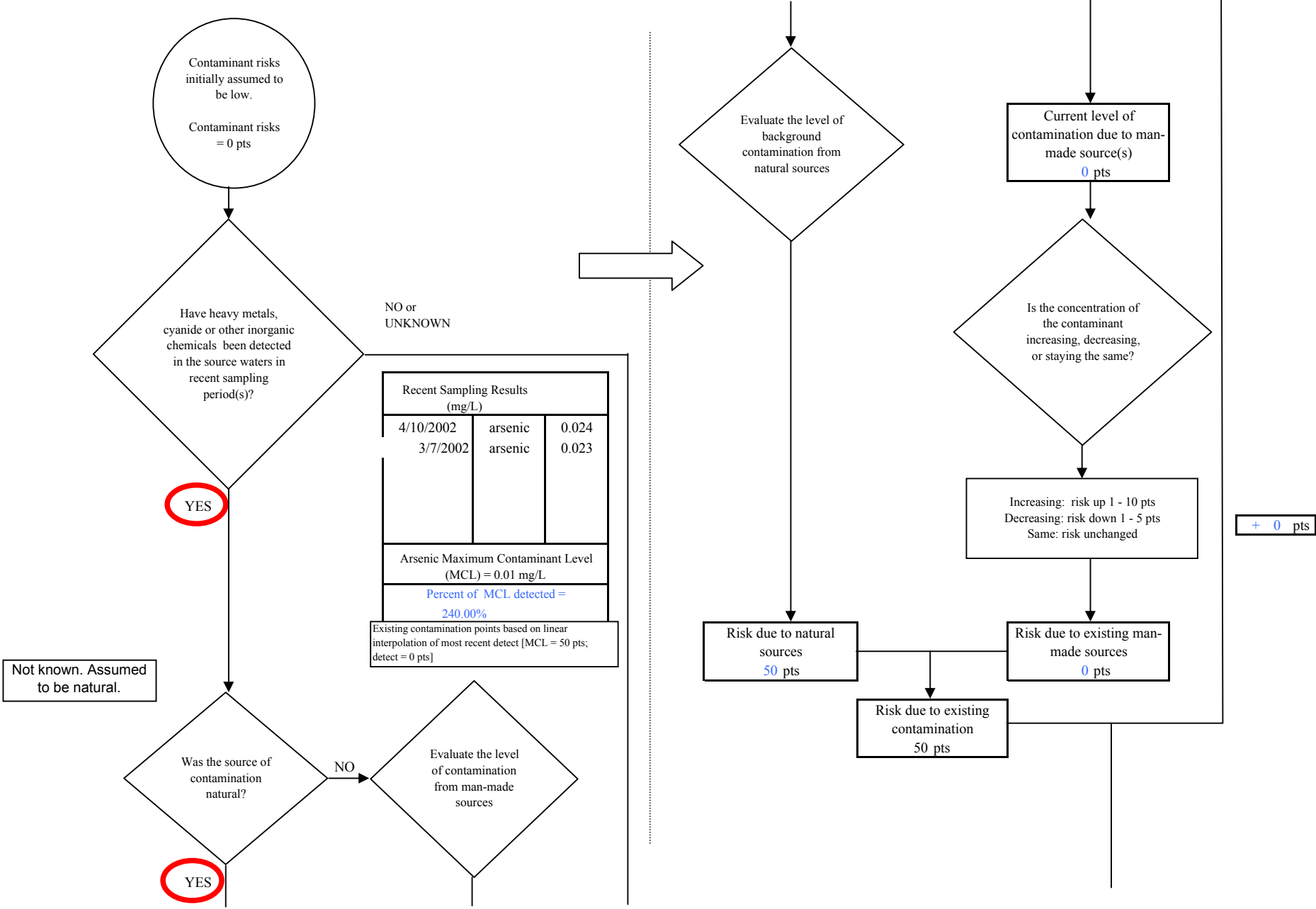


Chart 9. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Heavy Metals, Cyanide and Other Inorganic Chemicals

