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July 15, 1997

97-RF-03761

Norma Castaneda  
ES&H Program Assessment  
DOE, RFFO

**OU1 INTERIM MEASURES/INTERIM REMEDIAL ACTION (IM/IRA) MODIFICATION - AKS-027-97**

ahl, T. G.		
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and, Jennifer		

Enclosed please find draft letters to the Environmental Protection Agency (EPA) and Colorado Department of Health and the Environment (CDPHE) transmitting the OU1 IM/IRA Modification. The first objective of the OU1 IM/IRA Modification is to create a single, discrete, identifiable regulatory authority that governs operations at the Consolidated Water Treatment Facility (CWTF) located in Building 891. The second objective is to update the OU1 IM/IRA consistent with RFCA and the Integrated Monitoring Plan (IMP).

Please review and transmit the modification request to EPA and CDPHE at your earliest convenience.

Please contact me if you have any questions regarding this Modification.

*A. K. Sieben*  
A. K. Sieben  
Waste & Remediation Operations

bag

Orig. and 1 cc - N. Castaneda

RRRES. CONTROL	X	X
MIN RECD/099	X	X
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Enclosures:  
As Stated (2)

CLASSIFICATION:	
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CLASSIFIED	
CONFIDENTIAL	
SECRET	

cc:  
J. R. Cirillo - RMRS  
J. E. Law - "

THORIZED CLASSIFIED  
SIGNATURE:

empt per CEX-266-95

REPLY TO RFP CC NO.

*ACS*

CTION ITEM STATUS:  
PARTIAL/OPEN

CLOSED

LTR APPROVALS:



Kaiser-Hill Company, L.L.C.

IG. & TYPIST INITIALS

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A-QU01-001370

DRAFT

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DRAFT

Date

Mr. Steve Tarlton  
Colorado Dept. of Public Health and Environment  
4300 Cherry Creek Drive South  
Denver, CO 80222-1530

### OU1 IM/IRA MODIFICATION

Dear Mr. Tarlton:

The purpose of this correspondence is to request a modification to the Interim Measures/Interim Remedial Action Plan and Decision Document 881 Hillside Area, Operable Unit No. 1, January 1990, (OU1 IM/IRA). DOE is requesting this modification pursuant to RFCA ¶127.

#### Objectives

There are two objectives. The first objective of the OU1 IM/IRA Modification is to create a single, discrete, identifiable regulatory authority that governs operations at the Consolidated Water Treatment Facility (CWTF) located in Building 891. The second objective is to update the OU1 IM/IRA consistent with RFCA and the Integrated Monitoring Plan (IMP).

#### Approach

The overall approach, and the relationship of the OU1 IM/IRA Modification to the OU2 IM/IRA Modification is depicted on the chart in Attachment 1. It should be evident from the chart that the OU1 IM/IRA Modification and the recently submitted OU2 IM/IRA Modification have parallel purposes and complement one another.

The OU1 IM/IRA Modification is comprised of this cover letter and three attachments. Attachment 1 is a chart that depicts the elements of both the original OU1 IM/IRA and the original OU2 IM/IRA. The chart also depicts the overall strategy to modify and integrate these IM/IRAs.

Attachment 2 focuses on the CWTF. First, Attachment 2 presents a new Sampling and Analysis Plan (SAP) for the CWTF. The SAP covers not only long-term CWTF effluent monitoring, but also provides interim monitoring to cover the IHSS 119.1 Collection Well (OU1); the IHSS 119.1 French Drain (OU1); the 881 Footing Drain (OU1); SW059 (OU2) SW061 (OU2); and SW132 (OU2) until transferred to the IMP. In addition, the SAP contains the new, up to date chemical-specific ARARs for the CWTF.

Second, Attachment 2 provides an operational framework for the CWTF that introduces the CDPHE Wastewater Treatment Unit Policy (WWTU Policy) as a CERCLA to-be-considered criteria for accepting CERCLA/RFCA remediation wastewater and includes a discussion of OU1 IM/IRA and OU2 IM/IRA location and action-specific ARARs. For convenient reference, a copy of the CDPHE WWTU Policy is also included.

