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DOE/EA-XXXX

FINAL DRAFT ENVIRONMENTAL ASSESSMENT

DEWATERING AND RCRA PARTIAL CLOSURE ACTION ON SOLAR EVAPORATION PONDS ROCKY FLATS PLANT, GOLDEN COLORADO

November 1990

U.S. Department of Energy
Rocky Flats Office
Golden, Colorado

REVIEWED FOR CLASSIFICATION/UCNI
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A-OU04-000318

1.0 INTRODUCTION

This Environmental Assessment (EA) is prepared pursuant to the National Environmental Policy Act (NEPA), its implementing regulations promulgated by the Council on Environmental Quality (40 CFR 1500-1508), U.S. Department of Energy (DOE) Guidelines (10 CFR 1021 and 52 FR 47662), and DOE interim procedural guidance for implementing the Secretary of Energy Notice (SEN-15-90).

The action proposed by DOE involves partial closure of the solar evaporation ponds at the Rocky Flats Plant (RFP), which are designated as Solid Waste Management Unit (SWMU) #101 as well as an interim status unit under the Resource Conservation and Recovery Act (RCRA). The pond configuration is presented in Figure 1.

The proposed action consists of (1) enhancing the natural evaporation of the solar ponds by adding a blue, non-toxic, non-RCRA-regulated, non-bioaccumulative dye to the waters in the ponds (to increase solar heat absorption), the use of floating aerators to aid evaporation, and the use of soaker pipes along the pond perimeter; (2) forced evaporation of water collected by the interceptor trench system and water remaining in the ponds with an evaporation system, which is comprised of the existing evaporator in Building 374 and augmented by three portable evaporators; (3) removal of sludge from the ponds and conversion of the sludge to pondcrete; and (4) solidification of evaporator concentrate into saltcrete. These actions are also subject to review and approval by the Colorado Department of Health (CDH), as a change to the RCRA interim status closure plan, prior to implementation.

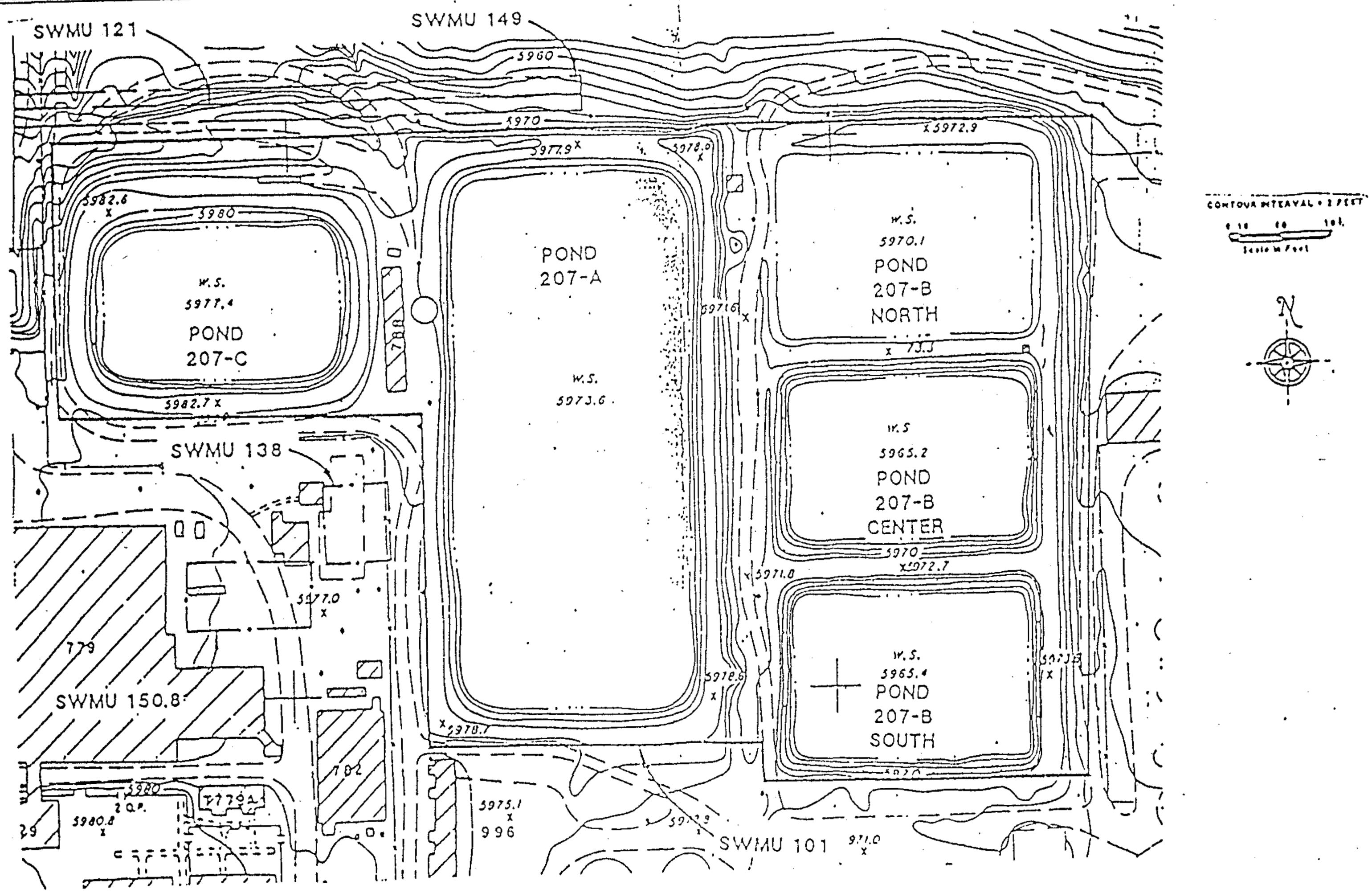
The purpose of this project is to implement pre-remediation actions pursuant to the Agreement in Principle (AIP) between DOE and the State of Colorado (CDH, 1989). The total estimated cost of this pre-remediation RCRA partial closure action is $59 million. A separate NEPA review will be performed for remediation of the solar evaporation ponds area (Operable Unit #4 or OU 4) as a separate action under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). Such a remediation action is discussed in the RFP Federal Facility Agreement and Consent Order, also called the Inter-Agency Agreement (IAG) (EPA, 1990).