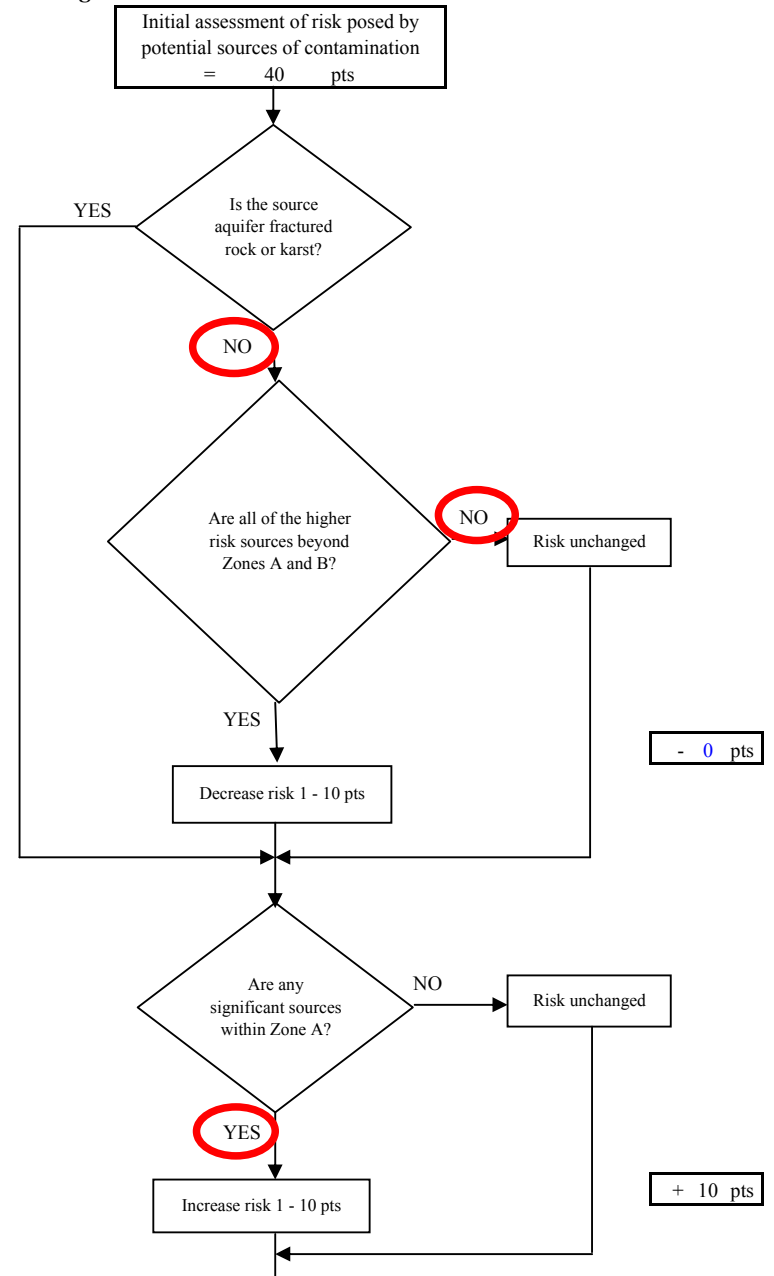
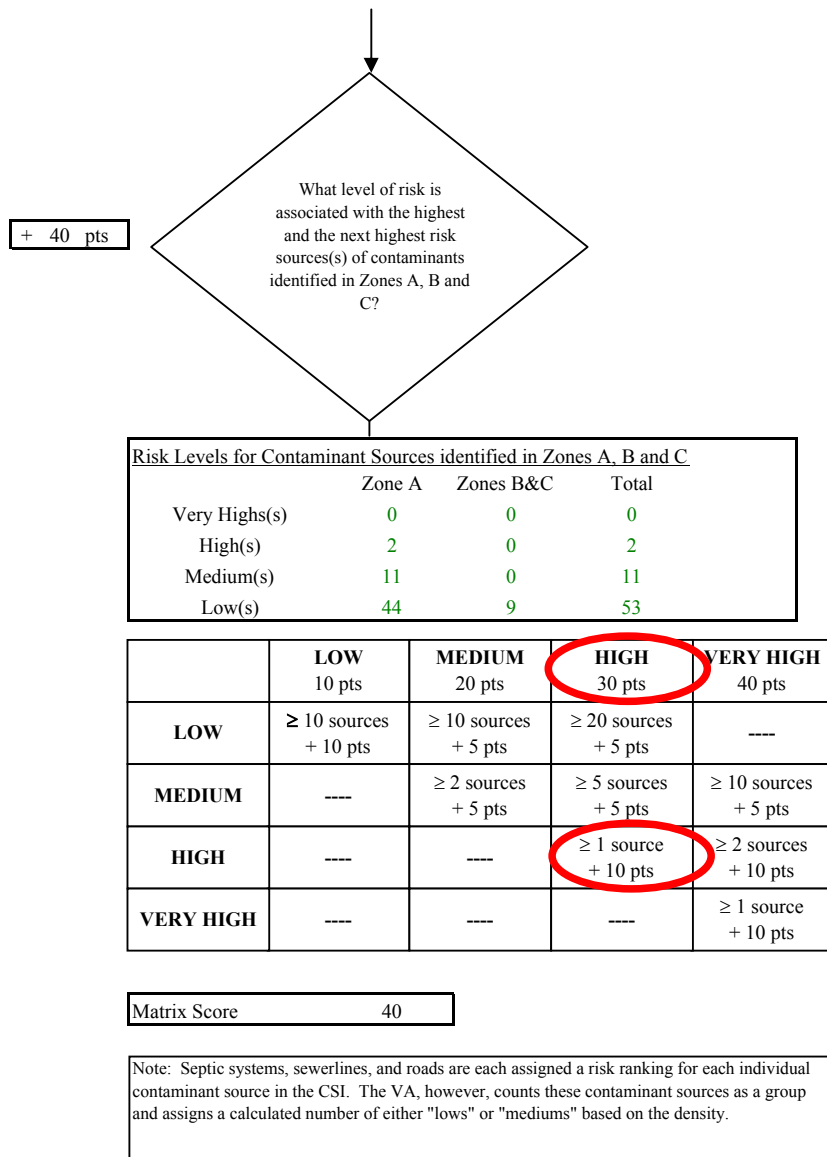


Chart 9. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Heavy Metals, Cyanide and Other Inorganic Chemicals