The purpose of Attachment 3 of the OU1 IM/IRA Modification is to ensure that the water sources originally addressed in the OU1 IM/IRA continue, without a lapse in coverage, to be addressed in a manner that is consistent with RFCA. In addition, the administrative transfer of the monitoring obligations to the IMP will ensure that the one remaining OU1 IM/IRA water source (881 Footing

Steve Tarlton  
Page 2

Drain) is handled consistent with the approach taken in the OU1 CAD/ROD and with the OU2 IM/IRA Modification.

DOE believes this proposed OU1 IM/IRA modification is justified because it will streamline operations at the CWTF, it will address all OU1 IM/IRA monitoring obligations and it will update and fully integrate the OU1 and OU2 IM/IRAs into the RFCA process.

RFCA ¶127 provides a 30-day review period, at the close of which the request is approved, or is denied with a written explanation. DOE suggests that a meeting be held in the middle of the 30-day review cycle to address questions and to facilitate final approval. To that end, Norma Castaneda will contact the project coordinators to schedule the review session. If you have other questions or comments, please do not hesitate to contact Ms. Castaneda at 966-4226.

Contact  
Title

Attachments:  
As Stated

cc:

DRAFT

DRAFT

DRAFT

Date

Tim Rehder  
EPA  
999 18th Street  
Suite 500  
Denver, CO 80202

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Tim Rehder  
Page 2

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Contact  
Title

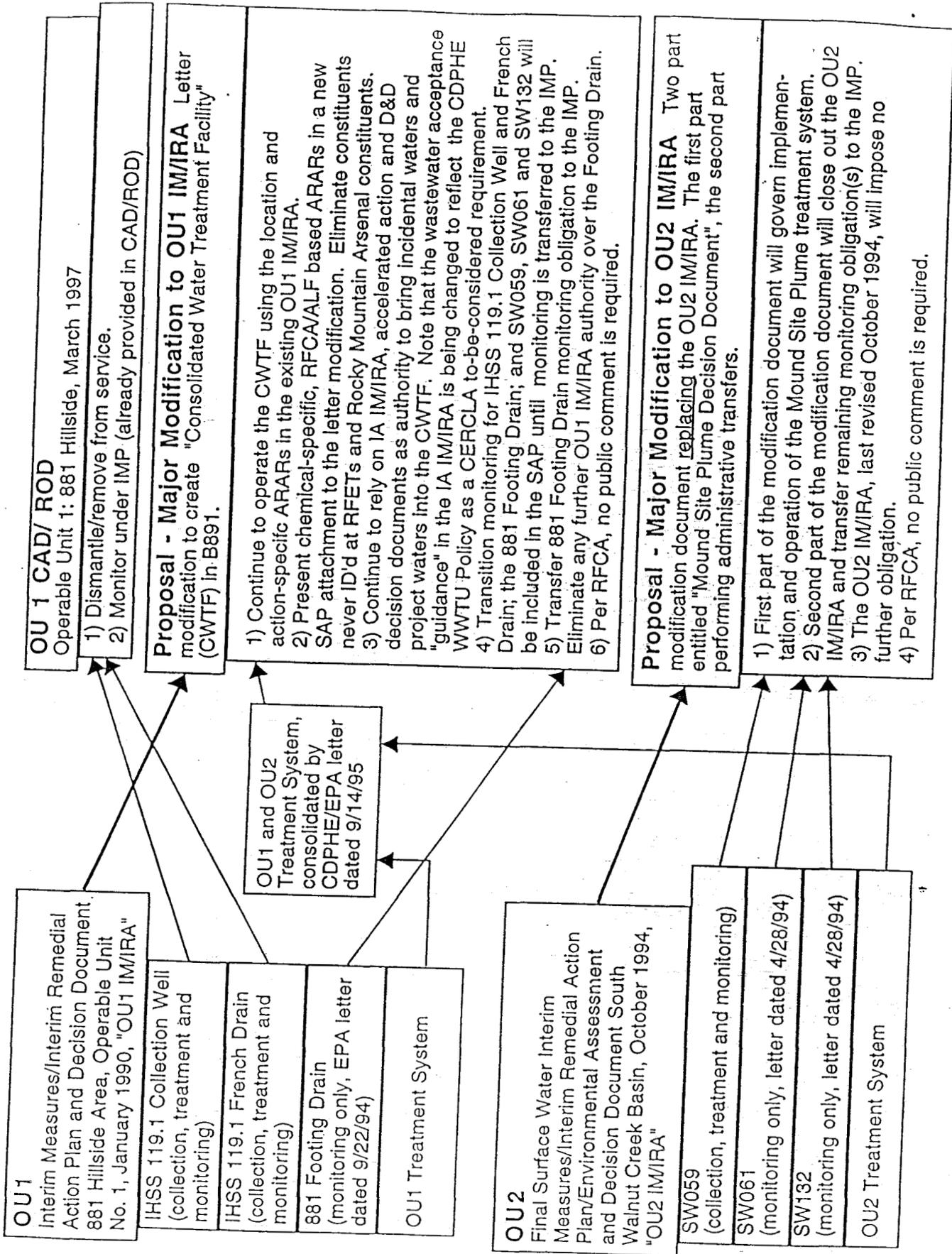
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As Stated