Implementation of the proposed action at this time would not prejudice or preclude the choice of alternatives for the planned future CERCLA removal and remediation action for Operable Unit #4 (OU4), which includes the five solar ponds.

2.0 BACKGROUND

Rocky Flats is located in northern Jefferson County approximately 16 miles northwest of downtown Denver, Colorado. The immediate area around Rocky Flats is primarily agricultural or undeveloped land. Other population centers within 12 miles of the facility include the cities of Boulder, Broomfield, Golden, and Arvada. A detailed description of the local demographics and environment is presented in the Rocky Flats Plant Site Final Environmental Impact Statement (DOE, 1980).

The solar evaporation ponds are located in the central portion of Rocky Flats inside and near the Perimeter Security Zone (PSZ). The ponds represent the primary location for any closure activities to be undertaken. Activities associated with closure of the ponds would occur totally within Rocky Flats boundaries (except for offsite shipment of wastes) and would be controlled by appropriate facility procedures in compliance with appropriate environmental regulations.



SWMU 101	-	207 SOLAR EVAPORATION PONDS
SWMU 121	-	ORIGINAL PROCESS WASTELINES
SWMU 138	-	COOLING TOWER BLOWDOWN FROM BUILDING 779
SWMU 149	-	EFFLUENT PIPE
SWMU 150.8	-	RADIOACTIVE LIQUID LEAKS NORTH OF BUILDING 779

SOLID WASTE MANAGEMENT UNITS
(SWMU'S)
WITHIN THE SOLAR PONDS AREA

Figure 1

The solar evaporation ponds are currently configured as a series of five evaporation ponds (see Figure 1). Pond 207-A was placed into service in August 1956. Ponds 207-B, North, Center, and South were placed into service in June 1960. These ponds were formerly used to store and treat liquid process wastes having less than 100,000 picocuries per liter (pCi/l) of total long-lived alpha activity (DOE, 1980). These process wastes also contained high concentrations of nitrates as well as treated acidic wastes containing aluminum hydroxide. The ponds are also known to have received other wastes, including sanitary sewer sludge, lithium chloride, lithium metal, sodium nitrate, ferric chloride, sulfuric acid, ammonium persulfates, hydrochloric acid, nitric acid, hexavalent chromium, tritium, and cyanide solutions (Rockwell International, 1988).