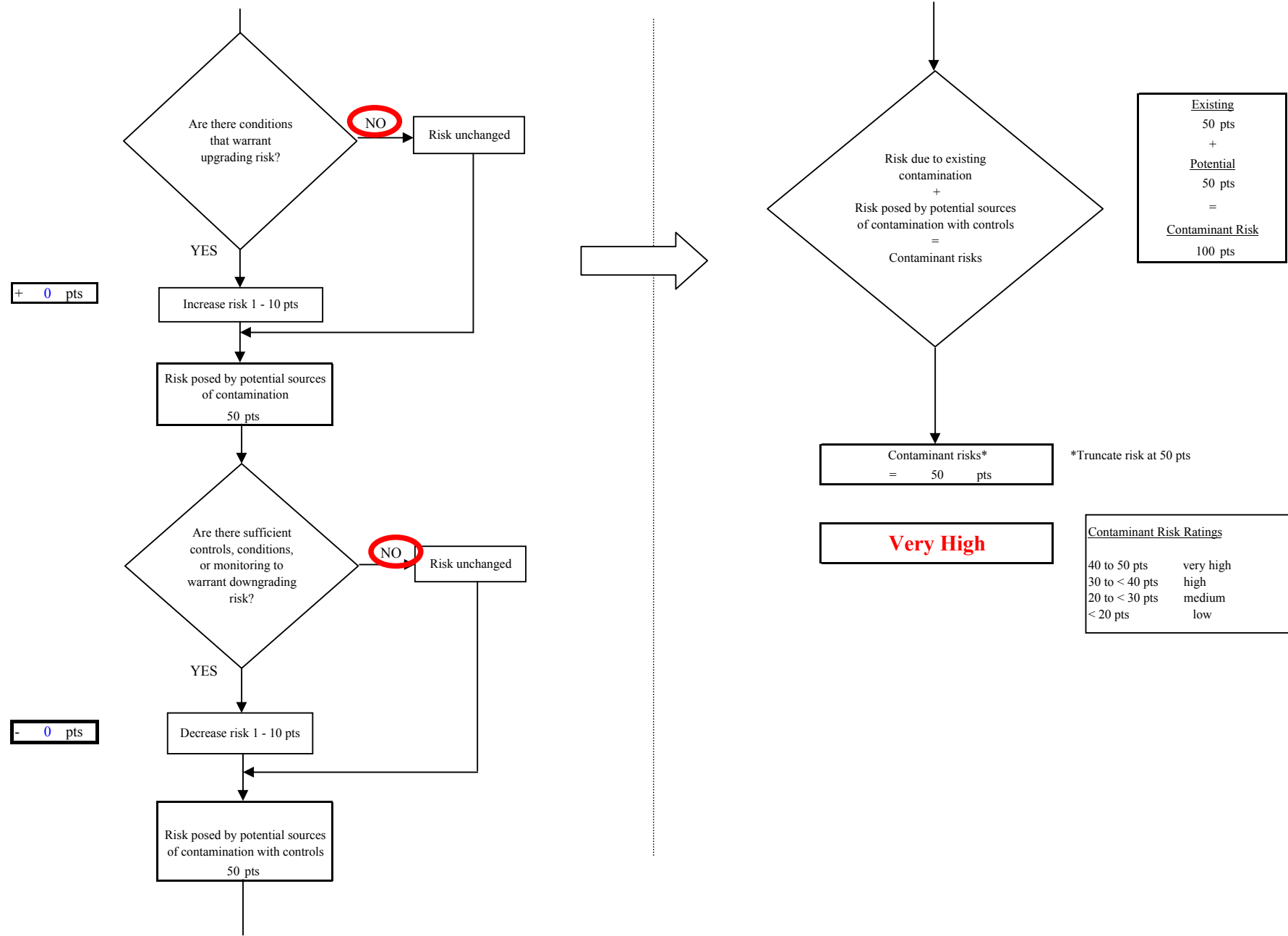


Chart 10. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Heavy Metals, Cyanide and Other Inorganic Chemicals

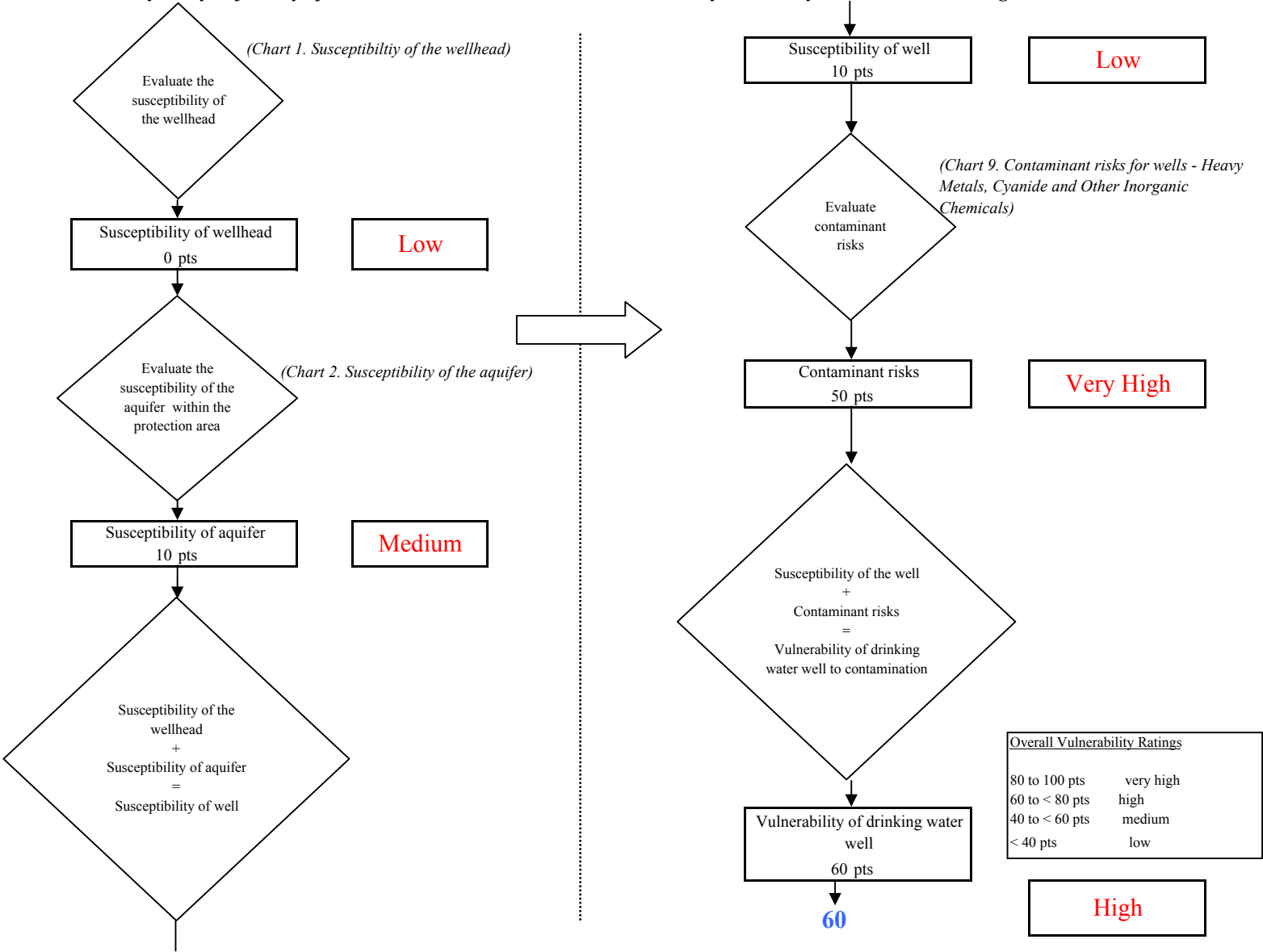


Chart 11. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Synthetic Organic Chemicals