cc:

**Attachment 1**

**Proposal for Modification of OU1 and OU2 IM/IRAs**

# Proposal for Modification of OU1 and OU2 IM/IRAs



## Attachment 2

### **OU1 IM/IRA Modification for the Consolidated Water Treatment Facility - Building 891**

#### **OVERVIEW**

The modification will promote expanded use of the CWTF to address the changing CERCLA/RFCA wastewater treatment needs at RFETS. Over the next several years increasing wastewater volumes from CERCLA/RFCA accelerated actions and decommissioning will require treatment. These remediation wastewaters can be accommodated because the CWTF has broad treatment capabilities. In addition, the CWTF provides added protectiveness by design. Specifically, the practice of first sampling and then evaluating results prior to batch discharge allows retreatment where ARARs have not been attained in the effluent.

#### **OU1 IM/IRA Background**

The existing OU1 IM/IRA has evolved over the past several years. Originally, the OU1 IM/IRA required the collection and treatment of three sources of water located in Woman Creek. The water sources included the IHSS 119.1 Collection Well, the IHSS 119.1 French Drain, and the Building 881 Footing Drain. Pursuant to an EPA letter dated September 22, 1994 and a CDPHE letter dated October 7, 1994, collection and treatment of the 881 Footing Drain was discontinued. Presently, the 881 Footing Drain is only being monitored.

In May 1995, DOE proposed to consolidate the OU1 water treatment system with the OU2 water treatment system for improved efficiency and reduced cost. The proposal was approved by EPA and CDPHE in a letter dated September 14, 1995 and the two facilities were combined at the OU1 water treatment facility location (Building 891). The CWTF currently treats water collected from Seep SW059 (OU2); the IHSS 119.1 Collection Well and the IHSS 119.1 French Drain; incidental waters pursuant to the Industrial Area IM/IRA (IA IM/IRA); remediation wastewaters from the decontamination pads; and remediation wastewaters resulting from accelerated actions and decommissioning pursuant to individual RFCA decision documents.

Recently a CAD/ROD for Operable Unit 1: 881 Hillside was signed. The OU1 CAD/ROD superseded portions of the OU1 IM/IRA by requiring that the IHSS

119.1 Collection Well and the IHSS 119.1 French Drain be dismantled and removed from service, and that collection and treatment of the groundwater cease. The OU1 CAD/ROD also provided that any long-term 881 Hillside groundwater monitoring be conducted pursuant to the IMP. In addition, the OU1 CAD/ROD contemplated limited source removal. Further characterization did not identify a source of contamination warranting removal. As a result, an OU1 CAD/ROD modification is planned. Regardless, the disposition of the IHSS 119.1 Collection Well and IHSS 119.1 French Drain will continue to be governed by the OU1 CAD/ROD and any modifications to the CAD/ROD.

At present, the operations at the CWTF are governed by both the OU1 and OU2 IM/IRAs. Not only are there discrepancies between many of the chemical-specific applicable or relevant and appropriate requirements (ARARs) identified in the existing IM/IRAs, the existing IM/IRA ARAR effluent limits do not reflect the current Surface Water Action Levels & Standards found in Table 1 of the RFCA Action Level Framework (ALF).

