

WYOMING WATER ASSESSMENT AND PROTECTION PROGRAM (SWAP)



SOURCE WATER ASSESSMENT PROGRAM EXECUTIVE SUMMARY

Source Water Assessment Prepared For:
Solvay Soda Ash Joint Venture

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SOURCE WATER ASSESSMENT SUMMARY FOR Solvay Soda Ash Joint Venture

PWS Source Water Assessment Summary

The Solvay Soda Ash Joint Venture water system is classified as a non-transient, non-community surface water supply. This mine/processing facility is located about 20 miles west of the City of Green River, south of I-80 at the Westvaco Road exit. Treated surface water is provided to a working population of 400 through 9 service connections year round.

Source water for this facility is obtained from the Green River, which is located about 15 miles northeast of the plant. Water taken from the river is stored on-site in a million-gallon water tank. This water is used both for process and potable water consumption. Before potable water use, the raw water is treated by conventional filtration techniques and then passed through additional sand filtration and chlorine disinfection before storage.

In general, the Solvay Soda Ash Joint Venture scores high for land use susceptibility because much of the land surrounding the intake is forest. The Solvay Soda Ash Joint Venture should be aware a potential line source that lies inside the delineation zone.

Delineation Methods

The Solvay Soda Ash Joint Venture water system is a non-transient non-community surface water system that receives its entire supply from a surface water source. For that reason, Lidstone delineated the source water area using surface water methods.

The surface water source area was delineated using surface topographic techniques. Zone 2 for included an area 1,000 feet on either side of the Green River and its perennial streams that extended upstream of the intake for a distance of 15 miles, or the distance from the intake to the headwaters of the drainage. Zone 3 for the intake includes the entire stream drainage basin from Zone 2 to the basin headwaters.

Surface Water Sources

The Solvay Soda Ash Joint Venture obtains all of its water from its intake on the Green River. The diversion structure consists of a single intake located at the river's edge and is protected with a screen. Additional information on this source is included on the enclosed surface water information sheet.

As shown on the enclosed delineation maps, the source water area includes part of the drainage basin of the Green River. Zone 2 extends 15 river miles upstream from the intake and includes a 1,000 foot buffer on both banks of the river and all perennial tributaries. Zone 3 includes the remaining watershed upstream from the intake.

Integrity Summary

The Solvay Soda Ash Joint Venture water system obtains its source water from the Green River. The intake was constructed before 1983, when less stringent construction standards were required by the state of Wyoming. Records also indicated that while the area around the intake is unrestricted, the intake is screened to protect against the infiltration of potential contaminants. As shown on the Integrity Summary Table, the facility's intake received an integrity score of 6. This value primarily resulted from the intake being completed before 1983, the intake area being unprotected, and the long conveyance length.

Water Source Sensitivity Summary

The Solvay Soda Ash Joint Venture water system obtains its source water from the Green River. As shown on the Source Sensitivity Summary Table, the intake received a sensitivity score of 10.

The intake received the maximum sensitivity score for two reasons. The first reason is because it obtains water from a surface water source. The second reason is that laboratory analysis of water samples from the system within the last five years detected several contaminants that are listed on EPA's primary and secondary drinking water standards. These include fluoride, total coliform, and sulfate among others. Despite detection, these contaminants were generally detected at concentrations below the EPA's maximum contaminant levels.

Water System Susceptibility Rating

Susceptibility is defined as the potential for a public water supply to draw water contaminated at concentrations that would pose a threat or concern to human health. In general, the Solvay Soda Ash Joint Venture scores high for land use susceptibility because much of the land surrounding the intake is forest. A railroad runs through Zone 2. The intake was assigned a high susceptibility for transportation corridor contaminants. Susceptibility ratings for each type of potential contaminant source are summarized on the attached susceptibility tables.

A review of your PWS's routine water analysis results revealed that one or more chemicals that are considered contaminants in drinking water were detected at some time within the last five years. Chemical detections have a large impact on your PWS's sensitivity score because it may indicate that there is a pathway for contaminants to reach the water supply. However, it is likely that these chemicals are present only in small amounts and are not a danger to your health. Some of these chemicals may also occur naturally in water.

For more information about which chemicals were detected, please contact the PWS for a copy of the most recent Consumer Confidence Report or water analysis results. Chemical detections at levels that are a concern to human health are reported on the EPA's website: http://www.epa.gov/enviro/html/sdwis/sdwis_query.html. To see if your PWS has exceeded the federal primary or secondary drinking water standards, just click on the State of Wyoming and then type in the name of your PWS. Consumer Confidence Reports are prepared by the PWS on a yearly basis. The reports should include information about any chemicals found in the water, even those found at very low levels. Please contact Kim Parker at DEQ, 307-777-7781, or WARWS for assistance. You may also contact EPA to find out what contaminants were

detected. You may have to fill out a Freedom of Information Act request to obtain the water test results for your PWS. Please call EPA's Safe Drinking Water Hotline at 1-800-426-4791.

**POINT SUSCEPTIBILITY SUMMARY TABLE
FOR Solvay Soda Ash Joint Venture
Point Source Susceptibility Summary**

It may appear from the results of this point source susceptibility summary table that your system has too many PSOCs influencing the final ratings. In some cases, a specific PSOC falls within a specific contaminant inventory zone shared by multiple wells or intakes. When this is the case, that PSOC will be scored for each intake. For example, an underground storage tank may appear within a contaminant inventory zone shared by four different wells. This would cause that single storage tank to be entered into the table four times, or once for each well or intake.

Point Source Type	Low	Medium	High
None Identified	N/A	N/A	N/A

- * Illustrates the number of PSOCs in a particular rating class for all water sources
- * N/A - Not Applicable