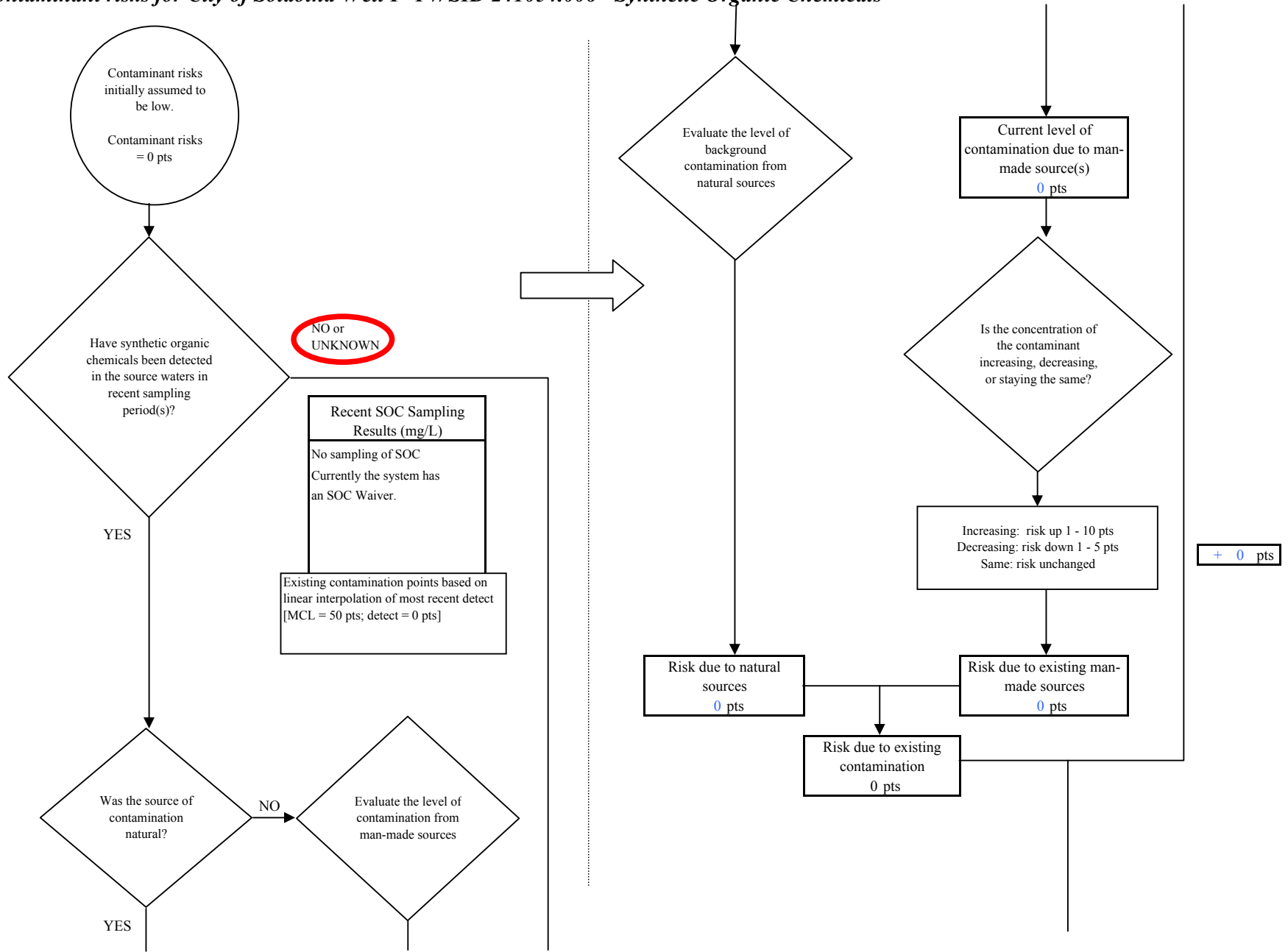


Chart 11. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Synthetic Organic Chemicals