Subsequent construction activities included installation of interceptor trenches Nos. 1 through 5-B during the period from October 1971 through April 1974 to prevent natural seepage and pond leakage from entering North Walnut Creek. This system has been replaced by the current Interceptor Trench System (ITS), which was installed in April 1981.

Sludges from the solar evaporation ponds have been removed from time to time to implement repair work on the pond liners. As the sludges were removed, they were mixed with Portland cement and solidified as a mixture of sludge and concrete (pondcrete) for shipment to an offsite low-level radioactive waste disposal site.

Emplacement of process waste material into these ponds ceased in 1986 due to changes in Rocky Flats waste treatment operations. Present ongoing activities include evaporation of the liquids currently held in the ponds, removal and solidification of pond sludge, and site monitoring and characterization activities. Ponds 207-A, B, and C continue to be used for storage of intercepted seepage water collected by the ITS.

Hydrogeologic site characterization studies in the vicinity of the solar evaporation ponds have shown that alluvial groundwater flows northeastward from the ponds area toward the North Walnut Creek drainage (DOE, 1988). As stated above, the ITS was constructed to capture groundwater flowing from the ponds area prior to reaching North Walnut Creek. Evidence of elevated concentrations of various constituents in the alluvial groundwater downgradient (north) of the ITS suggests that the ITS may not be adequately capturing alluvial groundwater that originates in the ponds area.

3.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of this project is to implement pre-remediation actions pursuant to the AIP between DOE and the State of Colorado (CDH, 1989). The AIP stipulates that "In order to stem the flow of harmful contaminants into the groundwater and soil, DOE will expedite the cleanup of the solar evaporation ponds by removal of the sludge from the remaining ponds and shipment of all the pondcrete by October 1991." Rocky Flats has five solar ponds from which the water must be evaporated and the sludge residue removed to meet the AIP stipulations. The largest volume solar evaporation pond (Pond 207-A, shown in Figure 1) contains approximately 3 million gallons of water to be evaporated. The other ponds contain a total of approximately 5 million gallons of water to be evaporated. The influx of water from precipitation and recovered groundwater would add another 4 million gallons, bringing the total volume of water to be evaporated to 12 million gallons by October 1991. The removal of water and sludge is required to fulfill the accelerated schedule for cleanup of past environmental contamination, as set forth in the AIP, which states, "several past disposal sites (i.e., solar ponds) on the plant pose a high risk for further spread of contaminants into surface water, ground water and the soil. The... site(s) require(s) special and accelerated actions by the DOE." Such actions will be performed in full compliance with state and Federal environmental laws (CDH, 1989).

DOE is implementing this proposed action because of the length of time typically required to finalize a RCRA Facility Investigation/Remedial Investigation (RFI/RI), and Corrective Measures Study/Feasibility Study (CMS/FS). Furthermore, pursuant to the AIP between DOE and CDH entered into in June 1989, it was agreed that DOE would complete partial closure actions by October 1991.

The proposed action would not prejudice future actions under CERCLA. The forced evaporators would have an independent utility to water management on plant site and would represent a minor alteration to the existing facility. The larger action of closure would not be dependent on the proposed action because it would not trigger closure or preclude any future closure actions.

4.0 DESCRIPTION OF PROPOSED ACTION

The activities necessary to complete RCRA partial closure of the solar evaporation ponds would include the following elements:

- Dewatering of impounded water via natural, enhanced natural, and forced evaporation;
- Forced evaporation of water collected by the ITS, and residual water resulting from precipitation;
- Removing, treating, and disposing of the pond sludges and sediments;
- Removing, treating, and disposing of the process by-products, such as evaporator distillates and concentrates; and
- Interim protective measures (such as tarps and thin polymer film coatings) to prevent resuspension of pond bottom materials and further infiltration prior to final remediation activities.