#### **CWTF SAMPLING AND ANALYSIS PLAN**

The CWTF SAP covers not only long-term CWTF effluent monitoring, but also provides the interim monitoring to cover the IHSS 119.1 Collection Well (OU1); the IHSS 119.1 French Drain (OU1); the 881 Footing Drain (OU1); SW059 (OU2) SW061 (OU2); and SW132 (OU2) until transferred to the IMP. (See the enclosed SAP). Once the monitoring obligations are transferred to the IMP, the SAP will be modified to reflect the change in monitoring status.

In addition, for consistency with the RFCA ALF and with the recently modified Colorado water quality standards, the SAP identifies new chemical-specific ARARs for the CWTF. In a CERCLA wastewater treatment context, the chemical-specific ARARs are used as effluent limitations. There are several justifications for the change. First, the CWTF is currently governed by both the OU1 IM/IRA and the OU2 IM/IRA. Each of the IM/IRAs identifies chemical-specific, action-specific and location-specific ARARs. The most significant ARAR discrepancies between the IM/IRAs relate to differences in chemical-specific ARARs.

Second, not only are there discrepancies between the IM/IRAs, there are also discrepancies between the IM/IRAs and the RFCA ALF. Consequently, one of the primary goals of the OU1 IM/IRA Modification is to eliminate

the discrepancies by changing and updating the chemical-specific ARARs. As a result, the new chemical-specific ARARs are listed in Appendix A of the SAP. It should be noted that some of the constituents presented in the ALF have not been included in the list. The justification for the exclusion of these constituents is presented in the SAP.

## **OPERATIONAL FRAMEWORK**

This modification is not intended to change operational practices at the CWTF. Overall, the existing OU1 IM/IRA ARAR framework has provided an effective yet flexible framework to conduct operations.

As noted above, the chemical-specific ARARs, acting as effluent limits in a CERCLA/RFCA wastewater treatment context, are presented in Appendix A of the SAP. Although there are differences in some of the location and action-specific ARARs identified by the OU1 IM/IRA and the OU2 IM/IRA, the differences do not impact operations. For that reason it is appropriate to continue to operate the CWTF under the OU1 IM/IRA location and action-specific ARARs framework.

This modification will continue to rely on the IA IM/IRA as an authority to accept incidental waters and the previous approval to accept remediation wastewater collected at the decontamination pads. Similarly, this modification will rely on RFCA decision documents (ie. PAM, IM/IRAs, RSOPs) associated with accelerated actions and decommissioning to accept those remediation wastewaters. Acceptance criteria for the CERCLA/RFCA remediation wastewaters are discussed below.

### OU1 and OU2 IM/IRA Location and Action-specific ARARs

An examination of the OU1 and OU2 IM/IRA location-specific ARARs reveals, that as a rule, location-specific ARARs are either attained at the time the decision is made, or the project does not go forward. In addition, location-specific ARARs have little impact on ongoing operations. Overall, both the OU1 IM/IRA and OU2 IM/IRA considered a similar list of location-specific ARARs in the decision processes.

Similarly, the action-specific ARARs that directly impact CWTF operations were present in both the OU1 IM/IRA and OU2 IM/IRA. Specifically, the language identifying the RCRA tank and container requirements is identical. In fact, it appears the OU2 IM/IRA authors may have copied the OU1 IM/IRA text verbatim.

Originally, neither the OU1 IM/IRA or the OU2 IM/IRA assigned specific, listed, hazardous waste codes to the various water sources being collected for treatment. Subsequently, an identification effort was undertaken and appropriate listed hazardous waste codes were identified for the various water sources. From that point on, as a standard CWTF operating practice, the listed hazardous waste codes, as ARAR, have also been assigned to any residuals/wastes generated during water treatment at the CWTF. The assignment of appropriate listed hazardous waste codes is a requirement of the WWTU Policy (below) and will remain a CWTF practice.