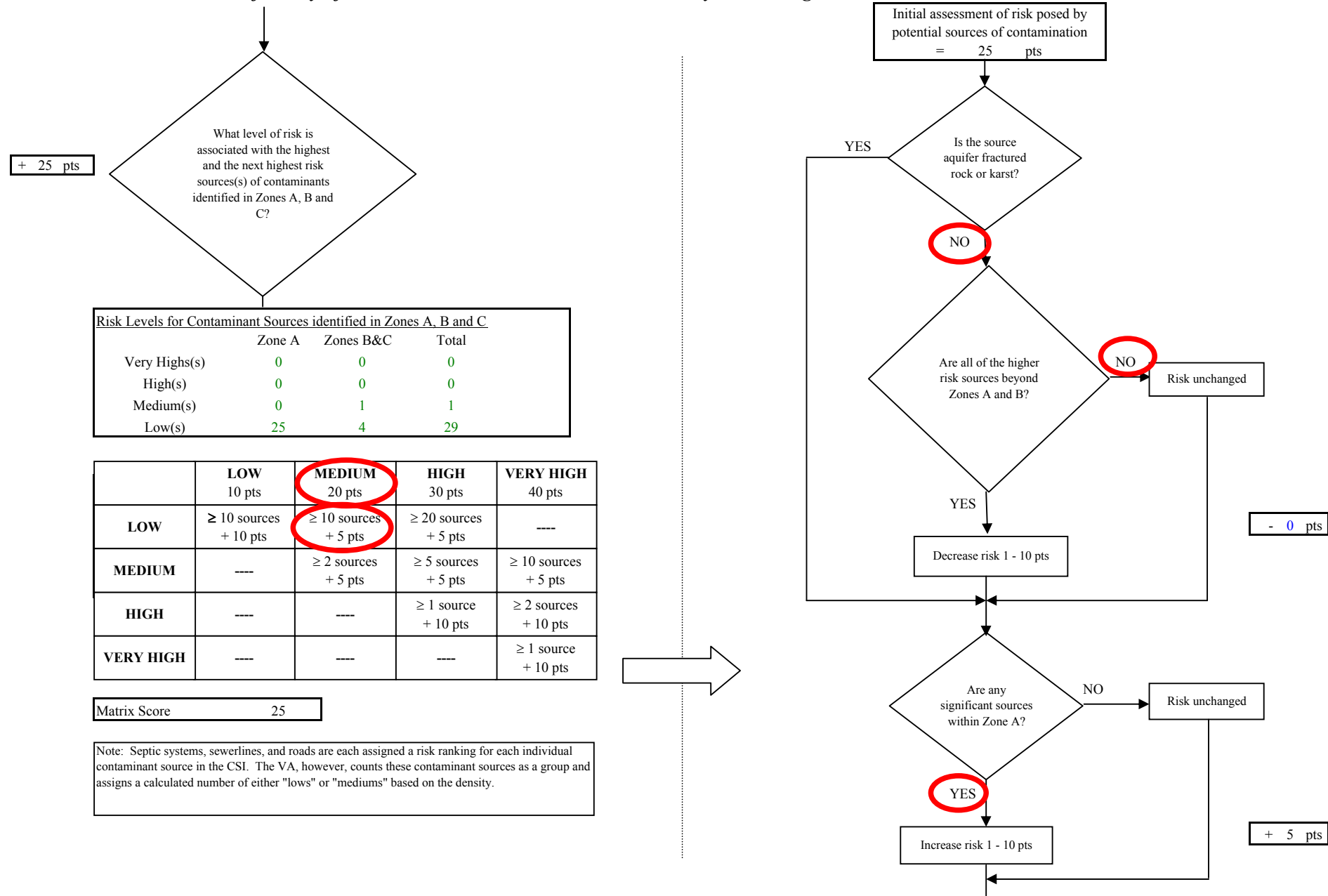


Chart 11. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Synthetic Organic Chemicals

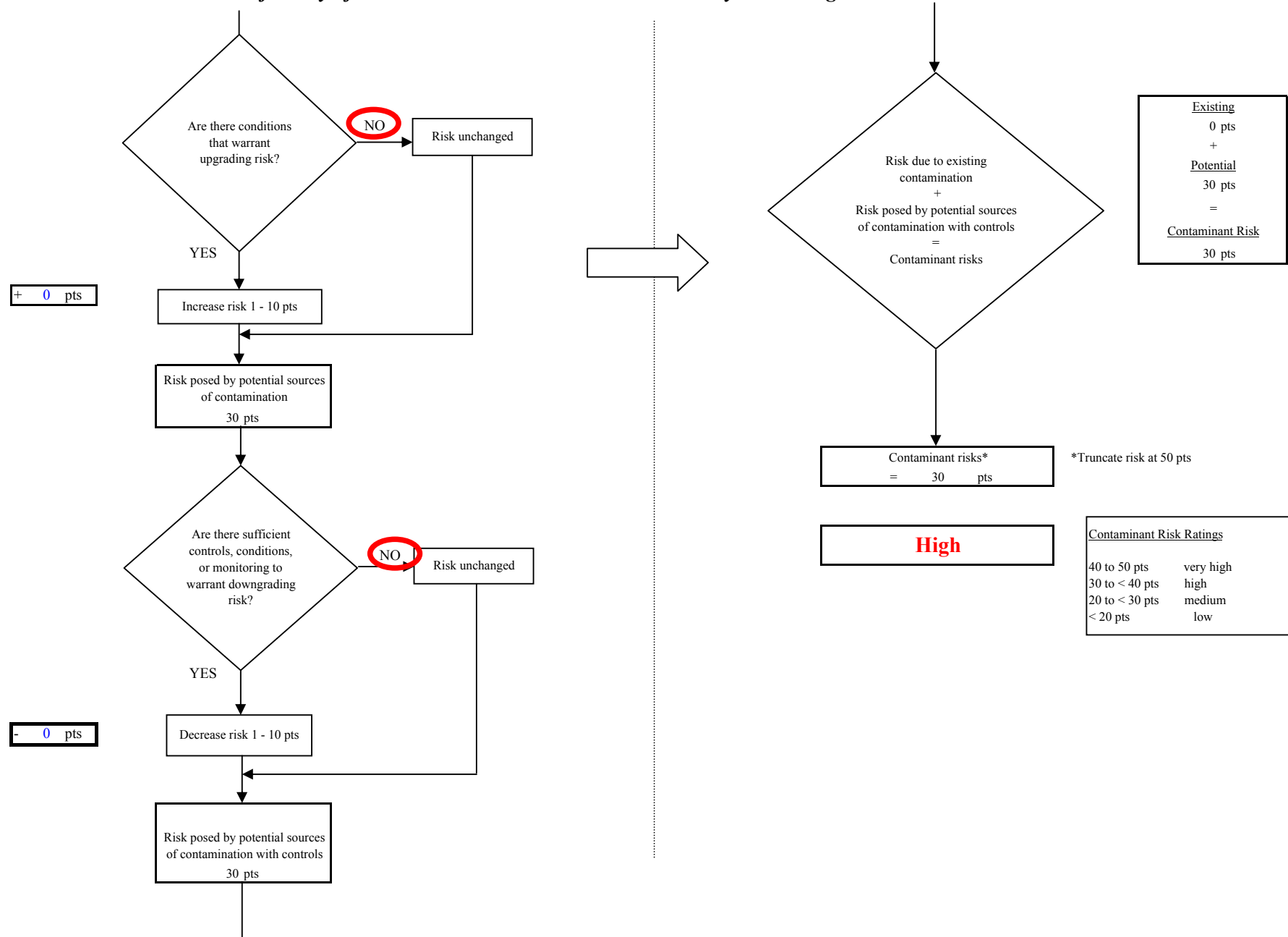


Chart 12. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Synthetic Organic Chemicals