Figure 2 provides a process diagram for these activities.

4.1 Dewatering of Impounded Water

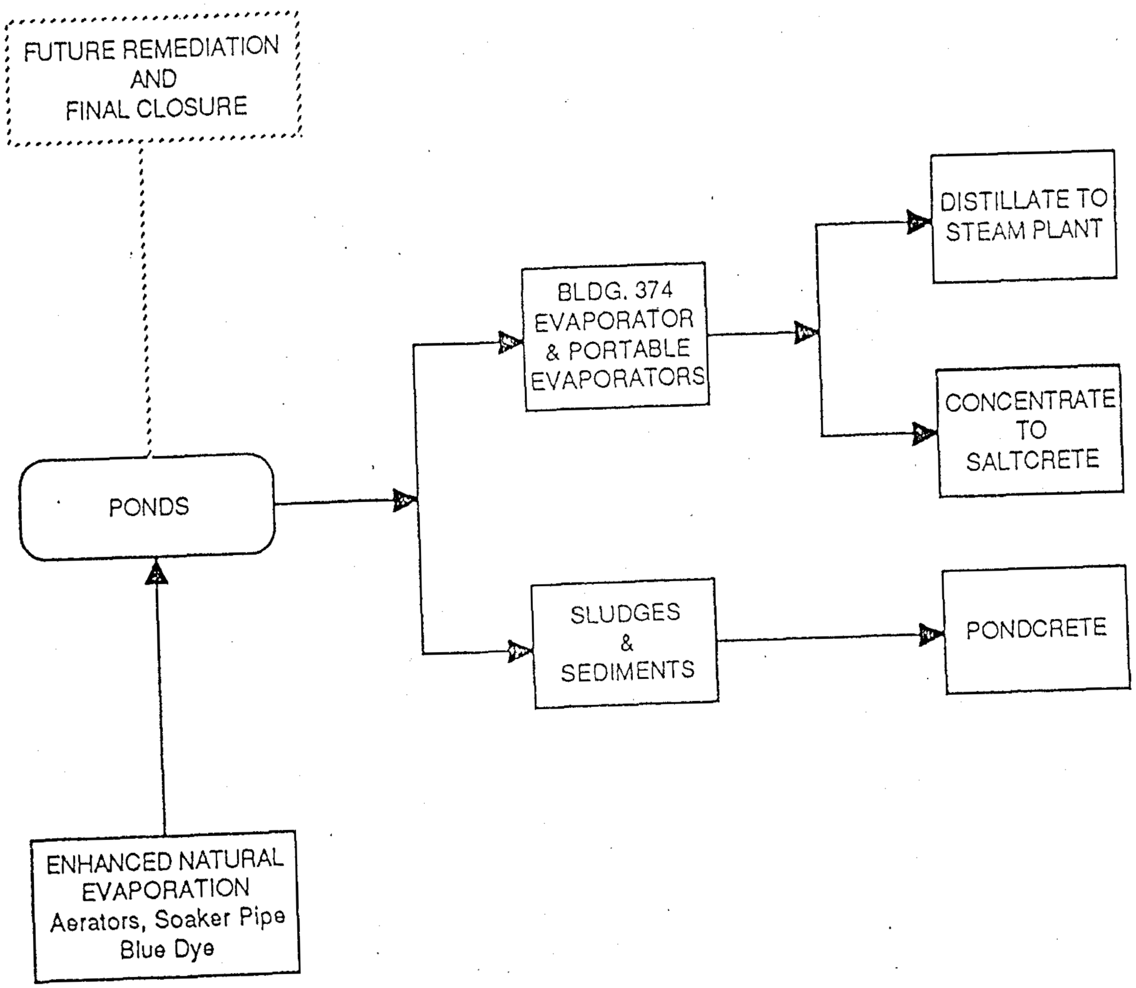
4.1.1 Evaporation

A key activity for the RCRA partial closure of the solar evaporation ponds would be evaporation of the liquid held in the ponds and disposition of incoming water from the ITS. To date, dewatering has taken place primarily through natural evaporation in conjunction with limited forced evaporation through the Building 374 evaporators.