CDPHE Wastewater Treatment Unit Policy as CERCLA To-Be-Considered

The National Contingency Plan recognizes a category of guidance, that while not ARAR, may be useful in developing CERCLA remedies. (See 40 CFR §300.400(g)(3)). This category of guidance is "to-be-considered" (TBC). The WWTU Policy is TBC when determining which remediation wastewaters are acceptable for treatment at the CWTF. (See Appendix C). The WWTU Policy cannot be ARAR because it is not duly promulgated. (See 40 CFR §300.5).

The WWTU Policy is useful because it provides an acceptance criteria, with regulatory basis, for determining whether remediation wastewater or incidental water may be treated in the CWTF. Specifically, the remediation wastewater or incidental water must be:

- <1% Total Organic Carbon
- >90% water
- not reactive (40 CFR §261.23)
- not ignitable - flash point of any phase must be >140 F° (40 CFR §261.21)

As noted earlier, when remediation wastewaters carry listed hazardous waste codes as ARAR, those listed codes are ARAR throughout the treatment, and are ARAR to any CWTF residuals resulting from their treatment.

Finally, it is appropriate and permissible to substitute the WWTU Policy as guidance for incidental waters and for all remediation wastewaters treated at the CWTF. The management and treatment of incidental waters

of these monitoring activities into the IMP will promote consistent evaluations, consistent application of data quality objectives and streamlined data management and reporting. In addition, consolidating the monitoring into the IMP will also facilitate the yearly Environmental Restoration Ranking and associated budget processes.

For the transfer of CWTF regulatory authority, the proposed modification will provide a single, discrete, identifiable, regulatory authority. The proposed modification will eliminate inconsistencies between the OU1 and OU2 IM/IRAs. The OU1 IM/IRA Modification will fully integrate current chemical-specific ARARs-based effluent limitations for the CWTF in a single document.

## Attachment 3

### OU1 IM/IRA Administrative Transfers

#### Objective of the OU1 IM/IRA Administrative Transfers

The objective of the OU1 IM/IRA Modification is to ensure that the water sources originally addressed in the OU1 IM/IRA continue to be monitored, without a lapse coverage, in a manner that is consistent with RFCA.

#### Process for Administrative Transfers

The transfer of remaining OU1 IM/IRA monitoring obligations to the IMP will occur in two steps. As a first step, the remaining OU1 IM/IRA monitoring obligations will be conducted, on an interim basis, consistent with the Sampling and Analysis Plan (SAP) being developed as part of this modification. (See Attachment 2). Specifically, the new OU1 SAP addresses interim sampling, analysis and QA for the IHSS 119.1 Collection Well; the IHSS 199.1 French Drain; and the 881 Footing Drain.

Although not ideal, this interim step in the transfer recognizes the reality of budgeting, and provides flexibility for scheduling final transfer without lapses in coverage. In addition, the interim step provides an opportunity for the IMP Working Group to evaluate, propose and reach consensus on an appropriate monitoring program.

For the 881 Footing Drain, final transfer of the monitoring obligation will occur when the IMP Working Group acknowledges incorporation of the monitoring into the IMP. For the IHSS 119.1 Collection Well and the IHSS 119.1 French Drain, final transfer will occur as part of implementation of the OU1 CAD/ROD.

Any remaining OU2 IM/IRA authority over CWTF operations will transfer to this OU1 IM/IRA Modification. Thus, any remaining relationship between OU2 and the CWTF will be severed. This will allow this OU1 IM/IRA Modification to act as a current, unified authority to govern CWTF operation.

#### Justification for Administrative Transfers

For the transfer of monitoring obligations, RFCA intends that the IMP be used to integrate short and long term monitoring programs. Consolidation

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Any remaining OU2 IM/IRA authority over CWTF operations will transfer to this OU1 IM/IRA Modification. Thus, any remaining relationship between OU2 and the CWTF will be severed. This will allow this OU1 IM/IRA Modification to act as a current, unified authority to govern CWTF operation.

#### Justification for Administrative Transfers

For the transfer of monitoring obligations, RFCA intends that the IMP be used to integrate short and long term monitoring programs. Consolidation

of these monitoring activities into the IMP will promote consistent evaluations, consistent application of data quality objectives and streamlined data management and reporting. In addition, consolidating the monitoring into the IMP will also facilitate the yearly Environmental Restoration Ranking and associated budget processes.

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