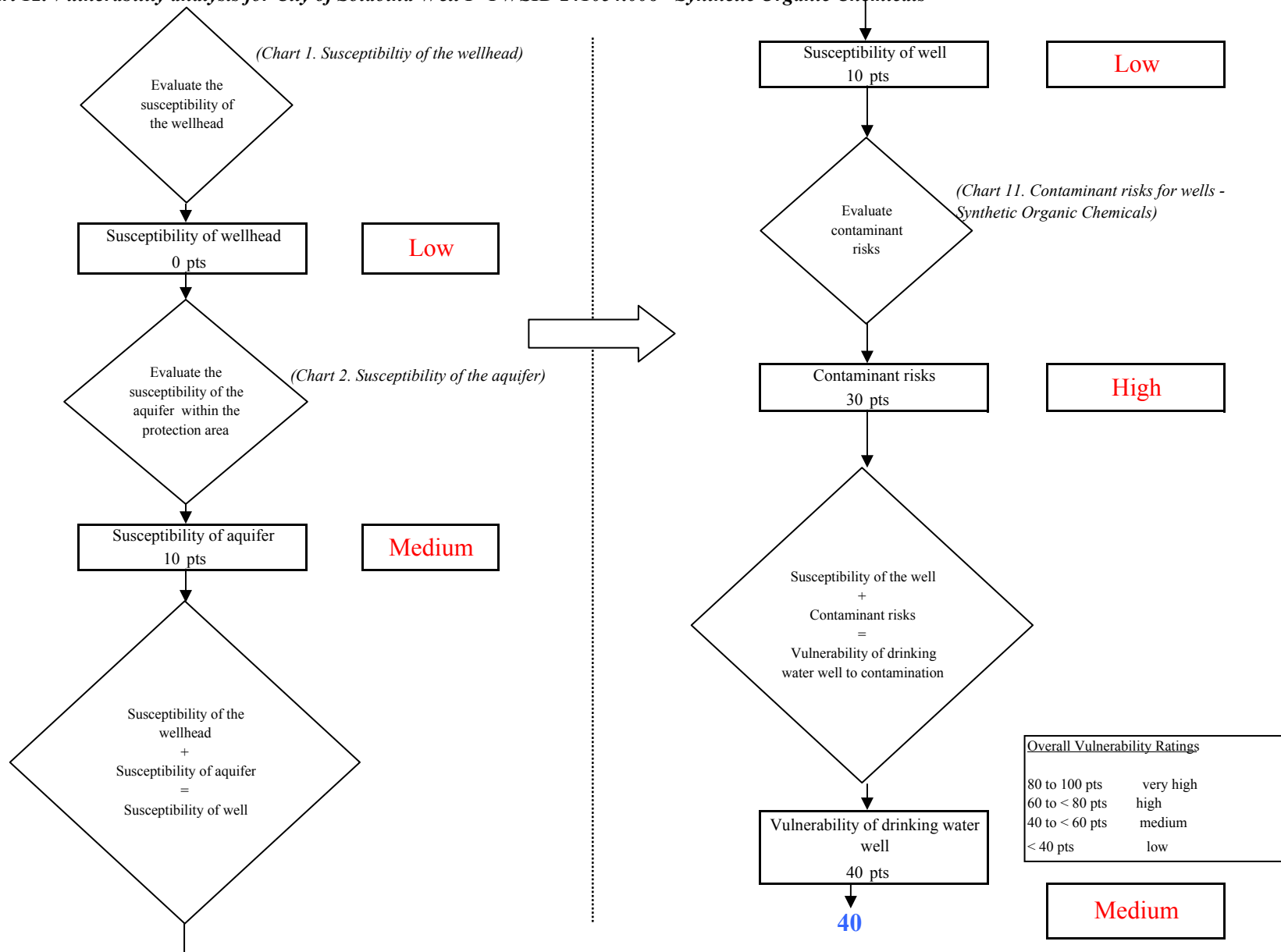


Chart 13. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Other Organic Chemicals