4.1.1.1 Natural Evaporation

Natural evaporation of the liquids in the ponds would be augmented by the use of several enhanced solar heating techniques. One technique would be to add a blue, non-toxic, non-RCRA-regulated, non-bioaccumulative dye to the pond water, which would increase the amount of heat absorbed by the ponds and thus increase the natural evaporation rate.

PROPOSED ACTION
PROCESS FLOW DIAGRAM
Figure 2



The second technique would be the use of floating aerators placed in Ponds 207-A and 207-B. The spray from the aerators would be adjusted to provide fine water droplets, a spray height of approximately 4 feet, and a spray diameter of approximately 40 feet or more, if possible. Ropes would be used to hold the aerators in place in the center of the ponds. The spray would be adjusted to prevent travel of water droplets beyond the boundary of the pond. The spray system would be shut down during periods when the wind speed would lead to significant carry-over beyond the pond boundary.

The third technique for enhancing natural evaporation would be the use of soaker pipes that run along the upper perimeter of each pond. Driven by a 1.0 HP submersible pump, water would flow through the pipe and exit 1/8-inch diameter holes (on 1-inch spacing) to keep the ponds' perimeter asphalt wetted. Prior to entering the soaker pipe, the water would have travelled the perimeter of the pond through a heater hose fitted with self-regulating heater strips. This would obviate the need for either a control system or for operators/maintenance of the heating system. Self-regulating heater strips, backed up by thermostat-contactor overtemperature protection, would be used on the heating system per standard practice for hazardous-area use as demonstrated in the petrochemicals industry.

If the preceding enhanced natural evaporation methods should prove to be inadequate in meeting the schedule, a fourth optional technique, involving direct heating of solar evaporation pond water with boiler systems would be considered. The boilers would elevate impounded water temperatures to approximately 90° F in order to enhance the natural evaporation process. The systems would use natural gas and would be located within the solar evaporation pond berms so that any water leakage would be confined within the pond perimeters.

4.1.1.2 Forced Evaporation

To expedite the RCRA partial closure activity, forced evaporation would be required to play a much larger role in dewatering all ponds except Pond 207-C, where a higher solids concentration would be directly solidified into pondcrete rather than undergoing the dewatering process (see Section 4.1.2). The forced evaporators would comprise a closed-loop system consisting of a permanent unit in Building 374, which is currently used for treated process waste at RFP, augmented by three portable evaporators.

The portable evaporators would be skid-mounted systems, facilitating installation in Building 910. Hook-up for dewatering impounded water would require only minor modification to existing plumbing, using aboveground double-pipe. Two 750,000-gallon holding tanks would be fabricated to receive water collected by the ITS for subsequent evaporation. Until tank installation is complete, alternative surge capacity may be required to process ITS groundwater during peak periods.

Operation of the evaporator units with regard to fit-form-function of feed, distillate, and concentrate paths would be identical to the existing Building 374 evaporator. An efficiency comparison shows that the Building 374 evaporator processes 60,000 gallons per day (GPD), with an estimated replacement cost of $13 million, and that the three portable evaporators would process 54,000 GPD, produce better product water, be capable of relocation, and cost $400,000 each.

The proposed portable evaporators would be located in Building 910, immediately south of the solar evaporation ponds. The portable evaporators would use forced evaporation to dewater the ponds. Each portable evaporator would be a patented, two-unit system that would combine the benefits of vapor-compression and flash evaporative technologies. Originally (as mentioned above), this task would have been assigned to the Building 374 evaporator; however, the Building 374 evaporator has limited excess capacity and must therefore be augmented by the portable units. A heat-balance analysis of the ponds shows that without the portable evaporators, the current 8-million-gallon water volume in the ponds would decrease only to 6 million gallons by October 1991. Using the portable evaporators, however, would result in complete dewatering several months prior to this date. The feed supply, distillate, and concentrate processing system for the portable evaporators would be similar to the existing operations, as discussed below.

Feed Supply

The supernate from the solar evaporation ponds would be pumped through a five-way manifold station equipped with duplex strainers and duplex filters, via a double-pipe transfer line, to the feed tank inside Building 910. The feed tank would supply feed with low dissolved solids to the vapor-compression unit and would also supply brine from the vapor-compression unit to the feed inlet of the flash evaporator. This series-combination would allow both the high-efficiency throughput of the vapor-compression-type unit and the ability to concentrate salts of the flash-type unit.