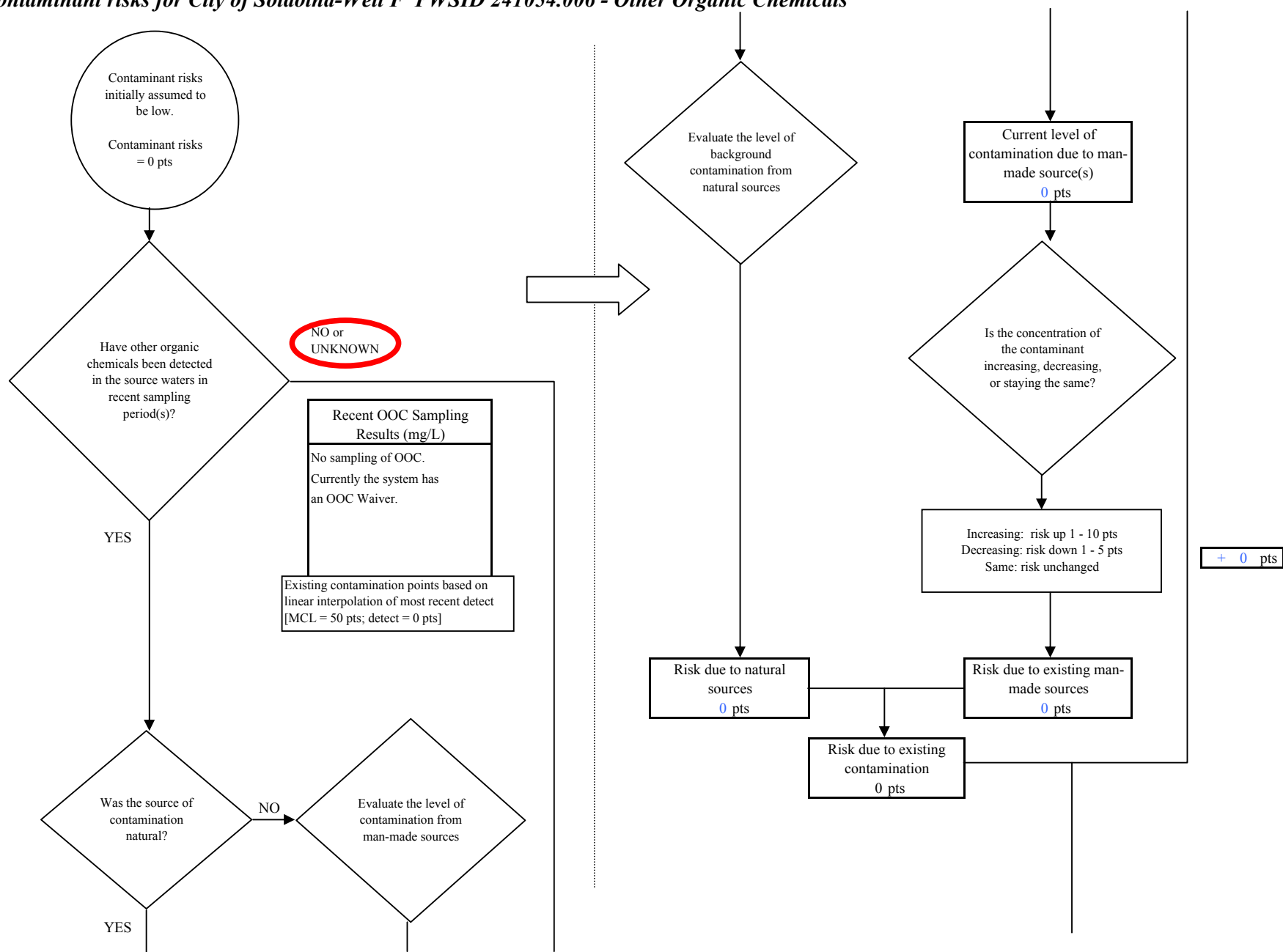


Chart 13. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Other Organic Chemicals

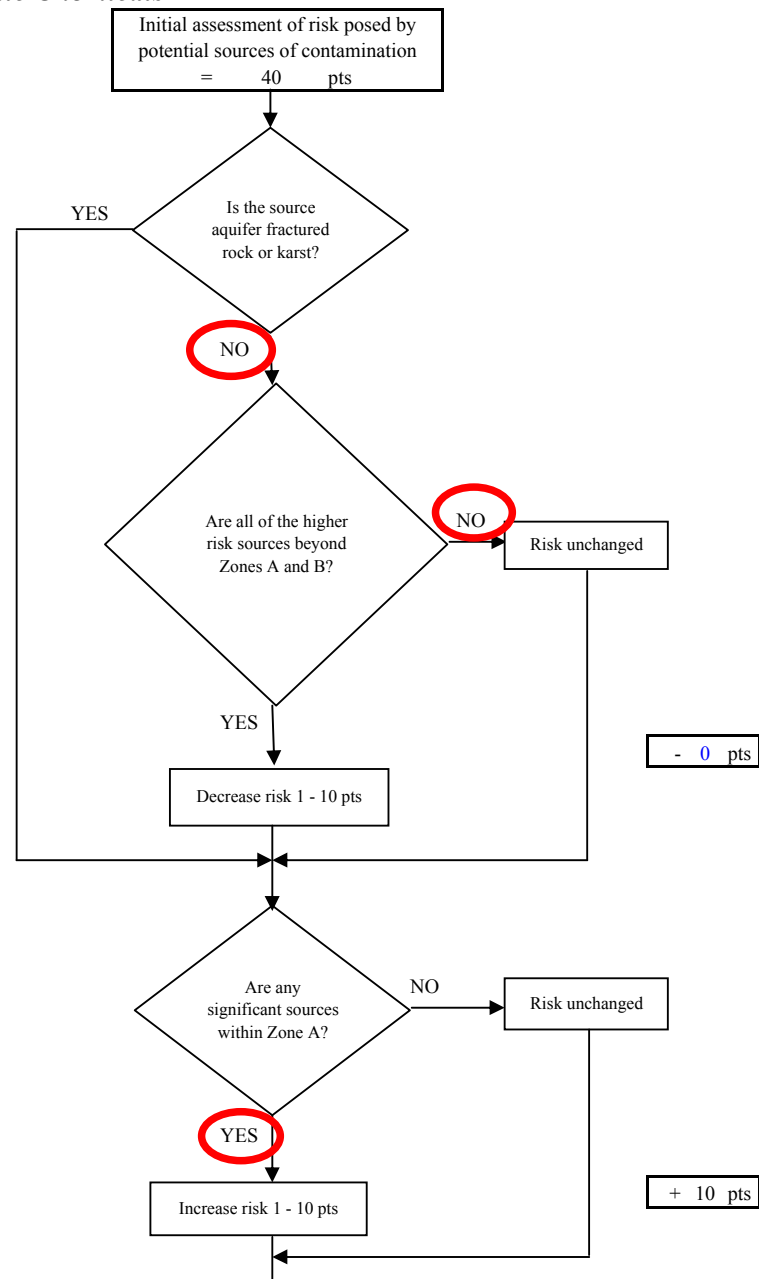
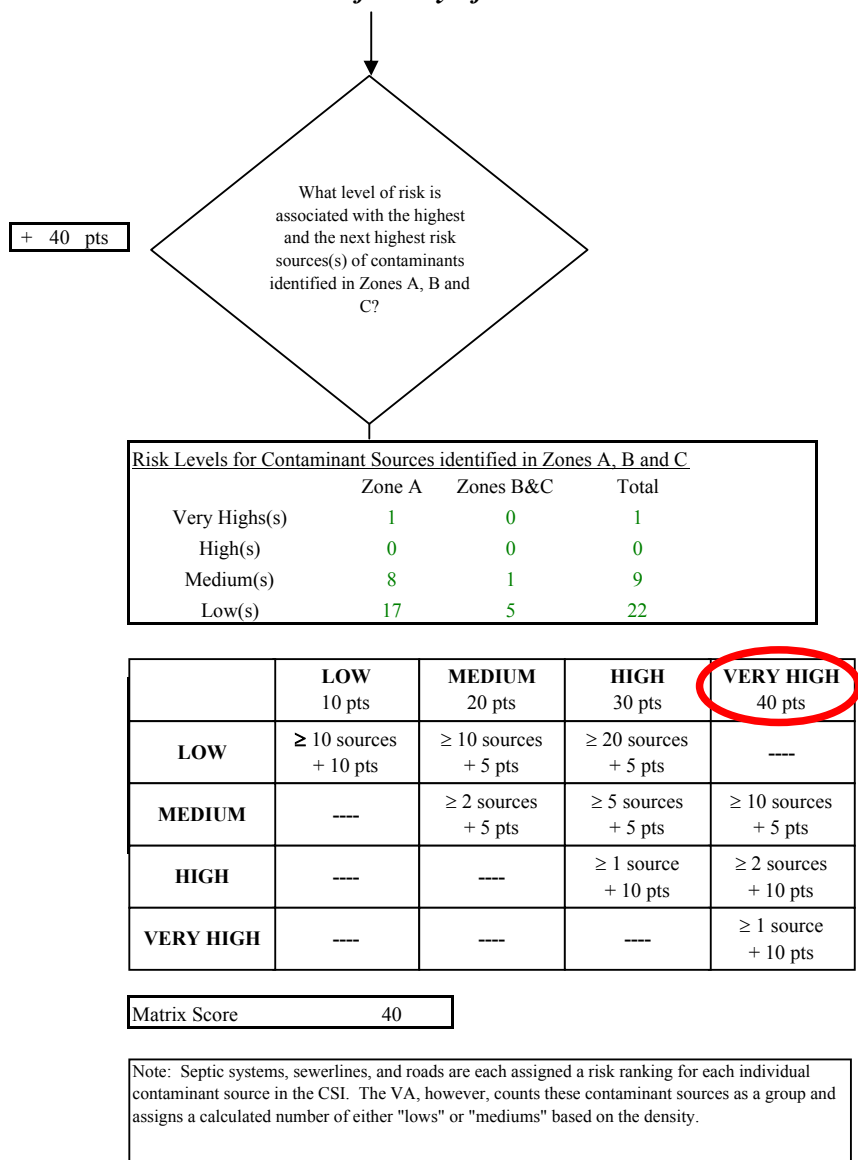