Distillate

Distillate would be collected from vapor-compression and flash units and would be held in one of two 7000-gallon holding tanks. After sampling for gross alpha, gross beta, pH, and nitrate with satisfactory results, the distillate would be transferred to a 500,000-gallon holding tank (the tanks mentioned currently exist and operate at Rocky Flats). If the sampling results indicate unsatisfactory levels, the distillate will be recycled through the evaporator. From here, the distillate could be sent to either the steam plant or the cooling towers as make-up water.

Evaporator Concentrate

Concentrated brine from the vapor-compression unit, as previously mentioned, would feed the flash unit. Concentrate from the flash unit would be transferred to the Building 374 spray-dryer/saltcrete process, where it joins concentrate from the Building 374 evaporator. Approximately 645 cubic yards of concentrate would result from the proposed action, resulting in a total of 2145 cubic yards of immobilized concentrate (saltcrete).

4.1.2 Removal, Treatment, and Disposal of Sludges and Sediments

After the water is evaporated, the sludges and sediments remaining in the ponds would be removed and solidified prior to shipment for disposal. These waste solids would be mixed with cement to form pondcrete blocks suitable for shipment and offsite disposal. The estimated total volume of sludges and sediments to be solidified would be as follows:

Ponds	Estimated Sludge Volume (Cubic Yards)	Estimated Pondcrete Volume (Cubic Yards)
207-A	250	500
207-B (North)	705	1410
207-B (Center)	705	1410
207-B (South)	720	1440
207-C	745	1490
Total	**3125**	**6250**

Solidifying pond sludges and sediments into pondcrete has been previously used at Rocky Flats.

Solidified pond sludge (pondcrete) and solidified evaporator concentrate (saltcrete) would be trucked offsite for disposal at the Nevada Test Site (NTS). Shipments would conform with applicable transportation regulations (Title 49 of CFR). The waste shipment material would also be required to meet NTS waste acceptance criteria (NVO-325), which prohibit the presence of free liquids and limit the amount of fine particulates. The solidified waste would be shipped in U.S. Department of Transportation (DOT) approved plywood boxes. To ensure that pondcrete and saltcrete meet low-level mixed waste acceptance criteria, the waste would be sampled before shipment and tested to certify compliance. Historically, pondcrete and saltcrete formulations have been administratively controlled and verified by sampling to meet the criteria for low-level mixed waste.

Concurrent with the proposed action would be remixing and repackaging of an existing unacceptable inventory of pondcrete. It is currently anticipated that integration of the solar evaporation ponds sludge solidification and remix operations would occur in July 1991. Existing operations involving remixing and repackaging were previously addressed in a Memo-to-File NEPA determination (November 1989).

The existing pondcrete process meets all EPA and OSHA protocols but does not process with adequate throughput to meet the schedule requirements agreed to by the State of Colorado and DOE regarding solar evaporation pond remediation activities. A proposed process would replace existing screening/ pumping equipment ("Morgan Pumpers") with state-of-the-art units and would also replace the conventional cement mixers with digital-process-controlled cycloidal mixers. The proposed process would provide for significantly increased product throughput and would maintain EPA and OSHA protocols. In addition, the equipment footprint and environmental effects of both processes would be the same.

4.1.3 Interim Protective Measures

Following the removal of sludges and sediments from the pond areas, temporary measures would be employed to prevent resuspension of dry pond-bottom materials, unnecessary erosion or sloughing of sidewalls, and infiltration or additional leaching of contaminants through the soil due to accumulation of rainwater and snowmelt. The measures would consist of the use of impermeable materials (such as tarps or film coatings) and forced evaporation of collected precipitation. They would be anticipated to be in place from the period of approximately 1991 until 1994, when final closure actions would be anticipated to be underway.