Chart 13. Contaminant risks for City of Soldotna-Well F PWSID 241054.006 - Other Organic Chemicals

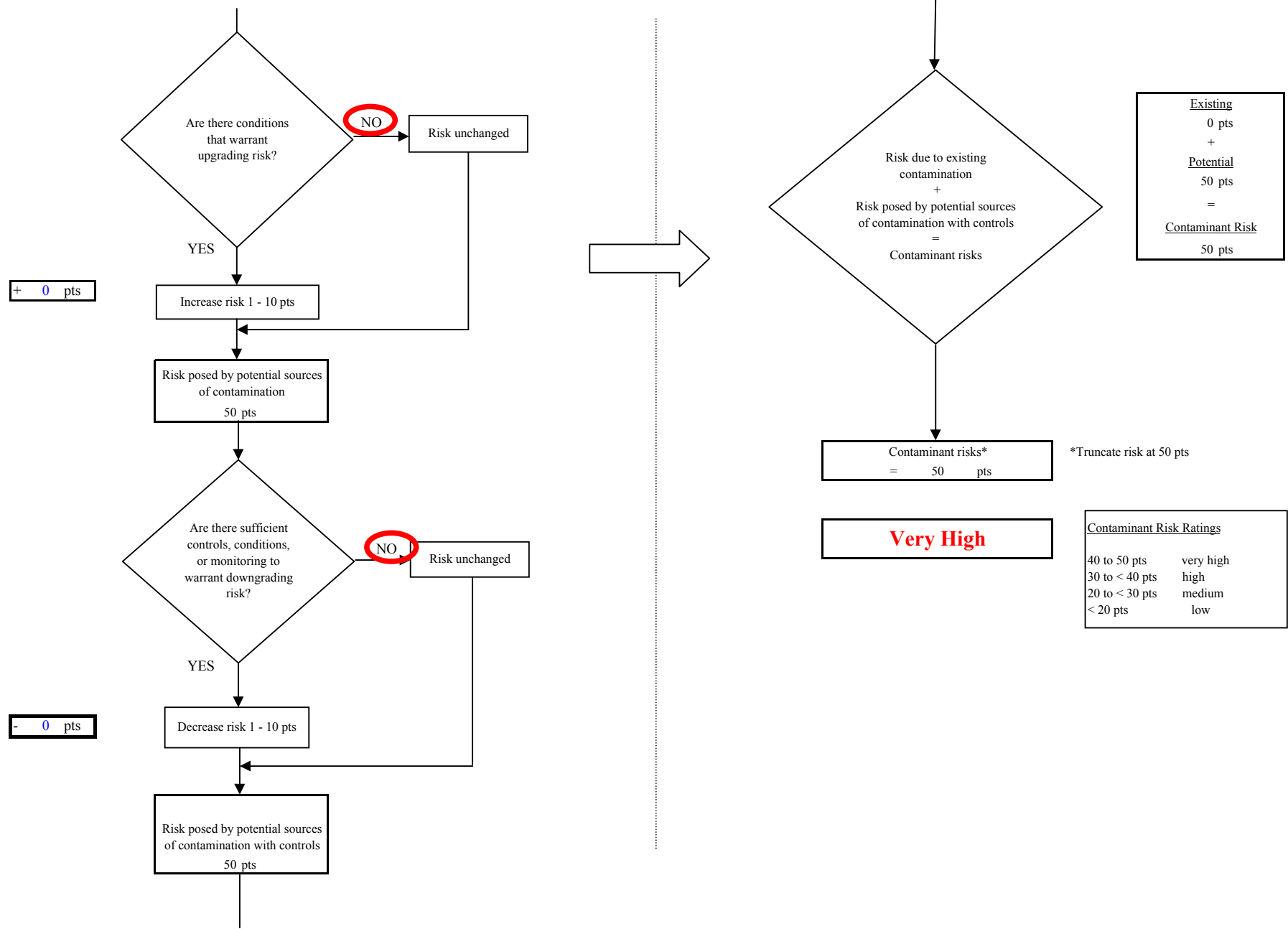


Chart 14. Vulnerability analysis for City of Soldotna-Well F PWSID 241054.006 - Other Organic Chemicals