5.0 DISCUSSION OF ALTERNATIVES

5.1 No Action

The No Action alternative would consist of maintaining the five solar ponds in their existing state, which would contribute long-term impacts to both local and offsite water quality as a result of continued contaminant migration via infiltration and inflow of groundwater from the solar evaporation ponds area. In addition, the No Action alternative would violate the AIP between DOE and State of Colorado in that removal of sludge and shipment of pondcrete would not be completed by the schedule deadline of October 1991. By November 1992, the RCRA interim status provision for the solar evaporation ponds would expire, resulting in Federal violations because permanent RCRA permitting would not be possible. For these reasons, the No Action alternative is considered unacceptable.

5.2 Alternatives Eliminated from Consideration

5.2.1 Offsite Treatment and Storage

An offsite treatment alternative would involve collection of the contents of the ponds (water, sludges, and sediments) in suitable shipping containers and transporting them offsite for treatment and storage. This alternative is considered unacceptable because it would substantially increase offsite transportation activities with the attendant increases in risk resulting not only from routine shipping hazards but also from the transport of materials as liquids rather than solids.

5.2.2 Onsite Treatment and Storage

An onsite storage alternative would also involve onsite removal of the contents of the solar ponds through the evaporative techniques and employing onsite treatment as in the proposed action. Although risks associated with transport would not be involved, this alternative is considered unacceptable because it would require additional storage areas not readily available at Rocky Flats. Onsite storage would not be a permanent solution and would not meet permitting regulations as a RCRA disposal site.

6.0 POTENTIAL ENVIRONMENTAL IMPACTS AND ISSUES

6.1 Air Quality

Air quality in the immediate vicinity of the ponds could be temporarily impacted from the proposed action. The potential for such impacts arises from the possible release of volatile organic compounds (VOCs) to the atmosphere during: 1) evaporation of the supernate water, and 2) removal of sludges and sediments and their conversion to pondcrete. During evaporation, the environmental impacts are expected to be negligible because the chemical analyses of the pond waters show that the VOCs present are below the detection limits (EG&G, 1990a). Also, environmental impacts during the removal of sludges/sediments are expected to be insignificant because analysis of sludges indicates that no VOCs are present (DOE, 1988). The pondcrete conversion process has been conducted at RFP since 1985 with no detectable or significant environmental impacts; a modification of this process is covered by a Memo-to-File dated November 20, 1989. Further, the mixing and grinding portions of the pondcrete process are confined within an enclosed HEPA-filtered area and any emissions are, therefore, well controlled. There are no other aspects of the pondcrete process that present an environmental problem.

If necessary, atmospheric resuspension of particulates would be controlled with dust suppression techniques, utilizing ambient air monitoring to ensure adequacy of control measures, and should have little environmental impact.

Additional air emissions would result from the portable evaporator process and associated power sources. Noncondensable gases ejected by the evaporators would include air (~99%) and CO_2 (~1%). While the evaporator process should preclude carry-over of radioactive particulate contaminants, evaporator tank vents would be equipped with HEPA filters. As a further precaution, air monitoring would be employed during unit operation. Any volatile organic emissions resulting from forced evaporation of impounded water held in the 207A and 207B series ponds would also be negligible (EG&G, 1990a). As noted in Section 4.1.1.2, forced evaporation will not be utilized to dewater pond 207-C. Natural gas would be utilized for the power units, resulting in a relatively clean emission source. At design conditions, natural gas consumption for all three portable evaporators would total 1020 scfm (standard cubic feet per minute). Potential use of boilers for direct heating of pond water would also result in additional air emissions. The Air Pollutant Emission Notice and emission permit process under the Colorado Air Quality Control Act would serve to identify appropriate monitoring/control needs. Long term beneficial impacts on local air quality would result from the proposed action due to the elimination of water impoundments which potentially act as wet aerosol sources under high wind conditions.

6.2 Water Quality

Ultimately, proposed action activities would have a net beneficial effect on groundwater quality in that the sources of contamination would be removed. No adverse water quality impacts would be anticipated during implementation of the proposed action because contaminated groundwater in the solar evaporation ponds vicinity would continue to be collected via the ITS.

6.3 Soils

No impacts to onsite soils would occur either during implementation or following the proposed action because of the protective interim measures built into the pre-remediation activities.

6.4 Cultural Resources

RCRA partial closure activities would have no impact on archaeological and/or historic resources. The State Office of Archaeology and Historic Preservation has stated that the areas within the 384-acre security-fenced zone are so highly disturbed that little cultural resource information would be available. A Class II survey was conducted during the summer of 1988, and no unique sites or sites considered eligible for nomination to the National Register of Historic Places were discovered (Burney and Associates, 1988).

6.5 Biological Resources

The proposed action would have negligible impacts on vegetation, as vegetation is relatively limited around the project area. The U.S. Fish and Wildlife Service has listed two endangered species (the black-footed ferret and the bald eagle) as potentially existing in the Rocky Flats area. This project would not be expected to affect either species.

6.6 Land Use

The RCRA removal activities would be within existing Rocky Flats boundaries and would not adversely impact agricultural areas or recreation areas. The action would tend to enhance the subsurface environment and limit potentially adverse environmental effects from contaminant migration offsite to agricultural areas or population centers.

6.7 Wetlands

Consultation with the U.S. Army Corps of Engineers was conducted in the fall of 1989, and the general locations of jurisdictional wetlands on plantsite were characterized. The solar evaporation ponds area does not occupy a wetland habitat; therefore, closure would have no effect on wetland resources.

6.8 Human Health Impacts

During routine operations, the potential for human health impacts primarily concerns the possibility of worker ingestion and/or inhalation of resuspended materials during RCRA removal operations. The potential for impacts on the general public health and safety would be insignificant. As a general protection measure, dust resuspension from evaporative deposits along the edges of the ponds would be minimized by the wetting action associated with the soaker pipe described earlier. After the pond area has dried and sludge materials have been removed, controls would be employed to minimize dust generation. Periodic air sampling would be conducted to confirm the effectiveness of the dust control techniques. Spray operation activities would not likely cause substantial increases in particulate emissions at the current level of dissolved solids; again, this would be verified by air sampling during operation of the units. As described in Section 4.1.1.1, the floating aerators would be operated to prevent transport of water droplets beyond the pond boundaries. It is not expected that the evaporation rate from the water droplets would be sufficient to reach dryness, which would lead to aerosol problems.

Volatile chemical levels from the forced evaporative unit emissions would not be expected to create significant adverse impacts. As noted in Section 6.1, volatile organic concentrations in the pond water have been found to be below the detection limits. Proper operation would not create significant carry-over of contaminants extending from the evaporator units.

Collection of the sludge would occur while the material is still in the form of a slurry and should preclude problems associated with resuspension of dry materials. Also, sludge solidification activities are a "wet" process and would be conducted in an enclosed area from which the ventilation discharge is filtered. In addition, personnel protection meeting applicable standards and in accordance with OSHA would be employed.

6.9 Transportation Impacts

Human health impacts normally incident to transportation include vehicle emissions in addition to possible traumatic injuries and fatalities resulting from vehicular operations. Normal transportation produces engine emissions, fugitive dust generated by vehicular traffic on unpaved surfaces, and particulates from tire wear. Offsite transportation impacts associated with shipment of solidified waste to a mixed-waste disposal site, such as NTS, would be minimal, due to relatively low concentrations of contaminants, the solid form of the waste, and compliance with disposal site waste acceptance criteria and DOT packaging and transport requirements.

6.10 Potential Accidents and Hazards

Studies of ongoing pondcrete operations have shown that risks from a radiological and toxicological perspective are low (EG&G, 1990b). Other hazards would include those incidental to normal industrial activities and of a type and magnitude routinely encountered at Rocky Flats, and would be insignificant.

6.11 Summary

Of the topical categories outlined in this section, the potential for impacts would be associated with air quality, water quality, and human health issues. Temporary impacts to air quality and human health factors could potentially result from inhalation or ingestion of resuspended dust from the dewatered solar evaporation ponds. This potential would, however, be controlled through dust suppression techniques, air monitoring, and personnel protection measures. Beneficial impacts to groundwater quality would be realized in the long term, when contamination sources would have been removed. All other impact categories would be insignificant or nonexistent.

7.0 AGENCIES AND/OR PERSONS CONSULTED, INCLUDING COORDINATION WITH FEDERAL, STATE, REGIONAL, AND LOCAL AGENCIES

Colorado Department of Health

8.0 REFERENCES

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